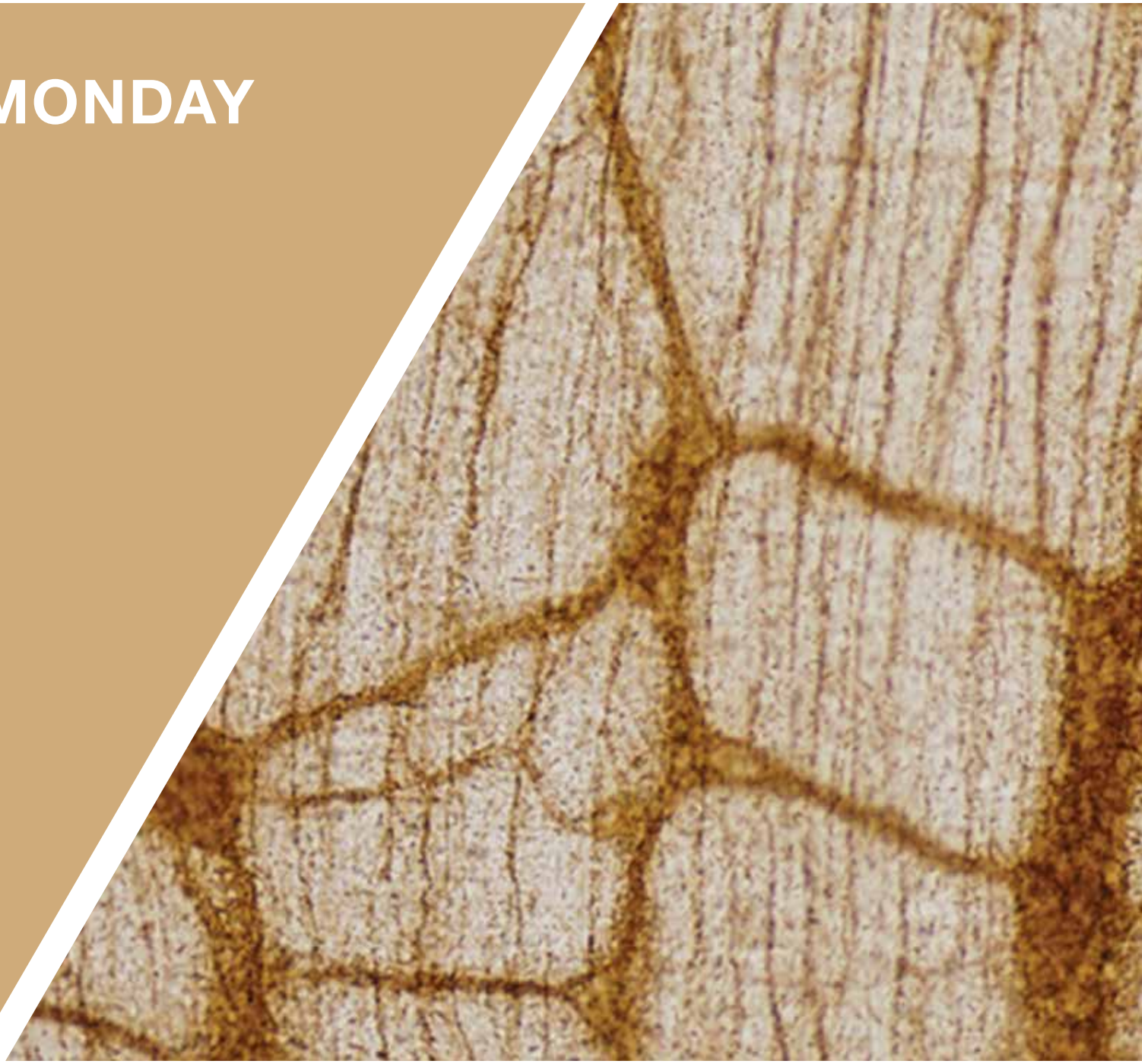
Neuroscience 2013

MONDAY



SAN DIEGO | NOVEMBER 11

Scientific Session Listings 294 – 490

SfN Society for Neuroscience

Monday Highlights

✍ Preregistration Required $ Course Fee 🕮 Professional Development ⛶ Networking Public Outreach ❑ Online Content

Special Lecture

Putting Sensory Back Into Voluntary Control **CME**
Stephen H. Scott, PhD
Queen's University
8:30–9:40 a.m.
San Diego Convention Center: Ballroom 20

Symposium

The Emotion Triad: The Role of Interactions Between the Amygdala Hippocampus and Medial Prefrontal Cortex in Mood and Anxiety **CME**
Chair: Joshua A. Gordon, MD , PhD
8:30–11 a.m.
San Diego Convention Center: 6A

Symposium

Neuropeptide Signaling in Cellular Interactions **CME**
Chair: Illana Gozes, PhD
8:30–11 a.m.
San Diego Convention Center: 6B

Symposium

The Role of Transposable Elements in Health and Diseases of the Central Nervous System **CME**
Chair: Matthew Reilly, PhD
Co-chair: Fred H. Gage, PhD
8:30–11 a.m.
San Diego Convention Center: 6F

Minisymposium

Emerging Roles of Resurgent Sodium Currents in Neuronal Excitability and Pathophysiology **CME**
Chair: Theodore R. Cummins, PhD
Co-chair: Angelika Lampert, PhD
8:30–11 a.m.
San Diego Convention Center: 6E

Minisymposium

Genes, Environment, and Cognitive Function **CME**
Chair: Orly Lazarov, PhD
Co-chair: Giuseppina Tesco, MD, PhD
8:30–11 a.m.
San Diego Convention Center: 28A

Minisymposium

Dynamic Signaling Mechanisms of Morphogenetic Proteins in the Developing and Adult Nervous System **CME**
Chair: Laura N. Borodinsky, PhD
Co-chair: Fred Charron, PhD
8:30–11 am.
San Diego Convention Center: 29D

Teaching Neuroscience: Is the Printed Textbook Obsolete? 🕮 ❑
Organizer: Richard F. Olivo, PhD
Panelists: John H. Byrne, PhD; Sydney Carroll; David B. Daniel, PhD; Robert V. Prior; Leonard E. White, PhD
9–11 a.m.
San Diego Convention Center: 31C

A Guide to Journal Publishing 🕮
Organizers: Verity J. Brown, PhD; Shamus O'Reilly, PhD
Panelists: Toby Charkin, PhD; Jud Dunham, PhD; Daniel Morgan, PhD; Michael Rugg, PhD; Randall Sakai, PhD; Kim Wallen, PhD
9 a.m.–noon
San Diego Convention Center: 30C

David Kopf Lecture on Neuroethics

Blaming the Brain: Behavioral Sciences in the Courtroom
Nita A. Farahany, JD, PhD
Duke University
10–11:10 a.m.
San Diego Convention Center: Ballroom 20

Special Lecture

Sensory Processing in *Drosophila*: Synapses Circuits and Computations **CME**
Rachel I. Wilson, PhD
Harvard Medical School
11:30 a.m.–12:40 p.m.
San Diego Convention Center: Ballroom 20

Graduate School Fair ⛶
Organizer: Committee on Neuroscience Departments and Programs
noon–2 p.m.
San Diego Convention Center: Sails Pavilion

Actively Managing Your Career and Life: What They Didn't Teach You in School 🕮 ❑
Organizer: Marty Nemko, PhD
noon–2:30 p.m.
San Diego Convention Center: 31C

Plan to Attend

TUESDAY, NOV. 12

Special Lecture

Blood-Brain Barrier and Neurodegeneration **CME**
Berislav V. Zlokovic, MD, PhD
University of Southern California
8:30–9:40 a.m.
San Diego Convention Center: Ballroom 20

Special Lecture

How Synthetic and Chemical Biology Will Transform Neuroscience **CME**
Bryan L. Roth, MD, PhD
University of North Carolina At Chapel Hill
10–11:10 a.m.
San Diego Convention Center: Ballroom 20

Special Lecture

Plasticity in the Adult Brain: Neurogenesis and Neuroepigenetics **CME**
Hongjun Song, PhD
Johns Hopkins University School of Medicine
1–2:10 p.m.
San Diego Convention Center: Ballroom 20

History of Neuroscience Lecture

Reward Circuitry in the Brain
Roy A. Wise, PhD
Intramural Research Program of the National Institute on Drug Abuse, NIH
2:30–3:40 p.m.
San Diego Convention Center: Ballroom 20

Presidential Special Lecture

Understanding Cortical Hierarchies: The Six-Piece Puzzle of Face Perception **CME**
Doris Y. Tsao, PhD
California Institute of Technology
5:15–6:25 p.m.
San Diego Convention Center: Ballroom 20

Monday Highlights (continued)

Preregistration Required $ Course Fee Professional Development Networking Public Outreach Online Content

Special Presentation

Understanding New Brain Initiatives in the United States and Europe

Panelists: Thomas Insel, MD; Story C. Landis, PhD; Geoffrey Ling, MD, PhD; Cora Marrett, PhD; Daniel Pasini, PhD

1:15–3 p.m.

San Diego Convention Center: Ballroom 20

Symposium

All for One and One for All: Progress in Single Cell Neurobiology **CME**

Chair: James Eberwine, PhD

Co-chair: Andrea C. Beckel-Mitchener, PhD

1:30–4 p.m.

San Diego Convention Center: 6A

Symposium

Neuro-Epigenetics in Neural Development Plasticity and Brain Disorders **CME**

Chair: Hongjun Song, PhD

Co-chair: J. David Sweatt, PhD

1:30–4 p.m.

San Diego Convention Center: 6B

Symposium

Maps and Meters for Sound Location **CME**

Chair: Jennifer M. Groh, PhD

Co-chair: Catherine Carr, PhD

1:30–4 p.m.

San Diego Convention Center: 6F

Minisymposium

Neurotransmitter Receptors for Visual Cognition in Primates **CME**

Chair: Stefan Everling, PhD

Co-chair: Pieter R. Roelfsema, MD, PhD

1:30–4 p.m.

San Diego Convention Center: 6E

Minisymposium

Neuroimaging Guided Cognitive Regulation of Food Stimuli: Implications for Obesity **CME**

Chair: Eric Stice, PhD

1:30–4 p.m.

San Diego Convention Center: 28A

Minisymposium

Neurological Consequences of Microglia Priming: Aging Disease and Trauma **CME**

Chair: John C. Gensel, PhD

Co-chair: Jonathan P. Godbout, PhD

1:30–4 p.m.

San Diego Convention Center: 29D

Global Advocacy Forum

Enhancing Global Cooperation on Advocacy

Organizer: Sten Grillner, MD

3–5 p.m.

San Diego Convention Center: 30C

Albert and Ellen Grass Lecture

The Neural Circuitry of Sex and Violence **CME**

David J. Anderson, PhD

3:30–4:40 p.m.

San Diego Convention Center: Ballroom 20

Presidential Special Lecture

Connectomics: What, How, and, Why **CME**

Jeff W. Lichtman, MD, PhD

5:15–6:25 p.m.

San Diego Convention Center: Ballroom 20

SfN-Sponsored Socials

6:45–8:45 p.m.

San Diego Marriott Marquis and Marina Meeting Rooms

See page xiv.

Chronological List of Monday Sessions

Theme Descriptions

A Development

B Neural Excitability, Synapses, and Glia: Cellular Mechanisms

C Disorders of the Nervous System

D Sensory and Motor Systems

E Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

F Cognition and Behavior

G Novel Methods and Technology Development

H History, Teaching, Public Awareness, and Societal Impacts in Neuroscience

All posters will be presented in the San Diego Convention Center, Halls B–H. All lecture, symposium, minisymposium, and nanosymposium rooms are in the San Diego Convention Center.

Note: Theme H Posters will be on display in Hall B beginning at 1 p.m. on Saturday, Nov. 9, and will remain posted until 5 p.m. on Sunday, Nov. 10. One–hour presentation times will occur either Saturday afternoon or Sunday morning.

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
	Featured Programs						
294	Putting Sensory Back into Voluntary Control	Special Lecture		Ballroom 20	11 Mon	8:30–9:40 a.m.	1.25
295	The Emotion Triad: The Role of Interactions Between the Amygdala, Hippocampus, and Medial Prefrontal Cortex in Mood and Anxiety	Symposium		6A	11 Mon	8:30–11 am.	2.5
296	Neuropeptide Signaling in Cellular Interactions	Symposium		6B	11 Mon	8:30–11 am.	2.5
297	The Role of Transposable Elements in Health and Diseases of the Central Nervous System	Symposium		6F	11 Mon	8:30–11 am.	2.5
298	Emerging Roles of Resurgent Sodium Currents in Neuronal Excitability and Pathophysiology	Minisymposium		6E	11 Mon	8:30–11 a.m.	2.5
299	Genes, Environment, and Cognitive Function	Minisymposium		28A	11 Mon	8:30–11 a.m.	2.5
300	Dynamic Signaling Mechanisms of Morphogenetic Proteins in the Developing and Adult Nervous System	Minisymposium		29D	11 Mon	8:30–11 a.m.	2.5
301	Blaming the Brain: Behavioral Sciences in the Courtroom	David Kopf Lecture on Neuroethics		Ballroom 20	11 Mon	10-11:10 a.m.	
302	Sensory Processing in Drosophila: Synapses, Circuits, and Computations	Special Lecture		Ballroom 20	11 Mon	11:30 a.m.–12:40 p.m.	1.25
	Nanosymposia (8 a.m.–noon)						
303	Axon Growth and Guidance	Nanosymposium		25A	11 Mon	8–10:45 a.m.	
304	Presynaptic Dynamics	Nanosymposium		4	11 Mon	8–10:30 a.m.	
305	Beta and Gamma Secretase: BACE and Presenilin	Nanosymposium		23A	11 Mon	8–11 a.m.	
306	Huntington's Disease: Mechanisms and Therapeutic Targets	Nanosymposium		24A	11 Mon	8–10:30 a.m.	
307	Brain Injury: Cellular and Molecular Mechanisms	Nanosymposium		32B	11 Mon	8–11:30 a.m.	
308	Biomarkers and Imaging in Schizophrenia	Nanosymposium		30B	11 Mon	8–11:15 a.m.	
309	Olfaction: Olfactory Bulb and Beyond	Nanosymposium		1B	11 Mon	8–11:30 a.m.	
310	Multisensory: Circuits and Functional Imaging	Nanosymposium		5B	11 Mon	8–11 a.m.	
311	Striate Cortex: Neural Coding	Nanosymposium		33C	11 Mon	8–10:30 a.m.	
312	The Control of Sleep	Nanosymposium		2	11 Mon	8–10 a.m.	
313	Computation, Modeling, and Simulation IV	Nanosymposium		7B	11 Mon	8–10:15 a.m.	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
	Posters (8 a.m.–noon)						
314	Proliferation: Cell Cycle	Poster	A1-A14	Halls B-H	11 Mon	8 a.m.–noon	
315	Proliferation: Molecular Mechanisms	Poster	A15-B17	Halls B-H	11 Mon	8 a.m.–noon	
316	Cell Fate: Mechanisms	Poster	B18-C13	Halls B-H	11 Mon	8 a.m.–noon	
317	Neuronal Differentiation in Response to Extracellular Factors	Poster	C14-C24	Halls B-H	11 Mon	8 a.m.–noon	
318	Activity-Dependent Growth and Remodeling of Synapses	Poster	C25-D14	Halls B-H	11 Mon	8 a.m.–noon	
319	GABA Receptors: Trafficking	Poster	D15-D32	Halls B-H	11 Mon	8 a.m.–noon	
320	Ion Channels: K^+ Channels I	Poster	D33-E20	Halls B-H	11 Mon	8 a.m.–noon	
321	Ion Channels and Disease States	Poster	E21-E37	Halls B-H	11 Mon	8 a.m.–noon	
322	Synaptic Transmission: Postsynaptic Mechanisms I	Poster	E38-F8	Halls B-H	11 Mon	8 a.m.–noon	
323	Synaptic Transmission: Postsynaptic Mechanisms II	Poster	F9-F21	Halls B-H	11 Mon	8 a.m.–noon	
324	Synaptic Plasticity: Physiology and Behavior	Poster	F22-F46	Halls B-H	11 Mon	8 a.m.–noon	
325	Synaptic Plasticity: Structural Plasticity II	Poster	G1-G24	Halls B-H	11 Mon	8 a.m.–noon	
326	Oscillations and Synchrony: Unit Studies I	Poster	G25-G47	Halls B-H	11 Mon	8 a.m.–noon	
327	Modulation of Neuronal Firing I	Poster	G48-H12	Halls B-H	11 Mon	8 a.m.–noon	
328	Oligodendrocytes: Cell Biology and Signaling	Poster	H13-H34	Halls B-H	11 Mon	8 a.m.–noon	
329	Parkinson's Disease: Transgenic and Related Mouse Models	Poster	H35-J7	Halls B-H	11 Mon	8 a.m.–noon	
330	Parkinson's Disease: Dopamine and Non-Dopamine Pathways	Poster	J8-K10	Halls B-H	11 Mon	8 a.m.–noon	
331	Parkinson's Disease: Neuroprotective Mechanisms	Poster	K11-M9	Halls B-H	11 Mon	8 a.m.–noon	
332	Ataxias	Poster	M10-N12	Halls B-H	11 Mon	8 a.m.–noon	
333	Huntington's Disease: Animal Models I	Poster	N13-O10	Halls B-H	11 Mon	8 a.m.–noon	
334	Aging: Physiology and Molecular Correlates	Poster	O11-Q1	Halls B-H	11 Mon	8 a.m.–noon	
335	Rett's Syndrome and Other Genetic Developmental Disorders	Poster	Q2-R7	Halls B-H	11 Mon	8 a.m.–noon	
336	Epilepsy: Network Activity and Oscillations	Poster	R8-T3	Halls B-H	11 Mon	8 a.m.–noon	
337	Ischemia: Molecular Mechanisms	Poster	T4-U10	Halls B-H	11 Mon	8 a.m.–noon	
338	Stroke Recovery: Integrated Responses	Poster	U11-V6	Halls B-H	11 Mon	8 a.m.–noon	
339	Ischemia: Pharmacologic Neuroprotection	Poster	V7-X6	Halls B-H	11 Mon	8 a.m.–noon	
340	Myelination and Remyelination: Mechanisms	Poster	X7-Z5	Halls B-H	11 Mon	8 a.m.–noon	
341	Spinal Cord Injury II	Poster	Z6-AA17	Halls B-H	11 Mon	8 a.m.–noon	
342	Spinal Cord Injury: Therapeutics II	Poster	AA18-CC10	Halls B-H	11 Mon	8 a.m.–noon	
343	Neurotoxicity: Mechanisms of Neuronal Damage and Protection	Poster	CC11-EE5	Halls B-H	11 Mon	8 a.m.–noon	
344	Neuroinflammation: Cellular and Molecular Mechanisms	Poster	EE6-GG7	Halls B-H	11 Mon	8 a.m.–noon	
345	Bipolar Disorders: Genetics	Poster	GG8-HH4	Halls B-H	11 Mon	8 a.m.–noon	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
346	Schizophrenia and Bipolar Disorder: Animal Models III	Poster	HH5-II9	Halls B-H	11 Mon	8 a.m.–noon	
347	Schizophrenia and Bipolar Disorders: Biochemical Studies	Poster	II10-JJ14	Halls B-H	11 Mon	8 a.m.–noon	
348	Mechanisms of Anxiety I	Poster	JJ15-MM6	Halls B-H	11 Mon	8 a.m.–noon	
349	Alcohol: Neural Mechanisms of Addiction	Poster	MM7-OO6	Halls B-H	11 Mon	8 a.m.–noon	
350	Cocaine: Neural Mechanisms of Addiction II	Poster	OO7-PP11	Halls B-H	11 Mon	8 a.m.–noon	
351	Neuropeptides and Behavior	Poster	PP12-QQ6	Halls B-H	11 Mon	8 a.m.–noon	
352	Auditory System: Mechanoreceptors and Cochlea	Poster	QQ7-QQ20	Halls B-H	11 Mon	8 a.m.–noon	
353	Auditory System: Sound Localization and Binaural Interactions	Poster	QQ21-RR12	Halls B-H	11 Mon	8 a.m.–noon	
354	Auditory System: Cortical Processing in Animals and Humans	Poster	RR13-SS10	Halls B-H	11 Mon	8 a.m.–noon	
355	Auditory System: Processing in Model Systems and Subcortical Pathways	Poster	SS11-UU1	Halls B-H	11 Mon	8 a.m.–noon	
356	Auditory System: Neural Coding, Experiment and Theory	Poster	UU2-UU17	Halls B-H	11 Mon	8 a.m.–noon	
357	Multisensory: Temporal Factors in Cross-Modal Processing	Poster	UU18-VV6	Halls B-H	11 Mon	8 a.m.–noon	
358	Striate Cortex: Neural Coding II	Poster	VV7-WW1	Halls B-H	11 Mon	8 a.m.–noon	
359	Striate Cortex: Response Properties II	Poster	WW2-WW20	Halls B-H	11 Mon	8 a.m.–noon	
360	Visual Motion: Neural Mechanisms	Poster	WW21-YY10	Halls B-H	11 Mon	8 a.m.–noon	
361	Feature-Based Attention	Poster	YY11-ZZ8	Halls B-H	11 Mon	8 a.m.–noon	
362	Sensorimotor Transformations in the Superior Colliculus	Poster	ZZ9-ZZ21	Halls B-H	11 Mon	8 a.m.–noon	
363	Circuitry for Non-Saccadic Eye Movements	Poster	ZZ22-AAA13	Halls B-H	11 Mon	8 a.m.–noon	
364	Saccades: Psychophysics and Metrics	Poster	AAA14-BBB14	Halls B-H	11 Mon	8 a.m.–noon	
365	Saccades: Physiology and Anatomy	Poster	BBB15-CCC10	Halls B-H	11 Mon	8 a.m.–noon	
366	Vestibular System: Hair Cells, End Organs, and Nerve	Poster	CCC11-DDD8	Halls B-H	11 Mon	8 a.m.–noon	
367	Vestibular System: Human Perception, Posture, and Spatial Orientation	Poster	DDD9-EEE12	Halls B-H	11 Mon	8 a.m.–noon	
368	Thalamic and Cortical Processing	Poster	EEE13-EEE26	Halls B-H	11 Mon	8 a.m.–noon	
369	Pain Models: Behavior I	Poster	FFF1-FFF20	Halls B-H	11 Mon	8 a.m.–noon	
370	Mechanisms of Neuropathic Pain: Signaling Pathways and Models	Poster	FFF21-GGG17	Halls B-H	11 Mon	8 a.m.–noon	
371	Opioid Receptor Pharmacology and Signaling Mechanisms	Poster	GGG18-GGG31	Halls B-H	11 Mon	8 a.m.–noon	
372	Motor Pattern Generation: Invertebrate Models II	Poster	GGG32-GGG45	Halls B-H	11 Mon	8 a.m.–noon	
373	Brain-Machine Interface III	Poster	GGG46-HHH24	Halls B-H	11 Mon	8 a.m.–noon	
374	Brain-Machine Interface: Limb Control	Poster	HHH25-HHH43	Halls B-H	11 Mon	8 a.m.–noon	
375	Factors Regulating GnRH	Poster	HHH44-III8	Halls B-H	11 Mon	8 a.m.–noon	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
376	Hormonal Modulation of Cognition: Estrogenic Effects	Poster	III9-III22	Halls B-H	11 Mon	8 a.m.–noon	
377	Neuroimmunology: Mechanisms of Regulation	Poster	III23-III40	Halls B-H	11 Mon	8 a.m.–noon	
378	Social Behavior: Oxytocin and Vasopressin	Poster	III41-JJJ14	Halls B-H	11 Mon	8 a.m.–noon	
379	Respiratory Regulation: Respiratory Rhythm and Pattern Generation	Poster	JJJ15-JJJ27	Halls B-H	11 Mon	8 a.m.–noon	
380	Early Life Stress: Molecular Mechanisms and Effects	Poster	JJJ28-JJJ49	Halls B-H	11 Mon	8 a.m.–noon	
381	Stress-Modulated Pathways: Amygdala	Poster	JJJ50-JJJ63	Halls B-H	11 Mon	8 a.m.–noon	
382	Stress-Modulated Pathways: Hypothalamus and Bed Nucleus	Poster	JJJ64-KKK21	Halls B-H	11 Mon	8 a.m.–noon	
383	Hypothalamus	Poster	KKK22-KKK31	Halls B-H	11 Mon	8 a.m.–noon	
384	Peptides, Signaling, and Feeding	Poster	KKK32-KKK43	Halls B-H	11 Mon	8 a.m.–noon	
385	Human Memory: Role of Medial Temporal Lobe	Poster	KKK44-KKK64	Halls B-H	11 Mon	8 a.m.–noon	
386	Emotion and Stress	Poster	KKK65-LLL10	Halls B-H	11 Mon	8 a.m.–noon	
387	Neural Mechanisms of Attention	Poster	LLL11-LLL29	Halls B-H	11 Mon	8 a.m.–noon	
388	Executive Function: Network Activity	Poster	LLL30-LLL46	Halls B-H	11 Mon	8 a.m.–noon	
389	Executive Function: Network Activity	Poster	LLL47-LLL61	Halls B-H	11 Mon	8 a.m.–noon	
390	Cognition, Learning, and Memory: Modulation, Aging, and Disease	Poster	LLL62-MMM26	Halls B-H	11 Mon	8 a.m.–noon	
391	Molecular Mechanisms of Memory Consolidation	Poster	MMM27-MMM44	Halls B-H	11 Mon	8 a.m.–noon	
392	Neural Mechanisms for Valuation, Learning, and Decision-Making	Poster	MMM45-NNN10	Halls B-H	11 Mon	8 a.m.–noon	
393	Circuit Mechanisms for Anxiety and Reward	Poster	NNN11-NNN27	Halls B-H	11 Mon	8 a.m.–noon	
394	New Molecular and Biological Techniques in Neuroscience I	Poster	NNN28-NNN55	Halls B-H	11 Mon	8 a.m.–noon	
	Featured Programs						
874	Understanding New Brain Initiatives in the United States and Europe	Special Presentation		Ballroom 20	11 Mon	1:15 - 3 p.m.	
395	All for One and One for All: Progress in Single Cell Neurobiology	Symposium		6A	11 Mon	1:30–4 p.m.	2.5
396	Neuro-Epigenetics in Neural Development, Plasticity, and Brain Disorders	Symposium		6B	11 Mon	1:30–4 p.m.	2.5
397	Maps and Meters for Sound Location	Symposium		6F	11 Mon	1:30–4 p.m.	2.5
398	Neurotransmitter Receptors for Visual Cognition in Primates	Minisymposium		6E	11 Mon	1:30–4 p.m.	2.5
399	Neuroimaging Guided Cognitive Regulation of Food Stimuli: Implications for Obesity	Minisymposium		28A	11 Mon	1:30–4 p.m.	2.5
400	Neurological Consequences of Microglia Priming: Aging, Disease, and Trauma	Minisymposium		29D	11 Mon	1:30–4 p.m.	2.5
402	Connectomics: What, How, and Why	Presidential Special Lecture		Ballroom 20	11 Mon	5:15–6:25 p.m.	1.25

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
	Nanosymposia (1–5 p.m.)						
403	Alzheimer Animal Models: Interventions	Nanosymposium		32B	11 Mon	1–4:15 p.m.	
403	Alzheimer Animal Models: Interventions	Nanosymposium		32B	11 Mon	1–4:15 p.m.	
404	Multiple Sclerosis: Molecular and Cellular Mechanisms of Demyelination and Neurodegeneration	Nanosymposium		24A	11 Mon	1–3:45 p.m.	
405	Animal Models of Schizophrenia Revisited: New Mechanisms and Therapeutic Targets	Nanosymposium		23A	11 Mon	1–4 p.m.	
406	High-Level Vision: Representation and Recognition	Nanosymposium		1B	11 Mon	1–4 p.m.	
407	The Illusion of Stability: Visual Perception and Eye Movements	Nanosymposium		5B	11 Mon	1–4 p.m.	
408	Energy Metabolism	Nanosymposium		2	11 Mon	1–4:15 p.m.	
409	Neuroimaging: Emotion, Reward, and Decision–Making	Nanosymposium		4	11 Mon	1–4:30 p.m.	
410	Computation, Modeling, and Simulation V	Nanosymposium		7B	11 Mon	1–4:15 p.m.	
	Posters (1–5 p.m.)						
411	Cell Lineage	Poster	A1-A16	Halls B-H	11 Mon	1–5 p.m.	
412	Neural Stem Cells and Neurogenesis	Poster	A17-B17	Halls B-H	11 Mon	1–5 p.m.	
413	Cell Migration: Mechanisms	Poster	B18-C1	Halls B-H	11 Mon	1–5 p.m.	
414	Stem Cell Based Disease Models	Poster	C2-C24	Halls B-H	11 Mon	1–5 p.m.	
415	Differentiation of Pluripotent Stem Cells to Neural Lineages	Poster	C25-D19	Halls B-H	11 Mon	1–5 p.m.	
416	Axon Growth and Guidance: Chemotrophic Mechanisms II	Poster	D20-D34	Halls B-H	11 Mon	1–5 p.m.	
417	Dendritic Growth and Branching I	Poster	D35-E11	Halls B-H	11 Mon	1–5 p.m.	
418	Motor System Development	Poster	E12-E36	Halls B-H	11 Mon	1–5 p.m.	
419	Regeneration: CNS I	Poster	E37-F5	Halls B-H	11 Mon	1–5 p.m.	
420	Nicotinic Receptor Trafficking and Regulation	Poster	F6-F18	Halls B-H	11 Mon	1–5 p.m.	
421	GABA Receptors: Physiology and Pharmacology	Poster	F19-G2	Halls B-H	11 Mon	1–5 p.m.	
422	Ion Channels: K^+ Channels II	Poster	G3-G23	Halls B-H	11 Mon	1–5 p.m.	
423	Neurotransmitter Release: Vesicle Recycling and Biogenesis	Poster	G24-G37	Halls B-H	11 Mon	1–5 p.m.	
424	Transmitter Release: Docking, Fusion, and Calcium Dependence	Poster	G38-H3	Halls B-H	11 Mon	1–5 p.m.	
425	Network Interactions: Oscillations and Synchrony III	Poster	H4-H23	Halls B-H	11 Mon	1–5 p.m.	
426	Axonal Plasticity	Poster	H24-H35	Halls B-H	11 Mon	1–5 p.m.	
427	Astrocytes: Synapses	Poster	I1-I15	Halls B-H	11 Mon	1–5 p.m.	
428	Astrocytes: Structural Plasticity and Glutamate Signaling	Poster	I16-J15	Halls B-H	11 Mon	1–5 p.m.	
429	APP Biology	Poster	J16-L9	Halls B-H	11 Mon	1–5 p.m.	
430	Genetics and Functional Genomics	Poster	L10-M14	Halls B-H	11 Mon	1–5 p.m.	
431	Parkinson's Disease: Human Studies	Poster	M15-N18	Halls B-H	11 Mon	1–5 p.m.	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
432	Parkinson's Disease: Mechanisms of Neuroprotection	Poster	O1-P13	Halls B-H	11 Mon	1–5 p.m.	
433	Huntington's Disease: Mechanisms II	Poster	P14-Q2	Halls B-H	11 Mon	1–5 p.m.	
434	Motor Neuron Disease: Mechanisms II	Poster	Q3-R5	Halls B-H	11 Mon	1–5 p.m.	
435	Motor Neuron Disease: Animal Models	Poster	R6-S16	Halls B-H	11 Mon	1–5 p.m.	
436	Aging: Oxidative Stress	Poster	S17-T12	Halls B-H	11 Mon	1–5 p.m.	
437	Dystonia	Poster	T13-U16	Halls B-H	11 Mon	1–5 p.m.	
438	Ischemia: Cellular Mechanisms	Poster	U17-W7	Halls B-H	11 Mon	1–5 p.m.	
439	Ischemia: Pharmacologic Neuroprotection	Poster	W8-X16	Halls B-H	11 Mon	1–5 p.m.	
440	Hypoxia and Ischemia: Stem Cells	Poster	X17-Z2	Halls B-H	11 Mon	1–5 p.m.	
441	Multiple Sclerosis: Mechanisms and Therapeutic Perspectives	Poster	Z3-AA3	Halls B-H	11 Mon	1–5 p.m.	
442	Brain Injury III	Poster	AA4-BB11	Halls B-H	11 Mon	1–5 p.m.	
443	Oxidative Stress, Mitochondrial Function, and Neurodegeneration	Poster	BB12-DD5	Halls B-H	11 Mon	1–5 p.m.	
444	Neurologic Disease: Cellular Mechanims and Oxidative Stress	Poster	DD6-EE1	Halls B-H	11 Mon	1–5 p.m.	
445	Neurotoxicity and Neurodegeneration I	Poster	EE2-GG3	Halls B-H	11 Mon	1–5 p.m.	
446	Neuro-Oncology I	Poster	GG4-HH5	Halls B-H	11 Mon	1–5 p.m.	
447	Somatosensory and Pain: Animal Models	Poster	HH6-II17	Halls B-H	11 Mon	1–5 p.m.	
448	Alcohol Self-Administration: Pharmacology and Genetics	Poster	II18-LL3	Halls B-H	11 Mon	1–5 p.m.	
449	Cocaine: Neural Mechanisms of Addiction III	Poster	LL4-NN1	Halls B-H	11 Mon	1–5 p.m.	
450	Olfactory Coding: Second Order Regions	Poster	NN2-OO13	Halls B-H	11 Mon	1–5 p.m.	
451	Olfaction: Receptors, Transduction, and Central Circuits	Poster	OO14-PP20	Halls B-H	11 Mon	1–5 p.m.	
452	Olfaction: Behavior, Perception, and Its Relation to Neurophysiology	Poster	PP21-QQ26	Halls B-H	11 Mon	1–5 p.m.	
453	Auditory System: Cortical Processing and Human Studies of Natural Sounds	Poster	RR1-RR18	Halls B-H	11 Mon	1–5 p.m.	
454	Auditory System: Model Systems and Subcortical Processing of Natural Sounds	Poster	RR19-SS4	Halls B-H	11 Mon	1–5 p.m.	
455	Auditory System: Neural Circuits and Functional Recovery	Poster	SS5-TT11	Halls B-H	11 Mon	1–5 p.m.	
456	Multisensory: Spatial Factors in Cross-Modal Processing	Poster	TT12-UU23	Halls B-H	11 Mon	1–5 p.m.	
457	Vision: Subcortical Pathways I	Poster	UU24-VV11	Halls B-H	11 Mon	1–5 p.m.	
458	Visual Motion: Behavior, Imaging, and Models	Poster	VV12-WW5	Halls B-H	11 Mon	1–5 p.m.	
459	Attention: Cognitive and Behavioral Studies	Poster	WW6-WW19	Halls B-H	11 Mon	1–5 p.m.	
460	Pain Transduction: Non-TRP Channels and Molecules	Poster	WW20-XX11	Halls B-H	11 Mon	1–5 p.m.	
461	Descending Modulation: Anatomical and Physiological Studies	Poster	XX12-ZZ8	Halls B-H	11 Mon	1–5 p.m.	
462	Pain Models: Behavior II	Poster	ZZ9-AAA1	Halls B-H	11 Mon	1–5 p.m.	
463	Somatosensation: Peripheral and Spinal Cord Representations	Poster	AAA2-AAA18	Halls B-H	11 Mon	1–5 p.m.	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
464	Sensorimotor Maps	Poster	AAA19-BBB2	Halls B-H	11 Mon	1–5 p.m.	
465	Somatosensory: Receptive Fields and Response Properties	Poster	BBB3-BBB22	Halls B-H	11 Mon	1–5 p.m.	
466	Spinal Cord Injury: Plasticity I	Poster	BBB23-EEE1	Halls B-H	11 Mon	1–5 p.m.	
467	Motoneurons: Plasticity after Lesion and in Disease	Poster	EEE2-EEE14	Halls B-H	11 Mon	1–5 p.m.	
468	Motor Cortex: Stimulation and Recording in Motor Tasks (TMS, Microstimulation, Optogenetics)	Poster	EEE15-FFF5	Halls B-H	11 Mon	1–5 p.m.	
469	Cerebellum: Plasticity and Climbing Fibers	Poster	FFF6-FFF26	Halls B-H	11 Mon	1–5 p.m.	
470	Inhibition in Basal Ganglia Loops	Poster	GGG1-GGG16	Halls B-H	11 Mon	1–5 p.m.	
471	Voluntary Motor Control: Motor Learning II	Poster	GGG17-GGG46	Halls B-H	11 Mon	1–5 p.m.	
472	Rapid and Membrane Effects of Estrogens	Poster	GGG47-HHH14	Halls B-H	11 Mon	1–5 p.m.	
473	Sexual Differentiation of Physiology and Behavior	Poster	HHH15-HHH27	Halls B-H	11 Mon	1–5 p.m.	
474	Respiratory Regulation: Hypoxia and Obstructive Sleep Apnea	Poster	HHH28-HHH43	Halls B-H	11 Mon	1–5 p.m.	
475	Early Life Stress: Effects on Anxiety, Social Function, and Depression	Poster	HHH44-III22	Halls B-H	11 Mon	1–5 p.m.	
476	Feeding Hormones and Hindbrain	Poster	III23-III39	Halls B-H	11 Mon	1–5 p.m.	
477	Molecular and Cellular Control of Circadian Clocks	Poster	III40-JJJ14	Halls B-H	11 Mon	1–5 p.m.	
478	Sleep: Molecular, Cellular, and Pharmacological	Poster	JJJ15-JJJ46	Halls B-H	11 Mon	1–5 p.m.	
479	Emotion and Development	Poster	JJJ46-JJJ59	Halls B-H	11 Mon	1–5 p.m.	
480	Working Memory and Executive Function II	Poster	JJJ60-KKK9	Halls B-H	11 Mon	1–5 p.m.	
481	Decision-Making: Value	Poster	KKK10-KKK32	Halls B-H	11 Mon	1–5 p.m.	
482	Social Cognition: Disorders	Poster	KKK33-KKK53	Halls B-H	11 Mon	1–5 p.m.	
483	Medial Temporal Lobe Anatomy, Pharmacology, and Function	Poster	KKK54-KKK66	Halls B-H	11 Mon	1–5 p.m.	
484	Incentive Learning and Memory	Poster	KKK67-LLL9	Halls B-H	11 Mon	1–5 p.m.	
485	Learning and Memory: Physiology II	Poster	LLL10-LLL25	Halls B-H	11 Mon	1–5 p.m.	
486	Neural Mechanisms Mediating Fear and Anxiety	Poster	LLL26-LLL55	Halls B-H	11 Mon	1–5 p.m.	
487	Genomics, Bioinformatics, and Systems Biology	Poster	LLL56-MMM17	Halls B-H	11 Mon	1–5 p.m.	
488	Staining, Tracing, and Imaging Novel Methods	Poster	MMM18-NNN1	Halls B-H	11 Mon	1–5 p.m.	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
489	Staining, Tracing, and Imaging Techniques III	Poster	NNN2-NNN31	Halls B-H	11 Mon	1–5 p.m.	
490	Computation, Modeling, and Simulation VI	Poster	NNN32-NNN44	Halls B-H	11 Mon	1–5 p.m.	
PDW17	Teaching Neuroscience: Is the Printed Textbook Obsolete?	Professional Development Workshops		31C	11 Mon	9-11 a.m	
PDW18	A Guide to Journal Publishing	Professional Development Workshops		30C	11 Mon	9 a.m.-noon	
PDW14-B	Graduate School Fair	Professional Development Workshops		Sails Pavilion	11 Mon	noon-2 p.m.	
PDW10	Actively Managing Your Career: What They Didn't Teach You in School	Professional Development Workshops		31C	11 Mon	noon - 2:30 p.m.	
ME06	Global Advocacy Forum: Enhancing Global Cooporation on Advocacy	Meetings and Events		30C	11 Mon	3-5 p.m.	

Dynamic Posters — Monday AM/PM

Monday's dynamic poster presentations are listed below. The listing includes the locations of each dynamic poster's corresponding paper poster, which will be presented on the same day as the dynamic poster presentation unless noted otherwise. All dynamic poster presentations will occur in the San Diego Convention Center, Halls B-H. Dynamic poster displays are numbered 1-10 and are spread throughout the poster floor. For more information on dynamic posters, please visit SfN.org

Theme	Abstract Title	Presenter Name	Dynamic Poster Location	Paper Poster Location	Paper Poster Pres. No.
	Dynamic Posters (8 a.m.-noon)				
Theme A: Development	Neuronal migration and radial glial cell proliferation are regulated by calcium transient activity propagated through radial fibers during corticogenesis	Brian Rash	DP1	B20	316.03
Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms	Cell-type- and activity-dependent extracellular correlates of intracellular spiking: Whole-cell multi-patch slice recordings with silicon probes	Costas Anastassiou	DP2	G38	326.15
Theme C: Disorders of the Nervous System	Reorganization of sensorimotor network after spinal cord injury with connectivity-based approach	Yu-Sun Min	DP5	Z8	341.03
Theme C: Disorders of the Nervous System	Light sheet fluorescent microscopy and three dimensional analysis of the injured spinal cord	Cynthia Soderblom	DP6	Z17	341.12
Theme D: Sensory and Motor Systems	Intracellular correlates of behavioral state in mouse visual cortex	Corbett Bennett	DP7	WW9	359.08
Theme D: Sensory and Motor Systems	Brain-computer interfaces for assessment and communication in patients with disorders of consciousness	Christoph Guger	DP8	HHH8	373.11
Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge	Rhythmic activity in brainstem-cerebellum slice co-cultures containing the preBötzinger complex	Mikkel Herly	DP9	JJJ25	379.11
Theme F: Cognition and Behavior	Small animal functional magnetic resonance imaging: Bridging the gap in translational research for psychiatric diseases	Ben Jarrett	DP10	LLL49	389.03
Theme F: Cognition and Behavior*	Defeats drive the emergence of social hierarchy representations in the human brain*	Romain Ligneul*	DP4*	GGG10*	186.12*
	Dynamic Posters (1-5 p.m.)				
Theme A: Development	Human neural stem cells (HNSCs) in the monkey brain without immunosuppression: long-term survival and differentiation for 24 months	Sang-Rae Lee	DP1	B2	412.12
Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms	From neuron to network: Modeling the role of synaptic proteins in neuronal network activity	Ayal Lavi	DP2	H7	425.05
Theme C: Disorders of the Nervous System	EEG abnormalities in patients with Parkinson's disease during online grasp adaptation	Jamie Lukos	DP3	N3	431.08
Theme C: Disorders of the Nervous System	*In vivo* cell specific characterization of cortical spreading depression	Jorge Mendez	DP4	II8	447.21
Theme C: Disorders of the Nervous System	Altered gait patterns in future Parkinson's fallers revealed by performance of a secondary motor task	Graham Kerr	DP5	N8	431.13

Theme	Abstract Title	Presenter Name	Dynamic Poster Location	Paper Poster Location	Paper Poster Pres. No.
Theme C: Disorders of the Nervous System	Cerebellar initiation of dystonia in genetic animals models of DYT1, DYT11, and DYT12	Rachel Fremont	DP6	U5	437.11
Theme D: Sensory and Motor Systems	Multimodal computation in the superior colliculus of running mice	Evan Feinberg	DP7	VV4	457.07
Theme D: Sensory and Motor Systems	Representation of global motion in the mouse barrel cortex, a voltage sensitive dye (VSD) imaging study	Eugenia Vilarchao	DP8	BBB12	465.1
Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge	Identification of sleep-promoting neurons in the ventrolateral preoptic nucleus as glucose-sensing neurones	Thierry Gallopin	DP9	JJJ30	478.16
Theme F: Cognition and Behavior	Anxiety and altered insula connectivity at rest	Janine Bijsterbosch	DP10	LLL36	486.11

*Paper presentation will occur during the morning poster session on Sunday, Nov. 10, 11 a.m.–noon.

Monday Workshops, Meetings & Events

Professional Development, Advocacy, and Networking Resources

✍ Preregistration Required $ Course Fee 🕮 Professional Development Networking Public Outreach Online Content

Monday, Nov. 11

Teaching Neuroscience: Is the Printed Textbook Obsolete? 🕮

Organizer: Richard Olivo, PhD

Panelists: John H. Byrne, PhD; Sydney Carroll; David B. Daniel, PhD; Robert V. Prior; Leonard E. White, PhD

9–11 a.m.
San Diego Convention Center: 31C
Contact: profdev@sfn.org

This year's workshop on teaching neuroscience will explore the future of textbooks. Hear from a publisher of advanced books in the sciences, a neuroscience editor for a leading publisher of college textbooks, an editor of an online textbook that receives 100,000 hits per month, a cognitive scientist who finds that digital formats are not necessarily better for student learning, and a faculty member teaching a Coursera massive open online course (MOOC). The workshop will end with an open discussion and breakout groups.

A Guide to Journal Publishing 🕮

Organizers: Verity Brown, PhD; Shamus O'Reilly, PhD

Panelists: Toby Charkin, PhD; Jud Dunham, PhD; Daniel Morgan, PhD; Michael Rugg, PhD; Randall Sakai, PhD; Kim Wallen, PhD

9 a.m.–noon
San Diego Convention Center: 30C
Contact: profdev@sfn.org

Journals form a core part of the process of scholarly communication and are an integral part of scientific research itself. Journals exist to disseminate new research findings and the latest new thinking to scholarly and professional communities worldwide. This workshop will present a rare opportunity to gain insight into journal publishing from Elsevier Publishing staff and editors including Professors Verity Brown (*Neuroscience & Biobehavioral Reviews*), Michael Rugg (*Neuropsychologia*), Randall Sakai (*Physiology & Behavior*), and Kim Wallen (*EiC Hormones and Behavior*). Speakers will cover myriad topics including authorship, reviewing, open access, and innovation around the journal experience. There will be ample opportunity for your questions.

Actively Managing Your Career and Life: What They Didn't Teach You in School 🕮

Organizer: Marty Nemko, PhD

noon–2:30 p.m.
San Diego Convention Center: 31C
Contact: profdev@sfn.org

You have the "hard" skills needed to advance your research, but have you mastered the "soft skills" that are equally important for career success? This workshop offers practical advice and tactics to help you navigate an increasingly complex and competitive environment — from creating a personal mission statement to gaining skills for effective time management, communications, networking, finding and leveraging mentors, negotiating to get what you want, and more. Learn how actively managing your career and life can lead to increased satisfaction and success. Marty Nemko is an acclaimed career coach, author, blogger, and radio host with a PhD in educational psychology. His most recent book is *How to Do Life: What They Didn't Teach You in School.*

Global Advocacy Forum ✍ Enhancing Global Cooperation on Advocacy

Organizers: Sten Grillner, PhD

3–5 p.m.
San Diego Convention Center: 30C
Contact: globalaffairs@sfn.org

Join the Global Advocacy Committee of the International Brain Research Organization (IBRO) and SfN's International Affairs Committee as they discuss the importance of neuroscience advocacy on a global scale. Speakers from Brain Canada, the International Society for Neurochemistry, the Federation of European Neuroscience Societies, and SfN will discuss best practices and share success stories. Join leaders from neuroscience societies in a poster session to learn more about programs worldwide. RSVP at bit.ly/IBROSfNGlobalAdvocacy.

Monday Socials

Monday, Nov. 11, 6:45 – 8:45 p.m.

Alzheimer's and Related Dementias Social
Purely Social
San Diego Marriott Marquis and Marina: Marriott Hall 2

Chair: Chad A. Dickey, PhD

This is an opportunity to catch up and network with other Alzheimer's disease and related dementias researchers. It will be a strictly social event with cash bar.

Behavioral Neuroendocrinology Social
Social with Brief Presentation
San Diego Marriott Marquis and Marina: Marriott Hall 6

Chair: Cheryl L. Sisk, PhD

Guests: Winner of the 2013 Frank A. Beach Award (to be named)

Come meet and speak with friendly colleagues with interests in hormones, brain, and behavior. Whether you are new to the field or an old-timer, this is a fun opportunity to socialize with others interested in those oh-so-powerful molecules. This is a social occasion at which the winner of the Society for Behavioral Neuroendocrinology's 2013 Frank A. Beach Award will be announced.

Developmental Neurobiology Social: The Challenges and Benefits of Controlling Human Brain Development in the Laboratory
Social with Brief Presentation
San Diego Marriott Marquis and Marina: Presidio

Chair: Ronald D. McKay, PhD

Guests: A. Calof, A. Kriegstein, S. Pfaff, C. Shatz, L. Tsai

The development of the brain is one of the most compelling narratives in contemporary neuroscience. Acting from the earliest specification of neural stem cells during pluripotency through the stunning events that build the brain and reaching into the memory and regenerative mechanisms at work, developmental insight is central to our understanding of the nervous system. Come and share your interest, even excitement, in the constantly growing nervous system.

Faculty for Undergraduate Neuroscience Social
Social with Brief Presentation
San Diego Marriott Marquis and Marina: Marriott Halls 3 and 4

Chair: Elaine R. Reynolds, PhD

Guests: N. Sandstrom, J. Smith

Socialize and exchange ideas with others interested in undergraduate neuroscience research and education. Undergraduates will present posters of their research, and FUN Student Travel Awards and Educator of the Year Award will be presented. See the FUN website for travel award information and registration for poster presentations at the FUN Social (funfaculty.org).

Hippocampus Social
Purely Social
San Diego Marriott Marquis and Marina: Atlanta and Chicago

Chair: Brian R. Christie, PhD

Still searching for an answer to the Great Hippocampus Question? Come join other graduate students, postdoctoral fellows, and investigators whose research focuses on this amazing structure and see if your thinking about the hippocampus has "evolved."

Ingestive Behavior Social: Ingestive Interactions!
Purely Social
San Diego Marriott Marquis and Marina: Torrey Pines 1 and 2

Chair: Linda Rinaman, PhD

Guests: G. Aston-Jones, H.R. Berthoud, L. de Lecea, S. Leibowitz, B. Levin, G. Petrovich, R. Simerly, A. Spector, A. Watts

After a long day of posters and talks, join us for a purely social meet-and-greet among old friends and new acquaintances. Trainees are especially welcome! Bring your friends and mingle with others interested in ingestion, body energy homeostasis, motivated behavior, reward, hypothalamic function, autonomic processes, and more!

Music Social
Purely Social
San Diego Marriott Marquis and Marina: Bayside

Chair: William J. Pearce, PhD

Guests: Space Clamps, C. Ammonis

An evening of music will be provided by SfN member musicians. All musical types from rock to country to opera are welcome, with emphasis on variety and enthusiasm. Accompaniment is available given two weeks of advance notice. The program fills quickly and there are no walk-ons, so contact us as soon as possible at wpearce@llu.edu to reserve a place on the program. Each performance is allotted 10 minutes. Join us for another casual, informal, and fun evening of neuroscientists enjoying music.

Neural Control of Autonomic and Respiratory Function Social and Data Highlight
Social with Brief Presentation
San Diego Marriott Marquis and Marina: Rancho Santa Fe

Chair: Alan Sved, PhD

This social event is a gathering of scientists interested in the role of the autonomic nervous system in health and disease such as hypertension, sleep apnea, metabolic syndrome, obesity, and others. The gathering is meant to facilitate informal interactions between scientists at all career levels and highlight some of the most transformational research in this field. The social will highlight some of the abstracts presented at this year's meeting.

Pavlovian Society Social
Purely Social
San Diego Marriott Marquis and Marina: Torrey Pines 3

Chair: Jeansok Kim, PhD

Guests: J. McGaugh, S. Mizumori

Get together with scientists of all academic levels (student to emeritus) working at all levels of analysis (molecules to behavior) with a shared interest in learning, memory, and emotion. Tolmanians and other non-Pavlovians welcome.

Psychopharmacology Social: Your Brain on Drugs
Purely Social
San Diego Marriott Marquis and Marina: Marriott Hall 5

Chair: Stan B. Floresco, PhD

Guests: G. Aston-Jones, K.A. Cunningham, P.J. Fletcher, B.T. Hope, S.A. Josselyn, B. Moghaddam, D.A. Morliak, A.G. Phillips, J.D. Salamone, Y. Shaham

Back by popular demand! Please come join us for an informal evening to socialize with psychopharmacologists — people who know a thing or two about mind-altering substances. Catch up with friends and colleagues, meet others in the field, and loosen up with a refreshing beverage after a hard day of science while listening to a psychopharmacologically-inspired playlist. All are welcome.

Vision Social
Social with Brief Presentation
San Diego Marriott Marquis and Marina: Marriott Hall 1

Chair: Cristopher M. Niell, PhD

Guests: E.M. Callaway, W. Guido, S. Kastner, J.A. Movshon, D.L. Ringach, J.T. Trachtenberg, W.M. Usrey

Come join your fellow vision researchers for libations and lively interaction. In addition to the opportunity to meet friends and collaborators, old and new, we'll have some fun interaction featuring our invited visionaries.

Monday Satellite Events & Non-SfN Socials

Full descriptions and the latest details on these satellite events and socials not sponsored by SfN are available online at SfN.org/satellites. These events also are available in the online Neuroscience Meeting Planner (NMP). Attendees can access the NMP on-site or at SfN.org/nmp.

Sponsor Category Key: (1) Commercial (2) University/Nonprofit (3) Individual/Group

Title	More Information	Time	Location	Room	Key
Monday , Nov. 11					
10th Annual Christopher Reeve "Hot Topics" in Stem Cell Biology	rachelb@sanfordburnham.org	6:30–9:30 p.m.	San Diego Convention Center	6A	1
Advances in Single Neuron and Network Electrical Recording Techniques	margaret@alascience.com	6:30–8 p.m.	San Diego Convention Center	23A	1
Association of Korean Neuroscientists: Annual Meeting and Social	yson@temple.edu	6:30–9:30 p.m.	akneuro.org/cms/		2
Behavioral Optogenetics: How Neuronal Activity Relates to Behavior	yvonne@noldus.com	6:30–9 p.m.	Manchester Grand Hyatt	Edward AB	1
Club Hypnos	bmanning@srsnet.org	6:30–8 p.m.	Hilton San Diego Bayfront	Indigo Ballrooms AE	2
Deciphering the Neural Circuit Basis of Brain Disease via *In Vivo* Imaging and Optogenetics	scott@inscopix.com	6:30–9:30 p.m.	San Diego Convention Center	25ABC	1
Ernst Strungmann Forum Social	lupp@esforum.de	6:30–9 p.m.	San Diego Marriott Marquis	Point Loma	2
Friends of Ohio State University Social	medicine.osu.edu/neuroscience/people/faculty/dana–m–mctigue–ph–d/Pages/index.aspx	6:30–8:30 p.m.	Hilton San Diego Bayfront	Aqua 300	2
Fluorescence Immunocytochemistry: Are the Brightest Fluorophores Enough?	gregg.hickey@rndsystems.com	6:30–8 p.m.	San Diego Convention Center	32A	2
Functional Brain Imaging at Cellular Resolution: The New Frontier of Brain Mapping	tricia.duff@olympus.com	6:30–10 p.m.	San Diego Marriott Marquis and Marina	San Diego Ballroom Salon A	1
Getting the Most Out of pCLAMP Software	Jeffrey.Tang@moldev.com	6:30–8:30 p.m.	San Diego Convention Center	27B	1
HEKA Electrophysiology Update	marketing@heka.com	6:30–8 p.m.	San Diego Marriott Marquis and Marina	Santa Rosa	1

Title	More Information	Time	Location	Room	Key
Internal Sensations, Artificial Intelligence, and Semblance Hypothesis	umvadakk@cc.umanitoba.ca	7–8 a.m.	San Diego Convention Center	3	3
In Vitro Microelectrode Array Recording Techniques	maulik@alascience.com	6:30–8 p.m.	San Diego Convention Center	24A	1
Leibniz Lecture: Niels Birbaumer on Clinical Application of Brain-Computer Interfaces	surjo@soekadar.com	6:30–7:30 p.m.	Hilton San Diego Bayfront	Aqua 308	2
Neuroscience Down Under	p.noakes@uq.edu.au	6:30–8 p.m.	Manchester Grand Hyatt	Randle Ballroom AB	2
Neuroscience in Germany XIX Social	emily.formica@dfg.de	7:30–10 p.m.	Hilton San Diego Bayfront	Aqua 306AB	2
NIH Brain Initiative: Forum to Discuss Interim Report	jorgensonla@od.nih.gov	6:30–8:30 p.m.	San Diego Convention Center	33C	2
SAGE Labs Symposium	kristen.bettinger@sial.com,	6:30–9 p.m.	San Diego Convention Center	4	1
Schizophrenia Social	hakon@ schizophreniaforum.org	6:30–8:30 p.m.	San Diego Convention Center	11B	2
Sleep and Circadian Biology DataBlitz	laposkya@nhlbi.nih.gov	8–10 p.m.	Hilton San Diego Bayfront	Indigo Ballrooms BF	2
Tackling the Terabyte: How Should Research Adapt to the Era of Big Data?	m.parker@nature.com	6:30–8:30 p.m.	Hilton San Diego Bayfront	Sapphire 400	3
Taiwan Night	cclien@ym.edu.tw	6:30–9:30 p.m.	San Diego Convention Center	30C	2
The Grass Foundation and Marine Biological Laboratory Social	execassist@ grassfoundation.org	6:30–8:30 p.m.	San Diego Marriott Marquis and Marina	La Costa	2
The International Society for Serotonin Research Mixer	becks@email.chop.edu	6:30–8:30 p.m.	Hennessy's Gaslamp Tavern	708 4th Ave.	3
Transitioning Beyond the Postdoc: Workshop for Early Career Investigators	seiservices.com/Nida/ fronteirs 2013/	6:30–9 p.m.	San Diego Marriott Marquis and Marina	Marina Ballroom Salon D	2

Notes

Notes

Complete Session Listing

Monday AM

SPECIAL LECTURE *San Diego Convention Center*

294. Putting Sensory Back into Voluntary Control — CME

Mon. 8:30 AM - 9:40 AM — Ballroom 20

Speaker: S. H. SCOTT, *Queen's University, Canada.*

Optimal feedback control can explain many features of biological movement, such as success with variability, motor synergies, and goal-directed behavior. I will describe the use of optimal control to interpret motor performance, highlighting the importance of sensory feedback in this process. The lecture will also describe how corrective responses to small visual or mechanical perturbations under a broad range of behavioral contexts provide an important window to probe voluntary control and its neural basis.

SYMPOSIUM *San Diego Convention Center*

295. The Emotion Triad: The Role of Interactions Between the Amygdala, Hippocampus, and Medial Prefrontal Cortex in Mood and Anxiety — CME

Mon. 8:30 AM - 11:00 AM — 6A

Chair: J. A. GORDON

The amygdala, medial prefrontal cortex, and hippocampus are separately implicated in mood and anxiety. This symposium will explore the dynamics and causal role of interactions between these brain regions in behavior. Speakers will present data using a variety of approaches, including multisite neural recordings, and genetic and optogenetic manipulations in rodent and non-human primate models. Combined, the symposum will present a unified view of a three-part circuit crucial for emotional behavior.

8:30 **295.01** Introduction.

8:35 **295.02** Prefrontal cortex-amygdala circuit dynamics predict stress susceptibility. K. DZIRASA. *Duke Univ. Med. Ctr.*

9:10 **295.03** Directionality within the amygdala-prefrontal-hippocampal network determines behavioral response to threat. J. A. GORDON. *Columbia Univ.*

9:45 **295.04** Basolateral amygdala projections to the ventral hippocampus and prefrontal cortex in anxiety-like behaviors. K. M. TYE. *MIT.*

10:20 **295.05** From adaptive learning to anxiety in primate networks. R. PAZ. *Weizmann Institue of Sci.*

10:55 **295.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

296. Neuropeptide Signaling in Cellular Interactions — CME

Mon. 8:30 AM - 11:00 AM — 6B

Chair: I. GOZES

Neuropeptide signaling is functionally essential through G protein-coupled receptors, which are important drug targets. Neuropeptide-stem cell interaction, cell migration, signaling-system biology, drug design, and development will be explored. The symposium will focus on PACAP, VIP, bradykinin, endothelin, galanin, and a downstream drug candidate, davunetide. Disease targets include Alzheimer's and related tauopathies, post-traumatic stress disorder, depression, stroke, and spinal cord injury.

8:30 **296.01** Introduction.

8:35 **296.02** Functional role for neuropeptides and their signaling cascades in microglial migration. M. NODA. *Kyushu Univ.*

9:10 **296.03** Neuropeptides and stem cell therapeutics: spinal cord injury and stroke. S. SHIODA. *Showa Univ. Sch. Of Med.*

9:45 **296.04** PACAP signaling through cyclic AMP in the central nervous system: implications for stress resilience. L. EIDEN. *NIH, NIMH-IRP.*

10:20 **296.05** From neuropeptides to drug candidates: Davunetide targeting microtubule dysfunction and tau pathology. I. GOZES. *Sackler Sch. Med/Tel Aviv Univ.*

10:55 **296.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

297. The Role of Transposable Elements in Health and Diseases of the Central Nervous System — CME

Mon. 8:30 AM - 11:00 AM — 6F

Chair: M. REILLY
Co-Chair: F. H. GAGE

Almost half of mammalian genomes are comprised of transposable elements (TEs). Yet, their role in human health and disease is undefined. The impetus for this symposium comes from the recent identification of CNS-specific TEs as generators of genetic heterogeneity and their ability to re-wire gene expression networks in the brain. The symposium will address the role of TEs in health and diseases of the CNS.

8:30 **297.01** Introduction.

8:35 **297.02** Regulation and potential function of mobile elements in neurons. F. H. GAGE. *The Salk Inst.*

9:10 **297.03** L1 retrotransposition in the neuronal genome. G. FAULKNER. *Mater Med. Res. Inst. (MMRI).*

9:45 **297.04** The transposon storm: from Barbara McClintock to Lou Gehrig. J. DUBNAU. *Cold Spring Harbor Lab.*

10:20 **297.05** Activation of transposable elements in human alcoholism and a rat model of PTSD. I. PONOMAREV. *Univ. of Texas At Austin.*

10:55 **297.06** Closing Remarks.

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

MINISYMPOSIUM *San Diego Convention Center*

298. Emerging Roles of Resurgent Sodium Currents in Neuronal Excitability and Pathophysiology — CME

Mon. 8:30 AM - 11:00 AM — 6E

Chair: T. R. CUMMINS
Co-Chair: A. LAMPERT

Resurgent sodium currents, unusual currents originally identified in cerebellar Purkinje neurons, can substantially impact action potential generation in electrically excitable cells. This minisymposium highlights recent advances in our understanding of resurgent sodium current generation, modulation of firing activity in CNS and PNS neurons, and the role of resurgent sodium currents in altered excitability associated with pain, epilepsy, and muscle disorders.

8:30 **298.01** Introduction.

8:35 **298.02** Roles of the resurgent sodium current in generating delayed afterpotentials and regulating firing activity in entorhinal cortex stellate cells. J. MAGISTRETTI. *Univ. of Pavia.*

8:55 **298.03** Importance of resurgent sodium currents in the development of epilepsy. M. K. PATEL. *Univ. Virginia Hlth. Sys.*

9:15 **298.04** Molecular and structural determinants of resurgent sodium current. A. LEWIS. *Northwestern Univ.*

9:35 **298.05** Modulation of resurgent sodium currents by inflammation and mutations underlying paroxysmal extreme pain disorder. T. R. CUMMINS. *Indiana Univ. Sch. Me*d.

9:55 **298.06** Toxins and chemotherapeutic's actions on sensory neuron's resurgent sodium currents. A. LAMPERT. *FAU Erlangen-Nürnberg.*

10:15 **298.07** Resurgent sodium currents in cardiac and skeletal muscle disorders. A. D. PIEKARZ. *Eli Lilly & Co.*

10:35 **298.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

299. Genes, Environment, and Cognitive Function — CME

Mon. 8:30 AM - 11:00 AM — 28A

Chair: O. LAZAROV
Co-Chair: G. TESCO

It has become clear that environmental factors play a major role in the development of cognitive impairments and Alzheimer's disease (AD) in particular. Increasing evidence suggests that traumatic brain injury and stroke are risk factors for AD. Conversely, environmental enrichment and exercise enhance brain plasticity and reduce neuropathology. This symposium will focus on the mechanism by which genes and environment play in concert to induce cognitive impairments and AD.

8:30 **299.01** Introduction.

8:35 **299.02** Alzheimer's disease and stroke: partners in crime in cognitive dysfunction. C. IADECOLA. *Weill Med. Col. Cornell Univ.*

8:55 **299.03** Genetic resiliency following blast-related traumatic brain injury in US military personnel. D. BRODY. *Washington Univ.*

9:15 **299.04** LDL receptor family, reelin and cognition. J. HERZ. *UT Southwestern.*

9:35 **299.05** Presenilins, nicastrin, and notch in adult brain function and dysfunction. J. SHEN. *Harvard Med. Sch.*

9:55 **299.06** Linking acute brain injuries to Alzheimer's disease: role of BACE1 elevation. G. TESCO. *Tufts Univ. Sch. of Med.*

10:15 **299.07** Environmental enrichment does not rescue critical learning and memory signals impaired in Alzheimer's disease. O. LAZAROV. *The Univ. of Illinois at Chicago.*

10:35 **299.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

300. Dynamic Signaling Mechanisms of Morphogenetic Proteins in the Developing and Adult Nervous System — CME

Mon. 8:30 AM - 11:00 AM — 29D

Chair: L. N. BORODINSKY
Co-Chair: F. CHARRON

The morphogenetic proteins are secreted factors essential for tissue morphogenesis. In the nervous system it is generally accepted that these proteins target progenitor cells to program them for the generation of specialized neural cell phenotypes. However, recent studies have expanded our understanding of morphogenetic protein actions. This minisymposium will showcase the latest discoveries on their signaling, the nature of target cells, and their functions in the developing and adult nervous system.

8:30 **300.01** Introduction.

8:35 **300.02** Specification of human neural subtypes by morphogens. S. ZHANG. *Univ. Wisconson.*

8:55 **300.03** Cell fate unsealed: spinal neuron differentiation controlled by the interplay between BMPs and electrical activity. L. N. BORODINSKY. *Univ. of California Davis Sch. of Med.*

9:15 **300.04** Switch in Shh signaling during spinal cord development. Y. H. BELGACEM. *Univ. of California Davis Sch. of Med*.

9:35 **300.05** Regulation of differential turning responses to Shh in axon guidance. F. CHARRON. *Inst. de Recherches Cliniques de Montreal.*

9:55 **300.06** The birth and death of synapses: a role for Wnt signaling. P. C. SALINAS. *Univ. Col. London.*

10:15 **300.07** Wnt signaling and the control of synaptic strength. A. V. MARICQ. *Univ. of Utah.*

10:35 **300.08** Closing Remarks.

DAVID KOPF LECTURE ON NEUROETHICS
San Diego Convention Center

301. Blaming the Brain: Behavioral Sciences in the Courtroom

Mon. 10:00 AM - 11:00 AM — Ballroom 20

Speaker: N. A. FARAHANY, *Duke Univ*

Support contributed by David Kopf Instruments.

Recent scientific progress has dramatically advanced our understanding of biological, neurological, and environmental contributions to normal and deviant human behavior. This lecture will present the first comprehensive empirical study on the use of biosciences in the United States and other legal systems. Focusing on criminal law and tort law, the lecture will cover the nature of claims being advanced, shifting attitudes toward scientific evidence in the legal system, and future implications for the relationship between law and neuroscience.

• Indicated a real or perceived conflict of interest, see page 149 for details.

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SPECIAL LECTURE *San Diego Convention Center*

302. Sensory Processing in *Drosophila*: Synapses, Circuits, and Computations— CME

Mon. 11:30 AM - 12:40 PM — Ballroom 20

Speaker: R. I. WILSON, *Harvard Med. Sch.*

Many of the basic computations involved in sensory processing are shared across sensory modalities and species. Understanding sensory processing requires identifying these canonical computations, why they might be useful to the organism, and how they are implemented at the level of cells, synapses, and circuits. The lecture will discuss recent work investigating these problems in the fly *Drosophila* melanogaster, using *in vivo* whole-cell recordings from genetically-identified neurons.

NANOSYMPOSIUM

303. Axon Growth and Guidance

Theme A: Development

Mon. 8:00 AM – *San Diego Convention Center*, 25A

8:00 **303.01** Revealing the Extracellular Interactome: Cell surface receptor function in the nervous system through protein interaction networks and structures. E. OZKAN*; R. A. CARRILLO; P. H. CHIA; C. L. EASTMAN; R. R. WANG; R. WEISZMANN; D. WAGHRAY; K. G. JOHNSON; T. WALZ; S. E. CELNIKER; K. SHEN; K. ZINN; K. C. GARCIA. *Univ. of Chicago, Caltech, Stanford Univ., Stanford Univ., Harvard Med. Sch., Lawrence Berkeley Natl. Lab., Pomona Col.*

8:15 **303.02** TRIM9 controls signaling downstream of netrin and DCC during axon guidance and branching. C. C. WINKLE*; C. PARK; J. VALTSCHANOFF; S. GUPTON. *UNC Chapel Hill, UNC Chapel Hill, UNC Chapel Hill.*

8:30 **303.03** Characterizing Slit as an attractive cue in the *Drosophila* CNS midline. M. ALAVI*; M. SONG; G. ANDREWS; A. BOUSUM; T. KIDD. *Univ. of Nevada Reno.*

8:45 **303.04** EphA4 receptor *in vivo* cleavage is required for spinal motor neuron guidance. G. GATTO*; I. DUDANOVA; R. KLEIN. *Max Planck Inst. of Neurobio., Max Planck Inst. of Neurobio.*

9:00 **303.05** EphB receptor forward signaling coordinates the selective cofasciculation of reciprocal thalamic and cortical axons during brain development. C. W. COWAN*; M. A. ROBICHAUX; G. CHENAUX; H. H. HO; K. Y. KWAN; N. SESTAN; M. E. GREENBERG; M. HENKEMEYER. *Harvard Med. Sch. and McLean Hosp., Harvard Med. Sch. and UT Southwestern, UT Southwestern Med. Sch., Harvard Med. Sch., Yale Univ. Sch. of Med.*

9:15 **303.06** Antagonistic functions of Dishevelleds regulate Frizzled3 recycling via filopodia tips in Wnt-mediated growth cone turning. K. ONISHI*; B. SHAFER; C. LO; F. TISSIR; A. M. GOFFINET; Y. ZOU. *Univ. of California, San Diego, Univ. Catholique de Louvain.*

9:30 **303.07** Endoplasmic reticulum motility in the growth cone is controlled by microtubule +TIPs and modulates axonal growth and guidance. T. FOTHERGILL*; A. PRICE; D. LUMBARD; M. SANTIAGO-MEDINA; E. W. DENT. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

9:45 **303.08** CNP/cGMP signaling regulates axon branching and growth by modulating microtubule polymerization. L. MA*; C. XIA; M. NGUYEN; A. GARRISON; Z. ZHAO; Z. WANG; C. SUTHERLAND. *USC, Univ. of Dundee.*

10:00 **303.09** Calcium-dependent calpain regulation of adhesion dynamics in axon pathfinding. P. C. KERSTEIN*; T. M. GOMEZ. *Univ. of Wisconsin-Madison.*

10:15 **303.10** An essential role of Elfn1 in the formation of hippocampal inhibitory neural circuits containing somatostatin-positive neurons. N. H. TOMIOKA*; H. MIYAMOTO; M. HATAYAMA; N. MORIMURA; Y. MATSUMOTO; T. SUZUKI; M. O. ODAGAWA; Y. S. ODAKA; Y. IWAYAMA; K. YAMADA; T. YOSHIKAWA; K. YAMAKAWA; J. ARUGA. *RIKEN Brain Sci. Inst., RIKEN Brain Sci. Inst., PRESTO, RIKEN Brain Sci. Inst., RIKEN Brain Sci. Inst., RIKEN Brain Sci. Inst.*

10:30 **303.11** TRF2s is a neuronal mRNA-binding protein and translational enhancer that regulates axonal and synaptic plasticity-related targets. P. ZHANG; K. ABDELMOHSEN; Y. LIU; K. BECKER; M. GOROSPE; M. P. MATTSON*. *Lab. of Neurosciences, NIA Biomedial Res. Ctr., Lab. ofGenetics, NIA Biomedial Res. Ctr.*

NANOSYMPOSIUM

304. Presynaptic Dynamics

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center*, 4

8:00 **304.01** Intracellular calcium waves mediate asynchronous release in zebrafish motor neurons. H. WEN; J. M. HUBBARD; M. W. LINHOFF; G. MANDEL; P. BREHM*. *Oregon Hlth. & Sci. Univ., Howard Hughes Med. Inst.*

8:15 **304.02** Ectopic release at a mammalian ribbon synapse reflects a transition from local to global control of exocytosis by presynaptic Ca channels. J. KE; B. MEHTA; A. BADEN; A. MARKOWITZ; S. NAYAK; K. L. BRIGGMAN; D. ZENISEK; J. H. SINGER*. *Univ. of Maryland, Yale Univ. Sch. of Med., NIH / NINDS.*

8:30 **304.03** Functional super-resolution imaging of active zone states. N. EHMANN*; S. VAN DE LINDE; D. LJASCHENKO; X. KEUNG; T. HOLM; A. WEYHERSMÜLLER; A. DIANTONIO; S. HALLERMANN; M. HECKMANN; M. SAUER; R. J. KITTEL. *Univ. of Wuerzburg, Univ. of Wuerzburg, Univ. Med. Ctr. Goettingen, Washington Univ. Sch. of Med.*

8:45 **304.04** Activity dependent modulation of synaptic transmission by presynaptic ryanodine receptors: A dichotomy of short-term depression and facilitation. T. M. BARTOL*; S. NADKARNI; H. LEVINE; T. J. SEJNOWSKI. *Salk Inst. Biolog Studies, Indian Inst. of Sci. Educ. and Res., Rice Univ., Salk Inst. Biolog Studies.*

9:00 **304.05** Presynaptic calcium dynamics at cerebellar mossy fibre boutons. I. DELVENDAHL*; L. JABLONSKY; S. HALLERMANN. *Leipzig Univ., European Neurosci. Inst.*

9:15 **304.06** Developmental refinement of hair cell synapses establishes calcium nanodomain control of exocytosis. T. MOSER*; A. B. WONG; M. A. RUTHERFORD; J. NEEF; N. URBAN; T. PANGRŠIč; F. GÖTTFERT; S. MICHANSKI; S. HELL; K. WILLIG; C. WICHMANN. *Univ. Goettingen Med. Sch., Univ. of Goettingen, Washington Univ. Sch. of Med., MPI for Biophysical Chem.*

9:30 **304.07** Presynaptic proton-mediated feedback at auditory hair cell synapses. S. CHO*; H. VON GERSDORFF. *Oregon Hlth. & Sci. Univ.*

9:45 **304.08** Phosphorylation of Munc18 by PKC is required for post-tetanic potentiation of transmitter release. O. GENC; O. KOCHUBEY; R. TOONEN; M. VERHAGE; R. SCHNEGGENBURGER*. *Ecole Polytech Fed Lausanne (EPFL), Neurosci. Campus Amsterdam, Ctr. for Neurogenomics and Cognitive Res.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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10:00 **304.09** Calcium channel cooperativity and distribution shapes excitatory transmission at Schaffer collateral synapses. A. SCIMEMI*. *NIH/NINDS.*

10:15 **304.10** Functional impact of diverse calcium channel-synaptic vesicle organization in active zones of frog and mouse NMJs. M. DITTRICH*; T. TARR; J. MA; L. KELLY; T. PRICE; J. INGRAM; D. VAROTSIS; S. MERINEY. *Carnegie Mellon Univ., Univ. of Pittsburgh, Carnegie Mellon Univ.*

NANOSYMPOSIUM

305. Beta and Gamma Secretase: BACE and Presenilin

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center*, 23A

8:00 **305.01** Leptin attenuates beta-secretase 1 (BACE1) expression and Amyloid-β genesis via the activation of Sirtuin 1 (SIRT1) signaling pathway. G. A. MARWARHA*; O. GHRIBI. *Case Western Reserve Univ., Univ. of North Dakota.*

8:15 **305.02** The Alzheimer's β-secretase BACE1 is localized within normal and dystrophic presynaptic terminals. P. C. KANDALEPAS*; K. R. SADLEIR; W. A. EIMER; D. A. NICHOLSON; R. VASSAR. *Northwestern Univ. Feinberg Sch. of Med., Rush Univ. Med. Ctr.*

8:30 **305.03** Presenilin1 mutant-dependent alterations in plasma cytokines and signaling factors following environmental enrichment and the impact on adult hippocampal neurogenesis. K. VEERARAGHAVALU*; D. BERDNIK; X. ZHANG; T. WYSS-CORAY; S. S. SISODIA. *Univ. Chicago, Stanford Univ.*

8:45 **305.04** Reduced γ-secretase activity in a mouse model of Down syndrome and modulation by GSMs. R. CAPONE*; P. NGUYEN; X. ZHANG; A. NAJMABADI; N. SINGHAL; D. CHAU; R. E. TANZI; Y. LI; S. SISODIA; S. L. WAGNER; W. C. MOBLEY. *Univ. of California San Diego, Univ. of Chicago, Mem. Sloan-Kettering Cancer Ctr., Massachusetts Gen. Hosp.*

9:00 **305.05** Molecular mechanism of phenylimidazole-type γ-secretase modulators. T. TOMITA*; K. TAKEO; S. TANIMURA; S. YOKOSHIMA; T. FUKUYAMA; T. IWATSUBO. *The Univ. of Tokyo.*

9:15 **305.06** Elucidation of the mechanism underlying the alteration of Abeta42 ratio by gamma-secretase modulators. S. TAGAMI*; M. OKOCHI; K. YANAGIDA; T. KODAMA; Y. IHARA; M. TAKEDA. *Osaka Univ. Grad. Sch. of Med., Doshisha Univ.*

9:30 **305.07** A synergistic effect of presenilin 1 mutant and CCL2 deficiency leads to cognitive dysfunction and brain atrophy in a mouse model of Alzheimer's disease. T. KIYOTA*; C. M. MORRISON; G. ZHANG; R. A. WEIR; M. D. BOSKA; H. E. GENDELMAN. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

9:45 **305.08** Presenilin specifically regulate neuronal EGFR expression and signaling. J. BRUBAN; G. VOLOUDAKIS; J. SHIOI; A. GEORGAKOPOULOS; N. K. ROBAKIS*. *Mount Sinai Sch. of Med., Mount Sinai Sch. Med.*

10:00 **305.09** Presenilin/γ-secretase prevents neurons from glucose deprivation-induced cell death via regulation of the miR-212/PEA15 pathway. Q. HUANG*; Y. REN; G. VOLOUDAKIS; Z. SHAO; Z. XUAN; A. GEORGAKOPOULOS; N. K. ROBAKIS. *Icahn Sch. of Med. At Mount Sinai, Box 1229.*

10:15 **305.10** Identification of five microRNAs regulating proteins implicated in Alzheimer's disease. N. CHOPRA*; J. M. LONG; B. RAY; A. G. OBUKHOV; D. K. LAHIRI. *IUPUI.*

10:30 **305.11** The ER-based acetyltransferases ATase1 and ATase2 form dimers and are part of large multi-protein complex. Y. DING*; C. DELLISANTI; C. CZAJKOWSKI; L. PUGLIELLI. *UW Madison.*

10:45 **305.12** Inhibition of ATase1 and ATase2 prevents Alzheimer's disease in cellular and animal models of the disease. L. PUGLIELLI*; Y. PENG; M. PEHAR; K. O'RIORDAN; C. BURGER. *Univ. Wisconsin-Madison Med. Sch.*

NANOSYMPOSIUM

306. Huntington's Disease: Mechanisms and Therapeutic Targets

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center*, 24A

8:00 **306.01** Role(s) of TRiC subunit(s) in rescuing cortico-striatal atrophy in Huntington's disease. C. WU*; X. ZHAO; E. HAN; W. C. MOBLEY. *UCSD Sch. of Med.*

8:15 **306.02** ● Fast axonal transport defect in Huntington's disease correlates with decreased vesicular glycolysis and is restored by targeting GAPDH to vesicles. D. ZALA*; M. HINCKELMANN; F. SAUDOU. *Inst. Curie.*

8:30 **306.03** Accelerated Huntington's disease-like pathogenesis in bac-hd mice expressing mutant huntingtin lacking n17 domain. X. GU*; E. GREINER; A. M. BARTH; J. CANTLE; S. SANDOVAL; I. MODY; G. COPPOLA; X. YANG. *UCLA, Brain Res. Inst., Dept. Psychiatry and Biohebaviroal Sci., David Geffen Sch. of Med., UCLA, Dept. Neurol., Brain Res. Inst.*

8:45 **306.04** Mass spectrometry analysis of phospholipids from wild-type and knock-in Q140/Q140 HD mouse brains. K. B. KEGEL*; K. GREEN; A. VALENCIA; H. MCCLORY; S. SHAFFER; N. ARONIN; M. DIFIGLIA. *Mass Gen. Hospistal, UMASS Med. Sch., Mass Gen. Hosp., UMASS Med. Sch.*

9:00 **306.05** Rhes modulation reveals a critical role for mTOR activity in Huntington's disease. J. H. LEE*; R. BOUDREAU; A. MAS MONTEYS; D. THEDENS; P. NOPOULOS; L. THOMPSON; B. L. DAVIDSON. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa, Univ. of California.*

9:15 **306.06** Impaired PPARδ function underlies mitochondrial demise and neurodegeneration in Huntington's disease: Mechanistic basis and therapeutic implications. A. S. DICKEY*; V. PINEDA; A. BUTTGEREIT; L. KRIEG; P. LIU; T. TSUNEMI; E. YEO; E. MASLIAH; A. R. LA SPADA. *Sanford Consortium - UCSD, Univ. of Washington, Sanford Consortium - UCSD, UCSD.*

9:30 **306.07** Impaired transsulfuration pathway contributes to oxidative stress and neurodegeneration. B. D. PAUL*; J. I. SBODIO; R. XU; M. S. VANDIVER; J. CHA; S. H. SNYDER. *Johns Hopkins Univ. Sch. of Med.*

9:45 **306.08** ● *In vivo* evaluation of candidate allele-specific mutant huntingtin gene silencing antisense oligonucleotide drugs. A. L. SOUTHWELL*; N. H. SKOTTE; M. OESTERGAARD; J. B. CARROLL; C. N. DOTY; E. B. VILLANUEVA; Y. XIE; K. VAID; J. PETOUKHOV; H. KORDASIEWICZ; A. T. WATT; S. M. FREIER; E. SWAYZE; P. SETH; C. F. BENNETT; M. R. HAYDEN. *UBC-CMMT, ISIS Pharmaceuticals, Western Washington University,.*

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10:00 **306.09** ● Allele-specific repression of mutant Huntingtin expression by engineered zinc finger transcriptional repressors as a potential therapy for Huntington's disease. B. ZEITLER*; J. R. PEARL; S. FROELICH; Q. YU; D. E. PASCHON; J. C. MILLER; D. LI; K. MARLEN; D. GUSCHIN; I. ANKOUDINOVA; D. SHIVAK; A. NARAYANAN; L. ZHANG; M. MENDEL; E. J. REBAR; F. D. URNOV; P. D. GREGORY; H. S. ZHANG. *Sangamo BioSciences, Inc.*

10:15 **306.10** Transplantation of adenovirus-generated induced pluripotent stem cells reduces neuropathological and functional deficits in a toxic-lesion rodent model of Huntington's disease. K. FINK*; A. T. CRANE; J. ROSSIGNOL; X. LÉVÊQUE; D. J. DUES; L. D. HUFFMAN; A. C. MOORE; D. T. STORY; A. K. ANTCLIFF; M. LU; L. LESCAUDRON; G. L. DUNBAR. *Central Michigan Univ., Univ. de Nantes, Inserm u1064, INSERM U791, Univ. de Nantes, Central Michigan Univ., Field Neurosciences Inst., INSERM U791, Univ. de Nantes.*

NANOSYMPOSIUM

307. Brain Injury: Cellular and Molecular Mechanisms

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center*, 32B

8:00 **307.01** Traumatic brain injury induces CCR2-dependent cognitive impairment and infiltration of monocytes that differentiate into brain macrophage subsets. C. L. HSIEH*; J. LIU; E. NIEMI; C. LEE; B. RYBA; M. NAKAMURA; W. E. SEAMAN. *San Francisco VA/ Univ. California San Francisco, San Francisco VA/ Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco, San Francisco VA.*

8:15 **307.02** Calpain 5 is highly expressed in the CNS, carries a unique NLS, and is co-localized with promyelocytic leukemia protein nuclear bodies. R. SINGH*; C. MASHBURN; D. LOU; S. GHOSHAL; B. GRAHAM; J. GEDDES. *Univ. of Kentucky, Univ. of Kentucky.*

8:30 **307.03** Beneficial role of Caveolin on the neurovascular unit after juvenile traumatic brain injury. D. W. SORENSEN*; A. M. FUKUDA; D. AJAO; J. BADAUT. *Loma Linda Univ., Basic Sci.*

8:45 **307.04** Disruption of autophagy after TBI may lead to neuronal death. C. SARKAR*; Z. ZHAO; B. SABIRZHANOV; T. AKINTOLA; K. CARDIFF; B. STOICA; A. I. FADEN; M. M. LIPINSKI. *Univ. of Maryland Sch. of Med.*

9:00 **307.05** Ezrin - a possible biomarker for traumatic brain injury. C. I. LÖÖV*; G. SHEVCHENKO; A. GEEYARPURAM NADADHUR; L. HILLERED; F. CLAUSEN; M. WETTERHALL; A. ERLANDSSON. *Neuroscience/ Neurosurgery, Uppsala Univ., Uppsala Univ.*

9:15 **307.06** Diffuse brain injury results in morphological changes to neurons that parallel development of late-onset morbidity in rats. T. C. THOMAS*; H. RAY-JONES; R. P. HAMMER, Jr.; P. D. ADELSON; J. LIFSHITZ. *Univ. of Arizona; Col. of Med. - Phoenix, Barrow Neurolog. Inst. at Phoenix Children's Hosp., Phoenix VA Healthcare Syst., Univ. of Bath, Univ. of Arizona Col. of Med. - Phoenix, Univ. of Arizona Col. of Med. - Tucson, Arizona State Univ., Arizona State Univ., Univ. of Arizona Col. of Med. - Phoenix.*

9:30 **307.07** *In vivo* imaging of mild blast-induced traumatic brain injury reveals blood-brain-barrier disintegrity, focal microglial activation, and increased regional microglial surveillance. B. R. HUBER*; J. S. MEABON; K. MEEKER; B. C. KRAEMER; E. C. PETRIE; E. R. PESKIND; D. G. COOK. *VA Puget Sound Hlth. Care Syst., VA Puget Sound, Univ. of Washington, Univ. of Washington Sch. of Med., VA Puget Sound Hlth. Care Syst., Univ. of Washington Sch. of Med., Univ. of Washington, VA Puget Sound.*

9:45 **307.08** Histological correlates of diffusion tensor imaging abnormalities in the dentate gyrus following TBI induced by controlled cortical impact in the temporo-parietal cortex of the rat. E. B. HUTCHINSON*; S. OSTING; P. RUTECKI; T. SUTULA. *Univ. of Wisconsin - Madison, NICHD, Natl. Inst. of Hlth.*

10:00 **307.09** Cox-2 regulation differs between sexes in the secondary inflammatory response following experimental penetrating brain injury in rats. M. GÜNTHER*; S. PLANTMAN; J. DAVIDSSON; M. ANGÉRIA; T. MATHIESEN; M. RISLING. *Karolinska Institutet, Chalmers Univ. of Technol.*

10:15 **307.10** Loss of parvalbumin interneurons underlies impaired cortical inhibition in post-traumatic epileptogenesis. H. H. LEE; T. H. HSIEH; M. Q. HAMEED; T. K. HENSCH; A. ROTENBERG*. *Boston Children's Hosp., Harvard Med. Sch., Taipei Med. Univ., Harvard Med. Sch.*

10:30 **307.11** Molecular mechanisms affecting N-acetylaspartate homeostasis in graded diffuse traumatic brain injury. V. DI PIETRO*; G. LAZZARINO; A. AMORINI; B. TAVAZZI; S. SIGNORETTI; R. VAGNOZZI; G. LAZZARINO; S. D'URSO; A. LOGAN; A. BELLI. *Univ. of Birmingham, Catholic Univ., San Camillo Hosp., Univ. of Rome Tor Vergata, Univ. of Catania.*

10:45 **307.12** Microglial contribution to axonal injury after repetitive concussion in CD11b-TK mice. R. E. BENNETT*; D. L. BRODY. *Washington Univ. In St. Louis, Washington Univ. in St. Louis.*

11:00 **307.13** ▲ Systems biology of the glial response to traumatic brain injury. H. G. YOHANNES*; A. K. OTTENS. *Virginia Commonwealth Univ.*

11:15 **307.14** Dendritic spine loss is an early consequence of both mild and severe TBI however spine levels are unaffected following repeat mild TBI. C. WINSTON*; M. PARSADANIAM; D. BARTON; D. CHELLAPPA; P. WASHINGTON; D. ZAPPLE; M. P. BURNS. *Georgetown Univ., Georgetown Univ.*

NANOSYMPOSIUM

308. Biomarkers and Imaging in Schizophrenia

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center*, 30B

8:00 **308.01** Altered epidermal growth factor receptor expression in dorsolateral prefrontal cortex may be implicated in sucidality in schizophrenia. V. SWAMINATHAN*; A. M. PEREIRA; S. TSAI-CHIN; C. S. WEICKERT; S. SUNDRAM. *The Florey Inst. of Neurosci. and Mental Hlth., Northern Psychiatry Res. Ctr., Univ. of Melbourne, Univ. of Melbourne, Neurosci. Res. Australia, Univ. of New South Wales, Schizophrenia Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:15 **308.02** An initial report on metabolic defects in recent onset schizophrenia with a 7 tesla mri scanner: Link to changes in brain temperature and cognition. S. POSPORELIS*; M. VARVARIS; A. MARSMAN; S. BONEKAMP; P. KIM; R. EDDEN; J. COUGHLIN; D. SCHRETLEN; N. CASCELLA; P. B. BARKER; A. SAWA. *Johns Hopkins Med. Institutions, Sch. of Med., South London & Maudsley NHS Fndn. Trust, The Johns Hopkins Univ. Sch. of Med., Sheppard Enoch Pratt Hosp.*

8:30 **308.03** RNA sequencing analysis reveals new transcripts in the BDNF locus, potentially relevant for schizophrenia. G. URSINI*; J. H. SHIN; B. XIE; G. PUNZI; Y. GAO; J. E. KLEINMAN; T. M. HYDE; K. MARTINOWICH; D. R. WEINBERGER. *Lieber Inst. For Brain Develop., Group of Psychiatric Neuroscience, Dept. of Basic Med. Science, Neurosci. and Sense Organs, Aldo Moro Univ., Lieber Inst. for Brain Development, Johns Hopkins Med. Campus, Baltimore, MD, USA.*

8:45 **308.04** ● Binding of ^{11}C-(R)-rolipram to phosphodiesterase 4 is downregulated in major depressive disorder and normalized with antidepressant treatment. R. B. INNIS*; M. FUJITA; D. IONESCU; M. NICIU; S. ZOGHBI; V. PIKE; W. DREVETS; C. ZARATE. *NIH, NIMH, MIB, NIMH, Johnson & Johnson, Inc.*

9:00 **308.05** Disc1-Boymaw fusion gene may contribute to major psychiatric disorders in the scottish schizophrenia family. K. K. HIGA*; B. JI; M. KIM; L. ZHOU; J. YOUNG; M. GEYER; X. ZHOU. *UC San Diego, La Jolla High Sch., VA San Diego Healthcare Syst.*

9:15 **308.06** Metabolic signature of reactivity to oxidative stress as biomarkers in early psychosis. M. FOURNIER*; C. FERRARI; P. S. BAUMANN; A. MONIN; K. L. PAPPAN; M. CUENOD; P. CONUS; K. Q. DO. *Unit For Res. In Schizophrenia, Service of Gen. Psychiatry, Metabolon.*

9:30 **308.07** ● Expression of repeat elements in the postmortem depression, schizophrenia and bipolar disorder brains. S. SABUNCIYAN*; M. DARBY; J. T. LEEK; R. H. YOLKEN. *Johns Hopkins Univ., Johns Hopkins Univ.*

9:45 **308.08** Src hypoactivity is an underlying mechanism for NMDA receptor hypofunction in schizophrenia. A. BANERJEE*; H. WANG; M. L. MACDONALD; K. E. BORGMANN-WINTER; R. RAY; A. STUCKY; J. KAPRIELIAN; C. EGBUJO; S. J. SIEGEL; S. E. ARNOLD; K. TALBOT; R. E. GUR; C. HAHN. *Univ. Pennsylvania, City Col. of City Univ. of New York, Univ. of Pennsylvania and Children's hospital of Philadelphia.*

10:00 **308.09** Plasma total homocysteine and schizophrenia: Gender and MTHFR C677T genotypes. A. NISHI*; S. NUMATA; A. TAJIMA; K. KIKUCHI; M. KINOSHITA; S. SHIMODERA; M. TOMOTAKE; I. IMOTO; T. OHMORI. *Dept. of Psychiatry, Course of Integrated Brain Sciences, Med. Informati, Dept. of Human Genetics, Inst. of Hlth. Biosciences, The Univ. of Tokushima Grad. Sch., Dept. of Neuropsychiatry, Kochi Med. School, Kochi Univ., Dept. of Mental Health, Inst. of Hlth. Biosciences, The Univ. of Tokushima Grad. Sch.*

10:15 **308.10** Impaired rich club connectivity in unaffected siblings of schizophrenia patients. G. COLLIN*; R. S. KAHN; M. A. DE REUS; W. CAHN; M. P. VAN DEN HEUVEL. *Univ. Med. Ctr. Utrecht, Rudolf Magnus Inst. of Neurosci.*

10:30 **308.11** Altered connectivity in limbic subnetworks during emotion processing: A graph-based intermediate phenotype linked to the genetic risk for schizophrenia. H. CAO*; A. SCHAEFER; O. GRIMM; H. WALTER; A. HEINZ; L. HADDAD; H. TOST; A. MEYER-LINDENBERG. *Central Inst. of Mental Hlth., Dept. of Psychiatry and Psychotherapy, Charité Universitaetsmedizin Berlin.*

10:45 **308.12** ● Dopamine, salience and the risk of psychosis. T. T. WINTON-BROWN*; J. P. ROISER; O. D. HOWES; N. BUNZECK; E. DUZEL; S. KAPUR; P. MCGUIRE. *Inst. of Psychiatry, UCL Inst. of Cognitive Neuroscience., Inst. of Psychiatry, Univ. Med. Ctr. Hamburg-Eppendorf, Inst. of Cognitive Neurol. and Dementia Research, Otto-von-Guericke Univ. Magdeburg, Inst. of Pscyhiatry.*

11:00 **308.13** Using hIPSCs to model disease mechanisms in Schizophrenia. T. ATKIN*; Y. QI; Z. SUN; S. MARKX; J. GOGOS; M. TOMISHIMA; L. STUDER; M. KARAYIORGOU. *Columbia Univ., Sloan-Kettering Inst., Columbia Univ., Sloan-Kettering Inst.*

NANOSYMPOSIUM

309. Olfaction: Olfactory Bulb and Beyond

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center*, 1B

8:00 **309.01** Calcium imaging of cortical feedback in the olfactory bulb of awake mice reveals diverse enhanced and suppressed odor responses and their experience-dependent modulation. G. H. OTAZU*; H. CHAE; D. F. ALBEANU. *Cold Spring Harbor Lab.*

8:15 **309.02** Spatial organization influences functional responses in the accessory olfactory bulb. G. HAMMEN*; T. E. HOLY; J. P. MEEKS. *Washington Univ. In St Louis, Sch. of Med., The Univ. of Texas Southwestern Med. Ctr.*

8:30 **309.03** Circuit mechanisms for controlling gamma synchronization in the awake olfactory bulb: Implications for odor discrimination. G. LEPOUSEZ*; P. LLEDO. *Inst. Pasteur.*

8:45 **309.04** Bidirectional modulation by interneurons stabilizes odor representation in the olfactory bulb. P. ZHU*; T. FRANK; R. FRIEDRICH. *Friedrich Miescher Inst. For Biomed. Research, Novartis Fndn., Univ. of Basel.*

9:00 **309.05** Differential cholinergic modulation in the accessory olfactory bulb. R. S. SMITH*; R. MAURER; W. CHAN; R. C. ARANEDA. *Univ. of Maryland, Col. Park*

9:15 **309.06** Functional dissection of granule celll odor responses in awake head-fixed mice. H. CHAE*; G. H. OTAZU; D. F. ALBEANU. *Cold Spring Harbor Lab.*

9:30 **309.07** Adult generated neurons inhibit granule cells in the olfactory bulb. R. C. ARANEDA*; A. NUNEZ-PARRA. *Univ. of Maryland.*

9:45 **309.08** Effect of age on NPY expression and neuroproliferative function in mouse olfactory epithelium. C. JIA*; C. HEGG. *Michigan State Univ.*

10:00 **309.09** Neural identity and odor coding in olfactory bulb and piriform cortex. A. FLEISCHMANN*; D. SOSULSKI; B. ROLAND. *Col. de France, Univ. Col. London.*

10:15 **309.10** Feedback inhibition by the APL neuron enhances learned odor discrimination in *Drosophila* by maintaining sparse coding in Kenyon cells. A. C. LIN*; A. BYGRAVE; A. DE CALIGNON; Y. TAN; G. MIESENBÖCK. *Univ. of Oxford.*

10:30 **309.11** Smell is hormonal: Ovarian cycle dependent sensitivity of the female nose to male pheromones. S. DEY*; P. CHAMERO; L. STOWERS. *The Scripps Res. Inst., Univ. of Saarland.*

10:45 **309.12** Sexual dimorphism and experience-dependent plasticity in mouse pheromone-sensing neurons. P. S. XU*; T. E. HOLY. *Washington Univ. In St. Louis Sch. of Med., Washington Univ. in St. Louis Sch. of Med.*

11:00 **309.13** Unified intensity perception in rodent olfaction. Y. B. SIROTIN*; P. T. WOJCIK. *Rockefeller Univ., The Rockefeller Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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11:15 **309.14** Widespread glomerular responses to nasal airflow in the mouse olfactory system. R. IWATA*; T. IMAI. *RIKEN Ctr. For Developmental Biol., JST PRESTO.*

NANOSYMPOSIUM

310. Multisensory: Circuits and Functional Imaging

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center*, 5B

8:00 **310.01** ● Mapping magnocellular and parvocellular subdivisions of human LGN at high spatial resolution with 3T and 7T fMRI. R. N. DENISON*; A. VU; E. YACOUB; D. A. FEINBERG; M. A. SILVER. *Univ. of California, Berkeley, Univ. of Minnesota Med. Sch., Advanced MRI Technologies, Univ. of California, Berkeley.*

8:15 **310.02** Attention alters orientation processing in the human LGN. S. LING*; M. S. PRATTE; F. TONG. *Vanderbilt Univ.*

8:30 **310.03** Population receptive field estimation in human subcortical nuclei. K. DESIMONE*; J. D. VIVIANO; K. A. SCHNEIDER. *York Univ., York Univ.*

8:45 **310.04** Depth dissociation of attentional response with and without significant visual stimulation in human superior colliculus. S. KATYAL*; D. RESS. *Univ. of Texas At Austin.*

9:00 **310.05** Encoding of sound frequency and location in human subcortical structures: Preliminary results using functional MRI at 7T. M. MOEREL*; F. DE MARTINO; R. SANTORO; E. YACOUB; E. FORMISANO. *Maastricht Univ., Ctr. for Magnetic Resonance Res. (CMRR), Univ. of Minnesota Med. Sch.*

9:15 **310.06** Measurement of sound frequency selectivity in the depth of human inferior colliculus. D. RESS*; B. CHANDRASEKARAN. *Univ. of Texas At Austin, Univ. of Texas at Austin.*

9:30 **310.07** Evidence for multisensory integration in human midbrain. M. BEAUCHAMP*; S. KATYAL; D. RESS. *Univ. Texas Med. Sch, Houston, Univ. of Texas at Austin.*

9:45 **310.08** Investigating the organization of functional and anatomical thalamo-cortical connectivity in the human pulvinar. M. J. ARCARO*; M. PINSK; S. KASTNER. *Princeton Univ.*

10:00 **310.09** Dynamic topographic connectivity profile: Application to connectivity patterns in the human basal ganglia. I. GILANI*; P. BOYACI; H. BOYACI; K. DOERSCHNER. *UMRAM, Bilkent Univ., Dept. of Mol. Biol. and Genetics, Bilkent Univ., Dept. of Psychology, Bilkent Univ.*

10:15 **310.10** Imaging the human visual thalamic reticular nucleus. J. D. VIVIANO*; K. A. SCHNEIDER. *York Univ., York Univ.*

10:30 **310.11** The brain's connectivity rich club and its role in intermodular communication and integration: A cross-modal structural - functional connectome study. M. P. VAN DEN HEUVEL*; O. SPORNS. *Rudolf Magnus Inst. of Neuroscience, Univ. Med. Ctr. Utrecht, Indiana Univ.*

10:45 **310.12** Visual feedback constrains representational plasticity following tool use. L. E. MILLER*; M. R. LONGO; A. P. SAYGIN. *UCSD, Kavli Inst. for Brain and Mind, Birkbeck, Univ. of London.*

NANOSYMPOSIUM

311. Striate Cortex: Neural Coding

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center*, 33C

8:00 **311.01** Response variability of visual cortical neurons explained by a modulated Poisson model. R. L. GORIS*; J. A. MOVSHON; E. P. SIMONCELLI. *New York Univ.*

8:15 **311.02** Top down signals influence the distribution of noise correlations amongst sensory neurons. A. G. BONDY*; B. G. CUMMING. *Lab. of Sensorimotor Research, NEI, NIH, Brown Univ.*

8:30 **311.03** Diversity, heterogeneity and orientation dependent variation of spike count correlation in cat visual cortex. H. ITO*; Y. MARUYAMA. *Kyoto Sangyo Univ.*

8:45 **311.04** ▲ Possible mechanism for encoding of stimulus orientation by temporal dependent firing rate in V1 neurons: The role of pinwheel centers. S. A. KOZHUKHOV*; N. A. LAZAREVA; R. S. IVANOV; R. S. NOVIKOVA; A. S. TIKHOMIROV; I. V. BONDAR. *The Inst. For Higher Nervous Activity, the Moscow Inst. of Physics and Technol.*

9:00 **311.05** Human visually-induced gamma-band activity is modulated during attentional deployment. S. VAN PELT*; P. FRIES. *Ernst Strungmann Inst. (ESI) For Neurosci. In Coop. W/ Max Planck Society, Radboud Univ. Nijmegen.*

9:15 **311.06** Predictive balance of cortical membrane potentials by spike-timing-dependent plasticity. K. PAWELZIK*; F. PATZELT; M. WESTKOTT. *Univ. Bremen.*

9:30 **311.07** One or two figures: Can neuronal populations in V1 distinguish? A. GILAD*; H. SLOVIN. *The Gonda Multidisciplinary Brain Res. Center, Bar-Ilan Univ.*

9:45 **311.08** The statistical computation underlying surface property perception in the cat primary visual cortex. T. NAITO*; N. SUEMATSU; T. MIYOSHI; H. SAWAI; H. SATO. *Osaka Univ., Osaka Univ.*

10:00 **311.09** Improved perceptual performance following optogenetic stimulation of excitatory V1 neurons. A. R. ANDREI*; S. POJOGA; R. JANZ; V. DRAGOI. *Univ. of Texas Hlth. Sci. Ctr. At Houston.*

10:15 **311.10** Stimulus-suppressed neuronal responses in macaque visual cortex. J. FERNANDEZ-LEON*; S. POJOGA; S. EAGLEMAN; V. DRAGOI. *Univ. of Texas-Houston Med. Sch., Ctr. for Computat. Neurosci. and Robotics, Univ. of Sussex.*

NANOSYMPOSIUM

312. The Control of Sleep

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center*, 2

8:00 **312.01** Involvement of the EphA4 receptor in sleep regulation. M. FREYBURGER*; G. PAQUETTE; E. BELANGER-NELSON; J. EL HELOU; V. MONGRAIN. *Hop. Sacre Coeur Montreal.*

8:15 **312.02** ● Appropriately timed sleep promotion by orexin receptor antagonism is achieved by high receptor occupancies yet allows waking to salient stimuli. A. L. GOTTER*; P. L. TANNENBAUM; C. J. WINROW; J. STEVENS; S. V. FOX; J. BINNS; J. BRUNNER; D. CUI; S. J. TYE; J. USLANER; J. J. RENGER. *Merck Res. Labs.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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8:30 **312.03** Changes in NREM sleep slow waves properties in Neuroligin 1 knockout mice. V. MONGRAIN*; E. BÉLANGER-NELSON; A. RACHALSKI; J. EL HELOU; J. PAQUET; J. CARRIER. *Ctr. for Advanced Res. in Sleep Med., Res. Center, Hôpital du Sacré-Coeur de Montréal, Univ. de Montréal.*

8:45 **312.04** Altered slow-wave activity in the default mode network during sleep associated with the first-night effect. M. TAMAKI*; J. BANG; T. WATANABE; Y. SASAKI. *Brown Univ.*

9:00 **312.05** Sex differences in sleep regulatory processes during the mid-active phase siesta in sleeping mice. A. J. BRAGER*; S. HESSE; J. EHLEN; K. PAUL. *Morehouse Sch. of Med.*

9:15 **312.06** Transiently increasing camp levels in hippocampal neurons using a novel pharmacogenetic approach is sufficient to prevent memory deficits caused by sleep deprivation. R. HAVEKES*; V. M. BRUINENBERG; J. H. K. CHOI; A. J. PARK; A. BAUMAN; P. MEERLO; T. ABEL. *Univ. of Pennsylvania, Univ. of Gorningen, 3Forschungszentrum Juelich, Inst. of Complex Systems, Zelluläre Biophysik (ICS-4).*

9:30 **312.07** Occurrence of local sleep in awake humans using electrocorticography. J. D. SLATER*; I. M. CHELARU; B. J. HANSEN; N. TANDON; V. DRAGOI. *Univ. of Texas Med. Sch. At Houston, Univ. of Texas Houston Med. Sch., The Salk Inst., Univ. of Texas Houston Med. Sch.*

9:45 **312.08** The caudate; a key node in the neuronal network disbalance of insomnia? D. STOFFERS; E. ALTENA; Y. D. VAN DER WERF; E. J. VAN SOMEREN*. *Netherlands Inst. For Neurosci.*

NANOSYMPOSIUM

313. Computation, Modeling, and Simulation IV

Theme G: Novel Methods and Technology Development

Mon. 8:00 AM – *San Diego Convention Center*, 7B

8:00 **313.01** ● Spiking restricted Boltzmann machine and training with spike time dependent plasticity based contrastive divergence. E. O. NEFTCI*; B. PEDRONI; S. DAS; K. KREUTZ-DELGADO; G. CAUWENBERGHS. *Inst. For Neural Computation, Univ. of California San Diego.*

8:15 **313.02** Generation of sequences through reconfiguration of ongoing activity in neural networks: A model of choice-specific cortical dynamics in virtual navigation. K. RAJAN*; C. D. HARVEY; D. W. TANK. *Princeton Univ., Harvard Med. Sch., Princeton Univ.*

8:30 **313.03** ● A spiking neuron model based on two-dimensional, two-piece linear dynamical systems. J. F. HUNZINGER; Y. C. YOON*; T. ZHENG. *Qualcomm Corp R&D.*

8:45 **313.04** Fast and exact 4D simulation membrane currents interacting with self-generated and externally imposed electric fields. A. NEEF*; A. Y. AGUDELO-TORO. *MPI For Dynamics and Self-Organization.*

9:00 **313.05** A dynamic model for delta rhythm fit to high-frequency cortical activity data. M. REIMERS*; M. H. MOHAJERANI; T. H. MURPHY. *Virginia Inst. of Psychiatric and Behavioral Genet., Univ. of British Columbia.*

9:15 **313.06** Mental imagery and reentry in a visuomotor reaching system using large-scale spiking neuronal models. Y. CHEN*; J. L. MCKINSTRY. *The Neurosciences Inst.*

9:30 **313.07** Efficient bayesian approach for tracking dynamics of spatiotemporal spike patterning. S. KIM*; N. G. HATSOPOULOS; T. P. COLEMAN. *UCSD, Univ. of Chicago.*

9:45 **313.08** Theory of dynamical systems describes experimentally observed hippocampal seizure-like events. E. NEGAHBANI*; A. D. STEYN-ROSS; M. L. STEYN-ROSS; J. W. SLEIGH; L. VOSS; M. T. WILSON. *Univ. of Waikato, Univ. of Auckland.*

10:00 **313.09** Local inhibition facilitates synaptic learning in spatially extended Bayesian spiking networks. J. BILL*; L. BUESING; S. HABENSCHUSS; B. NESSLER; R. LEGENSTEIN; W. MAASS. *Inst. For Theoretical Computer Sci., Univ. Col. London.*

POSTER

315. Proliferation: Molecular Mechanisms

Theme A: Development

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 A15 **315.01** Functional analysis of Wnt5a-Ror signaling in regulation of progenitor proliferation during neocortical neurogenesis. M. ENDO*; Y. MINAMI. *Grad. Sch. of Medicine, Kobe Univ.*

9:00 A16 **315.02** The SOX2-LIN28/let-7 pathway regulates proliferation and neurogenesis in neural precursor cells. F. CIMADAMORE*; C. CHEN; A. AMADOR-ARJONA; C. HUANG; A. V. TERSKIKH. *Sanford Burnham Med. Res. Inst.*

10:00 A17 **315.03** Robo1 modulates proliferation and neurogenesis in the developing neocortex. M. L. YEH*; Y. GONDA; M. T. M. MOMMERSTEEG; M. BARBER; A. R. YPSILANTI; P. ZELINA; A. CHEDOTAL; C. HANASHIMA; J. G. PARNAVELAS; W. D. ANDREWS. *Univ. Col. London, RIKEN Ctr. for Developmental Biol., Inst. Jacques-Monod, Univ. Paris Diderot/CNRS, Inst. de la Vision, INSERM UMRS 968.*

11:00 A18 **315.04** Effects of partial igf-1 deficiency in neurotrophic factor genes expression and the benefits of replacement therapy *in vivo.* I. ITURRIETA; U. MUÑOZ; J. E. PUCHE; L. GUERRA; P. FERNANDEZ; S. DE LAS HERAS*; I. CASTILLA DE CORTAZAR. *Univ. CEU San Pablo Facultad de Medicina, Univ. CEU San Pablo, Inst. of Applied Mol. Med. (IMMA), Sch. of Medicine, Dept. of Med. Physiology.*

8:00 A19 **315.05** PACAP inhibits Shh signaling in retinal progenitors. T. F. LIMA*; B. NJAINE; M. SILVEIRA. *UFRJ.*

9:00 A20 **315.06** Role of BRCA1 in embryonic brain development and neurogenesis. G. PAO*; Q. ZHU; C. PEREZ GARCIA; S. CHOU; J. OGAWA; H. SUH; F. H. GAGE; D. D. M. O'LEARY; I. M. VERMA. *Salk Inst., Salk Inst., Salk Inst., Salk, Salk Inst.*

10:00 A21 **315.07** Distinguishing features of human neocortex development. J. H. LUI*; T. NOWAKOWSKI; A. POLLEN; M. OLDHAM; A. KRIEGSTEIN. *UCSF, UCSF.*

11:00 A22 **315.08** Prenatal exposure to nicotine stimulates neurogenesis of orexigenic peptide-expressing neurons in hypothalamus and amygdala. S. F. LEIBOWITZ*; G. CHANG; O. KARATAYEV. *Rockefeller Univ.*

8:00 A23 **315.09** Interactions between radial glia endfeet and vasculature during early neurogenesis. M. L. LAU*; J. LI; H. T. CLINE. *The Scripps Res. Inst., UCSD.*

9:00 A24 **315.10** Small cell lung cancer (SCLC)-specific RE1-silencing transcription factor (REST) isoform is regulated by neural-specific Ser/Arg repeat-related protein of 100 kDa (nSR100/SRRM4). M. SHIMOJO*; Y. SHUDO; S. ITO. *Kansai Med. Univ.*

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10:00 A25 **315.11** Functional interaction between neural progenitors and the vasculature regulates neocortical interneuron production. X. TAN*; S. SHI. *Mem. Sloan Kettering Inst., Cornell University, Weill Grad. Sch. of Med. Sci.*

11:00 A26 **315.12** Study on the novel supra-molecular substance, [2]rotaxane in pc12 and b16 cells. N. ONO*; K. HARA; M. KIMURA; S. TAKATORI; H. KAWASAKI. *Fukuoka Univ. Fac Pharmaceut, Matsuyama Univ.*

8:00 B1 **315.13** ● Cellular and molecular changes regulating the onset of age-related decline in forebrain neurogenesis. L. M. COCHARD; L. K. HAMILTON; S. E. JOPPÉ; A. AUMONT; K. J. FERNANDES*. *Univ. of Montreal, Univ. of Montreal.*

9:00 B2 **315.14** Avoiding pitfalls of internal controls: Validation of reference genes and analysis of klf4 expression by qrt-pcr and western blot throughout rat retinal development. M. R. MARTINS*; B. NJAINE; R. A. P. MARTINS; M. S. SILVEIRA. *Univ. Federal Do Rio De Janeiro, Univ. Federal Do Rio De Janeiro.*

10:00 B3 **315.15** Potential interactions between multiple neuron populations and progenitor cells in the developing ferret cerebral cortex. I. REILLO; A. CÁRDENAS; V. BORRELL*. *Inst. Neuroci Alicante, Inst. Neuroci Alicante.*

11:00 B4 **315.16** *In vivo* overexpression of GSK3 in neural precursor cells. J. JURADO-ARJONA; M. LLORENS-MARTIN; A. FUSTER-MATANZO; N. PALLAS-BAZARRA; F. HERNÁNDEZ; J. AVILA*. *Ctr. Biol Mol Severo Ochoa CSIC-UAM.*

8:00 B5 **315.17** The role of Pax6 in the expansion of the subventricular zone. F. K. WONG; J. FEI; E. TAVERNA; W. B. HUTTNER*. *Max Planck Inst.*

9:00 B6 **315.18** PARP-1 regulates the proliferation of neural stem cells. S. HONG; J. H. YI; K. S. SHIN; S. KANG*. *Sejong Univ., Kyunghee Univ.*

10:00 B7 **315.19** Fractone niche for neuroepithelial and neural stem cell proliferation: From early brain development to adult subventricular zone. E. ARIKAWA-HIRASAWA; V. DOUET; V. B. ALARCON; A. KEREVER; F. J. MERCIER*. *Juntendo Univ. Fac. of Med., Univ. Hawaii, Univ. Hawaii, Inst. for Biogenesis Res.*

11:00 B8 **315.20** Adenomatous polyposis coli regulates oligodendrocyte progenitor cell expansion through a Wnt/β-catenin dependent mechanism. J. A. LANG*; M. HORIUCHI; F. GUO; D. E. PLEASURE. *IPRM, Shriners Hosp. and UC-Davis.*

8:00 B9 **315.21** Functional screening of the genes involved in the production of progenitor cells in the subventricular zone in mice. H. TABATA*; Y. SAKAKIBARA; K. NAGATA; K. NAKAJIMA. *Inst. For Developmental Research, Aichi Human Service Ctr., Sch. of Medicine, Keio Univ., Dept. of Biosci. and Informatics, Keio Univ.*

9:00 B10 **315.22** Zfp423 controls sonic hedgehog response in cerebellar granule cell precursors. *UCSD.*

10:00 B11 **315.23** Three-dimensional colloidal supports promote neurogenesis in rat embryonic E18 neuronal cells culture. D. JGAMADZE; I. MATESKA; S. PAUTOT*. *Crt-Dresden.*

11:00 B12 **315.24** Cilia and centrosomes in neurons, astrocytes, and neural progenitors: Relation to proliferative capacity. S. R. BHATTARAI; M. V. CORONEL; H. D. SCHWARK*; J. L. FUCHS. *Univ. of North Texas, Univ. of North Texas.*

8:00 B13 **315.25** Amyloid precursor protein (app) regulates the proliferation and differentiation of neural progenitors by antagonising microRNA in the developing cerebral cortex. W. ZHANG; S. THEVAPRIYA; W. YU; H. JE; E. TAN;. *Natl. Neurosci. Inst., Biol. resource Centre, A*STAR, DUKE-NUS GMS.*

9:00 B14 **315.26** Stimulation of sigma-1 receptor improves depressive-like behaviors in CaMKIV null mice. S. MORIGUCHI*; Y. SASAKI; H. SAKAGAMI; K. FUKUNAGA. *Tohoku Univ. Grad Sch. Pharm Scis, Kitasato Univ. Sch. of Med.*

10:00 B15 **315.27** ERK1/2 regulates morphogenesis and structural synaptic plasticity of the hippocampus. J. VITHAYATHIL*; J. PUCILOWSKA; E. J. TAVARES; G. E. LANDRETH. *Case Western Reserve Univ. Sch. of Med., Case Western Reserve Univ.*

11:00 B16 **315.28** Regulation of nutrient-dependent neural stem cell reactivation by inter-organ communication and extracellular matrix proteins. J. LIU*; P. SPEDER; J. VAN BUGGENUM; A. BRAND. *Univ. of Cambridge, Univ. of Nijmegen.*

8:00 B17 **315.29** Developmental localization of gadd45β in rat skeletal muscle tissue. L. COPES*. *Delaware State Univ.*

POSTER

316. Cell Fate: Mechanisms

Theme A: Development

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 B18 **316.01** Myelin Transcription Factor 1, Myt1, regulates glutamergic fate progression and neuronal migration in the embryonic mouse neocortex. Y. XIE; A. E. AYOUB*; M. H. DOMINGUEZ; J. D. BENOIT; P. RAKIC. *Yale Univ.*

9:00 B19 **316.02** Spatiotemporal gradient of Brn1/2 regulates heterogeneity in the cortical ventricular zone and instructs laminar fate. A. E. AYOUB; M. H. DOMINGUEZ; Y. XIE; J. J. BREUNIG; P. RAKIC*. *Yale Univ. Sch. Med., Cedars-Sinai Med. Ctr.*

10:00 B20-DP1 **316.03** Neuronal migration and radial glial cell proliferation are regulated by calcium transient activity propagated through radial fibers during corticogenesis. B. G. RASH*; J. B. ACKMAN; P. RAKIC. *Yale Univ., Kavli Inst. for Neurosci. at Yale.*

11:00 B21 **316.04** The role of TCF3 in cortical laminar cell fate determination. H. LI*; P. RAKIC. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

8:00 B22 **316.05** Role of feedback signaling during corticogensis. S. PARTHASARATHY*; S. SRIVATSA; A. NITYANANDAM; K. DAM; V. TARABYKIN. *Ctr. For Cell Biol. and Neuobiology, Dorris Neurosci. Center, The Scripps Res. Inst.*

9:00 B23 **316.06** Ascl1 establishes a transcriptional node for development of the olfactory epithelium. E. M. PARONETT*; T. MAYNARD; K. SUGRUE; A. LAMANTIA. *George Washington Univ.*

10:00 B24 **316.07** Defects in N-cadherin-based adherens junctions of radial glial cells precedes disruption of the ventricular zone in alpha-SNAP mutant mice. L. BATIZ*; G. MARQUEZ; G. C. TORO; A. ARCOS; Z. D. VELASQUEZ; M. P. MIRÓ; L. OJEDA; C. PARGA; C. MUÑOZ; V. CAVIERES; P. V. BURGOS; R. I. MUÑOZ. *Univ. Austral De Chile, Univ. Austral De Chile, Univ. Austral De Chile.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 B25 **316.08** Neurogenin3 is a key regulator in serotoninergic vs. spinal V3 neuronal fate decisions. A. CARCAGNO; D. DI BELLA; G. M. LANUZA*. *Fundacion Inst. Leloir.*

8:00 B26 **316.09** The formation of neuron in the injured brain regions by a viral overexpression of anti-apoptotic gene Bcl-xL in the subcallosal zone. J. KIM*. *Dept. of Anatomy, Col. of Medicine, Korea Univ.*

9:00 B27 **316.10** Identification of a transcriptional co-activator with dual functions in broad generation, and somatosensory area-specific development of callosal projection neurons. J. L. MACDONALD*; R. M. FAME; J. D. MACKLIS. *Harvard Univ.*

10:00 B28 **316.11** Hdac3 controls the fate switch of oligodendrocyte and astrocyte in the developing brain. H. XUELIAN*; L. LIU; M. JIANG; L. ZHANG; Q. LU. *Develop. Biol., developmental biology.*

11:00 B29 **316.12** Effects of glucocorticoids on embryonic neural progenitor cells. M. TSIARLI*; P. A. MONAGHAN; D. B. DEFRANCO. *Univ. Pittsburgh, Univ. Pittsburgh, Univ. Pittsburgh.*

8:00 B30 **316.13** Secondary induction of anterior-to-posterior molecular identity for cranial sensory neurons. B. KARPINSKI-OAKLEY*; S. A. MOODY; T. M. MAYNARD; A. S. LAMANTIA. *George Washington Univ., George Washington Univ.*

9:00 B31 **316.14** Nfix regulates the fate of neural stem cells in postnatal mouse brain. B. ZHOU*; J. OSINSKI; C. CAMPBELL; B. MARTYNOGA; F. GUILLEMOT; M. PIPER; R. GRONOSTAJSKI. *Univ. At Buffalo, MRC, Queensland Brain Inst., New York State Ctr. of Excellence in Bioinformatics and Life Sci.*

10:00 B32 **316.15** A comparative examination of microglia in the developing cerebral cortex of mammals, reptiles and birds. C. L. CUNNINGHAM; V. MARTINEZ-CERDENO; A. JOSHI; E. WEIDEMAN; V. RICKS; M. AURORA; C. JARVIS; M. QUINTON; S. SAYLOR; J. ARIZA; S. C. NOCTOR*. *UC Davis, UC Davis, California State University, Sacramento, BYU-Idaho, UC Davis, UC Davis.*

11:00 B33 **316.16** Nato3 controls neural progenitor differentiation during development of the ventral neural tube. A. MANSOUR*; S. ZISMAN; A. KLAR; N. BEN-ARIE. *Weizman Inst. of Sci., Hebrew university of jerusalem, Hebrew university of jerusalem-Hadassah Med. Sch.*

8:00 B34 **316.17** Roles of thalamic afferents in neocortical neurogenesis. Y. NAKAGAWA*; L. WANG; Z. WERKHOVEN. *Univ. Minnesota.*

9:00 C1 **316.18** Hemorrhage-mediated lysophosphatidic acid (LPA) signaling alters neuroprogenitor cleavage plane orientation and fate in the mammalian cerebral cortex. Y. C. YUNG*; K. NOGUCHI-MIYAMOTO; H. MIRENDIL; B. S. V. ALMEIDA; J. CHUN. *The Scripps Res. Inst.*

10:00 C2 **316.19** A role for vegfr-3 in cortical development. K. L. BAKER*; J. HAN; A. EICHMANN; J. THOMAS. *Yale Sch. of Med., Yale Sch. of Med.*

11:00 C3 **316.20** MicroRNA regulated by TLX at a post - transcriptional level to control neural stem cell fate. K. MURAI*; G. SUN; P. YE; E. TIAN; Y. SHI. *Beckman Res. Inst. of City of Hope.*

8:00 C4 **316.21** CoREST interacts with the SUMOE3-ligase PIASγ and is modified by SUMO2. J. E. SÁEZ*; M. E. ANDRÉS. *Pontificia Univ. Católica De Chile.*

9:00 C5 **316.22** Inhibition of Sonic Hedgehog signaling is required for fate specification of cortical progenitor cells during embryonic neurogenesis. O. R. YABUT*; S. PLEASURE. *Univ. of California, San Francisco.*

10:00 C6 **316.23** Interaction between local neurons and long-distance neuronal projections in regulating adult hippocampal neurogenesis. J. SUN*; J. SONG; C. ZHONG; G. MING; H. SONG. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med.*

11:00 C7 **316.24** Differential regulation of Atoh7 versus Neurog2 during early retinal neurogenesis. N. L. BROWN*; A. N. RIESENBERG; K. A. MAURER. *Univ. of California Davis, Cincinnati Children's Hosp. Res. Fndn.*

8:00 C8 **316.25** Direct administration of thyroid hormone to the tadpole optic tectum increases rates of tectal neurogenesis and apoptosis. C. K. THOMPSON*; H. T. CLINE. *The Scripps Res. Inst., The Scripps Res. Inst.*

9:00 C9 **316.26** Prdm13 mediates the balance of inhibitory and excitatory neurons in somatosensory circuits. J. CHANG*; D. M. MEREDITH; P. R. MAYER; M. D. BORROMEO; H. C. LAI; A. URUENA; J. E. JOHNSON. *UT Southwestern Med. Ctr.*

10:00 C10 **316.27** ● Interneuron specification in the vertebrate spinal cord. K. E. LEWIS*. *Syracuse Univ.*

11:00 C11 **316.28** Mitotic spindle asymmetry: a novel Wnt/PCP regulated mechanism generating asymmetrical division in cortical precursors. D. DELAUNAY*; V. CORTAY; D. PATTY; K. KNOBLAUCH; C. DEHAY. *INSERM U846, Univ. de Lyon.*

8:00 C12 **316.29** Wnt-signaling regulates dorsal progenitor fate acquisition in the postnatal subventricular zone. B. FISCHER*; K. AZIM; A. HURTADO-CHONG; K. DRAGANOVA; K. BASLER; A. BUTT; L. SOMMER; O. RAINETEAU. *ETH Zürich, Univ. of Zürich, Univ. of Portsmouth.*

9:00 C13 **316.30** The role of Dll1 in postnatal neural stem and progenitor cells. J. J. BREUNIG*; J. ARELLANO; G. KIM; K. ANIGHORO; R. LOPEZ LEAL; L. GRIGEREIT; D. GATE; J. RODRIGUEZ JR.; M. DOMINGUEZ; D. SAREEN; T. TOWN; S. FERGUSON; L. FRANCHINI; C. SVENDSEN; P. DE CAMILLI; P. RAKIC. *Cedars-Sinai Hosp., Yale Univ., CONICET.*

POSTER

317. Neuronal Differentiation in Response to Extracellular Factors

Theme A: Development

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 C14 **317.01** ● An activated protein C analog stimulates neuronal production by human neural progenitor cells via a PAR1-PAR3-S1PR1-Akt pathway. Z. ZHAO*; H. GUO; Q. YANG; M. WANG; R. D. BELL; S. WANG; N. CHOW; T. P. DAVIS; J. H. GRIFFIN; S. A. GOLDMAN; B. V. ZLOKOVIC. *USC, Univ. of Rochester Med. Ctr., Univ. of Arizona, The Scripps Res. Inst., Univ. of Rochester Med. Ctr.*

9:00 C15 **317.02** Effect of sonic hedgehog on generation of human dorsal calretinin neurons. N. RADONJIC*; N. ZECEVIC. *Univ. of Connecticut Hlth. Ctr.*

10:00 C16 **317.03** Significantly greater numbers of neurons, neurite outgrowth and neurite branch points in 21 day cultures of primary rat cortical neurons with NeuroCult™ Neuronal Media. S. A. LOUIS*; C. K. H. MAK; K. FAVELL; S. LLOYD-BURTON; E. JERVIS; T. E. THOMAS. *STEMCELL Technologies Inc.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 C17 **317.04** ● Enteric neural crest-derived precursors express foxa2 and the cerebral dopaminergic neurotrophic factor (CDNF), which is essential for enteric dopaminergic neuronal development/survival and the maintenance of gastrointestinal motility. A. CHALAZONITIS*; Z. LI; T. D. PHAM; M. LINDAHL; P. LINDHOLM-PULKKILA; M. SAARMA; M. D. GERSHON. *Columbia Univ., Univ. of Helsinki.*

8:00 C18 **317.05** Roles of small leucine-rich repeat proteoglycans in neural development and function. V. PAPADAKI*; M. DELLETT; S. OHNUMA. *Univ. Col. London.*

9:00 C19 **317.06** Astroglial NFkB signaling inhibits neuronal lineage differentiation of mouse neural stem cells both *in vitro* and *in vivo.* W. HU*; Y. ZHANG; A. PONTES FILHO. *Temple Univ.*

10:00 C20 **317.07** Ezrin's role in the developing cerebellum - Functions in granule cell differentiation and small GTPase regulation. L. B. RIECKEN; S. MAYERL; K. BAUER*; H. MORRISON. *Fritz Lipmann Inst.*

11:00 C21 **317.08** Inositol attenuates behavorial defects in a zebrafish model of fetal alcohol syndrome. L. PAUL; V. MORRIS; B. SIMS*. *Univ. Alabama, Univ. Alabama.*

8:00 C22 **317.09** Impairment of cerebellar development caused by prenatal exposure to dexamethasone is associated with altered levels of PAX6 and MMP9. L. AUSTDAL*; G. MATHISEN; R. PAULSEN. *Univ. of Oslo.*

9:00 C23 **317.10** Lipopolysaccharide may compromise adult hippocampal neurogenesis by modulating the expression of vascular factors. V. MUNIKOTI*; B. K. ORMEROD. *Univ. of Florida, Univ. of Florida.*

10:00 C24 **317.11** The first neurons of the human retina. I. BYSTRON*; P. RAKIC; C. BLAKEMORE. *Univ. of Oxford, Yale Univ. Sch. of Med.*

POSTER

318. Activity-Dependent Growth and Remodeling of Synapses

Theme A: Development

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 C25 **318.01** KCC2 regulates actin dynamics in spines via interaction with betaPIX. A. LUDWIG*; O. LLANO; S. SMIRNOV; A. GOLUBTSOV; I. MEDINA; H. NOTHWANG; C. RIVERA. *Neurosci. Ctr., INMED, U901-INSERM, Mediterranean Univ., Carl von Ossietzky Univ. of Oldenburg.*

9:00 C26 **318.02** Proteomic characterization of kinesin complexes identifies proteins differentially targeted to synapses of hippocampus and prefrontal cortex. S. V. PUTHANVEETTIL*; X. LIU; B. KADAKKUZHA; C. STECKLER; K. AKHMEDOV; L. YAN; B. PASCAL; M. CHALMERS. *The Scripps Res. Inst., Max Plack Florida Inst., The Scripps Res. Inst.*

10:00 C27 **318.03** A new form of autophagy for synaptic vesicles regulated by the BAD-BAX-caspase cascade. Z. LI*; S. JIAO; R. PETRALIA. *NIMH/NIH, NIDCD/NIH.*

11:00 C28 **318.04** Repetitive induction of synaptic depression induces synapse pruning. M. A. HENSON*; C. J. TUCKER; S. M. DUDEK. *NIEHS/NIH, NIEHS/NIH.*

8:00 C29 **318.05** Manipulating "critical period" by controlling synaptic GluN2B expression. T. OHNO*; N. ISOO; M. ISOWAKI; N. MURABE; S. FUKUDA; M. MISHINA; M. SAKURAI. *Teikyo Univ. Sch. Med., Dept Mol Neurobiol & Pharmacol, Grad Sch. Med, Univ. Tokyp.*

9:00 C30 **318.06** Evidence for presynaptic competition-dependent CNS synapse elimination *in vitro.* R. KOYAMA*; Y. WU; A. THOMPSON; A. FROUIN; A. R. BIALAS; C. CHEN; B. STEVENS. *Dept. of Neurology, Boston Children's Hospital, Harvard Med. Sch.*

10:00 C31 **318.07** Tgf-β signaling regulates complement C1q expression and developmental synaptic refinement. A. R. BIALAS*; B. STEVENS. *Children's Hosp. Boston.*

11:00 C32 **318.08** Visual midbrain circuitry is protected against maladaptive adult plasticity by light-induced alterations in GABA mediated synaptic transmission. T. S. BALMER*; S. L. PALLAS. *Georgia State Univ.*

8:00 C33 **318.09** Influence of thyroid hormones on the development and plasticity of the visual system. W. S. RODRIGUES JUNIOR*; P. OLIVEIRA-SILVA; P. PANDOLFO; K. OLIVEIRA-SILVA; P. CAMPELLO-COSTA; C. A. SERFATY. *Federal Fluminense Univ.*

9:00 C34 **318.10** GluN2A, GluN2B subunit specific functions in visual cortex LTP/LTD induction and regulation of AMPAR-containing synapses. J. ZHAO*; Y. MURATA; M. CONSTANTINE-PATON. *MIT.*

10:00 D1 **318.11** Separation of GluN2 signaling domain contributions on hippocampal maturation and the emergence of spatial learning. E. M. SANDERS*; A. N. BOLTON; F. G. KING; A. O. NYARKO-ODOOM; A. R. AVEERARE; E. P. R. IYER; T. C. DUMAS. *George Mason Univ., George Mason Univ., Osbourn High Sch., Flint Hill.*

11:00 D2 **318.12** Selective strengthening of single climbing fiber inputs to Purkinje cells during postnatal cerebellar development *in vivo.* Y. KAWAMURA*; H. NAKAYAMA; K. HASHIMOTO; K. SAKIMURA; K. KITAMURA; M. KANO. *Hiroshima Univ., Niigata Univ., The Univ. of Tokyo.*

8:00 D3 **318.13** Global scaling-down of excitatory postsynaptic responses in cerebellar Purkinje cells specifically impairs the late phase of climbing fiber synapse elimination during postnatal development. S. KAWATA*; T. MIYAZAKI; M. YAMAZAKI; T. MIKUNI; M. YAMASAKI; K. HASHIMOTO; M. WATANABE; K. SAKIMURA; M. KANO. *Univ. of Tokyo, Hokkaido Univ., Niigata Univ., Hiroshima Univ.*

9:00 D4 **318.14** Identification of retrograde signaling molecules required for developmental synapse elimination in the cerebellum by an RNAi-based approach. N. UESAKA*; T. MIKUNI; H. HIRAI; M. KANO. *Univ. of Tokyo, Gunma Univ.*

10:00 D5 **318.15** Post-ischemia intermittent hypoxia induces hippocampal neurogenesis and synaptic alterations and alleviates long-term memory impairment. Y. TSAI*; Y. YANG; H. S. SUN; K. LIANG; S. P. WANG; R. WANG. *Dept. and Inst. of Physical Therapy and Assistive Technology, NYMU, Inst. of Neuroscience, Natl. Yang-Ming Univ., Dept. of Psychology, Natl. Taiwan Univ., Dept. and Inst. of Physiology, Natl. Yang-Ming Univ.*

11:00 D6 **318.16** Serotonin receptor 7 (5-Htr7): A key-regulator of neuronal cytoarchitecture in telencephalic neurons. C. PERRONE-CAPANO*; L. SPERANZA; M. CRISPINO; F. VOLPICELLI; G. BELLENCHI; U. DI PORZIO. *Univ. of Naples Federico II, Inst. of Genet. and Biophysics "ABT", CNR, Univ. of Naples Federico II.*

8:00 D7 **318.17** The Myocyte Enhancer Factor 2C (Mef2c) is essential for the maturation of Parvalbumin-expressing cortical interneurons. X. JAGLIN*; R. BATISTA-BRITO; B. L. BENEDETTI; P. GUIGUE; R. COSSART; G. FISHELL. *New York Univ. Sch. of Med., Yale Univ., Inst. de Neurobiologie de la Méditerranée.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 D8 **318.18** Modulation of omega-3 fatty acids by diet interferes with topographical mapping development and regulates synaptic stabilization in rodent visual system. P. C. DE VELASCO*; P. C. SANDRE; A. C. FARIA-MELIBEU; J. M. C. BORBA; B. L. S. A. COSTA; P. CAMPELLO-COSTA; C. A. SERFATY. *Federal Fluminense Univ., Pernambuco Federal Univ., Pernambuco Federal Univ.*

10:00 D9 **318.19** Experience-dependent DNA methylation regulates plasticity in the developing visual cortex. P. TOGNINI*; D. NAPOLI; J. TOLA; D. SILINGARDI; T. PIZZORUSSO. *UCI, Inst. Neuroscience, CNR, Dept. of Neuroscience, Psychology, Drug Res. and Child Hlth. NEUROFARBA, Univ. of Florence.*

11:00 D10 **318.20** Regulation of the transcription factor neurod2 during cortical development. F. CHEN*; J. MORAN; K. ATES; P. DAS; F. JONES; B. HALL. *Tulane Univ., Tulane university, Tulane Univ., Tulane Univ.*

8:00 D11 **318.21** Neuron firing instructs dendritogenesis during learning in the awake brain. K. PODGORSKI*; K. HAAS. *Univ. of British Columbia, Univ. of British Columbia.*

9:00 D12 **318.22** Role of reelin on the establisment and refinement of retinocollicular connections during the critical period: Modulation through tryptophan nutritional restriction. R. A. SANTOS*; C. HEDIN-PEREIRA; E. GONZÁLEZ; C. A. SERFATY. *Federal Fluminense Univ., Federal Univ. of Rio de Janeiro.*

10:00 D13 **318.23** Local neuropeptide signaling promotes neuronal survival and circuit integration in the adult brain. I. GARCIA*; P. K. BHULLAR; K. B. QUAST; L. HUANG; A. M. HERMAN; N. J. JUSTICE; B. R. ARENKIEL. *Baylor Col. of Med., Univ. of Texas Hlth. Sci. Ctr.*

11:00 D14 **318.24** Synapsin 1 expression after erythropoietin therapy for neonatal stroke. A. LARPTHAVEESARP; D. M. FERRIERO; P. MCQUILLEN; F. F. GONZALEZ*. *UCSF, UCSF.*

POSTER

319. GABA Receptors: Trafficking

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 D15 **319.01** Structure of the intracellular domain of pentameric ligand-gated ion channels. N. MNATSAKANYAN*; S. NISHTALA; A. AHROROV; M. JANSEN. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. University/Howard Hughes Med. Inst.*

9:00 D16 **319.02** Crystallization of a homomeric GABAA receptor. H. D. SNELL*; E. B. GONZALES. *Univ. of North Texas Hlth. Sci. Ctr., Institue for Aging and Alzheimer's Dis. Res., Cardiovasc. Res. Inst.*

10:00 D17 **319.03** Fast regulation of glutamate and $GABA_A$ receptors lateral mobility at single synapse level probed with optogenetic tools. E. PETRINI*; A. POLENGHI; C. ROSILLO; P. GOROSTIZA; F. BENFENATI; A. BARBERIS. *ISTITUTO ITALIANO DI TECNOLOGIA, Inst. of Bioengeneering of Catalonia.*

11:00 D18 **319.04** Binding sites on heteromeric $GABA_A$ receptors for allosteric modulatory ligands, ethanol and general anesthetics, at subunit interfaces in extracellular and trans-membrane domains, show significant heterogeneity in affinity based on subunit composition. R. W. OLSEN*; M. WALLNER; G. LI. *Geffen Sch. of Med. At UCLA, Geffen Sch. of Med. At UCLA.*

8:00 D19 **319.05** GABAA receptor alpha and gamma subunits shape synaptic currents via different mechanisms. J. W. LYNCH*; C. L. DIXON; A. KERAMIDAS; P. SAH. *Univ. of Queensland, Univ. of Queensland.*

9:00 D20 **319.06** GABA-A receptor profiles in human brain: Effect of alcohol misuse. P. R. DODD*; S. KUO. *Univ. of Queensland, NHRI.*

10:00 D21 **319.07** Comparing the high affinity benzodiazepine binding site with the homologous "CGS 9895" site in GABAA receptors. R. PUTHENKALAM*; Z. VARAGIC; A. DEREKY; C. SUWATTANASOPHON; I. SARTO-JACKSON; W. SIEGHART; M. ERNST. *Med. Univ. Vienna, Konrad Lorenz Inst. for Evolution and Cognition Res.*

11:00 D22 **319.08** Pharmacological characterization of the novel β3δ $GABA_A$ receptor subtype. H. J. LEE*; N. ABSALOM; J. HANRAHAN; M. CHEBIB. *The Univ. of Sydney, The Univ. of Sydney.*

8:00 D23 **319.09** GABA-A receptor residue βN265 on M2 is an etomidate binding determinant. M. HOTTA*; D. S. STEWART; D. PIERCE; Y. JOUNAIDI; S. A. FORMAN. *Massachusetts Gen. Hosp.*

9:00 D24 **319.10** Assessment of subunit-dependent actions of meprobamate on gabaa receptors, and involvement of tm4 residues in its effects. M. KUMAR*; G. H. DILLON. *WEST VIRGINIA UNIVERSITY, MORGANTOWN.*

10:00 D25 **319.11** Allosteric modulators induce asymmetric motions in the inter- and intra-subunit TMD cavities of GABAARs. B. GHOSH*; C. CZAJKOWSKI. *Univ. of Wisconsin.*

11:00 D26 **319.12** ● Neurosteroids selectively modulate tonic current by promoting the phosphorylation and membrane insertion of GABAARs containing a4 subunits. A. M. ABRAMIAN*; E. J. COMENENCIA-ORTIZ; G. MACKENZIE; A. MODGIL; Y. NAKAMURA; J. L. MAGUIRE; P. A. DAVIES; S. J. MOSS. *Tufts Univ.*

8:00 D27 **319.13** GABAA receptor subunit domains that confers carisoprodol sensitivity. M. KUMAR*; J. M. FREUND; G. H. DILLON. *West Virginia Univ. Hlth. Sci. Ctr., West Virginia Univ. Hlth. Sci. Ctr.*

9:00 D28 **319.14** Ethanol-induced plasticity of GABAA receptors in the basolateral amygdala. K. LINDEMEYER*; J. LIANG; A. SURYANARAYANAN; I. SPIGELMAN; R. W. OLSEN. *UCLA, UCLA.*

10:00 D29 **319.15** ● Preventing the phosphorylation of the GABAAR β3 results in morphological and behavioral deficits that are seen in autism spectrum disorders. T. VIEN*; M. ABRAMIAN; J. MAGUIRE; P. A. DAVIES; S. J. MOSS. *Tufts Univ.*

11:00 D30 **319.16** The action of testosterone on histaminergic neurons. O. A. SERGEEVA*. *Heinrich-Heine-Univ.*

8:00 D31 **319.17** Dipicrylamine modulation of GABA ρ1 and other LGIC receptors. A. LIMON*; J. M. REYES-RUIZ; A. ESTRADA-MONDRAGÓN; R. MILEDI. *Univ. of California, Irvine, Inst. de Biologie Structurale Jean-Pierre Ebel.*

9:00 D32 **319.18** Endocytosis of GABAc receptors depends on subunit composition and is regulated by protein phosphatase 1, protein kinase C-alpha and protein kinase C-zeta. R. ENZ*; C. HAYNL; M. PRÖSCHEL; N. SCHÜRMANN. *Univ. Erlangen-Nürnberg.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

320. Ion Channels: K+ Channels I

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 D33 **320.01** Activation of Slack channels alters their interactions with the regulatory protein Phactr1. M. R. FLEMING*; L. K. KACZMAREK. *Yale Univ. Sch. Med., Yale Univ.*

9:00 D34 **320.02** Gain-of-function mutations in the sodium-activated potassium channel Slack are found in different early-onset epilepsies with developmental delay. G. E. KIM*; J. KRONENGOLD; M. R. FLEMING; M. R. BROWN; H. C. MARTIN; G. BARCIA; L. COLLEAUX; R. NABBOUT; J. C. TAYLOR; L. K. KACZMAREK. *Yale Univ., Yale Univ., Univ. of Oxford, Ctr. de Reference Epilepsies Rares, Hop. Necker-Enfants Malades.*

10:00 D35 **320.03** Physiological roles of Kv2 channels in entorhinal cortex layer II cells revealed by Guangxitoxin-1E. C. HÖNIGSPERGER*; M. J. NIGRO; J. F. STORM. *Univ. of Oslo, Feinberg Sch. of Medicine, Northwestern Univ.*

11:00 D36 **320.04** Carboxyl-terminal region contributes to the subcellular localization of Eag K^+ channels. C. JENG*; C. TANG; C. CHUANG. *Natl. Yang-Ming Univ., Natl. Taiwan University, Col. of Med.*

8:00 D37 **320.05** Cytoplasmic interacting proteins for the Kv3.3 potassium channel. A. SURGUCHEV*; Y. ZHANG; D. NAVARATNAM; L. K. KACZMAREK. *Yale Univ., Yale Univ.*

9:00 D38 **320.06** Regulation of Kv3.3 inactivation by monomeric actin. Y. ZHANG*; L. EL-HASSAR; M. FLEMING; A. SURGUCHEV; M. BROWN; M. WATERS; L. KACZMAREK. *Yale Univ. Sch. Med., Univ. of Florida.*

10:00 D39 **320.07** High glucose decreases Kir4.1 and TREK-2 potassium channel expression in cultured cortical astrocytes. D. E. RIVERA-APONTE*; A. RIVERA-PAGAN; Y. V. KUCHERYAVYKH; L. Y. KUCHERYAVYKH; S. N. SKATCHKOV; M. J. EATON. *Univ. Central Del Caribe, Univ. Central Del Caribe.*

11:00 D40 **320.08** Unidirectional cone-to-Müller glia coupling in caiman retina: A possible new mechanism of extracellular K^+ buffering. A. ZAYAS-SANTIAGO*; S. AGTE; E. ULBRICHT; Y. RIVERA; J. BENEDIKT; J. DAVILA; L. A. CUBANO; A. REICHENBACH; S. N. SKATCHKOV. *Univ. Central Del Caribe, Paul Flechsig Inst. of Brain Res. Leipzig Univ., Univ. of Cambridge.*

8:00 D41 **320.09** ● The contribution of TWIK-1 channels to astrocyte K^+ current is limited by retention in intracellular compartments. W. WANG*; A. PUTRA; B. MA; M. ZHOU. *The Ohio State Univ.*

9:00 D42 **320.10** Kv2.1 and the mosaic of ion channels on the axon initial segment of mammalian brain neurons. J. S. TRIMMER*; A. N. KING. *Univ. California, Davis.*

10:00 E1 **320.11** ● Pharmacological activators and inhibitors of Kv3.1 potassium currents. M. R. BROWN*; C. H. LARGE; G. ALVARO; L. K. KACZMAREK. *Yale Sch. of Med., Autifony Therapeut. Limited.*

11:00 E2 **320.12** Human gain-of-function Slack potassium channel mutations alter positive cooperativity between individual Slack channels. J. KRONENGOLD*; G. E. KIM; M. R. BROWN; M. R. FLEMING; H. C. MARTIN; G. BARCIA; L. R. COLLEAUX; R. NABBOUT; J. C. TAYLOR; L. K. KACZMAREK. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Univ. of Oxford, Hop. Necker-Enfants Malades.*

8:00 E3 **320.13** Slack and FMRP protein-protein interactions on the membrane. M. R. BROWN; A. A. SURGUCHEV; L. K. KACZMAREK*. *Yale Univ. Sch. Med.*

9:00 E4 **320.14** Loss of Kv1.3 potassium channels impairs auditory function. L. EL-HASSAR*; L. SONG; V. GAZULA; D. NAVARATNAM; J. SANTOS-SACCHI; L. KACZMAREK. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

10:00 E5 **320.15** ● Region-specific effects of KCNQ channel openers on physiological and pathological neuronal network activity in rat brain slices. S. SHAHABI MOHAMAMD SHAHI; L. MCKILLOP; T. BUIJS; J. D. FINDLAY; D. URSU; M. J. LORITE; S. W. HUGHES*. *Eli Lilly and Co., Eli Lilly and Co.*

11:00 E6 **320.16** Novel KCNJ10 variations compromise Kir4.1 channel function. M. MENDEZ*; Y. V. KUCHERYAVYKH; A. ZAYAS-SANTIAGO; L. A. CUBANO; S. N. SKATCHKOV; M. J. EATON*. *Univ. Central Del Caribe, Univ. Central Del Caribe, Univ. Central Del Caribe, Univ. Central Del Caribe.*

8:00 E7 **320.17** Rank-ordered recruitment of jaw-closing α-motoneurons depending on the activities of TASK1 and TASK3 channels in the rat. M. SAITO; Y. ISOGAI-MORITA; N. EMURA; H. TOYODA; H. SATO; Y. KANG*. *Osaka Univ. Grad. Sch. Dent.*

9:00 E8 **320.18** ATP-sensitive potassium (K-ATP) channels are coupled to voltage-gated calcium channels in dopamine substantia nigra neurons. S. KUTTERER*; J. ROEPER. *Neurophysiol.*

10:00 E9 **320.19** A-kinase-anchoring protein (AKAP150) may be involved in astrocytic TREK-2 channel regulation during ischemia. A. F. RIVERA-PAGAN*; D. E. RIVERA-APONTE; Y. V. KUCHERYAVYKH; L. Y. KUCHERYAVYKH; L. A. CUBANO; S. N. SKATCHKOV; M. J. EATON. *Univ. Central Del Caribe, Univ. Central Del Caribe, Univ. Central Del Caribe.*

11:00 E10 **320.20** Haloperidol blocks cloned kv4.3 potassium channels. H. LEE*; Y. S. JOO; G. U. SEONG; S. J. HAHN; K. W. SUNG. *Catholic Univ. Korea, Dept. of Physiology, Col. of Medicine, The Catholic Univ. of Korea.*

8:00 E11 **320.21** NMDA-induced excitotoxicity leads to proteasomal degradation of potassium channel. P. HSU*; C. TANG; C. JENG. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Yang-Ming Univ.*

9:00 E12 **320.22** Super-resolution imaging of AKAP79/150 signaling complexes in neurons using stochastic optical reconstruction microscopy (STORM). J. ZHANG*; M. S. SHAPIRO. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio.*

10:00 E13 **320.23** ● Discovery and characterization of ML297, a novel, *in vivo*-active, small-molecule activator of G-protein-coupled inward rectifying potassium (GIRK) Channels. K. KAUFMANN; I. ROMAINE; E. DAYS; C. PASCUAL; L. YANG; B. ZOU; A. MALIK; Y. DU; G. SLIWOSKI; R. MORRISON; J. DENTON; C. NISWENDER; S. DANIELS; G. SULIKOWSKI; X. S. XIE*; C. LINDSLEY; C. WEAVER. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Afasci Res. Laboratory, Afasci, Inc., Vanderbilt Univ., Vanderbilt Univ.*

11:00 E14 **320.24** ● The novel selective activator of the GIRK channel, ML297, produces inhibitory neuronal modulation and blocks epileptiform activity in mouse brain slices. B. ZOU*; C. PASCUAL; L. YANG; K. KAUFMANN; I. ROMAINE; C. LINDSLEY; D. WEAVER; X. XIE. *Afasci.,Inc., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 E15 **320.25** Escitalopram block of hERG potassium channels. Y. J. CHAE; J. CHOI*; S. J. HAHN. *Col. of Medicine, the Catholic Univ. of Korea, The Catholic Univ. of Korea.*

9:00 E16 **320.26** Electrostatic interactions in the voltage-sensing domain of Kv7.2 channels. M. V. SOLDOVIERI; P. AMBROSINO; M. DE MARIA; E. MARZILLI; L. MANOCCHIO; S. DI SISTO; M. TAGLIALATELA*. *Univ. of Molise.*

10:00 E17 **320.27** Stimulation of sarcolemmal ATP-sensitive potassium channels by atrial natriuretic peptide in cardiomyocytes. Y. LIN*; D. ZHANG. *Univ. California-Davis Sch. Med.*

11:00 E18 **320.28** Enhanced K+ conductances are responsible for age-related alterations in the intrinsic properties of CA3 pyramidal neurons. D. SIMKIN*; N. YBARRA, III; M. M. OH; J. F. DISTERHOFT. *Northwestern Univ.*

8:00 E19 **320.29** Kv2.1 and Kv2.2 show distinct patterns of cellular expression in mammalian forebrain. H. BISHOP*; J. S. TRIMMER. *UC Davis, Univ. of California, Davis, Univ. of California, Davis.*

9:00 E20 **320.30** The R-type (Cav2.3) calcium channel blocker SNX-482 is a potent inhibitor of Kv4.3 channels. C. KIMM*; B. P. BEAN. *Harvard Med. Sch.*

POSTER

321. Ion Channels and Disease States

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 E21 **321.01** Adoptive transfer of protective monocytes from a preconditioned donor to a naïve host confers cerebral ischemic tolerance in an IL-10-dependent manner. C. BENAKIS*; L. GARCIA-BONILLA; J. MOORE; G. RACCHUMI; C. IADECOLA; J. ANRATHER. *Weill Med. Col. of Cornell Univ.*

9:00 E22 **321.02** Differential expression of acid-sensing ion channels in the brain. X. ZHA*. *Univ. of South Alabama.*

10:00 E23 **321.03** TALEN knock-in of an SCN8A epilepsy mutation in the mouse germline. M. H. MEISLER*; J. M. JONES; J. E. O'BRIEN. *Univ. Michigan.*

11:00 E24 **321.04** Voltage-gated sodium channel activator enhancement of immature cerebrocortical neuron development requires both the N-methyl-D-aspartate receptor 2B (GluN2B) and p21 protein (Cdc42/Rac)-activated kinase 1 (PAK1). S. MEHROTRA*; S. M. DRAVID; T. F. MURRAY. *Creighton Univ.*

8:00 E25 **321.05** Leveraging endogenous protection for chronic neurodegenerative diseases: Postconditioning for glaucoma. J. M. GIDDAY*; L. ZHANG; C. CHIANG; Y. ZHU. *Washington Univ., Washington Univ.*

9:00 E26 **321.06** Etomidate and propofol interactions with cysteine-substituted residues on $GABA_A$ receptor β3-M2 and β3-M3 domains. A. M. ZIEMBA*; M. HABUCAK; D. S. STEWART; Y. JOUNAIDI; S. A. FORMAN. *Massachusetts Gen. Hosp., Harvard Med. Sch.*

10:00 E27 **321.07** Multifaceted roles of lactate in the cerebral cortex. B. CAULI*; A. KARAGIANNIS; A. LACROIX; F. PLAISIER; L. BELLIVEAU; R. HEPP; T. GALLOPIN; H. GEOFFROY; C. DAVID; F. JARLIER; B. L'HEREUX; B. LAMBOLEZ; J. F. STAIGER; S. SEINO; E. M. C. HILLMAN; J. ROEPER. *CNRS - UPMC, CNRS - UPMC, ESPCI ParisTech - CNRS, Semmelweis Univ., Columbia Univ., Georg August Univ., Kobe Univ., Goethe-University.*

11:00 E28 **321.08** Hypoxia exacerbates toxicity and aggregation of polyglutamine proteins in *C. elegans.* D. L. MILLER*; E. M. FAWCETT; N. N. IRANON; J. HOYT. *Univ. of Washington, Univ. of Washington.*

8:00 E29 **321.09** Slc26a11 is prominently expressed in the brain and functions as a chloride channel: Expression in Purkinje cells and stimulation of V H+-ATPase. N. RAHMATI*; K. KUNZELMANN; J. XU; S. BARONE; L. SIRIANANT; C. I. DE ZEEUW; M. SOLEIMANI. *Erasmus MC, Univ. Regensburg, Univ. of Cincinnati, Erasmus MC.*

9:00 E30 **321.10** Ethanol concentrations reached in blood during alcohol intoxication decrease ryanodine receptor type 2 activity. Y. YE; A. BUKIYA; A. DOPICO*. *The Univ. of Tennessee HSC, Coll. Med., Dept. Pharmacol.*

10:00 E31 **321.11** Cocaine potentiates dopamine regulation of calcium activated K+ channels in the prefrontal cortex. W. BUCHTA*; B. HARLAN; P. KALIVAS; A. RIEGEL. *Med. Univ. of South Carolina.*

11:00 E32 **321.12** The familial hemiplegic migraine type 1 K1336E mutation modifies syntaxin 1A-mediated regulation of Cav2.1 channels. E. GARZA-LÓPEZ*; M. GANDINI; A. SANDOVAL; R. GONZÁLEZ-RAMÍREZ; R. FELIX. *Ctr. De Investigación Y Estudios Avanzados IPN, Ctr. for research and advanced studies, Natl. Polytechnic Inst., Natl. Autonomous Univ. of Mexico, "Dr. Manuel Gea González" Gen. Hosp.*

8:00 E33 **321.13** Loss of functional A-type potassium channels in the dendrites of CA1 pyramidal neurons from a mouse model of Fragile X syndrome. B. N. ROUTH; D. JOHNSTON; D. H. BRAGER*. *Univ. Texas at Austin.*

9:00 E34 **321.14** The Shaker that wasn't Kv1: Gain of function point mutants of paralytic (DmNav1.1) with unique modes of seizure-like hyperexcitability. A. IYENGAR; A. UEDA*; X. XING; C. WU. *Univ. Iowa.*

10:00 E35 **321.15** Is the Na+/K+-ATPase α3 isoform developmentally regulated? K. LYKKE-HARTMANN*; T. HOLM. *Aarhus Univ.*

11:00 E36 **321.16** Dominant scale reduced modeling reveals mechanism of plateau potential in mouse myocyte model. B. CHUNG*; J. COLLENS; R. CLEWLEY. *Georgia State Univ.*

8:00 E37 **321.17** Gap junction Nexus structure and functional regulation. R. F. STOUT*, JR; E. BYRD; D. C. SPRAY. *Albert Einstein Col. of Med.*

POSTER

322. Synaptic Transmission: Postsynaptic Mechanisms I

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 E38 **322.01** Neto1 controls the synaptic localization of kainate receptors as well as their ionotropic and metabotropic signaling in hippocampal CA3 pyramidal cells. K. A. PELKEY*; M. S. WYETH; R. S. PETRALIA; M. W. SALTER; R. R. MCINNES; C. J. MCBAIN. *NIH, NIH, NIH, Hosp. for Sick Children, McGill Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 E39 **322.02** Neto auxiliary proteins regulate NMDA receptor subunits at mossy fiber synapses onto CA3 pyramidal spines. M. S. WYETH*; K. A. PELKEY; R. S. PETRALIA; M. W. SALTER; R. R. MCINNES; C. J. MCBAIN. *NIH, NIH, Hosp. for Sick Children, McGill Univ.*

10:00 E40 **322.03** Modeling the dendritic spine response: Effect of static charges and nanoscale geometry. D. PATIRNICHE; A. VOGEL; A. V. HERZ*; G. QUEISSER; M. B. STEMMLER. *Ludwig-Maximilians-Universität München, Goethe Univ.*

11:00 E41 **322.04** Synaptic function regulated by palmitate cycling on PSD-95. M. FUKATA*; A. SEKIYA; T. MURAKAMI; Y. FUKATA. *Natl. Inst. For Physiological Sci.*

8:00 E42 **322.05** MDGAs selectively interact with neuroligin-2 but not other neuroligins to regulate inhibitory synapse development. J. UM; K. LEE; S. LEE; Y. QIANG; S. H. JE; T. C. SUDHOF; J. KO*. *Yonsei Univ., Stanford university, DUKE-NUS Grad. Med. Sch.*

9:00 E43 **322.06** Homer is highly concentrated at the postsynaptic density and does not rapidly redistribute after synaptic stimulation. J. TAO-CHENG*; T. S. REESE; P. E. GALLANT. *NIH.*

10:00 E44 **322.07** Cytoplasmic interactions of the AMPA receptor auxiliary subunit Shisa9. A. KARATAEVA*; R. V. KLAASSEN; J. STRÖDER; M. RUIPEREZ-ALONSO; J. J. J. HJORTH; P. VAN NIEROP; H. D. MANSVELDER; S. SPIJKER; A. B. SMIT. *Vrije Univ. Amsterdam, Vrije Univ. Amsterdam.*

11:00 E45 **322.08** Live cell imaging of endogenous psd-95 using psd-95mvenus knock-in mice. D. A. FORTIN*; S. TILLO; G. YANG; J. RAH; S. BAI; M. QIN; C. GUO; T. MAO; H. ZHONG. *Oregon Hlth. and Sci. Univ., Janelia Farm Res. Campus.*

8:00 E46 **322.09** Molecular pathogenic mechanisms of epilepsy caused by LGI1 mutations. N. YOKOI*; Y. FUKATA; D. KASE; T. MIYAZAKI; M. JAEGLE; K. IMOTO; D. MEIJER; M. WATANABE; M. FUKATA. *Natl. Inst. For Physiological Sci., Natl. Inst. for Physiological Sci., Hokkaido Univ. Grad. Sch. of Med., Erasmus Univ. Med. Ctr., Japan Sci. and Technol. Agency.*

9:00 E47 **322.10** Local palmitoylation machinery defines activity-regulated postsynaptic subdomains. Y. FUKATA*; A. DIMITROV; G. BONCOMPAIN; O. VIELEMEYER; F. PEREZ; M. FUKATA. *Natl. Inst. For Physiological Sci., Ctr. Natl. de la Recherche Scientifique, and Inst. Curie Ctr. de Recherche.*

10:00 E48 **322.11** Proteomic determination of striatal spinophilin phosphorylation and protein-protein interactions in 6-hydroxydopamine lesioned mice. T. J. RENTZ; K. L. ROSE; A. J. BAUCUM II*. *Vanderbilt Univ., Vanderbilt Univ.*

11:00 E49 **322.12** p130 AMOT regulates synapse development. M. WIGERIUS; A. KOLAR; S. KRUEGER; J. P. FAWCETT*. *Dalhousie, Dalhousie, Dalhousie.*

8:00 E50 **322.13** Septohippocampal projections to hippocampal interneurons in somatostatin, parvalbumin, and ChAT-CRE mice. T. GARRETT*; F. YI; A. D. JOHNSTON; J. BALL; K. DEISSEROTH; J. J. LAWRENCE. *Univ. of Montana, Univ. of Montana, Stanford Univ., Stanford Univ.*

9:00 E51 **322.14** Neuronal trafficking of SorLA and Sortilin. S. C. KLINGER*; M. S. NIELSEN; J. S. BONIFACINO. *NIH, Aarhus Univ.*

10:00 E52 **322.15** Differences in size of cortical synapses underly distinct modes of inhibitory control. Y. KUBOTA*; S. KONDO; M. NOMURA; F. KARUBE; J. LUEBKE; Y. KAWAGUCHI. *Natl. Inst. Physiol Sci. (NIPS), SOKENDAI, JST-CREST, Kyushu Univ., RIKEN RCAI, Doshisha Univ., Res. Ctr. Juelich, RWTH/University Hosp. Aachen, JARA Translational Brain Med.*

11:00 E53 **322.16** Snap-25 regulates spine formation through postsynaptic binding to p140cap. R. TOMASONI*; D. REPETTO; R. MORINI; C. ELIA; E. TURCO; P. DEFILIPPI; M. MATTEOLI. *Humanitas Clin. and Res. Ctr., Univ. of Milan, Mol. Biotech. Ctr.*

8:00 E54 **322.17** Regulation of synapse structure and dendrite morphology by an autism-associated cadherin. K. R. SMITH*; K. A. JONES; A. C. BURETTE; B. A. COPITS; G. T. SWANSON; R. J. WEINBERG; P. PENZES. *Northwestern Univ., Univ. of North Carolina.*

9:00 F1 **322.18** Molecular organization of GKAP and Shank at the postsynaptic density. X. CHEN*; A. HOU; C. A. WINTERS; X. LI; R. D. LEAPMAN; T. S. REESE. *NINDS-NIH, Columbia Univ., NIBIB-NIH.*

10:00 F2 **322.19** Structural and functional interaction of calmodulin with PSD-95. L. MATT*; Y. ZHANG; T. PATRIARCHI; J. W. HELL; J. B. AMES. *Univ. of California Davis, Univ. of California Davis.*

11:00 F3 **322.20** Multiple spatial and kinetic subpopulations of CaMKII in spines and dendrites as resolved by single-molecule tracking PALM. H. LU*; H. D. MACGILLAVRY; N. A. FROST; T. A. BLANPIED. *Univ. Maryland, Baltimore.*

8:00 F4 **322.21** Activation-dependent spatial dynamics of postsynaptic glycine receptors. Y. NAKAHATA; H. ISHIBASHI*; H. HIRATA; J. NABEKURA. *Natl. Inst. for Physiological Sci., The Grad. Univ. for Advanced Studies (SOKENDAI), Kitasato Univ. Allied Hlth. Sci., Natl. Inst. of Genet., The Grad. Univ. for Advanced Studies (SOKENDAI), Japan Sci. and Technol. Agency (JST), Japan Sceince and Technol. Agency (JST).*

9:00 F5 **322.22** The Sec14 domain of Kalirin7 binds phosphoinositides and contributes to dendritic spine morphology. M. B. MILLER*; R. E. MAINS; B. A. EIPPER. *Univ. of Connecticut Hlth. Ctr., Univ. of Connecticut Hlth. Ctr.*

10:00 F6 **322.23** Input-selective synaptic photoinactivation at the hippocampal mossy fiber synapse. H. KAMIYA*. *Hokkaido Univ. Grad. Sch. of Med.*

11:00 F7 **322.24** AKAP5 postsynaptically anchors adenylyl cyclases in parallel with PKA for regulation of AMPA receptors by beta adrenergic stimulation. T. PATRIARCHI; M. ZHANG; H. QIAN; I. S. STEIN; L. MATT; J. W. HELL*. *UC Davis, Univ. of Iowa, UC Davis.*

8:00 F8 **322.25** Nanoscale scaffolding domains within the postsynaptic density concentrate synaptic AMPA receptors. H. D. MAC GILLAVRY*; Y. SONG; S. RAGHAVACHARI; T. A. BLANPIED. *Univ. of Maryland Sch. of Med., Duke Univ., Duke Univ. Med. Ctr., Univ. of Maryland Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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POSTER

323. Synaptic Transmission: Postsynaptic Mechanisms II

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 F9 **323.01** FILIP-related molecule controls spine maturation and synaptic function in the hippocampal neuron via non-muscle myosin IIb. K. KURODA*; H. YAGI; M. XIE; Y. OKA; T. IGUCHI; M. SATO. *Univ. of Fukui, Univ. of Fukui, Hyogo Col. of Med., Univ. of Fukui, Osaka Univ.*

9:00 F10 **323.02** Calcium regulation at a 'cisternal' synapse. P. A. FUCHS*; H. S. MOSKOWITZ; G. IM. *Johns Hopkins Univ. Med.*

10:00 F11 **323.03** Elfn1 regulates target cell specific release probability at CA1-interneuron synapses. E. L. SYLWESTRAK*; A. GHOSH. *F. Hoffmann-La Roche, UCSD, Univ. of Basel.*

11:00 F12 **323.04** TNiK synaptic signaling complexes and psychiatric disorders. J. LI; M. P. COBA*. *Zilkha Neurogenetic Institute/University of Southern California, Keck Sch. of Medicine, Univ. of Southern California.*

8:00 F13 **323.05** 3'UTR-mediated neuroligin-1 mRNA localization and translational dysregulation at synapses contributes to altered glutamate receptor expression in fragile X syndrome. J. B. DICTENBERG*; T. ZHU; A. MUSNIER; I. COHEN; G. UZUNOVA; H. WU; C. D'HULST; V. DROUET. *HUNTER COLLEGE of CUNY, Hunter Col. / CUNY, Hunter Col. / CUNY.*

9:00 F14 **323.06** SynDIG4: A novel AMPAR interacting protein important for excitatory synapse formation. L. M. KIRK*; I. KAUR; M. SHORROCK; E. DIAZ. *Univ. of California Davis.*

10:00 F15 **323.07** Regulation of PSD-95 dynamics at developing cortical synapses through ephrin-B3 signaling. M. HRUSKA*; S. J. LE MARCHAND; M. B. DALVA. *Thomas Jefferson Univ.*

11:00 F16 **323.08** Regulation of dendritic spine morphology by BRAG1, a protein associated with intellectual disability. M. HIMELRIGHT; R. S. WALIKONIS*. *Univ. of Connecticut.*

8:00 F17 **323.09** ● Neuroligin 1 and Neuroligin 2 in Alzheimer's disease. I. A. SINDI*; R. K. TANNENBERG; G. J. BYRNE; P. R. DODD. *Univ. of Queensland, Univ. of Queensland.*

9:00 F18 **323.10** Cypin regulates changes in neuronal network synchronization. A. RODRIGUEZ*; B. L. FIRESTEIN. *Rutgers Univ., Rutgers Univ.*

10:00 F19 **323.11** Synaptic and extrasynaptic NMDA receptors in somatostatin-positive interneurons. N. V. POVYSHEVA*; J. W. JOHNSON. *Univ. Pittsburgh.*

11:00 F20 **323.12** Neuroligin 2-induced molecular rearrangement of Collybistin underlies inhibitory postsynaptic differentiation. T. SOYKAN*; A. POULOPOULOS; T. PAPADOPOULOS; H. BETZ; F. VAROQUEAUX; N. BROSE. *Max Planck Inst. of Exptl. Med.*

8:00 F21 **323.13** Regulation of inhibitory activity at hippocampal slices by synapsin II and Rab3a. P. A. FELICIANO*; R. ANDRADE; M. BYKHOVSKAIA. *Univ. Central Del Caribe, Wayne State Univ.*

POSTER

324. Synaptic Plasticity: Physiology and Behavior

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 F22 **324.01** Pattern completion following long-term potentiation in the CA3 region of hippocampal slices. M. B. JACKSON*. *Univ. of Wisconsin Med. Sch.*

9:00 F23 **324.02** Voltage imaging of contributions from intrinsic circuitry to long term potentiation in the dentate gyrus. B. J. WRIGHT*; M. B. JACKSON. *Univ. of Wisconsin-Madison.*

10:00 F24 **324.03** LTP increases newly-generated dentate granule cells via increased proliferation but not neuronal survival. M. M. NAVARRO; D. M. VILLARREAL; B. E. DERRICK*. *Univ. of Texas at San Antonio, Dept. of Biol.*

11:00 F25 **324.04** ▲ Neonatal ketamine exposure causes long-lasting deficit of spatial learning associated with impairment of synaptic plasticity in the forebrain cortex of rats. A. WOMACK; R. WANG; J. ORTEGA; J. PERISH; D. LYU; X. ZOU; P. FUCHS; Q. LIN*. *Univ. of Texas At Arlington.*

8:00 F26 **324.05** Female rats placed on a diet high in saturated fat display impaired long-term potentiation, but no change in the expression and distribution of NMDA receptor subunits. I. MESSA; D. PAVLOV; D. LAU; J. G. MIELKE*. *Univ. of Waterloo.*

9:00 F27 **324.06** Neutralization of Nogo-A enhances synaptic plasticity in the rat motor cortex and improves motor learning *in-vivo*. A. ZEMMAR*; X. YU; Y. KELLNER; H. KASPER; O. WEINMANN; M. GULLO; K. LUSSI; A. LUFT; M. RIOULT-PEDOTTI; M. ZAGREBELSKY; Y. ZUO; M. SCHWAB. *Brain Res. Inst. (ETH Zurich & Univ. of Zurich), Univ. of California Santa Cruz, TU Braunschweig, Dept. of Neurology, Univ. Hosp. Zurich.*

10:00 F28 **324.07** The role of translin in LTP and memory through activity-dependent regulation of Arc and Bdnf1, as a novel target RNA-binding protein for neurological disorders. A. J. PARK*; R. HAVEKES; M. BRIDI; J. BARABAN; T. ABEL. *Univ. of Pennsylvania, Univ. of Pennsylvania, Johns Hopkins Sch. of Med.*

11:00 F29 **324.08** Pro-brain derived neurotrophic factor (proBDNF) does not modulate mossy fiber plasticity. E. A. JIMÉNEZ*; K. THOMPSON; J. PORTER. *Ponce Sch. of Med. and Hlth. Sci., Ponce Sch. of Med. and Hlth. Sci., Ponce Sch. of Med. and Hlth. Sci.*

8:00 F30 **324.09** Learning induced LTP in mice. J. REMAUD*; F. ROUMIER; S. PECH; B. FRANCÈS; L. DAHAN. *Ctr. De Recherches Sur La Cognition Animale (CRCA - UMR 5169).*

9:00 F31 **324.10** Neuroprotective effects of 4-methylcatechol against depression related to chronic pain: Similar action to TrkB agonist, 7, 8, 3'-THF. T. ISHIKAWA*; Y. IWANAGA; K. ISHIKAWA; S. YASUDA; Y. IDA; K. FUKUHARA; M. ONO; M. YAMAMOTO; H. SASAKI; T. ARIYOSHI. *Yamaguchi Univ. Sch. Med., Yamaguchi Prefectural Med. Ctr., Yamaguchi Univ. Hosp.*

10:00 F32 **324.11** D4 Dopamine receptors modulate synaptic plasticity and neural network activity in the hippocampus of freely behaving mice. S. LI*; G. KÖHR. *Central Inst. of Mental Health, Heidelberg Univ.*

11:00 F33 **324.12** Anodal transcranial direct current stimulation enhances hippocampal plasticity at CA3-CA1 synapses and improves learning and memory in mice. S. COCCO; M. V. PODDA; A. MASTRODONATO; C. RIPOLI; S. FUSCO; C. GRASSI*. *Med. School, UCSC.*

● Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 F34 **324.13** Interneuronopathy-related abnormalities in neural plasticity and gamma oscillations are corrected by MGE progenitor transplant. M. A. HOWARD*; J. L. R. RUBENSTEIN; S. C. BARABAN. *Univ. of California San Francisco, Univ. of California, San Francisco.*

9:00 F35 **324.14** Reductions in hippocampal ARC, BDNF and NMDA receptor subunit expression are associated with impaired spatial learning following exposure to high-fat diet. K. C. PAGE*; E. K. ANDAY. *Bucknell Univ., Drexel Univ. Col. of Med.*

10:00 F36 **324.15** Tauroursodeoxycholic acid ameliorates chronic intermittent hypoxia-induced memory deficits through suppression of endoplasmic reticulum stress. L. XU*; H. XIE; Y. KE; W. YUNG. *The Chinese Univ. of Hong Kong.*

11:00 F37 **324.16** Effect of stimulation pattern on synaptic plasticity outcome in adult rats with and without mild traumatic brain injury (mTBI). Q. S. FISCHER*; D. KALIKULOV; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst.*

8:00 F38 **324.17** Thalamocortical long-term potentiation becomes gated after the early critical period in the auditory cortex. S. CHUN*; I. T. BAYAZITOV; J. A. BLUNDON; S. S. ZAKHARENKO. *St. Jude Children's Res. Hosp.*

9:00 F39 **324.18** ● Transgenerational impact of early life stress on gene expression and synaptic plasticity in mice. M. FARINELLI; F. MELISSA*; J. BOHACEK; K. GAPP; F. KNOFLACH; J. MOREAU; I. M. MANSUY. *Brain Res. Inst., Pharma Division, Hoffmann-La Roche.*

10:00 F40 **324.19** Interaction of predator stress model of PTSD with a western diet in the expression of synaptic plasticity in CA1 *in vitro.* G. E. FARMER JR*; S. A. WOLFE; C. R. PARK; D. M. DIAMOND. *Univ. of South Florida, VA Hosp.*

11:00 F41 **324.20** The role of electric fields on the modulation of hebbian-like plasticity. B. LAFON*; A. RAHMAN; D. REATO; M. BIKSON; L. C. PARRA. *City Col. of New York.*

8:00 F42 **324.21** Presynaptic long-term potentiation in the basal amygdala underlies fear memory. K. CHOI; K. PARK; J. YI; S. LEE; K. SHIN*. *Kyung Hee Univ.*

9:00 F43 **324.22** Long-term potentiation of intrinsic excitability in hypoglossal and trigeminal motoneurons. S. BAKHSHISHAYAN*; T. TSUJI; S. TANAKA; K. ISHIHAMA; M. KOGO. *Osaka Univ., Saiseikai Matsusaka Gen. Hosp., Osaka Police Hosp.*

10:00 F44 **324.23** Deletion of forebrain tyrosine phosphatase Shp2 impairs synaptic plasticity and fear memory. X. YAN*; W. YANG; W. LU; L. PENG; J. LUO. *Inst. of Neuroscience, Zhejiang Univ. Sch. of Med.*

11:00 F45 **324.24** Synaptic AMPA receptor plasticity in hippocampal memory formation. M. RENNER*; K. VAN AERDE; H. W. KESSELS. *Netherlands Inst. For Neurosci.*

8:00 F46 **324.25** Inhibition differentially regulates dendritic spikes - the substrates for plasticity - in distinct compartments of a pyramidal neuron. K. A. WILMES*; H. SPREKELER; S. SCHREIBER. *Inst. For Theoretical Biology, Humboldt Univ. Zu Berlin, Bernstein Ctr. for Computat. Neurosci.*

POSTER

325. Synaptic Plasticity: Structural Plasticity II

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 G1 **325.01** Fluoxetine induces plasticity in hypothalamic circuits controlling leptin sensitivity and food intake. M. MAINARDI; G. SCABIA; I. BARONE; M. SCALI; G. CECCARINI; F. SANTINI; N. BERARDI*; T. PIZZORUSSO; L. MAFFEI; M. MAFFEI. *CNR - Natl. Res. Council, Univ. of Pisa, Dulbecco Telethon Inst., Inst. Neurosci. del CNR, Univ. of Florence.*

9:00 G2 **325.02** Differential aspect of treadmill exercise increased adult hippocampal neurogenesis in C57BL/6, ICR and BALB/c. S. NAM*; J. KIM; D. YOO; J. CHOI; W. KIIM; H. JUNG; M. WON; I. HWANG; J. SEONG; Y. YOON. *SEOUL NATIONAL UNIVERSITY, Kangwon Natl. Univ., Kangwon Natl. Univ.*

10:00 G3 **325.03** Profiling the expression of the SynDIG family and the function of SynDIG1 in hippocampal synapses. G. CHENAUX*; X. LIU; E. DIAZ. *UC Davis, UC Davis, UC Davis.*

11:00 G4 **325.04** Anatomical plasticity of adult brain is not titrated by Nogo Receptor 1. J. I. PARK*; M. G. FRANTZ; R. J. KAST; M. T. ARNETT; K. S. CHAPMAN; H. M. DORTON; C. STEPHANY; A. W. MCGEE. *Saban Res. Institute, Children's Hosp. Los Angeles, Keck Sch. of Medicine, USC.*

8:00 G5 **325.05** The role of anatomical plasticity in recovery of visual acuity. M. G. FRANTZ*; R. J. KAST; C. STEPHANY; J. I. PARK; H. M. DORTON; K. S. CHAPMAN; A. W. MCGEE. *Keck Sch. of Medicine, Univ. of Southern California.*

9:00 G6 **325.06** Synaptic plasticity regulates network wiring. J. SIMON WIEGERT*; T. G. OERTNER. *Inst. for Synaptic Physiol., Ctr. for Mol. Neurobio.*

10:00 G7 **325.07** STED microscopy of dendritic spine morphology in a fragile X mouse model reveals age and cell type specific alterations. L. S. WIJETUNGE; J. ANGIBAUD; P. C. KIND*; U. V. NÄGERL. *Edinburgh Univ., Patrick Wild Centre, Univ. of Edinburgh, Interdisciplinary Inst. for Neurosci., UMR 5297, Ctr. Natl. de la Recherche Scientifique (CNRS).*

11:00 G8 **325.08** Nogo-A signalling controls actin turnover and modulates dendritic spine dynamics in CA3 hippocampal neurons. Y. KELLNER; M. E. SCHWAB; M. KORTE; M. ZAGREBELSKY*. *TU Braunschweig, Brain Res. Institute, Univ. of Zurich and ETH.*

8:00 G9 **325.09** Spatio-temporal dynamics of cAMP signaling in octopamine-induced synaptic plasticity. I. MAIELLARO*; M. J. LOHSE; R. J. KITTEL; D. CALEBIRO. *Univ. of Wuerzburg, Inst. of Physiol.* University of Wuerzburg.

9:00 G10 **325.10** ▲ Kinome-wide siRNA screens for the identification of signal transduction pathways required for the stabilization of inhibitory synapses. H. VOLKMER*; M. KRIEBEL; S. BEUTER; J. WUCHTER. *NMI.*

10:00 G11 **325.11** Neuronal firing differentially regulates excitatory and inhibitory synapse structure and function. P. MENDEZ; C. E. FLORES; D. MULLER*. *Univ. Geneva.*

11:00 G12 **325.12** Role of gephyrin for maturation of newborn neurons in the adult olfactory bulb. F. DEPREZ*; M. PALLOTTO; V. DUVEAU; S. K. TYAGARAJAN; P. PANZANELLI; J. FRITSCHY. *Univ. of Zurich, Inst. Pasteur, Univ. of Turin.*

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8:00 G13 **325.13** The Role of NOPS proteins in regulating inhibitory synapse function. D. MIRCSOF*; C. KÖSTER; F. CRESTANI; J. FRITSCHY; S. BROWN; S. TYAGARAJAN. *Univ. of Zurich, Univ. of Zurich.*

9:00 G14 **325.14** Neuregulin-1 signaling promotes dendritic spine growth through kalirin. C. REMMERS*; M. E. CAHILL; K. A. JONES; Z. XIE; R. A. SWEET; P. PENZES. *Northwestern Univ. Feinberg Sch. of Med., Univ. of Pittsburgh Sch. of Med.*

10:00 G15 **325.15** Role of psd-95 ubiquitination in psd-95-spar interaction, spar synaptic trafficking, and dendritic spine morphogenesis. W. YAO*; E. REEDICH; T. SUZUKI; Q. MA. *Harvard Med. Sch., Harvard Med. Sch., Shinshu Univ. Grad Sch. Med.*

11:00 G16 **325.16** GSK3 kinase activity steers structural spine plasticity. I. A. CYMERMAN; A. GOZDZ; M. URBANSKA; J. JAWORSKI*. *Intl. Inst. of Mol. and Cell Biol.*

8:00 G17 **325.17** Activity-dependent alternative splicing and ubiquitin-dependent protein stability determine collybistin function at GABAergic synapses. C. DE GROOT*; A. AZZI; M. I. ABDUL; G. BOSSHARD; C. SCHWERDEL; S. A. BROWN; S. K. TYAGARAJAN. *Universitiy of Zurich.*

9:00 G18 **325.18** Adiponectin regulates structural plasticity of granule neurons in adult dentate gyrus. D. ZHANG*; X. WANG; X. LU. *UTHSCSA.*

10:00 G19 **325.19** Activity-dependent spine morphogenesis: A role for the actin-capping protein Eps8. E. STAMATAKOU*; A. MARZO; A. GIBB; P. C. SALINAS. *Univ. Col. London, Univ. Col. London.*

11:00 G20 **325.20** Calsyntenin-1 modulates NMDA receptor function and dendritic spine maturation in CA1 pyramidal cells. J. STER; M. STEUBLE; C. ORLANDO; T. DIEP; A. AKHMEDOV; O. RAINETEAU; V. PERNET; P. SONDEREGGER; U. GERBER*. *Univ. of Zurich, Inst. of Biochem., Inst. of Physiol.*

8:00 G21 **325.21** The role of CaMKII beta in structural plasticity of dendritic spines. M. KHAN*; G. LAKHANPAL; T. LUYBEN; K. KIM; Y. HAYAHI; K. OKAMOTO. *Samuel Lunenfeld Res. Inst., Univ. of Toronto, RIKEN Brain Sci. Inst.*

9:00 G22 **325.22** Identification and characterization of a Nogo-A-D20 (Amino-Nogo)-specific receptor repressing neuroplasticity. A. KEMPF*; B. TEWS; V. PERNET; F. OBERMAIR; M. GULLO; M. ARZT; O. WEINMANN; A. DELEKATE; M. ZAGREBELSKY; C. IOBBI; A. ZEMMAR; D. DODD; D. GYGAX; M. KORTE; M. SCHWAB. *Univ. of Zurich, Univ. of Heidelberg and DKFZ, TU Braunschweig, Univ. of Texas Southwestern Med. Ctr., Univ. of Applied Life Sci. Northwestern Switzerland.*

10:00 G23 **325.23** Real-time *in vivo* two-photon microscopy reveals rapid and continuous plasticity of sensory input to the mouse olfactory bulb. C. E. CHEETHAM*; L. BELLUSCIO. *NIH/NINDS.*

POSTER

326. Oscillations and Synchrony: Unit Studies I

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 G24 **326.01** Phase coherence between LFP oscillations and neuronal activity in the ventral tegmental area of awake, freely moving rats. S. KOULCHITSKY; A. MONTEFORTE; J. DETHIER; V. M. SEUTIN*. *Univ. Liege.*

9:00 G25 **326.02** Visually evoked cross-frequency coupling between deep and superficial layers of macaque V1. K. DOUGHERTY*; M. A. COX; D. A. LEOPOLD; A. MAIER. *Vanderbilt Univ., Natl. Inst. of Mental Hlth.*

10:00 G26 **326.03** Highly synchronized slow activity fluctuations in a single column of macaque area V4. T. A. ENGEL*; N. A. STEINMETZ; K. BOAHEN; T. MOORE. *Stanford Univ., Howard Hughes Med. Inst., Stanford Univ.*

11:00 G27 **326.04** Laminar profile of state-dependent visually evoked responses in primate visual cortex. B. MOORE*; M. A. COX; K. DOUGHERTY; M. S. YOUNG; A. MAIER. *Vanderbilt Univ.*

8:00 G28 **326.05** Laminar cross-frequency coupling in agranular frontal cortex. T. NINOMIYA*; D. C. GODLOVE; K. DOUGHERTY; A. MAIER; J. D. SCHALL. *Vanderbilt Univ.*

9:00 G29 **326.06** LFP coherence as a function of laminar depth and lateral distance in macaque visual cortex. M. A. COX*; B. MOORE; K. DOUGHERTY; M. S. YOUNG; A. MAIER. *Dept. of Psychology, Vanderbilt Univ.*

10:00 G30 **326.07** Period drift in spiking neurons has a history component. S. E. NORMAN*; C. C. CANAVIER; R. J. BUTERA. *Georgia Inst. of Technol., Louisiana State Univ. Hlth. Sci. Ctr., Louisiana State Univ. Hlth. Sci. Ctr., Georgia Inst. of Technol.*

11:00 G31 **326.08** Feedback induced period stability in bursting oscillatory networks with varied functional phase response curve, extrinsic noise, and network configuration. R. M. HOOPER*; C. C. CANAVIER; A. A. PRINZ. *Georgia Tech/Emory Univ., LSU, Emory Univ.*

8:00 G32 **326.09** Effect of intrinsic membrane conductances on the Phase Resetting Curve of a neural oscillator. W. SOOFI*; A. A. PRINZ. *Emory Univ.*

9:00 G33 **326.10** Spike phase precession may emerge from local circuit dynamics. E. STARK*; L. ROUX; R. EICHLER; G. BUZSAKI. *NYU Neurosci. Inst.*

10:00 G34 **326.11** Sharp-wave ripple oscillations along the entire septo-temporal axis of the hippocampus in behaving rats. J. PATEL*; A. BERENYI; E. SCHOMBURG; S. FUJISAWA; G. BUZSAKI. *NYU Neurosci. Inst., Univ. of Szeged, Caltech, New York Univ.*

11:00 G35 **326.12** Cell assembly replays are reflected in high frequency LFPs during sharp wave-ripple complexes. I. TAXIDIS*; C. A. ANASTASSIOU; K. DIBA; G. BUZSÁKI; C. KOCH. *Caltech, Allen Inst. for Brain Sci., Univ. of Wisconsin at Milwaukee, New York Univ.*

8:00 G36 **326.13** Intracellular recording of hippocampal CA1 pyramidal neurons in freely moving mice. D. F. ENGLISH*; A. PEYRACHE; D. VALLENTIN; M. A. LONG; G. BUZSAKI. *The Neurosci. Institute, New York University, Sch. of Med., The Neurosci. Institute, NYU Sch. of Med.*

9:00 G37 **326.14** Organization of the neuronal assemblies in the anterior thalamus coding for head direction. A. PEYRACHE*; M. LACROIX; P. PETERSEN; G. BUZSAKI. *New York Univ. Neurosci. Inst.*

10:00 G38-DP2**326.15** Cell-type- and activity-dependent extracellular correlates of intracellular spiking: Whole-cell multi-patch slice recordings with silicon probes. C. ANASTASSIOU*; R. PERIN; G. BUZSAKI; H. MARKRAM; C. KOCH. *Allen Inst. for Brain Sci., EPFL, NYU Neurosci. Inst. and Neural Studies.*

11:00 G39 **326.16** Inhibition-based theta resonance in cortical circuits. L. ROUX*; E. STARK; R. EICHLER; S. FUJISAWA; H. ROTSTEIN; G. BUZSÁKI. *NYU Med. Center, Neurosci. Inst., New Jersey Inst. of Technol.*

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8:00 G40 **326.17** Sequences of hippocampal cell assemblies reverse during backward movement. A. CEI*; G. GIRARDEAU; C. DRIEU; K. EL KANBI; M. B. ZUGARO. *Cnrs-Collège De France, LPPA.*

9:00 G41 **326.18** Sparse signatures of neuronal activity in the high-frequency LFP. G. AGARWAL*; A. BERÉNYI; K. MIZUSEKI; E. W. SCHOMBURG; G. BUZSÁKI; F. T. SOMMER. *UC Berkeley, Univ. of Szeged, Allen Inst. for Brain Sci., Caltech, NYU Med. Ctr.*

10:00 G42 **326.19** Conductance measurements of electrical fields generated by transcranial electrical stimulation (TES). M. VOROSLAKOS*; T. PUSKAS; G. BUZSAKI; A. BERENYI. *Univ. of Szeged, Neurosci. Institute, NYU Med. Ctr.*

11:00 G43 **326.20** A 'gestalt' rule for spontaneous hippocampal sequences during sleep. A. D. GROSMARK*; K. MIZUSEKI; E. PASTALKOVA; K. DIBA; G. BUZSAKI. *NYU Neurosci., Rutgers Univ., Allen Inst. for Brain Sci., Janelia Farms Res. Ctr. (HHMI), Univ. of Wisconsin`, Langone Med. Ctr. - NYU.*

8:00 G44 **326.21** Sources of high frequency signals and interactions in intracranial electrical recordings. E. W. SCHOMBURG*; K. MIZUSEKI; D. KHODAGHOLY; C. A. ANASTASSIOU; C. KOCH; G. BUZSAKI. *California Insitute of Technol., Allen Inst. for Brain Sci., New York Univ.*

9:00 G45 **326.22** Anterior cingulate cortical activity during affective experience in rats. B. O. WATSON*; G. BUZSAKI. *Cornell Univ., New York Univ.*

10:00 G46 **326.23** Physiological interactions between hippocampus and amygdala related to a fearful spatial experience. G. GIRARDEAU*; B. O. WATSON; G. BUZSÁKI. *NYU Med. Ctr. Neurosci. Inst.*

11:00 G47 **326.24** Selective reinforcement of hippocampo-cortical interactions during sleep potentiates memory consolidation. N. MAINGRET; G. GIRARDEAU; M. GOUTIERRE; M. B. ZUGARO*. *CNRS - Col. De France, LPPA.*

POSTER

327. Modulation of Neuronal Firing I

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 G48 **327.01** Reduced motoneuron excitability is the primary mechanism underlying weakness in septic rats. M. M. RICH*; P. NARDELLI; T. COPE. *Wright State Univ.*

9:00 G49 **327.02** Inhibiting glycolysis in the presence of ketone bodies reduces SNr excitability by decreasing a non-selective cation conductance. A. LUTAS*; G. YELLEN. *Harvard Med. Sch.*

10:00 G50 **327.03** Effects of aging on intrinsic ion conductances underlying excitability in dopamine neurons of the substantia nigra. S. BRANCH*; A. L. SHARPE; M. J. BECKSTEAD. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Univ. of the Incarnate Word.*

11:00 G51 **327.04** A sub-threshold bifurcation as the determinant for spiking precision in neocortical pyramidal cells. C. BOUCSEIN*; J. AMMER; J. BENDA. *Univ. of Freiburg, Ludwig-Maximilians-University, Univ. of Tübingen.*

8:00 G52 **327.05** DREAM/Calsenilin/KChIP3 alters dentate gyrus granule cell function. D. R. HOMIACK*; S. N. HURWITZ; T. TUNUR; A. H. MAHNKE; F. M. INGLIS; L. A. SCHRADER. *Tulane Univ., Syracuse Univ., Tulane Univ.*

9:00 G53 **327.06** Excitatory effects of neurotensin on neurons in layer 6b of the mouse cerebral cortex. L. CASE*; C. BROBERGER. *Karolinska Institutet.*

10:00 G54 **327.07** Involvement of protein phosphatases in the regulation of neuronal excitability by somatostatin in the mouse hippocampus. S. J. LUCAS*; E. MARRON FERNANDEZ DE VELASCO; D. L. ARMSTRONG. *Natl. Inst. of Envrn. Hlth. Sci.*

11:00 G55 **327.08** The cerebrospinal fluid promotes neuronal activity. A. BJOREFELDT*; U. ANDREASSON; J. DABORG; I. RIEBE; P. WASLING; H. ZETTERBERG; E. HANSE. *Inst. for Neurosci. and Physiol.*

8:00 G56 **327.09** ▲ Quantifying the electrophysiological effects of gold star-shaped nanoparticles on CA3 pyramidal neurons. K. J. SALINAS*; Z. KERESELIDZE; X. G. PERALTA; F. SANTAMARIA. *Univ. of Texas At San Antonio, Univ. of Texas At San Antonio.*

9:00 G57 **327.10** Transcranial direct current stimulation enhances descending inhibition of spinal cord and attenuates inflammatory pain in complete Freund's adjuvant-rats. C. LIN*; K. CHEN; C. YANG. *Kaohsiung Chang Gung Mem. Hosp. and Chang Gung Univ. Col. of Medi.*

10:00 G58 **327.11** Cholinergic regulation of layer 6 neurons in primary auditory cortex. T. MIEDA; H. D. KAWAI*. *Soka Univ.*

11:00 G59 **327.12** Correlations between neuronal spike trains examined under recreated fluctuating synaptic conductance inputs. D. LINARO*; M. GIUGLIANO. *Univ. of Antwerp, Ecole Polytechnique Fédérale de Lausanne, Univ. of Sheffield.*

8:00 G60 **327.13** Dual requirements for development of afterdischarge in primary somatosensory afferents. Y. ZHU*; S. A. PRESCOTT. *Univ. of Pittsburgh, Pittsburgh Ctr. for Pain Res., Univ. of Toronto.*

9:00 H1 **327.14** Cocaine self administration alters the membrane excitability of lateral habenular neurons. P. A. NEUMANN*; Y. DONG. *Univ. of Pittsburgh.*

10:00 H2 **327.15** Modeling spike timing adaptation with a fractional leaky integrate-and-fire model. W. TEKA*; T. M. MARINOV; F. SANTAMARIA. *UTSA Neurosciences Institute, Univ. of Texas At San Antonio.*

11:00 H3 **327.16** Homeostatic principles are consistent with sensitivity analysis of neuronal rhythmicity. A. FRANCI; T. O'LEARY; G. DRION; A. H. WILLIAMS; E. E. MARDER*; R. SEPULCHRE. *INRIA Lille-Nord Europe, Univ. of Liège, Volen Ctr.*

8:00 H4 **327.17** Induction of membrane-potential resonance by frequency-dependent activation of a threshold sodium current in medial entorhinal-cortex layer-II stellate cells. C. ALESSI*; A. RASPANTI; J. MAGISTRETTI. *Univ. of Pavia.*

9:00 H5 **327.18** Loss of NR1 subunit of NMDA receptors in primary sensory neurons leads to hyperexcitability and pain hypersensitivity via SK channels. C. PARK*; P. PAGADALA; S. BANG; Z. XU; T. LIU; B. HAN; W. TRACEY; F. WANG; R. JI. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

10:00 H6 **327.19** Functional interplay between TRP-like, SK, and N-type calcium channels regulates tonic firing in rat paraventricular thalamic neurons. A. Y. WONG*; J. BORDUAS; S. CLARKE; A. SOKOLOVSKI; K. F. H. LEE; J. BEIQUE; R. BERGERON. *Univ. of Ottawa, Ottawa Hosp. Res. Inst.*

11:00 H7 **327.20** Modeling physiological routes to bursting. G. DRION; A. FRANCI; J. J. MOREAU*; V. SEUTIN; R. SEPULCHRE. *Univ. of Liege, INRIA Lille-Nord Europe, Orchestron project, Univ. Liege.*

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8:00 H8 **327.21** cGMP modulates membrane excitability in mesencephalic trigeminal neurons of the rat. S. CURTI*; F. DAVOINE; F. R. MORALES. *Sch. of Med., Sch. of Engineering-UdelaR.*

9:00 H9 **327.22** Two compartment model of spontaneous firing in midbrain dopamine neurons. : Proximal dendrite as a generator and soma as a controller. U. KIBUM*; S. KIM; M. PARK. *Sungkyunkwan Univ.Sch of Medi.*

10:00 H10 **327.23** Determination of spontaneous firing rate by the area ratio of proximal dendrite to the soma in the midbrain dopamine neurons. J. JANG*; M. PARK. *Sungkyunkwan Univ.*

11:00 H11 **327.24** Temperature perturbations reveal intrinsic variability in lateral pyloric neurons. T. J. KISPERSKY*; M. L. GOERITZ; E. MARDER. *Brandeis Univ.*

8:00 H12 **327.25** Homeostatic regulation mechanism of spontaneous firing determines glutamate responsiveness in the midbrain dopamine neurons. M. JANG*; S. KIM; M. PARK. *Sch. of Medicine, Sungkyunkwan Univ.*

POSTER

328. Oligodendrocytes: Cell Biology and Signaling

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 H13 **328.01** Morphological and functional identification of gray matter satellite oligodendrocytes. A. BATTEFELD*; M. H. P. KOLE. *Netherlands Inst. For Neurosci.*

9:00 H14 **328.02** ● Neuronal activity promotes oligodendrogliogenesis in the mammalian brain. D. PURGER*; E. GIBSON; C. MOUNT; A. GOLDSTEIN; G. LIN; I. INEMA; G. BIERI; B. ZUCHERO; B. A. BARRES; P. J. WOO; H. VOGEL; M. MONJE. *Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med., Stanford Univ., Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med.*

10:00 H15 **328.03** Neuroligin-neurexin signaling in oligodendrocyte differentiation and CNS myelination. D. T. PROCTOR; L. O. M. SCOTT; C. L. R. DE LA HOZ; K. W. C. POON; P. K. STYS; M. A. COLICOS*. *Univ. of Calgary, Univ. of Calgary.*

11:00 H16 **328.04** Purinergic and cysteinyl-leukotriene agonists of the GPR17 receptor engender distinct intracellular signalling programs with different functional potentials in oligodendrocyte maturation. S. DANIELE; M. L. TRINCAVELLI; M. FUMAGALLI; E. ZAPPELLI; E. BONFANTI; D. LECCA; C. GIACOMELLI; M. P. ABBRACCHIO; C. MARTINI*. *Univ. of Pisa, Univ. of Milan.*

8:00 H17 **328.05** Characterization of oligodendrocyte lineage cells in the normal adult rat spinal cord: Distribution, association with neurons, and TrkB expression. A. P. COULIBALY*; L. G. ISAACSON. *Miami Univ.*

9:00 H18 **328.06** Oligodendrocyte-derived BDNF may affect the developing mouse basal forebrain. Y. HUANG*; I. BAGAYOGO; C. G. FULMER; L. D. LERCHER; J. Z. HONEYWELL; B. L. HEMPSTEAD; U. SUTER; C. F. DREYFUS. *Univ. of Med. and Dent. of New Jersey, Weill Cornell Med. Col., Inst. of Mol. Hlth. Sci.*

10:00 H19 **328.07** Following a demyelinating lesion, the metabotropic agonist ACPD increases myelin proteins by regulating the production of astrocyte-derived BDNF. C. F. DREYFUS*; M. W. VONDRAN; J. Z. HONEYWELL; L. D. LERCHER; Y. HUANG; S. MIRETZKY; C. G. FULMER. *UMDNJ Robert Wood Johnson Med. Sch.*

11:00 H20 **328.08** Oligodendrocyte generation is positively regulated by Lithium in the rodent optic nerve. A. D. RIVERA*; A. BUTT. *Univ. of Portsmouth.*

8:00 H21 **328.09** Dynamic regulation of myelin sheath and node of Ranvier in mature myelin by paranodal astrocytes. R. FIELDS*; H. U. LEE; P. R. LEE; O. BUKALO; K. PSACHOULIA. *NIH, NICHD.*

9:00 H22 **328.10** ● The role of the prostaglandin E2 receptor EP3, in excitotoxic death of oligodendrocyte precursor cells. N. G. CARLSON*; S. BELLAMKONDA; J. REDD; L. SCHMIDT; E. DAVIS; B. WOOD; T. MARUYAMA; J. ROSE. *Univ. Utah, VA Salt Lake City Hlth. Care Syst., VA Salt Lake City Hlth. Care Syst., Ono Pharmaceut. Co., VA Salt Lake City Hlth. Care Syst.*

10:00 H23 **328.11** Targeted Nogo-A gene ablation in glia reveals higher axonal regeneration in the injured adult optic nerve than after systemic gene deletion. F. VAJDA*; V. PERNET; A. GUZIK; S. JOLY; F. CHRIST; B. TEWS; M. E. SCHWAB. *Brain Res. Institute, Univ. of Zurich/ETH, German Cancer Res. Ctr. (DKFZ), Heidelberg Univ.*

11:00 H24 **328.12** a- and y- secretase dependent cleavage of the glial proteoglycan NG2/Kon-tiki is conserved between species and mediates signaling. D. SAKRY; A. BUSTOS; F. BINAME; B. ALTENHEIN; K. ENDRES; S. PINTO; J. TROTTER*. *Univ., Uni, Universitaetsmedizin, German Cancer Res. Ctr.*

8:00 H25 **328.13** Fabricated micropillar arrays as a novel high-throughput screening platform for potential therapeutics in Multiple Sclerosis. F. MEI*; S. P. FANCY; Y. A. SHEN; Q. J. NIU; C. ZHAO; P. BRYAN; E. MIAO; S. LEE; S. R. MAYORAL; S. A. REDMOND; A. ETXEBERRIA; L. XIAO; R. J. M. FRANKLIN; A. GREEN; S. L. HAUSER; J. R. CHAN. *Univ. of California In San Francisco, Univ. of California In San Francisco, Third Military Med. Univ., Univ. of Cambridge, Trianja Technologies.*

9:00 H26 **328.14** Myelination changes as a homeostatic plasticity form in the visual system. A. ETXEBERRIA; S. MAYORAL; W. MA; E. ULLIAN; H. W. TAO; J. R. CHAN*. *UCSF, USC.*

10:00 H27 **328.15** ● Identification and Quantification of Galactolipids in conditioned media of oligodendrocyte progenitor cells during differentiation. H. PATEL*; R. HUANG; Z. FEI; L. YANG; K. RHODES; A. DUNAH; J. CHAVEZ. *Biogen Idec.*

11:00 H28 **328.16** Development of molecular imaging system to visualize the processing of CD44 in NG2 cell, and its application to stem cell therapy for multiple scrolosis. T. UEKI*; K. SHIBASAKI; S. MORIKAWA; Y. OUCHI. *Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med.*

8:00 H29 **328.17** Oligodendroglial connexins contribute to monocarboxylate transporter 1 (MCT1)-dependent energy supply to axons. B. M. MORRISON*; A. TSINGALIA; S. LENGACHER; P. J. MAGISTRETTI; L. PELLERIN; S. S. SCHERER; J. D. ROTHSTEIN. *Johns Hopkins Univ., École Polytechnique Fédérale de Lausanne, Univ. of Lausanne, Univ. of Pennsylvania, Johns Hopkins Univ.*

9:00 H30 **328.18** The role of glutamate in activity dependent myelination. A. FUNK*; B. J. BAKER; T. M. DESILVA. *UAB, UAB.*

10:00 H31 **328.19** Transport and translation of MBP mRNA in oligodendrocytes. L. S. LAURSEN*; L. B. FIHL; J. STEENSGAARD; J. TORVUND-JENSEN. *Aarhus Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 H32 **328.20** Altered monocarboxylate metabolism induces cerebellar degeneration. Y. LEE*; T. PHILIPS; L. CHAKRAVARTI; I. SHATS; S. VIDENSKY; L. JIN; L. PELLERIN; P. MAGISTRETTI; B. M. MORRISON; J. D. ROTHSTEIN. *Johns Hopkins Sch. of Med., Univ. of Lausanne, King Abdullah Univ. of Sci. and Technol., Brain Sci. Institute, Johns Hopkins Univ.*

8:00 H33 **328.21** The role of Fkbp5/FKBP51 in erythropoitin expression and oligodendrocyte survival after brain ischemia. S. LIN*; S. CHUANG; C. WANG; Y. LEE. *Natl. Yang-Ming Univ., Brain Res. Center, Natl. Yang-Ming Univ.*

9:00 H34 **328.22** Monocarboxylate transporter 1 (MCT1) expression during oligodendrocyte differentiation and maturation. T. PHILIPS*; E. G. HUGHES; Y. LEE; B. M. MORRISON; R. SATTLER; D. E. BERGLES; J. D. ROTHSTEIN. *Johns Hopkins Univ., Johns Hopkins Univ.*

POSTER

329. Parkinson's Disease: Transgenic and Related Mouse Models

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 H35 **329.01** Expression of Nurr1 in Nurr1 null heterozygous genotype and aging using Quantitative Immunohistochemistry. E. KUMMARI*; J. EELLS; S. GUO-ROSS. *Mississippi State Univ.*

9:00 H36 **329.02** Transgluatminase 2 aggravates the neuroinflammatory effect of a-synuclein. J. WOO; H. GROSSO; K. LEE; E. MASLIAH; E. JUNN; M. M. MOURADIAN*. *UMDNJ-Robert Wood Johnson Med. Sch., Univ. of California-San Diego.*

10:00 I1 **329.03** Further evidence of axonopathy in a BAC transgenic hLRRK2(R1441G) mouse model of Parkinson's disease. A. P. TAGLIAFERRO*; T. KAREVA; N. KHOLODILOV; R. E. BURKE. *Dept. of Neurology, Columbia Univ.*

11:00 I2 **329.04** Do Parkin and α-synuclein interact in a common physiopathological pathway leading to Parkinson's disease ? A. A. B. ROUX; M. FOURNIER; M. MURIEL; S. BIGOU; A. BRICE; O. CORTI*. *UPMC Umr_s975, Inserm U 975, CNRS UMR 7225 - NEB, Brain Mind Institute, Ecole Polytechnique Fédérale de Lausanne, AP-HP, Hôpital de la Salpêtrière.*

8:00 I3 **329.05** c-Abl plays critical role in α-synuclein-mediated toxicity: Implications for potential therapeutic target in Parkinson's disease and α-synucleinopathies. S. BRAHMACHARI*; X. MAO; S. S. KARUPPAGOUNDER; H. JIANG; Y. LEE; H. KO; V. L. DAWSON; T. M. DAWSON. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

9:00 I4 **329.06** ● Retinal scanning evaluations of alpha-synuclein-eGFP deposition in a transgenic mouse model of PD/DLB. E. M. ROCKENSTEIN*; D. L. PRICE; M. MANTE; E. MASLIAH. *Univ. Calif San Diego, Neuropore Therapies, Univ. Calif San Diego, Univ. Calif San Diego.*

10:00 I5 **329.07** Human leucine-rich repeat kinase 2 (lrrk2) g2019s mutation cause learning and memory impairment in mice. S. O. ADEOSUN*; X. HOU; B. ZHENG; H. MELROSE; J. WANG. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Mayo Clin., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

11:00 I6 **329.08** The hippocampus in Parkinson's disease: Intact GABAergic and glutamatergic cell populations in a mouse model overexpressing human-wildtype alpha-synuclein. N. M. BEN ABDALLAH*; H. LANGEMANN; J. VOGELGSANG; J. WINKLER. *Friedrich-Alexander Univ. Erlangen-Nuremberg.*

8:00 I7 **329.09** Vps35 deficiency results in mitochondrial impairment and Parkinson's disease-relevant neuropathology. F. TANG*; L. MEI; W. XIONG. *Georgia Regents Univ., Charlie Norwood VA Med. Ctr.*

9:00 I8 **329.10** Novel mouse models of Parkinson's disease. M. SASNER*; M. BAPTISTA; K. DAVE. *The Jackson Lab., Michael J. Fox Fndn. for Parkinson's Res.*

10:00 I9 **329.11** Surprising behavioral and neurochemical enhancements in mice with combined mutations linked to Parkinson's disease. M. R. HENNIS*; M. A. MARVIN; C. M. TAYLOR; M. S. GOLDBERG. *UT Southwestern.*

11:00 I10 **329.12** The screening of phosphorylated proteins in LRRK2 R1441G Parkinson's disease model mice. T. KIM*; J. JEON; H. NOH; H. SEO. *Hanyang Univ.*

8:00 I11 **329.13** The hTH-GFP rat: A novel model for the study of Parkinson's disease. L. M. IACOVITTI*; X. WEI; J. CAI; A. GORODINSKY; P. ROMAN; G. KUSEK; S. S. DAS; A. DUFOUR; K. D. DAVE. *Thomas Jefferson Univ., Taconic Farms, Inc., THE MICHAEL J. FOX FOUNDATION FOR PARKINSON'S RESEARCH.*

9:00 I12 **329.14** Impaired adult hippocampal neurogenesis in a new BAC-transgenic rat model for Parkinson disease. Z. KOHL*; N. M. BEN ABDALLAH; J. VOGELGSANG; L. TISCHER; M. MÜNCH; E. MASLIAH; S. NUBER; J. WINKLER. *Univ. Hosp. Erlangen, Univ. of California San Diego.*

10:00 I13 **329.15** ● *In vivo* two-photon imaging of alpha-synuclein: Effects of a novel a-synuclein stabilizer in a gfp transgenic mouse model of Lewy Body disease. D. L. PRICE*; C. R. OVERK; W. WRASIDLO; I. TSIGELNY; D. BONHAUS; A. D. PAULINO; E. ROCKENSTEIN; E. MASLIAH. *Neuropore Therapies, Inc., UCSD.*

11:00 I14 **329.16** Conditional gene targeting of Lmx1a and Lmx1b reveals key functions in postmitotic DA neurons and leads to a Parkinson's disease-associated pathology. N. VOLAKAKIS*; A. LAGUNA; N. SCHINTU; A. NOBRE; J. JACOBSEN; A. ALVARSSON; E. SOPOVA; E. JOODMARDI; M. GOMEZ; T. YOSHITAKE; Q. DENG; J. KEHR; J. ERICSON; P. SVENNINGSSON; O. SHUPLIAKOV; T. PERLMANN. *Ludwig Inst. For Cancer Res., Ctr. for Mol. Med., Dept. of Neurosci., Dept. of Physiol. and Pharmacol., Dept. of Cell and Mol. Biol.*

8:00 I15 **329.17** L-DOPA treatment selectively restores spine density in D2R-expressing projection neurons in dyskinetic mice. L. M. SUÁREZ; O. SOLIS; J. M. CARAMES; I. R. TARAVINI; J. M. SOLIS; M. G. MURER; R. MORATALLA*. *Cajal Institute, CSIC, Inst. de Investigaciones Farmacológicas, Consejo Nacional de Investigaciones Científicas y Técnicas, Hosp. Universitario Ramón y Cajal.*

9:00 I16 **329.18** ● The use of fMRI and DTI to characterize the PTEN-induced putative kinase 1 (Pink1) knockout rat model of Parkinson's disease. T. M. BARCHET*; K. GAMBER; P. SIMMONS; M. NEDELMAN; P. KULKARNI; C. F. FERRIS. *Northeastern Univ., SAGE Labs, Ekam Imaging.*

10:00 I17 **329.19** Serotonergic disruptions in the VMAT2-deficient mouse model of PD. S. ALTER*; T. N. TAYLOR; M. WANG; G. W. MILLER. *Emory Univ.*

11:00 I18 **329.20** Urate oxidase knockout in mice by inducible cre and their cns phenotype. F. ZUO*; M. MAGUIRE; R. LOGAN; Y. XU; X. CHEN; M. SCHWARZSCHILD. *MGH Mol. Neurobio. Lab.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 J1 **329.21** Early ultrasonic vocalization dysfunction in a PINK1 knock-out model of Parkinson disease. L. M. GRANT*; K. P. CULLEN; C. A. KELM-NELSON; M. R. CIUCCI. *Univ. of Wisconsin-Madison, Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

9:00 J2 **329.22** The interaction between ATP13A2 and alpha-synuclein in mice. E. DIRR; O. R. EKHATOR; E. MASLIAH; P. J. SCHULTHEIS; G. E. SHULL; S. M. FLEMING*. *Univ. of Cincinnati, Univ. of California San Diego, Northern Kentucky Univ., Univ. of Cincinnati.*

10:00 J3 **329.23** Genetic deletion of Nrf2 causes progressive loss of nigrostriatial dopaminergic neurons in human A53T alpha-synuclein transgenic mice. N. AMMAL KAIDERY*; L. YANG; M. JIN; S. WAKADE; M. K. LEE; B. THOMAS. *Georgia Hlth. Sci. Univ., Univ. of Minnesota.*

11:00 J4 **329.24** ● Development of a tissue-specific superoxide dismutase-2 knock-down mouse model for the study of oxidative stress induced neurodegeneration. K. A. ALLERS*; T. KAULISCH; S. KREUZ; D. MENNERICH; H. SCHAUERTE; B. STIERSTORFER; D. STILLER; C. SWEATMAN; M. WINTER; T. WIRTH; L. KUSSMAUL. *Boehringer Ingelheim Pharma Gmbh & Co. KG, Boehringer Ingelheim Pharma Gmbh & Co. KG, Boehringer Ingelheim Pharma Gmbh & Co. KG, Univ. Ulm.*

8:00 J5 **329.25** Plasticity in the hippocampus of LRRK2 mutant mice. E. S. SWEET*; B. SAUNIER-REBORI; Z. YUE; R. D. BLITZER. *Mount Sinai Sch. of Med., Mount Sinai Sch. of Med.*

9:00 J6 **329.26** The effects of tyrosine hydroxylase over-expression on dopaminergic cells in transgenic mice. L. M. VECCHIO*; S. T. MASOUD; M. K. BERMEJO; N. URS; G. W. MILLER; A. J. RAMSEY; A. SALAHPOUR. *Univ. of Toronto, Duke Univ., Emory Univ.*

10:00 J7 **329.27** Alpha-synuclein staging in the hippocampal formation of A53T mice model of Parkinson's disease: Cell types involved. A. FLORES-CUADRADO; I. UBEDA-BANON; D. SAIZ-SANCHEZ; C. DE LA ROSA-PRIETO; A. MARTINEZ-MARCOS*. *Fac. Med. Ciudad Real, CRIB Univ. Castilla-La Mancha.*

POSTER

330. Parkinson's Disease: Dopamine and Non-Dopamine Pathways

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 J8 **330.01** Thalamic regulation of cortical monoamine release and movement. O. S. MABROUK*; D. Z. SEMAAN; S. MIKELMAN; M. GNEGY; R. T. KENNEDY. *Univ. of Michigan, Univ. of Michigan.*

9:00 J9 **330.02** Abnormal structure-specific opioid transmission and processing in a primate model of Parkinson's disease and l-dopa-induced dyskinesia. E. BEZARD*; M. BOURDENX; A. NILSSON; H. WADENSTEN; M. FÄLTH; Q. LI; A. R. CROSSMAN; P. E. ANDRÉN. *Inst. of Neurodegenerative Dis., Dept. of Pharmaceut. Biosciences, Med. Mass Spectrometry, Uppsala Univ., Inst. of Lab. Animal Sciences, China Acad. of Med. Sci., Motac Neurosci.*

10:00 J10 **330.03** Heat shock cognate 70 protects PC12 cells against 6-hydroxydopamine and MPP+ toxicity. L. MARTINEZ MENDIETA*; T. BAUST; M. J. ZIGMOND; G. TORRES. *Sch. of Med. Univ. of Pittsburgh, Univ. of Pittsburgh Sch. of Med.*

11:00 J11 **330.04** Reduced Parkinson's risk in smokers: Chronic nicotine may confer neuroprotection by decreasing aberrant corticostriatal plasticity. J. KORANDA*; J. A. BEELER; X. ZHUANG. *The Univ. of Chicago.*

8:00 J12 **330.05** Astrocytic GABA in Parkinson's disease. J. HEO*; J. LEE; D. WOO; S. JO; J. LEE; O. HWANG; G. KWEON; C. LEE. *Korea Inst. of Sci. and Technology/ Ctr. For Functional Connectomics, Biochem. and molecular biology,University of Ulsan college of medicine, Biochemistry, Colle of medicine, Chungnam national university.*

9:00 J13 **330.06** Dopamine and GABA interaction in basal ganglia: Muscimol attenuates L-DOPA-induced ERK1/2 signaling in a rat model of Parkinson's disease. S. P. SIVAM*; S. LYNCH. *Indiana Univ. Sch. Med-Northwest.*

10:00 J14 **330.07** Investigation of the antidyskinetic effect of memantine in the rat Parkinson´s disease model. C. FIDALGO*; E. TRONCI; C. LISCI; M. COLLU; R. STANCAMPIANO; M. CARTA. *Dept. Biomed. Sciences. Univ. of Cagliari.*

11:00 J15 **330.08** Localization and pharmacological activation of dopamine receptors in the subthalamic nucleus in normal and parkinsonian monkeys. X. HU; A. GALVAN; J. PARE; K. ROMMELFANGER; Y. SMITH; T. WICHMANN*. *Emory Univ. Sch. Med.*

8:00 J16 **330.09** Development and characterization of sensory neurons from Parkinson's disease iPSCs. A. SCHWAB; M. A. BARABAS; A. K. SMITH; C. L. STUCKY; A. D. EBERT*. *Med. Col. of Wisconsin.*

9:00 J17 **330.10** Dopamine modulation of asymmetric spine synapses in primate dorsolateral prefrontal cortex underlies cognitive dysfunction in primate models of Parkinson's disease and schizophrenia. J. D. ELSWORTH*; J. D. JENTSCH; D. E. REDMOND, Jr; C. LERANTH; R. H. ROTH. *Yale Univ. Sch. of Med., UCLA, Yale Univ. Sch. of Med.*

10:00 J18 **330.11** Effect of the serotonin precursor, 5-HTP, on L-DOPA-induced dyskinesia in parkinsonian rats. E. TRONCI*; C. LISCI; R. STANCAMPIANO; P. DEVOTO; M. COLLU; M. CARTA. *Dept Biomed. Sciences, Cagliari University, Italy, Dept. of Biomed. Sciences, Cagliari Univ.*

11:00 K1 **330.12** ● ▲ Heterozygous mutations in the parkinsonism-linked gene PINK1 induce subtle alterations in dopamine-dependent synaptic plasticity. G. MADEO; T. SCHIRINZI; G. MARTELLA; F. PUGLISI; J. SHEN; E. VALENTE; M. FEDERICI; N. B. MERCURI; P. BONSI; A. PISANI*. *Clinica Neurologica Univ. Tor Vergata, Neurophysiol. and Plasticity Lab, Fondazione Santa Lucia I.R.C.C.S., Ctr. for Neurologic Diseases, Brigham & Women's Hospital, Program in Neuroscience, Harvard Med. Sch., IRCCS Casa Sollievo della Sofferenza, Mendel Lab., Univ. of Salerno.*

8:00 K2 **330.13** ● Investigation of a dopamine receptor D2 positive allosteric modulator in rat striatal neurons. V. M. ANDRE*; I. JACQUES; M. WOOD; C. WOLFF. *UCB Pharma SA, UCB Pharma SA, UCB Pharma SA, UCB Pharma SA.*

9:00 K3 **330.14** Decrease in serotonin neurons in the rat dorsal raphe after chronic l-dopa. B. J. STANSLEY*; B. K. YAMAMOTO. *Univ. of Toledo Med. Ctr., Univ. of Toledo Med. Ctr.*

10:00 K4 **330.15** The mGlu5 receptor antagonist MPEP normalizes brain basal ganglia D1/D2 receptors, preproenkephalin/preprodynorphin mRNA levels and ERK/Akt signaling pathways of de novo parkinsonian monkeys. N. MORIN*; V. JOURDAIN; M. MORISSETTE; L. GRÉGOIRE; T. DI PAOLO. *Laval Univ. Med. Ctr. (CHUL), Laval Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 K5 **330.16** ● Improving impulsivity in Parkinson's disease by atomoxetine. J. B. ROWE*; Z. YE; E. ALTENA; C. NOMBELA-OTERO; T. RITTMAN; C. HOUSEDEN; R. REGENTHAL; C. L. RAE; R. A. BARKER; B. J. SAHAKIAN; T. W. ROBBINS. *Cambridge Univ. Dept. Clin. Neurosciences, Cambridge Univ., Univ. of Leipzig, MRC, Cambridge Univ., Cambridge Univ. Dept. Clin. Neurosciences.*

8:00 K6 **330.17** Estimation of CSF histamine in the patients with various atypical parkinsonian disorders . T. KANBAYASHI*; A. IMANISHI; K. YASUI; T. KODAMA; T. NOMURA; E. NARITA; Y. KIKUCHI; Y. SAGAWA; R. AIZAWA; M. SATO; J. TOKUNAGA; S. SATO; K. TSUTSUI; Y. TAKAHASHI; J. TAKAHASHI; H. SUDA; T. SHIMIZU. *Akita Univ. Sch. Med., Tottori Univ., Metropolitan Inst. of Med. Sci.*

9:00 K7 **330.18** Subsecond modulation of glutamate release by D2 receptors in a dopamine deficient state. A. ALVARSSON; T. L. STAN; N. SCHINTU; B. KADKHODAEI; T. PERLMANN; P. SVENNINGSSON*. *Karolinska Institutet, Ludwig Inst. for Cancer Res., Karolinska Institutet, Karolinska Institutet.*

10:00 K8 **330.19** ● Identification of novel allosteric modulators of the human dopamine D2 receptor. M. D. WOOD*; A. ATES; M. GILLARD; Z. SANDS; F. LEBON; M. LEDECQ; F. MOUREAU; P. VAN DURM; A. FRYCIA; M. BENOIT; E. JNOFF; B. ALLEMAND; D. SCHELLER; P. FOERCH; A. MICHEL; R. BARNABY; M. BURTON. *CNS Research, UCB S.A., UCB Pharma, UCB pharma.*

11:00 K9 **330.20** P11 gene therapy for Parkinson's disease motor dysfunction and L-Dopa induced dyskinesias. R. MARONGIU*; S. A. MUSATOV; M. A. STAVARACHE; M. ARANGO-LIEVANO; A. CENCI NILSSON; P. GREENGARD; M. G. KAPLITT. *Weill Med. Col. of Cornell Univ., Lund Univ., The Rockefeller Univ.*

8:00 K10 **330.21** Anti-dyskinetic concomitant targeting of 5-HT1A and 5-HT2A receptors does not affect anti-parkinsonian efficacy of L-DOPA. N. S. BHIDE*; C. Y. OSTOCK; C. BISHOP. *Binghamton Univ.*

POSTER

331. Parkinson's Disease: Neuroprotective Mechanisms

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 K11 **331.01** An increase in the endogenous GDNF expression protects the nigrostriatal dopaminergic system *in vivo.* J. J. KOPRA*; J. ANDRESSOO; C. VILENIUS; A. KUMAR; J. MIJATOVIC; P. MARSHALL; N. PULKKINEN; N. NEVALAINEN; I. STRÖMBERG; T. P. PIEPPONEN; M. SAARMA. *Univ. of Helsinki, Univ. of Helsinki, Umeå Univ.*

9:00 K12 **331.02** The effects of neurotrophic factors CDNF and MANF on striatal dopamine -microdialysis study in rats. J. RENKO; S. BÄCK; M. H. VOUTILAINEN; P. PIEPPONEN; M. SAARMA; R. K. TUOMINEN*. *Univ. Helsinki, Univ. Helsinki, Univ. Helsinki.*

10:00 L1 **331.03** ● New biologically active neuturin variants with improved spreading in the brain tissue. E. PICCININI*; P. RUNEBERG-ROOS; A. PENTTINEN; K. MÄTLIK; S. KUURE; M. M. BESPALOV; J. PERÄNEN; M. AIRAVAARA; N. KALKKINEN; R. PENN; M. SAARMA. *Univ. of Helsinki, Inst. of Biotech., Stem cells and Neurogenesis Unit, Div. of Neuroscience, San Raffaele Scientific Inst., Chief Scientific Officer at NTF Therapeutics, Inc.*

11:00 L2 **331.04** Functional principal component analysis of nonhuman primate and human activity collected by accelerometer across the 24 hour day: Changes induced by MPTP. H. SHOU; L. CUI; K. SUBRAMANIAN; R. MACIELAK; Z. ZHANG; C. CRAINICEANU; V. ZIPUNNIKOV; J. L. CAMERON*; K. R. MERIKANGAS. *Natl. Inst. of Mental Hlth., Johns Hopkins Univ., Univ. Pittsburgh Sch. Med., Univ. of Pittsburgh, Univ. of Kentucky.*

8:00 L3 **331.05** ● Intraputamenal infusions of variant forms of NRTN restore substantia nigra dopamine neuron integrity in the monkey low-dose MPTP model of Parkinson's disease. K. SUBRAMANIAN; A. DETTMER; N. ROCKCASTLE; Z. ZHANG; N. MONTGOMERY; R. MACIELAK; C. ADAM; T. GAUGHAN; P. RUNEBERG-ROOS; R. TUOMINEN; J. L. CAMERON; R. D. PENN*; M. SAARMA. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Kentucky, Univ. of Pittsburgh, Univ. of Helsinki, NTF Therapeut.*

9:00 L4 **331.06** ● The effect of cerebral dopamine neurotrophic factor and a neurturin heparin non-binding mutant on response of postnatal dopamine neurons to MPP^+. J. D. JAUMOTTE*; P. RUNEBERG-ROOS; M. SAARMA; R. D. PENN; M. J. ZIGMOND. *Univ. of Pittsburgh, Univ. of Helsinki, Rush Med. Sch.*

10:00 L5 **331.07** ● Intraputamenal CDNF infusions restore substantia nigra dopamine neuron integrity in the monkey low-dose MPTP model of Parkinson's disease. K. GANAPATHY SUBRAMANIAN*; A. DETTMER; N. ROCKCASTLE; Z. ZHANG; A. DOYLE; A. NOORBAKSH; S. LAINO; I. SINGH; A. NGO; R. MACIELAK; C. ADAM; T. GAUGHAN; N. MONTGOMERY; A. OBLACK; B. KREIDER; R. K. TUOMINEN; P. PULKKILA; Y. AI; D. GASH; J. L. CAMERON; M. SAARMA. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Kentucky, Univ. of Pittsburgh, Univ. of Helsinki.*

11:00 L6 **331.08** ● Anti-inflammatory therapy via CD163-macrophages in the 6-OHDA Parkinson's disease model. N. TENTILLIER*; A. ETZERODT; M. OLESEN; S. K. MOESTRUP; M. ROMERO-RAMOS. *Dept. Biomed.*

8:00 L7 **331.09** Alpha-synuclein immunization of WT mice modifies microglia activation and T cells' STAT profiles in absence of a-syn over expression or neural pathology. V. SANCHEZ-GUAJARDO*; M. ROMERO-RAMOS. *Aarhus Univ.*

9:00 L8 **331.10** Effect of a single peripheral injection of lipopolysaccharide in the alpha-synuclein rAAV rat model of Parkinson's disease. J. ZAREBA; K. JENSEN; M. ROMERO-RAMOS*. *Dept. Biomedicine, Aarhus Univ., Ctr. for Psychiatric Res.*

10:00 L9 **331.11** Effects of long-term subthalamic nucleus deep brain stimulation on gene expression in rat basal ganglia circuitry. D. L. FISCHER*; C. E. SORTWELL; C. J. KEMP; A. COLE-STRAUSS; K. L. PAUMIER; Z. MATTINGLY; K. STEECE-COLLIER; T. J. COLLIER; J. W. LIPTON. *Translational Sci. & Mol. Medicine, Michigan State Univ.*

11:00 L10 **331.12** Gene and protein expression profiles in the striatum of dyskinetic versus non-dyskinetic responders to levodopa priming in the 6-hydroxydopamine lesioned rat. K. A. STEECE-COLLIER*; A. COLE-STRAUSS; K. SISSON; J. A. STANCATI; T. J. COLLIER; C. E. SORTWELL; J. W. LIPTON. *Michigan State Univ.*

8:00 L11 **331.13** The anti-diabetic hormone, adiponectin, has protective effect on the pathogenesis of *in vitro and in vivo* models of α-synucleinopathies. K. SEKIYAMA*; M. FUJITA; A. SEKIGAWA; Y. TAKAMATSU; M. HASHIMOTO. *Tokyo Metropolitan Inst. of Med. Sci.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 L12 **331.14** ● Plasmalogen precursor analogs PPI-1011 and PPI-1025 protect striatal biogenic amines of MPTP in mice. T. P. DIPAOLO*; M. BOURQUE; M. MORISSETTE; S. AL SWEIDI; T. SMITH; V. SENANAYAKE; D. GOODENOWE. *Ctr. de Recherche de CHUQ-CHUL, Laval Univ., Phenomenome Discoveries Inc.*

10:00 L13 **331.15** A screening of neuroprotective compounds for Parkinson's disease from herbal medicines. T. FUJIMAKI*; S. SAIKI; E. TASHIRO; N. HATTORI; M. IMOTO. *Keio Univ., Juntendo Univ. Sch. of Med.*

11:00 L14 **331.16** Doxycycline confers neuroprotection in a 6-OHDA Parkinson model: Glial cells analysis. E. DEL BEL*; M. LAZZARINE; S. MARTIN; M. MITKOVSKI; R. RAISMAN-VOZARI; W. STUEHMER. *Fac Odontol, Inst. Max Planck, INSERM UMR 975 CNRS UMR 7225 Univ. Pierre and Marie Currie CRICM.*

8:00 L15 **331.17** Nigral neuroprotection against alpha-synuclein toxicity is provided by oral fasudil administration. C. E. SORTWELL*; F. MANFREDSSON; C. KEMP; S. GOMBASH-LAMPE; N. KUHN; K. PAUMIER; J. LIPTON; K. STEECE-COLLIER; A. POOLEY; N. LEVINE; G. FINK; H. GARVER; P. MOHANKUMAR; S. MOHANKUMAR; K. PETRITIS; T. TEGELER; A. KAUFFMAN; J. MACKEIGAN. *Michigan State Univ., Translational Genomics Res. Inst., Van Andel Res. Inst.*

9:00 L16 **331.18** Neuroprotective effects of AMPA against lLPS-induced toxicity in SH-SY5Y cells: Implications for Parkinson's disease. B. J. HURD; Y. TIZABI*; D. BROWN; L. AKINFIRESOYE. *Howard Univ. Col. Med.*

10:00 L17 **331.19** Methylene blue: Beneficial in bioenergetics, questionable effects on ROS homeostasis in isolated mitochondria. L. TRETTER*; G. HORVÁTH; Á. HÖLGYESSY; F. ESSEK; T. KOMLÓDI; V. ADAM-VIZI. *Semmelweis Univ., Hungarian Acad. of Sci.*

11:00 L18 **331.20** Mammalian target of rapamycin (mTOR) mediates neuroprotection by oxicam non-steroidal anti-inflammatory drugs against MPP^+-induced SH-SY5Y cell death. Y. TASAKI*; T. ONO; J. YAMAMOTO; T. OHKUBO; T. NODA; T. OMURA; M. SUNO; K. MATSUBARA. *Asahikawa Med. Univ., Kyoto Univ. Hosp., Dent. and Pharmaceut. Sci. Okayama Univ.*

8:00 M1 **331.21** Sulfuretin inhibits 6-hydroxydopamine-induced neuronal cell death via NF-κB suppression and Nrf-2-dependent heme oxygenase-1 induction in SH-SY5Y cells. S. KWON; S. MA; S. HONG; Y. JUNG; J. OH; J. HWANG; H. JOO; J. KIM; C. JANG*. *Sungkyunkwan Univ.*

9:00 M2 **331.22** Discovery and characterization of mglur3 pams - novel neuroprotective therapeutic strategy for parkinson disease. S. SCHANN*; B. MANTEAU; S. MAYER; C. FRANCHET; M. FRAULI; S. SCHEFFLER; T. PILLOT; V. BRUNO; V. BRUNO; F. NICOLETTI; P. NEUVILLE. *Domain Therapeut., Domain, SynAging, Neuromed.*

10:00 M3 **331.23** C-terminal fragment of tetanus toxin prevents oxidative stress in the striatum of rats with MPP+. D. JUÁREZ TORRES*; V. PALAFOX-SÁNCHEZ; L. MENDIETA; A. PATRICIO-MARTÍNEZ; A. DÍAZ; A. SÁNCHEZ-GONZÁLEZ; F. PÉREZ-SEVERIANO; S. MONTES; A. CANDALIJA; J. AGUILERA; I. D. LIMÓN. *Lab. of Neuropharm. BUAP, Univ. of Pittsburgh Sch. of Med., Inst. Nacional de Neurología "MVS", Inst. de Neurociénces, Univ. Autónoma of Barcelona.*

11:00 M4 **331.24** ATF4 is a therapeutic target for the treatment of Parkinson's disease. X. SUN*; P. AIME; L. A. GREENE; O. A. LEVY. *Columbia Universtiy, Columbia Universtiy.*

8:00 M5 **331.25** Interaction of type A monamine oxidase with type B monoamine oxidase. M. NAOI*; K. INABA-HASEGAWA; W. MARUYAMA. *Aichi Gakuin Univ., Nat'L Ctr. Geriatric. Gerontol.*

9:00 M6 **331.26** Virally-mediated RNA interference of alpha-synuclein for Parkinson's disease. A. D. MILLER*; R. L. BOUDREAU; R. M. SPENGLER; H. S. MCLOUGHLIN; M. S. KEISER; B. L. DAVIDSON; N. S. NARAYANAN*. *Univ. of Iowa.*

10:00 M7 **331.27** Dopamine type 2 receptor activation prevents degeneration of mitochondrial morphology in *Drosophila* dopaminergic neurons. D. LEE*; L. WIEMERSLAGE; R. A. COLVIN. *Ohio Univ., Ohio Univ.*

11:00 M8 **331.28** Neuroprotective effect of Chebulagic acid via autophagy induction in SH-SY5Y cells. H. KIM; L. HUAN; J. KIM; K. KANG; K. LEE; S. CHUNG*; H. YANG. *KIST Gangneung Inst., Gangneung-Wonju Natl. Univ., Sungkyunkwan Univ.*

8:00 M9 **331.29** Endogenous repair by the activation of cell survival signalling cascades during the early stages of rat parkinsonism. C. LUI*; L. CHEN; K. YUNG. *Hong Kong Baptist Univ., The Forth Military Med. Univ.*

POSTER

332. Ataxias

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 M10 **332.01** ▲ The impact of GABA receptors on the excitotoxic damage in the spastic Han-Wistar rat, an animal model of Ataxia. A. CRUZ*; R. W. COHEN. *California State University, Northridge, California State University, Northridge.*

9:00 M11 **332.02** ▲ High-fat diet reverses Purkinje cell neuroprotection attained by moderate aerobic exercise in spastic Han-Wistar rats. S. YOUNESI*; T. L. UHLENDORF; R. W. COHEN. *California State University, Northridge.*

10:00 M12 **332.03** Ubiquitin-mediated regulation and functional roles of the deubiquitinating enzyme JosD1. T. SEKI*; S. V. TODI; N. SAKAI; H. L. PAULSON. *Dept Mol & Pharmacol Neurosci, Grad Sch. Biomed Sci, Hiroshima Univ., Univ. of Michigan, Wayne State Univ. Sch. Med.*

11:00 M13 **332.04** Implication of ATXN7 SUMOylation in degradation of nuclear aggregates. M. MARINELLO; A. WERNER; S. ALVES; S. LESAGE*; A. BRICE; A. SITTLER. *CRICM - UPMC/Inserm UMR_S975, Naturalia and Biologia, Zentrum für Molekulare Biologie der Univ. Heidelberg, UMRS INSERM U 975.*

8:00 M14 **332.05** ▲ Application of the rotarod to monitor progressive Purkinje cell death exhibited in cerebellar ataxia. K. L. JEW*; R. W. COHEN. *California State University, Northridge.*

9:00 M15 **332.06** P/Q-type voltage-gated calcium channel dysfunction: Cerebellar and hippocampal phenotypes. I. SILVEIRA*; P. MELO; D. I. RODRIGUES; D. L. SERRENHO; P. SAMPAIO; P. SZUCS; J. C. RODER; A. S. OLSSON. *IBMC, Univ. of Porto, Samuel Lunefeld Res. Inst.*

10:00 M16 **332.07** Iron metabolism is altered in fragile x-associated tremor/ataxia (fxtas). J. ARIZA TORRES*; C. STEWARD; F. GALVAN-RUECKERT; A. AFJEI; S. NOCTOR; R. HAGERMAN; P. HAGERMAN; V. MARTÍNEZ-CERDEÑO. *UC Davis.*

11:00 M17 **332.08** Quantifying movement defects in an animal model of Friedreich's ataxia. M. Z. MCMACKIN*; M. GOLUB; C. LUTZ; G. CORTOPASSI. *Univ. of California, Davis, UC Davis, Jackson Labs.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 M18 **332.09** ▲ Mitochondrial OXPHOS dysfunction in spinocerebellar ataxia type 1. E. CARBONE; M. BREUER; S. LAGALWAR*. *Skidmore Col., Univ. Nijmegen Med. Ctr.*

9:00 N1 **332.10** A "humanized" P/Q-type Ca^{2+} channel gene does not complement the mouse gene. X. DU*; K. ROBINSON; D. COLLINS; C. M. GOMEZ; H. ZHU. *Univ. Chicago.*

10:00 N2 **332.11** Purkinje cell degenerate (PCD) mouse as a surrogate model of ataxia in ataxia-telangiectasia (A-T). A. TEWARI*; K. KHODAKHAH. *Albert Einstein Col. of Med.*

11:00 N3 **332.12** Loss of striatal pde10a causes chorea in humans. M. POPIOLEK*; S. J. SUKOFF RIZZO; C. P. DIGGLE; I. M. CARR; A. F. MARKHAM; D. T. BONTHRON; K. PYSDEN; V. REINHART; L. C. JAMES; M. A. VANASE-FRAWLEY; J. SCHUELKE; E. CHARYCH; M. ALLEN; J. HARMS; C. STRICK; E. SHERIDAN; N. J. BRANDON. *Pfizer, LIMM, Univ. of Leeds, Pfizer.*

8:00 N4 **332.13** A visuomotor disorder in absence of movement: Optic ataxia generalizes to learnt isometric hand action. S. FERRARI TONIOLO*; O. PAPAZACHARIADIS; F. VISCO-COMANDINI; M. SALVATI; A. D'ELIA; R. CAMINITI; A. BATTAGLIA-MAYER. *SAPIENZA Univ., SAPIENZA Univ.*

9:00 N5 **332.14** Routine clinical testing underestimates proprioceptive deficits in Friedreich's ataxia. M. HIMMELBACH*; S. BORCHERS; E. KIELY; M. SYNOFZIK. *Ctr. of Neurology, Hertie-Institute For Clin. Brain Res., Ctr. of Neurology, Hertie-Institute For Clin. Brain Res.*

10:00 N6 **332.15** Praja2 and the regulation of the Spinocerebellar Ataxia type 1 protein Ataxin-1 phosphorylation in the cerebellum. J. M. PEREZ*; L. DUVICK; J. FRISCH; R. BOUDREAU; H. ORR. *Univ. of Minnesota, Twin Cities, Univ. of Minnesota Med. Sch., Inst. of Translational Neurosci., Univ. of Minnesota, Univ. of Iowa.*

11:00 N7 **332.16** Interferon-beta induces clearance of mutant ataxin-7 and improves locomotion in SCA7 knock-in mice. A. SITTLER*; A. CHORT; S. ALVES; M. MARINELLO; B. DUFRESNOIS; J. DORNBIERER; C. TESSON; M. LATOUCHE; D. P. BAKER; M. BARKATS; K. H. EL HACHIMI; M. RUBERG; A. JANER; G. STEVANIN; A. BRICE. *Inst. du Cerveau et de la Moelle Épinière, INSERM_ U975, CNRS UMR7225, Univ. P&M Curie, Inst. du Cerveau et de la Moelle Épinière, Paris, France, BiogenIdec Inc.,, UPMC-AIM UMR S974, INSERM U 974, CNRS UMR 7215.*

8:00 N8 **332.17** The tremorgenic indole-diterpenoid toxin lolitrem B induces behavioural despair and activates stress and anxiety centres in the brain. J. C. QUINN*; M. D. COMBS; A. S. HAMLIN. *Charles Sturt Univ., Charles Sturt Univ., Charles Sturt Univ.*

9:00 N9 **332.18** Saccades, eye-head coordination and cerebellar degeneration in ataxia with oculomotor apraxia type 2. M. PANOUILLERES*; S. FRISMAND; H. SALEM; O. SILLAN; C. URQUIZAR; S. JACOBS; A. VIGHETTO; F. COTTON; D. PELISSON; C. TILIKETE. *Neurosci. Res. Ctr. Lyon - INSERM U1028, CNRS UMR5292, Univ. Lyon 1, Hospices Civils de Lyon, Neuro-ophtalmology Unit and Neurol. D, Neurolog. and Neurosurgical Hosp. P. Wertheimer, CREATIS, INSERM U1044/CNRS UMR 5220, Hospices Civils de Lyon, Ctr. Hospitalier Lyon Sud, Service de Radiologie and Lab. d'Anatomie de Rockefeller.*

10:00 N10 **332.19** ● Consequences of forebrain-specific expression of expanded ataxin-3. T. SCHMIDT*; J. SCHMIDT; A. MAYER; D. BAKULA; A. WEISS; O. RIESS. *Med. Genetics, Univ. of Tuebingen, Ctr. for Rare Dis. (ZSE Tübingen), Univ. hospital Tuebingen, IRBM Promidis S.r.l.*

11:00 N11 **332.20** Altered calcium signaling in the cerebellar granule cell layer of waddles mice deficient in carbonic anhydrase VIII. M. G. LAMONT*; J. T. WEBER. *Mem. Univ. of Newfoundland, Mem. Univ. of Newfoundland.*

8:00 N12 **332.21** Nrf2 deficiency, increased neuroinflammation and small molecule therapeutics in an animal model of Friedreich's ataxia. G. CORTOPASSI*; Y. SHAN; G. HAYASHI; M. POOK; S. SAHDEO; Y. SHEN. *UC DAVIS, Brunel Univ.*

POSTER

333. Huntington's Disease: Animal Models I

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 N13 **333.01** Neurochemical effects of diminished syntaxin-1A in the R6/2 model of Huntington's disease. A. M. WOLFRAM-ADUAN*; K. L. LOGAN; T. PAPANIKOLAOU; J. GAFNI; A. BONNER; C. VITELLI; R. GANESHAN; P. J. DETLOFF; K. L. KIRK; M. I. SANDSTROM; R. E. HUGHES; L. ELLERBY. *Central Michigan Univ., Buck Inst. for Res. on Aging, Univ. of Alabama.*

9:00 N14 **333.02** Optogenetic control of parvalbumin-expressing interneurons in the R6/2 mouse model of Huntington's disease. L. GALVAN*; C. CEPEDA; M. S. LEVINE. *IDDRC, Semel Inst. For Neurosci. and Human Behavior, BRI, UCLA.*

10:00 N15 **333.03** Syntaxin-1A knockdown in the R6/2 mouse model of Huntington's disease exacerbates the phenotype. S. M. HOLLEY*; T. D. PAPANIKOLAOU; J. GAFNI; A. HO; R. GANESHAN; P. J. DETLOFF; K. L. KIRK; C. CEPEDA; R. HUGHES; M. S. LEVINE; L. M. ELLERBY. *UCLA, Buck Inst. for Res. on Aging, Univ. of Alabama.*

11:00 N16 **333.04** Characterization of electrophysiological properties of striatal medium-sized spiny neurons in the Q175 mouse model of Huntington's disease. T. INDERSMITTEN*; C. H. TRAN; C. C. CEPEDA; M. S. LEVINE. *UCLA.*

8:00 N17 **333.05** Thalamostriatal and corticostriatal synapses exhibit differential alterations in the R6/2 mouse model of Huntington's disease. A. PARIEVSKY*; D. LITVAK; C. CEPEDA; M. S. LEVINE. *IDDRC, Semel Inst. for Neurosci. and Human Behavior, BRI, UCLA.*

9:00 N18 **333.06** Alterations in the firing patterns of globus pallidus neurons in the R6/2 mouse model of Huntington's disease. G. K. AKOPIAN*; D. C. NACHUN; C. CEPEDA; M. S. LEVINE. *UCLA.*

10:00 O1 **333.07** Evaluation of fine motor skill impairment of R6/2 and zQ175 knock in mice and BAC rats of Huntington's disease. T. HEIKKINEN*; J. PUOLIVÄLI; L. C. PARK; D. HOWLAND; A. NURMI. *Charles River Discovery Res. Services, CHDI Fndn. Inc.*

11:00 O2 **333.08** Neurophysiological signals as potential translational biomarkers in Huntington's disease. D. NAGY; F. D. TINGLEY III; M. STOILJKOVIC; M. HAJOS*. *Yale Univ. Sch. of Med.*

8:00 O3 **333.09** Open field testing of early stage YAC128 and BACHD Huntington's disease models reveals a motor phenotype dependent upon test environment parameters: Role of hypothesized anxiety phenotype. S. ALSELEHDAR*; E. D. ABERCROMBIE. *Rutgers, The State Univ. of NJ.*

9:00 O4 **333.10** Examination of dopaminergic modulation of corticostriatal information processing in an animal model of Huntington's disease. K. L. TORESON*; T. SESIA; C. OBINEME; P. O'DONNELL. *Univ. of Maryland, Baltimore.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 O5 **333.11** ● Evaluation of deficits in response inhibition in the peak interval task in three mouse models of Huntington's disease. S. OAKESHOTT; F. BALCI; R. PORT; J. SUTPHEN; J. BERGER; J. WATSON-JOHNSON; A. M. FARRAR; S. RAMBOZ; L. PARK; D. HOWLAND; D. BRUNNER*. *Psychogenics Inc, Koç Univ., CHDI Management/CHDI Fndn.*

11:00 O6 **333.12** Longitudinal anatomical, metabolic and functional changes by MRI/MRS, and PET and SPECT in a zQ175 knock in mouse model of Huntington's disease. K. LEHTIMÄKI; T. HUHTALA; L. TAHTIVAARA*; T. HEIKKINEN; L. C. PARK; I. MUNOZ-SANJUAN; O. KONTKANEN; N. VARTIAINEN; A. NURMI. *Charles River Discovery Res. Services Finland Ltd, CHDI Fndn. Inc.*

8:00 O7 **333.13** Longitudinal characterization of diurnal rhythms of activity and core body temperature in the zQ175 knock-in mouse model of Huntington's disease: Genotype and sex interactions. S. P. FISHER*; M. A. MILLER; S. W. BLACK; M. D. SCHWARTZ; T. S. KILDUFF; S. R. MORAIRTY. *SRI Intl.*

9:00 O8 **333.14** Striatal chimerization with hESC-derived glia expressing mutant huntingtin is sufficient to impair motor learning and coordination. S. WANG; S. HERRILINGER; X. LI; A. BENRAISS; M. S. WINDREM*; S. A. GOLDMAN. *Univ. of Rochester Med. Ctr.*

10:00 O9 **333.15** Huntingtin (HTT) mediates the motility of a novel class of vesicles on axonal microtubules *in vivo.* S. GUNAWARDENA*; D. POWER; S. SIRINIVASAN; C. ZHENG. *SUNY At Buffalo.*

11:00 O10 **333.16** Survival and neural differentiation of neural progenitor cells from transgenic Huntington's disease monkey in mice brain. R. L. CARTER*, III; Y. CHEN; C. LI; S. P. MORAN; D. RAINNIE; A. W. S. CHAN. *Emory Univ., Emory Univ., Emory Univ., Emory Univ.*

POSTER

334. Aging: Physiology and Molecular Correlates

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 O11 **334.01** Aging-associated increases in microglia and alpha-synuclein in rat substantia nigra. S. N. CASSELLA*; B. A. GARNER; A. M. ST.JOHN; V. GHISAYS; J. P. HERMAN; S. M. FLEMING; K. B. SEROOGY. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati.*

9:00 O12 **334.02** Forced exercise: A lifestyle strategy to mitigate bradykinesia by increasing dopamine signaling and glutamate uptake in nigrostriatal neurons of aged rats. J. C. ARNOLD*; V. FIELDS; D. K. INGRAM; M. F. SALVATORE. *Louisiana State Univ. Hlth. Sci. Ctr., Pennington Biomed. Res. Ctr.*

10:00 P1 **334.03** Age at onset of exercise affects locomotor ability and survival of lumbar motoneurons in aged rats. H. TAKEMOTO*; N. KANEMURA; H. IMAGITA; K. OKADA; T. YAMAKAMI; S. KAWATA; K. FUJIMAKI; T. MATSUMOTO; K. MURATA; T. KOKUBUN; T. KATAOKA; M. DEIE; A. OTSUKA; S. OKI; S. MORINOBU. *Prefectural Univ. of Hiroshima, Saitama Prefectural Univ., Kio Univ., Prefectural Univ. of Hiroshima, Hiroshima Univ., Hiroshima Univ.*

11:00 P2 **334.04** Age-dependent effects of RCAN1 overexpression on memory and synaptic plasticity. H. WONG*; J. LEVENGA; B. A. ROTHERMEL; E. KLANN; C. A. HOEFFER. *New York Univ., NYU Sch. of Med., UT Southwestern Med. Ctr.*

8:00 P3 **334.05** The 'pro-longevity' Forkhead transcription factor FoxO6 regulates memory consolidation and a gene expression profile overlapping with Alzheimer's disease in mice. D. A. SALIH*; A. J. RASHID; D. COLAS; L. DE LA TORRE-UBIETA; R. P. ZHU; A. A. MORGAN; E. E. SANTO; D. UCAR; C. J. COLE; M. SHAMLOO; A. J. BUTTE; A. BONNI; S. A. JOSSELYN; D. V. MADISON; A. BRUNET. *Univ. Col. London, The Hosp. for Sick Children, Stanford Univ., Harvard Med. Sch., Stanford Univ., Stanford Univ., Academic Med. Ctr. (AMC), Stanford Univ., Stanford Univ.*

9:00 P4 **334.06** Mitochondrial dysfunction alters lipid metabolism in prematurely aging mtDNA mutator (PolgAmut) mice. J. M. ROSS*; G. COPPOTELLI; M. SHAFAATI; M. OLIN; I. BJÖRKHEM; L. OLSON. *Karolinska Institutet, Karolinska Institutet.*

10:00 P5 **334.07** Mitochondrial dysfunction differentially affects ubiquitin proteasome and autophagy lysosome system. G. COPPOTELLI*; J. M. ROSS; L. OLSON. *Karolinska Institutet.*

11:00 P6 **334.08** Lysosome dysfunction disrupts cobalamin transport. H. ZHAO*; K. RUBERU; B. GARNER. *Illawarra Hlth. and Med. Res. Inst.*

8:00 P7 **334.09** Age-related alteration of extracellular matrix in the subventricular zone of the lateral ventricles. A. KEREVER*; T. YAMADA; R. NONAKA; F. MERCIER; E. ARIKAWA-HIRASAWA. *Juntendo Univ. Grad. Sch. of Med., Univ. of hawai.*

9:00 P8 **334.10** Unique age-related changes in circulating, hippocampal and cortical hormones, cytokines and chemokines relate to spatial ability. R. B. SPEISMAN; A. KUMAR; A. RANI; T. C. FOSTER; B. K. ORMEROD*. *J. Crayton Pruitt Family, Univ. of Florida.*

10:00 P9 **334.11** Rapamycin extends lifespan but has limited effects on aging in mice. D. EHNINGER*; F. NEFF; D. FLORES-DOMINGUEZ; D. P. RYAN; T. ADLER; J. A. AGUILAR-PIMENTEL; L. BECKER; L. GARRETT; S. M. HÖLTER; K. MORETH; C. PREHN; O. PUK; I. RÁCZ; B. RATHKOLB; J. ROZMAN; J. ADAMSKI; J. BECKERS; R. BEKEREDJIAN; D. H. BUSCH; J. GRAW; H. HÖFLER; M. KLINGENSPOR; T. KLOPSTOCK; M. OLLERT; E. WOLF; W. WURST; A. ZIMMER; H. FUCHS; V. GAILUS-DURNER; M. HRABĕ DE ANGELIS. *DZNE, German Ctr. For Neurodegenerative Dis., Helmholtz Zentrum München, Technische Univ. München, Univ. of Bonn, Univ. of Heidelberg, Ludwig-Maximilians-Universität München.*

11:00 P10 **334.12** ▲ Plexin-A1 deficiency induces inflammatory response in aged mouse brain. T. ITO*; K. YOSHIDA; T. NEGISHI; K. YUKAWA. *Meijo Univ.*

8:00 P11 **334.13** Longitudinal cortical thinning in older adults with chronic hypertension. J. PACHECO*; L. L. BEASON-HELD; M. A. KRAUT; S. M. RESNICK. *Natl. Inst. On Aging, The Johns Hopkins Univ. Sch. of Med.*

9:00 P12 **334.14** Volume of hippocampal subfields in healthy adults: Age differences and the effects of genetic and physiological markers of neuroinflammation. N. RAZ*; A. M. DAUGHERTY; A. R. BENDER. *Wayne State Univ., Wayne State Univ.*

10:00 P13 **334.15** Mining the OMIM database uncovers genes implicated in hearing loss and Alzheimer's disease. D. RAMIREZ-GORDILLO*; E. E. SERRANO. *New Mexico State Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 P14 **334.16** Relationships between cerebral acetycholinesterase activity and verbal memory. N. RICHTER*; I. ALLENDORF; Ö. ONUR; L. KRACHT; M. TITTGEMEYER; B. NEUMAIER; M. DIETLEIN; M. SCHMIDT; G. FINK; J. KUKOLJA. *Univ. Hosp. of Cologne, Res. Ctr. Juelich, Max-Planck-Institute for Neurolog. Res., Univ. Hosp. of Cologne.*

8:00 P15 **334.17** Couch potatoes rejoice! Prevention of age-related bradykinesia by caloric restriction initiated at middle age. M. F. SALVATORE*; V. FIELDS; J. C. ARNOLD; J. TERREBONNE; C. RUNFALO; D. K. INGRAM. *LSU Hlth. Sci. Cntr, Pennington Biomed. Res. Ctr.*

9:00 P16 **334.18** Human apolipoprotein E regulates brain insulin signaling. B. WONG*; Q. ONG; E. S. H. CHAN. *Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

10:00 P17 **334.19** 3d immersive visualization of brain connectivity data using the CAVE2 system. O. A. AJILORE*; A. LEOW; J. GADELKARIM; A. KUMAR; D. TSOUPIKOVA; J. LEIGH. *Univ. of Illinois-Chicago.*

11:00 P18 **334.20** Quantitative biological measurements of white matter aging. A. A. MEZER*; J. D. YEATMAN; M. L. PERRY; J. NGUYEN; B. WANDELL. *Stanford Univ.*

8:00 Q1 **334.21** Age-related change in resting state bold variability: Vascular or neuronal? K. A. TSVETANOV*; S. W. DAVIS; J. R. TAYLOR; N. WILLIAMS; R. N. A. HENSON; L. K. TYLER; . CAM-CAN; J. B. ROWE. *Ctr. For Speech, Language and the Brian, Med. Res. Council Cognition and Brain Sci. Unit.*

POSTER

335. Rett's Syndrome and Other Genetic Developmental Disorders

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 Q2 **335.01** Sex- and allele associated alterations in MET expression and transcriptional regulation in autism and Rett Syndrome. J. PLUMMER*; P. LEVITT; K. A. ALDINGER. *Zilkha Neurogenetics Institute, Univ. of Southern California, Zilkha Neurogenetics Institute, Univ. of Southern California, Keck Sch. of Med.*

9:00 Q3 **335.02** Breathing abnormalities in female Mecp2+/− mice. C. M. JOHNSON*; N. CUI; W. ZHONG; C. JIANG. *Georgia State Univ.*

10:00 Q4 **335.03** Enhanced synaptic transmission impairs hippocampal LTP in Mecp2 knockout mice. W. LI*; L. POZZO-MILLER. *The Univ. of Alabama At Birmingham.*

11:00 Q5 **335.04** Studying changes in Prss12 expression and neurotrypsin-dependent cleavage of agrin in human induced pluripotent stem cells (hIPSC)-derived neurons from Rett Syndrome patients. S. N. KIM*; C. CARROMEU; A. ACAB; A. R. MUOTRI; L. S. B. GOLDSTEIN; A. ALMENAR-QUERALT. *UCSD.*

8:00 Q6 **335.05** Bi-directional dendritic BDNF transport is impaired in Mecp2 knockout neurons. X. XU*; L. POZZO-MILLER. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

9:00 Q7 **335.06** Post-symptomatic bone marrow transplant in a female mouse model of Rett syndrome. D. E. PARRA; S. M. CULLEN; T. HUANG; C. S. WARD*; M. A. GOODELL; J. L. NEUL. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

10:00 Q8 **335.07** ▲ Prodromal circuit changes in MeCP2+/- mouse model of Rett syndrome. J. A. CHARTOVE*; W. LIAO; A. HASSAN; S. KIM; G. C. CARLSON. *Swarthmore Col., Univ. of Pennsylvania.*

11:00 Q9 **335.08** Role of cortical interneuron subtypes in Rett syndrome. A. BANERJEE*; J. CASTRO; C. RUNYAN; M. SUR. *MIT.*

8:00 Q10 **335.09** MeCP2 regulates BLOC-1 expression. J. L. LARIMORE*; L. AMBROSE; Y. SMITH; V. FAUNDEZ. *Agnes Scott Col., Emory Univ.*

9:00 Q11 **335.10** Memory deficits are associated with elevated synaptic ERK1/2 activation and reversed by mGluR5 antagonism in a mouse model of autism. R. R. SEESE*; A. MASKE; G. LYNCH; C. M. GALL. *UC Irvine.*

10:00 Q12 **335.11** Increased binding of MeCP2 to RELN and GAD1 regulatory regions may be mediated by increases in 5-hmC in the promoter regions of autism spectrum disorder (ASD) post-mortem brain samples. A. ZHUBI*; Y. CHEN; E. DONG; E. H. COOK; A. GUIDOTTI; D. R. GRAYSON. *Univ. Ill at Chicago, Univ. of Illinois at Chicago.*

11:00 Q13 **335.12** Impaired learned maternal behavior in a mouse model of Rett Syndrome. B. Y. LAU*; K. KRISHNAN; G. EWALL; Z. HUANG; S. SHEA. *Cold Spring Harbor Labs.*

8:00 Q14 **335.13** Funcitonal analyses of the CDKL5, a causative gene for neurodevelopemental disorders. T. TANAKA*; A. WATANABE; M. HAGIWARA; M. MIZUGUCHI; K. TAKAO; T. MIYAKAWA; S. KOBAYASHI; T. MANABE; M. FUKAYA; H. SAKAGAMI; K. OKUDA. *The Univ. of Tokyo, Natl. Inst. for Physiological Sci., IMSUT, Kitasato Univ. Sch. of Med.*

9:00 Q15 **335.14** Optogenetic intervention to GABAergic interneurons in the locus coeruleus area. X. JIN*; W. ZHONG; C. JIANG. *Georgia State Univ., Georgia State Univ.*

10:00 Q16 **335.15** ● Ipsc models of rett syndrome show molecular and functional deficits at various developmental stages. M. T. MILLER*; J. J. KIM*; J. N. SAVAS; F. BOUKHTOUCHE; S. AIGNER; C. CARROMEU; R. JAGASIA; A. MUOTRI; A. GHOSH*. *F. Hoffmann-La Roche, UCSD, The Scripps Res. Inst., Sanford Consortium for Regenerative Med., UCSD.*

11:00 Q17 **335.16** Williams Syndrome: A histological study of cortical neuronal density in the social brain. C. F. HORTON; L. STEFANACCI*; K. L. HANSON; L. WILDER; L. YZURDIAGA; C. BROWN; A. MUOTRI; E. HALGREN; U. BELLUGI; J. KORENBERG; K. SEMENDEFERI. *UCSD, UCSD Dept Anthrop., UCSD, UCSD, Salk Inst. for Biol. Studies, Univ. of Utah.*

8:00 Q18 **335.17** Williams syndrome: a preliminary investigation of the morphology of cortical pyramidal neurons. B. HRVOJ MIHIC*; L. STEFANACCI; K. HANSON; U. BELLUGI; A. MUOTRI; E. HALGREN; J. KORENBERG; B. JACOBS; K. SEMENDEFERI. *Dept of Anthropology, Univ. of California San Diego, Univ. of California San Diego, The Salk Inst., Univ. of California San Diego, Univ. of California San Diego, Univ. of Utah, The Colorado College,.*

9:00 R1 **335.18** Imbalanced homeostasis of social behavior in mouse models of Idic15 autism and Angelman syndrome. D. STOPPEL; S. E. P. SMITH; M. P. ANDERSON*. *Harvard Med. School/ Beth Israel Deaconess, Mayo Clin. Col. of Med.*

10:00 R2 **335.19** Cell type-specific contributions of ube3a loss to excitatory/inhibitory balance. M. WALLACE*; M. JUDSON; A. BURETTE; R. WEINBERG; B. PHILPOT. *Univ. of North Carolina.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 R3 **335.20** Williams syndrome: Multimodal neuroimaging of white matter microstructure. T. T. BROWN*; M. ERHART; J. KORENBERG; U. BELLUGI; A. M. DALE; E. HALGREN. *UCSD Sch. of Med., UCSD Sch. of Med., UCSD Sch. of Med., UCSD Sch. of Med., Univ. of Utah, Salk Inst., UCSD.*

8:00 R4 **335.21** Sex chromosome dosage effects in temporal lobe anatomy. D. HONG*; F. HOEFT; J. LEPAGE; J. ROSS; A. REISS. *Stanford Univ., UCSF, Thomas Jefferson Univ.*

9:00 R5 **335.22** Examination of auditory processing in Rett Syndrome using mismatch negativity. H. FREY*; A. DJUKIC; J. J. FOXE. *Albert Einstein Col. of Med., Montefiore Med. Ctr.*

10:00 R6 **335.23** A neural basis for atypical auditory processing in Williams syndrome. J. R. PRYWELLER*; E. M. DYKENS; C. J. CASCIO; T. A. THORNTON-WELLS. *Vanderbilt Univ., Vanderbilt Univ.*

11:00 R7 **335.24** Functional neurocorrelates of impaired multiple object tracking in children with chromosome 22q11.2 deletion syndrome. D. D. STEPHENSON*, JR; E. A. BEATON; M. H. CABARAL; J. J. STODDARD; T. J. SI Mon. *Univ. of New Orleans, Univ. of New Orleans, Univ. of California, Davis, Natl. Inst. of Mental Hlth.*

POSTER

336. Epilepsy: Network Activity and Oscillations

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 R8 **336.01** Long-lasting anti-epileptic effects of coordinated reset neuromodulation studied by a multi-electrode array. G. FILATOV*; P. A. TASS; M. BAZHENOV. *Univ. of California Riverside, Juelich Res. Ctr.*

9:00 R9 **336.02** Early detection of human epileptic seizures using neocortical microelectrode array signals. Y. S. PARK*; L. R. HOCHBERG; E. ESKANDAR; S. S. CASH; W. TRUCCOLO. *Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp. and Harvard Med. Sch., Massachusetts Gen. Hosp. and Harvard Med. Sch., Brown Univ.*

10:00 R10 **336.03** Development of chemoconvulsant-induced neocortical seizures *in-vivo*: A two-photon imaging study. I. PACHTER*; U. DUBIN; L. GARION; Y. SCHILLER. *Technion - Israel Inst. of Technol.*

11:00 S1 **336.04** EEG functional networks partially reflect underlying white matter connectivity. C. J. CHU-SHORE*; R. TRIETSCH; N. TANAKA; B. EDLOW; O. WU; S. CASH; S. STUFFLEBEAM; M. KRAMER. *Massachusetts Gen. Hospital/Harvard Med. Sch., Martinos Center/Harvard Med. Sch., Boston Univ.*

8:00 S2 **336.05** Patterns of synchronous population activity in the neocortex of patients with epilepsy or tumour, *in vitro.* K. HOFER; K. TÓTH; Á. KANDRÁCS; C. SZABÓ; A. BAGÓ; L. ERőSS; L. ENTZ; T. FREUND; I. ULBERT*; L. WITTNER. *ICNP RCNS HAS, FIT PPCU, NIN, IEM HAS.*

9:00 S3 **336.06** Neuronal spiking synchrony in human focal seizures. W. TRUCCOLO*; O. J. AHMED; M. HARRISON; E. N. ESKANDAR; G. R. COSGROVE; J. R. MADSEN; A. BLUM; N. S. POTTER; L. R. HOCHBERG; S. S. CASH. *Brown Univ., Dept. of Veterans Affairs, Massachusetts Gen. Hosp. and Harvard Med. Sch., Brown Univ., Massachusetts Gen. Hosp. and Harvard Med. Sch., Brown Univ., Children's Hosp. and Harvard Med. Sch., Brown Univ., Brown Univ.*

10:00 S4 **336.07** Point process analysis of ictal discharges. G. M. FIDDYMENT*; S. SOKOLOWSKI; U. T. EDEN; S. S. CASH; M. A. KRAMER. *Boston Univ., Massachusetts Gen. Hosp.*

11:00 S5 **336.08** Cross-frequency phase-amplitude coupling in the default mode network in response to interictal epileptic discharges: A combined fcMRI-MEG study. G. M. IBRAHIM*; S. DOESBURG; A. OCHI; H. OTSUBO; M. SMITH; E. DONNER; J. T. RUTKA; O. SNEAD. *Univ. of Toronto.*

8:00 S6 **336.09** Analysis of single unit firing patterns preceding human seizures. E. M. MERRICKS*; R. G. EMERSON; G. MCKHANN, Jr; R. R. GOODMAN; S. A. WEISS; C. A. SCHEVON; A. J. TREVELYAN. *Newcastle Univ., Columbia Univ., Cornell Univ., Columbia Univ.*

9:00 S7 **336.10** ● Ictal high frequency oscillations distinguish two types of seizure territories in humans. S. A. WEISS*; G. P. BANKS; G. MCKHANN, III; R. GOODMAN; R. EMERSON; A. J. TREVELYAN; C. A. SCHEVON. *Shennan Weiss, Columbia Univ., Columbia Univ., Roosevelt Hosp., Hosp. for Special Surgery, Newcastle Univ.*

10:00 S8 **336.11** Rapid eye movement sleep and theta oscillations precedes seizures in tetanus toxin model of epilepsy. M. SEDIGH-SARVESTANI*; G. I. THUKU; A. PARKAR; S. L. WEINSTEIN; B. J. GLUCKMAN. *The Pennsylvania State Univ., Virginia Commonwealth Univ., George Washington Univ.*

11:00 S9 **336.12** Altered neuronal activity during network oscillations in awake epileptic rats. S. KARUNAKARAN*; D. W. GRASSE; K. A. MOXON. *Drexel Univ.*

8:00 S10 **336.13** Novel computational approach to detect absence seizures in mutant mouse strains. C. D. RICHARD*; A. KHALIL; W. N. FRANKEL. *The Jackson Lab., Univ. of Maine.*

9:00 S11 **336.14** Effect of Carbenoxolone on fast ripple activity in the hippocampus of rats with spontaneous recurrent seizures. C. VENTURA*; L. MEDINA-CEJA. *Univ. De Guadalajara.*

10:00 S12 **336.15** ▲ Decreased fast ripple activity during citalopram administration in rats with spontaneous recurrent seizures. K. PARDO*; L. MEDINA-CEJA; A. MORALES-VILLAGRÁN. *Univ. De Guadalajara.*

11:00 S13 **336.16** Functional alterations in chronic epilepsy triggered by tetanus neurotoxin in mouse visual cortex. E. VANNINI*; L. RESTANI; M. MAINARDI; M. PIETRASANTA; M. CALEO. *CNR Pisa.*

8:00 S14 **336.17** Local interplay between hippocampal single cell firing and network oscillations is preserved under epileptic conditions. A. KILIAS*; U. P. FRORIEP; U. HÄUSSLER; A. KUMAR; C. A. HAAS; U. EGERT. *Berstein Ctr. Freiburg, Univ. of Freiburg, Univ. of Freiburg, Univ. of Freiburg, MIT, Univ. of Freiburg.*

9:00 S15 **336.18** ● Temporal dynamics of neocortical high frequency oscillations in human epilepsy. W. C. STACEY*; A. PEARCE; D. WULSIN; B. LITT; J. A. BLANCO; A. KRIEGER. *Univ. of Michigan, Univ. of Pennsylvania, Univ. of Pennsylvania, US Naval Acad., Wharton Sch. of Business, Univ. of Pennsylvania.*

10:00 S16 **336.19** The neurogenic niche is irreversibly changed in experimental epilepsy. U. HAUSSLER*; T. GREMMELSPACHER; A. HUBBE; C. A. HAAS. *Exptl. Epilepsy Research, Dept. of Neurosurgery, Univ. of Freiburg, Bernstein Ctr. Freiburg, Univ. of Freiburg, BrainLinks-BrainTools, Univ. of Freiburg.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 S17 **336.20** Propagation dynamics of spontaneous and optogenetically induced seizures. J. A. DIAN; P. L. CARLEN*; T. A. VALIANTE. *Dept. of Electrical and Computer Engin., Toronto Western Hosp.*

8:00 S18 **336.21** On-demand generation of seizures with defined origin and network propagation pathways. A. WEITZ; Z. FANG; W. SMITH; H. LEE; R. FISHER; J. LIU; P. LIN; M. ROSENBERG; H. LI; J. PARVIZI; J. LEE*. *Stanford Univ., UCLA.*

9:00 T1 **336.22** Phase resetting analysis of interictal bursts in hippocampal slices from patients with epilepsy. P. YU*; M. HSIAO; D. SONG; C. Y. LIU; C. N. HECK; D. MILLETT; T. W. BERGER. *USC.*

10:00 T2 **336.23** ▲ *In-vivo* silicon nanoprobe recordings of hippocampal network dynamics in chronically epileptic mice navigating virtual reality. M. JAVAHERIAN*; T. SHUMAN; C. C. KABA; J. DANESHRAD; R. MANAVI; A. FARIBORZI; K. BAKHURIN; S. MASMANIDIS; P. GOLSHANI. *UCLA, Veterans Affairs Med. Ctr., UCLA, UCLA.*

11:00 T3 **336.24** Multimodal hemodynamic imaging in chronic epileptic mouse model. A. JO*; H. SONG; J. SIM; C. HEO; B. KIM*; M. SUH*. *Sungkyunkwan Univ., Koear Univ., Inst. for Basic Sci., Koear Univ., Sungkyunkwan Univ.*

POSTER

337. Ischemia: Molecular Mechanisms

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 T4 **337.01** NOS1AP mediates excitotoxic neurodegeneration triggered by NMDA receptor-nNOS signalling. L. LI*; V. GINET; X. LIU; O. VERGUN; J. PUYAL; A. TRUTTMANN; M. COURTNEY. *A.I. Virtanen Inst. For Mol. Sci., Univ. of Lausanne, Dept. of Paediatrics and Paediatric Surgery and Univ. Hosp. Ctr. and Univ. of Lausanne.*

9:00 T5 **337.02** Early activation of caspase-6 and cleavage of caspase-6 substrates in an *in vitro* model of stroke. R. K. GRAHAM*; M. DEMERS; K. GIRLING; S. ZHANG; Y. WANG. *Univ. of Sherbrooke, Univ. of British Columbia.*

10:00 T6 **337.03** Npas4 is up-regulated in the corticolimbic system of the rodent brain following focal cortical ischaemia. T. S. KLARIC*; W. LEONG; M. D. LEWIS; S. A. KOBLAR. *Univ. of Adelaide.*

11:00 T7 **337.04** Neurochemistry of cerebral vasospasm in patients following aneurysmal subarachnoid hemorrhage. E. C. DAMISAH*; C. ONG; J. ROBINSON; R. A. GRANT; T. C. MANCHANDIA; M. CHANG, B.S; T. EID; K. BULSARA. *Yale Univ., Yale Univ.*

8:00 T8 **337.05** The role of sestrin 2 on transient global ischemia-induced hippocampal neuronal injury. S. CHEN*; T. LIN; D. YANG; S. LEE; F. SHAW; C. LIOU; Y. CHUANG. *Chang Gung Mem. Hospital, Chang Gung University, Neurol., Ctr. for Translational Res. in Biomed. Sciences, Kaohsiung Chang Gung Mem. Hosp., Inst. of Brain Science, Natl. Yang-Ming Univ., Dept. of Psychology, Natl. Cheng Kung Univ.*

9:00 T9 **337.06** A novel function for caspase-9 in vasogenic edema during cerebral ischemia. N. AKPAN; E. G. GLENNON; R. Y. HWANG; E. S. CONNOLLY; C. M. TROY*. *Columbia Univ. Medl Ctr., Columbia Univ. Medl Ctr.*

10:00 T10 **337.07** Could the failing Na+/K+ pump convert to a channel during stroke? R. D. ANDREW*; R. BRISSON; S. A. MCQUEEN; D. KIM; A. Y. JIN. *Queen's Univ.*

11:00 T11 **337.08** Characterization of the ubiquitin-modified proteome regulated by transient forebrain ischemia. W. PASCHEN*; M. IWABUCHI; H. SHENG; W. J. THOMPSON; W. YANG. *Duke Univ. Med. Ctr.*

8:00 T12 **337.09** SUMO2/3 conjugates co-precipitate with ubiquitin aggregates in the mouse neocortex after middle cerebral artery occlusion. K. HOCHRAINER*; K. JACKMAN; J. ANRATHER; C. IADECOLA. *Weill Cornell Med. Col.*

9:00 T13 **337.10** Rac1 signalling downstream of calcium-permeable AMPAR trafficking differs in oxygen/glucose deprived cortical and hippocampal neurons. E. M. BLANCO SUAREZ*; J. G. HANLEY. *Univ. of Bristol.*

10:00 T14 **337.11** Regulation of Kv2.1 channel localization by cyclin E1. N. HEGDE*; Z. P. WILLS; A. SCHULIEN; T. AIZENMAN; E. AIZENMAN. *Univ. of Pittsburgh.*

11:00 T15 **337.12** How calcium and zinc found each other: Cooperative metal signaling during a Kv2.1-mediated potassium current surge. M. C. MCCORD*; E. AIZENMAN. *Univ. of Pittsburgh.*

8:00 T16 **337.13** Middle cerebral artery occlusion and reperfusion induces cofilin rod formation in rats. B. CHEN*; H. XU; L. SHU; Y. WANG. *Inst. of Brain Sci. and State Key Lab. For Med. Neurobiology, Fudan Univ., Shanghai Ninth People's Hosp. Affiliated Shanghai JiaoTong Univ. Sch. of Med.*

9:00 T17 **337.14** The impact of protein phosphatase-1 inhibition on neuronal death following ischemia simulated by oxygen-glucose deprivation. J. A. DETERT*; H. C. HEMMINGS, Jr. *Weill Cornell Med. Col., Weill Cornell Med. Col.*

10:00 T18 **337.15** SPAK/OSR1/NKCC1 signaling pathway contributes to grey and white matter damage after cerebral ischemia. H. YUAN*; L. LI; S. YANG; S. LIN; K. KAHLE; D. SUN. *Univ. of Pittsburgh, Tri-Service Gen. Hospital, Natl. Def. Med. Ctr., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

11:00 U1 **337.16** Exacerbation of ischemic brain damage in STEP knockout mice. ; C. YANG; I. DEB; R. PODDAR; E. CANDELARIO-JALIL; S. PAUL. *Univ. of New Mexico, Univ. of Florida.*

8:00 U2 **337.17** Investigating a novel localization and mode of trafficking of Pannexin 1 with implications for neural cell viability in the post-stroke brain environment. A. K. BOYCE*; L. E. WICKI-STORDEUR; P. C. NAHIRNEY; L. A. SWAYNE. *Univ. of Victoria, Univ. of Victoria.*

9:00 U3 **337.18** Axonal sprouting is restrained by chimaerin-1 in peri-infarct cortex of the mouse after photothrombotic cortical stroke. S. LI*; K. WANG; A. BRUMM; J. J. OVERMAN; S. T. CARMICHAEL. *UCLA, UCLA.*

10:00 U4 **337.19** Changes in the expression of VEGF-C and VEGFR-3 in the hippocampus of a mouse model of ischemic tolerance. M. I. BHUIYAN*; M. Y. LEE; S. Y. KIM*. *The Catholic Univ. of Korea, Catholic Neurosci. Institutue, The Catholic Univ. of Korea.*

11:00 U5 **337.20** Single cell gene expression profiling of GFAP-positive glia in the mouse cortex during development and after ischemia. D. DZAMBA*; P. HONSA; V. RUSNAKOVA; M. KUBISTA; M. ANDEROVA. *2nd Fac. of Medicine, Charles Univ., Inst. of Exptl. Medicine, AS CR, Inst. of Biotechnology, AS CR.*

8:00 U6 **337.21** Stroke alters expression of miRNAs and ROCK signaling in cerebral endothelial cells. H. TENG*; M. CHOPP; X. LIU; X. WANG; Z. ZHANG. *Henry Ford Hosp., Oakland Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 U7 **337.22** HSP70 inhibited apoptosis by interfering with dynamin-mediated signaling. J. KIM*; N. KIM; Z. ZHENG; J. LEE; M. A. YENARI. *UCSF, San Francisco VA Hosp., UCSF, Yonsei Univ. Col. of Med.*

10:00 U8 **337.23** Global Ischemia induces lysosomal-mediated degradation of mTOR. M. J. GERTNER*; D. OFENGEIM; J. HWANG; F. PONTARELLI; R. ZUKIN. *Albert Einstein Col. of Med., Harvard Med. Sch., Albert Einstein Col. of Med.*

11:00 U9 **337.24** Genome-wide DNA methylation analysis shows overall hypomethylation in the striatum of HD mice vs. wild-type mice exposed to a super-enriched environment. J. HWANG*; M. SUZUKI; K. NOH; A. LATUSZEK; J. M. GREALLY; R. ZUKIN. *Albert Einstein Col. Med., Albert Einstein Col. Med., Albert Einstein Col. Med.*

8:00 U10 **337.25** Epigenetic modifications associated with selective neuronal vulnerability in a rat model of transient global brain ischemia. M. MOTOLESE*; M. CANNELLA; F. MASTROIACOVO; A. GAGLIONE; G. BATTAGLIA; V. BRUNO; F. NICOLETTI. *I.R.C.C.S. Neuromed, Univ. Sapienza.*

POSTER

338. Stroke Recovery: Integrated Responses

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 U11 **338.01** Cognitive control and its impact on recovery from aphasic stroke. R. J. WISE*; S. L. E. BROWNSETT; J. E. WARREN. *Imperial Col. London, UCL.*

9:00 U12 **338.02** ● Developing an enriched environment for post-stroke upper limb recovery. P. RAGHAVAN*; N. GUERRERO; D. GELLER; V. ALURU; Y. LU; A. TURRY. *New York Univ. Langone Med. Ctr., NYU Steinhardt Sch. of Culture, Educ. and Human Develop.*

10:00 U13 **338.03** The use of extended field-of-view 2D ultrasound to measure biceps brachii fascicle lengths in individuals after chronic hemiparetic stroke. C. NELSON*; P. KRUEGER; W. MURRAY; J. P. A. DEWALD. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

11:00 U14 **338.04** Large-scale modulation of spontaneous neural activity using epidural direct current stimulation. K. GANGULY*; T. GULATI. *SFVAMC & UCSF.*

8:00 U15 **338.05** ● ▲ Premotor cortical stimulation in stroke rehabilitation: Neural mechanisms of recovery. N. VARNERIN*; D. A. CUNNINGHAM; D. JANINI; E. BEALL; S. JONES; A. WYANT; C. BONNETT; G. H. YUE; M. LOWE; K. SAKAIE; A. MACHADO; E. B. PLOW. *Cleveland Clin., Cleveland Clin., Cleveland Clin., Cleveland Clin., Kessler Fndn.*

9:00 U16 **338.06** Tracking spontaneous recovery of digit individuation after stroke with a novel task and multivariate functional imaging. J. XU; N. EJAZ; N. KIM; J. BERARD; M. HARRAN; J. CORTES; T. KITAGO; B. HERTLER; M. BRANSCHEIDT; P. A. CELNIK; A. LUFT; J. W. KRAKAUER*; J. DIEDRICHSEN. *Johns Hopkins Univ., Univ. Col. London, Johns Hopkins Univ., Columbia Univ., Univ. of Zürich, Kennedy Krieger Inst., Univ. of Zürich.*

10:00 U17 **338.07** Action Observation Stroke Therapy and long-term maintenance of motor gains. M. I. FALCON*; J. D. RILEY; E. E. CHEN; A. SOLODKIN. *Univ. of California Irvine, Univ. of California, Irvine.*

11:00 U18 **338.08** ● Muscle activity in the lower limb during robot-assisted walking training using the Hybrid Assistive Limb. S. IRIE*; K. KAMIBAYASHI; K. EGUCHI; S. KUBOTA; R. ARIYASU; Y. UENO; H. KAWAMOTO; A. MATSUSHITA; H. KADONE; Y. NAKATA; Y. SANKAI; M. SAKANE. *Dept. Rehabil. Medicine, Univ. of Tsukuba, Fac. of Engineering, Information and systems, Univ. of Tsukuba, Fac. of Hlth. and Sports Science, Doshisha Univ., Fac. of Medicine, Univ. of Tsukuba, Dept. Orthopaedic Surgery,University of Tsukuba, Ctr. for Cybernics Research, Univ. of Tsukuba, Dept. Neurosurgery, Univ. of Tsukuba, Tsukuba Critical Path Res. and Educ. Integrated Leading Ctr. (CREIL).*

8:00 V1 **338.09** Bilateral reach training following a unilateral ischemic injury to the caudal forelimb area (CFA) of motor cortex in rats. A. M. DUTCHER*; R. P. ALLRED; T. A. JONES. *Univ. of Texas At Austin, Univ. of Texas At Austin.*

9:00 V2 **338.10** Post stroke motor unit firing rate alteration examined by high density surface electromyography decomposition. X. LI*; A. HOLOBAR; M. GAZZONI; A. BOTTER; R. MERLETTI; W. Z. RYMER; P. ZHOU. *Rehab Inst. of Chicago, Univ. of Maribor, Politecnico di Torino, Univ. of Sci. and Technol. of China.*

10:00 V3 **338.11** Effects of rehabilitation post-stroke: DTI analysis of corticospinal tract characteristics using BrainSuite13. D. BEROUKHIM*; M. KONERSMAN; M. CHONG; A. A. JOSHI; C. BHUSAN; D. W. SHATTUCK; J. P. HALDAR; R. M. LEAHY; C. J. WINSTEIN. *USC, UCLA.*

11:00 V4 **338.12** Functional MRI confirms subjective experience of internal naming success in aphasia. W. HAYWARD*; S. SNIDER; R. B. FRIEDMAN; P. E. TURKELTAUB. *Georgetown Univ.*

8:00 V5 **338.13** Transcallosal axonal sprouting patterns after ischemic motor cortical lesions vary with forelimb experiences. J. LUBS*; A. MYLES; S. C. JEFFERSON; R. P. ALLRED; T. A. JONES. *Univ. of Texas At Austin.*

9:00 V6 **338.14** A rodent white matter stroke model: Spasticity and gait disability. F. THOMPSON; G. MUSTAFA; J. HOU*; R. NELSON; Y. GAO; Y. ZHANG; P. BOSE. *North Florida/South Georgia VAMC, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

POSTER

339. Ischemia: Pharmacologic Neuroprotection

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 V7 **339.01** Interaction of orexin-A and BDNF in hypothalamus on the development of post-ischemic glucose intolerance and neuronal damage. S. HARADA*; S. TOKUYAMA. *Kobe Gakuin Univ.*

9:00 V8 **339.02** Docosahexaenoic acid improves behavior and reduces blood-brain barrier permeability in an ischemic stroke model. S. HONG; L. BELAYEV; L. KHOUTOROVA*; D. V. ANZOLA; N. G. BAZAN. *LSU.*

10:00 V9 **339.03** Eupatilin ameliorates brain injury after transient focal ischemia in mice. J. HAN; H. BAE; J. CHOI*. *Gachon Univ.*

11:00 V10 **339.04** Mechanisms underlying astrocyte-dependent ischemic tolerance. Y. HIRAYAMA*; Y. IKEDA-MATSUO; S. KOIZUMI. *Univ. of Yamanashi, Univ. of Kitasato.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 V11 **339.05** Neurotropin, an analgesic drug elevates BDNF levels in the brain and prevents the development of cerebral infarction in mice. H. YANAMOTO*; D. YANG; Y. NAKAJO; K. IIHARA; H. KATAOKA. *Natl. Cerebral & Cardiovasc Res. Ctr., Osaka Univ. Grad. Sch. of Med., China-Japan Friendship Hosp., Rakuwakai Otowa Hosp., Natl. Cerebral & Cardiovasc Res. Ctr.*

9:00 V12 **339.06** Probucol attenuates oxidative stress, energy starvation and nitric acid production following transient forebrain ischemia in the rat hippocampus. A. AL-MAJED*. *King Saud Univ.*

10:00 W1 **339.07** Retinal neuroprotection against ischemia/ reperfusion damage induced by global and local hypothermia. E. M. SALIDO*; D. DORFMAN; M. CHIANELLI; R. E. ROSENSTEIN. *NROE.*

11:00 W2 **339.08** Neuroprotective effect of extracts from Tilia americana var. mexicana in the neuronal damage induced by intestinal ischemia. G. E. ANGELES-LOPEZ*; M. E. GONZÁLEZ-TRUJANO; M. DÉCIGA-CAMPOS; R. VENTURA-MARTÍNEZ. *Facultad De Medicina UNAM, Inst. Nacional de Psiquiatría Ramón de la Fuente Muñiz, Inst. Politécnico Nacional.*

8:00 W3 **339.09** Cerebral blood flow is a major contributing factor towards the beneficial effects of PGD2 DP1 activation. A. S. AHMAD*; S. NARUMIYA; S. DORE. *Univ. of Florida Col. of Med., Kyoto Univ., Univ. of Florida Col. of Med.*

9:00 W4 **339.10** Hypothermia protects retinal ganglion cells from cell death in a new retinal ischemia organ culture model. S. O. SCHNICHELS*; M. BLAK; T. DORFI; J. HOFMANN; K. BARTZ-SCHMIDT; M. SCHULTHEISS; M. S. SPITZER. *Ctr. of Ophthalmology Tuebingen.*

10:00 W5 **339.11** Docosahexaenoic acid complexed to human albumin provides neuroprotection against intracerebral hemorrhage stroke in rats. L. S. BELAYEV*; L. KHOUTOROVA; D. V. ANZOLA; A. OBENAUS; N. G. BAZAN. *LSUHSC, Loma Linda Univ.*

11:00 W6 **339.12** ● Nanoparticles mediated delivery of TIMP-1 across BBB and its neuroprotective effects. M. CHATURVEDI; Y. MOLINO; B. SREEDHAR; M. KHRESTCHATISKY; L. KACZMAREK*. *Nencki Inst., VECT-HORUS S.A.S., Indian Inst. of Chem. Technol., UMR 7259 - CNRS - Aix-Marseille Univ.*

8:00 W7 **339.13** A Type-II positive allosteric modulator of α7 nAChRs reduces the infarct volume and improves the sensorimotor performance after focal cerebral ischemia in rats. V. V. UTESHEV*; K. JIN; F. SUN. *Univ. of North Texas Hlth. Sci. Ctr.*

9:00 W8 **339.14** Treatment of ischemic stroke using a protease-inducible gene delivery system in rat MCAO model. S. ZHANG*; L. KOJIC; Y. WEN; D. QIANG; K. WONG; M. S. CYNADER; W. JIA. *Brain Res. Ctr., Brain Res. Ctr.*

10:00 W9 **339.15** Efficacy of the flavan-3-ol (-)-epicatechin in aging mice subjected to experimental stroke. C. C. LEONARDO*; J. R. MOORE; M. MILLS; N. SINGH; S. DORE. *Ctr. For Translational Res. In Neurodegenerative Disease, Univ. of Fl, Univ. of Florida.*

11:00 W10 **339.16** Neuroprotection by Epicatechin in *in vitro* stroke model: Role of Nrf2 pathway. M. AGRAWAL; C. LEONARDO; S. DORE*. *Univ. of Florida.*

8:00 W11 **339.17** Induction of ischemic stroke in awake mice reveals that anesthesia can mask the benefits of a neuroprotective therapy. C. E. BROWN*; A. SETO; D. TRUDEAU; J. LEUNG; P. REESON; R. LIM; K. DELANEY. *Univ. of Victoria, Univ. of Victoria.*

9:00 W12 **339.18** Keap1-tat peptide attenuates ischemic neuronal injury and behavioral deficits via upregulating Nrf2 activity. R. WANG*; Q. ZHANG; J. TU; Y. ZHU; X. ZHANG; H. TANG; F. YANG; D. BRANN. *Hebei United Univ., Georgia Regents Univ.*

10:00 W13 **339.19** Nr1 and nr2 mRNA NMDA receptor subunit expression is regulated by ethanol and resveratrol in cerebral ischemia. A. L. CERÓN*; A. MILLÁN VEGA; A. ORTIZ-PLATA; M. I. SALAZAR; M. ESPINOZA-ROJO; P. AGUILERA. *Inst. Nacional De Neurología Y Neurocirugía, Unidad de Investigación Especializada en Microbiología, Inst. Politécnico Nacional, Escuela Nacional de Ciencias Biológicas, Unidad Académica de Ciencia Químico Biológicas.*

11:00 W14 **339.20** Increased omega-3 polyunsaturated fatty acids in fat-1 transgenic mice confers neuroprotection and enhances endogenous neurogenesis following focal cerebral ischemia. S. H. HASSAN; X. HU; F. ZHANG; W. ZHANG; M. IWAI; R. A. STETLER*; Y. DAI; A. ZHAO; Y. GAO; J. CHEN. *Univ. of Pittsburgh, Fudan Univ., Veterans Affairs Pittsburgh Hlth. Care Syst., Univ. of Pittsburgh, Nanjing Med. Univ.*

8:00 W15 **339.21** ● Orally administered apoaequorin protects neurons from oxygen-glucose deprivation. E. L. ADAMS*; V. L. EHLERS; S. C. MICHELS; N. B. FETTINGER; J. R. MOYER, Jr. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee.*

9:00 W16 **339.22** Neuroprotective effect of oral administration of human serum albumin against transient cerebral hypoxic ischemia in rats. H. PARK*; M. HONG; C. HEO; Y. LEE; G. JHON; M. SUH. *Sungkyunkwan Univ., Inst. for Basic Sci., Ewha Womans Univ., Sungkyunkwan Univ.*

10:00 W17 **339.23** ▲ Potent therapeutic effects of prothymosin alpha in the stroke model induced by thrombosis and late tPA-treatment. H. MASANORI*. *Nagasaki Univ.*

11:00 W18 **339.24** ▲ Effect of resveratrol on cellular damage, ros production and tgf-b1 mrna expression in cerebral ischemia. Y. TREJO QUIÑONES*; P. MONTES DE OCA; A. ORTIZ; J. PEDRAZA; P. AGUILERA. *Inst. Nacional De Neurología Y Neurocirugía manuel Velazco Suarez, , Facultad de Química, Univ. Nacional Autónoma de México.*

8:00 X1 **339.25** Overexpression of Hsp72 protected against ischemic CNS white matter injury. M. A. HAMNER*; X. SUN; Z. YE; R. G. GIFFARD; B. R. RANSOM. *Univ. Washington, Stanford Univ. Sch. of Med.*

9:00 X2 **339.26** Two approaches for therapeutic hypothermia induction after ischemic brain injury: TRPV1-agonist-induced pharmacologic hypothermia and Peltier-device-induced focal brain cooling. M. TEJADA BONILLA; H. HARADA*; K. USHIJIMA; M. TAUCHI. *Kurume Univ. Sch. of Med., Univ. Hosp. Erlangen, Germany, Univ. Hosp. Erlangen, Germany.*

10:00 X3 **339.27** Neuroprotective effects of HT047 in focal cerebral ischemia models. J. SONG; J. CHOI; B. GAIRE; S. HONG; H. KIM*. *Kyung Hee Univ, Col. Korean Med., Korea Inst. of Sci. and Technol. for Eastern Med. (KISTEM), Gachon Univ. Gil Oriental Med. Hosp.*

11:00 X4 **339.28** Effect of dexrazoxane on learning and memory alterations induced by acute cerebral ischemia and its possible involvement in the neurogenic process. L. A. MÉNDEZ-CUESTA*; C. E. CAZARES-MARTÍNEZ; D. O. HERNÁNDEZ-AGUILAR; L. PARRA-GÁMEZ; J. GONZÁLEZ-RÍOS; C. GÓMEZ-ACEVEDO. *Univ. Nacional Autónoma De México.*

8:00 X5 **339.29** Lidocaine inhibits TRPM7 current and TRPM7-mediated zinc toxicity. T. LENG*; Z. ZENG; Z. O'BRYANT; K. INOUE; Z. XIONG. *Morehouse Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 X6 **339.30** Studying the glutamate-attenuating potential of activated protein C (APC) analog using *in vivo* microdialysis in a mouse model of ischemic stroke. A. RAMANATHAN*; Y. WANG; A. SAGARE; B. V. ZLOKOVIC. *USC.*

POSTER

340. Myelination and Remyelination: Mechanisms

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 X7 **340.01** PERK activation preserves the viability and function of remyelinating oligodendrocytes in immune-mediated demyelinating diseases. W. LIN*; Y. LIN; G. HUANG; S. JAMISON; J. LI; H. HARDING; D. RON. *Univ. of Minnesota, Univ. of Cambridge.*

9:00 X8 **340.02** Mouse model of remyelination and neuroprotection. B. BAI; S. SUN; S. MEDICETTY*; K. DONATTO; D. EDBERG; G. KIDD; B. TRAPP. *Renovo Neural Inc., Lerner Res. Institute, Cleveland Clin.*

10:00 X9 **340.03** Neuronal overexpression of human tau influences CNS remyelination. B. OSSOLA*; C. ZHAO; C. COSSETTI; M. GOEDERT; A. COMPSTON; S. PLUCHINO; R. J. M. FRANKLIN; M. G. SPILLANTINI. *Univ. of Cambridge, Univ. of Cambridge, MRC Lab. of Mol. Biol.*

11:00 X10 **340.04** Human iPSC-derived astrocytes protect against white matter injury and promote remyelination in a mouse model of periventricular leukomalacia. C. CHEN*; P. JIANG; Y. LIU; W. DENG. *Univ. of California, Davis, Shriners Hosp. for Children, Shriners Hosp. for Children, Univ. of Texas Hlth. Sci. Ctr. at Houston.*

8:00 X11 **340.05** Nuclear receptors in ageing macrophages, myelin debris clearance and CNS remyelination. M. S. NATRAJAN*; B. BIELEKOVA; R. J. M. FRANKLIN. *Univ. of Cambridge, NIH.*

9:00 X12 **340.06** The program of oligodendrocyte ablation determines the potential of myelin recovery in postnatal brain. A. SHABBIR; A. TIEN; N. BOEHM; G. MENSAH-NYAGAN; W. MACKLIN; D. ROWITCH; M. GHANDOUR*. *INSERM U1119 / Univ. de Strasbourg, Univ. of California San Francisco, Univ. of Colorado, Sch. of Med.*

10:00 X13 **340.07** ● Progestins as myelin repair agents for the treatment of established demyelinating lesions of the central nervous system. M. EL-ETR*; C. BOUCHER; M. RAME; A. GHOUMARI; M. SCHUMACHER; R. SITRUK-WARE. *INSERM UMR 788, Population Council and Rockfeller Univ.*

11:00 X14 **340.08** The critical role of Smad-interacting protein 1 (Sip1) in peripheral myelination. L. WU*; R. LU. *UT Southwestern Med. Ctr.*

8:00 X15 **340.09** NG2 ablation from oligodendrocyte progenitors affects regeneration of myelin in mice spinal cord. K. KUCHAROVA*; W. B. STALLCUP. *SBMRI.*

9:00 X16 **340.10** The role of developmental heterogeneity of oligodendrocyte origin in remyelination of the adult central nervous system. A. H. CRAWFORD*; R. B. TRIPATHI; W. D. RICHARDSON; R. J. M. FRANKLIN. *Univ. of Cambridge, Univ. Col. London.*

10:00 X17 **340.11** The central effects of chronic demyelination on the intrinsic properties of motoneurones in P0-deficient mice. J. LEHNHOFF*; M. MOLDOVAN; L. GRØNDAHL; C. F. MEEHAN. *Dept. of Neurosci. and Pharmacology, Univ. of Copenhagen.*

11:00 X18 **340.12** Monitoring donor cell derived myelination in shiverer mouse brain using diffusion tensor MRI. A. LYCZEK*; J. ZHANG; A. ARNOLD; M. JANOWSKI; J. W. M. BULTE; P. WALCZAK. *Radiology and Radiological Science, Johns Hopkins Univ., Inst. for Cell Engineering, Johns Hopkins Univ., 3 NeuroRepair Department, Mossakowski Med. Res. Centre, Polish Acad. of Sci., Dept. of Neurosurgery, Mossakowski Med. Res. Centre, Polish Acad. of Sci., FM Kirby Res. Center, Kennedy Krieger Inst., Dept. of Chem. and Biomolecular Engineering, The Johns Hopkins Univ. Whiting Sch. of Engin., Dept. of Biomed. Engineering, The Johns Hopkins Univ. Sch. of Med., Dept. of Radiology, Fac. of Med. Sciences, Univ. of Warmia and Mazury.*

8:00 Y1 **340.13** Systemic rapamycin administration improves myelin, but not neuromuscular function in neuropathic mice. J. R. NICKS*; A. HARRIS; W. A. DUNN, Jr; L. NOTTERPEK. *Univ. of Florida, Univ. of Florida, Univ. of FLorida.*

9:00 Y2 **340.14** Role of nuclear ErbB3 in controlling Schwann cell myelination. A. A. SKILES; J. K. NESS; E. H. YAP; A. FISER; K. SNYDER*; N. TAPINOS. *Geisinger Clin., Albert Einstein Col. of Med., Geisinger Clin.*

10:00 Y3 **340.15** *In vitro* models of amiodarone-induced Schwannopathy and myelinopathy. K. SANGO*; N. NIIMI; M. TSUKAMOTO; S. TAKAKU; H. YANAGISAWA; E. KAWAKAMI; K. WATABE. *Tokyo Met Inst. Med. Sci.*

11:00 Y4 **340.16** ● The role of central myelination in auditory brainstem function. S. KIM*; J. KIM. *UTHSCSA.*

8:00 Y5 **340.17** *In vitro* assay to monitor the differentiation efficiency of iPSCs toward myelinating oligodendrocytes. A. ARNOLD*; R. MARTIN; H. MAO; M. JANOWSKI; J. W. M. BULTE; P. WALCZAK. *Dept. of Radiology, Inst. For Cell Engineering, The Johns Hopkins Univ., Whitaker Biomed. Engin. Institute, The Johns Hopkins Univ. Sch. of Med., Dept. of Neurosurg.*

9:00 Y6 **340.18** Axonal injury in a rodent model of perioperative ischemic optic neuropathy. S. ROTH*; J. C. DREIXLER; A. R. SHAIKH; S. CONWAY. *Univ. Chicago, Univ. of Chicago.*

10:00 Y7 **340.19** The absence of PMP22 alters cell adhesion, migration and lamellipodial extension. L. NOTTERPEK*; S. AMICI; S. FREELAND; W. ZENG; S. LEE. *McKnight Brain Inst, Univ. Florida.*

11:00 Y8 **340.20** Axonopathy in Krabbe's disease is characterized by lipid raft clustering, impaired endocytosis and axonal transport and signaling defects. C. A. TEIXEIRA; C. O. MIRANDA; V. F. SOUSA; T. E. SANTOS; P. BRITES; M. L. SOUSA*. *IBMC.*

8:00 Y9 **340.21** Effect of Jimpy mutation on retinal structure and function. A. HOVHANNISYAN*; B. BENKNER; A. BIESEMEIER; U. SCHRAERMEYER; T. A. MÜNCH. *Ctr. For Integrative Neurosci. (CIN), Inst. for Ophthalmic Res.*

9:00 Y10 **340.22** The CMT4B-causing phosphatases Mtmr2 and Mtmr13 depend upon each other to achieve wild type levels of protein expression in sciatic nerve. F. L. ROBINSON*; A. A. NG; A. M. LOGAN; E. J. SCHMIDT. *Oregon Hlth. & Sci. Univ.*

10:00 Z1 **340.23** Identification of a gene influencing the severity of Charcot-Marie-Tooth neuromuscular phenotypes in mice. R. W. BURGESS*; K. L. SEBURN; D. G. SCHROEDER; L. A. DIONNE; G. A. COX. *The Jackson Lab.*

11:00 Z2 **340.24** Alterations in TFEB activation and autophagic-lysosomal function with aging in Schwann cells and CMT1A patient fibroblasts. S. LEE*; L. NOTTERPEK. *Univ. of Florida, McKnight Brain Inst., Univ. of Florida, McKnight Brain Inst.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 Z3 **340.25** ● Novel procedure for the isolation of large quantities of highly pure Oligodendrocyte progenitor cells (OPCs) from postnatal rodent brain tissue. B. LAPP; R. CLARK; R. BROCKETT; F. A. AHMADI*; K. LONG; W. SPECKMANN. *EMD Millipore, EMD Millipore.*

9:00 Z4 **340.26** LINGO-1 forms constitutive cis-dimers: BRET analysis and role in oligodendrocytes differentiation. S. MORISSET*; L. COBRET; J. FERENT; M. DE-TAUZIA; F. GODIN; E. TRAIFFORT; H. BÉNÉDETTI. *Ctr. de Biophysique Moléculaire, CNRS, UPR 4301, CNRS.*

10:00 Z5 **340.27** Schwann cell-derived desert hedgehog has a neuroprotective effect against mechanical stimuli. J. S. JUNG*; D. FRUMP; T. MOZAFFAR; R. GUPTA. *Univ. of California, Irvine.*

POSTER

341. Spinal Cord Injury II

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 Z6 **341.01** Optimal time-window of cell transplantation therapy is at the sub-acute phase of SCI in non-human primate. S. NISHIMURA*; K. YOSHIDA; H. IWAI; Y. KOBAYASHI; S. SHIBATA; H. EBISE; I. KOYA; T. SASAKI; A. SHIMIZU; J. KUDOH; Y. TOYAMA; H. OKANO; M. NAKAMURA. *Dept. of Orthopaedic Surgery, Sch. of Medicine, Keio Univ., Dept. of Physiology, Sch. of Medicine, Keio Univ., Genomic Sci. Laboratories, Dainippon Sumitomo Pharma Co., Ltd., Ctr. for Integrated Med. Research, Sch. of Medicine, Keio Univ., Dept. of Dermatology, Sch. of Medicine, Keio Univ., Iwate Tohoku Med. Megabank Organization, Iwate Med. Univ., Lab. of Gene Medicine, Sch. of Medicine, Keio Univ.*

9:00 Z7 **341.02** Binding characteristics at the interface between Nogo-A-Δ20 and its specific G-Protein coupled receptor. M. E. ARZT*; C. L. PISCITELLI; B. TEWS; X. DEUPI; G. F. SCHERTLER; M. E. SCHWAB. *ETH/University of Zurich, Paul Scherrer Inst., German Cancer Res. Ctr.*

10:00 Z8-DP5 **341.03** Reorganization of sensorimotor network after spinal cord injury with connectivity-based approach. Y. MIN*; T. JUNG; Y. CHANG. *Kyungpook Natl. Univ. Med. Ctr., Kyungpook Natl. Univ. Hosp., Kyungpook Natl. Univ. Sch. of Med.*

11:00 Z9 **341.04** Macrophage polarization *in vitro* and *in vivo* after spinal cord injury. A. KRONER-MILSCH*; S. DAVID. *Ctr. For Res. In Neuroscience, Res. Inst. of the McGill Univ.*

8:00 Z10 **341.05** Mechanism of fibronectin assembly in the fibrotic scar after spinal cord injury. Y. ZHU*; C. SODERBLOM; J. ASHBAUGH; J. BETHEA; J. K. LEE. *Univ. of Miami.*

9:00 Z11 **341.06** Unable to Attend Cofilin 1 activity modulates actin dynamics in primary sensory neurons upon a conditioning lesion. C. J. LASKOWSKI*; K. C. FLYNN; A. TEDESCHI; F. BRADKE. *DZNE Bonn.*

10:00 Z12 **341.07** PDGFRα-positive progenitor cells form myelinating oligodendrocytes and Schwann cells following contusion spinal cord injury. P. L. ASSINCK*; G. J. DUNCAN; N. J. MICHAELS; D. R. BROWN; J. R. PLEMEL; M. J. LEE; J. LIU; W. TETZLAFF. *ICORD/University of British Columbia.*

11:00 Z13 **341.08** Persistent at-level thermal hyperalgesia is accompanied by chronic neuronal and astrocyte activation in superficial dorsal horn following mouse cervical contusion spinal cord injury. J. L. RENNINGER*; T. J. HALA; D. SANNIE; K. LI; R. PUTATUNDA; B. A. STEVENS; A. C. LEPORE. *Thomas Jefferson Univ., Arcadia Univ.*

8:00 Z14 **341.09** The effect of lipopolysaccharide preconditioning in mouse model of spinal cord injury. K. HAYAKAWA*; Y. ICHIHARA; M. NAGAO; M. AKAI; S. TANAKA; T. OGATA. *NATIONAL REHABILITATION CENTER, The Univ. of Tokyo.*

9:00 Z15 **341.10** Effects of chondroitinase on regeneration and survival of axotomized spinal-projecting neurons in the lamprey. J. HU*; K. G. ZHANG; M. E. SELZER. *Templel Univ. Sch. of Med., Temple Univ. Sch. of Med.*

10:00 Z16 **341.11** Thoracic SCI produces remote neuroinflammation that prevents plasticity in locomotor networks. C. N. HANSEN*; S. KERR; L. FISHER; R. DEIBERT; E. S. WOHLEB; J. WILLIAMS; N. BLACK; J. P. GODBOUT; J. F. SHERIDAN; J. GRAU; D. BASSO. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., Texas A&M Univ.*

11:00 Z17-DP6 **341.12** Light sheet fluorescent microscopy and three dimensional analysis of the injured spinal cord. C. SODERBLOM*; D. LEE; P. TSOULFAS; J. LEE. *Univ. of Miami Miller Sch. of Med.*

8:00 Z18 **341.13** Cytokeletal messages are present in regenerating tips of lamprey axons after spinal cord transection. L. JIN*; C. R. PENNISE; K. S. JAHN; C. AUSTELL; N. FREYLIKH; M. E. SELZER. *Temple Univ. Sch. of Med., Temple Univ. Sch. of Med.*

9:00 AA1 **341.14** Analysis of autophagy during early axonal degeneration in a rat model of spinal cord injury. V. T. RIBAS*; B. SCHNEPF; M. CHALLAGUNDLA; J. C. KOCH; U. MICHEL; M. BÄHR; P. LINGOR. *Univ. Med. Goettingen, DFG Res. Ctr. for Nanoscale Microscopy and Mol. Physiol. of the Brain (CNMPB).*

10:00 AA2 **341.15** Modulation of MDM4/MDM2 signaling promotes axonal regeneration in the CNS. Y. JOSHI; G. QUADRATO; G. INAK; M. GRANDO SORILIA; R. PUTTAGUNTA*; K. RATHORE; A. WUTTKE; M. ELNAGGAR; J. MARINE; S. DI GIOVANNI. *Univ. of Tuebingen, German Ctr. for Neurodegenerative Dis. (DZNE), Grad. Sch. of Cell. and Mol. Neuroscience, Univ. of Tuebingen, Hertie Inst. for Clin. Brain Res., Grad. Sch. for Cell. and Mol. Neuroscience, Univ. of Tuebingen, Lab. for Mol. Cancer Biology, Ctr. for Human Genetics, Catholic Univ. of Leuven.*

11:00 AA3 **341.16** ● The omega-3 fatty acid docosahexaenoic acid alters the expression of endothelial markers in spinal cord blood vessels after acute spinal cord contusion injury in the adult rat. P. K. YIP*; V. CIBERT-GOTON; J. PRIESTLEY; A. MICHAEL-TITUS. *Queen Mary Univ. of London.*

8:00 AA4 **341.17** Alpha9 integrin activation in neurite outgrowth and axon regeneration. M. CHEAH*; M. ANDREWS; J. VERHAAGEN; R. FAESSLER; A. FAISSNER; J. FAWCETT. *Univ. of Cambridge, Univ. of St Andrews, Netherlands Inst. for Neurosci., Max Planck Inst. of Biochem., Ruhr Univ. Bochum.*

9:00 AA5 **341.18** Effect of Nogo and PTEN co-deletion on corticospinal axon regeneration and sprouting after spinal cord injury in mice. C. G. GEOFFROY*; A. O. LORENZANA; J. P. KWAN; B. ZHENG. *UCSD.*

10:00 AA6 **341.19** Central nervous system pericyte-derived fibrosis limits axonal regeneration and functional recovery. D. O. DIAS; B. W. SOLNESTAM; J. LUNDEBERG; J. FRISÉN; C. GOERITZ*. *Karolinska Inst., Sci. for Life Laboratory, Karolinska Inst. Sci. Park, Karolinska Inst.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 AA7 **341.20** Post-transcriptional regulation of inflammatory cytokines after spinal cord injury. T. KWAN*; C. L. FLOYD; P. H. KING. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

8:00 AA8 **341.21** BDNF expression secondary to treadmill training contributes to the long-term suppression of allodynia and spasticity through functional KCC2 increase in lumbar enlargement after thoracic cord injury. S. TASHIRO*; S. MUNEHISA; M. MUKAINO; F. RENAULT-MIHARA; Y. TOYAMA; M. LIU; M. NAKAMURA; H. OKANO. *KEIO Univ. School of Med., KEIO Univ.School of Med., Asahikawa Med. Univ., KEIO Univ.School of Med.*

9:00 AA9 **341.22** NADPH oxidase expression and oxidative stress in mouse spinal cord injury. S. BERMUDEZ; G. KHAYRULLINA; K. R. BYRNES*. *Uniformed Services Univ., Uniformed Services Univ.*

10:00 AA10 **341.23** Enhanced mechanical reactivity after contusion spinal cord injury correlates with elevated levels of IL-6 and IL-6R. S. M. GARRAWAY*; S. WASHBURN; J. J. HARTMAN; S. A. WOLLER; M. A. HOOK; J. W. GRAU. *Emory Univ. Sch. of Med., Texas A & M Univ.*

11:00 AA11 **341.24** Role of LAR phosphatase in restricting axon regeneration after spinal cord injury. P. ABDUL-MUNEER; H. LI; Y. OHTAKE; D. PARK; F. LONGO; S. LI*. *Temple Univ. Sch. of Med., Stanford Univ. Sch. of Med., Temple Univ. Sch. of Med.*

8:00 AA12 **341.25** Macrophage specific translational profile after spinal cord injury. K. LYAPICHEV*; C. SODERBLOM; X. LUO; K. PARK; J. K. LEE. *Univ. of Miami.*

9:00 AA13 **341.26** The effect of lesion proximity on the regenerative response of long distance propriospinal neurons after spinal contusion injury. K. SWIECK*; A. CONTA- STEENCKEN; F. MIDDLETON; D. STELZNER. *SUNY Upstate Med. Univ., SUNY Upstate Med. Univ., SUNY Upstate Med. Univ.*

10:00 AA14 **341.27** Characterization of immune cell infiltration after mouse spinal cord injury. I. FRANCOS-QUIJORNA*; R. LÓPEZ-VALES. *Univ. Autonoma De Barcelona.*

11:00 AA15 **341.28** Transcriptomic analysis of miRNAs involved in the regeneration of the turtle spinal cord. G. GARCIA; G. GREIF; O. TRUJILLO CENOZ; R. E. RUSSO*; C. ROBELLO. *IIBCE, Inst. Pasteur de Montevideo, IIBCE, Facultad de Medicina UDELAR.*

8:00 AA16 **341.29** Influences of systemic inflammation and gabapentin on the severity of autonomic dysreflexia in relation to the expression of inflammatory cytokines in both visceral and neural tissues. A. G. RABCHEVSKY*; K. C. ELDAHAN; D. A. NALL; J. L. VANROOYEN; C. Y. WANG; S. P. PATEL. *Univ. of Kentucky, Univ. of Kentucky.*

9:00 AA17 **341.30** The fatty acid-binding protein 5 is involved in the restorative actions of docosahexaenoic acid in spinal cord injured rats. J. D. FIGUEROA*; K. CORDERO; M. SERRANO-ILLAN; M. DE LEON. *Loma Linda Univ. Sch. of Med., Loma LInda Univ.*

POSTER

342. Spinal Cord Injury: Therapeutics II

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 AA18 **342.01** Neural stem/progenitor cells-laden microfibers promote cellular survival in mouse transected spinal cord injury model. K. HORI*; S. NISHIMURA; M. NEGISHI; H. ONOE; Y. KOBAYASHI; G. ITAKURA; H. IWAI; S. TAKEUCHI; H. OKANO; Y. TOYAMA; M. NAKAMURA. *Dept. of Orthopaedic Surgery, Keio University, Sch. of Med., Inst. of Industrial Science, The Univ. of Tokyo, Dept. of Physiology, Keio University, Sch. of Med.*

9:00 BB1 **342.02** Curcumin maintains the oxidative balance in traumatic spinal cord injury in rats. H. SALGADO-CEBALLOS*; S. TORRES-CASTILLO; B. ALVARADO-SÁNCHEZ; M. E. LÓPEZ-HERNÁNDEZ; G. DELGADO-MAGAÑA. *Med. Res. Unit Neurol Disease,CMN Siglo XXI, IMSS, Univ. Estatal del Valle de Ecatepec.*

10:00 BB2 **342.03** ● Effects of therapeutic muscle stretching intervention on upper extremity hyperexcitable deep tendon reflexes in human chronic spinal cord injury. R. D. THEISS*; J. T. CERDENIA. *Rehab Inst. Chicago, Northwestern Univ. Feinberg Sch. of Med., Governors State Univ.*

11:00 BB3 **342.04** Mesenchymal stem cells and physical activity: A novel therapeutic approach in a mice spinal cord injury. T. B. MASSOTO*; F. ALMEIDA; A. MARTINEZ; S. MARQUES. *Univ. Federal Fluminense, Univ. Federal do Rio de Janeiro, Univ. Federal do Rio de Janeiro.*

8:00 BB4 **342.05** ▲ Pre-immunization with a neural-derived peptide induces neuroprotection after spinal cord injury. H. MESTRE*; A. IBARRA; M. SOSA; E. GARCIA; A. FLORES; Y. CRUZ; G. GUTIERREZ-OSPINA. *Univ. Anahuac Mexico Norte, Proyecto CAMINA, Inst. de Investigaciones Biomedicas.*

9:00 BB5 **342.06** Developing nerve anastomosis into a viable therapy for chronic thoracolumbar spinal cord injury. Y. D. TENG*; D. YU; J. ANDERSON. *Children's Hosp/ Harvard Med. Sch., Brigham & Women's Hosp., VA Boston Healthcare Syst.*

10:00 BB6 **342.07** Lysophosphatidic acid receptor (LPA1) contributes to pathophysiology of spinal cord injury. E. S. NOGUEIRA*; A. M. ASTUDILLO; J. BALSINDE; G. ESTIVILL-TORRÚS; F. R. DE FONSECA; J. CHUN; S. DAVID; R. LÓPEZ-VALES. *Dep Bio Cel, Fisio Immuno, Inst. Neuroc, CIBERNED, Univ. Autonoma Barcelona, Inst. de Biología y Genética Molecular, Consejo Superior de Investigaciones Científicas (CSIC), Unidad de Microscopía, UGC de Neurociencias y Lab. de Medicina Regenerativa, Hosp. Regional Universitario Carlos Haya, Inst. de Investigación Biomédica de Málaga (IBIMA), Mol. and Cell. Neurosci. Department, Dorris Neurosci. Center, The Scripps Res. Inst., Ctr. for Res. in Neuroscience, The Res. Inst. of the McGill Univ. Hlth. Center; McGill Univ., Univ. Autonoma de Barcelona.*

11:00 BB7 **342.08** A biodegradable trimethylene carbonate-caprolactone-glycolide block copolymer scaffold with guidance microfilaments and human adipose derived stem cells to promote regeneration in the injured rat spinal cord. L. N. NOVIKOVA*; P. J. KINGHAM; M. K. KOLAR; A. ULLRICH; S. OBERHOFFNER; M. RENARDY; M. DOSER; E. MÜLLER; M. HOSS; M. DAUNER; M. WIBERG; L. N. NOVIKOV. *Umea Univ., ITV Inst. of Textile Technol. and Process Engin., ITV Denkendorf Productservice GmbH.*

8:00 BB8 **342.09** Minocycline suppresses established neuropathic pain in an early chronic model of spinal cord injury. A. R. POTEETE; R. J. GRILL*. *UT-Health, Ut-Health.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 BB9 **342.10** Novel conduits for schwann cell induced spinal cord repair. Y. LEE*; S. WU; I. SIDHU; T. LIVINGSTON ARINZEH; M. B. BUNGE. *Univ. of Miami, New Jersey Inst. of Technol., New Jersey Inst. of Technol., Univ. of Miami.*

10:00 BB10 **342.11** Prolonged inhibition of RhoA by HSV-mediated gene transfer of C3 transferase enhances corticospinal tract regeneration after spinal cord injury. M. MATA*; P. CHIANG; D. J. FINK. *Univ. of Michigan Dept. of Neurol.*

11:00 BB11 **342.12** Transplantation of human adipose stem cells into the injured rat spinal cord changes the arrangement of astrocytic processes at the scar interface and stimulates regeneration. M. K. KOLAR; P. K. KINGHAM; L. N. NOVIKOVA; M. WIBERG; L. N. NOVIKOV*. *Umea Univ.*

8:00 BB12 **342.13** Transplantation of spinal neural progenitors improves diaphragm function following cervical contusion injury. V. SPRUANCE*; D. SANCHEZ; G. GROSSL; D. FULLER; P. REIER; M. LANE. *Univ. of Florida.*

9:00 CC1 **342.14** Microtubule stabilization promotes recovery of breathing function after cervical hemisection. K. C. HOY*; F. HELLAL; F. BRADKE; W. ALILAIN. *Metrohealth Med. Ctr., German Ctr. for Neurodegenerative Dis.*

10:00 CC2 **342.15** Laser microdissection of *in vivo* regenerating spinal neurons identifies genes including ptpn2 that promote neurite outgrowth and axon regeneration. T. H. HUTSON*; L. D. F. MOON; R. E. VAN KESTEREN; K. IFFLAND; J. TORRES-MUÑOZ; C. K. PETITO; J. B. AIMONE; W. J. BUCHSER; V. P. LEMMON; J. L. BIXBY; A. B. SMIT; F. H. GAGE; M. B. BUNGE. *King's Col. London, VU Univ., Univ. of Miami, Salk Insitute.*

11:00 CC3 **342.16** Combinatorial strategy using aligned filaments, extracellular matrix molecules, Schwann cells and GDNF in promoting axonal regeneration in a rat thoracic spinal cord hemisection model. L. DENG*; N. LIU; S. YANG; X. WEN; X. XU. *STARK NEUROSCIENCE INSTITUTE, Indiana Univ. Sch. of Med., Virginia Commonweath Univ.*

8:00 CC4 **342.17** Effects of continuous N-acetylcysteine amide (naca) treatment on acute and chronic pathophysiology after contusion spinal cord injury. S. P. PATEL*; P. G. SULLIVAN; H. M. YONUTAS; J. L. VANROOYEN; K. C. ELDAHAN; A. G. RABCHEVSKY. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

9:00 CC5 **342.18** Perioperative imaging studies and intra-operative EMG monitoring as guide for surgical repair of avulsed ventral roots using intercostal nerve grafts in Rhesus macaques. M. OHLSSON*; J. H. NIETO; P. VILLABLANCA; K. L. CHRISTE; L. A. HAVTON. *Karolinska Institutet, Univ. of California, Irvine, UCLA, Univ. of California, Davis, Univ. of California, Irvine.*

10:00 CC6 **342.19** The role of the crossed phrenic pathway after cervical contusion injury and a new model to evaluate therapeutic interventions. D. V. GUTIERREZ*; B. I. AWAD; P. M. WARREN; K. C. HOY; W. J. ALILAIN; M. P. STEINMETZ. *METROHEALTH MEDICAL CENTER, MetroHealth Med. Ctr., Case Western Reserve Univ.*

11:00 CC7 **342.20** Optogenetic photostimulation to control bladder function after spinal cord injury. B. I. AWAD*; D. V. GUTIERREZ; S. HERLITZE; W. J. ALILAIN; M. P. STEINMETZ. *Metro-Health Med. Ctr., MetroHealth Med. Ctr., Ruhr Univ. Bochum.*

8:00 CC8 **342.21** Drawing breath in the midst of chaos: Intermittent hypoxia when combined with chondroitinase ABC converts respiratory recovery into non-rhythmic motor activity at chronic time points following C2 hemisection. P. M. WARREN*; J. SILVER; W. J. ALILAIN. *Metrohealth Med. Centre, Case Western Reserve Univ. Sch. of Med., Case Western Reserve Univ. Sch. of Med.*

9:00 CC9 **342.22** Intrathecal therapy for autonomic dysreflexia in rats with T4 spinal cord transection. P. C. DOLBER*; H. JIN; S. X. SHEN; M. O. FRASER. *Duke Univ. and Durham Veterans Affairs Med. Centers.*

10:00 CC10 **342.23** Long-distance axonal growth of neural stem sells, derived from human induced pluripotent stem cells (IPSCs), after rat spinal cord injury. P. P. LU*; G. WOODRUFF; Y. WANG; L. GRAHAM; M. HUNT; D. WU; G. POPLAWSKI; J. H. BROCK; L. S. B. GOLDSTEIN; M. H. TUSZYNSKI. *UCSD, VA San Diego Healthcare Syst.*

POSTER

343. Neurotoxicity: Mechanisms of Neuronal Damage and Protection

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 CC11 **343.01** Phosphorylation-dependent akt sumoylation enhances global sumoylation and substrate sumoylation specificity through phosphorylation of ubc9 and sumo1. C. H. LIN*; S. Y. LIU; E. H. LEE. *Inst. of Biomed. Sci. (IBMS).*

9:00 CC12 **343.02** Dietary selenium supplementation improves behavioral and mitochondrial function following traumatic brain injury. C. A. CROWDUS*; J. D. PANDYA; L. M. POWER; H. M. YONUTAS; A. H. SEBASTIAN; D. M. HOPKINS; J. R. PAULY; P. G. SULLIVAN; R. F. POWER; J. W. GEDDES. *Univ. of Kentucky, Alltech.*

10:00 CC13 **343.03** Effects of Dendropanax morbifera extract on heavy metal induced acute toxicity in Sprague-Dawley rats. W. KIM*; D. YOO; H. JUNG; S. NAM; J. KIM; Y. KIM; D. KIM; Y. YOON; I. HWANG. *Soeul Natl. University, Lab. of Anat., Central Res. Center, Egreen Co., Ltd.*

11:00 CC14 **343.04** ● Estradiol metabolites effect estradiol neuroprotection. C. TAN*; J. W. SIMPKINS. *West Virginia Univ. Hlth. Sci. Ctr.*

8:00 DD1 **343.05** Effect of sulforaphane on mitochondrial dysfunction induced by quinolinic acid in rat striatum. E. LUIS*; M. OROZCO-IBARRA; J. LIMON-PACHECO; N. SERRANO-GARCÍA; P. MALDONADO; J. PEDRAZA-CHAVERRI. *Univ. Nacional Autonoma De Mexico, Inst. Nacional de Neurologia y Neurocirugia, Inst. Nacional de Neurologia y Neurocirugia, Inst. Nacional de Neurologia y Neurocirugia, Univ. Nacional Autonoma de Mexico.*

9:00 DD2 **343.06** Pretreatment with apomorphine protects cultured cortical neurons from zinc-induced neurotoxicity. H. HARA*; T. KAMIYA; T. ADACHI. *Gifu Pharmaceut. Univ.*

10:00 DD3 **343.07** Effect of the pentapeptide monocyte locomotion inhibitory factor in motor recovery and neuroprotection of rats with spinal cord injury. R. S. GARCÍA*; E. GARCÍA VENCES; G. BERMEO GÓMEZ; A. FLORES ROMERO; R. MARROQUÍN SEGURA; M. GARRIDO ORTEGA; G. RICO ROSILLO; C. FLORES DOMÍNGUEZ; A. IBARRA ARIAS. *Inst. Mexicano Del Seguro Social, Hosp. de Pediatría, UIMI, Univ. Anáhuac, Inst. Mexicano del Seguro social, Ctr. de Investigación del Proyecto CAMINA, A.C, Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México.*

11:00 DD4 **343.08** Activation of Glucagon-like Peptide-1 Receptors Enhance Base Excision DNA Repair Against Oxidative Damage to Protect Rat Cortical Neurons. J. YANG*; Y. LIN; M. P. MATTSON. *Kaohsiung Chang Gung Mem. Hosp., Natl. Inst. on Aging.*

8:00 DD5 **343.09** ▲ Direct interaction of peroxynitrite and kynurenine in rat cerebellum: An alternative pathway of kynurenic acid production. T. BLANCO AYALA*; V. PÉREZ DE LA CRUZ; C. RÍOS; L. APARICIO CARMONA; J. PEDRAZA CHAVERRI. *Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Pediatría, Facultad de Química, UNAM.*

9:00 DD6 **343.10** Melatonin protects against methamphetamine-induced cytosolic calcium overload, calpain activation and degeneration in human neuroblastoma SH-SY5Y cells and substantia nigra of rats. J. CHETSAWANG*; S. MUKDA; A. PARAMEYONG; P. GOVITRAPONG; B. CHETSAWANG. *Fac. of Medicine, Mahidol Univ., Inst. of Mol. Biosciences, Mahidol Univ.*

10:00 DD7 **343.11** Neurotropin protects against posterior root damage caused by intrathecal lidocaine neurotoxicity in rats. T. TAKENAMI*; Y. NARA; L. ISONAKA; H. OKAMOTO. *Kitasato Univ.*

11:00 DD8 **343.12** ● Neuroprotective role of tfp5 peptide, derived from p35, the cdk5 neuronal activator, against high glucose induced neurotoxicity. B. BK*; Y. YA-LI ZHENG; V. SHUKLA; N. D. . AMIN; P. PHILIP GRANT; H. C. PANT. *NIH, NIH.*

8:00 DD9 **343.13** Study of chronic mountain sickness using inducible pluripotent stem cells. H. ZHAO*; X. GU; T. CHAILANGKARN; O. APPENZELLER; O. POULSEN; D. ZHOU; A. MUOTRI; G. HADDAD. *Univ. of California San Diego, Sch. of Medicine, Dept. of Pediatrics, New Mexico Hlth. Enhancement and Marathon Clinics Res. Fndn., The Rady Children's Hosp.*

9:00 DD10 **343.14** Valproic acid increases no production by decreasing phosphorylation of endothelial no synthase at serine 116: Role of sh-ptp1 and cdk5. D. CHO; E. LEE; S. KIM; K. KWON; C. SHIN; K. SONG; J. PARK; I. JO; S. HAN*. *Konkuk Univ., Konkuk Univ. Sch. of medicine, Konkuk Univ. Sch. of medicine, Konkuk university medical center, Ewha Womans Univ. Med. school, Konkuk Univ. Med. Ctr.*

10:00 DD11 **343.15** Zinc permeation and neurotxocity mediated by acid-sensing ion channels. K. INOUE*; X. CHU; Z. XIONG. *Neurosci. Institute, Morehouse Sch. of Med., Dept. of Basic Med. Science, Sch. of Medicine-Kansas City, Univ. of Missouri.*

11:00 DD12 **343.16** ▲ Effect of the intrastriatal administration of 3-Hydroxykynurenine and 3-hydroxyanthranilic acid on oxidative damage markers and circling behavior in rats. J. G. REYES OCAMPO*; D. RAMÍREZ-ORTEGA; G. I. VÁZQUEZ-CERVANTES; B. PINEDA; D. SILVA-ADAYA; A. JIMÉNEZ-ANGUIANO; P. CARRILLO-MORA; J. PEDRAZA-CHAVERRÍ; C. RÍOS; V. PÉREZ-DE LA CRUZ. *Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Neurología y Neurocirugía, Univ. Autónoma Metropolitana, Inst. Nacional de Rehabilitación, Univ. Nacional Autónoma de México.*

8:00 DD13 **343.17** L-2-oxothiazolidine-4-carboxylic acid: A novel antioxidant agent that protects cadmium-induced thromboembolic events in mice. M. A. FAHIM*; A. NEMMAR; M. SHAFIULLAH; S. SINGH; J. YASIN; M. HASAN. *Fac. Of Medecine, Physiol. Dept., Fac. Of Medecine, Pharmacol. Dept., Fac. Of Medecine, Intrnl. Med. Dept.*

9:00 DD14 **343.18** Dendrobium huoshanense can reduce hydrogen peroxide-induced toxicity in SH-SY5Y cells. K. SUEN*; H. CHUNG; H. MA; P. HO; P. CHOW; J. T. TONG; G. ABBASS; C. CHUNG; R. C. CHANG. *Po Leung Kuk Laws Fndn. Col., The Univ. of Hong Kong.*

10:00 DD15 **343.19** ▲ *In vivo* and *in vitro* ketamine exposure exhibits a dose-dependent induction of ADNP in rat cortical neurons. B. BROWN; S. KANG; K. GAWELEK; R. ZACHARIAS; D. SLAWSKI; N. WILES; S. ANDERSON; L. SIRLINE; J. K. MORRIS*; C. TURNER. *Baldwin Wallace Univ., Baldwin Wallace Univ.*

11:00 DD16 **343.20** The role of RBM45 in antioxidant responses in ALS. N. BAKKAR*; R. BOWSER. *St Joseph Hosp. and Med. Center/Barrow Neurolog. Inst.*

8:00 DD17 **343.21** Estrogen receptor β and cyclophilin D cooperate in regulating calcium handling in brain mitochondria: Implications for neuroprotection and neurodegeneration. S. R. BURSTEIN*; H. J. KIM; T. A. MILNER; A. A. STARKOV; G. MANFREDI. *Weill Cornell Med. Col., The Rockefeller Univ.*

9:00 DD18 **343.22** Egb761 inhibits zinc-induced tau phosphorylation at Ser262 by antioxidative action in rat primary cortical neurons. K. KWON*; E. LEE; K. CHO; D. CHO; C. SHIN; S. HAN. *Konkuk Univ., Konkuk Univ.*

10:00 EE1 **343.23** Interleukin-1β protects astrocytes against oxidant-induced injury via upregulation of glutathione synthesis. Y. HE*; N. A. JACKMAN; T. L. THORN; M. J. HERMELIN; S. J. HEWETT. *Syracuse Univ., Univ. of Connecticut Hlth. Ctr., SUNY Upstate Med. Univ.*

11:00 EE2 **343.24** Methamphetamine decreases levels of glutathione peroxidases 1 and 4 in SH-SY5Y neuronal cells. S. M. BARAYUGA; X. PANG; R. H. L. H. RUELI; A. C. PARUBRUB; E. D. NGUYEN-WU; M. A. ANDRES; J. PANEE; F. P. BELLINGER*. *JABSOM, Univ. Hawaii, Univ. of Hawaii at Manoa.*

8:00 EE3 **343.25** Investigating the role of haptoglobin in epicatechin-mediated protection against intracerebral hemorrhage. S. ROBBINS*; J. L. LECLERC; C. C. LEONARDO; S. DORE. *CTRND, Univ. of Florida Col. of Med.*

9:00 EE4 **343.26** ▲ Chelating, scavenging and antioxidant properties of 3-hydroxykynurenine in brain tissue homogenates of rat exposed to peroxynitrite and $FESO_4$: Comparison with 3-hydroxyanthranilic. D. RAMÍREZ ORTEGA*; G. VÁZQUEZ CERVANTES; P. UGALDE MUÑIZ; R. LUGO HUITRÓN; E. RANGEL LÓPEZ; V. CAMPOS PEÑA; B. PINEDA; J. PEDRAZA CHAVERRÍ; C. RÍOS; V. PÉREZ DE LA CRUZ. *Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Univ. Nacional Autónoma de México.*

10:00 EE5 **343.27** Regulation of system xc- by intracellular cysteine. R. ALBANO; J. HJELMHAUG; N. RADDATZ; D. BAKER; D. C. LOBNER*. *Marquette Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

344. Neuroinflammation: Cellular and Molecular Mechanisms

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 EE6 **344.01** Sustained hippocampal IL-1β expression induces synaptophysin loss and cognitive dysfunction. J. D. CHERRY*; J. A. OLSCHOWKA; M. K. O'BANION. *Univ. of Rochester.*

9:00 EE7 **344.02** Role of substance P in endotoxin- and central mediators-induced fever: Evidence of NK1 receptors activation, clustering and internalization. H. O. BRITO; F. L. BARBOSA; B. S. BORGES; C. R. CLAVICHIOLO; A. R. ZAMPRONIO*. *Federal Univ. Parana, Federal Univ. Parana.*

10:00 EE8 **344.03** The administration of exogenous npy induces long lasting effects on hippocampal neurogenesis in trimethyltin-treated rats. F. MICHETTI*; V. CORVINO; E. MARCHESE; M. PODDA; S. GIANNETTI; V. DI MARIA; W. LATTANZI; C. GRASSI; M. GELOSO. *Univ. Cattolica S. Cuore, Univ. Cattolica S. Cuore, Univ. Cattolica S. Cuore.*

11:00 EE9 **344.04** Modulation of aromatase and brain-derived estrogen in the hippocampus following global cerebral ischemia. Q. ZHANG*; A. CHAN; E. SCOTT; Y. DONG; R. WANG; F. YANG; D. BRANN. *Georgia Regents Univ., Hebei United Univ.*

8:00 EE10 **344.05** Depiction of microglial activation in the living human brain by different TSPO tracers. M. YOKOKURA*; Y. OUCHI; K. TAKEBAYASHI; Y. IWATA; T. TERADA; K. NAKAIZUMI; N. MORI. *Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med.*

9:00 EE11 **344.06** TUDCA reduces microglial migratory capability both *in vitro* and *in vivo.* N. YANGUAS-CASÁS; M. BARREDA-MANSO; L. ROMERO-RAMÍREZ; M. NIETO-SAMPEDRO*. *Inst. Cajal, Hosp. Nacional de Parapléjicos.*

10:00 EE12 **344.07** Role of D-amino acid oxidase in the production of kynurenine pathway metabolites from D-tryptophan in mice. F. M. NOTARANGELO*; X. WANG; K. J. HORNING; R. SCHWARCZ. *Univ. of Maryland Sch. of Med.*

11:00 EE13 **344.08** Neuroinflammation in forebrain-specific Cdk5 conditional knockout mice is suppressed by PPARγ agonist pioglitazone. E. UTRERAS; M. PROCHAZKOVA; A. TERSE; R. HAMADA; S. TAKAHASHI; T. OSHIMA; A. B. KULKARNI*. *NIDCR, NIH, Waseda Univ., Asahikawa Med. Col.*

8:00 EE14 **344.09** Neuroprotective effects of erythropoietin in the chronic restraint stress model. N. N. AALLING*; I. HAGEMAN; D. ORLOWSKI; K. FORSBERG; K. MISKOWIAK; M. B. JOERGENSEN; G. WEGENER; C. R. BJARKAM; G. WORTWEIN. *Copenhagen Univ., Copenhagen Psychiatric Centre, Lab. of Neuropsychiatry, Aarhus Univ., Aarhus Univ. Hosp.*

9:00 EE15 **344.10** Dlk regulates retinal ganglion cell death following axon injury but is not required for retinal development. K. A. FERNANDES*; J. M. HARDER; L. GAN; P. SHRAGER; R. T. LIBBY. *Univ. of Rochester, Univ. of Rochester.*

10:00 EE16 **344.11** Peripheral inflammation caused neurodegeneration in the central nervous system. S. TANAKA*; S. NUMAZAWA. *Showa Univ. Sch. of Pharm.*

11:00 EE17 **344.12** ● Conformation-specific anti-NMDA receptor antibodies in neurologic disease. J. A. PANZER*; B. H. BAUMANN; H. FURUKAWA; N. SIMOROWSKI; H. PRUSS; A. GLEICHMANN; D. R. LYNCH. *Children's Hosp. of Philadelphia, Cold Spring Harbor Lab., Charité Univ. Med., UCLA.*

8:00 EE18 **344.13** ● Elimination of microglia improves functional recovery following extensive neuronal loss. R. RICE*; B. WEST; K. N. GREEN. *UC Irvine, Plexxikon, Inc.*

9:00 FF1 **344.14** Administration of ketones attenuates against lipopolysaccharide-induced microglial inflammatory responses and oxidative stress-evoked neuronal death. S. LEE; M. ABDELWAHAB; D. KIM*. *Barrow Neurolog. Institute, St. Joseph's Hosp. & Med. Ctr.*

10:00 FF2 **344.15** Influence of oxygen tension on mitochondrial respiratory inhibition by inflammatory microglia. E. A. BORDT*; S. X. GE; B. M. POLSTER. *Univ. of Maryland Sch. of Med., Univ. of Maryland Shock Trauma and Anesthesiol. Res. (STAR) Ctr.*

11:00 FF3 **344.16** Dissecting out the molecular mechanisms of neuroinflammation in cervical spondylotic myelopathy: The role of CD200 in the activation of microglia. Y. ZHOU*; S. K. KARADIMAS; W. YU; A. LALIBERTE; M. G. FEHLINGS. *Toronto Western Res. Inst., Xiehe Hospital, Tongji Med. Col. of HUST, Inst. of Med. Sci., Div. of Neurosurgery, Univ. of Toronto.*

8:00 FF4 **344.17** Contribution of IFN-β to TLR3-dependent clearance of myelin debris. ; A. PULM; M. KOCUR; H. HARTUNG; P. KURY; T. PROZOROVSKI; S. SCHEU; O. AKTAS. *Univ. Clinics Duesseldorf, Inst. of Med. Microbiology and Hosp. Hyg.*

9:00 FF5 **344.18** ▲ Comparison of hippocampal cytokine expression in different animal models of diabetes. A. POLADIAN; C. AVOUNDJIAN; E. ROSENBLATT II; S. H. LEE; M. PECACHE; L. R. BANNER*. *California State Univ. Northridge.*

10:00 FF6 **344.19** MyD88-dependent and independent microglial responses to oligomeric alpha-synuclein: Potential therapeutic interventions. K. A. MAGUIRE-ZEISS*; S. DANIELE; A. EDWARDS; C. DAVENPORT; D. BERAUD; K. CHENG; H. YIN. *Georgetown Univ. Med. Ctr., Univ. of Colorado at Boulder.*

11:00 FF7 **344.20** Changes of peripheral TGF-β1 depend on macrophages polarization in Huntington disease. A. DI PARDO*; S. ALBERTI; V. MAGLIONE; E. AMICO; F. ELIFANI; G. BATTAGLIA; C. BUSCETI; F. NICOLETTI; J. G. VONSATTEL; F. SQUITIERI. *IRCCS Neuromed, Columbia Univ.*

8:00 FF8 **344.21** Role of SIRT1 and TrkB signaling pathway on neuroprotection in experimental allergic encephalomyelitis. V. K. NIMMAGADDA*; C. T. BEVER, Jr; S. I. V. JUDGE; D. TRISLER; T. K. MAKAR. *Univ. of Maryland, Veteran Affairs Med. Ctr., VA Multiple Sclerosis Ctr. of Excellence, EAST.*

9:00 FF9 **344.22** Nitrated α-synuclein induces increased production of reactive oxygen and nitrogen species by myeloid lineage cells. R. A. WILSHUSEN; K. M. ANDERSON; A. M. SZLACHETKA; R. MOSLEY*. *Univ. Nebraska Med. Ctr.*

10:00 FF10 **344.23** Acute neuroinflammation induces increased transcription of retrotransposons in the brain. S. WANG; J. CHIEN; F. AYOUB; S. KELLY*. *JFK Med. Ctr.*

11:00 GG1 **344.24** ● Potent immune response in Dorsal Root Ganglia following application of BMP2. K. MITCHELL; J. P. SHAH; A. M. CAMPBELL; A. J. SYMES*. *USUHS.*

8:00 GG2 **344.25** ▲ Nk1 substance p receptor antagonist inhibition of neurogenic inflammation. T. J. DALSING; A. KUBURAS; W. A. JOHNSON*; A. F. RUSSO. *Univ. Iowa.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 GG3 **344.26** Effects of Statin treatment on hippocampal memory and inflammatory response in diabetic mice. S. H. LEE*; C. AVOUNDJIAN; A. POLADIAN; E. ROSENBLATT II; L. R. BANNER. *California State University, Northridge.*

10:00 GG4 **344.27** The role of Stat3 transcriptional factor in neuronal autophagy. A. M. HABAS*; Q. TANG; T. MANCHENKOV; P. DEMEDIUK; L. L. DUGAN. *UCSD.*

11:00 GG5 **344.28** Interleukin-1 beta disrupts chemical LTP-induced surface expression of GluR1 in rat hippocampal neurons. L. TONG*; C. W. COTMAN. *UC Irvine.*

8:00 GG6 **344.29** TLR3 polymorphism and age related macular degeneration: A pilot study in North India. K. SHARMA*; N. K. SHARMA; A. GUPTA; S. PRABHAKAR; R. SINGH; A. ANAND. *Post Grad. Inst. of Med. Educ. & Res., Post Grad. Inst. of Med. Educ. & Res.*

9:00 GG7 **344.30** Suberoylanilide hydroxamic acid (SAHA) attenuates neurodegeneration and glial activation after intracerebral hemorrhage. S. SUKUMARI RAMESH*; C. ALLEYNE; K. DHANDAPANI. *Georgia Regents Univ.*

POSTER

345. Bipolar Disorders: Genetics

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 GG8 **345.01** Dynamics of gene expression patterns in frontal cortex and hippocampus of mice subjected to chronic social stress. A. M. STANKIEWICZ; A. H. SWIERGIEL*; G. R. JUSZCZAK; J. GOSCIK; A. MAJEWSKA; P. LISOWSKI. *Inst. of Genet. and Animal Breeding, Dept. Animal & Human Physiology, Univ. of Gdansk, Bialystok Univ. of Technol., Warsaw Univ. of Life Sci., Inst. of Genet. and Animal Breeding.*

9:00 GG9 **345.02** Identification of gene ontologies linked to small-world network properties in the human brain. L. DIXSON*; U. BRAUN; H. WALTER; A. HEINZ; A. SCHÄFER; L. HADDAD; O. GRIMM; M. MATTEISEN; M. NÖTHEN; S. CICHON; S. WITT; M. RIETSCHEL; H. TOST; A. MEYER-LINDENBERG. *Central Inst. For Mental Hlth., Central Inst. for Mental Hlth., Charité - Universitätsmedizin Berlin, Life and Brain Center, Univ. of Bonn, Inst. of Human Genetics, Univ. of Bonn, Inst. for Genomic Mathematics, Univ. of Bonn.*

10:00 GG10 **345.03** ● Genome-wide association study of acute and transient psychosis. T. KANAZAWA*; S. MARUYAMA; H. KIKUYAMA; M. IKEDA; J. KOH; N. IWATA; H. YONEDA. *Osaka Med. Col., Fujita Hlth. Univ., Shin-Abuyama Hosp.*

11:00 GG11 **345.04** No evidence for association of schizophrenia-risk genotype in rs1625579 with expression of mir137 in postmortem human prefrontal cortex. B. K. LIPSKA*; E. NEWBURN; N. BEVERIDGE; T. M. HYDE; R. TAO; D. R. WEINBERGER; J. E. KLEINMAN. *NIH, NIMH-HBP (neuroinformatics), NIH, NIMH, NIMH, Lieber Inst. for Brain Develop.*

8:00 GG12 **345.05** ▲ Molecular studies of Boymaw, a candidate susceptibility gene for major psychiatric disorders. L. ZHOU; B. JI; M. KIM; X. ZHOU*. *La Jolla High Sch., UCSD.*

9:00 GG13 **345.06** A report on arntl gene mutation associated with bipolar disorder with seasonal pattern in an indian family. V. R. BHAGYALAKSHMI*; R. BOOPATHY; V. N. JANAKARAJAN. *Bharathiar Univ., Bharathiar Univ., Perundurai Med. Col.*

10:00 GG14 **345.07** Association of genetic variants in the HPS4 gene with cognitive function in schizophrenia patients and healthy subjects. G. KURATOMI*; A. SAITO; Y. OZEKI; T. WATANABE; K. FUJII; K. SHIMODA; K. AKIYAMA. *Dokkyo Med. Univ. Sch. of Med., Dokkyo Med. Univ. Sch. of Med.*

11:00 GG15 **345.08** The BDNF Val66Met polymorphism and plasma BDNF levels in Han Chinese patients with bipolar disorder, schizophrenia, and heroin dependency. S. CHEN*; S. LEE; R. LU. *Natl. Cheng-Kung Univ.*

8:00 GG16 **345.09** Expression levels of CHRNA7 and CHRFAM7A are altered in postmortem dorsolateral prefrontal cortex in major psychiatric disorders. Y. KUNII*; T. M. HYDE; T. YE; C. LI; R. TAO; W. MCFADDEN; D. R. WEINBERGER; J. E. KLEINMAN; B. K. LIPSKA. *Fukushima Med. Univ., Natl. Inst. of Mental Hlth. , Natl. Inst. of Hlth., Lieber Inst. for Brain Development,Johns Hopkins Med. Campus.*

9:00 GG17 **345.10** The effect of MTHFR C677T on DNA methylation of peripheral leukocytes in schizophrenia. M. KINOSHITA*; S. NUMATA; A. TAJIMA; A. NISHI; K. OHI; R. HASHIMOTO; S. SHIMODERA; I. IMOTO; M. TAKEDA; T. OHMORI. *The Univ. of Tokushima Grad. School/ Inst. of Hlth. Biosci., The Univ. of Tokushima Grad. School/ Inst. of Hlth. Biosci., The Univ. of Tokushima Grad. School/ Inst. of Hlth. Biosci., Osaka Univ. Grad. school of Med., United Grad. Sch. of Child Development, Osaka Univ., Kochi Med. School, Kochi Univ.*

10:00 GG18 **345.11** MicroRNA expression profiling of oligodendrocytes in the dorsal lateral prefrontal deep white matter in schizophrenia and bipolar disorder. S. A. MAUNEY*; C. Y. PIETERSEN; T. W. WOO. *McLean Hosp., Harvard Med. Sch., Beth Israel Deaconess Med. Ctr.*

11:00 HH1 **345.12** Repressive epigenetic changes at the promoters of 5-HT3b, 5-HT1f, and 5-HT7 receptors in the hippocampus of mice subjected to chronic social stress. P. LISOWSKI*; A. M. STANKIEWICZ; A. RONOWICZ; A. PIOTROWSKI; G. R. JUSZCZAK; M. WIECZOREK; A. H. SWIERGIEL. *Dept. Mol. Biol., Inst. Genet. & Animal Breeding, Polish. Acad. Sci., Inst. of Genet. and Animal Breeding, Med. Univ. Gdansk, Univ. of Lodz, Gdansk Univ.*

8:00 HH2 **345.13** Alterations of cAMP response-element binding protein in the postmortem brain of bipolar subjects. X. REN*; H. S. RIZAVI; Q. WEI; Y. DWIVEDI; G. N. PANDEY. *Univ. of Illinois at Chicago.*

9:00 HH3 **345.14** Molecular patho-mechanisms of mood and anxiety disorders in neural cells derived from disease specific iPSCs. M. HWANG*; M. KANG; D. GEUM. *Korea Univ.*

10:00 HH4 **345.15** Differential expression of exosomal miR-29c and miR-149 in brain tissue of bipolar disorder patients and rat model of depression. Y. ZHAN; J. KOZUBEK; P. KAO; A. REZVANI; I. DELALLE*. *Boston Univ. Sch. of Med., Duke Univ.*

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POSTER

346. Schizophrenia and Bipolar Disorder: Animal Models III

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 HH5 **346.01** ● Neonatal immune activation-induced changes in brain volume, neurogenesis and behavior in mice - moderation by dysbindin-1 gene. S. BHARDWAJ*; A. AL-SHAMMARI; S. P. ZEHNTNER; M. GRAND'MAISON; A. MATHIEU; B. COURCOT; B. J. BEDELL; F. SZELE; L. K. SRIVASTAVA. *Douglas Mental Hlth. Univ. Institute, McGill Univ., Oxford Univ., Biospective, Inc., Montreal Neurolog. Institute, McGill Univ.*

9:00 HH6 **346.02** Effects of mGluR5 positive allosteric modulation on cognitive flexibility and neuronal plasticity: Potential relevance for schizophrenia. A. L. LACROSSE*; S. L. YAHN; S. B. TAYLOR; S. E. TOMEK; S. A. WEGNER; M. F. OLIVE. *Arizona State Univ., Arizona State Univ.*

10:00 HH7 **346.03** ▲ Cognitive and emotional abnormalities in males and females in the neonatal ventral hippocampal lesion model of schizophrenia. A. N. KOCH; J. M. MARBOURG; A. H. BRADY*. *St. Mary's Col. of Maryland.*

11:00 HH8 **346.04** ▲ Evaluation of ketamine-induced changes in spatial working memory and gabaergic systems. M. A. LANGHARDT; M. M. BOLTON; C. F. HEANEY; A. S. MURTISHAW; J. W. KINNEY*. *Univ. Nevada Las Vegas.*

8:00 HH9 **346.05** ● A loss of hippocampal parvalbumin expression induces behavioral deficits modeling the positive symptoms of schizophrenia. A. M. BOLEY*; D. J. LODGE. *UTHSCSA, Univ. of Texas Hlth. Sci. Ctr.*

9:00 HH10 **346.06** Gadd45b, a regulator of active demethylation, alters the expression of MeCP2 and Reelin within the developing amygdala. S. L. KIGAR*; A. P. AUGER. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

10:00 HH11 **346.07** Prenatal psychological stress and periadolescent immune activation may not synergize in a rat model of schizophrenia. C. A. WILSON*; J. I. KOENIG. *Maryland Psychiatric Res. Ctr.*

11:00 HH12 **346.08** ● Schizophrenia-like phenotype inherited by the f2 generation of a gestational disruption rodent model. S. M. PEREZ*; D. J. LODGE. *UTHSCSA.*

8:00 HH13 **346.09** Yesterday, four hours, thirty and five minutes ago: Competition between spatial memories in the rat and the effects of acute and chronic ketamine. J. J. CHROBAK*; C. CHEN; L. L. LONG; J. A. CORRIVEAU. *Univ. Connecticut.*

9:00 HH14 **346.10** Methamphetamine has discrete effects on previously enriched rats placed in a novel, complex environment. L. C. PALMER*; C. D. COX; D. T. PHAM; S. D. CORWIN; B. S. HONG; C. M. GALL; G. LYNCH. *Univ. of California.*

10:00 HH15 **346.11** The roles of dopamine d2 receptor in brain development and behavioral plasticity. P. SABANDAL*; J. LIM; J. GUTIERREZ; J. BURCIAGA; J. GARZA; L. LUJAN MARTINO; I. MERCADO; J. SABANDAL; K. HAN. *Univ. of Texas At El Paso, Univ. of Texas at El Paso.*

11:00 HH16 **346.12** Repetitive exposure to ketamine differentially modulates NMDA receptor signaling in juvenile vs. adult mice. K. BORGMANN-WINTER*; A. BANERJEE; H. WANG; R. FEATHERSTONE; S. SIEGAL; C. HAHN. *Univ. Pennsylvania, Children's Hosp. of Philadelphia at Perelman Sch. of Med. at the Univ. of Pennsylvania, City Univ. of New York Med. Sch.*

8:00 HH17 **346.13** Examining resting state functional network connectivity and behavioral performance in a rat chronically exposed to phencyclidine. C. M. MAGCALAS*; N. I. PERRONE-BIZZOZERO; V. D. CALHOUN; J. BUSTILLO; D. A. HAMILTON. *Univ. of New Mexico, Univ. of New Mexico, MIND Res. Network.*

9:00 HH18 **346.14** Effects of chronic prenatal MK-801 treatment in adult rat offspring: Cognitive and emotional behaviour. S. GALLANT*; L. HAMEL; J. DUCHESNEAU; D. MADULARU; M. ATHANASSIOU; U. SHALEV. *Ctr. For Studies In Behavioral Neurobio. - Concordia Univ.*

10:00 II1 **346.15** Functional analysis of the schizophrenia-related gene tcf4. M. D. RANNALS; B. J. MAHER*. *Lieber Inst. For Brain Develop.*

11:00 II2 **346.16** ▲ Motor, sensorimotor and cognitive behavior of offsprings from mothers with neonatal ventral hippocampal lesion. S. GUZMAN-VELAZQUEZ*; C. SÁNCHEZ; S. R. ZAMUDIO; A. I. MELO; M. FLORES-JIMENEZ; M. MARQUEZ-PORTILLO; G. FLORES; F. DE LA CRUZ. *Natl. Politech Inst., Natl. Politechnic Inst., CIRA-CINVESTAV-UAT, Inst. de Fisiología.*

8:00 II3 **346.17** Alterations in the physiological properties of fast-spiking interneurons and prefrontal cortex-dependent behaviors following developmental ketamine treatment. V. JEEVAKUMAR*; J. RAMOS; M. SOBHANIAN; A. PAINE; S. KROENER. *Univ. of Texas At Dallas, Univ. of Texas At Dallas.*

9:00 II4 **346.18** Brain-derived neurotrophic factor heterozygous mutant rats: Selective behavioural changes and effect of young-adult corticosterone treatment. M. VAN DEN BUUSE*; A. GURURAJAN. *Florey Inst. of Neurosci. and Mental Hlth.*

10:00 II5 **346.19** Dose dependent divergence of ketamine elicited neuronal signaling and fast-acting antidepressant efficacy. K. L. SZABLA*; L. M. MONTEGGIA. *Univ. of Texas Southwestern Med. Sch.*

11:00 II6-DP3 **346.20** BDNF expression and signalling is dynamically regulated by stress in a sex-dependent manner and may mediate sex-specific disruptions in spatial memory and anhedonia in a 'two-hit' rat model. R. A. HILL*; M. KLUG; S. KISS VON SOLY; M. BINDER; M. VAN DEN BUUSE. *Florey Inst. For Neurosci. and Mental Hlth.*

8:00 II7 **346.21** ● Daylength changes in mice modulate behaviors relevant to cycling in bipolar disorder. M. A. GEYER*; D. DULCIS; J. VAN ENKHUIZEN; N. C. SPITZER; R. F. SHARP; J. W. YOUNG. *Univ. California Sch. Med., UCSD.*

9:00 II8 **346.22** Dietary intervention with the essential nutrient choline in rat models of schizophrenia. M. J. GLENN*; J. A. CORRIVEAU; R. ST. LAURENT; S. R. HELM. *Colby Col., Univ. of Connecticut, NIDA.*

10:00 II9 **346.23** Behavioral consequences of subtle neuronal migration changes induced by hippocampal *in utero* electroporation of disabled-1 shRNA in the rat. S. VOMUND; A. DE SOUZA SILVA; J. P. HUSTON; C. KORTH*. *Heinrich Heine Univ. Dusseldorf, Heinrich Heine Univ. Dusseldorf.*

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POSTER

347. Schizophrenia and Bipolar Disorders: Biochemical Studies

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 II10 **347.01** DISC1 modulates anterograde axonal mitochondrial trafficking. F. OGAWA*; D. K. CRUMMIE; E. L. V. MALAVASI; D. C. SOARES; S. MACKIE; D. J. PORTEOUS; J. K. MILLAR. *Univ. of Edinburgh.*

9:00 II11 **347.02** ● Dopamine regulation by functional DISC1 aggregates. V. BADER*; S. V. TROSSBACH; M. PUM; I. PRIKULIS; M. DE SOUZA; P. A. BABALOLA; Z. A. HUGHES; S. F. GODSAVE; P. J. PETERS; G. W. MILLER; A. RAMSEY; N. J. BRANDON; J. P. HUSTON; C. KORTH. *Univ. of Düsseldorf, Dept. of Neuropathology, Heinrich Heine Univ. of Duesseldorf, Dept. of Psychiatry and Behavioral Disorders, Netherlands Cancer Inst., Rollins Sch. of Publ. Health, Emory Univ., Univ. of Toronto, AstraZeneca Neurosci. iMED.*

10:00 II12 **347.03** TRIOBP as a NDE1-interaction partner which may form insoluble aggregates in schizophrenia. N. J. BRADSHAW*; V. BADER; I. PRIKULIS; W. HENNAH; C. KORTH. *Univ. of Duesseldorf, Univ. of Helsinki, Natl. Inst. for Hlth. and Welfare, Univ. of Edinburgh.*

11:00 II13 **347.04** D4 dopamine receptor expression significantly alters redox and methylation metabolites. N. HODGSON*; R. C. DETH. *Northeastern Univ.*

8:00 II14 **347.05** Psychotropics and obesity: Epigenetic studies with the LSD1 inhibitor tranylcypromine. K. A. CHASE*; R. P. SHARMA. *Univ. of Illinois At Chicago, Univ. of Illinois at Chicago.*

9:00 II15 **347.06** Wnt signaling is altered in Olfactory Neuro-epithelial (OE) cells and Brains from patients with Bipolar Disorder and Lithium induced modulation in OE cells. R. RAY*; K. BORGMANN-WINTER; J. STEFANO; T. MCCLOSKEY; M. BARRETT; M. THASE; C. HAHN. *Univ. of Pennsylvania Sch. of Med., Children's Hosp. of Philadelphia.*

10:00 II16 **347.07** Genetic variation in human SYNE1, a risk locus for bipolar disorder, leads to functional changes in CPG2 with implications for synaptic transmission. S. LOEBRICH*; E. HAGER; M. BENOIT; S. PURCELL; P. SKLAR; E. NEDIVI. *MIT, Mount Sinai Hosp.*

11:00 II17 **347.08** Sigma-1 receptor agonists dehydroepiandrosterone (DHEA)-sulfate and fluvoxamine induces the Ser-phosphorylation of Akt-1 in PC12 cells. M. NAKANO*; K. OSADA; T. WATANABE; A. TAGUCHI; T. HAGA; A. MUTOH. *St.Marianna University/ Neuropsychiatry, St.Marianna University/ Neuropsychiatry, St. Marianna Univ., St. Marianna-u.ac.jp.*

8:00 II18 **347.09** Serum levels of MMPs and TIMPs in mood disorders and schizophrenia: A pilot study. C. SHIBASAKI; H. ABE; N. KAJITANI; M. T. OKADA; K. N. HISAOKA; M. TAKEBAYASHI*. *Natl. Hosp Org Kure Med. Centr, Natl. Hosp Org Kure Med. Centr, Hiroshima Univ. Grad Sch. of Biomed Hlth. Sci.*

9:00 JJ1 **347.10** Targeted proteomic analysis of postmortem auditory cortex reveals an altered glutamatergic signaling protein network in schizophrenia. M. L. MACDONALD*; Y. DING; J. NEWMAN; N. YATES; D. A. LEWIS; R. A. SWEET. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

10:00 JJ2 **347.11** Lower plasma agmatine levels related to the clinical symptoms in chronic schizophrenic individuals and first episode psychosis patients. O. M. İPÇIOğLU; C. BASOGLU*; A. ATEş; M. GÜLTEPE; Ö. ÖZCAN; A. AKGÜL; F. ARıCıOğLU; M. ÇETIN. *GATA Haydarpasa Training Hosp., GATA Haydarpasa Training Hosp., Marmara University, Fac. of Pharm.*

11:00 JJ3 **347.12** Alcohol reduces the effect of antidepressants on the platelet BDNF release. T. ISHII*; W. UKAI; Y. KIGAWA; K. FURUSE; Y. KAKUTANI; H. TSUJINO; E. HASHIMOTO; T. SAITO. *Sapporo Med. Univ.*

8:00 JJ4 **347.13** Expression of the zinc finger protein 804A (ZNF804A) in the brain. E. BENEDIKZ*; K. HVID. *Univ. of Southern Denmark.*

9:00 JJ5 **347.14** ● Analysis of STEP and downstream targets in post-mortem brain samples from subjects with schizophrenia, bipolar disorder and major depressive disorder. J. J. JOSHI; V. REINHART; D. VOLFSON; T. A. LANZ*. *Pfizer, Pfizer.*

10:00 JJ6 **347.15** ● One STEP downstream: The effect of STEP knockdown on RNA expression in *in vivo* and *in vitro* systems. V. L. REINHART*; T. NGUYEN; T. A. LANZ. *Pfizer.*

11:00 JJ7 **347.16** ▲ Long lasting effects of early-life stress on behavior, energy metabolism, oxidative damage, cytokines and BDNF are modulated by ketamine treatment. G. Z. RÉUS*; M. NACIF; H. ABELAIRA; D. TOMAZ; M. DOS SANTOS; A. CARLESSI; G. SCAINI; F. VUOLO; F. DAL-PIZZOL; E. STRECK; J. QUEVEDO. *Univ. Do Extremo Sul Catarinense, UNESC, Unesc.*

8:00 JJ8 **347.17** The viral mimetic poly(I:C) induces dendritic spine remodeling in the mouse cortex through the chemokine receptor CX3CR1. J. M. GARRE; G. YANG*. *New York Univ. Sch. of Med.*

9:00 JJ9 **347.18** Microglial priming and dissociable pathways for IL-1 beta effects on cognitive function: Relevance for delirium. C. CUNNINGHAM*; D. T. SKELLY; E. GRIFFIN; S. HARNEY; C. MURRAY. *Trinity Col. Inst. of Neurosci., Trinity Col. Dublin.*

10:00 JJ10 **347.19** Epigenetic changes in prefrontal cortex and hippocampus during development in the methylazoxymethanol model for schizophrenia. Y. GULCHINA*; M. A. SNYDER; W. GAO. *Drexel Univ. Col. of Med.*

11:00 JJ11 **347.20** Differential effects of antipsychotic drugs on food intake, weight gain and locomotor activity in male and female juvenile rats. C. DENG*; J. LIAN; M. DE SANTIS; X. HUANG. *Univ. of Wollongong.*

8:00 JJ12 **347.21** The effects of clinically relevant antipsychotics dose regimen on chronic phencyclidine-treated mice. Y. ARIME*; K. AKIYAMA. *Dokkyo Med. Univ.*

9:00 JJ13 **347.22** The psychotropic actions of LSP4-2022, mGlu4 agonist, in rodent models. J. M. WIERONSKA*; A. SLAWINSKA; A. PALUCHA-PONIEWIERA; F. ACHER; M. MARCINIAK; A. PILC. *Dept. of Neurobiology, Inst. of Pharmacol., Inst. of Pharmacol., Univ. Paris Descartes.*

10:00 JJ14 **347.23** Microglial activation in psychiatric disorders and suicide. T. P. SCHNIEDER*; A. STANKOV; I. TRENCHEVSKA; J. SMILEY; G. ROSOKLIJA; A. DWORK. *NYSPI, CUNY, Hunter Col., Sch. of Medicine, Univ. "Ss. Cyril and Methodius", Psychiatric Hosp., Nathan Kline Inst., CUNY, City Col., NYSPI, Columbia Univ.*

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POSTER

348. Mechanisms of Anxiety I

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 JJ15 **348.01** Maternal care influences susceptibility to anxiety-type behaviours mediated by neurogenesis-dependent mechanisms. N. RASTEGAR*; J. DIORIO; M. J. MEANEY. *Douglas Mental Hlth. Univ. Institute, McGill Univ.*

9:00 JJ16 **348.02** Interaction of genetic and environmentally modulated epigenetic factors in the development of anxiety-related behavior: Detailed analysis of a candidate gene. R. R. NAIK*; S. SOTNIKOV; N. CHEKMAREVA; L. CZIBERE; R. LANDGRAF. *Max Planck Inst. of Psychiatry.*

10:00 JJ17 **348.03** Segregation of anxiety and fear by two parallel septo-habenular pathways. T. YAMAGUCHI*; T. DANJO; I. PASTAN; T. HIKIDA; S. NAKANISHI. *Osaka Univ., Osaka Biosci. Inst., Natl. Cancer Inst.*

11:00 JJ18 **348.04** Corticotropin-releasing factor (crf) plays a tonic anxiogenic-like action at crf type-1 receptor (crfr1) within the medial prefrontal cortex (mpfc) in mice: Role of protein kinase a (pka). R. L. NUNES-DE-SOUZA*; K. S. GOMES; T. T. MIGUEL. *Univ. Estadual Paulista, UNESP, São Paulo State University, UNESP.*

8:00 KK1 **348.05** Association between ADORA1 polymorphism and peripheral levels of IL-1β in subjects with generalized anxiety disorder: A population based study. M. P. KASTER*; P. B. DE LEON; B. A. ACOSTA; F. N. KAUFMANN; F. P. MOREIRA; M. GAZAL; S. L. TEIXEIRA; R. A. SILVA; D. R. LARA; D. CRISPIM; G. GHISLENI. *Univ. Católica De Pelotas, Pontifícia Univ. Católica do Rio Grande do Sul, Univ. Federal do Rio Grande do Sul.*

9:00 KK2 **348.06** Immunosuppressive treatment affects neuronal activity and induces anxiety-related behavior. M. HADAMITZKY*; H. ENGLER; K. BÖSCHE; K. ORLOWSKI; M. SCHEDLOWSKI. *Univ. of Essen, Sch. of Med.*

10:00 KK3 **348.07** ● Intranasal infusion of neuropeptide Y attenuates development of PTSD-like symptoms in rats. E. L. SABBAN*; L. I. SEROVA; A. TILLINGER; L. G. ALALUF; M. LAUKOVA. *New York Med. Coll.*

11:00 KK4 **348.08** ● Intranasal melanocortin receptor four (MC4R) antagonist ameliorates depression and anxiety-related behavior in rats PTSD model. L. I. SEROVA*; M. LAUKOVA; L. ALALUF; E. L. SABBAN. *New York Med. Col.*

8:00 KK5 **348.09** Blockade of TRPV1 receptors within the dorsal periaqueductal gray prevents and attenuates, respectively, capsaicin- and open elevated plus maze-induced antinociception in mice. D. C. MASCARENHAS*; K. S. GOMES; R. L. NUNES DE SOUZA. *Sch. of Pharmaceut. Sciences/ UNESP, Joint Grad. Program in Physiological Sciences, UFSCar/UNESP.*

9:00 KK6 **348.10** Effect of enriched environment and chronic stress on experimental anxiety induced by progesterone withdrawal in female Wistar rats. D. M. ISLAS*; P. DE GORTARI-GALLARDO; C. LÓPEZ-RUBALCAVA; E. ESTRADA-CAMARENA. *Inst. Nacional De Psiquiatria, Ctr. de Investigación y Estudios Avanzados del IPN.*

10:00 KK7 **348.11** Repeated social defeat stress impairs the locomotion without changing anxiety indices of mice exposed to the elevated plus maze. A. C. CIPRIANO*; K. S. GOMES; R. L. NUNES-DE-SOUZA. *Joint Grad. Program in Physiological Sci. UFSCar/UNESP, Lab. Pharmacology, Sch. of Pharmaceut. Sciences, São Paulo State University, UNESP.*

11:00 KK8 **348.12** Antinociception and defensive behaviors induced by a predator (rat) are attenuated by intra-amygdala injection of midazolam in mice: Blockade with flumazenil. A. CANTO-DE-SOUZA*; C. A. BARBALHO. *Psychobiology Group, Dept of Psychology, UFSCar, Joint Grad. Program in Physiological Sci., Grad. Program in Psychology.*

8:00 LL1 **348.13** Nna1 is related to motor learning, anxiety-related behaviors and dynamics of glutamate receptor subunits. L. ZHOU*; K. KONNO; M. YAMAZAKI; M. ABE; R. NATSUME; M. WATANABE; K. SAKIMURA. *Brain Res. Inst., CREST, Japan Sci. and Technol. Agency, Dept. of Anatomy, Hokkaido Univ. Sch. of Med.*

9:00 LL2 **348.14** Behavioral evaluation of compulsivity and anxiety in mice - further characterization of Sapap3-mutant mice as a model for obsessive compulsive disorder. M. G. FEENSTRA*; J. A. HEINSBROEK; W. A. VAN LEEUWEN; L. M. CROWN; F. SANTANA; G. FENG; D. DENYS. *Netherlands Inst. Neurosci., Dept Psychiatry, Acad Med. Ctr., MIT.*

10:00 LL3 **348.15** Striatal expression of constitutively active CaMKII promotes resistance to anxiety-provoking stimuli. M. A. BENNEYWORTH*; T. MACHEDA; R. A. FISCHER; M. J. THOMAS. *Univ. of Minnesota.*

11:00 LL4 **348.16** Blockade of CRF type 1 receptors within the periaqueductal gray or bed nucleus of the stria terminalis does not change defensive behavior of mice exposed to a predator. K. S. GOMES*; R. L. NUNES-DE-SOUZA. *Univ. Estadual Paulista.*

8:00 LL5 **348.17** Conditional knockout of Deaf1 in brain produces anxiety but not depressive behavior in adult mice, and decreased expression of Eif4g3. S. RAJAMANICKAM; K. JARRETT; X. CAI; J. HUGGENVIK; M. W. COLLARD*. *Southern Illinois Univ.*

9:00 LL6 **348.18** Gender and parental effects for anxiety-related behaviour in F_1 hybrids derived from the C57BL/6J-Chr $19^{PWD/Ph}$/ForeJ and C57BL/6J-Chr 19^{A}/NaJ consomic strains. M. LABOTS*; J. M. BAARS; J. G. LOZEMAN-VAN 'T KLOOSTER; P. HESSELING; S. KIRCHHOFF; F. OHL; H. A. VAN LITH. *Utrecht Univ., Rudolf Magnus Inst. of Neurosci., Utrecht Univ.*

10:00 LL7 **348.19** Stress and anxiety related differences in behavior, neurochemistry and neural activity in high anxiety-low anxiety rats. R. RAO*; M. SADANANDA. *St. Aloysius Col.*

11:00 LL8 **348.20** HIV-1 Tat protein influences anxiety in an exposure-dependent manner. J. J. PARIS*; S. T. VALENTE; J. P. MCLAUGHLIN. *Torrey Pines Inst. For Mol. Studies, The Scripps Res. Inst., Torrey Pines Inst. for Mol. Studies.*

8:00 LL9 **348.21** Altered serotonin-1A receptor binding in social anxiety disorder: A ^{18}F-FCWAY positron emission tomography study. S. CHOI*; J. KIM. *Seoul Natl. Univ. Hosp., Yonsei Univ.*

9:00 LL10 **348.22** ▲ Elevated Plus Maze behavior of rats neonatally exposed to clomipramine is dramatically altered by prior environmental experience. E. RETTSTATT*; K. A. TRYCHTA; L. KASPARSON; M. KRELKO; L. LAIKS; J. PANGER; A. WALSH; D. S. KREISS. *Colgate Univ.*

10:00 LL11 **348.23** ● ▲ Neonatal exposure to clomipramine is a model of Obsessive Compulsive Disorder with unique face and predictive validity. C. C. BAVLEY*; J. L. BELLUARDO; E. E. RETTSTATT; K. A. TRYCHTA; D. S. KREISS. *Colgate Univ., Colgate Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 LL12 **348.24** ● ▲ Comparison of two novel animal models of Obsessive Compulsive Disorder: Alteration of hole-poke and marble burying behaviors induced by either acute mCPP or neonatal clomipramine exposure. J. L. BELLUARDO*; C. C. BAVLEY; K. A. TRYCHTA; A. PESCH; D. S. KREISS. *Colgate Univ.*

8:00 MM1 **348.25** Overactivation of muscarinic cholinergic receptors leads to long-term anxiogenic responses associated with altered hippocampal theta rhythm activity and NMDA receptors regulation. A. A. HOELLER*; A. P. R. COSTA; G. LACH; M. A. BICCA; J. B. CALIXTO; T. C. M. DE LIMA. *Federal Univ. of Santa Catarina.*

9:00 MM2 **348.26** Medial prefrontal cortex involvement in emotional threat processing following motor vehicle collision. X. WANG; E. DUVAL*; A. S. COTTON; S. HO; K. R. BRICKMAN; M. B. TAMBURRINO; S. A. MCLEAN; W. R. BAUER; I. LIBERZON. *Univ. of Michigan, Univ. of Toledo, Univ. of North Carolina at Chapel Hill.*

10:00 MM3 **348.27** Coherence between orbitofrontal cortex and nucleus accumbens reflects OCD-like persistent avoidance in rats. T. J. BANASIKOWSKI*; A. A. GRACE. *Univ. of Pittsburgh.*

11:00 MM4 **348.28** A breath of fear: Of mice and men - Chemosensitivity and the serotonergic system in panic disorder. N. LEIBOLD*; D. L. A. VAN DEN HOVE; K. LESCH; I. MYIN-GERMEYS; H. W. M. STEINBUSCH; K. R. J. SCHRUERS. *Maastricht Univ., Sch. for Mental Hlth. and Neurosci. (MHeNS), European Grad. Sch. of Neurosci. (EURON), Maastricht Univ., Univ. of Wuerzburg.*

8:00 MM5 **348.29** Towards therapy in the MRI scanner: Cognitive reappraisal of parametrically modulated anxiety in spider phobia. A. ZILVERSTAND*; A. KAEMINGK; B. SORGER; R. GOEBEL. *Maastricht Univ.*

9:00 MM6 **348.30** Isolation rearing attenuates social experience-induced c-fos in the forebrain of rats. S. T. BLAND*; M. AHERN; D. J. GOODELL; S. GROTEWOLD. *Univ. of Colorado, Denver, Univ. of Colorado Denver, Univ. of Colorado Denver.*

POSTER

349. Alcohol: Neural Mechanisms of Addiction

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 MM7 **349.01** *In vivo* alcohol exposure triggers functional and structural plasticity in dopamine D1 receptor-expressing neurons of the dorsomedial striatum. J. WANG*; H. GIL; S. BEN HAMIDA; D. RON. *The Gallo Res. Center, Dept. of Neurology, Univ. of California.*

9:00 MM8 **349.02** MicroRNA-30a-5p in the medial prefrontal cortex controls the transition from moderate to excessive alcohol consumption. E. DARCQ*; V. WARNAULT; D. RON. *The Gallo Res. Center, Dept. of Neurology, Univ. of California.*

10:00 MM9 **349.03** Alcohol-mediated inhibition of the tyrosine phosphatase STEP61 in the dorsomedial striatum facilitates Fyn activation, NR2B-NMDA receptor phosphorylation and alcohol consumption. R. LEGASTELOIS; E. DARCQ; J. WANG; K. PHAMLUONG; S. BEN HAMIDA; J. XU; P. J. LOMBROSO*; D. RON. *Dept. of Neurol., Yale Univ. Sch. Med.*

11:00 MM10 **349.04** Collapsin response mediator protein-2 contributes to neuroadaptations underlying alcohol-related behaviors. F. LIU; R. LEGASTELOIS; D. RON*. *Gallo Clin. and Res. Center, UCSF.*

8:00 NN1 **349.05** Enduring effects of binge alcohol exposure on the frontal cortex. E. A. BARTON*; P. KULKARNI; M. E. MAYNARD; M. A. REA; B. ROYSAM; J. L. LEASURE. *Univ. of Houston, Univ. of Houston, Univ. of Houston, Univ. of Houston.*

9:00 NN2 **349.06** Role of DNA methylation in alcohol addiction. E. D. BARBIER*; N. JUERGENS; J. TAPOCIK; J. SCHANK; K. SCHUEBEL; Z. ZHOU; Q. YUAN; D. GOLDMAN; M. HEILIG. *LCTS, NIAAA, Lab. of Neurogenetics, NIAAA.*

10:00 NN3 **349.07** Facilitated extinction of ethanol-seeking behavior with CDPPB is prevented with inhibition of mGluR5 activity in the infralimbic cortex. J. T. GASS*; J. MCGONIGAL; W. B. GLEN; H. TRANTHAM-DAVIDSON; M. F. OLIVE; L. J. CHANDLER. *Med. Univ. South Carolina, Arizona State Univ.*

11:00 NN4 **349.08** Enhancement of extinction learning attenuates ethanol-seeking behavior and alters plasticity within the addiction neurocircuitry. H. TRANTHAM-DAVIDSON*; J. T. GASS; A. S. KASSAB; L. J. CHANDLER. *Med. Univ. of South Carolina.*

8:00 NN5 **349.09** Effects of the mGluR5 negative allosteric modulator MTEP on ethanol self-administration and ethanol seeking: Roles of dorsal and ventral medial prefrontal cortex. P. R. KUFAHL*; E. MOORE-NYE; C. HALSTENGARD; P. BARABAS; S. E. TOMEK; N. E. NEMIROVSKY; A. VILLA; L. E. HOOD; S. L. YAHN; L. R. WATTERSON; M. OLIVE. *Arizona State Univ.*

9:00 NN6 **349.10** Ethanol inhibits dopamine release at terminals in the nucleus accumbens via GABA receptors. N. SCHILATY*; J. T. YORGASON; D. M. HEDGES; E. Y. JANG; R. J. FOLSOM; A. NELSON; A. VERA; S. HANSON; M. WALLNER; S. JONES; S. C. STEFFENSEN. *Brigham Young Univ., Wake Forest Univ. Sch. of Med., Univ. of California at Los Angeles.*

10:00 NN7 **349.11** Rapid adaptation of D2 dopamine receptor responses following acute ethanol. E. JANG*; N. D. SCHILATY; S. HANSON; R. J. FOLSOM; R. J. LINZEY; B. ACKERSON; A. PEREZ; S. C. STEFFENSEN. *Brigham Young Univ.*

11:00 NN8 **349.12** Functional switch in gaba(a) receptors on vta gaba neurons by chronic ethanol. J. K. MABEY*; S. I. SHIN; D. N. WHITE; C. A. NIELSON; N. D. SCHILATY; R. TING-A-KEE; H. VARGAS-PEREZ; D. VAN DER KOOY; S. C. STEFFENSEN. *Brigham Young Univ., Univ. of Toronto.*

8:00 NN9 **349.13** Neural circuit investigations into the role of midbrain dopamine neurons in mediating alcohol drinking behaviors. B. JUAREZ*; A. K. FRIEDMAN; D. CHAUDHURY; J. J. WALSH; S. M. KU; M. HAN. *Mount Sinai Sch. of Med., Mount Sinai Sch. of Med.*

9:00 NN10 **349.14** Chronic alcohol drinking alters the local stimulating effects of ethanol and D2 autoreceptor function in the posterior ventral tegmental area. Z. DING*; C. M. INGRAHAM; Z. A. RODD; E. A. ENGLEMAN; W. J. MCBRIDE. *Indiana Univ. Sch. of Med.*

10:00 NN11 **349.15** The role of the rostromedial tegmental nucleus in alcohol consumption. E. J. BURNETT*; T. C. JHOU; L. J. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

11:00 NN12 **349.16** Chronic intermittent ethanol exposure alters neuronal BK channels in the central nucleus of the amygdala in mice. Q. LI*; R. D. MADISON; S. D. MOORE. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Durham VAMC.*

● Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 NN13 **349.17** Relaxin-3 receptor (RXFP3) signalling in the bed nucleus of stria terminalis regulates alcohol-seeking in the rat. H. E. KASTMAN*; E. V. KRSTEW; P. J. RYAN; A. L. GUNDLACH; A. J. LAWRENCE. *The Florey Inst. of Neurosci. and Mental Hlth., The Florey Inst. of Neurosci. and Mental Hlth., The Florey Inst. of Neurosci. and Mental Hlth.*

9:00 NN14 **349.18** Glucocorticoid receptors in the central amygdala mediate compulsive-like alcohol drinking. L. F. VENDRUSCOLO*; S. EDWARDS; L. G. MACSHANE; M. L. LOGRIP; J. E. SCHLOSBURG; E. R. ZAMORA-MARTINEZ; T. W. WITHFIELD JR; P. P. SANNA; G. F. KOOB. *The Scripps Res. Inst., The Scripps Res. Inst.*

10:00 NN15 **349.19** Gene network dysregulation in compulsive alcohol intake during protracted abstinence. V. R. CANONIGO*; W. K. SHIN; L. F. VENDRUSCOLO; C. LEFEBVRE; L. VAN DER STAP; T. KAWAMURA; J. SCHLOSBURG; G. F. KOOB; A. CALIFANO; P. P. SANNA. *The Scripps Res. Inst., Herbert Irving Comprehensive Cancer Center, Columbia Univ., The Scripps Res. Inst.*

11:00 NN16 **349.20** Pavlovian-conditioned alcohol-seeking is invigorated by an alcohol-associated context and reduced by AMPA receptor antagonist administration in the basolateral amygdala. J. M. SCIASCIA*; R. REESE; P. H. JANAK; N. CHAUDHRI. *Concordia Univ., Ernest Gallo Clin. and Res. Ctr.*

8:00 NN17 **349.21** Orexin in the anterior thalamic paraventricular nucleus promotes ethanol drinking: Possible role of substance P. J. R. BARSON*; H. T. HO; S. F. LEIBOWITZ. *The Rockefeller Univ.*

9:00 NN18 **349.22** Neuropeptide gene expression within the centrally projecting Edinger-Westphal nucleus following long-term intermittent alcohol drinking. W. J. GIARDINO*; D. M. COTE; E. D. RODRIGUEZ; A. E. RYABININ. *Oregon Hlth. & Sci. Univ.*

10:00 OO1 **349.23** ● Phosphodiesterase 10A is a positive modulator of alcohol self-administration. M. L. LOGRIP*; L. F. VENDRUSCOLO; J. E. SCHLOSBURG; G. F. KOOB; E. P. ZORRILLA. *The Scripps Res. Inst.*

11:00 OO2 **349.24** Drinking habitualness in alcohol dependence: Differential neural response to alcohol cues following a priming dose. K. E. COURTNEY*; A. SHENG; L. A. RAY. *UCLA.*

8:00 OO3 **349.25** Neurogranin regulates ethanol-seeking behavior through mGluR5 signaling in the nucleus accumbens. H. NAM*; T. KIM; D. J. HINTON; D. CHOI. *Mayo Clin. Col. of Med.*

9:00 OO4 **349.26** Conditioned odor cues associated with access to alcohol alcohol modulate serotonin efflux in the nucleus accumbens shell. G. A. DEEHAN*, JR; S. R. HAUSER; E. A. ENGLEMAN; J. A. WILDEN; W. J. MCBRIDE; Z. A. RODD. *Indiana Univ.*

10:00 OO5 **349.27** Ethanol intake after accumbal modulation of μ-opioid receptor expression using lentiviral vectors. K. KIIANMAA*; J. UHARI; M. AIRAVAARA; A. RAASMAJA; P. PIEPPONEN. *Natl. Inst. for Hlth. and Welfare, Univ. of Helsinki, Univ. of Helsinki.*

11:00 OO6 **349.28** Behavioral responses to ethanol are regulated by the LIM only protein LMO3. A. M. SAVARESE*; M. ZOU; V. KHARAZIA; U. HEBERLEIN; A. W. LASEK. *Univ. of Illinois At Chicago, Ernest Gallo Clin. and Res. Ctr. at UCSF, Univ. of Illinois at Chicago.*

POSTER

350. Cocaine: Neural Mechanisms of Addiction II

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 OO7 **350.01** BDNF over-expression in the ventral tegmental area potentiates intermittent social defeat stress-induced escalation of cocaine self-administration. J. WANG; R. BASTLE; C. E. BASS; R. P. HAMMER, Jr.; J. L. NEISEWANDER; E. M. NIKULINA*. *Arizona State Univ., SUNY Univ. at Buffalo, Univ. Arizona.*

9:00 OO8 **350.02** Inhibiting the expression of SAP97, which transports GluA1-containing AMPA receptors to synapses, in the accumbens shell blocks the reinstatement of cocaine seeking. S. L. WHITE*; P. ORTINSKI; S. H. FRIEDMAN; H. D. SCHMIDT; R. G. KALB; C. PIERCE. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:00 OO9 **350.03** Stress or cocaine-induced metaplasticity of long term potentiation in the ventral hippocampus of rats. M. MATHILAKATH KERALAPURATH*; J. J. WAGNER. *Univ. of Georgia, Univ. of Georgia.*

11:00 OO10 **350.04** NMDA receptors mediate extinction of cocaine self-administration, and enhancing receptor function facilitates extinction. M. HAFENBREIDEL*; C. RAFA TODD; R. C. TWINING; D. MUELLER. *Univ. of Wisconsin-Milwaukee.*

8:00 OO11 **350.05** ● Epigenetic readers: The role of bromodomain proteins in cocaine reward. G. C. SARTOR*; S. P. BROTHERS; C. WAHLESTEDT. *Univ. of Miami Miller Sch. of Med.*

9:00 OO12 **350.06** A neuroanatomical map of L-type calcium channels in the extinction of cocaine conditioned place preference. A. S. LEE*; K. C. SCHIERBERL; F. HOFMANN; M. GLASS; A. RAJADHYAKSHA. *Weill Cornell, Tech. Univ. Munich, Weill Cornell Med. Col.*

10:00 OO13 **350.07** Opioid control of GABA release in the ventral pallidum is altered after cocaine self administration. Y. M. KUPCHIK*; P. W. KALIVAS. *Med. Univ. of South Carolina.*

11:00 OO14 **350.08** Glucagon-like peptide-1 receptor activation reduces cocaine reward. D. L. GRAHAM*; M. A. BUENDIA; H. H. DURAI; A. GALLI; G. D. STANWOOD. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

8:00 OO15 **350.09** Rapid, experience-dependent changes in nucleus accumbens glutamate release elicited by intravenous cocaine: Peripheral contributions to release. K. T. WAKABAYASHI*; E. A. KIYATKIN. *NIH/NIDA.*

9:00 OO16 **350.10** MicroRNA-495 competes with the RNA-binding protein HuD for control of addiction related genes. A. S. GARDINER; R. J. OLIVER, Jr; N. PERRONE-BIZZOZERO*. *Univ. of New Mexico HSC.*

10:00 OO17 **350.11** miR-495, a post-transcriptional link between gene expression and the behavioral effects of cocaine. R. J. OLIVER*, JR; R. M. BASTLE; A. S. GARDINER; C. WRIGHT; J. L. SAAVEDRA; N. S. PENTKOWSKI; A. M. ALLAN; J. L. NEISEWANDER; N. I. PERRONE-BIZZOZERO. *Univ. of New Mexico, Arizona State Univ.*

11:00 OO18 **350.12** The glucagon-like peptide 1 (glp-1) receptor agonist exendin-4 decreases cocaine self-administration in mice. G. SØRENSEN; P. WEIKOP; G. WÖRTWEIN; A. FINK-JENSEN*. *Psychiatric Ctr. Copenhagen and Univ. of Copenhagen, Dept. of Publ. Hlth.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 PP1 **350.13** GluA1 phosphorylation mediates extinction of cocaine contextual learning: Potential regulation via Cav1.2 L-type Ca^{2+} channels. K. C. SCHIERBERL*; A. S. LEE; M. A. BYRNE; R. L. HUGANIR; A. M. RAJADHYAKSHA. *Dept. of Neuroscience, Weill Cornell Grad. Sch. of Biomed. Sci., Weill Cornell Med. Col., Johns Hopkins Univ.*

9:00 PP2 **350.14** The paraventricular nucleus of the thalamus is differentially recruited by cocaine vs. natural reward: Correlation with cocaine seeking. R. MARTIN-FARDON*; A. MATZEU; G. CAUVI; F. WEISS. *The Scripps Res. Inst.*

10:00 PP3 **350.15** ● Intraaccumbal administration of zeta inhibitory peptide (ZIP) erases drug memory and prevents cocaine reinstatement. L. A. BRIAND*; B. KIMMEY; R. L. HUGANIR; C. PIERCE. *Univ. of Pennsylvania, Johns Hopkins Sch. of Med.*

11:00 PP4 **350.16** Infralimbic BDNF/TrkB signaling enhances extinction of cocaine seeking via potentiation of NR2B-containing NMDA receptor currents. J. M. OTIS*; M. K. FITZGERALD; J. WONG; D. MUELLER. *Univ. Wisconsin-Milwaukee.*

8:00 PP5 **350.17** Reactivation of cocaine reward memory engages the PI3K/Akt/GSK3/mTOR signaling pathway. X. SHI*; J. S. MILLER; L. J. HARPER; E. M. UNTERWALD. *Temple Univ. Sch. of Med.*

9:00 PP6 **350.18** A 5-HT_{1A} receptor-mediated mechanism in addiction-like cocaine self-administration behavior in rats. I. YOU*; S. R. WRIGHT; S. EDWARDS; C. D. MANDYAM; G. F. KOOB; S. WEE. *The Scripps Res. Inst., The Scripps Reserch Inst.*

10:00 PP7 **350.19** Orexin/hypocretin in the paraventricular nucleus of the thalamus mediates cocaine-seeking behavior in rats. A. MATZEU*; T. M. KERR; F. WEISS; R. MARTIN-FARDON. *The Scripps Res. Inst.*

11:00 PP8 **350.20** SSRI potentiation of methylphenidate-induced gene expression in the striatum: Role of 5-HT1B receptor. H. STEINER*; J. BEVERLEY; M. MARINELLI. *Chicago Med. School/RFUMS.*

8:00 PP9 **350.21** Persistent changes in the hippocampal glutamatergic synaptic transmission following long access cocaine self-administration in rats. S. B. HAMMOND*; M. MATHILAKATH KERALAPURATH; J. J. WAGNER. *The Univ. of Georgia, The Univ. of Georgia, The Univ. of Georgia.*

9:00 PP10 **350.22** Hippocampal beta-adrenergic receptor blockade impairs retrieval but not reconsolidation of cocaine-associated memory and prevents subsequent reinstatement. D. MUELLER*; J. M. OTIS; M. K. FITZGERALD. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee.*

10:00 PP11 **350.23** Modulation of central dopamine homeostasis by glucagon-like peptide-1. I. A. REDDY; T. A. HACKETT; G. D. STANWOOD*; A. GALLI. *Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med.*

POSTER

351. Neuropeptides and Behavior

Theme C: Disorders of the Nervous System

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 PP12 **351.01** Effects of neuropeptide S and nociceptin/orphanin FQ on anxiety and memory in mice assessed in the elevated T-maze task. L. ASTH*; N. G. CORREIA; G. CALO'; V. P. SOARES-RACHETTI; E. C. GAVIOLI. *Federal Univ. of Rio Grande Do Norte, Univ. of Ferrara.*

9:00 PP13 **351.02** Neuropeptide S restores 6-OHDA-, but not haloperidol-, induced motor deficits in mice. J. J. DIDONET*; J. C. CAVALCANTE; M. S. M. O. COSTA; L. S. SOUZA; E. ANDRE; V. P. SOARES-RACHETTI; R. GUERRINI; G. CALO'; E. C. GAVIOLI. *Federal Univ. of Rio Grande Do Norte, Federal Univ. of Rio Grande Do Norte, Federal Univ. of Parana, Univ. of Ferrara, Univ. of Ferrara.*

10:00 PP14 **351.03** Oxytocin reverses CRF-R2 induced depressive-like behavior in the NAc shell after partner-loss in male prairie voles. O. J. BOSCH*; M. E. MODI; A. C. KEEBAUGH; C. E. BARRETT; I. D. NEUMANN; L. J. YOUNG. *Univ. of Regensburg / Dept. of Behavioural and Mol. Neurobio., Emory Univ.*

11:00 PP15 **351.04** Systemic administration of the kappa opioid receptor agonist U50,488 decreases extracellular serotonin by a reuptake-independent mechanism in mice lacking the serotonin transporter. A. B. THOMPSON*; H. YANG; A. M. ANDREWS. *UCLA.*

8:00 PP16 **351.05** Oral administration of peptide YY (PYY3-36) decreases aggressive behaviour in a rodent model of social defeat. D. P. DEVINE*; K. LORBEER; N. J. WEINSTOCK; S. ZOLOTUKHIN. *Univ. of Florida, Univ. of Florida.*

9:00 PP17 **351.06** L703, 606, a NK1 antagonist, reduces fear reactions after social defeat. E. C. SANTOS*; R. C. N. MARCHETTE; M. DUZZIONI; T. C. M. DE LIMA. *Federal Univ. of Santa Catarina.*

10:00 PP18 **351.07** Neuropeptide Y attenuates cholecystokinin-4 induced anxiety-like behavior in mice. M. P. DANDEKAR*; S. J. DESAI; D. M. KOKARE; N. K. SUBHEDAR. *Dept. of Pharmaceut. Sciences, R.T.M. Nagpur Univ., Indian Inst. of Sci. Educ. and Res.*

11:00 PP19 **351.08** Levonorgestrel and ethinyl estradiol alter brain-derived neurotrophic factor mRNA levels in the hippocampus and anxiety-related behaviors in rats. J. SIMONE*; L. E. DAY; A. WHITAKER-LEA; P. V. HOLMES. *Univ. of Georgia, Georgia Hlth. Sci. University-UGA Med. Partnership.*

8:00 PP20 **351.09** Galanin/ Neuropeptide Y Y1 receptor interaction at the cellular and receptor level in the amygdala. M. NARVÁEZ; C. MILLÓN; A. FLORES; L. SANTÍN; C. PARRADO; A. PUIGCERVER; D. BORROTO-ESCUELA; K. FUXE; Z. DIAZ-CABIALE*; J. NARVÁEZ. *Univ. Malaga Spain, Karolinska Institutet.*

9:00 PP21 **351.10** Galanin into Dorsal Raphe Nucleus has antidepressant-like effect in rats submitted to forced swimming test. V. BEIJAMINI*; M. M. SOUZA; G. P. SILOTE. *Federal Univ. of Espirito Santo.*

10:00 PP22 **351.11** The administration of Galanin N-Terminal fragment (1-15) induces depressant- and anxiogenic effects in rats. C. MILLÓN*; A. FLORES; M. NARVÁEZ; L. SANTÍN; C. PARRADO; A. PUIGCERVER; D. BORROTO-ESCUELA; K. FUXE; J. NARVÁEZ; Z. DIAZ-CABIALE. *Univ. of Málaga. Dept. of Human Physiol., Karolinska Institutet.*

11:00 PP23 **351.12** The change of cocaine- and amphetamine-regulated transcript (CART) peptide levels in human cerebrospinal fluid (hCSF) of major depressive disorder (MDD) and the role of CART to modulate basal anxiety-related behaviors in rats. H. YOON*; K. HATTORI; D. SASAYAMA; H. KUNUGI. *Natl. Ctr. of Neurol. and Psychiatry (NCNP), Shinshu Univ. school of Med.*

8:00 PP24 **351.13** Effects of nasally applied oxytocin on thermal pain perception: Behavioral results. M. ZUNHAMMER*; V. BUSCH; M. W. GREENLEE; P. EICHHAMMER. *Univ. of Regensburg, Univ. of Regensburg, Univ. of Regensburg.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 QQ1 **351.14** Galanin and exercise confer behavioral resilience to stress and attenuate dopamine overflow in the frontal cortex. N. R. SCIOLINO*; J. M. SMITH; B. N. BREWER; G. D. WALKER; K. G. FREEMAN; G. L. EDWARDS; D. WEINSHENKER; P. V. HOLMES. *Univ. of Georgia, Univ. of Georgia, Univ. of Georgia, Univ. of Georgia, Univ. of Georgia, Emory Univ., Univ. of Georgia.*

10:00 QQ2 **351.15** Leptin (i.c.v) induces anxiolytic-like effects in rats exposed to elevated plus maze and Vogel Conflict test. D. C. AGUIAR*; C. J. SANTOS. *Univ. of Minas Gerais- UFMG.*

11:00 QQ3 **351.16** Kinin B1 involvement in memory impairment in rats. K. E. DONG CRESTE*; F. A. AMARAL; M. R. LEMOS; A. L. CAETANO; T. A. VIEL; H. S. BUCK. *FCMSCSP, Univ. de São Paulo, Univ. de São Paulo, FCMSCSP.*

8:00 QQ4 **351.17** Central and peripheral neuropeptide Y responses to stress in animals expressing different levels of anxiety-like behavior. A. C. SHARKO*; K. F. KAIGLER; J. R. FADEL; M. A. WILSON. *Univ. of South Carolina-School of Med.*

9:00 QQ5 **351.18** Central PACAP administration induces a pro-depressive phenotype in the rat. M. SEIGLIE*; K. L. SMITH; R. DORE; P. COTTONE; P. COTTONE; V. SABINO. *Boston Univ. Sch. of Med.*

10:00 QQ6 **351.19** The CRF binding protein helps ending the stress response and maintaining low levels of anxiety in lactating rats. S. M. KLAMPFL*; O. J. BOSCH. *Univ. of Regensburg.*

POSTER

352. Auditory System: Mechanoreceptors and Cochlea

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 QQ7 **352.01** Cochlear mechanotransduction adaptation is not driven by calcium entry. A. W. PENG*; T. EFFERTZ; A. J. RICCI. *Stanford Univ., Stanford Univ.*

9:00 QQ8 **352.02** Expression of somatostatin receptors (SSTR1-SSTR5) in the mammalian cochlea and its influence on Ca^{2+} homeostasis and hair cell survival. V. RADOJEVIC*; S. LEVANO; C. SETZ; Y. BRAND; D. BODMER. *Univ. Hospital, Clin. For Otorhinolaryngology, Dept. of Biomedicine.*

10:00 QQ9 **352.03** Development and function of local cochlear steroidogenic pathways- A cochlear HPA-like signaling system. D. E. VETTER*; J. LONTHAIR. *Univ. Mississippi Med. Ctr., Univ. Miami.*

11:00 QQ10 **352.04** Progressive hearing loss in mice with a mutation affecting the ubiquitin-proteosome pathway. S. L. HARRIS; U. MUELLER; M. SCHWANDER*. *Rutgers Univ., The Scripps Res. Inst.*

8:00 QQ11 **352.05** ● Mutation of Foxo3 causes adult onset auditory neuropathy and alters cochlear synapse architecture in mice. P. WHITE*; F. GILELS; S. T. PAQUETTE; J. ZHANG; I. RAHMAN. *Univ. of Rochester Sch. of Med. and Dent.*

9:00 QQ12 **352.06** Frequency tuning, suppressive masking, and hair bundle shape organization relationships revealed by the study of Nherf1 mutant mice. V. MICHEL; K. KAMIYA; F. GIRAUDET; S. PAPAL; I. PERFETTINI; S. LE GAL; M. GEORGESCU; D. WEIL; P. AVAN; A. EL-AMRAOUI; C. PETIT*. *Inst. Pasteur, Unite Genetique & Physiologie Audition, Paris 15, France, Lab. de Biophysique Sensorielle, Faculté de Médecine, Univ. d'Auvergne, Dept. of Neuro-Oncology, Texas M.D. Anderson Cancer Ctr., Lab. de Biophysique Sensorielle, Faculté de Médecine, Univ. d'Auvergne, Clermon-Ferrand, France, Unite Genetique & Physiologie Audition.*

10:00 QQ13 **352.07** Audiogenic seizure behavior in rbl2 null mice exposed to traumatizing noise. K. E. BRUNETTE*; J. MCGEE; E. J. WALSH. *Boys Town Natl. Res. Hosp.*

11:00 QQ14 **352.08** Oncomodulin null mutants have altered prestin expression. D. D. SIMMONS*; M. DAI; E. NEALY; A. HORNAK. *UCLA.*

8:00 QQ15 **352.09** New locus for age-related hearing loss (AHL) on Chromosome 17 of the 129S6/SvEvTac mouse. B. PEGUERO*; L. C. ROBINSON; B. L. TEMPEL. *Univ. of Washington, Univ. of Washington.*

9:00 QQ16 **352.10** Synaptic vesicle recycling is functionally segregated from constitutive membrane trafficking in presynaptic cells that lack synaptic boutons. N. H. REVELO*; D. KAMIN; T. MOSER; S. O. RIZZOLI. *STED Microscopy of Synaptic Function, European Neurosci. Inst., Intl. Max Planck Res. Sch. Neurosciences, Collaborative Res. Ctr. 889, Univ. Med. Ctr. Göttingen.*

10:00 QQ17 **352.11** Time course characterization of the effects of systemic kanamycin on auditory inner hair cell ribbon synapse plasticity: Evidence of aminoglycoside induced excitotoxicity. M. M. ABERNATHY; D. V. GAUVIN*; T. J. BAIRD; R. ALTSCHULER; J. MILLER; J. SPITSBERGEN; R. EVERSOLE. *MPI Res. Inc., Univ. of Michigan, Western Michigan Univ.*

11:00 QQ18 **352.12** Frequency response properties of the zebrafish larval lateral line. R. LEVI*; O. AKANYETI; J. LIAO. *The Whitney Lab. For Marine Biosci.*

8:00 QQ19 **352.13** Effects of ramp stimulation on individual lateral line neuromasts in larval zebrafish: from afferent activity to motor response. O. AKANYETI; M. HAEHNEL*; J. C. LIAO. *Univ. of Florida.*

POSTER

353. Auditory System: Sound Localization and Binaural Interactions

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 QQ20 **353.01** Eye position influences on auditory processes measured from within the external ear canal. K. GRUTERS*; C. A. SHERA; J. M. GROH. *Duke Univ., Havard Med. Sch., Duke Univ., Duke Univ.*

9:00 QQ21 **353.02** Physiological and anatomical characterization of the auditory brain stem in turtles. K. L. WILLIS*; C. E. CARR. *Univ. Maryland.*

10:00 QQ22 **353.03** ITD tuning of MSO neurons beyond coincidence detection of monaural inputs. T. P. FRANKEN*; M. T. ROBERTS; N. L. GOLDING; P. X. JORIS. *KU Leuven, Univ. of Texas at Austin.*

11:00 QQ23 **353.04** Distribution of fragile x mental retardation protein in the human medial superior olive. R. J. KULESZA*, JR; Y. WANG; E. RUBEL; K. BEEBE. *Lake Erie Col. of Osteo. Med., Univ. of Washington Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 QQ24 **353.05** Age related morphological changes in human cochlear nucleus - A stereological study. T. ROY*; S. SHARMA; T. C. NAG; A. THAKAR; D. BHARDWAJ. *All India Inst. Med. Sci., All India Inst. Med. Sci., All India Inst. Med. Sci., All India Inst. Med. Sci.*

9:00 QQ25 **353.06** Spatial hearing capabilities of the adult guinea pig (Cavia porcellus). N. T. GREENE*; A. T. FERBER; K. L. ANBUHL; P. D. ALLEN; D. J. TOLLIN. *The Univ. of Colorado Sch. of Med., Univ. of Rochester.*

10:00 QQ26 **353.07** Neural population decoding of sound source location in the face of changes in sound level. M. L. DAY*; B. DELGUTTE. *Massachusetts Eye and Ear Infirmary.*

11:00 RR1 **353.08** Monkeys can localize more than one simultaneous sound, but how they do it is mysterious: Behavior and neural activity in the inferior colliculus. J. LEE*; R. ESTRADA; S. T. TOKDAR; J. M. GROH. *Duke Univ., Duke Univ., Duke Univ.*

8:00 RR2 **353.09** Spatial processing in the primary auditory cortex following cholinergic lesions of the basal forebrain in ferrets. F. R. NODAL; N. D. LEACH; P. KEATING; J. C. DAHMEN; A. J. KING*; V. M. BAJO. *Univ. of Oxford.*

9:00 RR3 **353.10** Primary auditory cortex of anaesthetized marmosets: Neuronal sensitivity to interaural level differences for natural vocalizations. L. L. LUI*; Y. MOKRI; D. H. RESER; M. G. P. ROSA; R. RAJAN. *Monash Univ.*

10:00 RR4 **353.11** Whole field spatial receptive fields measured with spatially dense acoustic stimuli in marmoset auditory cortex. E. D. REMINGTON*; X. WANG. *Johns Hopkins Univ. Sch. of Med.*

11:00 RR5 **353.12** High-resolution fMRI phase-mapping of azimuth space in rhesus monkey auditory cortex. M. ORTIZ*; T. STEUDEL; N. K. LOGOTHETIS; J. P. RAUSCHECKER. *Max Planck Inst. for Biol. Cybernetics, Georgetown Univ.*

8:00 RR6 **353.13** A piece of the cocktail party puzzle: a computational model of sound source segregation in the auditory cortex. J. DONG*; H. COLBURN; K. SEN. *Boston Univ.*

9:00 RR7 **353.14** Measuring the efficiency of binaural hearing with magnetoencephalography (MEG). L. E. GASCOYNE; G. B. HENNING; P. L. FURLONG; S. SERI; C. WITTON*. *Aston Univ.*

10:00 RR8 **353.15** Independent or integrated processing of interaural time and level differences in human auditory cortex?C. F. ALTMANN*; S. TERADA; M. KASHINO; T. MIMA; H. FUKUYAMA; S. FURUKAWA. *Kyoto Univ., Human Brain Res. Ctr., Dept. of Psychology, NTT Communication Sci. Labs.*

11:00 RR9 **353.16** The Doppler Effect as a sufficient cue for perception of dangerousness related to looming auditory signals. M. S. OECHSLIN*; L. ROGENMOSER; C. KUHN-RAHLOFF; L. JÄNCKE; M. MEYER; M. NEUKOM. *Univ. of Zurich, Zurich Univ. of the Arts.*

8:00 RR10 **353.17** Regional tuning to interaural time and level differences in human auditory cortex. N. C. HIGGINS*; S. A. MCLAUGHLIN; G. C. STECKER. *Univ. of Washington.*

9:00 RR11 **353.18** Interhemispheric auditory processing of words and tones. S. HOLLOWAY*; K. J. PATTEN; S. MACKNIK; M. K. MCBEATH. *Arizona State Univ., Barrow Neurolog. Inst.*

10:00 RR12 **353.19** The influence of vision on sound localization abilities in both the horizontal and vertical planes. P. VOSS*; V. TABRY; R. J. ZATORRE. *McGill Univ., McGill Univ.*

POSTER

354. Auditory System: Cortical Processing in Animals and Humans

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 RR13 **354.01** Comparison of auditory cortical receptive fields constructed on spikes and local field potentials in mice. X. LIU; F. DING; Y. WANG; J. YAN*. *Univ. of Calgary Fac. of Med., Univ. of Calgary Fac. of Med., Winston Churchill High Sch.*

9:00 RR14 **354.02** Parvalbumin-expressing inhibitory interneurons in auditory cortex are well-tuned for frequency. A. K. HARTMAN*; M. S. WEHR. *Univ. of Oregon.*

10:00 RR15 **354.03** Cellular and laminar specificity of stimulus-specific adaptation in the primary auditory cortex. R. G. NATAN*; L. MWILAMBWE-TSHILOBO; M. N. GEFFEN. *Univ. of Pennsylvania.*

11:00 RR16 **354.04** Locomotion reduces sound-evoked responses in mouse auditory cortex. A. G. GUSEV*; C. MASTON; M. WEHR. *Univ. of Oregon.*

8:00 RR17 **354.05** Unidirectional dual-component propagation of neural activity evoked by sound and electrical stimulation in rat multiple auditory cortical fields revealed by optical imaging with voltage-sensitive dye. J. NISHIKAWA*; M. NOTO; H. W. KITAMURA; T. TATENO. *Grad. Sch. of Information Sci. and Technology, Hokkaido Univ.*

9:00 RR18 **354.06** Neural mechanisms underlying the coding of time-varying stimuli in primary auditory cortex of awake marmoset studied by intracellular recording. L. GAO*; X. WANG. *The Johns Hopkins Univ.*

10:00 RR19 **354.07** Defining harmonic resolvability in the common marmoset (Callithrix jacchus). M. S. OSMANSKI*; X. SONG; X. WANG. *Johns Hopkins Univ. SOM, Johns Hopkins Univ. Sch. of Med.*

11:00 RR20 **354.08** Measurement of pitch discrimination thresholds in the common marmoset (Callithrix jacchus). X. SONG*; M. S. OSMANSKI; X. WANG. *Johns Hopkins University. Dept. of Biomed. Engin.*

8:00 RR21 **354.09** Spectral templates for encoding harmonic structure in marmoset auditory cortex. L. FENG*; X. WANG. *Johns Hopkins Univ.*

9:00 RR22 **354.10** Sensitivity of macaque auditory cortical neurons to amplitude modulation as a function of modulation frequency and duration. K. N. O'CONNOR*; J. R. VERHEIN; M. NIWA; M. L. SUTTER. *UC Davis, Stanford Sch. of Med.*

10:00 RR23 **354.11** Spectral and spatial tuning of onset and offset responses in the auditory cortex of awake macaque monkeys. D. L. RAMAMURTHY*; C. NG; D. T. GRAY; J. A. OVERTON; G. H. RECANZONE. *UC Davis.*

11:00 RR24 **354.12** Dynamical microstates in primary auditory cortex. S. A. NEYMOTIN*; W. W. LYTTON; M. N. O'CONNELL; P. LAKATOS. *Yale University, Sch. of Med., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., Kings County Hosp., Nathan Kline Inst.*

8:00 RR25 **354.13** Multi-scale entrainment of coupled neuronal oscillations in primary auditory cortex (A1). M. N. O'CONNELL*; A. BARCZAK; T. MCGINNIS; D. ROSS; C. E. SCHROEDER; P. LAKATOS. *Nathan Kline Instit, City Col. CUNY, New York Univ. Sch. of Med., Columbia Univ. Col. of Physicians & Surgeons.*

9:00 RR26 **354.14** Intrinsic and synaptic mechanisms of frequency modulated sweep detection. S. W. SKORHEIM*; K. RAZAK; M. BAZHENOV. *Univ. of California Riverside.*

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10:00 SS1 **354.15** Tonotopic organization in monkey auditory cortex using phase-encoded fMRI. O. JOLY*; S. BAUMANN; F. BALEZEAU; A. THIELE; T. D. GRIFFITHS. *Inst. of Neurosci.*

11:00 SS2 **354.16** Human depth electrode recording of auditory cortex responses to different pitch values. P. E. GANDER*; S. KUMAR; K. V. NOURSKI; H. OYA; H. KAWASAKI; M. A. HOWARD, III; T. D. GRIFFITHS. *Univ. of Iowa Hosp. and Clinics, Inst. of Neurosci., Wellcome Trust Ctr. for Neuroimaging.*

8:00 SS3 **354.17** ● Anatomically constrained MEG studies of the temporal dynamics of cortical auditory processing. M. ERHART; P. A. TALLAL*; B. ROGOWSKY; T. JERNIGAN; E. NEWMAN; T. T. BROWN. *UCSD, Rutgers Univ., UCSD.*

9:00 SS4 **354.18** Uncertainty tradeoff between temporal and spectral resolution in a pitch-discrimination task. K. SABERI*; I. HSIEH; A. PETROSYAN; Ó. F. GONÇALVES; G. HICKOK; H. FARAHBOD. *Univ. California, Natl. Central Univ., Univ. of Minho.*

10:00 SS5 **354.19** Toward real-time identification of selective auditory attention in a “cocktail party” using electrocorticographic signals (ECoG) in humans. P. BRUNNER*; A. GUNDUZ; W. G. COON; G. MILSAP; A. L. RITACCIO; G. SCHALK. *Wadsworth Ctr, NYSDOH, Albany Med. Col., Graz Univ. of Technol., Univ. of Florida, State Univ. of New York at Albany, Johns Hopkins Univ.*

11:00 SS6 **354.20** Neural representations of Background speakers at the Cocktail Party. K. C. PUVVADA*; J. Z. SI Mon. *Univ. of Maryland, Univ. of Maryland.*

8:00 SS7 **354.21** Pattern specific adaptation to speech and non-speech sounds in human auditory cortex. C. J. HUMPHRIES*; M. SABRI; N. HEUGEL; K. LEWIS; E. LIEBENTHAL. *Med. Col. of Wisconsin.*

9:00 SS8 **354.22** The song in your head: identifying tonal frequency patterns in auditory cortex. J. M. THOMAS*; I. FINE; G. M. BOYNTON. *Univ. of Washington.*

10:00 SS9 **354.23** Spatial-temporal relationships of oscillatory activity during music processing. C. M. POTES*; P. BRUNNER; A. GUNDUZ; R. KNIGHT; G. SCHALK. *Wadsworth Center, NYS Dept. of Hlth., Univ. of Texas at El Paso, Albany Med. Col., Wadsworth Center, NYS Dept. of Hlth., Graz Univ. of Technol., Univ. of Florida, Univ. of California at Berkeley, Albany Med. Col., State Univ. of New York at Albany.*

11:00 SS10 **354.24** Abnormalities in fine temporal auditory neural entrainment in classical aniridia. A. M. BOBILEV*; W. T. OLIVER; J. P. HAMM; J. E. MCDOWELL; B. A. CLEMENTZ; J. D. LAUDERDALE. *The Univ. of Georgia.*

POSTER

355. Auditory System: Processing in Model Systems and Subcortical Pathways

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 SS11 **355.01** Auditory brainstem responses in the nine-banded armadillo (dasypus novemcinctus). B. MOFFITT; B. SKINNER; S. ATCHERSON; J. J. PADBERG*. *Univ. Central Arkansas, Univ. of Arkansas at Little Rock.*

9:00 SS12 **355.02** Principles of auditory coding in receptor neurons of *Drosophila.* J. CLEMENS*; C. C. GIRARDIN; M. MURTHY. *Princeton Univ., Princeton Univ.*

10:00 TT1 **355.03** Functional analysis of the *Drosophila* auditory pathway. C. C. GIRARDIN*; J. CLEMENS; B. J. DICKSON; M. MURTHY. *Univ. of Konstanz, Princeton Univ., Princeton Univ., Inst. of Mol. Pathology.*

11:00 TT2 **355.04** Characterizing central auditory neurons in *Drosophila.* A. E. BAKER*; A. G. VAUGHAN; B. S. BAKER; R. I. WILSON. *Harvard Univ., Harvard Med. Sch., Janelia Farm Res. Campus, Cold Spring Harbor Lab.*

8:00 TT3 **355.05** Mapping auditory response in the larval zebrafish brain. T. PAGE*; R. BALL; A. T. SORNBORGER; J. D. LAUDERDALE. *Univ. of Georgia, UC Davis.*

9:00 TT4 **355.06** Comparative effects of Valium/Dexdomitor and Ketaset/Dexdomitor, on the input-output characteristics of auditory brainstem response waveforms in guinea pigs. J. YODER*; M. M. ABERNATHY; B. W. WILSON; R. L. TAPP; D. V. GAUVIN; T. J. BAIRD. *MPI Res., MPI Res.*

10:00 TT5 **355.07** Synaptic circuitry mechanisms for the diversity of auditory response patterns in the Dorsal Cochlear Nucleus. M. ZHOU*; H. W. TAO; L. I. ZHANG. *USC.*

11:00 TT6 **355.08** The roles of GABAergic inhibition and synaptic plasticity in the long-interval selectivity of neurons in the anuran inferior colliculus. S. E. ODOM; J. A. GRAHAM; R. K. ALLURI; G. A. VASQUES-OPAZO; G. J. ROSE*. *Univ. Utah.*

8:00 TT7 **355.09** Dimensionality of neuronal response to complex sound in rat inferior colliculus. W. TANG; R. XU; B. HONG*. *Tsinghua Univ.*

9:00 TT8 **355.10** Representation of periodic sounds in the inferior colliculus of the gerbil - Periodotopy revisited. J. W. SCHNUPP*; J. A. GARCIA-LAZARO; N. LESICA. *Oxford Univ., Univ. Col. London.*

10:00 TT9 **355.11** Rapid task-related plasticity of spectrotemporal receptive fields in the auditory midbrain. S. J. SLEE*; S. V. DAVID. *Oregon Hlth. and Sci. Univ.*

11:00 TT10 **355.12** Functional differences between the rostral and caudal regions in the central nucleus of the inferior colliculus. M. STRAKA*; S. J. SCHMITZ; P. T. LEE; M. MCMAHON; R. HUGHES; H. H. LIM. *Univ. of Minnesota.*

8:00 TT11 **355.13** Evoked responses elicited by acoustic and MGB electrical stimulation in the cat. D. A. HORVATH*; R. FIÁTH; L. WITTNER; I. ULBERT; G. KARMOS. *RCNS HAS, Pázmány Péter Catholic Univ. Fac. of Information Technol.*

9:00 TT12 **355.14** Tinnitus related neural changes in the auditory thalamus of awake rats. B. I. KALAPPA*; J. TURNER; T. J. BROZOSKI; D. M. CASPARY. *Southern Illinois Univ. Sch. of Med., Southern Illinois Univ. Sch. of Med., Illinois Col.*

10:00 UU1 **355.15** Auditory responses to the own song with the systematic modification in the avian song nuclei. T. KOUMURA*; Y. SEKI; K. OKANOYA. *The Univ. of Tokyo, ERATO, Japan Sci. and Technol. Agency, RIKEN Brain Sci. Inst.*

POSTER

356. Auditory System: Neural Coding, Experiment and Theory

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 UU2 **356.01** Emergent properties of divergent and convergent harmonic connectivity in the auditory system. M. A. CANTU*. *Boston Univ., Boston Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 UU3 **356.02** Local field potentials have low response-latency variability in bat cochlear nucleus. J. A. SIMMONS*; A. M. SIMMONS; M. WARNECKE; J. R. BARCHI. *Brown Univ., Brown Univ.*

10:00 UU4 **356.03** Neural mechanism of decoding target information embedded in background signal in bat's auditory system. Y. KASHIMORI*. *Univ. Electro-Communications.*

11:00 UU5 **356.04** Sampling methods for the neural representation of priors. B. J. FISCHER*; D. RICH; J. L. PENA. *Seattle Univ., Albert Einstein Col. of Med.*

8:00 UU6 **356.05** Three dimensional maps of neurophysiological responses to acoustic stimulation in the inferior colliculus. S. J. OFFUTT*; J. E. POHL; K. J. RYAN; M. H. HARRIS; H. H. LIM. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

9:00 UU7 **356.06** Nonlinear oscillation accounts for the perception of residue pitch and its brainstem EEG correlate. K. LERUD*; J. KIM; E. W. LARGE. *Florida Atlantic Univ.*

10:00 UU8 **356.07** Learning the stimulus space geometry from auditory neural population responses. B. ENGLITZ*; S. SHAMMA. *Univ. of Maryland, Col. Park, Ecole Normale Superieure.*

11:00 UU9 **356.08** Encoding rapid envelope dynamics in primate auditory cortex. B. J. MALONE*; B. H. SCOTT; M. N. SEMPLE. *UCSF Sch. of Med., NIMH, New York Univ.*

8:00 UU10 **356.09** Population responses for the simultaneous encoding of sound intensity and identity in primary auditory cortex. W. SUN*; D. L. BARBOUR. *Washington Univ. In St. Louis.*

9:00 UU11 **356.10** Active engagement reduces intrinsic and correlated variability in primary and belt auditory cortex. J. D. DOWNER*; M. NIWA; M. SUTTER. *UC Davis.*

10:00 UU12 **356.11** Changes in mutual information, redundancy, and stimulus selectivity of simultaneously recorded neurons in the developing primary auditory cortex. B. F. ALBANNA; M. INSANALLY*; M. R. DEWEESE; S. BAO. *Univ. of California, Berkeley, Redwood Ctr. for Theoretical Neurosci., NYU Sch. of Medicine, Skirball Inst., Univ. of California, Berkeley.*

11:00 UU13 **356.12** Laminar dependence of core and belt auditory cortical areas during spontaneous activity. J. L. HERRERO*; Y. KAJIKAWA; P. LAKATOS; C. SCHROEDER. *Columbia Univ., Nathan Klein Inst.*

8:00 UU14 **356.13** Brain responses to auditory novelty under general anesthesia is anesthetic agent dependent : Evidence from monkey fMRI studies. L. UHRIG*; D. JANSSEN; S. DEHAENE; B. JARRAYA. *INSERM Avenir, CEA Neurospin, CEA Neurospin, INSERM Unicog, Collège de France, Neuromodulation unit, Dept. of Neurosurgery, Foch Hospital, Univ. of Versailles Saint-Quentin.*

9:00 UU15 **356.14** Alteration of auditory stimulus representation across anesthetic state. M. I. BANKS*; B. M. KRAUSE; S. M. GRADY; A. RAZ. *Univ. of Wisconsin, Univ. of Wisconsin, Rabin Med. Ctr., Sackler Sch. of Medicine, Tel Aviv Univ.*

10:00 UU16 **356.15** Envelope-locked EEG signals permit robust classification of attended speaker in a cocktail party task. C. HORTON*; M. D'ZMURA; R. SRINIVASAN. *Univ. of California, Irvine.*

11:00 UU17 **356.16** *In-vivo* structural and functional parcellation of human auditory cortex using magnetic resonance imaging at 7 Tesla. J. BESLE*; O. MOUGIN; R. SÁNCHEZ-PANCHUELO; S. WHARTON; P. GOWLAND; R. BOWTELL; S. FRANCIS; K. KRUMBHOLZ. *Med. Res. Council, Univ. of Nottingham.*

POSTER

357. Multisensory: Temporal Factors in Cross-Modal Processing

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 UU18 **357.01** Inactivation of the rat posterior parietal cortex during multisensory decision-making. D. NUNES RAPOSO*; A. K. CHURCHLAND. *Cold Spring Harbor Lab.*

9:00 UU19 **357.02** Diminished high gamma response in superior temporal cortex during incongruent audiovisual speech perception. M. OZKER*; I. SCHEPERS; D. YOSHOR; M. BEAUCHAMP. *Univ. of Texas Hlth. Sci. Ctr. At Houston, Dept. of Neurosurgery, Baylor Col. of Med.*

10:00 UU20 **357.03** A phase-resetting framework for crossmodal influences on perception. G. R. STONER*; T. D. ALBRIGHT; H. KAFALIGONUL. *The Salk Inst. Biol Studies, Natl. Magnetic Resonance Res. Ctr. (UMRAM), Bilkent Univ.*

11:00 UU21 **357.04** The effects of audiovisual speech congruency on the representation of the speech envelope in human auditory cortex. M. J. CROSSE*; E. C. LALOR. *Trinity Col. Dublin, Trinity Col. Dublin, Trinity Col. Dublin.*

8:00 UU22 **357.05** Visual predictions speed-up auditory processing: An EEG study. T. PARIS*; J. KIM; C. DAVIS. *MARCS, UWS.*

9:00 UU23 **357.06** Role of inverse effectiveness in multisensory evidence accumulation. A. R. NIDIFFER*; M. T. WALLACE. *Vanderbilt Univ.*

10:00 UU24 **357.07** ▲ Attention is necessary for the integration of audiovisual speech stimuli but unnecessary for the integration of non-speech stimuli. E. ALIGBE*; B. A. EGGLESTON; L. D. KWAKYE. *Oberlin Col.*

11:00 UU25 **357.08** Attention shifts the temporal relationship between visual and auditory stimuli in the crossmodal temporal order judgment task. L. D. KWAKYE*; B. A. EGGLESTON; E. ALIGBE. *Oberlin Col., Oberlin Col.*

8:00 UU26 **357.09** Can non-synesthetes associate musical timbre with shapes? M. ADELI; S. MOLOTCHNIKOFF; J. ROUAT*. *Univ. De Sherbrooke, Univ. de Montréal, Univ. De Sherbrooke, Univ. de Montreal.*

9:00 VV1 **357.10** Pre-attentive tone processing in colored-hearing synesthetes. L. ROGENMOSER*; S. ELMER; L. JÄNCKE. *Inst. of Psychology, Univ. of Zurich.*

10:00 VV2 **357.11** Early modality-specific somatosensory cortical regions are modulated by attended visual stimuli: Interaction of vision, touch and behavioural intent. C. POPOVICH*; J. K. DIONNE; W. R. STAINES. *Univ. of Waterloo.*

11:00 VV3 **357.12** An MEG study of visual-tactile integration using the rubber hand illusion. H. SAKUMA*; A. AOYAMA; S. HONDA. *Keio Univ., Keio Univ.*

8:00 VV4 **357.13** Cross-modal sensory integration of visual-tactile motion information: Instrument design and human psychophysics. Y. M. HSU*; T. CHANG; T. LEE; S. SAHA; M. GOMEZ-RAMIREZ; Y. PEI. *Chang Gung Mem. Hosp. At Linkou, Johns Hopkins Univ., Chang Gung Univ., Chang Gung Univ.*

9:00 VV5 **357.14** Auditory-tactile integration in temporal frequency discrimination. J. HUANG*; Y. ZHANG; M. REINHARDT; S. HSIAO; X. WANG. *Johns Hopkins Univ., Tsinghua Univ., Johns Hopkins Univ., Johns Hopkins University; Tsinghua Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

358. Striate Cortex: Neural Coding II

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 VV6 **358.01** Oscillations comprised of multiple narrow frequency bands during cortical visual processing. J. POBST*; W. CLAWSON; W. SHEW; R. WESSEL. *Washington Univ. In St. Louis, Univ. of Arkansas.*

9:00 VV7 **358.02** ▲ Cortical visual processing at criticality. W. CLAWSON*; W. SHEW; J. POBST; Y. KARIMIPANAH; R. WESSEL. *Univ. of Arkansas, Washington Univ.*

10:00 VV8 **358.03** Neuronal avalanches at single-cell resolution in mouse visual cortex *in vivo.* Y. KARIMIPANAH; A. KWAN; Y. DAN; R. WESSEL*. *Wash Univ., UC Berkeley.*

11:00 VV9 **358.04** Responses to black and white stimuli in the primary visual cortex explained by a model that combines luminance and contrast. G. ZURAWEL*; I. AYZENSHTAT; R. M. SHAPLEY; H. SLOVIN. *The Leslie and Susan Gonda (goldschmied) Multidisciplinary Brain Res. Ctr., Ctr. for Neural Science, New York Univ.*

8:00 VV10 **358.05** Increasing the visuotopic extent of normalization through cortico-cortical feedback. C. GOMEZ-LABERGE*; J. J. NASSI; G. KREIMAN; R. T. BORN. *Harvard Med. Sch., Boston Children's Hosp., Salk Inst., Harvard Univ.*

9:00 VV11 **358.06** Gratings elicit narrowband gamma responses in human visual field potentials; Faces, houses, and noise patterns elicit broadband responses. J. WINAWER*; D. HERMES; J. PARVIZI; B. A. WANDELL; K. J. MILLER. *Stanford Univ., New York Univ., Stanford Univ., Stanford Univ.*

10:00 VV12 **358.07** Does V1 anticipate moving stimuli? T. S. HARTMANN*; R. T. BORN. *Harvard Med. Sch.*

11:00 VV13 **358.08** Testing the functional significance of directional selectivity in the developing primary visual cortex. M. POPOVIC*; S. D. VAN HOOSER; J. FISER. *Brandeis Univ., Brandeis Univ., Central European Univ.*

8:00 VV14 **358.09** Noise correlations induced by computation. I. KANITSCHEIDER*; R. COEN-CAGLI; A. POUGET. *Univ. of Geneva, Univ. of Rochester.*

9:00 VV15 **358.10** Neural correlates of Vasarely's nested squares and the Alternating Brightness Star illusion in area V1. J. CUI*; S. L. MACKNIK; X. G. TRONCOSO; J. OTERO-MILLAN; S. MARTINEZ-CONDE. *Barrow Neurolog. Inst., Information et Complexite, (CNRS-UNIC).*

10:00 VV16 **358.11** Coding of stimulus orientation and position by cells in tree shrew primary visual cortex examined by two photon calcium imgaing. W. H. BOSKING*; X. HUANG; D. E. WILSON; D. FITZPATRICK. *Max Planck Florida Inst. For Neurosci.*

11:00 VV17 **358.12** State dependence of noise correlations in monkey primary visual cortex. A. S. ECKER*; P. BERENS; R. J. COTTON; M. SUBRAMANIYAN; G. H. DENFIELD; S. M. SMIRNAKIS; M. BETHGE; A. S. TOLIAS. *Ctr. For Integrative Neurosci., Baylor Col. of Med.*

8:00 VV18 **358.13** Bidirectional modulation of neuronal ensembles underlies encoding of natural scenes with different spatial frequencies. M. F. IACARUSO*; G. BILLINGS; S. B. HOFER; Y. HAN; E. SADER; T. D. MRSIC-FLOGEL; R. A. SILVER. *Univ. Col. London.*

9:00 VV19 **358.14** The position of V1 receptive fields shift to reflect perceived object size in a corridor illusion. A. M. NI; S. O. MURRAY; G. D. HORWITZ*. *Univ. of Washington, Univ. of Washington.*

10:00 VV20 **358.15** Stimulus Specific Adaptation in turtle visual cortex. J. FOURNIER; C. M. MUELLER*; G. LAURENT. *Max-Planck-Institute For Brain Res., Max-Planck-Institute For Brain Res.*

11:00 VV21 **358.16** Dynamic coding of statistical distribution of luminance in primary visual cortex. Y. WANG*; Y. WANG. *Inst. of Biophysics, Univ. of Chinese Acad. of Sci.*

8:00 VV22 **358.17** How smart is surround suppression in V1 and how dumb does it get when feedback from V2/V3 is removed? A. TROTT*; S. G. LOMBER; R. T. BORN. *Harvard Med. Sch., Univ. of Western Ontario.*

9:00 WW1 **358.18** Ongoing activity impacts network coding and visual behavior. C. BEAMAN*; D. GUTNISKY; S. LEW; V. DRAGOI. *The Univ. of Texas Hlth. Sci. Ctr. At Houston, Howard Hughes Med. Inst., Inst. de Ingeniería Biomédica.*

POSTER

359. Striate Cortex: Response Properties II

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 WW2 **359.01** Making the blind see: Imaging the cortical retinotopy of blind rodents with a retina reactivated by optogenetics. E. MACÉ*; O. MARRE; P. BARBE; R. CAPLETTE; M. DESROSIERS; J. SAHEL; D. DALKARA; S. PICAUD. *Vision Inst.*

9:00 WW3 **359.02** Lateral connectivity causes divisive normalization in visual cortex. T. SATO*; M. HÄUSSER; M. CARANDINI. *Univ. Col. London, Univ. Col. London.*

10:00 WW4 **359.03** The coding of centre and surround naturalistic visual stimuli by pyramidal, parvalbumin and somatostatin neurons in mouse visual cortex. Y. HAN*; E. SADER; M. PECKA; T. MRSIC-FLOGEL. *Univ. Col. London.*

11:00 WW5 **359.04** Locomotion broadens spatial integration of neurons in layer 2/3 of mouse primary visual cortex. M. DIPOPPA*; M. CARANDINI; K. D. HARRIS; A. RANSON. *Univ. Col. London, Univ. Col. London, Univ. Col. London.*

8:00 WW6 **359.05** Fast temporal processing in the mouse early visual system during wakefulness. N. T. DHRUV*; M. CARANDINI. *Univ. Col. London.*

9:00 WW7 **359.06** Imaging visual cortex in awake mice with genetically-encoded voltage and calcium indicators. L. F. ROSSI; D. SHIMAOKA; T. SATO; T. KNOPFEL; M. CARANDINI; A. BENUCCI*. *Univ. Col. London, RIKEN Brain Sci. Inst., Imperial Col.*

10:00 WW8 **359.07** Silencing activity of individual neurons throughout development does not prevent maturation of orientation and direction selectivity in mouse visual cortex. K. M. HAGIHARA*; Y. TAGAWA; T. YOSHIDA; K. OHKI. *Kyushu Univ., CREST, Kyoto Univ.*

11:00 WW9-DP7 **359.08** Intracellular correlates of behavioral state in mouse visual cortex. C. BENNETT*; S. ARROYO; S. HESTRIN. *Stanford Sch. of Med.*

8:00 WW10 **359.09** The effect of anesthesia on activity and modulation of visually responsive neurons in cortical and subcortical areas. I. AASEBØ*; E. S. NORHEIM; K. K. LENSJØ; M. FYHN; T. HAFTING *. *Univ. of Oslo, Norwegian Univ. of Life Sci.*

9:00 WW11 **359.10** Cortical processing in awake, behaving rats after removal of perineuronal nets. K. K. LENSJØ*; G. DICK; E. S. NORHEIM; T. HAFTING; M. FYHN*. *Universtity of Oslo.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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10:00 WW12 **359.11** V1 single neurons can distinguish between motion in the world and visual displacements due to eye movements. X. G. TRONCOSO; M. B. MCCAMY; A. NAJAFIAN JAZI; J. OTERO-MILLAN; S. L. MACKNIK; S. MARTINEZ-CONDE*. *Barrow Neurolog. Inst., CNRS - UNIC, Arizona State Univ., Univ. of Vigo.*

11:00 WW13 **359.12** Two distinct mechanisms for emergence of direction selectivity coexist in generic random recurrent neural networks. D. TSIGANKOV*; M. KASCHUBE. *Frankfurt Inst. For Advanced Studies.*

8:00 WW14 **359.13** Long delayed cortical responses impact visual processing and perception. K. FUNAYAMA*; N. MATSUMOTO; G. MINAMISAWA; N. MATSUKI; Y. IKEGAYA. *Grad. Sch. of Pharmaceut. Sciences, The Univ. of Tokyo.*

9:00 WW15 **359.14** Contrast response functions are identical at multiple spatiotemporal frequencies within single neurons in primary visual cortex. K. S. SASAKI*; I. OHZAWA. *Osaka Univ., CiNet (Center for Information and Neural Networks).*

10:00 WW16 **359.15** Nonlinear, non-oriented receptive fields in early visual cortex: Possible precursors to second-order processing. A. GHARAT*; C. L. BAKER. *McGill Univ.*

11:00 WW17 **359.16** Effect of attention and surround suppression on gamma oscillations in inhibition stabilized networks. Y. AHMADIAN*; K. D. MILLER. *Columbia Univ.*

8:00 WW18 **359.17** Phase-domain analysis of motion selectivity in V1 neurons. T. NAKAZONO*; I. OHZAWA. *Osaka Univ., Ctr. for Information and Neural Networks(CiNet).*

9:00 WW19 **359.18** The neural representation of brightness and its temporal dynamics in the cat primary visual cortex. S. SHIMEGI*; S. SOMA; N. SUEMATSU; A. KIMURA; A. SATO; D. YOSHIOKA; H. SATO. *Osaka Univ., Osaka Hlth. Sci. Univ.*

10:00 WW20 **359.19** Visual training-induced decrease in noise correlation indicates a dominant role of recurrent connections in visual cortical motion processing. M. KASCHUBE*; D. TSIGANKOV; S. D. VAN HOOSER; A. SEDERBERG. *Frankfurt Inst. For Advanced Studies, Brandeis Univ., Univ. of Chicago.*

POSTER

360. Visual Motion: Neural Mechanisms

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 WW21 **360.01** Primate parasol (magnocellular-projecting) ganglion cells exhibit direction sensitivity. M. B. MANOOKIN*; C. PULLER; F. RIEKE; J. NEITZ; M. NEITZ. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Howard Hughes Med. Inst.*

9:00 WW22 **360.02** Surround modulation in visual area MT: Suppression/facilitation, antagonism/integration. M. A. LOPES*; H. KAFALIGONUL; T. D. ALBRIGHT; G. R. STONER. *Salk Inst., Univ. of Coimbra, Bilkent Univ.*

10:00 XX1 **360.03** A neural correlate of the line motion illusion in area MT. P. WALLISCH*. *New York Univ.*

11:00 XX2 **360.04** Modulation of stimulus processing by network activity across cortical depth in area MT. Y. CUI*; L. D. LIU; J. M. MCFARLAND; C. C. PACK; D. A. BUTTS. *Univ. of Maryland, McGill Univ.*

8:00 XX3 **360.05** Gain modulation by eye movements as a mechanism for representing depth from motion parallax in area MT. H. R. KIM*; D. E. ANGELAKI; G. C. DEANGELIS. *Univ. of Rochester, Baylor Col. of Med.*

9:00 XX4 **360.06** The neuronal mechanism for processing random-dot motion at various speeds in early visual cortices. X. AN; H. GONG*; N. MCLOUGHLIN; Y. YANG; W. WANG. *Inst. of Neuroscience, State Key Lab. of Neuroscience, CAS, CAS Key Lab. of Brain Function and Diseases, Sch. of Life Sciences, Univ. of Sci. and Technol. of China, Fac. of Life Sciences, Univ. of Manchester.*

10:00 XX5 **360.07** The depth from motion problem can be solved using the properties of neurons along the primate visual motion pathway. J. A. PERRONE*; R. J. KRAUZLIS; L. S. STONE. *The Univ. Of Waikato, Natl. Eye Institure, NASA Ames Res. Ctr.*

11:00 XX6 **360.08** Macaque ventral intraparietal area (VIP) compensates for smooth pursuit during translations using both retinal and extra-retinal cues. A. SUNKARA*; G. C. DEANGELIS; D. E. ANGELAKI. *Washington Univ. In St. Louis, Univ. of Rochester, Baylor Col. of Med.*

8:00 XX7 **360.09** Roles of retinal and extra-retinal rotation cues in heading estimation during smooth pursuit. D. E. ANGELAKI*; E. M. KLIER; A. SUNKARA; G. C. DEANGELIS. *Baylor Col. of Med., Baylor Col. Med., Washington Univ. in St. Louis, Univ. of Rochester.*

9:00 XX8 **360.10** Tuning properties of MT and MSTd and divisive interactions for eye-movement compensation. B. CAO*; A. YAZDANBAKHSH. *Boston Univ., Boston Univ.*

10:00 XX9 **360.11** Influence of surround suppression in cortical area MT on motion discrimination performance. L. D. LIU*; C. C. PACK. *McGill Univ., Montreal Neurolog. Inst.*

11:00 XX10 **360.12** Selectivity for motion and binocular disparity in macaque area V6. R. H. FAN*; S. LIU; G. C. DEANGELIS; D. E. ANGELAKI. *Baylor Col. of Med., Univ. of Rochester.*

8:00 XX11 **360.13** Attentional influences on self-movement cue integration in monkey MSTd neurons. W. K. PAGE*; C. J. DUFFY. *Univ. of Rochester.*

9:00 XX12 **360.14** Neurophysiological markers of covert orientation in aging and Alzheimer's disease. C. LOCKWOOD*; A. MONACELLI; C. J. DUFFY. *Univ. of Rochester.*

10:00 YY1 **360.15** Cortical specialization for the perception and control of self-movement: The roles of MST and LIP in steering. M. S. JACOB*; C. T. LOCKWOOD; C. J. DUFFY. *Univ. of Rochester, Univ. of Rochester.*

11:00 YY2 **360.16** Neuronal activities in the cortical MT/MST area during initial ocular following depend on the Fourier components of the motion stimulus. K. MIURA*; N. INABA; Y. AOKI; K. KAWANO. *Grad. Schl Med, Kyoto Univ.*

8:00 YY3 **360.17** Estimating heading in the presence of moving objects: Population decoding of activity from area MSTd. R. SASAKI*; D. E. ANGELAKI; G. C. DEANGELIS. *Univ. of Rochester, Baylor Col. of Med., Univ. of Rochester.*

9:00 YY4 **360.18** ● Near-optimal multisensory integration revisited. A. ONKEN*; G. C. DEANGELIS; D. E. ANGELAKI; A. POUGET. *Univ. of Geneva, Univ. of Rochester, Rice Univ., UCL.*

10:00 YY5 **360.19** A normalization model of multisensory integration accounts for distinct forms of cross-modal and within-modal cue integration by cortical neurons. T. OSHIRO*; D. E. ANGELAKI; G. C. DEANGELIS. *Univ. of Rochester, Dept. of Neuroscience, Baylor Col. of Med.*

11:00 YY6 **360.20** A novel stationary pattern inhibited high-speed motion sensitive visual neuron. Y. LEE*; K. NORDSTRÖM; R. DE HAAN. *Uppsala Univ., Univ. Amsterdam.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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8:00 YY7 **360.21** Plaid motion responses in mouse V1 and extrastriate visual areas. A. L. JUAVINETT*; E. M. CALLAWAY. *The Salk Inst. for Biol. Studies.*

9:00 YY8 **360.22** Characterization of primate visual cortex responses to local motion signals: Fourier, non-Fourier, and glider. E. I. NITZANY; Q. HU; A. M. SCHMID; Y. YU; J. D. VICTOR*. *Weill Cornell Med. Col.*

10:00 YY9 **360.23** Pulvinar affects the middle temporal area (MT) activity in primate. K. LI*; G. PURUSHOTHAMAN; R. T. MARION; Y. JIANG; D. YAMPOLSKY; J. A. MAVITY-HUDSON; V. A. CASAGRANDE. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

11:00 YY10 **360.24** Real-time decoding of visual stimuli in the visual cortex of attentive primates. C. L. BUCKLEY*; T. YANAGAWA; K. TAKAURA; N. FUJI; T. TOYOIZUMI. *RIKEN BSI, RIKEN BSI.*

POSTER

361. Feature-Based Attention

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 YY11 **361.01** Feature-based attentional modulation of human BOLD responses to spiral motion patterns. S. FAZELI NEISHABOUR*; C. SCHMIDT-SAMOA; P. DECHENT; S. TREUE. *German Primate Ctr., Univ. Med. Goettingen, Bernstein Ctr. for Computat. Neurosci. Goettingen.*

9:00 YY12 **361.02** Feature-based attention influences surround suppression in human visual cortex. A. V. FLEVARIS; S. O. MURRAY*. *Univ. Washington.*

10:00 ZZ1 **361.03** The role of working memory in top-down modulation of attentional capture. O. R. JACOBY*; R. W. REMINGTON; S. I. BECKER; M. R. KAMKE; J. B. MATTINGLEY. *The Univ. of Queensland, The Univ. of Queensland, The Univ. of Queensland, The Univ. of Queensland.*

11:00 ZZ2 **361.04** Mechanisms of global color-based attention: Dissociating the role of feature- and object-based selection. M. V. BARTSCH*; C. N. BOEHLER; M. A. SCHOENFELD; J. HOPF. *Leibniz Inst. for Neurobio., Ghent* University, Otto-von-Guericke Univ.

8:00 ZZ3 **361.05** Flexible coding of visual objects in human visual and multiple-demand cortex. M. C. MUR*; S. BRUEGGEMANN; J. DUNCAN. *MRC Cognition and Brain Sci. Unit.*

9:00 ZZ4 **361.06** Visual salience and memory modulate viewing behavior of natural scenes in monkeys. S. KOENIG*; E. A. BUFFALO. *Georgia Tech. and Emory Univ., Yerkes Natl. Primate Res. Ctr., Emory Univ.*

10:00 ZZ5 **361.07** Neural mechanisms of object-based attention in MEG. D. BALDAUF*; R. DESIMONE. *MIT.*

11:00 ZZ6 **361.08** Effects of prefrontal cortex inactivation on behavior and visual selection in FEF during a free-viewing search task. N. P. BICHOT*; M. T. HEARD; R. DESIMONE. *MIT.*

8:00 ZZ7 **361.09** Effects of attention on spike synchrony reveal proto-object mechanism in visual cortex. A. B. MARTIN*; R. VON DER HEYDT. *Princeton Univ., Princeton Univ., The Johns Hopkins Univ., The Johns Hopkins Univ.*

POSTER

362. Sensorimotor Transformations in the Superior Colliculus

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 ZZ8 **362.01** Intention mirrors attention in the superior colliculus during visual search. N. J. GANDHI*; U. K. JAGADISAN. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

9:00 ZZ9 **362.02** Suppression of a salient but irrelevant distractor in the superior colliculus. U. K. JAGADISAN*; N. J. GANDHI. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

10:00 ZZ10 **362.03** The functional contribution of the frontal eye fields to spiking activity and local field potentials in the intermediate superior colliculus. T. R. PEEL*; T. WOMELSDORF; S. G. LOMBER; B. D. CORNEIL. *Western Univ., York Univ., Western Univ.*

11:00 ZZ11 **362.04** Comparison of visual and/or visuo-spatial updating responses in superior colliculus visual neurons during smooth pursuit eye movements. J. CRAWFORD*; S. DASH; S. ALIPOUR-NAZARI; X. YAN; H. WANG. *York Univ.*

8:00 ZZ12 **362.05** Extrafoveal smooth pursuit after microstimulation of the deep superior colliculus (dSC): Behavioral characterization and recordings in FEFsem and MSTd. J. FLEURIET; L. BAKST; S. ONO; M. J. MUSTARI*. *Univ. Washington.*

9:00 ZZ13 **362.06** Visuomotor processing in the Superior Colliculus: Comparison between single unit activity and local field potentials. T. IKEDA*; S. E. BOEHNKE; B. J. WHITE; C. WANG; R. A. MARINO; R. LEVY; D. P. MUNOZ. *Queen's Univ.*

10:00 ZZ14 **362.07** Effects of prefrontal cortex deactivation on local field potential activity in the superior colliculus. J. L. CHAN*; M. J. KOVAL; T. WOMELSDORF; S. G. LOMBER; S. EVERLING. *Univ. of Western Ontario, Duke Univ., York Univ.*

11:00 ZZ15 **362.08** The properties of collision sensitive neurons in the rat superior colliculus. G. BARANAUSKAS*; G. SVIRSKIS; N. SVIRSKIENE; T. TKATCH. *Lithuanian Univ. of Hlth. Sci.*

8:00 ZZ16 **362.09** Examining the dopamine projection to the superior colliculus. A. D. BOLTON*; Y. MURATA; T. DANG; M. CONSTANTINE-PATON. *MIT, MIT.*

9:00 ZZ17 **362.10** Intrinsic operation of lamprey tectum - from retina to motor command. A. A. KARDAMAKIS*; B. ROBERTSON; S. GRILLNER. *Karolinska Inst.*

10:00 ZZ18 **362.11** Network mechanisms underlying looming stimuli detection in the optic tectum, and their maturation during development. A. S. KHAKHALIN*; H. XU; C. D. AIZENMAN; C. RAMIREZ. *Brown Univ., Brown Univerisy, Baylor Col. of Med., Brown Univerisy.*

11:00 ZZ19 **362.12** Parallel midbrain microcircuits perform independent temporal transformations. C. A. GODDARD*; J. HUGUENARD; E. KNUDSEN. *Stanford Univ., Stanford Univ., Stanford Univ.*

8:00 ZZ20 **362.13** Optogenetic investigation of cholinergic mechanisms modulating midbrain motor output. E. A. STUBBLEFIELD*; G. FELSEN. *Univ. of Colorado Denver Sch. of Med., Univ. of Colorado Denver & Anschutz Med. Campus.*

9:00 ZZ21 **362.14** Characterization of the Tecto-GLv projection involved in gaze orienting movements in the chicken. T. VEGA-ZUNIGA*; S. WEIGEL; B. EBERHARDT; H. LUKSCH. *Technische Univ. Muenchen.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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POSTER

363. Circuitry for Non-Saccadic Eye Movements

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 ZZ22 **363.01** ▲ Equilibria and transitions during visual tracking: Learning to track a moving visual target in the monkey. C. BOURRELLY; J. QUINET; L. GOFFART*. *Aix-Marseille Univ., CNRS.*

9:00 ZZ23 **363.02** Building an internal model of expected target position for the control of visual tracking. J. J. QUINET*; C. BOURRELLY; L. GOFFART. *Inst. de Neurosciences de la Timone, UMR7289, CNRS, Aix-Marseille Univ.*

10:00 ZZ24 **363.03** Morphology and distribution of two inputs to the oculomotor nucleus in the macaque. P. J. MAY*; M. O. BOHLEN; S. WARREN. *Univ. Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

11:00 ZZ25 **363.04** Does the fastigial nucleus project directly to oculomotor motoneurons? M. O. BOHLEN*; S. WARREN; A. P. MORENO; P. J. MAY. *Program In Neurosci., Univ. Of Mississippi Med. Ctr., Millsaps Col., Millsaps Col., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

8:00 ZZ26 **363.05** Adaptations in extraocular muscle after neurotrophic factor delivery. C. WILLOUGHBY*; M. J. MUSTARI; L. K. MCLOON. *Univ. of Minnesota, Univ. of Washington.*

9:00 AAA1 **363.06** The structural and genotypic organization of temporal integrators in the oculomotor system. M. M. LEE*; E. R. F. AKSAY. *Weill Cornell Med. Col., Weill Cornell Med. Col.*

10:00 AAA2 **363.07** Intrinsic membrane properties and nicotinic receptor-mediated current responses of cholinergic neurons in the medial vestibular and prepositus hypoglossi nuclei as analyzed in ChAT-tdTomato transgenic rats. Y. ZHANG*; R. KANEKO; Y. YANAGAWA; Y. SAITO. *Gunma Univ. Grad. Sch. of Med., Gunma Univ. Grad. Sch. of Med.*

11:00 AAA3 **363.08** Persistent neural activity underlying vergent fixations and prey capture. A. D. RAMIREZ*; K. DAIE; E. AKSAY. *Home, Weill Cornell Med. Col.*

8:00 AAA4 **363.09** Do topographically distinct abducens motor neuron pools innervate the superior and inferior compartments of the lateral rectus muscle? J. L. DEMER*; M. A. MITTELMAN-SMITH; P. E. MICEVYCH; V. POUKENS; P. FOELLER; L. T. TYCHSEN. *Jules Stein Eye Inst., Univ. of California Los Angeles, Univ. of California Los Angeles, Washington Univ. at St. Louis.*

9:00 AAA5 **363.10** Gaze holding in acute unilateral ischemic cerebellar lesions. A. A. TARNUTZER; G. BERTOLINI; C. J. BOCKISCH; B. SCHUKNECHT; D. STRAUMANN*; S. MARTI. *Univ. Hosp. Zurich, Dept. of Neurol., Univ. Hosp. Zurich, Depts. of Neurology, Ophthalmology and Otorhinolaryngology, Medizinisch Radiologisches Inst. MRI.*

10:00 AAA6 **363.11** Mechanism of Rebound Nystagmus. G. BERTOLINI*; A. A. TARNUTZER; I. OLASAGASTI; K. P. WEBER; D. STRAUMANN; S. MARTI. *Dept. of Neurology, Univ. Hosp. Zurich, Dept. of Neurol. and Dept. of Ophthalmology, Univ. Hosp. Zurich.*

11:00 AAA7 **363.12** Evolution of response latency through the sensory-motor circuit for smooth pursuit eye movement. J. LEE*; M. JOSHUA; J. F. MEDINA; D. SCHOPPIK; S. G. LISBERGER. *Duke Med. Ctr., Howard Hughes Med. Inst., Univ. of Pennsylvania, Harvard Univ.*

8:00 AAA8 **363.13** Stimulus configuration shapes the attentional spotlight during smooth pursuit. S. N. WATAMANIUK*; S. J. HEINEN. *Wright State Univ., The Smith-Kettlewell Eye Res. institute.*

9:00 AAA9 **363.14** Smooth pursuit is penalized by small spot stimuli. S. J. HEINEN*; S. WATAMANIUK. *Smith-Kettlewell Eye Res. Inst., Wright State Univ.*

10:00 AAA10 **363.15** Development of predictive eye movements during childhood. C. EGO*; J. ORBAN DE XIVRY; D. YÜKSEL; P. LEFÈVRE. *Univ. catholique de Louvain, Univ. catholique de Louvain, Cliniques universitaires Saint-Luc.*

11:00 AAA11 **363.16** The effects of smooth pursuit adaptation on visuomotor processing. S. ONO*. *Univ. of Washington.*

8:00 AAA12 **363.17** Mapping the macaque superior temporal sulcus: Functional delineation of vergence and version-related activity. M. K. WARD*; M. S. BOLDING; K. P. SCHULTZ; P. D. R. GAMLIN. *Univ. Alabama, Birmingham, Univ. Alabama, Birmingham, Univ. Alabama, Birmingham.*

9:00 AAA13 **363.18** Novel techniques for rapid assessment of oculomotor function. K. H. BEATON*; M. C. SCHUBERT; M. SHELHAMER. *John Hopkins Univ. Sch. of Med., John Hopkins Univ. Sch. of Med.*

POSTER

364. Saccades: Psychophysics and Metrics

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 AAA14 **364.01** ● Gaze control without the fovea. H. MAZYAR*; B. S. TJAN. *USC, USC.*

9:00 AAA15 **364.02** The dependence of saccade inhibition on repititve distractors. Y. SHAN*; J. EDELMAN. *The Grad. Center, CUNY, The City Col. of New York.*

10:00 AAA16 **364.03** Naturalistic pacing of reactive saccades increases their peak velocities. M. R. HARWOOD; M. J. GRAY; A. BLANGERO*. *City Col. of New York, City Col. of New York.*

11:00 AAA17 **364.04** Saccade reaction time with short fixation intervals. J. A. EDELMAN*; A. DRAZEVIC. *City Col. of New York, City Col. of New York.*

8:00 AAA18 **364.05** Explicit reinforcement versus visual error feedback in driving saccade adaptation. T. M. GERSCH*; A. BLANGERO; J. A. EDELMAN; M. R. HARWOOD. *City Col. of New York, City Col. of New York, City Col. of New York.*

9:00 AAA19 **364.06** Effects of spatial cueing on the accuracy of visually guided saccades. T. HAARMEIER*; P. SCHELLHORN. *RWTH Aachen Univ., Neurol. Dept.*

10:00 AAA20 **364.07** Humans and monkeys fixational saccades are scaled with the statistics of naturalistic visual scenes. G. MASSON*; C. SIMONCINI; J. QUINET; L. U. PERRINET; A. MONTAGNINI; L. GOFFART. *Inst. De Neurosciences De La Timone.*

11:00 AAA21 **364.08** Mapping the time-course of extraretinal motion suppression during and near saccades. A. L. FROST*; M. NIEMEIER. *Univ. of Toronto.*

8:00 AAA22 **364.09** Unseen visual distractors affect saccade trajectories in hemidecorticate patients. K. RATH-WILSON*; D. GUITTON. *Montreal Neurolog. Inst.*

9:00 AAA23 **364.10** Adapting remapped saccades. A. Z. KHAN*; D. LEVY-BENCHETON; D. PÉLISSON; L. PISELLA. *Queen's Univ., Ctr. de Recherche en Neurosciences de Lyon (CRNL), ImpAct team, Inserm U1028, CNRS UMR 5292.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 AAA24 **364.11** Confirmation of the cerebellar model of schizophrenia by saccadic adaptation and smooth pursuit eye movement experiments. N. L. PORT*; B. REDICK; J. HOWELL; D. WESTFALL; A. R. BOLBECKER; B. F. O'DONNELL; W. P. HETRICK. *Indiana Univ., Indiana Univ., Indiana Univ.*

11:00 AAA25 **364.12** Modulation of stimulus saliency and modality on transient pupil responses. C. WANG*; S. E. BOEHNKE; L. ITTI; D. P. MUNOZ. *Queens Univ., USC.*

8:00 AAA26 **364.13** Saccade adaptation in children with dyslexia. D. BELYUSAR*; J. J. FOXE; S. MOLHOLM. *Albert Einstein Col. of Med.*

9:00 BBB1 **364.14** Competing motor commands and fixation maintenance: Why are identical peripheral stimuli sometimes effective in biasing microsaccades and sometimes not? Z. M. HAFED*; C. CHEN. *Werner Reichardt Ctr. For Integrative Neurosci.*

10:00 BBB2 **364.15** High proportions of express saccades in Chinese participants: Not the product of culture. P. C. KNOX*; F. WOLOHAN. *Univ. Liverpool.*

11:00 BBB3 **364.16** Examining oculomotor inhibition in express saccade makers. F. D. WOLOHAN*; P. C. KNOX. *The Univ. of Liverpool.*

8:00 BBB4 **364.17** Trunk orientation and saccadic choice behavior: Effects of egocentric midline shift. K. PASCHKE; I. KAGAN; M. BÄHR; M. WILKE*. *Univ. Med. Goettingen, Univ. Med. Goettingen, German Primate Ctr.*

9:00 BBB5 **364.18** Short term saccadic adaption spills over to smooth pursuit initiation. A. SMILGIN*; S. TELGEN; Z. SUN; P. W. DICKE; P. THIER. *Hertie Inst. For Clin. Brain Res., Univ. Col. London, Hertie Inst. for Clin. Brain Res., Hertie Inst. for Clin. Brain Res.*

10:00 BBB6 **364.19** Response inhibition deficits in children with Fetal Alcohol Spectrum Disorder: Relationship to diffusion tensor imaging of the corpus callosum. A. PAOLOZZA; C. BEAULIEU; J. N. REYNOLDS*. *Queen's Univ., Univ. of Alberta.*

11:00 BBB7 **364.20** Unsupervised clustering method to detect microsaccades. J. OTERO-MILLAN*; J. L. ALBA; S. L. MACKNIK; S. MARTINEZ-CONDE. *Barrow Neurol Inst., Univ. of Vigo, Barrow Neurolog. Inst.*

8:00 BBB8 **364.21** Reward expectation modulates saccadic velocities in humans performing a conditional reward task. Y. M. CHEN; L. L. CHEN*; W. ZHOU. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

9:00 BBB9 **364.22** Efficient saccade planning requires time and large differences in viisbility. S. GHAHGHAEI; P. VERGHESE*. *Smith Kettlewell Eye Res. Inst.*

10:00 BBB10 **364.23** Saccadic eye movement reflect surgical residents' fatigue. L. DI STASI*; M. B. MCCAMY; S. L. MACKNIK; J. MANKIN; N. HOOFT; A. CATENA; S. MARTINEZ-CONDE. *Barrow Neurolog. Inst., Univ. of Granada, St. Joseph's Hosp. & Med. Ctr., Univ. of Granada.*

11:00 BBB11 **364.24** Slow phase velocity of the torsion vestibulo-ocular reflex increases both before and after the quick phase independent of head velocity. R. B. GEARY*; S. H. YING; K. IRSCH; H. S. YING. *Johns Hopkins Wilmer Eye Inst., The Johns Hopkins Univ., Wilmer Ophthalmological Inst.*

8:00 BBB12 **364.25** Effects of Visual and auditory stimuli integration on saccade dynamics. A. RUFA*; F. FARGNOLI; P. FEDERIGHI; E. PRETEGIANI; C. VINCIGUERRA; F. ROSINI; P. PIU. *Evalab - Dep Neurolog. Neurosurgical and Behavioural Sci., Univ. of Siena.*

9:00 BBB13 **364.26** Sound imagery forces eye movement. S. P. LANDRY*; J. LÉVESQUE; J. ROY; H. THÉORET; F. CHAMPOUX. *Univ. De Montréal.*

10:00 BBB14 **364.27** Spatial remapping without gain fields: A neural model based on cortico-thalamic connectivity. B. BABADI*; P. SAFARI; A. YAZDANBAKHSH. *Harvard Univ., Harvard Univ., Boston Univ.*

POSTER

365. Saccades: Physiology and Anatomy

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 BBB15 **365.01** Optogenetic activation of primate superior colliculus, a substitute for electrical stimulation? R. SOETEDJO*; Y. KOJIMA; G. HORWITZ. *Univ. of Washington, Univ. of Washington.*

9:00 BBB16 **365.02** Characteristics of immediate neural plasticity induced by previous saccades in monkeys. J. HUANG; Y. XU; I. SIMPSON; K. KOSEK; H. ZHU; Y. ZHOU; W. ZHOU*. *Univ. of Mississippi Med. Ctr., Sch. of Life Sciences, Univ. of Sci. and Technol. of China, Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

10:00 BBB17 **365.03** Microsaccade-related activity of pedunculopontine tegmental nucleus neurons in behaving monkeys. K. OKADA*; Y. KOBAYASHI. *Osaka Univ., Natl. Inst. of Information and Communications Technology, and Osaka Univ., Osaka Univ., Japan Sci. and Technol. Agency (JST).*

11:00 BBB18 **365.04** Saccade modulation in the frontal eye field of macaques with optical and electrical microstimulation. S. OHAYON*; P. GRIMALDI; N. SCHWEERS; D. Y. TSAO. *Caltech.*

8:00 BBB19 **365.05** Spatiotemporal structure of peri-saccadic LFP receptive fields in monkey area V4. S. NEUPANE*; C. C. PACK; D. GUITTON. *Montreal Neurolog. Inst.*

9:00 BBB20 **365.06** Spatial and state-dependent effects of transcranial magnetic stimulation of the frontal eye fields in non-human primates. C. GU*; T. K. STEVENS; A. THIELSCHER; A. H. BELL; B. D. CORNEIL. *Western Univ., Western Univ., Copenhagen Univ. Hosp. Hvidovre, Univ. of Oxford, Western Univ.*

10:00 BBB21 **365.07** Motor coding in the superior colliculus during reactive versus volitional gaze shifts in the head unrestrained monkey. M. SADEH*; A. SAJAD; H. WANG; X. YAN; J. CRAWFORD. *Ctr. For Vision Res.*

11:00 BBB22 **365.08** A saliency-guided neural prosthesis for recovery of visual attention: design and simulation. M. YOSHIDA*; R. VEALE. *Natl. Inst. Physiol Sci., Indiana Univ.*

8:00 BBB23 **365.09** Changes in build-up rate and threshold level in superior colliculus neurons in a simple saccadic decision task. B. CAZIOT*; J. PARK; M. R. HARWOOD; R. M. MCPEEK. *SUNY Col. of Optometry, SUNY Eye Inst., City Col. of New York.*

9:00 BBB24 **365.10** fMRI guided TMS over early visual cortex degrades single object feature memory in the remapped, not perceived, visual field in a transsaccadic integration task. P. MALIK*; J. C. DESSING; J. D. CRAWFORD. *Ctr. For Vision Research, York Univ., York Univ., Queen's Univ., York Univ., Canada Res. Chair in Visuomotor Neurosci.*

10:00 BBB25 **365.11** Dopamine D2 receptor actions on prefrontal neurons engaged in processing of rule-contingent responses. S. VIJAYRAGHAVAN*; S. EVERLING. *Western Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 BBB26 **365.12** Remapping and transsaccadic attentional shifts in macaque area MT. T. YAO*; S. TREUE; B. KRISHNA. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci., Goettingen Univ.*

8:00 CCC1 **365.13** The basal ganglia indirect pathway plays a role in temporal processing. J. KUNIMATSU*; T. SUZUKI; M. TANAKA. *Hokkaido Univ. Sch. Med.*

9:00 CCC2 **365.14** Spatiotemporal evolution of FEF and SC response fields during delayed memory-guided gaze shifts. A. SAJAD*; M. SADEH; M. DAEMI; X. YAN; H. WANG; J. D. CRAWFORD. *York Univ., York Univ., York Univ.*

10:00 CCC3 **365.15** Rate of microsaccades is modulated by reward size and cue location. M. JOSHUA*; S. G. LISBERGER. *Duke Univ., Duke university.*

11:00 CCC4 **365.16** Microstimulation of Frontal Eye Field in concert with saccades to visual or auditory targets. V. CARUSO*; D. S. PAGES; J. M. GROH. *Duke University, Ctr. For Cognitive Neurosci., Duke Univ., Duke Univ.*

8:00 CCC5 **365.17** Two types of neurons in the primate globus pallidus external segment play distinct roles in antisaccade generation. A. YOSHIDA*; M. TANAKA. *Hokkaido Univ. Sch. of Med.*

9:00 CCC6 **365.18** Abnormalities of pontine paramedian reticular formation in strabismic monkeys. M. M. WALTON*; S. ONO; M. MUSTARI. *Univ. of Washington.*

10:00 CCC7 **365.19** Unilateral deactivation of dorsolateral prefrontal cortex biases saccade target selection. K. D. JOHNSTON*; S. G. LOMBER; S. EVERLING. *Univ. of Western Ontario.*

11:00 CCC8 **365.20** Changes in outcome-sensitive beta and gamma band activity in the macaque prefrontal cortex accompany anti-saccade impairment following ketamine administration. K. J. SKOBLENICK*; T. WOMELSDORF; S. EVERLING. *Univ. of Western Ontario, York Univ., Univ. of Western Ontario.*

8:00 CCC9 **365.21** Beta-band coherence between frontal eye field and anterior cingulate cortex in oculomotor tasks. S. BABAPOOR-FARROKHRAN*; K. JOHNSTON; S. EVERLING. *Western Univ.*

9:00 CCC10 **365.22** Structure of neuronal correlation during eye movement planning in FEF. S. B. KHANNA*; A. C. SNYDER; M. A. SMITH. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

POSTER

366. Vestibular System: Hair Cells, End Organs, and Nerve

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 CCC11 **366.01** Effects of paraformaldehyde on the immunoreactivity and fluorescence intensity of myosin VIIa in mouse utricles. B. W. WILSON; M. M. ABERNATHY; R. L. TAPP*; J. D. YODER; A. A. KOCH; K. BAILEY; D. V. GAUVIN; T. J. BAIRD. *MPI Res., MPI Res., MPI Res., MPI Res.*

9:00 CCC12 **366.02** Distribution of 5-HT_{1F} receptors in monkey vestibular and trigeminal ganglia. H. O. VONGTAU; C. D. BALABAN*. *Univ. of Pittsburgh, Univ. Pittsburgh.*

10:00 DDD1 **366.03** Localization and characterization of nebulin expression in rat inner ear sensory epithelium. R. L. CHIDAVAENZI*; P. STRUK; M. T. REQUENA NAVARRO; J. A. LÓPEZ-ESCÁMEZ; A. LYSAKOWSKI. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago, Ctr. de Genómica e Investigación Oncológica, Pfizer/Universidad de Granada/ Junta de Andalucía (GENYO).*

11:00 DDD2 **366.04** Modeling the effect of morphology on the response properties of vestibular bouton afferents in turtle utricle. W. R. HOLMES*; J. HUWE; M. R. ROWE; E. H. PETERSON. *Ohio Univ.*

8:00 DDD3 **366.05** Variations in electrophysiological properties of the vestibular calyx across the mammalian crista. F. MEREDITH; S. MANN; K. J. RENNIE*. *Univ. of Colorado, Denver.*

9:00 DDD4 **366.06** The μ opioid receptor inhibits calcium currents through cyclic AMP mediated signaling mechanism in the vestibular ganglion neurons of the rat. R. VEGA*; E. SOTO; E. SESEÑA. *Univ. Autonoma De Puebla, Univ. Autónoma de Puebla.*

10:00 DDD5 **366.07** Highly conserved Nmf9 gene is essential for vestibular development and functions of limbic, circadian systems in adult mice. S. ZHANG*; T. POON; M. GORMAN; X. WANG; E. KEITHLEY; B. A. HAMILTON. *UCSD, UCSD, UCSD.*

11:00 DDD6 **366.08** ● Spontaneous nystagmus outlasts behavioral deficit symptoms in a rodent model of acute peripheral vestibular injury. J. DYHRFJELD-JOHNSEN*; A. BROUSSY; M. PETREMANN; V. BRIEUC; L. NGUYEN CONG DUC. *Sensorion.*

8:00 DDD7 **366.09** Age-related decline in balance performance in a murine model of ageing. A. J. CAMP*; E. DEBABNEH; S. QUAIL; T. BURTON; V. TUNG. *Univ. of Sydney, Univ. of Sydney.*

9:00 DDD8 **366.10** Environmental enrichment reduces the impact of age-related balance deficits in mice. V. TUNG*; E. DEBABNEH; S. QUAIL; T. BURTON; A. O'CONNOR; A. SAWATARI; C. LEAMEY; A. CAMP. *Univ. of Sydney, Univ. of Sydney.*

POSTER

367. Vestibular System: Human Perception, Posture, and Spatial Orientation

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 DDD9 **367.01** Spatial coding of eye movements relative to perceived orientations during roll tilt with different gravitoinertial loads. S. J. WOOD*; G. CLÉMENT. *NASA JSC, Azusa Pacific Univ., Intl. Space Univ.*

9:00 DDD10 **367.02** Body image relies on a vestibular sense of the gravito-inertial force field. R. C. FITZPATRICK*. *Neurosci. Res. Australia.*

10:00 DDD11 **367.03** Active control and perception of the vertical. A. S. PANIC*; H. PANIC; P. DIZIO*; J. R. LACKNER. *Brandeis Univ., Brandeis Univ., Brandeis Univ.*

11:00 DDD12 **367.04** Visual and vestibular cues for orientation and balance. H. PANIC*; A. S. PANIC; P. DIZIO; J. R. LACKNER. *Brandeis Univ., Brandeis Univ., Brandeis Univ.*

8:00 EEE1 **367.05** Angular discrimination thresholds are optimized for human vertical posture. C. DAKIN*; D. E. ANGELAKI. *Baylor Col. of Med.*

9:00 EEE2 **367.06** Effects of long-term sensory adaptation on visuo-vestibular integration. S. GALE*; M. PRSA; O. BLANKE. *Ctr. for Neuroprosthetics, EPFL.*

10:00 EEE3 **367.07** The impact of body orientation and plane of movement on human heading perception. N. HUMMEL*; L. F. CUTURI; P. R. MACNEILAGE; V. L. FLANAGIN. *Ludwig Maximilians Univ., Ludwig Maximilians Univ.*

● Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 EEE4 **367.08** Vestibular heading precision and accuracy in humans depends on stimulus magnitude. L. F. CUTURI*; P. MACNEILAGE. *IFB/LMU - German Ctr. For Vertigo and Balance Disorders, Grad. Sch. of Systemic Neurosciences (GSN-LMU).*

8:00 EEE5 **367.09** Human visual and vestibular heading perception in the vertical planes. B. T. CRANE*. *Univ. of Rochester.*

9:00 EEE6 **367.10** ● Balance task and head orientation dependency of vestibular reflexes in neck muscles. P. A. FORBES*; G. P. SIEGMUND; R. HAPPEE; A. C. SCHOUTEN; J. BLOUIN. *Delft Univ. of Technol., MEA Forensic Engineers & Scientists, Univ. of British Columbia, Univ. of Twente.*

10:00 EEE7 **367.11** Effect of natural vestibular stimulation on the soleus H-reflex. A. W. FOX*; K. KITANO; D. KOCEJA. *Indiana Univ., Indiana Univ.*

11:00 EEE8 **367.12** Magnitude of spin influences the control of upright posture during the dance pirouette. M. C. KILBY*. *Johannes Gutenberg Univ. Mainz.*

8:00 EEE9 **367.13** The vestibulo-spinal pathways after unilateral labyrinthectomy as the origin for scoliotic deformations. P. VIDAL*; F. LAMBERT; D. MALINVAUD; H. STRAKA. *UMR 8194, Univ. Paris Descartes - CNRS, Dept. Biol. II, Ludwig-Maximilians-Universi.*

9:00 EEE10 **367.14** Natural statistic of vestibular stimuli. J. CARRIOT*; M. JAMALI; A. SCHNEIDER; M. CHACRON; K. E. CULLEN. *McGill Univ.*

10:00 EEE11 **367.15** Multisensory processing in subjects with vestibular dysfunction: a probabilistic approach. B. ALBERTS*; L. P. J. SELEN; W. I. M. VERHAGEN; W. P. MEDENDORP. *Sensorimotorlab, Donders Inst. For Brain Cognition and Behavior, Canisius Wilhelmina Hosp.*

11:00 EEE12 **367.16** Balance deficits in diabetic peripheral neuropathy: The role of the vestibular system. L. J. D'SILVA*; P. KLUDING. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

POSTER

368. Thalamic and Cortical Processing

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 EEE13 **368.01** Cognitive performance is inversely correlated with pain behaviors in rats. A. BITTAR*; E. CROFTON; V. NEUGEBAUER. *Univ. Texas Med. Br.*

9:00 EEE14 **368.02** Activation of rat medial prefrontal cortex (mPFC) increases activity of amygdala interneurons in the intercalated cell masses (ITC). V. NEUGEBAUER*; G. JI. *Univ. Texas Med. Br.*

10:00 EEE15 **368.03** Endocannabinoids are required to restore pyramidal cell output in the rat medial prefrontal cortex (mPFC) in pain. T. KIRITOSHI*; V. NEUGEBAUER. *Univ. Texas Med. Br.*

11:00 EEE16 **368.04** Pain-related activity changes of infralimbic and prelimbic pyramidal cells in rat medial prefrontal cortex (mPFC). G. JI*; V. NEUGEBAUER. *Univ. Texas Med. Br.*

8:00 EEE17 **368.05** Increasing signaling at glycinergic receptors in rat insula reduces the aversive aspects of pain, allodynia, and nociception in a rodent model of chronic neuropathic pain. C. J. WATSON*. *Univ. Michigan.*

9:00 EEE18 **368.06** The inhibition of the field potential activity in medial prefrontal cortex by nociception. A. LI*; C. ZUO; Y. WANG; X. YANG; J. CHIAO; Y. PENG. *Univ. of Texas at Arlington, Huazhong Univ. of Sci. and Technol., Univ. of Texas at Arlington.*

10:00 EEE19 **368.07** Hippocampal neurogenesis is necessary for persistent pain behavior. A. A. MUTSO*; G. BANISADR; M. V. CENTENO; M. N. BALIKI; R. J. MILLER; J. RADULOVIC; J. A. KESSLER; A. V. APKARIAN. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Northwestern Univ.*

11:00 EEE20 **368.08** Neuropathic pain differentially alters firing properties of nucleus accumbens core and shell D2 medium spiny neurons. W. REN*; M. MARTINA; D. J. SURMEIER; A. V. APKARIAN. *Northwestern Univ.*

8:00 EEE21 **368.09** Differential involvement of posterior insular cortex for mechanical allodynia of spare nerve injured rats. H. YEH*. *Dept. of Life Science, Natl. Taiwan Univ.*

9:00 EEE22 **368.10** Cortical encoding of sensorimotor information in a rat model of neuropathic pain. A. MANOHAR*; K. MOXON; A. GRAZIANO. *Drexel Univ., Drexel Univ., Drexel Col. of Med.*

10:00 EEE23 **368.11** ● Pain-induced theta oscillations in primary somatosensory cortex and its response to therapeutic spinal cord stimulation. C. Y. SAAB*; T. R. LII; B. W. LEBLANC. *Brown/RIH, Brown Univ.*

11:00 EEE24 **368.12** ● Theta in primary somatosensory cortex co-varies with acute and chronic pain. B. W. LEBLANC*; T. R. LII; C. Y. SAAB. *Rhode Island Hosp., Brown Univ., Brown/RIH.*

8:00 EEE25 **368.13** Menthol stimulation induces c-fos expression in s2 and granular insular cortex. P. BEUKEMA*; C. M. STEPHENSON; A. L. BARTH. *Mellon Inst. Carnegie Mellon Univ., Carnegie Mellon Univ., Carnegie Mellon Univ., Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ.*

9:00 EEE26 **368.14** Mast cells in the CNS modulate a variety of nociceptive modalities in mice. A. A. LARSON*; K. J. KOVÁCS. *Univ. of Minnesota.*

POSTER

369. Pain Models: Behavior I

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 FFF1 **369.01** ● Chronic stress-induced visceral and somatic pain occurs through an amygdala-mediated mechanism. A. C. JOHNSON*; B. GREENWOOD-VAN MEERVELD. *Univ. of Oklahoma Hlth. Sci. Ctr., V.A. Med. Ctr.*

9:00 FFF2 **369.02** Stress and estrogen induce persistent visceral hypersensitivity following masseter muscle inflammation: A new model of overlapping pain conditions. R. J. TRAUB*; D. CAO; S. DORSEY; D. DESSEM. *Univ. of Maryland Sch. of Dent., Univ. of Maryland Sch. of Nursing.*

10:00 FFF3 **369.03** A simplified scoring method for Von Frey testing in mice. R. P. BONIN*; Y. DE KONINCK. *Ctr. De Recherche De L'Institut Universitaire En Santé Mentale De Québec.*

11:00 FFF4 **369.04** Molecular effects of social interaction in a mouse model of spared nerve injury-induced allodynia. A. HINZEY*; B. JARRETT; A. C. DEVRIES. *Ohio State Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 FFF5 **369.05** Elicitation of empathy for pain in strangers by social stress reduction in mice and humans. L. J. MARTIN*; G. A. HATHAWAY; K. A. ISBESTER; S. MIRALI; N. NIEDERSTRASSER; P. SLEPIAN; Z. TROST; M. J. SULLIVAN; J. A. BARTZ; R. M. SAPOLSKY; W. F. STERNBERG; D. J. LEVITIN; J. S. MOGIL. *McGill Univ., Univ. of North Texas, Stanford Univ., Haverford Col.*

9:00 FFF6 **369.06** Understanding the precursors to friendship: Effects of pain and stress on social proximity behaviors in laboratory mice. A. H. TUTTLE*; K. DOSSETT; M. SUKOSD; P. LEGER; D. YACHNIN; J. S. AUSTIN; J. S. MOGIL. *McGill Univ., The Alan Edwards Ctr. for Res. on Pain.*

10:00 FFF7 **369.07** Complete reversal of neuropathic and inflammatory mechanical allodynia in pregnant mice. S. F. ROSEN*; J. S. MOGIL. *McGill Univ.*

11:00 FFF8 **369.08** Paired amino acid converting enzyme 4 (PACE4): A gene for pain on the left side of the body. J. S. WIESKOPF*; M. E. WEBB; J. MARCOVITZ; R. E. MILLER; P. SLEPIAN; S. SOTOCINAL; A. MALFAIT; J. S. MOGIL. *McGill Univ., Rush Univ. Med. Ctr.*

8:00 FFF9 **369.09** ▲ Conditioned pain hypersensitivity in male but not female mice. E. L. ACLAND; L. J. MARTIN; J. S. MOGIL*. *McGill Univ.*

9:00 FFF10 **369.10** ▲ The mGluR5 antagonist fenobam induces analgesic conditioned place preference in mice with spared nerve injury. D. C. GEORGE*, III; N. C. LAX; B. J. KOLBER. *Duquesne Univ., Duquesne Univ.*

10:00 FFF11 **369.11** A new tool for testing innocuous and noxious cold sensitivity in mice. D. S. BRENNER*; R. W. GEREAU, IV. *Washington Univ. In St Louis, Washington Univ. in St. Loui.*

11:00 FFF12 **369.12** Cheek model of dry skin-induced persistent itch. V. K. SAMINENI*; M. V. VALTCHEVA; S. DAVIDSON; R. W. GEREAU IV. *Washington Univ., Washington Univ.*

8:00 FFF13 **369.13** The 5HT-induced itching by activation of 5HT2b receptor in mice. S. JUNG*; S. LEE; I. AHN. *Dept. Physiol., Hanyang univ. Med. school, Hanyang Univ. Med. scool.*

9:00 FFF14 **369.14** Pellet uptake patterns as indicators of TMJ pain in rats. M. UMORIN*; L. L. BELLINGER; P. R. KRAMER. *Texas A&M Univ. Baylor Col. of Dent.*

10:00 FFF15 **369.15** ● Pulp capping with mineral aggregates reduce the nociceptive response of rat with an exposed pulp. L. L. BELLINGER*; L. A. OPPERMAN; K. F. WOODMANSEY; M. PRAKESH; C. M. PRIMUS; P. R. KRAMER. *Texas A&M Hlth. Sci. Ctr. Baylor Col. Dent., Texas A&M University, Baylor Col. of Dent., Primus Consulting.*

11:00 FFF16 **369.16** ● Visceral inflammation in the laboratory rat - an investigation into the effects on complex behaviour, cfos immunoreactivity in the amygdala, and cytokine expression. R. H. MORLAND*; A. NOVEJARQUE; T. PHEBY; J. DAWES; S. MCMAHON; A. S. C. RICE. *Imperial Col. London, Imperial Col., Oxford Univ., Kings Col.*

8:00 FFF17 **369.17** Thermal discrimination of innocuous and noxious temperatures in rats. M. IODI CARSTENS*; P. HUEBNER; K. NISHIDA; M. TRANNGUYEN; E. CARSTENS. *Univ. California Davis, Ehime Univ. Sch. of Med.*

9:00 FFF18 **369.18** Cdk5 regulates thermal and mechanical nociception in the orofacial region. M. PROCHAZKOVA*; E. UTRERAS; S. KIMANI; A. TERSE; N. D. AMIN; B. HALL; H. C. PANT; A. B. KULKARNI. *NIH/NIDCR/LCDB, NIH/NINDS/NCPRS.*

10:00 FFF19 **369.19** Group iii mglur8 activation attenuates trpa1-induced calcium mobilization. R. M. GOVEA*; S. M. CARLTON. *Univ. of Texas Med. Br.*

11:00 FFF20 **369.20** The Coy Operant Conflict-Avoidance System: Adaptations allow the testing of mechanical, heat and cold sensitivity in mice. S. M. CARLTON*; S. ZHOU. *Univ. Texas Med. Br.*

POSTER

370. Mechanisms of Neuropathic Pain: Signaling Pathways and Models

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 FFF21 **370.01** Activation of WNT/Frizzled/β-catenin in nociceptive pathways and its contributions to neuropathic pain after nerve injury and bone cancer. Y. LIU; S. LIU; Z. HUANG; Y. ZHANG; A. A. SONG; X. SONG*. *Dept. of Neurobiology, Parker Univ. Res. Inst., Peking Univ.*

9:00 FFF22 **370.02** WNT signaling in spinal cord may contribute to development of neuropathic pain by stimulating production of the proinflammatory cytokines IL-18 and TNF-α through the β-catenin pathway. S. LIU; Y. LIU; Y. ZHANG*; Z. HUANG; W. B. SONG; X. SONG. *Parker Univ. Res. Inst., Peking Univ.*

10:00 FFF23 **370.03** Glutamate receptors, cxcr4 and wnt signaling are involved in hiv-1 gp120 bal- induced synapse loss. W. RU*; S. TANG; Y. SHI; S. YUAN. *Univ. of Texas Med. Br.*

11:00 FFF24 **370.04** Symptomatic and preventive treatment of sensory neuropathy in a mouse model of dose-dense paclitaxel therapy. P. HUEHNCHEN*; W. BOEHMERLE; M. ENDRES. *Charite Universitätsmedizin Berlin, Charite Universitätsmedizin Berlin.*

8:00 FFF25 **370.05** Involvement of neuropathic pain-related protein-B (NPRP-B), a novel functional molecule, in inflammatory and neuropathic pain *in vivo.* T. KATANO*; I. YAO; M. YAMAZAKI; M. ABE; M. FUKUDA; N. OKUMURA; T. TAKAO; K. SAKIMURA; S. ITO. *Kansai Med. Univ., Niigata Univ., Osaka Univ., Osaka Univ.*

9:00 FFF26 **370.06** ● Long term treatment with gabapentin persistently reverses hypersensitivity and symptomes of the spastic syndrome in an animal model of spinal cord injury - a model of chronic neuropathic pain. C. BAASTRUP*; N. ANDREWS; N. FNNERUP. *Danish Pain Res. Ctr., Aarhus Univ., Boston Children's Hospital, Harvard Med. Sch.*

10:00 GGG1 **370.07** Co-administration of l-dopa and naproxen diminishes pain in both neuropathic and inflammatory animal models. S. E. BERGER*; M. V. CENTENO; A. V. APKARIAN. *Northwestern Univ. Feinberg Sch. of Med.*

11:00 GGG2 **370.08** Does motor cortex stimulation have effect on insular in neuropathic pain model? J. SHIN*; J. KIM; J. LEE; H. JUNG; J. CHANG. *Med. Res. Centar, Sevrance Hosp., Yonsei Univ. Col. of Med.*

8:00 GGG3 **370.09** Blockade of SRSF1 mediated RNA splicing events can attenuate neuropathic pain. R. P. HULSE*; D. O. BATES; L. F. DONALDSON. *Univ. of Bristol, Univ. of Nottingham.*

9:00 GGG4 **370.10** Heterosynaptic long-term potentiation at C-fiber synapses as a possible mechanism of secondary hyperalgesia. M. GASSNER*; R. DRDLA-SCHUTTING; H. FENSELAU; J. SANDKÜHLER. *Ctr. For Brain Research, Dept. Neurophysiology, Med. Univ. of Vienna, Harvard Med. Sch.*

● Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 GGG5 **370.11** Molecular mechanism of Paclitaxel-induced degradation of SCG10: A potential neuropathy biomarker. R. CINTRON*; I. E. VEGA. *Univ. of Puerto Rico-Rio Piedras Campus.*

11:00 GGG6 **370.12** Chronic administration of the cannabinoid CB_2 agonist AM1710 suppresses chemotherapy-induced neuropathic pain without tolerance or unwanted CNS side-effects. L. DENG*; J. GUINDON; V. KODUMURU; A. MAKRIYANNIS; K. MACKIE; A. G. HOHMANN. *Indiana Univ., Indiana Univ., Indiana Univ., Indiana Univ., Northeastern Univ.*

8:00 GGG7 **370.13** The role of neuronal calcium sensor-1 in an *in vitro* model of paclitaxel-induced sensitization of sensory neurons. L. DARBY*; H. MENG; J. FEHRENBACHER. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

9:00 GGG8 **370.14** Toll-like receptor (TLR) 4 contributes paclitaxel-induced painful neuropathy. H. ZHANG*; Y. LI; H. ZHANG; A. KOSTURAKIS; P. M. DOUGHERTY. *The Univ. of Texas MD Anderson Cancer Ctr., The Univ. of Texas MD Anderson Cancer Ctr.*

10:00 GGG9 **370.15** Upregulation of cyclin-dependent kinase 5 potentiates spinal NMDA receptor activity and neuropathic pain. L. WEN*; S. CHEN; L. LI; H. CHEN; H. PAN. *The Univ. of Texas MD Anderson Cancer Ctr., The Univ. of Texas MD Anderson Cancer Ctr., Med. College, Xiamen Univ.*

11:00 GGG10 **370.16** Sigma-1 receptor decreases intracellular calcium stores and increases neuronal excitability in rat sensory neurons. H. WU*; Y. GUO; B. PAN; Q. HOGAN. *Med. Col. Wisconsin, Dept. Anesthesiology, Res. M4280.*

8:00 GGG11 **370.17** Hemopressin (inverse agonist of CB1R) inhibits nociception associated to diabetes mellitus-induced neuropathy in mice. C. S. DALE*; E. F. TONIOLO. *Univ. of São Paulo.*

9:00 GGG12 **370.18** Annormal pain in mice deficient for ERK2 in the central nervous system. Y. OTSUBO-IWAMA*; Y. SATOH; S. ENDO; G. PAGÈS; J. POUYSSÉGUR; T. YAMAMOTO; Y. TAKAHASHI; T. KAZAMA. *JGSDF Test and Evaluation Command, Natl. Def. Med. Col., Aging Regulation Res. Team, Tokyo Metropolitan Geriatric Hosp. and Inst. of Gerontology, Inst. of Developmental Biol. and Cancer Research, Univ. of Nice Sophia-Antipolis, Ctr. Natl. de la Recherche Scientifique, Unité mixte de Recherche.*

10:00 GGG13 **370.19** Upregulation of PIP_3 via reactive oxygen species in the spinal cord is involved in mechanical hyperalgesia in a rat model of neuropathic pain. J. JUN*; S. JUNG; H. KIM; J. LEEM. *Col. of Medicine, Yonsei Univ., Brain Korea 21 Project for Med. Sci.*

11:00 GGG14 **370.20** Synaptic localization of CaMKII in the spinal dorsal horn of kinase-dead knock-in mouse in the maintenance of neuropathic pain. I. YAO*; S. MATSUMURA; T. KATANO; Y. YAMAGATA; K. IMOTO; S. ITO. *Kansai Med. Univ., Japan Sci. and Technol. Agency (JST), Natl. Inst. for Physiological Sci.*

8:00 GGG15 **370.21** Spared nerve injury model of neuropathic pain induces sympathetic sprouting in the skin of the rat hind paw. F. NASCIMENTO*; C. MAGNUSSEN; A. RIBEIRO-DA-SILVA. *McGill Univ.*

9:00 GGG16 **370.22** Area 3a nociresponsive neuron activation and neuropathic pain: Is there a relationship? O. V. FAVOROV*; B. L. WHITSEL; M. TOMMERDAHL; R. H. NGUYEN; J. LEE. *Univ. North Carolina, Univ. North Carolina.*

10:00 GGG17 **370.23** Docosahexaenoic acid (dha) protects schwann cells in palmitic acid-induced lipotoxicity: Involvement of pi3k/akt and mapk pathway. M. DESCORBETH*; J. VEGA-TORRES; K. FIGUEROA; M. SERRANO-ILLAN; M. DE LEON. *Loma Limda Univ.*

POSTER

371. Opioid Receptor Pharmacology and Signaling Mechanisms

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 GGG18 **371.01** Levels of transcript for Gα proteins in the rostral ventromedial medulla of rats with peripheral inflammatory injury. A. WATTIEZ*; R. WALDER; S. R. WHITE; D. L. HAMMOND. *Univ. of Iowa.*

9:00 GGG19 **371.02** Mor-1k contributes to opioid-induced hyperalgesia. F. OLADOSU*; S. O'BUCKLEY; A. NACKLEY. *Univ. of North Carolina At Chapel Hill.*

10:00 GGG20 **371.03** ▲ Synergistic analgesia between morphine and β-adrenergic antagonists. J. MARCOVITZ; J. S. WIESKOPF; M. E. WEBB; A. SAMOSHKIN; N. DOKHOLYAN; M. CONVERTINO; L. S. STONE; J. S. MOGIL; L. DIATCHENKO*. *McGill Univ., Univ. of North Carolina At Chapel Hill.*

11:00 GGG21 **371.04** Testosterone mediates cytokine induced up-regulation of μ-opioid receptors in trigeminal ganglia. J. L. SALOMAN*; Y. ZHANG; X. ZHANG; M. CHUNG; J. Y. RO. *Univ. of MD Sch. of Dent., school of stomotology, china medical university.*

8:00 GGG22 **371.05** Opioid receptor heterodimerization in the development of peripheral opioid tolerance. S. N. SMITH*; J. L. FISHER; S. N. RAJA; S. M. SWEITZER. *Univ. of South Carolina Sch. of Med., Johns Hopkins University, Sch. of Med., Presbyterian College, Sch. of Pharm.*

9:00 GGG23 **371.06** Dialysis of DAMGO in the rostral ventromedial medulla (RVM) alters extracellular concentrations of GABA and glutamate (GLU) in rats with persistent inflammation. R. Y. WALDER*; M. CANO; S. R. WHITE; D. L. HAMMOND. *Univ. of Iowa.*

10:00 GGG24 **371.07** Exploring Group III mGluR8-selective agonist potentiation of morphine-induced inhibition of sensitized peripheral nociceptors. A. BAKER*; S. CARLTON. *Univ. of Texas Med. Br., UTMB.*

11:00 GGG25 **371.08** Pentazocine, a mixed-action κ opioid receptor agonist, produces antinociception in the rat: Differential dose response in the male and female. D. L. ROBINSON*, JR; S. NAG; S. MOKHA. *Meharry Med. Col.*

8:00 GGG26 **371.09** Endomorphin analogs with analgesic actions mediated through exon 11 variants of the mu opioid receptor (MOR-1). G. MARRONE*; S. G. GRINNELL; S. MAJUMDAR; G. W. PASTERNAK. *Mol. Pharmacol. and Chem., Mem. Sloan-Kettering Cancer Ctr., Weill Cornell Med. Col., Weill Cornell Med. Col.*

9:00 GGG27 **371.10** Genetic succeptibility of opioid-induce hyperalgesia, tolerance and dependence. D. LIANG*; Y. SUN; M. ZHENG; W. LI; P. SAHBAIE; X. SHI; G. PELTZ; D. J. CLARK. *Stanford Univ.*

10:00 GGG28 **371.11** ● 6TM and 7-TM variants of the μ-opioid receptor (MOR) in human and mouse tissues. T. WILLIAMS-STINNETTE; C. L. A. RUBLE; S. P. ARNERIC*. *Eli Lilly and Co., Eli Lilly & Co.*

11:00 GGG29 **371.12** Non-opioid actions of morphine in a murine model of cancer-induced bone pain. A. M. SYMONS-LIGUORI*; N. M. SAYERS; T. W. VANDERAH. *Univ. of Arizona.*

8:00 GGG30 **371.13** Spatiotemporal localization of internalized mu-opioid receptors in rats. R. ISHIDA*; T. TSUMORI; T. NIKAI; Y. KATSUBE; M. TAKAHASHI; Y. SAITO. *Shimane Universty Fac. of Med., Prefectural Univ. of Hiroshima.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 GGG31 **371.14** Activation of membrane estrogen receptors attenuates opioid receptor-like1 receptor-mediated antinociception via an ERK-dependent, non-genomic mechanism. K. MCLEAN*; S. NAG; S. S. MOKHA. *Meharry Med. Col.*

POSTER

372. Motor Pattern Generation: Invertebrate Models II

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 GGG32 **372.01** Distinct activity signatures of neurons in an oscillatory network. D. MARTINEZ*; F. NADIM. *Rutgers Univ. and NJIT, New Jersey Inst. of Technol., Rutgers Univ. & NJIT.*

9:00 GGG33 **372.02** Predicting the firing phase of an oscillator from its subthreshold impedance profile. H. G. ROTSTEIN*; D. FOX; F. NADIM. *NJIT, New Jersey Inst. of Technol. / Rutgers Univ.*

10:00 GGG34 **372.03** ● Chronic electromyographic analysis of circadian locomotor activity in crayfish: Is it initiated spontaneously or reflexively? Y. TOMINA*; A. KIBAYASHI; T. YOSHII; M. TAKAHATA. *Hokkaido Univ., Okayama Univ.*

11:00 GGG35 **372.04** Doing the crab slide: Active and passive responses of running crabs to slip perturbations. R. B. ROSS; J. H. BELANGER*. *West Virginia Univ.*

8:00 GGG36 **372.05** Fitting neuron models by minimizing control current. T. BROOKINGS*; M. L. GOERITZ; E. MARDER. *Brandeis Univ., Brandeis Univ.*

9:00 GGG37 **372.06** Slow oscillations in crab pyloric neurons induce by a negative-conductance linear current. Y. GUAN*; A. BOSE; J. GOLOWASCH; F. NADIM. *Rutgers Univ., New Jersey Inst. of Technol., New Jersey Inst. of Technol., New Jersey Inst. of Technol.*

10:00 GGG38 **372.07** Conductance correlations between ionic currents in a pacemaker neuron. J. P. GOLOWASCH; S. ZHAO*; L. YU. *NJIT, Rutgers University-Newark.*

11:00 GGG39 **372.08** Membrane potential resonance of bursting neuron captured with an ICa/Ih biophysical model using multi-objective evolutionary algorithms. D. M. FOX*; H. TSENG; H. G. ROTSTEIN; F. NADIM. *NJIT & Rutgers Univ., NJIT.*

8:00 GGG40 **372.09** Pyloric network responses to temperature changes *in vivo.* M. GOERITZ*; W. SOOFI; W. A. STEIN; A. A. PRINZ; E. MARDER. *Brandeis Univ., Georgia Inst. of Technol., Illinois State Univ.*

9:00 GGG41 **372.10** Temperature compensation in a pacemaker model. A. H. WILLIAMS*; J. S. CAPLAN; E. MARDER. *Brandeis Univ.*

10:00 GGG42 **372.11** Temperature dependent effects on rhythmic activity in the swimmeret system of crayfish. C. R. SMARANDACHE-WELLMANN*; F. BLUMENTHAL. *Univ. of Cologne.*

11:00 GGG43 **372.12** Intersegmental coordination in the swimmeret system: Neuronal properties of the ascending (ASC_E) and descending (DSC) coordinating neuron. A. C. SCHNEIDER*; S. GRÄTSCH; C. R. SMARANDACHE-WELLMANN. *Univ. of Cologne.*

8:00 GGG44 **372.13** Modeling the input-output relationship of identified coordinating neurons. T. M. WRIGHT*, JR; A. C. SCHNEIDER; M. S. GOLDMAN; B. MULLONEY. *Univ. of California, Davis, Univ. of Cologne, Univ. of California, Davis, Univ. of California, Davis.*

9:00 GGG45 **372.14** Five types of nonspiking local interneurons in crayfish swimmeret local pattern-generating circuits. B. MULLONEY*; C. WELLER; T. M. WRIGHT, Jr.; C. R. SMARANDACHE-WELLMANN. *Univ. of California Davis, Univ. of Cologne.*

POSTER

373. Brain-Machine Interface III

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 GGG46 **373.01** ● Comprehensive quantitative analysis of cell responses to intracortical neuroprosthetic devices. W. SHAIN*; K. TRETT; P. CHONG; X. CAI; K. PEARSON; N. TASKIN; C. HARRIS; S. ZHU; Y. ZU; A. MEROUANE; V. SOMASUNDAR; Y. LU; Y. LU; P. KULKARNI; B. ROYSAM; D. KIPKE; R. PADMANABHAN; L. CARIN; M. DIWEKAR; L. RIETH; S. JOHNSON; A. WHITE. *Ctr. For Integrative Brain Res., Univ. of Washington Sch. of Med., Ctr. for Integrative Brain Res., Univ. of Houston, Univ. of Michigan, Duke Univ., Univ. of Utah, GVD Corp.*

9:00 GGG47 **373.02** Microchannel neural-electrode neuroprostheses for highly efficient motor and sensory action potential recording. D. CHEW*; L. ZHU; E. DELIVOPOULOS; K. MUSICK; I. MINEV; S. LACOUR; S. MCMAHON; J. FAWCETT. *Univ. of Cambridge, Kings Col. London, Univ. of Nottingham, Ecole Polytechnique Federale de Lausanne.*

10:00 GGG48 **373.03** Development of a brain-to-brain interface for real-time sharing of sensorimotor information. M. PAIS-VIEIRA; L. M. OLIVEIRA*; M. LEBEDEV; C. KUNICKI; M. A. L. NICOLELIS. *Duke Univ., Ctr. for Neuroengineering, Edmond and Lily Safra Intl. Inst. for Neurosci. of Natal (ELS-IINN), Biomed. Engin., Psychology and Neurosci.*

9:00 HHH1 **373.04** A vibrotactile sensory substitution system for the deaf and severely hearing impaired. S. NOVICH*; D. M. EAGLEMAN. *Baylor Col. of Med., Rice Univ.*

11:00 HHH2 **373.05** Chronic stability of nerve cuff electrode stimulation in non-human primate upper extremity nerves. N. BRILL*; S. NAUFEL; C. ETHIER; L. MILLER; D. TYLER. *Case Western Reserve Univ., Northwestern Univ.*

8:00 HHH3 **373.06** Development of a novel sensory regenerative peripheral nerve interface. J. V. LARSON*; T. A. KUNG; M. G. URBANCHEK; P. S. CEDERNA; N. B. LANGHALS. *Univ. of Michigan, Univ. of Michigan.*

9:00 HHH4 **373.07** Operant conditioning of single-neurons in mouse motor cortex by two-photon calcium imaging. R. HIRA*; F. OHKUBO; Y. MASAMIZU; M. OHKURA; J. NAKAI; T. OKADA; M. MATSUZAKI. *Natl. Inst. for Basic Biol., Brain Sci. Institute, Saitama Univ., Dept. of Mol. Therapy, Natl. Inst. of Neuroscience, NCNP.*

10:00 HHH5 **373.08** Effect of pulse shapes on evoking retinal ganglion cell (rgc) responses in rd1 retina with epiretinal stimulation. Y. S. GOO*; K. N. AHN; W. W. LEE; J. Y. KIM. *Chungbuk Natl. Univ. Med. Sch., Nano Artificial Vision Res. Ctr.*

11:00 HHH6 **373.09** Adaptive decoding of eye movements with a simple recurrent artificial neural network. S. TORENE*; S. L. BRINCAT; A. F. SALAZAR-GÓMEZ; N. JIA; M. PANKO; V. SALIGRAMA; E. K. MILLER; F. H. GUENTHER. *Boston Univ., Boston Univ., MIT, Boston Univ., Boston Univ., Boston Univ., Boston Univ.*

8:00 HHH7 **373.10** A brain-machine interface for control of medically-induced coma. M. M. SHANECHI*; J. CHEMALI; M. LIBERMAN; K. SOLT; E. BROWN. *Univ. of California Berkeley, Cornell Univ., Massachusetts Gen. Hosp., MIT.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 HHH8-DP8 **373.11** Brain-computer interfaces for assessment and communication in patients with disorders of consciousness. C. GUGER*; Z. LUGO; Q. NOIRHOMME; A. ESPINOSA; J. RODRIGUEZ; G. EDLINGER; S. LAUREYS. *g.tec Guger Technologies OG, Univ. of Liège.*

10:00 HHH9 **373.12** Behavioral responses to microstimulation of the feline dorsal root ganglion. C. A. AYERS*; R. A. PARKER; L. E. FISHER; D. J. WEBER. *Univ. of Pittsburgh.*

11:00 HHH10 **373.13** A polymer-based interface restores light sensitivity in rat blind retinas. D. GHEZZI*; M. ANTOGNAZZA; M. METE; G. PERTILE; G. LANZANI; F. BENFENATI. *Fondazione Inst. Italiano Di Tecnologia, Fondazione Inst. Italiano di Tecnologia, Ospedale S. Cuore-Don Calabria.*

8:00 HHH11 **373.14** Discrimination of multichannel ICMS driven by a tactile sensor. C. K. OVERSTREET*; R. B. HELLMAN; R. D. PONCE WONG; V. J. SANTOS; S. I. HELMS TILLERY. *Arizona State Univ., Arizona State Univ.*

9:00 HHH12 **373.15** Spontaneous spatiotemporal activity pattern in rat motor sensory cortex. E. MORYA*; T. MONTEIRO; V. ALBUQUERQUE; K. SAMESHIMA; M. A. L. NICOLELIS. *Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Univ. of Fortaleza, Univ. of Fortaleza, Univ. of São Paulo, Duke Univ., Duke Univ., Duke Univ., Duke Univ.*

10:00 HHH13 **373.16** ● Functional electrical stimulation for restoration of facial expression. D. MCDONNALL*. *Ripple.*

11:00 HHH14 **373.17** Design and validation of a sensory neuroprosthesis platform. N. B. LANGHALS*; E. K. KIM; K. B. SUGG; M. G. URBANCHEK; P. S. CEDERNA; G. J. GERLING. *Univ. of Michigan, Univ. of Michigan, Univ. of Virginia.*

8:00 HHH15 **373.18** A P300-based brain-computer interface for spinocerebellar ataxia patients. S. IKEGAMI; T. KAWASE; K. TAKANO; M. NAGAO; T. KOMORI; K. KANSAKU*. *Sys Neurosci Sect, Dept of Rehab For Brain Funct, Res. Inst. Natl. Rehab Cent, Dept of Neurol Surg, Grad Sch. of Med, Chiba Univ., Dept of Neurology, Tokyo Metropolitan Neurolog. Hosp, Cent for Neuromuscular and Intractable Disease, Natl. Hakone Hosp.*

9:00 HHH16 **373.19** ● The RoboRoach, year 4: A bluetooth cyborg platform for studying the behavior effects of sensory microstimulation. G. J. GAGE*; T. C. MARZULLO. *Backyard Brains.*

10:00 HHH17 **373.20** Role of Interleukin 1β converting enzyme on inflammation and neuronal degeneration around chronic neural electrode and recording performance. T. D. KOZAI*; L. M. BODILY; Z. DU; G. A. ZENONOS; D. L. CARLISLE; E. M. CAPAROSA; R. M. FRIEDLANDER; M. A. SMITH; R. J. FERRANTE; X. CUI. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

11:00 HHH18 **373.21** ● Ultrastructural characterization of tissue reaction to neural electrode implantation. J. R. ELES*; C. WEAVER; X. T. CUI. *Univ. of Pittsburgh, Ctr. for Neural Basis of Cognition, McGowan Inst. of Regenerative Med.*

8:00 HHH19 **373.22** ● Braided microprobes showed less immunoreaction than a single 50um wire-electrode in rats' brain. T. KIM*; A. BRANNER; S. F. GISZTER. *Drexel Univ. Col. of Med.*

9:00 HHH20 **373.23** Implantation of nanowires into the rat brain - A one year biocompatibility study. L. E. GÄLLENTOFT*; L. M. E. PETTERSSON; J. SCHOUENBORG; C. PRINZ; C. ERIKSSON LINSMEIER. *Neuronano Res. Center, Lund Univ., Div. of Solid State Physics, Lund Univ.*

10:00 HHH21 **373.24** Forensic analysis of retrieved utah electrode arrays following implantation into rat cortex. B. VELAGAPUDI*; P. D. CRANE; N. F. NOLTA; M. B. CHRISTENSEN; P. A. TRESCO. *Univ. of Utah.*

11:00 HHH22 **373.25** Quantitative correlation of electrode array functionality to end-point histology. M. B. CHRISTENSEN*; N. F. NOLTA; P. A. TRESCO. *Univ. of Utah.*

8:00 HHH23 **373.26** The foreign body response to headstage fixation screws alters the cytoarchitecture of the underlying cortical tissue. R. S. OAKES*; M. B. CHRISTENSEN; P. A. TRESCO. *Univ. of Utah.*

9:00 HHH24 **373.27** A CAD-based modeling approach that predicts the foreign body response to cortically implanted electrode arrays. N. NOLTA*; M. B. CHRISTENSEN; P. D. CRANE; P. A. TRESCO. *Univ. of Utah.*

POSTER

374. Brain-Machine Interface: Limb Control

Theme D: Sensory and Motor Systems

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 HHH25 **374.01** High performance online hand trajectory decoding from ECoG signal to be reproduced by robotic arm. T. AKSENOVA*; A. ELISEYEV; N. ARIZUMI; J. PRADAL; N. TARRIN; C. MESTAIS; A. BENABID. *CLINATEC, CEA-LETI MINATEC.*

9:00 HHH26 **374.02** A BCI-based OT-assist suit for paralyzed upper extremities: Grasping movements controlled by EEG and EMG signals. T. KAWASE*; T. SAKURADA; Y. KOIKE; K. KANSAKU. *Sys Neurosci Sect, Dept of Rehab For Brain Funct, Res. Inst. Natl. Rehab Cent, Tokyo Inst. of Technol.*

10:00 HHH27 **374.03** Electrocorticographic control of a hybrid augmented reality multimodal operation neural integration environment (HARMONIE) brain-machine interface. D. MCMULLEN*; G. HOTSON; M. S. FIFER; K. D. KATYAL; B. A. WESTER; T. G. MCGEE; A. HARRIS; M. S. JOHANNES; R. J. VOGELSTEIN; W. S. ANDERSON; N. V. THAKOR; N. E. CRONE. *Johns Hopkins Univ. Sch. of Med., UMDNJ/ Rutgers Robert Wood Johnson Med. Sch., Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Applied Physics Lab., Johns Hopkins Univ. Sch. of Med.*

11:00 HHH28 **374.04** HARMONIE: A hybrid augmented reality multimodal operation neural integration environment system for versatile control of a modular upper-extremity neuroprosthetic limb. K. D. KATYAL*; B. A. WESTER; T. G. MCGEE; M. S. JOHANNES; A. HARRIS; G. HOTSON; D. P. MCMULLEN; M. S. FIFER; R. S. ARMIGER; A. D. RAVITZ; R. J. VOGELSTEIN; N. E. CRONE; M. P. MCLOUGHLIN. *Johns Hopkins Univ. Applied Physics Lab., Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Rutger/University of Med. and Dent. of New Jersey, Johns Hopkins Univ. Sch. of Med.*

8:00 HHH29 **374.05** Continuous actuation of the Modular Prosthetic Limb using electrocorticographic signals during overt reaching and grasping movements. M. S. FIFER*; G. HOTSON; B. A. WESTER; Y. WANG; M. S. JOHANNES; K. D. KATYAL; J. B. HELDER; M. P. PARA; R. J. VOGELSTEIN; W. S. ANDERSON; N. V. THAKOR; N. E. CRONE. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ. Applied Physics Lab., Johns Hopkins Univ., Natl. Univ. of Singapore, Johns Hopkins Univ.*

9:00 HHH30 **374.06** Neuroprosthetic control from fusion processing of EEG, computer vision, and eye tracking data. T. M. LAU*; E. LAVELY; G. MELTZNER. *BAE Systems Advanced Information Technologies.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 HHH31 **374.07** Multisensory feedback enables fine force control in a bidirectional prosthetic hand. M. CAPOGROSSO*; M. BONIZZATO; F. PETRINI; S. RASPOPOVIC; T. STIEGLITZ; P. M. ROSSINI; S. MICERA. *Scuola Superiore Sant'Anna, Ecole Polytechnique Federale de Lausanne, Campus Bio-Medico Univ., IRCCS San Raffaele Pisana, Scuola Superiore Sant'Anna, Univ. of Freiburg, Catholic Univ. of The Sacred Heart.*

11:00 HHH32 **374.08** Real-time prosthetic arm control using MEG signals of paralyzed patients. T. YANAGISAWA*; R. FUKUMA; K. MATSUSHITA; M. HIRATA; H. KISHIMA; Y. SAITOH; R. KATO; T. SEKI; H. SUGATA; H. YOKOI; Y. KAMITANI; T. YOSHIMINE. *Osaka Univ., ATR Computat. Neurosci. Labs., Osaka Univ. Grad. Sch. of Med., Nara Inst. of Sci. and Technol., The Univ. of Tokyo Interfaculty Initiative in Information Studies Grad. Sch. of Interdisciplinary Information Studies.*

8:00 HHH33 **374.09** Direct cortical control of muscle stimulators in a simulated upper-limb neuroprosthesis. F. WILLETT; H. KALODIMOS; D. M. TAYLOR*. *Cleveland Clin. Learner Res. Inst., Case Western Reserve Univ., Louis Stokes VA Med. Ctr.*

9:00 HHH34 **374.10** Strategies to improve ECoG based BCI decoding during move and hold tasks. P. KARANDE*; J. J. WHEELER; D. W. MORAN. *Washington Univ.*

10:00 HHH35 **374.11** Virtual embodiment and robotic reembodiment with a brain-computer interface. G. EDLINGER*; C. GUGER; C. HINTERMÜLLER; C. KAPELLER; M. ABU-ALQUMSAN; A. PEER; M. SLATER. *G.Tec Med. Engin. Gmbh, Guger Technologies OG, Technische Univ. München, ICREA - Univ. of Barcelona.*

11:00 HHH36 **374.12** Proprioceptive feedback enables brain computer interface (BCI) controlled prosthetic arm movement in the absence of visual input. R. A. GAUNT*; J. L. COLLINGER; B. WODLINGER; D. J. WEBER; M. L. BONINGER. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 HHH37 **374.13** Recording force and position of dexterous finger movements with a mechatronic manipulandum for a peripheral nerve implant. C. D. BARTON*; S. HANRAHAN; T. DAVIS; D. WARREN; D. HUTCHINSON; G. A. CLARK; B. GREGER. *Univ. of Utah.*

9:00 HHH38 **374.14** Cortical electrical stimulation enhances skilled forelimb motor function and increases the expression of N-methyl-D-aspartate receptor subunit NR2A/B in the dentate gyrus after focal cerebral ischemia in rats. Y. CAO*; L. LIU; J. ZHENG; J. LIU. *UCSF, Beijing Tiantan Hospital, Capital Med. Univ.*

10:00 HHH39 **374.15** Automatic locomotion-triggered intracortical stimulating system for a rat. O. FUKAYAMA*; M. YOKOTA; R. NAKANISHI; K. MABUCHI. *The Univ. of Tokyo.*

11:00 HHH40 **374.16** BMI control of hindlimb after complete spinal transection: Restoration of volitional control using epidural stimulation. M. E. POWERS*; E. B. KNUDSEN; K. A. MOXON. *Drexel Univ.*

8:00 HHH41 **374.17** BMI control of hindlimb after complete spinal transection: The encoding movement-related temporal intervals. E. B. KNUDSEN*; K. A. MOXON. *Drexel Univ.*

9:00 HHH42 **374.18** ● A hybrid EMG controller for proportional control of a powered ankle-foot prosthesis. O. A. KANNAPE*; H. M. HERR. *MIT.*

10:00 HHH43 **374.19** Grasping with hands and tools - studied by transcranial magnetic stimulation on the premotor cortex. K. K. TSENG*; Y. CHOU. *NDHU.*

POSTER

375. Factors Regulating GnRH

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 HHH44 **375.01** Tuning fertility: miRNA regulation of GnRH genetic network. A. MESSINA*; P. GIACOBINI; V. PREVOT. *Inserm, JPARC U837, Develop. and Plasticity of the Postnatal Brain; Univ. Lill.*

9:00 HHH45 **375.02** Channelrhodopsin activation of mouse GnRH neurons *in vitro.* P. CAMPOS; B. I. HYLAND*; A. E. HERBISON. *Univ. of Otago.*

10:00 HHH46 **375.03** Reproductive phenotype of transgenic mouse with conditional deletion of fibroblast growth factor receptor 1 in GnRH neurons. S. RAMELLI*; A. WOLFE; S. RADOVICK; P. TSAI. *Univ. of Colorado, John Hopkins Univ. Sch. of Med.*

11:00 III1 **375.04** Chronic stress causes an increase in rfrp expression and leads to reproductive dysfunction in the adult female rat. A. C. GERAGHTY*; S. MUROY; S. ZHAO; L. KRIEGSFELD; G. E. BENTLEY; D. KAUFER. *UC Berkeley.*

8:00 III2 **375.05** ▲ Extra-ovarian effects of anti-müllerian hormone on the gonadotropin-releasing hormone (gnrh) neurons. I. CIMINO*; F. CASONI; A. MESSINA; J. PARKASH; A. LOYENS; S. JAMIN; N. DI CLEMENTE; D. DEWAILLY; V. PREVOT; P. GIACOBINI. *Univ. Lille Nord De France, F-59000, Inserm, Jean-Pierre Aubert Res. Center, U837, Inserm U487, 92140, Dept. of Endocrine Gynaecology and Reproductive Medicine, Hosp. Jeanne de Flandre.*

9:00 III3 **375.06** Hormonal characterization of VCD-induced perimenopause in female rats. P. D. BARROS*; R. O. CAROLINO; N. O. PESTANA; C. M. LEITE; J. A. ANSELMO-FRANCI. *Univ. of São Paulo, Univ. of São Paulo.*

10:00 III4 **375.07** Morphological analysis of the early development of GnRH neuron systems in the EGFP-expressing transgenic medaka lines. A. TAKAHASHI*; S. ISLAM; Y. AKAZOME; H. ABE; K. OKUBO; Y. OKA. *Grad Sch. Science, Univ. of Tokyo, Bangladesh Agricult Univ., Grad Sch. Bioagricult Science, Nagoya Univ., Grad Sch. Agricult Life Science, Univ. of Tokyo.*

11:00 III5 **375.08** Central prolactin signaling restores bicuculline-potentiated dopaminergic suppression of gonadotrophin-releasing hormone pulse generator in the female rat. P. GRACHEV*; K. O'BYRNE. *Sch. of Medicine, King's Col. London.*

8:00 III6 **375.09** Neurobiological analysis of dopaminergic inhibition in the HPG axis regulation. T. KARIGO*; Y. OKA. *Dept Biol Sci, Grad Sch. Sci, Univ. Tokyo.*

9:00 III7 **375.10** Gonadotropin-releasing hormone (GnRH) gene regulation via an enhancer-derived noncoding RNA in GT1-7 cells. P. P. HUANG*; A. K. IYER; P. L. MELLON. *UC San Diego, UC San Diego.*

10:00 III8 **375.11** Chemically-induced perimenopause is associated with impairment in the preoptic area noradrenergic and serotoninergic systems. N. PESTANA*; C. M. LEITE; R. O. CAROLINO; J. A. ANSELMO-FRANCI. *Univ. De São Paulo, Univ. de São Paulo-Faculdade de Odontologia de Ribeirão Preto/FORP.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

376. Hormonal Modulation of Cognition: Estrogenic Effects

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 III9 **376.01** Mechanism by which neonatal testosterone exposure mediates sex differences in impulsivity in prepubertal rats. D. W. BAYLESS*; M. M. NOONAN; M. E. FITZPATRICK; J. M. DANIEL. *Tulane Univ., Tulane Univ.*

9:00 III10 **376.02** Circulating estradiol-induced enhancement of spatial memory and increases in hippocampal levels of synaptic proteins in ovariectomized rats are mediated by brain-derived estrogens and hippocampal gonadotropin releasing hormone receptors. B. S. NELSON*; P. A. SVORINIC; A. C. VAN MAREL; J. M. DANIEL. *Tulane Univ., Tulane Univ.*

10:00 III11 **376.03** Tamoxifen produces estrogen-like agonist effects on cholinergically-mediated learning in postmenopausal women. P. A. NEWHOUSE*; K. ALBERT; R. ASTUR; J. JOHNSON; M. R. NAYLOR; J. DUMAS. *Vanderbilt Sch. of Med., Vanderbilt Univ., Univ. of Connecticut, Univ. of Massachusetts, Univ. of Vermont.*

11:00 III12 **376.04** Estrogen modulates the expression of the serotonin 6 receptor in the rat brain. O. LIPATOVA*; N. WIENER; C. M. MORGAN; D. J. TOUFEXIS. *Univ. of Vermont.*

8:00 III13 **376.05** role of g-protein-coupled estrogen receptor (gper/gpr30) in hippocampal memory and cell signaling in female mice. J. KIM*; M. BOULWARE; K. FRICK. *Univ. of Wisconsin-Milwaukee.*

9:00 III14 **376.06** Activation of mGluR1 and ERK are essential for ERalpha and ERbeta to enhance hippocampal memory consolidation. M. I. BOULWARE*; J. D. HEISLER; K. M. FRICK. *Univ. of Wisconsin - Milwaukee.*

10:00 III15 **376.07** Hippocampally-synthesized estrogens are essential for spatial memory consolidation in female mice. J. TUSCHER*; J. S. SZINTE; J. R. STARRETT; A. A. KRENTZEL; L. REMAGE-HEALEY; K. M. FRICK. *UW-Milwaukee, Univ. of Massachusetts Amherst.*

11:00 III16 **376.08** Estradiol-induced epigenetic changes and memory consolidation in middle-aged mice. A. M. FORTRESS*; J. KIM; R. L. POOLE; T. J. GOULD; K. M. FRICK. *Univ. of Wisconsin - Milwaukee, Temple Univ.*

8:00 III17 **376.09** Investigations of systemic and intrahippocampal estrogens on social learning in female mice. K. S. ERVIN*; E. MULVALE; J. BOYD; G. MONTINI; A. MELENDEZ; E. CHOLERIS. *Univ. of Guelph.*

9:00 III18 **376.10** Estrogen treatment after menopause protects against stress-induced impairments in working memory. A. E. YCAZA*; H. N. HODIS; W. J. MACK; M. MATHER. *USC, USC, USC, USC.*

10:00 III19 **376.11** Selective pharmacological activation of hippocampal G-protein coupled estrogen receptor affects social recognition, object recognition, and object placement in female mice. J. LYMER*; C. GABOR; A. PHAN; A. MAGAHAY; N. BAINES; E. CHOLERIS. *Univ. of Guelph, Univ. of Guelph.*

11:00 III20 **376.12** Sustained treatment with estradiol or G-1 alters the levels of orexin and aromatase mRNAs in the brain in a regionally-specific manner. Z. Z. KIRSHNER*; J. LI; D. NELSON; R. B. GIBBS. *Univ. of Pittsburgh.*

8:00 III21 **376.13** Ovarian cycle stage alters cognitive and network function in a mouse model of Alzheimer's disease. L. BROESTL*; K. WORDEN; L. VERRET; J. J. PALOP; D. B. DUBAL. *Dept. of Neurology, Univ. of California, Gladstone Inst. of Neurolog. Dis.*

9:00 III22 **376.14** Molecular interactions of estrogen and its receptors in human brain vascular endothelial cells. S. E. FRANCIS*; J. TU; W. S. KIM. *Macquarie Univ., Neurosci. Res. Australia.*

POSTER

377. Neuroimmunology: Mechanisms of Regulation

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 III23 **377.01** Impact of microglia-mediated inflammation on hypothalamic homeostasis. C. BAUFELD; K. R. MILLER*; F. L. HEPPNER. *Charité Universitätsmedizin Berlin.*

9:00 III24 **377.02** Role of serotonin 2A receptors on lymphocyte taurine transport of rat treated with fluoxetine. M. G. COLMENARES*; M. URBINA; F. FAZZINO; L. LIMA. *Inst. Venezolano De Investigaciones Científicas, Inst. Venezolano de Investigaciones Cientificas.*

10:00 III25 **377.03** Postnatal inflammation does not alter the number of oxytocin neurons in selected hypothalamic nuclei. V. M. DOENNI*; Q. J. PITTMAN. *Univ. of Calgary.*

11:00 III26 **377.04** Brain-gut-immune interactions in the development of depression. I. MARIN*; M. WU; J. KIPNIS. *Univ. of Virginia, Univ. of Virginia.*

8:00 III27 **377.05** Quantitative trait loci analysis reveals candidate genes implicated in regulating functional motor deficit and CNS vascular permeability in immune-mediated fatal blood-brain barrier disruption. H. JOHNSON*; L. HANSON; Y. CHEN; A. BIEBER; R. BUONO; T. FERRARO; I. PIRKO; A. JOHNSON. *Mayo Clin., Univ. of Cincinnati, Cooper Med. Sch. of Rowan Univ., Univ. of Pennsylvania.*

9:00 III28 **377.06** Characterizing the neuroendocrine-immune role of CD11c+ cells in pituitary gland. E. G. GLENNON*; U. KAUNZNER; K. BULLOCH. *Rockefeller Univ.*

10:00 III29 **377.07** Acute social stress affects expression of pro- and anti-inflammatory gene products in humans. N. ROHLEDER*; D. WANG; L. HANLIN; D. GIANFERANTE; X. CHEN; M. V. THOMA. *Brandeis Univ.*

11:00 III30 **377.08** The effect of pro-inflammatory and anti-inflammatory cytokines on neuronal mitochondrial function and neuronal cell viability. D. N. DOLL*; S. L. RELLICK; T. L. BARR; J. W. SIMPKINS. *West Virginia Univ.*

8:00 III31 **377.09** ● Loss of RGS10 modulates immune homeostasis but not dopamine metabolism in aging. G. T. KANNARKAT*; C. P. RAMSEY; K. SHEPHERD; M. G. TANSEY. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Morehouse Sch. of Med.*

9:00 III32 **377.10** Purinerigic receptors mediate activation of innate immune cells in the choroid plexus. V. MASLIEIEVA*; R. J. THOMPSON. *Univ. of Calgary, Univ. of Calgary.*

10:00 III33 **377.11** Bacterial lipopolysaccharide-induced systemic inflammation alters cerebral perfusion and diffusion parameters. M. GRITON; I. DHAYA; G. RAFFARD; R. ROULAND; J. FRANCONI; B. HIBA; J. KONSMAN*. *CNRS UMR 5536 RMSB / Univ. Bordeaux.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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11:00 III34 **377.12** Repeated alcohol exposure during the 3rd trimester-equivalent alters inflammatory signaling pathways in the rat dentate gyrus. L. TOPPER*; F. VALENZUELA. *Univ. of New Mexico HSC.*

8:00 III35 **377.13** Cytokines induce specific activation patterns in the sensory vagus nerve. S. S. CHAVAN*; S. ROBBIATI; K. J. TRACEY; P. T. HUERTA. *Feinstein Inst. For Med. Res., Feinstein Inst. For Med. Res.*

9:00 III36 **377.14** Activation of TrkB signaling reduces disease severity by anti-inflammatory response in an animal model of Multiple Sclerosis. T. K. MAKAR*; V. K. C. NIMMAGADDA; N. K. NAGALLA; S. I. V. JUDGE; D. TRISLER; C. T. BEVER, Jr. *Univ. of Maryland Baltimore, Veteran Affairs Med. Ctr., VA Multiple Sclerosis Ctr. of Excellence, EAST.*

10:00 III37 **377.15** Perivascular macrophages of circumventricular organs (CVOs) exhibit a distinct phagocytic phenotype and susceptibility to chlodronate depletion. G. FARACO*; A. MORAGA; Y. SUGIYAMA; J. MOORE; J. ANRATHER; C. IADECOLA. *Weill Med. Col. of Cornell Univ., Univ. Complutense.*

11:00 III38 **377.16** The effects of sepsis on the osmoregulatory pathway of the hypothalamus. J. STARE*; S. SIAMI; E. TRUDEL; M. PRAGER-KHOUTORSKY; T. SHARSHAR; C. W. BOURQUE. *McGill Univ. Hlth. Ctr., McGill Univ., Ctr. Hospitalier d'Étampes, Montreal Gen. Hosp. Res. Inst., McGill Univ. Hlth. Ctr., Hôpital Raymond Poincaré.*

8:00 III39 **377.17** Circadian desynchronization increases the sensitivity to an inflammatory challenge: An *in vitro* and *in vivo* study. N. N. GUERRERO*; R. SALGADO-DELGADO; J. GARCÍA; M. BASUALDO; M. GUZMÁN; E. TAMURA; C. CARVALHO-SOUSA; E. CECON; D. FRANCO; R. MARKUS; C. ESCOBAR; R. BUIJS*. *Inst. De Investigaciones Biomédicas, Univ. Autónoma de San Luis Potosí, Inst. de Biosciencias, Univ. de São Paulo,, Facultad de Medicina, Univ. Nacional Autónoma de México.*

9:00 III40 **377.18** Role of the chemokine, CCL2, in stimulating the migratory behavior and orexigenic peptide expression in hypothalamic embryonic neurons. K. POON*; S. MANDAVA; J. R. BARSON; H. T. HO; S. F. LEIBOWITZ. *The Rockefeller Univ.*

POSTER

378. Social Behavior: Oxytocin and Vasopressin

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 III41 **378.01** Sex-specific regulation of social play by vasopressin and oxytocin depends on social context. R. BREDEWOLD*; C. J. W. SMITH; K. M. DUMAIS; A. H. VEENEMA. *Boston Col.*

9:00 III42 **378.02** Sex differences in oxytocin receptor binding in the bed nucleus of the stria terminalis and amygdala: Implications for differential expression and regulation of social behavior. K. M. DUMAIS*; A. G. ALONSO; T. E. MAYER; R. BREDEWOLD; A. H. VEENEMA. *Boston Col.*

10:00 III43 **378.03** Role of opioids, oxytocin, and stress in modulating social novelty-seeking behavior in the juvenile rat. C. J. SMITH*; J. N. MOGAVERO; K. B. WILKINS; K. I. REARDON; R. BREDEWOLD; A. H. VEENEMA. *Boston Col.*

11:00 III44 **378.04** Social recognition in male and female Syrian hamsters. K. E. MCCANN*; A. NORVELLE; H. E. ALBERS; K. L. HUHMAN. *Georgia State Univ.*

8:00 III45 **378.05** Oxytocin induces social communication in male Syrian hamsters by activating V1a and not OT receptors. Z. E. SONG*; K. E. MCCANN; J. K. MCNEILL, IV; K. L. HUHMAN; H. E. ALBERS. *Georgia State Univ.*

9:00 III46 **378.06** The influence of socio-spatial experience on dynamics of oxytocin receptor development in the prairie vole. G. S. PROUNIS*; A. G. OPHIR. *Cornell Univ.*

10:00 JJJ1 **378.07** The effects of vasopressin in the ventral tegmental area on social behavior are modulated by previous social experience. M. GIL*; E. NGUYEN; A. RIAZ; H. E. ALBERS. *Georgia State Univ., Georgia State Univ.*

11:00 JJJ2 **378.08** ▲ Effects of chronic intranasal oxytocin and exposure to novel social partners on expression of c-fos and oxytocin in prairie voles (microtus ochrogaster). G. M. DOWNING*; A. M. PERKEYBILE; J. A. VANWESTERHUYZEN; C. D. GUOYNES; C. D. PEIRIS; C. S. BIONDI; F. MA; D. J. PATRON; T. FONG; K. L. BALES. *Univ. of California, Davis, John F. Kennedy High Sch.*

8:00 JJJ3 **378.09** Contributions of genetic polymorphisms and neonatal experience to retrosplenial V1aR in prairie voles, Microtus ochrogaster. G. N. WALLACE*; M. OKHOVAT; Z. DEHGHANI; A. BERRIO ESCOBAR; S. PHELPS. *The Univ. of Texas, The Univ. of Texas.*

9:00 JJJ4 **378.10** Chronic intranasal oxytocin changes oxytocin receptor binding and peptide levels in male prairie voles. K. L. BALES*; T. C. SIMMONS; C. D. GUOYNES; A. M. PERKEYBILE; M. SOLOMON; S. JACOB; S. P. MENDOZA. *Univ. of California, Brigham Young Univ., MIND Institute, Univ. of California, Univ. of Minnesota.*

10:00 JJJ5 **378.11** Fibroblast growth factor 2 and maternal separation differentially interact with oxytocin and vasopressin to affect behavioral and physiological indices of anxiety. Y. LITVIN*; M. ROSE BAKER; C. A. TURNER; H. AKIL; B. S. MCEWEN. *The Rockefeller Univ., Univ. of Michigan, Univ. of Michigan.*

11:00 JJJ6 **378.12** Early-life FGF2 regulates developmental anxiety responses in rats bred for differences in their response to novelty. P. M. MARAS*; C. A. TURNER; Y. LITVIN; P. BLANDINO; S. J. WATSON; B. S. MCEWEN; H. AKIL. *Univ. of Michigan, Rockefeller Univ., Univ. of Michigan.*

8:00 JJJ7 **378.13** Early life FGF2 treatment alters vasopressin and oxytocin gene expression in animals that differ in their response to novelty. C. A. TURNER*; P. M. MARAS; Y. LITVIN; S. J. WATSON, Jr.; B. S. MCEWEN; H. AKIL. *Univ. Michigan, Rockefeller Univ., Univ. Michigan.*

9:00 JJJ8 **378.14** Empathy and Physiology in Sex Offenders. L. E. BEAVIN*; C. HARENSKI; P. J. ZAK; K. A. KIEHL. *Ctr. For Neuroeconomic Studies, Claremont Grad. Univ., The Mind Res. Network, Univ. of New Mexico.*

10:00 JJJ9 **378.15** Oxytocin release during rituals and its effect on in-group and out-group behavior. E. T. TERRIS*; L. E. BEAVIN; J. SCHLOSS; P. J. ZAK. *Ctr. For Neuroeconomics Studies, Claremont Grad. Univ., Ctr. For Neuroeconomics Studies, Westmont Col.*

11:00 JJJ10 **378.16** Autonomic and hormonal responses during narrative exposure predict charitable giving. J. A. BARRAZA*; V. ALEXANDER; L. BEAVIN; E. TERRIS; P. ZAK. *Claremont Grad. Univ., Claremont Grad. Univ.*

8:00 JJJ11 **378.17** A SNP in the prairie vole oxytocin receptor gene predicts individual variation in oxytocin receptor density in the nucleus accumbens and pup ultrasonic vocalizations. L. B. KING*; K. INOUE; D. G. RAINNIE; L. J. YOUNG. *Emory Univ., Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 JJJ12 **378.18** Consoling behavior in prairie voles is empathy-based and oxytocin-dependent. J. P. BURKETT*; D. W. CURRY; M. V. REYES; L. J. YOUNG. *Emory Univ., Ctr. for Translational Social Neurosci.*

10:00 JJJ13 **378.19** The effects of sex ratio on spatial navigation and OTR and V1aR neural phenotype. M. RICE*; G. SANIN; S. GIBBONS; A. G. OPHIR. *Oklahoma State Univ., Georgia State Univ.*

11:00 JJJ14 **378.20** Distribution of oxytocin receptor and vasopressin 1a receptor binding in the brain of the socially monogamous coppery titi monkey (Callicebus cupreus). S. M. FREEMAN*; L. J. YOUNG; K. L. BALES. *Emory Univ., Univ. of California-Davis.*

POSTER

379. Respiratory Regulation: Respiratory Rhythm and Pattern Generation

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 JJJ15 **379.01** Cardiorespiratory changes in dehydrated rats. M. T. FAVERO*; M. F. MENEZES; J. V. MENANI; P. M. DE PAULA. *Dept. of Physiol. and Pathology, Sch. of Dentistry, UNESP, Araraquara,, Dept. of Physiol. and Pathology, Sch. of Dentistry, UNESP, Araraquara, SP, Brazil.*

9:00 JJJ16 **379.02** Postnatal development of glycine receptor subunits α1, α2, α3, and β immunoreactivity in multiple brain stem respiratory-related nuclei of the rat. Q. LIU; X. GAO*; M. T. T. WONG-RILEY. *Med. Col. of Wisconsin.*

10:00 JJJ17 **379.03** Reduction of the dopaminergic neurons of the substantia nigra leads to abnormal respiratory control. M. T. CAVALLERI*; L. ALVES-DOS-SANTOS; B. F. BARNA; S. CHIAVEGATTO; T. S. MOREIRA; A. C. TAKAKURA. *Univ. of São Paulo, Univ. of São Paulo.*

11:00 JJJ18 **379.04** Evidence for enhanced central cardio-respiratory coupling following caffeine administration in the neonate rat *in vitro.* N. M. MELLEN*; B. GOURÉVITCH. *Univ. Louisville, Univ. Paris-Sud.*

8:00 JJJ19 **379.05** Collateral innervations are prevalent in pontomedullary respiratory circuits. G. SONG*; Y. NING; C. POON. *MIT.*

9:00 JJJ20 **379.06** Optogenetic inhibition of glycinergic neurons in the pre-Bötzinger/Bötzinger complex facilitates respiratory activity in neonatal mouse. N. KOSHIYA*; H. KOIZUMI; R. ZHANG; J. C. SMITH. *NIH - NINDS.*

10:00 JJJ21 **379.07** ATP released from glia is critical for the generation of sighs. T. I. DASHEVSKIY*; A. DOI; A. J. GARCIA; J. RAMIREZ. *Seattle Childrens Res. Inst., Univ. of Washington.*

11:00 JJJ22 **379.08** Examining the organization of the respiratory network in a novel slice preparation containing the entire ventral respiratory column. T. ANDERSON*; A. J. GARCIA, III; J. RAMIREZ. *Seattle Children's Res. Inst., Univ. of Washington, Univ. of Washington.*

8:00 JJJ23 **379.09** Distinct breathing activities during the first hours after birth in term and preterm mice. J. E. KOSCHNITZKY*; T. M. YOUNGQUIST; C. V. SMITH; J. M. RAMIREZ. *Seattle Children's Hosp. Res. Inst., Seattle Children's Hosp. Res. Inst., Univ. of Washington.*

9:00 JJJ24 **379.10** Mu-opioid suppression of preBötzinger fictive respiratory rhythm is mediated by activation of KCNQ, not GIRK potassium channels. A. D. WEI*; J. RAMIREZ. *Seattle Children's Res. Inst., Univ. of Washington Sch. of Med.*

10:00 JJJ25-DP9 **379.11** Rhythmic activity in brainstem-cerebellum slice co-cultures containing the preBötzinger complex. M. HERLY; M. APUSCHKIN; J. C. REKLING*. *Copenhagen Univ.*

11:00 JJJ26 **379.12** Activation of post-synaptic 5-HT1a receptors improves respiration in a mouse model of Rett syndrome. J. M. BISSONNETTE*; E. S. LEVITT; B. J. HUNNICUTT; S. J. KNOPP; J. T. WILLIAMS. *Oregon Hlth. Sci. Univ., Oregon Hlth. Sci. Univ., Oregon Hlth. Sci. Univ.*

8:00 JJJ27 **379.13** Effects of glutamatergic neurons in parabrachial nuclei on genioglossus muscle responses to hypercapnia in a mouse model of obstructive sleep apnea. I. RUKHADZE; A. MALHOTRA; N. L. CHAMBERLIN*. *Beth Israel Deaconess Med. Ctr. and harvard Med. Sch., Brigham and Women's Hosp. and harvard Med. Sch., Beth Israel Deaconess Med. Ctr.*

POSTER

380. Early Life Stress: Molecular Mechanisms and Effects

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 JJJ28 **380.01** Gene expression changes in the olfactory bulb of mice induced by exposure to diesel exhaust are dependent on animal rearing environment. S. YOKOTA*; C. KOIKE; K. TAKEDA. *Ritsumeikan Univ., Tokyo Univ. of Sci., Ritsumeikan Univ.*

9:00 JJJ29 **380.02** Three moments, three variables, and three predictions: Why some measures of individual circulating corticosterone (CORT) are better functional markers than others. A. C. TANG*; B. REEB-SUTHERLAND; R. ROMEO; B. MCEWEN. *Natl. Sci. Fndn., Florida Intl. Univ., Barnard Col., Rockefeller Univ.*

10:00 JJJ30 **380.03** Exposure to caregiver maltreatment alters epigenetic regulators in the medial prefrontal cortex. J. BLAZE*; T. L. ROTH. *Univ. of Delaware.*

11:00 JJJ31 **380.04** The influence of infant-caregiver experiences on neural substrates of anxiety-related and social behaviors in developing male and female rats. K. A. TAYLOR*; T. L. ROTH. *Univ. of Delaware.*

8:00 JJJ32 **380.05** The influence of caregiver maltreatment on brain telomere length in a rodent model. A. ASOK*; K. BERNARD; J. B. ROSEN; M. DOZIER; T. L. ROTH. *Univ. of Delaware, Stony Brook Univ.*

9:00 JJJ33 **380.06** Repeated exposure to the predator odor TMT in early-life alters behavioral responses to subsequent TMT exposure in adolescence. L. W. AYERS*; A. ASOK; J. BLAZE; T. ROTH; J. ROSEN. *Univ. Delaware, Univ. of Delaware.*

10:00 JJJ34 **380.07** Tween stress: Prepubertal adverse experience programs long-term changes in adult stress and reproductive pathways in females. K. E. MORRISON*; A. B. RODGERS; T. L. BALE. *Univ. of Pennsylvania.*

11:00 JJJ35 **380.08** OGT is a predictive placental biomarker of early maternal stress. C. L. HOWERTON*; T. L. BALE. *Univ. of Pennsylvania.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 JJJ36 **380.09** Sex differences in microRNA-mRNA networks: Novel epigenetic programming mechanisms in the sexually dimorphic neonatal hypothalamus. C. P. MORGAN*; T. L. BALE. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

9:00 JJJ37 **380.10** Tween stress: Prepubertal adversity disrupts male PFC maturation and is ameliorated by social interaction. A. M. BUCH*; K. E. MORRISON; T. L. BALE. *Univ. of Pennsylvania: Sch. of Vet Med., Univ. of Pennsylvania: Sch. of Vet Med.*

10:00 JJJ38 **380.11** Early prenatal stress reprograms prefrontal cortex mediated behaviors and dopamine pathways through increased placental inflammation. S. L. BRONSON*; T. L. BALE. *Univ. of Pennsylvania.*

11:00 JJJ39 **380.12** Placental-specific targeting of insulin signaling as a contributing mechanism to prenatal stress reprogramming. S. L. BRONSON; K. K. BENCE*; T. L. BALE. *Univ. of Pennsylvania.*

8:00 JJJ40 **380.13** Of vaginas and guts: The microbiome as a novel mechanism for maternal stress reprogramming of the offspring brain. C. L. HOWERTON; C. D. HOWARD; T. L. BALE*. *Univ. Pennsylvania.*

9:00 JJJ41 **380.14** Prenatal immune challenge enhances fetal levels of corticosterone in an IL-6 dependent manner. A. MOUIHATE*. *Kuwait Univ.*

10:00 JJJ42 **380.15** The cell adhesion molecule neuroligin-2 as a novel modulator of social behavior and vulnerability to early life stress. C. KOHL*; X. WANG; J. GROSSE; C. FOURNIER; K. V. WAGNER; D. HARBICH; C. SANDI; M. V. SCHMIDT. *Max Planck Inst. of Psychiatry, École Polytechnique Fédérale de Lausanne.*

11:00 JJJ43 **380.16** Effects of gene x early environment interaction on stress response in adult mice. D. ANDOLINA*; M. DISEGNI; F. D'AMATO; D. CONVERSI; L. D'APOLITO; L. BABICOLA; S. PUGLISI-ALLEGRA; T. PASCUCCI; R. VENTURA. *Santa Lucia Fundation, Santa Lucia Fundation, Natl. Res. Council, Dept. di Psicologia and Ctr. "Daniel Bovet", "Sapienza" Univ., Santa Lucia Fndn.*

8:00 JJJ44 **380.17** Epigenetic mechanisms are related to differential gene expression patterns after early life stress in the prefrontal cortex of mice. J. BOCK*; L. XIE; M. UHLIG; N. GRÖGER; K. RETHER; K. S. KORKMAZ; K. BRAUN. *Otto-von-Guericke University, Inst. of Biol., Ctr. for Behavioral Brain Sci., Ege Univ.*

9:00 JJJ45 **380.18** Changes in the expression of endocannabinoid synthesizing and degrading enzymes in adult rats subjected to maternal separation. A. ROMANO*; M. MENDEZ-DÍAZ; O. PROSPÉRO-GARCÍA. *Univ. Nacional Autonoma De Mexico, UNAM.*

10:00 JJJ46 **380.19** Effect of prenatal alcohol exposure and chronic mild stress in adulthood on CRH and AVP mRNA expression in the PVN and profile of anxiety-like behavior. N. LAN*; K. G. C. HELLEMANS; L. ELLIS; J. WEINBERG. *Univ. of British Columbia, China Med. Univ., Carleton Univ.*

11:00 JJJ47 **380.20** ● Early life stress differentially affects hippocampal and hypothalamic CRH and AVP expression during the stress hyporesponsive period, without affecting glucocorticoids levels. N. LAJUD*; K. M. HILLERER; M. FUCHS; A. ROQUE; L. TORNER; I. D. NEUMANN. *IMSS, Univ. of Regensburg,.*

8:00 JJJ48 **380.21** Mechanisms of repressed hypothalamic CRH expression by augmented maternal care. A. SINGH*; C. KARSTEN; J. COPE; T. Z. BARAM. *Univ. of Calfornia-Irvine, Univ. of Calfornia-Irvine, Univ. of Calfornia-Irvine.*

9:00 JJJ49 **380.22** Adverse early life experience evokes dysregulated expression of several histone modifying enzymes across the life-span in the rat prefrontal cortex. A. BHATTACHARYA; M. PUSALKAR; D. SURI; V. A. VAIDYA*. *Tata Inst. Fundamental Rese.*

POSTER

381. Stress-Modulated Pathways: Amygdala

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 JJJ50 **381.01** HCN1 expression pattern in distinct cell populations within the amygdala complex. M. BOMPOLAKI; W. F. COLMERS; J. H. URBAN*. *Rosalind Franklin Univ., Univ. of Alberta, Chicago Med. Sch/Rosalind Franklin Univ. Med. & Sci.*

9:00 JJJ51 **381.02** Differential activation of neuronal cell types in the basolateral amygdala by corticotropin releasing factor. M. R. DEJOSEPH*; A. B. ROSTKOWSKI; R. J. LEITERMANN; J. H. URBAN. *Rosalind Franklin.*

10:00 JJJ52 **381.03** Sex differences in c-Fos activation of amygdala and locus coeruleus neurons following chronic alcohol treatment. T. A. RETSON*; E. J. VAN BOCKSTAELE. *Thomas Jefferson Univ.*

11:00 JJJ53 **381.04** Blockade of the Glutamatergic activity within the basolateral amygdala reduces the cardiovascular response evoked from the periaqueductal gray in conscious rats. A. R. R. DE ABREU; A. R. R. ABREU; L. G. B. T. SANTOS; D. A. CHIANCA*; R. C. A. MENEZES. *Federal Univ. of Ouro Preto.*

8:00 JJJ54 **381.05** Chronic psychosocial stress and estradiol alter intrinsic functional connectivity and gray matter volume in rhesus macaques. K. M. REDING*; D. S. GRAYSON; O. MIRANDA-DOMÍNGUEZ; S. RAY; M. STYNER; M. E. WILSON; D. TOUFEXIS; D. A. FAIR; M. SANCHEZ. *Emory Univ., Univ. of California, Oregon Hlth. and Sci. Univ., Univ. of North Carolina, Yerkes Natl. Primate Res. Center, Emory Univ., Univ. of Vermont, Emory Univ.*

9:00 JJJ55 **381.06** Enkephalin knockdown in the central or basolateral nucleus of the amygdala exhibit opposite fear and anxiety-like behavioral responses. P. BERUBE*; J. POULIN; S. LAFOREST; G. DROLET. *Univ. Laval / Ctr. De Recherche Du CHU De Québec (CHUL).*

10:00 JJJ56 **381.07** During chronic stress, α2-adrenergic receptor activity interferes with the stress-induced morphological changes in the principal neurons of the rat basolateral amygdala. E. W. H. MU*; K. BORGES; N. A. LAVIDIS. *Univ. of Queensland.*

11:00 JJJ57 **381.08** A curcumin-enriched diet is as effective as fluoxetine at reversing the effects of chronic corticosterone exposure on fear memory consolidation. M. S. MONSEY*; L. M. BOYLE; M. L. ZHANG; C. P. NGUYEN; J. R. TAYLOR; G. E. SCHAFE. *Yale Univ., Yale Univ., Yale Univ.*

8:00 JJJ58 **381.09** Organic cation transporter 3 is expressed on a diverse group of GABAergic neurons in the amygdala: A mechanism for stress-induced modulation of amygdala activity. P. J. GASSER*; J. E. HILL; M. HURLEY; A. NELEZEN. *Marquette Univ., Marquette Univ.*

9:00 JJJ59 **381.10** The involvement of corticosteriods in regulation of amygdla crf-expression by adverse events. A. THORSELL; J. SCHULKIN*. *Linkoping Univ., American Col. OBGYN, Georgetown Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 JJJ60 **381.11** Psychosocial stress increases brain glucose metabolism in limbic areas in rats. M. ANANTH*; L. S. ROBISON; S. YOUNENTOB; N. VOLKOW; P. THANOS. *Stony Brook Univ., Brookhaven Natl. Lab., Stony Brook Univ., SUNY Upstate Med. Univ., The SUNY Developmental Exposure Alcohol Res. Ctr., NIAAA, NIH.*

11:00 JJJ61 **381.12** Reduced inhibition of the amygdala may contribute to phobia development in panic-prone rats with chronic disinhibition of PeF/DMH neurons. A. I. MOLOSH*; W. A. TRUITT; S. D. FITZ; A. D. DIETRICH; P. L. JOHNSON; A. SHEKHAR. *IU Sch. of Medicine/SNRI, IU Sch. of Medicine/SNRI.*

8:00 JJJ62 **381.13** Neuronal activity of the central and lateral amygdaloid and dorsal raphe nuclei in rats subjected to acoustic stress. G. ARAJYAN; R. SARGSYAN; N. B. YERITSYAN*. *Armenian State Pedagogical Univ. after Kh. Abovyan, Natl. Acad. of Sci. of Armenia, Leibniz Inst. For Neurobio.*

POSTER

382. Stress-Modulated Pathways: Hypothalamus and Bed Nucleus

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 JJJ63 **382.01** ▲ Nitric oxide synthase and nitric oxide alterations in major depressive disorder: Comparison with chronic stress rats. S. GAO; Y. LU; X. WU; J. WU; J. LU; J. LUO; A. BAO*. *Zhejiang Univ.*

9:00 JJJ64 **382.02** High fat diet-induced obesity does not alter the cardiovascular effects evoked by activation of glutamatergic receptors within the dorsomedial hypothalamus in wistar rats. A. R. R. DE ABREU*; L. G. B. T. SANTOS; D. A. CHIANCA JR; R. C. A. MENEZES. *Federal Univ. of Ouro Preto.*

10:00 JJJ65 **382.03** Subthreshold panicogenic stimuli trigger exacerbated hot flash-like responses in an ovariectomy rat model of a menopausal state. L. FEDERICI*; S. FITZ; A. SHEKHAR; P. JOHNSON. *Indiana Univ., Indiana Univ.*

11:00 JJJ66 **382.04** Hindbrain glucagon-like peptide-1 (GLP1) neurons in rats are glutamatergic. H. ZHENG; R. STORNETTA; K. AGASSANDIAN; L. M. RINAMAN*. *Univ. of Pittsburgh, Univ. of Virginia, Univ. of Pittsburgh, Univ. Pittsburgh.*

8:00 JJJ67 **382.05** The impact of a common mu-opioid receptor single nucleotide polymorphism (SNP) on stress-induced HPA axis activation. L. MARSAN*; P. S. GRIGSON; R. H. BONNEAU. *Pennsylvania State Univ.*

9:00 JJJ68 **382.06** ▲ The expression of the oxytocin-monomeric red fluorescent protein 1 fusion gene in the hypothalamus and spinal cord of adjuvant-induced arthritic rats. M. TAKANORI*; T. ISHIKURA; M. YOSHIMURA; J. OHKUBO; T. MARUYAMA; M. KAWASAKI; H. OHNISHI; H. HASHIMOTO; Y. UETA. *Univ. of Occup. and Envrn. Health, Japan.*

10:00 JJJ69 **382.07** ● Differential roles of cyclooxygenase-2-related signaling in regulating neuronal activity under various acute stress conditions. Y. MA*; T. MATSUWAKI; K. YAMANOUCHI; M. NISHIHARA. *The Univ. of Tokyo.*

11:00 JJJ70 **382.08** Intra-bed nucleus of the stria terminalis pituitary adenylate cyclase- activating peptide increases plasma corticosterone. K. R. LEZAK*; E. ROELKE; O. HARRIS; G. COCCHIARIO; C. W. ROMAN; G. MISSIG; K. M. BRAAS; V. MAY; S. E. HAMMACK. *Univ. of Vermont, Univ. of Vermont Col. of Med.*

8:00 KKK1 **382.09** Modulation of dopaminergic neurotransmission via CRH and CRHR1 differentially regulates anxiety-related behavior. N. DEDIC*; C. KUEHNE; A. KOLARZ; E. A. ANDERZHANOVA; M. SCHIEVEN; M. ABLEITNER; C. TOUMA; F. HOLSBOER; C. T. WOTJAK; W. WURST; D. REFOJO; J. M. DEUSSING. *Max Planck Inst. of Psychiatry, Helmholtz Zentrum.*

9:00 KKK2 **382.10** Electromagnetic field exposure induces behavioral changes on stressed rats. L. VERDUGO-DIAZ*; J. MARTINEZ-HERRERA; A. SANCHEZ-TAPIA; I. MEDINA-SALAZAR. *Univ. Natl. Autonoma Mexico.*

10:00 KKK3 **382.11** Acute and repeated social defeat differentially activate hypothalamic orexin/hypocretin and melanin-concentrating hormone neurons in the male rat. E. D. PAUL*; B. K. K. FIELDS; J. D. HEINZE; M. W. HALE; J. L. LUKKES; I. A. KERMAN; C. A. LOWRY. *Univ. of Colorado, La Trobe Univ., Harvard Med. Sch., Univ. of Alabama at Birmingham.*

11:00 KKK4 **382.12** Neuroanatomy and evolution of corticotropin-releasing hormone and urotensin 1 in zebrafish. B. GRONE*; G. SKARIAH; P. MOURRAIN. *Stanford Univ.*

8:00 KKK5 **382.13** Alpha2a-AR modulation of parabrachial nucleus input to the BNST. S. FLAVIN*; R. T. MATTHEWS; D. G. WINDER. *Vanderbilt Univ. Med. Ctr., Neurosci. Program in Substance Abuse, Vanderbilt Brain Inst., Vanderbilt Med. Scientist Training Program, Vanderbilt Kennedy Ctr., Vanderbilt Univ. Med. Ctr., Mol. Physics and Biophysics.*

9:00 KKK6 **382.14** Differential effects of corticosterone on basal or cold-induced proTRH expression in the paraventricular nucleus of the hypothalamus and thyrotropin release. I. SOTELO RIVERA; A. PÉREZ MALDONADO; J. CHARLI*; P. JOSEPH BRAVO. *Inst. De Biotecnología, Univ. Nacional Autonoma De Mexico (UNAM).*

10:00 KKK7 **382.15** Orexin (hypocretin) neurons are hyporesponsive to stress in adulthood following maternal separation: Effects reversed by voluntary exercise in male but not female rats. E. J. CAMPBELL*; M. H. JAMES; H. N. RICHARDSON; D. M. HODGSON; C. V. DAYAS. *Univ. of Newcastle, Univ. of Massachusetts.*

11:00 KKK8 **382.16** Kappa opioid receptor regulation of anxiety-like behaviors in mice. N. M. MCCALL*; N. A. CAPIK; J. WHISTLER; T. L. KASH. *Univ. of Minnesota, UNC Sch. of Med., UCSF.*

8:00 KKK9 **382.17** Differential expression of arginine vasotocin and CRH receptor subtypes in the avian brain and hypothalamus by acute and chronic stress. S. W. KANG*; G. NAGARAJAN; W. J. KUENZEL. *Univ. of Arkansas.*

9:00 KKK10 **382.18** Characterization and targeting of corticotropin releasing hormone neurons in the paraventricular nucleus of the hypothalamus of Crh-IRES-Cre mutant mice. T. FÜZESI*; J. I. WAMSTEEKER CUSULIN; A. G. WATTS; J. S. BAINS. *Univ. of Calgary, USC.*

10:00 KKK11 **382.19** Sex differences in stress-related neurocircuitry following tailshock stress. J. A. BABB*; B. N. GREENWOOD; A. B. LOUGHRIDGE; K. G. SPENCE; T. D. SCHOLL; M. FLESHNER; H. E. W. DAY; S. CAMPEAU. *Univ. Colorado Boulder, Univ. Colorado Boulder.*

11:00 KKK12 **382.20** Sex and age-dependent changes in Relaxin 3 expression and modulation of the HPA axis in rats. K. MEADOWS; E. M. BYRNES*. *Tufts Univ. Cummings Sch. Vet Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 KKK13 **382.21** Angiotensin Converting Enzyme 2 is anxiolytic, alters stress-induced neuronal activation and expression of inflammatory cytokines in mice. L. WANG*; A. D. DE KLOET; H. HILLER; D. NGUYEN; J. A. SMITH; E. G. KRAUSE. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

9:00 KKK14 **382.22** Pacap: A potential modulator of adrenal-level hpa responses to acute and chronic stress. M. C. VALDEZ*; K. SPURGIN; V. JHA; J. KOUCH; M. CURRAS-COLLAZO. *Univ. of California Riverside.*

10:00 KKK15 **382.23** Application of the three hit theory in PACAP heterozygote mice: Maternal separation and chronic stress influence BNST CRF and cpEW Ucn1 in an inverse manner. B. GASZNER*; J. FARKAS; G. BODNAR; L. KOVACS; T. GASZNER; L. GASPAR; A. BALOGH; B. SZALONTAI; V. KORMOS. *Univ. of Pecs, Univ. of Pecs, Univ. of Pecs, Univ. of Pecs.*

11:00 KKK16 **382.24** ▲ Urocortin 1 priming in the bed nucleus of the stria terminalis (BNST) induces a chronic anxiety-like state: Analysis of slc6a4 expression in anxiety-related serotonergic systems of rats. S. MANI*; N. C. DONNER; S. D. FITZ; A. SHEKHAR; C. A. LOWRY. *Univ. of Colorado Boulder, Indiana Univ. Sch. of Med.*

8:00 KKK17 **382.25** The effect of peripheral salt loading on central circuits that regulate stress. C. J. FRAZIER*; D. PATI; J. A. SMITH; A. D. DE KLOET; E. G. KRAUSE. *Univ. Florida, Univ. Florida.*

9:00 KKK18 **382.26** Pharmacological depletion of serotonin in the basolateral amygdala reduces anxiety and disrupts fear conditioning. L. LI; L. M. FEDERICI; R. PATIBANDLA; S. D. FITZ; Z. A. RODD; P. L. JOHNSON*; A. SHEKHAR. *Indiana Univ., Indiana Univ., Indiana Univ. Sch. of Med.*

10:00 KKK19 **382.27** Regulation of GABAergic transmission in hypothalamic parvocellular neuroendocrine cells by GABA transporters. P. COLMERS*; J. S. BAINS. *Univ. of Calgary, Univ. of Calgary.*

11:00 KKK20 **382.28** Role of vasopressinergic innervation of habenula in the selection of stress coping strategies in rat. V. S. HERNANDEZ*; L. ZHANG. *Dept. of Physiology, Fac. of Medicine, Natl. Autonomous Univ. of Mexico.*

8:00 KKK21 **382.29** Serotonin regulation of local GABAergic circuit function in the bed nucleus of stria terminalis. C. MARCINKIEWCZ; A. LOPEZ; L. KENDRA; T. KASH*. *UNC-Chapel Hill, UNC- Chapel Hill.*

POSTER

383. Hypothalamus

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 KKK22 **383.01** ▲ Antagonistic interactions between lateral hypothalamic NMDA receptors and GABAA receptors regulating food intake. S. H. COOP*; K. R. URSTADT; O. SHAHAIN; B. G. STANLEY. *Univ. of California Riverside, Univ. of California Riverside, Univ. of California Riverside.*

9:00 KKK23 **383.02** Anatomical evidence that the ventral pallidum interconnects the accumbens shell and the lateral hypothalamus. K. URSTADT*; B. G. STANLEY. *Univ. of California, Riverside, Univ. of California, Riverside.*

10:00 KKK24 **383.03** Inhibition of aspartic cathepsins impairs processing of POMC in hypothalamic neurons. S. KIM*; E. KIM. *Daegu Gyeongbuk Inst. of Sci. & Technol.*

11:00 KKK25 **383.04** Hypothalamic and Brainstem structures involved in the beneficial effects of iminosugars on metabolic syndrome. D. HERRERA MORO*; M. VAN EIJK; E. FOPPEN; R. OTTENHOFF; C. VAN ROOMEN; E. GIRAULT; J. ELIVELD; K. JANSEN; A. KALSBEEK; H. AERTS. *Academic Med. Ctr., Academic Med. Ctr., Netherlands Inst. of Neurosci.*

8:00 KKK26 **383.05** Intrahypothalamic pituitary adenylate cyclase-activating polypeptide regulates energy balance via site-specific actions on feeding and metabolism. J. M. RESCH*; B. MAUNZE; A. E. GERHARDT; S. K. MAGNUSON; K. PHILIPS; S. CHOI. *Marquette Univ.*

9:00 KKK27 **383.06** LGR4 and its ligands, R-spondin 1 and 3, regulate food intake in the hypothalamus. J. LI*; B. CHAI; W. ZHANG; D. M. FRITZE; C. ZHANG; M. W. MULHOLLAND. *Univ. Michigan.*

10:00 KKK28 **383.07** Oxytocin in the ventromedial nucleus of the hypothalamus reduces feeding and increases energy expenditure: A potential contributor to post-exercise satiety. E. NOBLE*; C. M. KOTZ; C. J. BILLINGTON; C. WANG. *Univ. of Minnesota, Minnesota Obesity Ctr., VAMC.*

11:00 KKK29 **383.08** How does the ventromedial nucleus of the hypothalamus control the endocrine counterregulatory response to hypoglycemia? N. FOSTER*; A. G. WATTS. *USC.*

8:00 KKK30 **383.09** ● Epigenetic effect of macronutrient on gene expression in the hypothalamus. M. BUENDIA; M. GONZÁLEZ; I. F. PEREZ*; R. CONTRERAS; L. BETANCOURT; P. RADA; D. PAREDES; S. MIGUEL; L. HERNÁNDEZ. *Inst. Nacional de Nutrición, Univ. de Los Andes, INSTITUTO NACIONAL DE Nutrición, Johns Hopkins University. Inst. Lieber, NIH.*

9:00 KKK31 **383.10** ▲ The chemoarchitecture of the lateral hypothalamic area. G. A. LEAN; J. F. ABU-JABER; R. H. THOMPSON*. *USC.*

POSTER

384. Peptides, Signaling, and Feeding

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 KKK32 **384.01** Fasting increases the readily releasable pool of gaba in agrp neurons. M. DICKEN*; S. T. HENTGES. *Colorado State Univ.*

9:00 KKK33 **384.02** Peripheral LPS administration modulates AMPK phosphorilation. D. C. VITORINO; R. F. MOURA; E. A. D. R. ROMAN; G. A. DOS SANTOS; P. M. COELHO; S. RIVEST; L. A. VELLOSO*; M. A. TORSONI. *Unicamp, Laval Univ.*

10:00 KKK34 **384.03** Role of capsaicin-sensitive peripheral sensory neurons in anorexic responses to peptide YY (3-36) and glucagon-like peptide-1 in rats. R. REIDELBERGER*; A. HAVER; K. ANDERS; B. APENTENG. *Creighton Univ., Veterans Affairs-Nebraska Western Iowa Hlth. Care Syst.*

11:00 KKK35 **384.04** Ghrelin stimulates POMC neurons in ghrelin receptor null mice. D. LI*; S. CHEN; H. CHEN; G. PRADHAN; Y. SUN; H. PAN. *UT-MD Anderson Cancer Ctr., UT-MD Anderson Cancer Ctr,, Baylor Col. of Med., UT MD Anderson Cancer Ctr.*

8:00 KKK36 **384.05** Insights into underlying mechanism and improved efficacy of the adjustable gastric band. B. J. OLDFIELD*; J. KAMPE; K. COHEN; N. FORREST; W. A. BROWN; A. STEFANIDIS. *Monash Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 KKK37 **384.06** Regulation of brain reward function by melanin-concentrating hormone. J. B. FRIHAUF*; E. P. ZORRILLA. *The Scripps Res. Inst.*

10:00 KKK38 **384.07** Close arterial infusions of devazepide suggest that the vascular bed of the celiac artery contains site(s) of action for reduction of meal size and prolongation of intermeal interval by camostat. A. I. SAYEGH*; A. AGLAN; M. WASHINGTON; J. REEVE JR. *Tuskegee Univ., Sch. of Med. Wayne State Univ., David Geffen UCLA Sch. of Med.*

11:00 KKK39 **384.08** A novel role for PTP1B in BDNF/TrkB signaling in the context of metabolism. C. OZEK*; S. KANOSKI; H. GRILL; K. BENCE. *Univ. of Pennsylvania, USC.*

8:00 KKK40 **384.09** Synaptic regulation of agrp neurons and related feeding control. D. KONG*; Y. DAGON; B. B. KAHN; B. L. SABATINI; B. B. LOWELL. *Beth Israel Deaconess Med. Ctr. and Harvard Med. Sch., HHMI, Harvard Med. Sch.*

9:00 KKK41 **384.10** mTORC2/Akt signaling in monoaminergic neurons controls brain dopamine homeostasis and caloric intake. O. DADALKO*; A. POE; L. MORRIS; L. KANG; D. WASSERMAN; G. STANWOOD; K. NISWENDER; A. GALLI. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr.*

10:00 KKK42 **384.11** ● Effect of satiety hormone analog, exenatide on resting state brain activity in lean vs obese women. K. COVELESKIE; L. CONNOLLY; C. ASHE-MCNALLEY; J. STAINS; E. A. MAYER; L. A. KILPATRICK*. *Oppenheimer Family for the Neurobio. of Stress, UCLA.*

11:00 KKK43 **384.12** Central vagal afferent terminals are necessary for reduction of food intake by hindbrain melanocortin 4 receptor activation. C. A. CAMPOS*; H. SHIINA; R. C. RITTER. *Washington State Univ.*

POSTER

385. Human Memory: Role of Medial Temporal Lobe

Theme F: Cognition and Behavior

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 KKK44 **385.01** Adaptive beta and gamma oscillatory responses to oddball stimuli in human anterior hippocampus. M. YEBRA; S. MORATTI*; R. TOLEDANO; C. MENDEZ-BERTELO; F. LOPEZ-SOSA; A. GIL-NAGEL; B. A. STRANGE. *Univ. Politécnica, Univ. Complutense De Madrid, Hosp. Ruber Internacional, Univ. Complutense.*

9:00 KKK45 **385.02** Compression and expansion of temporal context in the human brain is revealed by representational similarity analysis. T. A. SMITH*; V. SREEKUMAR; S. DENNIS; P. B. SEDERBERG. *The Ohio State Univ.*

10:00 KKK46 **385.03** *In-vivo* visualization and segmentation of perforant path in the human brain with high angular resolution diffusion imaging. Z. SONG*; F. LAM; N. PANNETIER; S. BUCKLEY; F. EZEKIEL; S. MUELLER; Z. LIANG; M. WEINER. *Univ. of California, San Francisco, UIUC.*

11:00 KKK47 **385.04** ● Divergent object recognition response biases for semantically familiar and unfamiliar objects: Relationship with the anteromedial temporal lobe. S. KRUMM*; J. REINHARDT; S. L. KIVISAARI; S. ULMER; A. U. MONSCH; C. STIPPICH; R. W. KRESSIG; K. I. TAYLOR. *Univ. of Basel, Memory Clinic, Univ. Ctr. of Med. of Aging Basel (UAB), Felix-Platter Hosp., Div. of Diagnos. and Interventional Neuroradiology Univ. of Basel Hosp., Univ. of Cambridge, Ctr. for Speech, Language and the Brain, Med. Radiological Inst. (MRI).*

8:00 KKK48 **385.05** The impact of visual object interference on eye movements and brain activity during object recognition memory. H. C. WATSON; S. DHILLON; N. LOBAUGH; A. C. LEE*. *Univ. of Toronto, Ctr. for Addiction and Mental Hlth., Univ. of Toronto, Baycrest Ctr. for Geriatric Care.*

9:00 KKK49 **385.06** Reinstatement of place-responsive cell activity during episodic memory retrieval. J. MILLER*; M. NEUFANG; A. SOLWAY; A. BRANDT; S. HEFFT; M. TRIPPEL; I. MADER; S. POLYN; J. JACOBS; A. SCHULZE-BONHAGE; M. KAHANA. *Drexel Univ., Univ. of Freiburg, Princeton Univ., Vanderbilt Univ., Univ. of Pennsylvania.*

10:00 KKK50 **385.07** The dual process signal detection model makes systematic errors. A. DEDE*; L. R. SQUIRE; J. T. WIXTED. *Univ. of California San Diego, Veterans Affairs Healthcare Syst., Univ. of California San Diego.*

11:00 KKK51 **385.08** Selective attention modulates coupling between ventral visual cortex and the medial temporal lobe. N. I. CORDOVA*; A. TOMPARY; N. B. TURK-BROWNE. *Princeton Univ., New York Univ.*

8:00 KKK52 **385.09** Context valence improves Item memory: Role of the hippocampus and midbrain. E. LOH*; D. KUMARAN; R. DOLAN; E. DUZEL. *Univ. Col. London.*

9:00 KKK53 **385.10** Investigating the neural correlates underlying temporal duration memory. A. J. BARNETT*; H. C. WATSON; A. C. H. LEE. *Univ. of Toronto.*

10:00 KKK54 **385.11** Effects of emotion on memory representations in hippocampal subfields. C. SWEEGERS*; L. M. TALAMINI. *Univ. of Amsterdam, Cognitive Sci. Ctr. Amsterdam.*

11:00 KKK55 **385.12** Integrating neural and behavioral data into episodic memory models. J. R. MANNING*; D. BLEI; K. NORMAN. *Princeton Univ., Princeton Univ.*

8:00 KKK56 **385.13** Response specificity in the medial temporal lobe during recognition of novel objects, faces and scenes: A mixed-design fMRI experiment. A. KAFKAS*; E. M. MIGO; R. G. MORRIS; M. D. KOPELMAN; D. MONTALDI; A. R. MAYES. *Univ. of Manchester, Inst. of Psychiatry, King's Col. London.*

9:00 KKK57 **385.14** The hippocampus is only sensitive to amount recollected, not to recollection strength. D. MONTALDI*; A. KAFKAS; E. M. MIGO; A. ROPER; T. GHOLIPOUR; A. MAYES. *The Univ. of Manchester, Inst. of Psychiatry, King's Col. London, Brigham and Women Hosp. Neurology, Harvard Univ.*

10:00 KKK58 **385.15** Effects of emotional experience on sleep depend on circadian phase. L. M. TALAMINI*; R. COX; C. C. G. SWEEGERS; W. F. HOFMAN. *Univ. Amsterdam, Cognitive Sci. Ctr. Amsterdam.*

11:00 KKK59 **385.16** Computational model-based neurogenetic analysis of human learning and memory. G. LUKSYS*; S. ACKERMANN; D. COYNEL; M. FASTENRATH; L. GSCHWIND; A. HECK; B. RASCH; K. SPALEK; C. VOGLER; A. PAPASSOTIROPOULOS; D. DE QUERVAIN. *Univ. of Basel, Univ. of Zurich.*

8:00 KKK60 **385.17** ● ▲ Improving participant performance on mu rhythm-based brain-computer interfaces. V. CORBIT; M. SCHLUSSEL; Y. YU; L. A. GABEL*. *Lafayette Col., Lafayette Col., Lafayette Col.*

9:00 KKK61 **385.18** Ventral visual object stream hierarchically processes confusable objects. S. L. KIVISAARI*; A. U. MONSCH; S. ULMER; J. REINHARDT; C. STIPPICH; R. W. KRESSIG; K. I. TAYLOR. *Ctr. For Speech, Language, and the Brain, Memory Clin., Univ. of Basel, Med. Inst. of Radiology, Div. of Diagnos. and Interventional Neuroradiology.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 KKK62 **385.19** A broadly distributed memory signal in neurons of the human hippocampus. J. T. WIXTED*; L. R. SQUIRE; Y. JANG; M. H. PAPESH; S. D. GOLDINGER; P. N. STEINMETZ. *UC San Diego, UC San Diego, Univ. of Montana, Louisiana State Univ., Arizona State Univ., Barrow Neurolog. Inst.*

11:00 KKK63 **385.20** High-resolution investigation of trial-level and state-level similarity in hippocampal subfields and MTL cortex. A. TOMPARY*; K. DUNCAN; L. DAVACHI. *New York Univ., Columbia Univ., New York Univ.*

POSTER

386. Emotion and Stress

Theme F: Cognition and Behavior

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 KKK64 **386.01** Releasing the brake: Blockade of the endogenous cortisol response increases emotional arousal responses during stress. E. J. HERMANS*; G. FERNÁNDEZ. *Radboud Univ. Nijmegen Med. Ctr., Radboud Univ. Nijmegen Med. Ctr.*

9:00 KKK65 **386.02** Trait neuroticism selectively sensitizes the amygdala under acute stress. D. S. EVERAERD*; F. KLUMPERS; G. VAN WINGEN; I. TENDOLKAR; G. FERNÁNDEZ. *Radboud Univ. Nijmegen Med. Ctr., Radboud Univ. Nijmegen Med. Ctr., Radboud Univ. Nijmegen Med. Ctr., Academic Med. Ctr., Radboud Univ. Nijmegen Med. Ctr., Univ. Hosp. Essen.*

10:00 KKK66 **386.03** Dual competition in the salience and perceptual networks during task-relevant emotional working memory processing. Y. LUO*; S. QIN; G. FERNÁNDEZ; Y. ZHANG; F. KLUMPERS; H. LI. *Radboud Univ. Nijmegen Med. Ctr., Radboud Univ. Nijmegen Med. Ctr., Southwest Univ., Stanford Univ. Sch. of Med., Liaoning Normal Univ.*

11:00 KKK67 **386.04** Emergency over the atlantic: Altered attentional tuning following a single traumatic event. D. H. LEE*; R. M. TODD; M. C. MCKINNON; B. LEVINE; A. K. ANDERSON. *Univ. of Toronto, Univ. of British Columbia, McMaster Univ., St. Joseph's Healthcare Hamilton, Rotman Res. Inst.*

8:00 KKK68 **386.05** ▲ Stress administered immediately before learning reduces false memory production and selectively enhances true memory in females. A. KALCHIK*; D. M. PETERS; S. A. WOELKE; M. M. HOFFMAN; R. L. AUFDENKAMPE; K. L. FINDLEY; N. E. WOLTERS; J. N. TALBOT; P. R. ZOLADZ. *Ohio Northern Univ., Ohio Northern Univ.*

9:00 KKK69 **386.06** Cognitive mechanisms of mindful attention and stress: When the space between your ears seems real. L. MCDONOUGH*; E. K. PAPIES; K. GOPINATH; L. F. BARRETT; L. W. BARSALOU. *Emory Univ., Utrecht Univ., Northeastern Univ.*

10:00 KKK70 **386.07** The interaction effect of the neuregulin-1 genotype and stressful life events on impulsive behaviour. E. KIIVE*; M. VAHT; T. VEIDEBAUM; J. HARRO. *Univ. of Tartu, Natl. Inst. for Hlth. Develop.*

11:00 LLL1 **386.08** Stress and coping in college students. V. V. GALVAN*; S. V. JENSEN; C. L. TERGESEN; H. HILDALGO; A. LEBENBAUM; V. MENDEZ; B. CHASE. *Univ. San Diego.*

8:00 LLL2 **386.09** The effects of cortisol on the emotion-induced memory trade-off. K. R. MICKLEY STEINMETZ*; K. A. BENNION; E. A. KENSINGER. *Wofford Col., Boston Col.*

9:00 LLL3 **386.10** How the mineralocorticoid receptor mediates acute stress - Effects on human brain function and cognition. S. VOGEL*; F. KLUMPERS; C. F. A. DOELLER; M. C. W. KROES; H. J. KRUGERS; Z. FANG; K. T. OPLAAT; M. S. OITZL; M. JOËLS; G. FERNÁNDEZ. *Radboud Univ. Nijmegen Med. Ctr., Radboud Univ. Nijmegen Med. Ctr., Radboud Univ. Nijmegen, Univ. of Amsterdam, Univ. Med. Ctr. Utrecht, Radboud Univ. Nijmegen, Donders Inst.*

10:00 LLL4 **386.11** Glucocorticoid modulation of memory for emotional gist and detail in hormonal contraceptive users and non-users. S. E. NIELSEN*; L. CAHILL. *Univ. of California, Irvine.*

11:00 LLL5 **386.12** Pre-learning social evaluative stress exerts sex-specific effects on long-term picture memory. A. J. WARNECKE*; H. M. BURKE; R. M. FRIGO; S. A. WOELKE; J. M. PISANSKY; C. M. ROBINSON; N. E. WOLTERS; J. N. TALBOT; P. R. ZOLADZ. *Ohio Northern Univ., Ohio Northern Univ.*

8:00 LLL6 **386.13** Neural responses to negative outcomes and decisions to persist or give up on a goal. J. P. BHANJI*; M. E. SPEER; M. R. DELGADO. *Rutgers Univ.*

9:00 LLL7 **386.14** Acute stress impairs dietary self-control and reduces dlPFC-vmPFC interactions. S. U. MAIER*; A. B. MAKWANA; T. A. HARE. *Univ. of Zurich, Dept. of Econ.*

10:00 LLL8 **386.15** Investigating the influence of fear and disgust on a high-level visual discrimination task. D. M. DOUGLAS*; M. D. BARENSE; J. D. RYAN. *Univ. of Toronto, Rotman Res. Inst.*

11:00 LLL9 **386.16** Placebo instructions reverse the impact of negative emotions on pain - An fMRI study. P. REICHERTS*; A. B. M. GERDES; P. PAULI; M. J. WIESER. *Univ. of Würzburg, Univ. of Mannheim.*

8:00 LLL10 **386.17** Resting cardiac vagal tone inversely relates to intrinsic salience network connectivity. X. YANG*; M. IMMORDINO-YANG. *USC, USC, USC.*

POSTER

387. Neural Mechanisms of Attention

Theme F: Cognition and Behavior

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 LLL11 **387.01** Feature-based attentional modulation of multi-unit activity in primary visual cortex of the rhesus monkey. R. LIU*; V. STEPHAN; S. TREUE. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci., Fac. for Biol. and Psychology, Goettingen Univ.*

9:00 LLL12 **387.02** ● Poor sustained - but not control of - attention in the Sp4 hypomorphic mouse model of schizophrenia. J. W. YOUNG*; M. E. KAMENSKI; M. A. GEYER; G. A. LIGHT; X. ZHOU. *UCSD.*

10:00 LLL13 **387.03** Does the post-stimulated gamma-band energy of lfp in v1 depend on the stimulation? W. HONG*; Z. SHANG; Z. WANG; L. SHI. *Zhengzhou Univ., Zhengzhou Univ.*

11:00 LLL14 **387.04** Functional connectivity of macaque prefrontal cortex cells reveals a modulatory and driving role for the anterior cingulate cortex in attentional control. M. OEMISCH*; S. WESTENDORFF; S. EVERLING; T. WOMELSDORF. *York Univ., Western Univ.*

8:00 LLL15 **387.05** Modeling the neural correlates of visual attention. T. WIESE*; M. COHEN; B. DOIRON. *Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

9:00 LLL16 **387.06** Neuronal correlates of spatial attention in FEF during motion direction change detection. A. BOLLIMUNTA*; R. KRAUZLIS. *Natl. Eye Inst.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 LLL17 **387.07** Posterior parietal cortex and Pearce-Hall attention for learning. F. SCHIFFINO*; V. ZHOU; J. TRAGESER; M. HAMZA; P. HOLLAND. *Johns Hopkins Univ.*

11:00 LLL18 **387.08** Maternal and postnatal diets drive enduring deficits in attention. N. M. GRISSOM*; J. DESILETS; C. HERDT; T. REYES. *Univ. of Pennsylvania.*

8:00 LLL19 **387.09** Noise correlations in macaque area 8a during target selection and maintenance of attention. T. BACKEN*; S. TREUE; J. C. MARTINEZ-TRUJILLO. *McGill Univ., German Primate Ctr., Bernstein Ctr. for Computat. Neurosci. Goettingen.*

9:00 LLL20 **387.10** Anticipatory alpha band activity in the primate temporal lobe. Y. KAJIKAWA*; S. HAEGENS; C. E. SCHROEDER. *Nathan Kline Inst., Columbia Univ.*

10:00 LLL21 **387.11** Improved information processing under attention is explained by phase transitions in cortical dynamics. U. A. ERNST*; N. TOMEN. *Univ. Bremen.*

11:00 LLL22 **387.12** Thalamic reticular nucleus lesions increase cross-modal distractibility. G. WEESE*; C. N. CASTELVECCHI; H. W. FRASER. *Hampden-Sydney Col., Hampden-Sydney Col., Hampden-Sydney Col.*

8:00 LLL23 **387.13** Head gaze following of rhesus monkeys is an automatic behavior that cannot be completely suppressed. K. MARCINIAK*; P. W. DICKE; P. THIER. *Hertie Inst. For Clin. Brain Res.*

9:00 LLL24 **387.14** Laminar profile of the sensorimotor alpha rhythm: Generation and modulation. S. HAEGENS*; G. MUSACCHIA; M. L. LIPTON; M. N. O'CONNELL; T. MCGINNIS; P. LAKATOS; C. E. SCHROEDER. *Columbia Univ. Med. Ctr., Nathan Kline Inst., Rutgers Univ., Albert Einstein Col. of Medicine,.*

10:00 LLL25 **387.15** Social cues are not attended to by monkeys with amygdala lesions. O. DAL MONTE*; P. NOBLE; E. A. MURRAY; B. B. AVERBECK. *NIH.*

11:00 LLL26 **387.16** Spike-phase coding of attention priorities in parietal cortex predicts behavior. L. WANG*; Y. B. SAALMANN; A. SHESTYUK; N. E. CRONE; J. PARVIZI; R. T. KNIGHT; S. KASTNER. *Inst. of Psychology, Chinese Acad. of Sci., Princeton Univ., Princeton Univ., Univ. of California Berkeley, Univ. of California Berkeley, The Johns Hopkins Hosp., Stanford Univ. Sch. of Med.*

8:00 LLL27 **387.17** Endogenous influences shape midbrain stimulus selection signals. S. P. MYSORE*; E. I. KNUDSEN. *Stanford Univ., Stanford Univ.*

9:00 LLL28 **387.18** Functional and behavioral effects induced by electrical microstimulation of monkey FEF during selective spatial attention tasks. H. STEMMANN*; W. VANDUFFEL. *K.U. Leuven, Massachusetts Gen. Hosp., Harvard Med. Sch.*

10:00 LLL29 **387.19** Optogenetic dissection of the role of fast-spiking parvalbumin interneurons and gamma rythms in attention and behavior. H. KIM; X. WANG; M. CARLEN*. *Karolinska Institutet.*

POSTER

388. Executive Function: Network Activity

Theme F: Cognition and Behavior

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 LLL30 **388.01** Robust bifurcations and slow timescales in a model of interconnected heterogeneous cortical areas. F. SONG*; R. CHAUDHURI; X. WANG. *Yale Univ., New York Univ.*

9:00 LLL31 **388.02** Hierarchy of intrinsic timescales across primate cortex. J. D. MURRAY*; A. BERNACCHIA; D. LEE; C. PADOA-SCHIOPPA; T. PASTERNAK; X. WANG. *Yale Univ. Sch. of Med., Jacobs Univ. Bremen, Yale Univ. Sch. of Med., Washington Univ. in St. Louis, Univ. of Rochester Med. Ctr., New York Univ.*

10:00 LLL32 **388.03** Diversity of timescales in network activity. R. CHAUDHURI*; A. BERNACCHIA; X. WANG. *Yale Univ., Jacobs Univ., New York Univ., Yale Univ. Sch. of Med.*

11:00 LLL33 **388.04** ▲ Dynamics and temporal stability of neural representations in the prefrontal cortex during encoding and maintenance of working memory. N. ROY*; J. D. MURRAY; R. ROMO; C. CONSTANTINIDIS; X. WANG. *Yale Univ., Yale Univ. Sch. of Med., Inst. de Fisiologia Celular, Univ. Nacional Autónoma de México, Wake Forest Univ. Sch. of Med., New York Univ.*

8:00 LLL34 **388.05** A spiking neural network model showing neuromodulatory influences on working memory and behavior. M. AVERY*; N. DUTT; J. L. KRICHMAR. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine.*

9:00 LLL35 **388.06** Transmission of cognitive signals between simultaneously recorded prefrontal and parietal neurons in a rule-based categorization task: Temporal features of the interaction and modulation by reward. M. V. CHAFEE*; D. A. CROWE; S. J. GOODWIN; R. K. BLACKMAN; S. SAKELLARIDI. *Univ. Minnesota, Augsburg Col., Univ. Minnesota, Univ. Minnesota, Univ. Minnesota.*

10:00 LLL36 **388.07** Changes in Neural Complexity during exploration and exploitation. B. CARACHEO*; J. HYMAN; E. EMBERLY; J. SEAMANS. *UBC Brain Res. Ctr., Simon Fraser Univ., UBC Brain Res. Ctr.*

11:00 LLL37 **388.08** From neurons to large-scale brain networks, hierarchical coding appears to be a ubiquitous functional property. J. D. KRALIK*; E. R. XU. *Dartmouth Col.*

8:00 LLL38 **388.09** The relative phase angle between local field potentials, in the beta-frequency band, reveals distinct networks in the macaque cortex during working memory. N. M. DOTSON*; B. GOODELL; C. M. GRAY. *Montana State Univ.*

9:00 LLL39 **388.10** Distributed processing in the macaque cortex is investigated using a 256 channel, micro-electrode, semi-chronic recording device. C. M. GRAY*; N. M. DOTSON; B. GOODELL. *Montana State Univ.*

10:00 LLL40 **388.11** The "Emotional Lens": A network linking amygdala, limbic cortices and the thalamic reticular nucleus that facilitates the interplay between attentional and emotional processes. Y. J. JOHN*; D. BULLOCK; B. ZIKOPOULOS; H. BARBAS. *Boston Univ., Boston Univ.*

11:00 LLL41 **388.12** KCNQ channels regulate working memory in prefrontal cortex. L. E. JIN*; Y. YANG; N. J. GAMO; S. ALI; C. D. PASPALAS; M. WANG; A. F. T. ARNSTEN. *Yale Univ., Yale Univ.*

8:00 LLL42 **388.13** Synaptic specializations of amygdalar projections to the thalamus and orbitofrontal cortex. C. TIMBIE*; H. BARBAS. *Boston Univ.*

9:00 LLL43 **388.14** Network activation during attentional set shifting. H. GAO; V. OBERTO; A. BIONDI; S. J. SARA*; S. WIENER. *Collège de France, CNRS.*

10:00 LLL44 **388.15** Dynamic coding in the prefrontal cortex: insights from reservoir computing. P. ENEL*; E. PROCYK; P. F. DOMINEY. *INSERM, Univ. de Lyon, Lyon 1.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 LLL45 **388.16** Analysis of population coding in the rat medial prefrontal cortex. O. KORNIENKO*; L. MA; J. M. HYMAN; J. K. SEAMANS; D. DURSTEWITZ. *Med. Fac. Mannheim, Heidelberg Univ., Fac. of Medicine, Univ. of British Columbia.*

8:00 LLL46 **388.17** Modulation of default mode network activity by the knowledge of observation. J. LI*; B. TURNER; E. RISKO; A. KINGSTONE; M. MILLER. *Univ. of California at Santa Barbara, Arizona, Univ. of British Columbia.*

POSTER

389. Executive Function: Network Activity

Theme F: Cognition and Behavior

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 LLL47 **389.01** Macaque lateral prefrontal activity rapidly adapts to code task-role of novel stimuli. A. BHANDARI*; N. SIGALA; M. KUSUNOKI; M. STOKES; D. GAFFAN; J. DUNCAN. *Oxford Ctr. For Human Brain Activity, Univ. of Cambridge, Brighton and Sussex Med. Sch. & Sackler Ctr. for Consciousness Studies, Univ. of Sussex, Univ. of Oxford, MRC Cognition and Brain Sci. Unit.*

9:00 LLL48 **389.02** Behavioral, systems level and synaptic actions of isoflurane in the rat. B. H. BLAND*; R. A. PEARCE; B. M. MACIVER. *Univ. Calgary, Univ. of Wisconsin-Madison, Stanford Univ.*

10:00 LLL49-DP10 **389.03** Small animal functional magnetic resonance imaging: Bridging the gap in translational research for psychiatric diseases. B. JARRETT*; J. STAFFORD; D. FAIR. *OHSU, NYU Sch. of Med.*

11:00 LLL50 **389.04** Correlated activity between neurons in prefrontal area 8a influences the coding of saccade direction. S. TREMBLAY*; F. PIEPER; A. SACHS; J. MARTINEZ-TRUJILLO. *McGill Univ., Inst. for Neuro- & Pathophysiology, Univ. Med. Ctr. Hamburg-Eppendorf (UKE), Div. of Neurosurgery, Dept. of Surgery,The Ottawa Hosp. Res. Institute, Univ. of Ottawa, McGill Univ.*

8:00 LLL51 **389.05** Activation of ventral tegmental area glutamate neurons is rewarding. H. WANG*; J. QI; M. MORALES. *IRP/NIDA/NIH.*

9:00 LLL52 **389.06** Song-dependent neural activity in hippocampal formation of female Zebra Finch: Visualization of cytoarchitecture of neurons, expression of zenk, and 5-HT distribution. T. KUNII*; M. YAMAMOTO; M. YAMASHITA; K. HOTTA; K. OKA. *Keio Univ.*

10:00 LLL53 **389.07** Integration Interrupted: Dose-dependent isoflurane effects on functional connectivity in the non-human primate. R. HUTCHISON*; M. HUTCHISON; K. Y. MANNING; J. S. GATI; R. S. MENON; S. EVERLING. *Western Univ., Robarts Res. Inst., London Hlth. Sci. Ctr., Western Univ.*

11:00 LLL54 **389.08** Transcranial magnetic stimulation of macaque intraparietal sulcus impairs numerical processing. C. B. DRUCKER*; E. M. BRANNON; M. L. PLATT. *Duke Univ., Duke Univ., Duke Univ.*

8:00 LLL55 **389.09** A small population of ventral intraparietal area (VIP) neurons encode numerosity in numerosity-task-naïve monkeys. N. K. DEWIND*; E. M. BRANNON; M. L. PLATT. *Duke Univ., Duke Univ., Duke Univ.*

9:00 LLL56 **389.10** Dynamic changes in the representation of operant-action sequences by prefrontal cortex ensembles over prolonged training. J. K. SEAMANS*; J. M. HYMAN; A. G. PHILLIPS; L. MA. *UBC, UBC.*

10:00 LLL57 **389.11** Outcome feedback responses in acc ensembles are reflective of reward probabilities. J. M. HYMAN*; C. M. WARREN; C. B. HOLROYD; J. K. SEAMANS. *Univ. British Columbia, Univ. of Leiden, Univ. of Victoria, Univ. of British Columbia.*

11:00 LLL58 **389.12** Ensemble encoding of sequence and temporal order in corticostriatal circuits. L. MA*; J. M. HYMAN; A. G. PHILLIPS; J. K. SEAMANS. *Univ. of British Columbia, The Univ. of British Columbia, The Univ. of British Columbia.*

8:00 LLL59 **389.13** Weak intrinsic connectivity in the peri-pubertal prefrontal cortex. X. ZHOU*; D. ZHU; F. KATSUKI; X. QI; C. J. LEES; A. J. BENNETT; E. SALINAS; T. R. STANFORD; C. CONSTANTINIDIS. *Wake Forest Sch. Med., Wake Forest Sch. Med., Univ. of Wisconsin,Madison.*

9:00 LLL60 **389.14** A comparison of neurobehavioral assessment between cynomolgus macaque and human to support cns safety pharmacology (regulatory) study. Y. CHEN; Y. LIU; L. HU; M. PIETRAS; R. LUZIETTI; A. GUPTA; D. LENGEL; W. LUO; B. PLATZACK; W. REDFERN; R. A. BIALECKI*. *AstraZeneca Pharmaceuticals, Shanghai Inst. of Materia Medica, AstraZeneca Pharmaceuticals, AstraZeneca Pharmaceuticals.*

10:00 LLL61 **389.15** Electrophysiology of the rat prefrontal cortex and central amygdala under anaesthesia and during behaviour. A. MAGONY*; A. SIK. *Univ. of Birmingham.*

POSTER

390. Cognition, Learning, and Memory: Modulation, Aging, and Disease

Theme F: Cognition and Behavior

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 LLL62 **390.01** ▲ Effect of chronic stress during adolescence on working memory in a spatial alternation task with delays in adulthood rats. W. ZEPEDA-RUIZ*; E. MENDOZA-MUNOZ; A. AGUAYO DE CASTILLO; C. CASASOLA. *Univ. Nacional Autonoma De Mexico.*

9:00 LLL63 **390.02** Resemblance between “brain diabetes” and human Alzheimer type dementia from viewpoints of hippocampal immunohistochemistry and insulin effects. A. S. SHINGO*; S. KITO; T. MURASE. *Okinaka Mem. Inst. For Med. Res., Chigasaki Tokushu-kai Clin.*

10:00 LLL64 **390.03** ▲ Effect of electroconvulsive seizures on pattern separation ability in rats. M. GRAHM*; M. SVENSSON; M. JOHANSSON; A. TINGSTRÖM. *Psychiatric Neuromodulation Unit, Univ. of Lund.*

11:00 LLL65 **390.04** Postnatal protein malnutrition: Effects on brain weight, learning, memory and anxiety in rats. N. N. BRAGA*; P. A. P. PACAGNELLA; D. LACHAT; E. H. BARBOSA; R. O. SOARES; J. LACHAT; S. S. ALMEIDA. *Univ. De São Paulo, Univ. De São Paulo.*

8:00 MMM1 **390.05** Sleep disturbance during elevated slow-wave activity, but not elevated theta, prevents memory consolidation for visual imprinting in domestic chicks. A. U. NICOL; B. MCCABE*. *Sub-Dept Animal Behaviour, Dept Zoology, Univ. of Cambridge.*

9:00 MMM2 **390.06** Sleep and Fos-like immunoreactivity in a chick forebrain memory region after filial imprinting. R. SUGE*; A. U. NICOL; B. J. MCCABE. *Saitama Med. Univ., Univ. of Cambridge.*

10:00 MMM3 **390.07** Consumption of a western diet in rats disrupts neuronal activation in brain regions important in cognition. S. KOSARI*; E. BADOER; T. JENKINS. *RMIT Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 MMM4 **390.08** Cerebral amyloid deposition and phosphorylated tau: Relationships between age and cognitive status in the rhesus macaque. J. R. ENGLE*; M. J. ARCHIBEQUE; M. R. PERMENTER; J. A. VOGT; B. N. DUGGER; T. G. BEACH; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, California Natl. Primate Res. Ctr., Banner Sun Hlth. Res. Inst., Univ. of Arizona.*

8:00 MMM5 **390.09** Changes in sensory function are correlated with cognitive impairments in bonnet macaques. K. PLANGE*; J. R. ENGLE; S. N. BURKE; D. T. GRAY; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

9:00 MMM6 **390.10** Large scale molecular imaging of hippocampal network activity during real and virtual navigation in freely behaving primates. A. THOME*; M. K. CHAWLA; V. RAMIREZ-AMAYA; D. F. MARRONE; P. LIPA; T. M. ELLMORE; B. L. MCNAUGHTON; C. A. BARNES. *Univ. Arizona, Univ. of Arizona, Univ. of Lethbridge, Univ. of Arizona.*

10:00 MMM7 **390.11** Telemetric recordings from temporal lobe of a freely moving primate. A. P. MAURER*; A. THOME; K. M. BOHNE; M. J. ARCHIBEQUE; M. R. PERMENTER; J. A. VOGT; K. SPRAWKA; J. R. ENGLE; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, California Natl. Primate Res. Ctr., Univ. of Arizona.*

11:00 MMM8 **390.12** Dual input component models of CA1 activity in young and aged rats. F. S. CHANCE*; A. P. MAURER; S. N. BURKE; C. A. BARNES. *Janelia Farm Res. Campus, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

8:00 MMM9 **390.13** Preserved neural dynamics during reverse locomotion. A. W. LESTER*; A. P. MAURER; S. N. BURKE; L. T. HOANG; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

9:00 MMM10 **390.14** Perirhinal cortical interneurons exhibit reduced firing rates with advanced age. S. N. BURKE*; A. P. MAURER; S. L. COWEN; C. A. BARNES. *Univ. Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

10:00 MMM11 **390.15** Frontal cortical gamma frequency slowing in aging: Can C6 rescue cortical synchrony and decision speed? A. R. UPRETY*; P. LIPA; A. THOME; A. I. ESPINOZA; T. R. HINDLEY; C. A. BARNES. *Univ. Arizona, Univ. of Arizona, Univ. of Arizona.*

11:00 MMM12 **390.16** Effect of aging on the microcolumnar structure of entorhinal cortex: Correlation with performance on the spatial Morris water maze test. M. XIONG*; W. MORRISON; J. P. LISTER; C. A. BARNES; L. R. CRUZ; D. L. ROSENE. *Univ. of Arizona, Univ. of Arizona, Boston Univ., UCLA, Univ. of Arizona, Drexel Univ., Boston Univ. Sch. of Med.*

8:00 MMM13 **390.17** Massed trial induced under-expression of Arc mRNA in rat hippocampal neurons. M. K. CHAWLA*; N. SEKHADIA; K. OLSON; C. B. ALME; E. I. MOSER; M. MOSER; B. L. MCNAUGHTON; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Norwegian Univ. of Sci. and Technol., Univ. of Lethbridge, Univ. of Arizona.*

9:00 MMM14 **390.18** Effect of age and changing odors on population activity in the medial entorhinal cortex during track running behavior. J. P. LISTER*; J. LIANG; C. A. BARNES. *David Geffen Sch. of Med. UCLA, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

10:00 MMM15 **390.19** Cognitive dysfunction in heart failure and a protective role for angiotensin (1-7). M. HAY*; E. CONSTANTOPOULOS; A. R. UPRETY; F. SAMAREH-JAHANI; C. A. BARNES; J. P. KONHILAS. *The Univ. of Arziona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

11:00 MMM16 **390.20** Consumption of fluoridated water affected the neuronal cytoarchitecture of the III layer of the prefrontocortical and the performance of the short term memory task. P. MARIA ISABEL*; K. TORRES-RODRIGUEZ; A. PEREZ-BARRON; I. GUZMAN-HUERTA; M. MIRANDA-BELTRAN; O. GUTIERREZ-CORONADO; C. SORIA-FREGOZO. *Univ. De Guadalajara, Univ. de Guadalajara.*

8:00 MMM17 **390.21** Adolescent preemptive cognitive training improves adult cognitive control in the gestational methylazoxymethanol acetate (MAM) model of schizophrenia. K. C. O'REILLY*; H. KAO; A. A. FENTON. *New York Univ.*

9:00 MMM18 **390.22** Characterization of novel object recognition in male rats: Effects of age, housing, and nicotine on memory performance and c-fos immunoreactivity in the hippocampus and perirhinal cortex. R. E. GRAHN*; L. ROMAN; M. WISHNOFF; J. TRUELOVE; E. FINESMITH. *Connecticut Col.*

10:00 MMM19 **390.23** Preventive effect of moderate treadmill exercise on social defeat- associated cognitive, behavioral and biochemical impairments in rats. ; G. PATKI; F. ATROOZ; F. ALLAM; A. ANSARI; B. JANNISE; J. MATURI; S. SALIM. *Univ. of Houston -college of Pharm.*

11:00 MMM20 **390.24** Combination of a neonatal immune abnormality with adolescent abused drug administration induces cognitive impairment with overexpressed GLAST in adult mice. H. HIDA*; A. MOURI; T. MAMIYA; K. IWAMOTO; N. OZAKI; K. YAMADA; T. NABESHIMA; Y. NODA. *Grad. Sch. of Pharmacy, Meijo Univ., Fac. of Pharmacy, Meijo Univ., Grad. Sch. of Medicine, Nagoya Univ., Grad. Sch. of Medicine, Nagoya Univ., Fac. of Pharmacy, Meijo Univ.*

8:00 MMM21 **390.25** Biochemical and behavioral consequences of hyperhomocysteinemia. M. M. REZENDE*; V. D'ALMEIDA. *Univ. Federal De São Paulo.*

9:00 MMM22 **390.26** Analysis of spatial memory retrieval in a rat model of electroconvulsive therapy. M. SVENSSON*; M. GRAHM; M. JOHANSSON; A. TINGSTRÖM. *Psychiatric Neuromodulation Unit, Lund Univ., Lund Univ.*

10:00 MMM23 **390.27** The acute behavioral effects of proton radiation in adult mice that have consumed pomegranate juice since before birth. S. HALAVI*; M. DULCICH; N. MISTRY; R. HARTMAN. *Loma Linda Univ.*

11:00 MMM24 **390.28** Lack of rhythmic burst discharges in thalamic reticular nucleus alters thalamocortical rhythms associated with absence seizure and sleep. A. P. KIM*; T. CHO; C. LATCHOUMANE; S. LEE; H. SHIN. *Inst. For Basic Sci., Korea Inst. of Sci. and Technol.*

8:00 MMM25 **390.29** Deficiency of phospholipase C-β1 in the medial prefrontal cortex is selectively responsible for impaired spatial working memory in the mouse model of schizophrenia. S. KIM*; M. SEO; D. KIM; M. KANG; Y. KIM; H. KOH; H. SHIN. *IBS (institute For Basic Science), Univ. of Sci. and Technol., Korea Inst. for Sci. and Technol. (KIST), Univ. of Sci. and Technol., Soonchunhyang Univ., Inje Univ., Korea Inst. of Sci. and Technol. (KIST).*

9:00 MMM26 **390.30** Complete deletion of T-type Ca^{2+} channels in thalamic reticular nucleus facilitates absence seizures. S. LEE*; J. LEE; C. LATCHOUMANE; A. KIM; B. LEE; E. CHEONG; G. AUGUSTINE; C. LEE; H. SHIN. *Korea institute of science & technology, Inst. for Basic Sci., Yonsei Univ.*

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POSTER

391. Molecular Mechanisms of Memory Consolidation

Theme F: Cognition and Behavior

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 MMM27 **391.01** Contextual novelty, but not prediction error, is the new information present at retrieval that controls the reconsolidation-dependent updating of an auditory fear memory in the amygdala. T. J. JAROME*; J. L. KWAPIS; F. J. HELMSTETTER. *Univ. Wisconsin-Milwaukee.*

9:00 MMM28 **391.02** Ubiquitin-proteasome mediated proteolysis regulates protein translation that is critical to the formation and consolidation of auditory delay fear memory in the amygdala. D. S. REIS*; T. J. JAROME; F. J. HELMSTETTER. *Univ. of Wisconsin - Milwaukee.*

10:00 MMM29 **391.03** Insulin-like growth factor II enhances the retention of remote memories. S. A. STERN*; V. GAO; C. M. ALBERINI. *Icahn Sch. of Med. at Mount Sinai, New York Univ.*

11:00 MMM30 **391.04** Systemic IGF-II treatment enhances memories and rescues autistic phenotypes. S. A. STERN; A. S. KOHTZ; C. M. ALBERINI*. *New York Univ., Icahn Sch. of Med. at Mount Sinai, Univ. at Albany- SUNY Albany.*

8:00 MMM31 **391.05** Interactions of dorsal hippocampus with amygdala and medial prefrontal cortex mediate reactivation-induced memory strengthening. X. YE*; C. INDA; G. POLLONINI; C. M. ALBERINI. *New York Univ., Zuckerman Res. Ctr.*

9:00 MMM32 **391.06** Examining the role of VGF in hippocampal-dependent memory formation. W. LIN*; X. YE; M. SADAHIRO; J. CHENG; J. WELAGEN; O. BOZDAGI; C. M. ALBERINI; S. R. J. SALTON. *Mount Sinai Sch. of Med., New York Univ., Mount Sinai Sch. of Med.*

10:00 MMM33 **391.07** Rescue of age-related memory deficits by insulin-like growth factor 2. S. A. JOHNSON*; C. M. ALBERINI. *New York Univ.*

11:00 MMM34 **391.08** Molecular mechanisms of long-term memory following a traumatic event. C. FINSTERWALD*; C. M. ALBERINI. *Ctr. for Neural Science, New York Univ.*

8:00 MMM35 **391.09** HDAC inhibitors effect on physiological and pathological memories. L. O. ALVARES*; F. D. DUTRA; A. P. CRESTANI; F. Z. BOOS; J. A. QUILLFELDT. *Federal Univ. Rio Grande do Sul, UFRGS.*

9:00 MMM36 **391.10** The novel complex mTORC2 controls actin polymerization required for consolidation of long-term memory. W. HUANG*; P. J. ZHU; S. ZHANG; L. STOICA; K. KRNJEVIC; G. ROMAN; M. COSTA-MATTIOLI. *Baylor Col. of Med., Baylor Col. of Med., Univ. of Houston, Baylor Col. of Med., McGill Univ.*

10:00 MMM37 **391.11** Temporal dynamics of memory consolidation enhancement by HDAC inhibition in the hippocampus. R. ROESLER*; M. BLANK; A. WERENICZ; A. S. DORNELLES. *Federal Univ. of Rio Grande Do Sul, Univ. Hosp. Res. Ctr. (CPE-HCPA), Natl. Inst. for Translational Med.*

11:00 MMM38 **391.12** Circadian regulation of hippocampus dependent memory retrieval by BMAL1. S. HASEGAWA*; H. HOSODA; Y. ZHANG; M. OHTA; T. TANIMIZU; P. W. FRANKLAND; S. A. JOSSELYN; S. KIDA. *Tokyo Univ. of Agr., CREST, JST, Univ. of Toronto.*

8:00 MMM39 **391.13** Understanding memory circuit discriminating novel and familiar mice in the social recognition memory task. T. TANIMIZU*; K. KADOMA; E. OKANO; Y. ZHANG; H. FUKUSHIMA; S. KIDA. *Dept. of Bioscience, Tokyo Univ. of Agriaulture, CREST.*

9:00 MMM40 **391.14** TRIM3 is a synaptic E3 ubiquitin ligase that regulates hippocampus-dependent learning. J. SCHREIBER; M. J. VÉGH; J. DAWITZ; R. M. MEREDITH; A. B. SMIT; R. E. VAN KESTEREN*. *VU Univ. Amsterdam.*

10:00 MMM41 **391.15** Social memory relies on different stages of local protein synthesis in the main olfactory bulb and hippocampus. R. R. PENA*; A. R. P. CAIXETA; M. F. D. MORAES; G. S. PEREIRA. *NNC/UFMG.*

11:00 MMM42 **391.16** Key role of NF-kB for memory consolidation in fear conditioning in fish. A. BARBOSA JÚNIOR*; A. HOFFMANN; L. M. IDE; R. FREUDENTHAL; A. ROMANO; S. MORATO. *Fac. of Philosophy, Sci. and Letters of Ribeirão Preto, Univ. of São, Sch. of Med. of Ribeirão Preto, Univ. of São Paulo, Federal Univ. of São João del-Rei, Univ. de Buenos Aires, IFIByNE, CONICET.*

8:00 MMM43 **391.17** Time-course for consolidation of cerebellar learning. A. B. STEINMETZ*; J. H. FREEMAN. *Univ. of Iowa.*

9:00 MMM44 **391.18** Long-lasting and sex-dependent regulation of bdnf isoform transcription in mouse hippocampus after contextual fear conditioning. K. MIZUNO*; E. DEMPSTER; J. MILL; K. P. GIESE. *Kings Col. London, Univ. of Exeter Med. Sch.*

POSTER

392. Neural Mechanisms for Valuation, Learning, and Decision Making

Theme F: Cognition and Behavior

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 MMM45 **392.01** The dorsal striatum promotes lose-switch responding and is not necessary for random choices in rats. I. SKELIN*; R. HAKSTOL; D. MUDIAYI; L. A. MOLINA; A. J. GRUBER. *Univ. of Lethbridge.*

9:00 MMM46 **392.02** Rapid temporal dynamics of normalized value coding in parietal cortex. K. LOUIE*; T. LOFARO; R. WEBB; P. W. GLIMCHER. *New York Univ., Gustavus Adolphus Col., New York Univ.*

10:00 NNN1 **392.03** Pathway-specific modulation of nucleus accumbens in reward and aversive learning behaviors via selective transmitter receptors. T. HIKIDA*; S. YAWATA; T. YAMAGUCHI; T. DANJO; T. SASAOKA; Y. WANG; S. NAKANISHI. *Kyoto Univ. Grad. Sch. of Med., Osaka Biosci. Inst., JST, Kitasato Univ. Sch. of Med., Beckman Institute, Univ. of Illinois.*

11:00 NNN2 **392.04** Role of Gi/o-signaling cascades in striatal subregions during delay discounting. A. M. WUNSCH*; S. M. FERGUSON. *Univ. of Washington, Seattle Children's Res. Inst.*

8:00 NNN3 **392.05** Decision and metacognition in the subthalamic nucleus: An electrophysiological study in obsessive-compulsive patients. W. I. HAYNES*; K. N'DIAYE; L. MALLET. *Univ. Pierre et Marie Curie.*

9:00 NNN4 **392.06** Neuronal activity in the monkey orbitofrontal cortex related to reward value processing during a decision-making schedule task. T. SETOGAWA*; T. MIZUHIKI; F. AKIZAWA; N. MATSUMOTO; M. SHIDARA. *Grad Sch. of Comprehensive Human Sci, Univ. of Tsukuba, JSPS Res. Fellow, Fac. of Medicine, Univ. of Tsukuba, Human Technol. Res. Inst., AIST.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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10:00 NNN5 **392.07** Effects of manipulations of the basal ganglia pathways on reversal learning and time preference: Predictions of the corticostriatal temporal difference (TD) hypothesis with implications for addiction. K. MORITA*; Y. KAWAGUCHI. *The Univ. of Tokyo, Natl. Inst. for Physiological Sci., Grad. Univ. for Advanced Studies, JST, CREST.*

11:00 NNN6 **392.08** No divisive normalization of action value represented in the supplementary eye field. X. CHEN*; V. STUPHORN. *Johns Hopkins Univ., Johns Hopkins Univ.*

8:00 NNN7 **392.09** Basolateral amygdala and anterior cingulate cortex inactivations have dissociable effects on a rodent cost/benefit decision-making task of cognitive effort. J. G. HOSKING*; P. J. COCKER; C. A. WINSTANLEY. *Dept. of Psychology, Univ. of British Columbia.*

9:00 NNN8 **392.10** Value-dependent scaling of self- and other-referenced decisions by neurons in primate amygdala. S. W. CHANG*; M. L. PLATT. *Duke Univ., Duke Univ., Yale Univ., Duke Univ.*

10:00 NNN9 **392.11** Psycho-cybernetics: Positive thinking versus deviant behaviour in academe. M. ORKODASHVILI*. *Vanderbilt Univ.*

11:00 NNN10 **392.12** A pilot study investigating Integrative Inquiry's effect on levels of critical thinking dispositions, attention, emotion, and cognitive regulation: A translational neuroscience study between neuroscience and post-secondary education. M. BRESCIANI*; M. EVRARD; W. BRACKEN; M. TUCKER. *San Diego State Univ.*

POSTER

393. Circuit Mechanisms for Anxiety and Reward

Theme F: Cognition and Behavior

– *San Diego Convention Center,* Halls B-H

8:00 NNN11 **393.01** Optogenetic manipulations of amygdala projections to the ventral hippocampus modulate anxiety-like behaviors. A. C. FELIX-ORTIZ*; A. BEYELER; C. SEO; C. LEPPLA; C. WILDES; K. M. TYE. *Picower Inst. for Learning and Memory, MIT.*

9:00 NNN12 **393.02** Optogenetic investigation of the local circuit mechanism of BLA inputs to the vHPC. A. BEYELER*; A. FELIX-OTRIZ; C. SEO; C. LEPPLA; C. WILDES; K. M. TYE. *Picower Insitute for Learning and Memory, MIT.*

10:00 NNN13 **393.03** Neural encoding dynamics of VTA-projecting lateral hypothalamic neurons in a reward-related task. E. NIEH*; G. A. C. MATTHEWS; S. A. ALLSOP; K. N. PRESBREY; K. M. TYE. *Picower Inst. For Learning and Memory, MIT.*

11:00 NNN14 **393.04** Medial striatum is critical for keeping foraging effort, but not for social facilitation. Y. OGURA*; T. MATSUSHIMA. *Hokkaido Univ., Hokkaido Univ.*

8:00 NNN15 **393.05** Neuronal activities in the medial striatum of domestic chicks in the reward period may code the expectation of reward to calculate the prediction error. C. WEN*; T. MATSUSHIMA. *Hokkaido Univ., Hokkaido Univ.*

9:00 NNN16 **393.06** ● Pseudo-competition suppresses subjective values of food in terms of predicted and gained food rewards represented by the nucleus accumbens/medial striatum. H. AMITA; C. WEN; T. MATSUSHIMA*. *Hokkaido University, Grad Sch. Sci., Hokkaido University, Grad Sch. Life Sci.*

10:00 NNN17 **393.07** Differences in numbers of neurons projecting to the ventral tegmental area and rostromedial tegmental nucleus from key structures in the reward/aversion network. L. YETNIKOFF*; A. Y. CHENG; Z. M. SCHWARTZ; K. P. PARSELY; D. S. ZAHM. *St. Louis Univ. Sch. of Med.*

11:00 NNN18 **393.08** Cannabinoid CB1 receptor in dorsal telencephalic glutamatergic neurons: Distinctive sufficiency for hippocampus- and amygdala-dependent synaptic and behavioral functions. B. LUTZ*; S. RUEHLE; F. REMMERS; H. ROMO-PARRA; F. MASSA; M. WICKERT; S. WÖRTGE; M. HÄRING; N. KAISER; G. MARSICANO; H. PAPE. *Univ. Med. Ctr. Mainz, Westfaelische Wilhelms-University, Neurocentre Magendie INSERM U862.*

8:00 NNN19 **393.09** Ventral tegmental area GABA projections. S. R. TAYLOR*; M. R. PICCIOTTO. *Yale Univ.*

9:00 NNN20 **393.10** The rostromedial tegmental nucleus is a GABAergic relay between the lateral habenula and the dorsal raphe nucleus in the rat. L. LIMA; C. SEGO; L. GONÇALVES; J. DONATO JR; M. METZGER*. *Univ. of Sao Paulo, Federtal Univ. of the Triangulo Mineiro.*

10:00 NNN21 **393.11** Effects of temporary inactivation of the subiculum on affective encoding by the nucleus accumbens. A. L. LORIAUX*; J. D. ROITMAN; C. G. SINON; M. F. ROITMAN. *Arizona State Univ., Univ. of Illinois at Chicago.*

11:00 NNN22 **393.12** Habenular cholinergic neurons regulate anxiety and aversion via nicotinic acetylcholine receptor signaling. X. PANG; J. NGOLAB; L. LIU; P. D. GARDNER; A. R. TAPPER*. *UMass Med. Sch.*

8:00 NNN23 **393.13** Antagonism of dopamine D4 receptors in the prelimbic cortex decreases emotional aversive related behaviors. M. D. VERGARA*; J. A. FUENTEALBA; K. GYSLING. *Pontificia Univ. Catolica De Chile, Millenium Sci. Nucleus Stress and Addiction.*

9:00 NNN24 **393.14** The rostromedial tegmental nucleus plays an important role in cost-benefit decision-making. P. J. VENTO*; N. W. BURNHAM; C. S. ROWLEY; T. C. JHOU. *Med. Univ. of South Carolina.*

10:00 NNN25 **393.15** Temporally restricted optogenetic inhibition of rostromedial tegmental nucleus blocks conditioned avoidance of cocaine. N. W. BURNHAM; C. S. ROWLEY; T. C. JHOU*. *Med. Univ. of South Carolina.*

11:00 NNN26 **393.16** Anxiolytic effects of lateral preoptic area (LPO) activation. D. S. ZAHM*; Z. M. SCHWARTZ; K. P. PARSLEY. *St. Louis Univ. Sch. of Med.*

8:00 NNN27 **393.17** Serotonin regulation by the habenula is essential for adaptive problem solving in zebrafish. R. AMO*; M. AGETSUMA; M. KINOSHITA; F. FREDES; T. SHIRAKI; T. AOKI; R. AOKI; M. YAMAZAKI; S. HIGASHIJIMA; M. MATSUDA; M. L. SUSTER; K. KAWAKAMI; T. OHSHIMA; H. AIZAWA; H. OKAMOTO. *RIKEN Brain Sci. Inst. - Wako, Columbia Univ., Univ. of Tokyo, Okazaki Inst. for Integrative Bioscience, NIPS, Ctr. for Biosci. Res. and Education, Utsunomiya Univ., Natl. Inst. of Genet., Waseda Univ., Tokyo Med. and Dent. Univ.*

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POSTER

394. New Molecular and Biological Techniques in Neuroscience I

Theme G: Novel Methods and Technology Development

Mon. 8:00 AM – *San Diego Convention Center,* Halls B-H

8:00 NNN28 **394.01** The NINDS repository: A public collection of biomaterials for gene and biomarkers discovery in neurological research. G. BALABURSKI*; M. SELF; C. PEREZ; S. HEIL; K. REEVES; J. SANTANA; W. MUHAMMAD; K. GWINN; R. CORRIVEAU; C. TARN. *Coriell Inst. For Med. Res., Natl. Inst. for Neurolog. Disorders and Stroke-NIH.*

9:00 NNN29 **394.02** ● Enabling cutting edge neuroscience research with Droplet Digital PCR™. C. LITTERST*; S. MARRS; Y. JOUVENOT; D. MAAR; N. HEREDIA; S. WANG; J. BERMAN. *DBC Bio-Rad.*

10:00 NNN30 **394.03** Development of an animal component-free neural stem cell serum replacement. R. ALFANO; P. J. PRICE*. *In Vitria, In Vitria.*

11:00 NNN31 **394.04** Structural characterization of atp analog-sensitive protein kinase c delta. V. KUMAR*; W. J. GELDENHUYS; D. WANG; Y. WENG; R. O. MESSING; W. CHOU. *Kent State Univ., Northeast Ohio Med. Univ., Univ. of California, San Francisco, Kent State Univ., The Univ. of Texas at Austin.*

8:00 NNN32 **394.05** Characterization of toxic αsn oligomeric species using hydrogen/deuterium exchange mass spectroscopy. W. P. PASLAWSKI*; S. MYSLING; T. J. D. JØRGENSEN; D. E. OTZEN. *Aarhus Univ., Univ. of Southern Denmark.*

9:00 NNN33 **394.06** Oligomerization of the sigma-1 receptor. T. A. MAVLYUTOV*; A. E. RUOHO; U. CHU; J. YANG; B. G. FOX; K. GROMEK; J. PRIMM; F. SUCHY; H. MEDDAUGH; R. WROBEL; L. LAPOINTE; A. SENES; V. RAICU; A. MISHRA; D. SINGH. *Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Wisconsin, John Hopkins Univ.*

10:00 NNN34 **394.07** ● Development of new antibody array and its application to evaluate anti-dementia drugs. W. MARUYAMA*; M. SHAMOTO-NAGAI; M. NAOI; Y. TAKIMOTO; X. WU; T. OSAWA; N. MOTOYAMA. *Nat'L Ctr. Geriatric. Gerontol., Nat'L Ctr. Geriatric. Gerontol., Aichi Gakuin Univ., Healthcare Systems.*

11:00 NNN35 **394.08** Developing ultrasensitive ethanol receptors (users) as novel tools for alcohol research. A. NAITO; K. MUCHHALA; L. ASATRYAN; J. R. TRUDELL; G. E. HOMANICS; D. L. DAVIES; R. L. ALKANA*; D. I. PERKINS. *USC Sch. Pharm., USC Sch. Pharm., Stanford Univ., Univ. of Pittsburgh, USC Sch. Pharm., Allergan Inc.*

8:00 NNN36 **394.09** A comprehensive study on detecting tau isoforms and mutations using kinesin motility assay and suspended microtubules. M. C. TARHAN*; Y. ORAZOV; R. YOKOKAWA; S. L. KARSTEN; H. FUJITA. *The Univ. of Tokyo, Kyoto Univ., NeuroInDx, Inc.*

9:00 NNN37 **394.10** ● Methods for functionalizing microfabricated neural probes for the rapid detection of chemical concentrations *in vivo.* E. BIGELOW*; X. T. CUI; B. JAMIESON. *Diagnos. Biochips, Univ. of Pittsburgh.*

10:00 NNN38 **394.11** Multi-waveform fast-scan cyclic voltammetry. Y. OH*; D. KIM; H. SHIN; I. KIM; C. KIMBLE; K. BENNET; K. LEE; D. JANG. *Hanyang Univ., Mayo Clin., Mayo Clin., Mayo Clin.*

11:00 NNN39 **394.12** Analysis of glutamate, GABA, noradrenaline, dopamine, serotonin and metabolites using microbore UHPLC with electrochemical detection. M. EYSBERG*; H. BROUWER; N. J. REINHOUD; L. M. VAN HEERWAARDEN. *Antec BV.*

8:00 NNN40 **394.13** 5-methyl ultra-sequencing (5-methyl ultra-seq): A method for identifying individual and cell-type specific variation in dna methylation. D. BAKER-ANDRESEN*; X. LI; Q. ZHAO; Z. ZHANG; W. WEI; V. MARSHALL; T. BREDY. *Queensland Brain Inst.*

9:00 NNN41 **394.14** An unbiased screening assay of trans-splicing efficiency by randomized intron fragmentation. M. DAVIDSSON; M. TORROBA; P. ALDRIN; C. LUNDBERG; T. BJORKLUND*. *Mol. Neuromodulation Labs, Wallenberg Neurosci. Ctr., Lund Univ.*

10:00 NNN42 **394.15** Characterisation of a novel gene regulation system for use in gene therapy. J. NAIDOO; A. MOURAVLEV; D. FONG; E. SIRIMANNE; D. YOUNG*. *Univ. of Auckland Fac. of Med. & Hlth. Sci.*

11:00 NNN43 **394.16** Simple western analysis of signaling cascade proteins. J. M. PROCTOR*; U. NGUYEN; I. KAZAKOVA; F. RAMIREZ; H. XU; A. BOGE. *Proteinsimple.*

8:00 NNN44 **394.17** Development of an integrated platform for standardized, high-throughput single cell transcriptional profiling. T. M. KEENAN*; K. SMITH; V. MENON; N. DEE; S. KU; A. SZAFER; D. BERTAGNOLLI; J. GOLDY; N. SHAPOVALOVA; B. TASIC; B. LEVI; T. NGUYEN; E. THOMSEN; S. YAO; A. KAYKAS; R. DOLMETSCH; H. ZENG; E. LEIN; J. PHILLIPS; A. BERNARD. *Allen Inst. for Brain Sci.*

9:00 NNN45 **394.18** ● A novel approach to detecting RNA in living neuronal cells. D. WELDON*, V; H. LIU; Y. WILLIAMS; G. JOHNSTON. *EMD Millipore.*

10:00 NNN46 **394.19** ▲ Deep sequencing analysis of extracellular RNA obtained from biologically relevant samples. T. BEECROFT*; A. COURTRIGHT; K. VAN KEUREN-JENSEN; R. METPALLY; H. DHRUV; A. EZRIN; N. TRAN. *Tgen, NX Pharmagen.*

11:00 NNN47 **394.20** ● Feasibility of high-throughput screening in neurons using microraft arrays. M. NIEDRINGHAUS*; A. MABB; Y. WANG; P. A. KUNZ; B. PHILPOT; N. ALLBRITTON; A. M. TAYLOR. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

8:00 NNN48 **394.21** *In utero* electroporation of doxycycline-inducible expression plasmids allows for tight control over gene expression in cortical neurons *in vivo.* C. K. SALMON*; E. V. JONES; K. K. MURAI. *Ctr. For Res. In Neurosci., McGill Univ.*

9:00 NNN49 **394.22** A nanoscale interface able to induce molecular and functional differentiation of cultured rat primary astrocytes *in vitro.* A. PISTONE*; T. POSATI; G. P. NICCHIA; A. SPARANEO; M. CAPRINI; A. SAGNELLA; M. NOCCHETTI; S. BONETTI; G. RUANI; R. ZAMBONI; M. MUCCINI; V. BENFENATI. *CNR-ISOF, CNR-National Res. Council, Lab. di Micro e Submicro Tecnologie abilitanti dell'Emilia-Romagna (MIST.E-R),, Univ. of Bari, UNIBO, Univ. of Perugia, cnr-National Res. Council.*

10:00 NNN50 **394.23** ● Small Molecule Delivery into primary neuronal cells capillary-electrode electroporation. J. PIHL*; P. KARILA; S. ASPENGREN; A. KARLSSON; M. KARLSSON. *Cellectricon AB.*

11:00 NNN51 **394.24** A versatile genetic approach for permanent tagging of experience activated neurons. M. T. HASAN; M. KERNERT; A. JAIN; J. M. WEISLOGEL; S. KNOBLOCH; A. ILLARIONOVA; H. BADING; R. SPRENGEL; P. H. SEEBURG; V. GRINEVICH*. *Charite-Universitätsmedizin-Berlin, Max Planck Inst. for Med. Res., German Cancer Res. Ctr., Univ. of Heidelberg.*

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8:00 NNN52 **394.25** The isolation and the characteristic features of rat brain cell nuclear membrane and nuclear matrix GlcNAc-specific lectin. T. MACHARADZE*; R. AKHALKATSI. *Tbilisi State Univ.*

9:00 NNN53 **394.26** ● Substituting flow cytometry for manual immunohistological methods improves speed and reliability of cellular characterization in neuroscience. S. GANGAR; T. MASLANIK*; G. MACK; K. PADGETT. *Novus Biologicals.*

10:00 NNN54 **394.27** ▲ High molecular weight dextran is a safe and reliable additive in cerebral microdialysis. F. FIORINI*; V. LAFORTE; J. MARCOUX; D. JUNCKER. *McGill Univ. and Génome Québec Innovation Ctr., Imperial Col. London, Montreal Neurolog. Inst., Montreal Gen. Hospital, McGill Univ. Hlth. Ctr. Res. Inst., McGill Univ.*

11:00 NNN55 **394.28** Metabolome for fast diagnosis of etiological agent in meningitis. L. F. HERNANDEZ*; A. J. FLORES; A. V. BECERRA; C. S. BENCOMO; G. CEBALLOS; P. RADA; L. R. BETANCOURT. *Univ. de los Andes.*

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SPECIAL PRESENTATION *San Diego Convention Center*

874. Understanding New Brain Initiatives in the U.S. and Europe

Mon. 1:15 PM - 3:00 PM — Ballroom 20

The Special Presentation will feature a panel discussion about emerging neuroscience projects in the United States and Europe. The panel will include key leaders from the U.S. Brain Research through Advancing Innovative Neurotechnologies (B.R.A.I.N.) Initiative and the Human Brain Project, a European Flagship program. Learn more about recent investments in brain research initiatives, the scientific foci, and the public policy implications and opportunities in neuroscience.

874.01 T. R. Insel *National Institute of Mental Health, National Institutes of Health*

874.02 S. C. Landis *National Institute for Neurological Disorders and Stroke, National Institutes of Health*

874.03 G. S. F. Ling *Defense Sciences Office, Defense Advanced Research Projects Agency*

874.04 C. B. Marrett *National Science Foundation*

874.05 D. Pasini *European Commission*

SYMPOSIUM *San Diego Convention Center*

395. All for One and One for All: Progress in Single Cell Neurobiology — CME

Mon. 1:30 PM - 4:00 PM — 6A

Chair: J. EBERWINE

Co-Chair: A. C. BECKEL-MITCHENER

Complex biological systems are made up of individual cells that work in concert. Recent advances in single cell methods are enabling higher resolution analysis of molecular and cellular processes and providing a window into the properties of individual cells and their integration into functional networks. New and quantitative measures allow unprecedented views of cellular heterogeneity for multiple phenotypes, which will facilitate better understanding of important neurobiological phenomena. Data encompassing multiple systems and neuronal cell types will be presented including human neurons, human iPS, and mouse neuronal systems.

1:30 **395.01** Introduction.

1:35 **395.02** Functional consequences of single cell mRNA expression variability. J. EBERWINE. *Univ. of Pennsylvania Med. Ctr.*

2:10 **395.03** Omics methods for single cell phenotyping. B. WOLD. *Caltech.*

2:45 **395.04** Exploring the cellular basis of neurodevelopmental disorders with iPSC-derived neurons. S. P. PASCA. *Stanford Univ. Sch. of Med.*

3:20 **395.05** Optical, molecular, and robotic tools for integrative single cell analysis. E. BOYDEN. *MIT.*

3:55 **395.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

396. Neuro-Epigenetics in Neural Development, Plasticity, and Brain Disorders — CME

Mon. 1:30 PM - 4:00 PM — 6B

Chair: H. SONG

Co-Chair: J. SWEATT

Epigenetic mechanisms play critical roles in tissue-specific gene expression, X chromosome inactivation, gene imprinting, and reprogramming. Groundbreaking discoveries in the past two years have overturned several decade-old dogmas. This symposium will discuss recent advances in the understanding of epigenetic mechanisms, including DNA modifications, miRNA and piRNA in the wider context of neurogenesis, neuronal development, synaptic plasticity, learning and memory, and brain disorders.

1:30 **396.01** Introduction.

1:35 **396.02** DNA methylation and development of the nervous system. Y. SUN. *UCLA Med. Sch.*

2:10 **396.03** The coordinated regulation of transcription in the nucleus and translation at the synapse by microRNAs and piRNAs. E. R. KANDEL. *Howard Hughes Med. Inst.*

2:45 **396.04** Regulation of postnatal neurogenesis through modulation of genomic imprinting. A. FERGUSON-SMITH. *Univ. of Cambridge.*

3:20 **396.05** Epigenetic Mechanisms in Memory Formation. J. SWEATT. *Dir., McKnight Brain Inst. UAB.*

3:55 **396.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

397. Maps and Meters for Sound Location — CME

Mon. 1:30 PM - 4:00 PM — 6F

Chair: J. M. GROH

Co-Chair: C. CARR

Neural populations use two types of codes: “maps” of neurons serving as labeled lines for preferred parameter values, or “meters”, in which information is encoded via neural firing rates. Sound location is a computed parameter for which either type of code is possible. We present evidence suggesting that some species and brain structures use maps and others use meters. We explore the evolutionary, computational, and perceptual factors that may favor one coding scheme over another.

1:30 **397.01** Introduction.

1:35 **397.02** Brainstem codes for sound localization. C. CARR. *Univ. Maryland.*

2:10 **397.03** From auditory brainstem adaptation via inhibitory feed-back to human perception. B. GROTHE. *Ludwig Maximilians Univ. Munich.*

2:45 **397.04** Dynamic spatial sensitivity in auditory cortex. J. MIDDLEBROOKS. *Univ. of California, Irvine.*

3:20 **397.05** An auditory meter in a visual map in the primate superior colliculus. J. M. GROH. *Duke Univ.*

3:55 **397.06** Closing Remarks.

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MINISYMPOSIUM *San Diego Convention Center*

398. Neurotransmitter Receptors for Visual Cognition in Primates — CME

Mon. 1:30 PM - 4:00 PM — 6E

Chair: S. EVERLING

Co-Chair: P. R. ROELFSEMA

The performance of cognitive tasks relies on the coordinated activity of neurons within and between brain regions. How do cells in different brain areas work together to implement cognitive functions? This minisymposium will present state-of-the art neuropharmacological and optogenetic techniques to influence the reciprocal interactions between areas within the primate brain. The results reveal unprecedented insight into the feedforward/feedback mechanisms involved in working memory, reward, and attention.

1:30 **398.01** Introduction.

1:35 **398.02** Role of frontal dopamine in visual attention. T. MOORE. *Stanford Univ. Sch. of Med.*

1:55 **398.03** Cholinergic contribution to visual attention in occipital and frontal cortex. A. THIELE. *Newcastle Univ.*

2:15 **398.04** AMPA and NMDA receptors have unique roles in feedforward and feedback processing. P. ROELFSEMA. *Netherlands Inst. for Neurosci.*

2:35 **398.05** Actions of acetylcholine in the local circuits of the visual cortex. A. A. DISNEY. *Salk Inst.*

2:55 **398.06** The role of dopamine in modulating abstract mental representations in the primate prefrontal cortex. S. JACOB. *Tuebingen Univ.*

3:15 **398.07** Dopaminergic reward signals in primate visual cortex. W. VANDUFFEL. *KU Leuven.*

3:35 **398.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

399. Neuroimaging Guided Cognitive Regulation of Food Stimuli: Implications for Obesity — CME

Mon. 1:30 PM - 4:00 PM — 28A

Chair: E. STICE

This minisymposium will present fMRI data highlighting the overlap between drug and food cue-induced craving, the differential reactivity to food images in obese versus lean individuals, and the effectiveness of various cognitive reappraisal strategies in reducing reward-related activity and increasing activation in inhibitory control regions in response to food stimuli in obese versus lean individuals. Data on the effects of behavioral weight loss strategies on the response to food stimuli will also be presented.

1:30 **399.01** Introduction.

1:35 **399.02** Cognitive regulation of food craving: effects of three cognitive reappraisal strategies on neural response to palatable foods. S. YOKUM. *Oregon Res. Inst.*

1:55 **399.03** Fractionating the components of food choice: a comparison of reactivity and regulation in obese and healthy individuals. C. HUTCHERSON. *Caltech.*

2:15 **399.04** Piece of cake: affective reactivity to and cognitive regulation of food cues. N. GIULIANI. *Univ. of Oregon.*

2:35 **399.05** Is regulating craving for food like regulating craving for drugs? Relationship to eating and drug use. H. KOBER. *Clin. & Affective Neurosci. Lab.*

2:55 **399.06** The impact of behavioral weight loss strategies on the response to food. K. DEMOS. *Brown Univ. Med. Sch.*

3:15 **399.07** Pilot trial of a neuroimaging-guided obesity prevention program: reducing elevated responsively to food cues and reduced responsively to food intake. E. STICE. *Oregon Res. Inst.*

3:35 **399.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

400. Neurological Consequences of Microglia Priming: Aging, Disease, and Trauma — CME

Mon. 1:30 PM - 4:00 PM — 29D

Chair: J. C. GENSEL

Co-Chair: J. P. GODBOUT

The role of inflammation in CNS pathology is evolving from a correlative indicator of dysfunction to a causative factor for disease progression and onset. Specifically, priming of microglia and macrophages through injury, infection, or aging exacerbates neuronal dysfunction in response to subsequent insults. This minisymposium will discuss how microglia/macrophage priming can increase susceptibility to cognition dysfunction, delirium, motor impairment, and depression.

1:30 **400.01** Introduction.

1:35 **400.02** Unravelling the roles of microglial priming, IL-1ß and acetylcholine in systemic inflammation-induced delirium. C. CUNNINGHAM. *Trinity Col. Inst. of Neurosci.*

1:55 **400.03** Heterogeneity in the microglial response in the Alzheimer's disease brain. D. M. WILCOCK. *Univ. of Kentucky.*

2:15 **400.04** Macrophage phenotype and neurorepair. J. GENSEL. *Univ. of Kentucky.*

2:35 **400.05** Microglial priming and the aged injured brain. D. LOANE. *Univ. of Maryland Sch. of Med.*

2:55 **400.06** Aging-associated microglial priming and cognitive dysfunction. R. BARRIENTOS. *Univ. Colorado At Boulder, Dept. of Psychology & Neurosci.*

3:15 **400.07** Social stress induced microglial reactivity and macrophage trafficking to the brain promotes anxiety-like behavior. J. GODBOUT. *The Ohio State Univ.*

3:35 **400.08** Closing Remarks.

ALBERT AND ELLEN GRASS LECTURE

San Diego Convention Center

401. The Neural Circuitry of Sex and Violence — CME

Mon. 3:30 PM - 4:40 PM — Ballroom 20

Speaker: D. J. ANDERSON*, California Instiitue of Technology, Howard Hughes Med. Inst.*

Support contributed by The Grass Foundation

Arousal states are integral to our emotional responses. Both mating and fighting are associated with high states of arousal and, furthermore, these behaviors can reinforce one another. For example sexual experience enhances aggressiveness in mice. , However, at the same time, these behaviors are typically mutually exclusive. How can these behaviors be so opposed while reinforcing each other? This talk will describe efforts to address this problem by elucidating the functional neural circuitry underlying aggression and its relationship to circuits controlling mating behavior in both mice and fruit flies.

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PRESIDENTIAL SPECIAL LECTURE

San Diego Convention Center

402. Connectomics: What, How and Why — CME

Mon. 5:15 PM - 6:25 PM — Ballroom 20

Speaker: J. W. LICHTMAN*, Harvard Univ.*

Support contributed by MedImmune

Connectional maps of the brain have value in modeling how the brain works and fails when subsets of neurons or synapses are missing or misconnected. Such maps also provide information about how brain circuits develop and age. Efforts to obtain complete wiring diagrams of peripheral motor and autonomix axons provide insight into the way mammalian nervous systems mold in response to experience. Automated electron microscopy used to collect tapes of brain sections then imaged at high resolution will be discussed. This imaging pipeline will make large-scale connectomic analysis of brain circuits more routine.

NANOSYMPOSIUM

403. Alzheimer Animal Models: Interventions

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* 32B

1:00 **403.01** Physical exercise improves cognition, increases neurogenesis, and reduces amyloid beta plaque load in a mouse model of AD. E. MALISZEWSKA-CYNA*; I. AUBERT. *Sunnybrook Res. Inst., Univ. of Toronto.*

1:15 **403.02** Understanding the link between diabetes and Alzheimer's disease: The effects of hyperglycemia on amyloid-beta levels within brain interstitial fluid. S. L. MACAULEY*; R. PEREZ; T. E. MAHAN; J. M. LEE; D. M. HOLTZMAN. *Washington Univ. Sch. of Med.*

1:30 **403.03** Progression of synaptic amyloid beta and tau pathology in AD: Soluble synaptic amyloid beta oligomers distinguish early AD from high pathology controls. K. GYLYS*; T. BILOUSOVA; B. GONZALEZ; A. EMIRZIAN; W. W. POON; C. A. MILLER; H. V. VINTERS; L. CORNWELL; M. CORRADA; C. KAWAS; E. TENG; G. M. COLE. *UCLA, UCLA, UC Irvine, Keck USC Sch. of Med., UCLA, UCLA, UCLA.*

1:45 **403.04** Rice Bran Extract improves mitochondrial dysfunction in a mouse model of AD. G. P. ECKERT*; S. HAGL; M. T. KHAYYAL; W. E. MULLER. *Goethe-University/ Department of Pharmacol., Univ. of Cairo.*

2:00 **403.05** Amyloid-β-induced cell cycle re-entry in Alzheimer's disease is controlled by the Rac1-mTOR pathway. A. NORAMBUENA; L. MCMAHON; G. S. BLOOM*. *Univ. of Virginia, Univ. of Virginia.*

2:15 **403.06** ● Tyrosine kinase inhibition increases functional parkin-Beclin-1 interaction and enhances amyloid clearance and cognitive performance. C. E. MOUSSA*; M. HEBRON; I. LONSKAYA. *Georgetown Univ., Georgetown Univ.*

2:30 **403.07** Full-length Abeta(1-40/42) and pyroGlu-Abeta(3-40/42) peptides are produced in neurotransmitter secretory vesicles by the APP secretase system and glutaminyl cyclase for regulated Abeta secretion with peptide and catecholamine transmitters. V. Y. HOOK*; T. TONEFF; H. CYNIS; C. MOSIER; H. DEMUTH; M. ZIEGLER. *Univ. Calif, San Diego, Probiodrug.*

2:45 **403.08** Hyperhomocysteinemia as a model of vascular dementia and its effects on amyloid pathology in a transgenic mouse model. T. SUDDUTH; E. WEEKMAN; D. M. WILCOCK*. *Univ. of Kentucky.*

3:00 **403.09** PPARγ-mediated cognitive enhancement in AD. L. A. DENNER*; J. B. JAHRLING; M. N. NENOV; S. J. HAIDACHER; P. R. GRIFFIN; F. LAEZZA; K. T. DINELEY. *Univ. Texas Med. Br., Univ. Texas Med. Br., Univ. of Texas Med. Br., The Scripps Res. Inst.*

3:15 **403.10** Human Aβ expression increases survival and inhibits microbial spread in transgenic *C. elegans, Drosophila,* and mouse models of infection. R. D. MOIR*; D. K. KUMAR; K. J. WASHICOSKY; S. H. CHOI; A. LI; M. KONSOLAKI; G. MCCOLL; J. LINNOILA; B. PULLI; J. W. CHEN; R. E. TANZI. *Massachusetts Gen. Hosp., Rutgers Univ. of New Jersey, Melbourne Univ., Massachusetts Gen. Hosp.*

3:30 **403.11** HDAC2 tyrosine phosphorylation by c-Abl induces neuronal gene repression in Alzheimer diseases models. M. A. GONZALEZ*; P. A. CONTRERAS; L. D. ESTRADA; D. CHAMORRO; A. VILLAGRA; E. SETO; A. R. ALVAREZ. *Pontificia Univ. Catolica De Chile, Pontificia Univ. Catolica De Chile, H. Lee Moffitt Cancer Ctr. and Res. Inst., H. Lee Moffitt Cancer Ctr. and Res. Inst.*

3:45 **403.12** ● Immunotherapy with BIIB037 restores calcium dyshomeostasis in Tg2576 mice. K. KASTANENKA*; T. BUSSIERE; F. QIAN; P. WEINREB; K. RHODES; B. BACSKAI. *Massachusetts Gen. Hosp., Harvard Med. Sch., Biogen Idec.*

4:00 **403.13** Role of CCl2 and CCR2 mediated clearance of Aβ rich drusen in Age Related Macular Degeneration: Implications for Alzheimer's disease. A. ANAND*; N. K. SHARMA. *Post Grad. Inst. of Med. Educ. and Res., Post Grad. Inst. of Med. Educ. and Res.*

NANOSYMPOSIUM

404. Multiple Sclerosis: Molecular and Cellular Mechanisms of Demyelination and Neurodegeneration

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* 24A

1:00 **404.01** A potential role for apolipoprotein A1 in multiple sclerosis. L. A. GARDNER*; C. J. GROOVER; C. S. BRADLEY; M. LEVIN. *Res. Service VAMC, Univ. of Tennessee Hlth. Sci. Ctr.*

1:15 **404.02** Autoimmunity and neurodegeneration: Antibodies effect on neuronal viability and endogenous proteins. J. DOUGLAS*; L. A. GARDNER; S. LEE; M. C. LEVIN. *Univ. of Tennessee Hlth. Sci. Ctr., VA Med. Ctr.*

1:30 **404.03** PDGFRβ-expressing stromal cells contribute to neuroinflammation during experimental autoimmune encephalitis. F. FERNÁNDEZ KLETT*; C. FERNÁNDEZ ZAPATA; S. BRENDECKE; M. PRINZ; J. PRILLER. *Charité-Universitätsmedizin Berlin, Univ. of Freiburg.*

1:45 **404.04** Deletion of IKK2 in myeloid cells impairs T lymphocyte priming and protects mice from experimental autoimmune encephalomyelitis. N. GLADOW; H. RADBRUCH; K. BLAZEJ; J. PETER; M. BARDUA; J. LADHOFF; M. HRISTOVA; O. RUNG; M. PASPARAKIS; O. HOFFMANN; G. RAIVICH; M. PRINZ; C. BÖTTCHER; J. PRILLER*. *Charite-Universitaetsmedizin Berlin, Univ. Col. London, Charite-Universitaetsmedizin Berlin, Univ. of Cologne, Univ. of Freiburg.*

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2:00 **404.05** Cell type-specific ablation of lipid phosphatase FIG4/SAC3 reveals cell-autonomous and non-cell-autonomous functions in OL development and axon myelination. Y. MIRONOVA*; G. M. LENK; T. L. DICKENDESHER; P. SHRAGER; M. H. MEISLER; R. J. GIGER. *Univ. of Michigan, Roman Giger Lab., Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Rochester Med. Ctr., Univ. of Michigan.*

2:15 **404.06** Axons are MHC class I-dependent targets of antigen-specific CD8+ T cells and are injured through a granzyme B-dependent mechanism. B. M. SAUER*; W. F. SCHMALSTIEG; C. L. HOWE. *Mayo Clin. Col. of Med., Mayo Clin. Col. of Med.*

2:30 **404.07** Neurodegeneration and inflammation in a duplication mouse model of Pelizaeus-Merzbacher Disease. L. M. SAKOWSKI*; K. CLARK; K. SPERLE; S. MODLA; K. CZYMMEK; R. SKOFF; G. HOBSON. *A.I. Dupont Hosp. For Children, Univ. of Delaware, Multiple Sclerosis Res. Ctr. of New York, Delaware Biotech. Inst., Wayne State Univ.*

2:45 **404.08** Remodeling of brain functional connectivity in the cuprizone mouse model of demyelination. N. S. HÜBNER*; A. MECHLING; H. LEE; M. REISERT; J. HENNIG; D. VON ELVERFELDT; L. HARSAN. *Univ. Med. Ctr. Freiburg, Univ. Freiburg, Univ. Med. Ctr. Freiburg.*

3:00 **404.09** Construction of *in vitro* Neuromyelitis optica (NMO) models and effect of NMO-IgG at the Blood-Brain Barrier. Y. TAKESHITA*; B. OBERMEIER; A. COTLEUR; F. SHIMIZU; Y. SANO; T. J. KRYZER; V. A. LENNON; T. KANDA; R. M. RANSOHOFF. *Cleveland Clin. Fndn. Lerner Res. Inst., Yamaguchi Univ. Grad. Sch. of Med., Mayo Clin. Col. of Med.*

3:15 **404.10** Cerebrospinal fluid derived from progressive multiple sclerosis patients induces demyelinating lesions in the mouse CNS. M. CRISTOFANILLI*; B. CYMRING; H. ROSENTHAL; B. XIE; S. A. SADIQ. *Tisch MS Res. Ctr. of New York, Tisch MS Res. Ctr. of New York.*

3:30 **404.11** Early detection of thrombin activity in neuroinflammatory disease. D. DAVALOS*; K. M. BAETEN; M. A. WHITNEY; E. S. MULLINS; B. FRIEDMAN; E. S. OLSON; J. K. RYU; D. S. SMIRNOFF; M. A. PETERSEN; C. BEDARD; J. L. DEGEN; R. Y. TSIEN; K. AKASSOGLOU. *Gladstone Inst., UCSD, Univ. of Cincinnati, Univ. of California San Francisco, Howard Hughes Med. Inst., Univ. of California San Diego, Univ. of California, San Francisco.*

NANOSYMPOSIUM

405. Animal Models of Schizophrenia Revisited: New Mechanisms and Therapeutic Targets

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* 23A

1:00 **405.01** Amygdala hyperactivity in the MAM model of schizophrenia. Y. DU*; A. A. GRACE. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:15 **405.02** Decreased expression of calbindin and calretinin in APO-SUS rats displaying schizophrenia-relevant features. F. MEYER*; J. ROOSEN; V. D. EIJSINK; J. A. VAN HULTEN; N. H. VAN BAKEL; M. M. M. VERHEIJ; G. J. M. MARTENS. *Radboud University-Donders Inst. For Brain, Cognition and Behaviour.*

1:30 **405.03** Proton MR spectroscopy and resting state functional MRI of the brain in sub-chronic phencyclidine (PCP) model of cognitive impairment in schizophrenia (CIS). K. A. WILLIAMS*; Y. OYAMADA; L. RAJAGOPAL; H. Y. MELTZER; D. PROCISSI. *Northwestern Univ., Northwestern Univ.*

1:45 **405.04** ● High frequency neuronal oscillations in a cynomologus macaque test of sustained attention following nmda receptor antagonism. A. V. GOONAWARDENA*; C. GLAVIS-BLOOM; J. HEISS; G. TRUBE; D. ALBERATI; E. BORRONI; T. L. WALLACE. *SRI Intl., F. Hoffmann La Roche Ltd.*

2:00 **405.05** Early postnatal inactivation of the prefrontal cortex results in disrupted dopaminergic responses in the nucleus accumbens shell to ketamine treatment in adult rats. Y. MAKHLOUFI; Y. USUN; S. EYBRARD; F. MEYER; A. E. LOUILOT*. *INSERM U1114- Fac. of Medicine- Uds, Radboud Univ. Nijmegen,.*

2:15 **405.06** Conditional Gad67 ablation restricted to the cortex and hippocampus recapitulates aspects of the negative symptoms of schizophrenia and melancholic depression. S. M. KOLATA*; G. ROMPALA; K. NAKAO; Z. JIANG; K. MARTINOWICH; K. NAKAZAWA. *Natl. Inst. of Mental Hlth., Lieber Inst. for Brain Develop.*

2:30 **405.07** Neuropsychological assessment of mice depleted of the complement control-related and schizophrenia susceptibility genes CSMD1 and CSMD2. B. HAVIK*; C. NEPAL; K. M. ERSLAND; I. DUUS; S. SKREDE; V. M. STEEN. *Haukeland Univ. Hosp., Haukeland Univ. Hosp.*

2:45 **405.08** Mechanisms of impaired cortical synchrony in an NMDA receptor hypo- function mouse model for schizophrenia. V. ZSIROS*; K. NAKAZAWA. *NIMH/National Inst. of Hlth.*

3:00 **405.09** Effects of risperidone and D-serine in a PCP rat model of schizophrenia. D. PARACHOU; E. CAYRE; B. MEOT; V. ANGLADE; C. DRIEU LA ROCHELLE*. *Biotrial Pharmacol.*

3:15 **405.10** Interplay of D1/D5 dopamine receptors and L-type voltage gated Ca^{2+} channels leads to enhanced LTP at glutamatergic CA1-subiculum synapses in the NMDA receptor hypofunction model of psychosis. J. BARTSCH; P. FIDZINSKI; R. KOVACS; J. BEHR*. *Charité, Universitätsmedizin Berlin, Charité, Universitätsmedizin Berlin, Charité, Universitätsmedizin Berlin.*

3:30 **405.11** Chronic treatment with anti-Neuregulin-1 alters behavior in C57BL/6 mice. S. L. DOMINGUEZ*; G. V. HEGDE; J. HANSON; M. WEBER; C. LE PICHON; Q. ZHOU; E. JACKSON; K. SCEARCE-LEVIE. *Genentech, Genentech.*

3:45 **405.12** The involvement of GABA-A receptor and CREB signaling pathway in the molecular mechanisms of combined SSRI-antipsychotic treatment in rats. O. WEINREB*; R. EINOCH; M. B. H. YOUDIM; H. SILVER. *Technion-Israel Inst. of Technology, Medicine, Pharmacology, Eve Topf Ctr., Shaar Menashe MHC.*

NANOSYMPOSIUM

406. High-Level Vision: Representation and Recognition

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* 1B

1:00 **406.01** Functionally partitioning the ventral stream with controlled natural stimuli. J. FREEMAN*; C. M. ZIEMBA; E. P. SIMONCELLI; J. A. MOVSHON. *Janelia Farm Res. Campus, HHMI, New York Univ.*

1:15 **406.02** High order volterra models of area v4 capture complex selectivity. M. D. OLIVER*; J. L. GALLANT. *UC Berkeley.*

1:30 **406.03** Using natural stimuli to probe invariance and composite feature selectivity of V4 neurons. R. ROWEKAMP*; M. KOUH; T. SHARPEE. *Salk Inst. For Biol. Studies, Drew Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:45 **406.04** A spatiotemporal profile of invariant object recognition in the human visual system. L. ISIK*; E. M. MEYERS; J. Z. LEIBO; T. POGGIO. *MIT.*

2:00 **406.05** Leveraging visual feature selectivity to probe mechanisms of size-invariant object coding. Y. EL-SHAMAYLEH*; A. PASUPATHY. *Univ. of Washington.*

2:15 **406.06** Sensitivity of curvature-tuned V4 neurons under partial occlusion. A. K. PASUPATHY*; Y. KOSAI; Y. EL-SHAMAYLEH; A. FYALL. *Univ. Washington.*

2:30 **406.07** Canonical correlation analysis revealed perceptual gloss parameters represented in the monkey inferior temporal cortex. A. NISHIO*; T. SHIMOKAWA; N. GODA; H. KOMATSU. *Natl. Inst. For Physiological Sci., Advanced Telecommunications Res. Inst. Intl., The Grad. Univ. for Advanced Studies (SOKENDAI).*

2:45 **406.08** Functional organization of columns in macaque inferotemporal cortex: Moderately complex features or object categories? S. YOKOO*; T. MOGAMI; K. TANAKA. *Riken-Brain Sci. Inst.*

3:00 **406.09** Channels for objects and landscapes in macaque inferotemporal cortex. S. VAZIRI*; C. E. CONNOR. *Johns Hopkins Univ.*

3:15 **406.10** Bottom-up value processing in macaque inferotemporal visual cortex. C. E. CONNOR*; D. SASIKUMAR; E. EMERIC; V. STUPHORN. *Johns Hopkins Univ.*

3:30 **406.11** Invariance to non-affine transformations in domain-specific regions of the ventral stream. J. Z. LEIBO*; T. POGGIO. *MIT.*

3:45 **406.12** Optogenetic suppression of "face neurons" reveals their causal role in face discrimination behavior. A. AFRAZ*; E. S. BOYDEN; J. J. DICARLO. *MIT.*

NANOSYMPOSIUM

407. The Illusion of Stability: Visual Perception and Eye Movements

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* 5B

1:00 **407.01** Enhanced visual sensitivity of superior colliculus neurons before microsaccades. C. CHEN*; Z. M. HAFED. *Werner Reichardt Ctr. For Integrative Neurosci., Grad. Sch. of Neural & Behavioural Sci. of Intl. Max Planck Res. Sch.*

1:15 **407.02** The timing of remapping of a stable scene in LIP suggests a possible mechanism for scene stability. J. W. BISLEY*; K. MIRPOUR. *UCLA.*

1:30 **407.03** Visual (In)stability: Attention and feature binding errors after eye movements. J. D. GOLOMB*. *Ohio State Univ., The Ohio State Univ.*

1:45 **407.04** Active and passive mechanisms for visual stability. D. MELCHER*; A. BUONOCORE; J. E. CORBETT. *Univ. of Trento, Univ. of Trento.*

2:00 **407.05** Eye-position signals in primary visual cortex during fixation, saccades, and smooth-pursuit eye movements. A. P. MORRIS*; B. KREKELBERG. *Natl. Vision Res. Inst. of Australia, Rutgers Univ.*

2:15 **407.06** Modulation of visual responses by gaze direction in human visual cortex. E. P. MERRIAM*; J. L. GARDNER; J. A. MOVSHON; D. HEEGER. *New York Univ., New York Univ., RIKEN Brain Sci. Inst.*

2:30 **407.07** An overrepresentation of target space in prefrontal cortex during saccadic eye movements. M. ZIRNSAK*; B. NOUDOOST; N. A. STEINMETZ; K. Z. XU; T. MOORE. *Stanford Univ.*

2:45 **407.08** Microscopic eye movements compensate for non-homogeneous vision within the fovea. M. POLETTI*; C. LISTORTI; M. RUCCI. *Boston Univ., Boston Univ.*

3:00 **407.09** Combined head and eye movements whiten space in time during normal fixation. M. RUCCI*; J. D. VICTOR; M. AYTEKIN. *Boston Univ., Weill Cornell Med. Col.*

3:15 **407.10** Shaping the world through looking: Saccadic adaptation affects localization in macaques. S. GREMMLER; A. BOSCO; P. FATTORI; M. LAPPE*. *Inst. for Psychology, Univ. of Bologna.*

3:30 **407.11** Contributions of shared and independent noise sources to the precision of human smooth pursuit and motion perception. L. C. OSBORNE*; T. MUKHERJEE; M. E. BATTIFARANO; K. A. COTTRILL. *Univ. of Chicago.*

3:45 **407.12** Visual perception during the saccadic "gap effect". E. PRETEGIANI; C. ASTEFANOAEI; P. M. DAYE; E. J. FITZGIBBON; D. CREANGA; A. RUFA; L. M. OPTICAN*. *Lab. Sensorimotor Research/NEI/NIH, Univ. of Siena, Alexandru Ioan Cuza Univ.*

NANOSYMPOSIUM

408. Energy Metabolism

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 1:00 PM – *San Diego Convention Center,* 2

1:00 **408.01** Structural and biophysical features of the ion channel activity of the C-subunit ring of the F1FO ATP synthase-the mitochondrial permeability transition pore? E. A. JONAS*; S. SACCHETTI; H. PARK; G. BEUTNER; G. A. PORTER, Jr.; K. N. ALAVIAN. *Yale Univ. Sch. Med., Univ. of Rochester Med. Ctr.*

1:15 **408.02** Transcriptional and epigenetic regulation coupling mitochondrial biogenesis to differentiation of neural progenitors. M. UITTENBOGAARD; J. WANG; A. E. CHIARAMELLO*. *George Washington Univ. Med. Ctr., Hosp. for Sick Children.*

1:30 **408.03** Activity dependent regulation of axonal mitochondrial transport. Y. CHEN*; Z. SHENG. *Ninds, NINDS.*

1:45 **408.04** Therapeutic interventions targeting mitochondrial dysfunction in neurodegenerative diseases. M. BEAL*. *Cornell Univ. Med. Col.*

2:00 **408.05** Imaging mitochondrial dynamics and transcriptional control in living neurons. G. C. OWENS*; E. C. WALCOTT; J. Y. DELGADO. *David Geffen Sch. of Med. at UCLA, The Scripps Res. Inst., Univ. of Bordeaux.*

2:15 **408.06** Coupling of energy metabolism and synaptic transmission at the transcriptional level: Role of transcription factors in regulating mediators of energy metabolism, synaptic transmission, and energy utilization in neurons. M. T. WONG-RILEY*; S. DHAR; K. JOHAR; A. PRIYA. *Med. Col. Wisconsin, Med. Col. Wisconsin.*

2:30 **408.07** Transcellular degradation of axonal mitochondria. N. MARSH-ARMSTRONG*; C. DAVIS; K. KIM; E. BUSHONG; E. MILLS; D. BOASSA; M. ELLISMAN. *Johns Hopkins Univ. Sch. Med., Natl. Ctr. for Microscopy and Imaging Res.*

2:45 **408.08** Metabolic programming in genome-wide networks contributes to neurological and behavioral plasticity. Q. MENG; R. AGRAWAL; V. MÄKINEN; F. GOMEZ-PINILLA*; X. YANG. *UCLA.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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3:00 **408.09** Short-term high-fat and high-fructose diet feeding produces hippocampal insulin signaling alterations, dendrite and spine loss and neuroinflammation in the rat. E. CALVO-OCHOA*; K. HERNÁNDEZ-ORTEGA; P. FERRERA; S. MORIMOTO; R. GUTIÉRREZ-JUÁREZ; C. ARIAS. *Inst. de Investigaciones Biomédicas, UNAM, Inst. Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Dept. of Medicine, Diabetes Res. Ctr., Albert Einstein Col. of Med.*

3:15 **408.10** Imaging the co-development of hemodynamic and neuronal receptive fields in the neonatal brain. M. G. KOZBERG*; A. RAYSHUBSKIY; B. R. CHEN; M. B. BOUCHARD; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ., Columbia Univ.*

3:30 **408.11** Dendritic filtering can bridge functional magnetic resonance imaging and neural responses in a recurrent network model of the primary visual cortex. H. M. HEIKKINEN*; F. SHARIFIAN; R. VIGARIO; S. VANNI. *Aalto Univ. Sch. of Sci., Aalto Univ. Sch. of Sci., Advanced Magnetic Imaging Centre, Aalto Neuroimaging, Aalto Univ. Sch. of Sci.*

3:45 **408.12** Optogenetic control of neurovascular coupling along the transcallosal circuits in rat somatosensory cortex. B. IORDANOVA*; A. L. VAZQUEZ; A. J. POPLAWSKY; T. D. Y. KOZAI; M. FUKUDA; S. KIM. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 **408.13** Spatiotemporal hemodynamics from a physiological model: Deconvolution of fMRI data, and interactions of BOLD responses. K. M. AQUINO*; P. A. ROBINSON; M. J. BREAKSPEAR; T. LACY; M. M. SCHIRA. *Univ. of Sydney, Brain Dynamics Ctr., Brain Dynamics Ctr., Queensland Instiute of Med. Res., Neurosci. Res. Australia, Univ. of Wollongong.*

NANOSYMPOSIUM

409. Neuroimaging: Emotion, Reward, and Decision Making

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* 4

1:00 **409.01** Anatomical connections of monkey amygdala as assessed by electrical stimulation and functional MRI. A. MESSINGER*; N. J. MEI; R. B. H. TOOTELL; L. G. UNGERLEIDER. *NIMH, Harvard Med. Sch.*

1:15 **409.02** Gambling-related cues increase temporal discounting and decrease valuation signals in striatum and midbrain in problem gamblers. J. PETERS*; S. F. MIEDL; C. BÜCHEL. *Dept. of Systems Neuroscience, Univ. Medical-Center Hamburg-Eppendorf, Univ. of California, Berkeley.*

1:30 **409.03** Mathematical modeling reveals brain regions encoding perceived risk during a naturalistic risk-taking task. S. M. HELFINSTEIN*; T. SCHONBERG; E. CONGDON; K. H. KARLSGODT; J. A. MUMFORD; F. W. SABB; T. D. CANNON; E. D. LONDON; R. M. BILDER; R. A. POLDRACK. *The Univ. of Texas At Austin, Univ. of California Los Angeles, Zucker Hillside Hosp., Yale Univ.*

1:45 **409.04** Up-regulation of emotional responses to reward-predicting stimuli: An event-related potential study. S. J. LANGESLAG*; J. W. VAN STRIEN. *Univ. of Maryland, Erasmus Univ. Rotterdam.*

2:00 **409.05** Imaging nocebo induced hyperalgesia in the human spinal cord. S. GEUTER*; C. BÜCHEL. *Univ. Med. Ctr. Hamburg-Eppendorf.*

2:15 **409.06** Dopamine modulation of reward- and effort-based decision making circuits in humans. A. ZENON; E. OLIVIER*; L. DRICOT. *Inst. of Neurosci. - UCL.*

2:30 **409.07** Changes in striatal intrinsic functional connectivity from childhood into adulthood. M. ERNST*; J. PORTER; A. K. ROY; B. BENSON; D. S. PINE; M. LUCIANA. *NIMH-NIH, VA Central Iowa Hlth. Care Syst., Fordham Univ., NIH, Univ. of Minnesota.*

2:45 **409.08** Biased input regulation of striatal reward response comprises a circuit-level mechanism for human self-control. J. W. BUCKHOLTZ*; E. K. KASTMAN; H. M. DORFMAN. *Harvard Univ., Harvard Univ., Massachusetts Gen. Hosp.*

3:00 **409.09** Dopaminergic midbrain and habenula functional connectivity underlie aversive processing in humans. K. HENNIGAN*; K. D'ARDENNE; S. M. MCCLURE. *Stanford Univ., Virginia Tech.*

3:15 **409.10** How instructed knowledge shapes aversive learning. L. Y. ATLAS*; B. B. DOLL; N. D. DAW; E. A. PHELPS. *New York Univ., New York Univ., New York Univ., New York Univ., Nathan Kline Inst.*

3:30 **409.11** Reward- and effort-related neuronal activity in the subthalamic nucleus of Parkinson's disease patients. A. ZENON*; Y. DUCLOS; A. EUSEBIO. *Inst. of Neurosci., Inst. de Neurosci. de la Timone.*

3:45 **409.12** Posttraumatic stress disorder not associated with heightened amygdala activation to non-trauma related negative stimuli. S. VAN ROOIJ*; A. R. RADEMAKER; M. KENNIS; M. VINK; R. S. KAHN; E. GEUZE. *Univ. Med. Ctr., Res. Ctr. Military Mental Health, Ministry of Defence.*

4:00 **409.13** The way to her heart? Young women prone to weight gain show elevated brain response to romantic cues after having eaten. A. V. ELY*; A. CHILDRESS; K. JAGANNATHAN; M. R. LOWE. *Drexel Univ., Univ. of Pennsylvania.*

4:15 **409.14** Social touch activates endogenous μ-opioid system in humans - A pet study. L. TUOMINEN*; J. HIRVONEN; M. SAMS; I. JÄÄSKELÄINEN; A. MACHIN; R. HARI; R. DUNBAR; L. NUMMENMAA. *Turku PET Ctr., Aalto Univ., Oxford Univ., Aalto Univ.*

NANOSYMPOSIUM

410. Computation, Modeling, and Simulation V

Theme G: Novel Methods and Technology Development

Mon. 1:00 PM – *San Diego Convention Center,* 7B

1:00 **410.01** Co-evolution patterns in functional connections that change during learning. D. S. BASSETT*; N. F. WYMBS; M. A. PORTER; P. J. MUCHA; S. T. GRAFTON. *Univ. of California Santa Barbara, Univ. of California Santa Barbara, Univ. of Oxford, Univ. of North Carolina Chapel Hill, Univ. of California Santa Barbara.*

1:15 **410.02** Statistical hypothesis testing on white-matter connections and structures. F. PESTILLI*; J. YEATMAN; A. ROKEM; K. KAY; B. WANDELL. *Psychology, Stanford Univ.*

1:30 **410.03** Iterative sparse logistic regression (iSLR): a new ensemble pattern classification method for fMRI decoding. S. HIROSE*; I. NAMBU; E. NAITO. *CiNet, NICT, ATR, Nagaoka Univ. of Technol., Osaka Univ.*

1:45 **410.04** A neural mass model for simulating modulation of cortical activity with transcranial direct current stimulation. A. DUTTA*; M. A. NITSCHE. *Inst. Natl. De Recherche En Informatique Et En Automatique (INRIA), Univ. Med. Goettingen.*

2:00 **410.05** From connectome to model parameters: Combining measurements of morphology and brain activity. R. A. KOENE*. *Carboncopies.Org, NeuraLink Co.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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2:15 **410.06** In limbo: Identifying regions of activation that are too close to call. G. DE HOLLANDER*; B. U. FORSTMANN; L. J. WALDORP; E. WAGENMAKERS. *Univ. of Amsterdam, Univ. of Amsterdam.*

2:30 **410.07** Critical brain dynamics after traumatic brain injury. G. SCOTT*; P. HELLYER; M. SHANAHAN; S. JILKA; R. LEECH; D. SHARP. *Imperial Col. London, Imperial Col. London.*

2:45 **410.08** An edge-centric perspective on the human connectome: Differentiating connections according to their local and global role. M. A. DE REUS*; R. S. KAHN; M. P. VAN DEN HEUVEL. *Rudolf Magnus Institute, Univ. Med. Ctr. Utrecht.*

3:00 **410.09** Brain-inspired equivalence structure extraction technique for generating frames. H. YAMAKAWA*. *FUJITSU LABORATORIES LTD.*

3:15 **410.10** Low-frequency intersubject synchronization of MEG time-courses during movie viewing. K. LANKINEN*; M. KOSKINEN; J. SAARI; R. HARI. *Aalto Univ.*

3:30 **410.11** *In vivo* reconstruction of head tissue conductivities using a genetic algorithm and a 4-shell spherical head model. B. KORITNIK*; J. DREO. *Univ. Med. Ctr. Ljubljana, Univ. Med. Ctr.*

3:45 **410.12** Advances in basal ganglia, thalamic, hippocampal, and cerebellar atlasing: Development and automated segmentation methods. M. CHAKRAVARTY*; M. PARK; J. PIPITONE; J. L. WINTERBURN; S. CHAVEZ; M. M. SCHIRA; J. C. PRUESSNER; N. J. LOBAUGH; D. L. COLLINS; J. P. LERCH; A. N. VOINESKOS. *Ctr. for Addiction and Mental Hlth., Neurosci. Res. Australia, McGill Univ., Montreal Neurolog. Inst., The Hosp. for Sick Children.*

4:00 **410.13** EEG-FMRI coupling is task related and spectrally dependent. P. DOUGLAS*; D. MOYER; M. S. COHEN. *UCLA.*

POSTER

411. Cell Lineage

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 A1 **411.01** Genetic control of chandelier interneuron specification in mouse cerebral cortex. S. M. KELLY*; M. HE; Z. HUANG. *Stony Brook Univ., Cold Spring Harbor Lab.*

2:00 A2 **411.02** Embryonic expression of nolz-1/zfp503 in reelin-positive cortical cells implicates a potential role in regulating the development of mouse cajal-retzius cell subtypes. L. CHANG*; S. CHEN; Y. LIU; F. LIU. *Grad. Inst. of Basic Med. Science, China Med. Univ., Inst. of Neuroscience, Natl. Yang-Ming Univ.*

3:00 A3 **411.03** Defining lineage relationships in the cochlear spiral ganglion using Brainbow. H. E. SHERRILL*; M. W. KELLEY. *Nih-Brown Univ. GPP, NIH-NIDCD.*

4:00 A4 **411.04** Cell type – selective expression of the zinc finger – containing gene nolz-1/zfp503 in the developing mouse striatum. H. S. KO*; S. CHEN; H. CHEN; H. J. HAO; F. LIU. *Neurosci.*

1:00 A5 **411.05** Clonal analysis of excitatory neuron neurogenesis and organization in the neocortex. P. GAO*; S. HIPPENMEYER; L. HERNANDEZ; K. HUANG; L. LUO; S. SHI. *Mem. Sloan Kettering Cancer Ctr., Inst. of Sci. and Technol. Austria, Weill Cornell graduate school of medical sciences, Ohio state university, Stanford Univ.*

2:00 A6 **411.06** A genetic analysis of hypothalamic development and function by using Ptf1a-genetically modified mice. T. FUJIYAMA*; M. NAGAOKA; H. KUMANOGOH; Y. HAYASE; H. FUNATO; M. YANAGISAWA; T. TANAKA; A. IMURA; Y. YANAGAWA; M. A. MAGNUSON; C. V. E. WRIGHT; K. OBATA; Y. KAWAGUCHI; Y. NABESHIMA; M. HOSHINO. *Natl. Inst. Neurosci, NCNP, IIIS, Univ. of Tsukuba, BRI, Grad. Sch. of Med. Gunma Univ., Vanderbilt Univ., RIKEN BSI, CiRA, Kyoto Univ.*

3:00 A7 **411.07** Special AT-rich sequence-binding protein-2 (Satb2) - Independent initiation of cholinergic sweat gland innervation in rat *in vivo.* B. SCHUETZ*; M. K. SCHÄFER; L. E. EIDEN; E. WEIHE. *Philipps Univ., Natl. Inst. of Mental Hlth.*

4:00 A8 **411.08** Targeted activation of primitive neural stem cells in the mouse brain. R. LEEDER*; B. DEVEALE; C. M. MORSHEAD; D. VAN DER KOOY. *Univ. of Toronto.*

1:00 A9 **411.09** Ctip1 controls refinement of area identity and organization of sensory maps in the developing neocortex. L. F. CUSTO GREIG*; M. B. WOODWORTH; J. D. MACKLIS. *Harvard Dept. of Stem Cell and Regenerative Biol.*

2:00 A10 **411.10** Ctip1 regulates balance of projection neuron subtype specification in deep cortical layers. M. B. WOODWORTH*; L. F. CUSTO GREIG; J. D. MACKLIS. *Harvard Univ.*

3:00 A11 **411.11** Lineage analysis of interneurons using a retroviral library. C. MAYER*; X. H. JAGLIN; C. L. CEPKO; G. FISHELL. *NYU Neurosci. Inst., Harvard Med. Sch.*

4:00 A12 **411.12** Clonal cell analysis in the olfactory bulb. M. FIGUERES OÑATE*; L. LÓPEZ MASCARAQUE. *Cajal Inst. (CSIC).*

1:00 A13 **411.13** Lineage-dependent functional organization of neocortical interneurons. X. ZHANG*; S. SHI. *Mem. Sloan-Kettering Cancer Ctr.*

2:00 A14 **411.14** Cellular origin and physiological characterization of newly generated oligodendrocytes after chronic perinatal hypoxia. P. LI*; M. RAYMOND; S. FOX; J. SCAFIDI; V. GALLO. *Children's Natl. Med. Ctr.*

3:00 A15 **411.15** The covariance structure and genomic control of retinal cell number. B. E. REESE*; I. E. WHITNEY; P. W. KEELEY; N. R. MADSEN; A. ST. JOHN. *Univ. California.*

4:00 A16 **411.16** Utilizing advanced cryopreservation techniques to produce assay ready primary mouse neurons. N. KAUR*; L. KOPP; J. YOUNG; S. KIM; A. DUDLEY; A. HANNAY. *Life Technologies, Life Technologies.*

POSTER

412. Neural Stem Cells and Neurogenesis

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 A17 **412.01** ● Ganglioside GD3 sustains neurogenesis in the subventricular zone of adult mice by regulating EGF-induced division of neural stem cells. J. WANG; C. WAKADE; R. K. YU*. *Georgia Regents Univ., Georgia Regents Univ., Georgia Regents Univ., Med. Col. of Georgia, Georgia Regents Univ.*

2:00 A18 **412.02** Sitagliptin and neurogenesis in the brain of diabetic mice. T. P. BACHOR*; A. M. SUBURO. *Univ. Austral - Facultad De Ciencias Biomedicas, Univ. Austral - Facultad De Ciencias Biomedicas.*

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3:00 A19 **412.03** The H3K27 demethylase KDM6B/JMJD3 is a retinoic acid-inducible regulator of neural differentiation in medulloblastoma cells. A. GRACIAS; T. LILJA; O. B. HERMANSON*. *Dept. of Neuroscience, Karolinska Institutet.*

4:00 A20 **412.04** Involvement of IKKβ in adult neurogenesis through WNT and NeuroD1 signaling. K. SEONG; S. CHOI; M. KIM; M. PARK; J. YANG; J. JUNG; W. KIM; M. KIM*. *Univ. of Chonnam Natl., Univ. of Michigan ,.*

1:00 A21 **412.05** Towards a comprehensive characterization of human cortical development at single cell resolution. B. P. LEVI*; E. THOMSEN; Y. WANG; R. MARTINEZ; A. NELSON; V. MENON; S. YAO; A. KAYKAS; R. DOLMETSCH. *Allen Inst. For Brain Sci.*

2:00 A22 **412.06** ▲ Expression of differentiation markers of neuronal cell types elevated by KD202. M. HAN; Y. K. KWON*. *kyunghee Univ., Kyung Hee Univ.*

3:00 A23 **412.07** Spatial heterogeneity of antigen expression in primary human brain tumor tissues. M. E. BARISH*; L. WENG; M. D'APUZZO; S. J. FORMAN; C. E. BROWN. *City of Hope, Beckman Res. Inst., City of Hope Med. Ctr., City of Hope Med. Ctr., City of Hope, Beckman Res. Inst.*

4:00 A24 **412.08** Carboxypeptidase E: Embryonic expression and neural stem cell differentiation. P. SELVARAJ; S. R. K. MURTHY; C. LEE; M. LANE; N. X. CAWLEY; I. MERCHENTHALER; T. D. GOULD*; S. AHN; Y. LOH. *NICHD-NIH, NICHD-NIH, Univ. of Maryland, Univ. Maryland Sch. Med., NICHD-NIH.*

1:00 A25 **412.09** Synaptic activity and network behavior in neurons derived from stem cell populations. P. M. MCNUTT*; P. H. BESKE; M. E. LYMAN; K. S. HUBBARD; I. M. GUT. *USAMRICD.*

2:00 A26 **412.10** Wnt/beta-catenin signaling regulates Pax6 for radial glial self-renewal and neurogenesis. C. ZHOU*; Q. GAN; R. SUZUKI; A. STOKES. *Univ. of California, Davis.*

3:00 B1 **412.11** Establishment and characterization of immortalized mini-pig neural stem cell line. S. CHOI*; H. LEE*; H. KIM; J. AN; S. LEE; S. KIM; K. CHANG; S. KIM. *Chung-Ang Univ. Col. of Med., Univ. of British Columbia, Korea Res. Inst. of Biosci. and Biotech., Korea Res. Inst. of Biosci. and Biotech.*

4:00 B2-DP1 **412.12** Human neural stem cells (HNSCs) in the monkey brain without immunosuppression: long-term survival and differentiation for 24 months. S. LEE*; H. LEE; Y. LEE; K. YI; S. CHA; S. KIM; K. CHANG. *Korea Res. Inst. of Biosci. and Biotech., COLLEGE OF MEDICINE, CHUNG-ANG UNIVERSITY, COLLEGE OF MEDICINE, CHUNG BUK UNIVERSITY.*

1:00 B3 **412.13** Il-1beta regulates proliferation and differentiation of neural stem cells by regulating nuclear receptor tlx mediating through pi3k/akt pathway. J. SONG; K. BOKARA; S. CHEON; K. PARK; W. LEE; J. LEE*. *Yonsei Univ. Col. of Med.*

2:00 B4 **412.14** Behavior of cultured hippocampal progenitor cells in the cyclin d2 knockout mouse model and effects on endogenous neurogenesis. A. L. JAMAL*; T. L. WALKER; G. KEMPERMANN; R. F. BERMAN; B. WALDAU. *Dept. of Neurolog. Surgery,University of California Davis, Ctr. for Regenerative Therapies Dresden.*

3:00 B5 **412.15** GDNF and Et3 effects on proliferation and differentiation of neural progenitors derived from embryonic rat intestine. A. CARREON-RODRIGUEZ*; R. HOTTA; A. BENEDICT; S. MILLER; C. STEIGER; A. M. GOLDSTEIN; J. BELKIND-GERSON. *Inst. Nacional De Salud Publica, Massachusetts Gen. Hospital/Harvard Med. Sch.*

4:00 B6 **412.16** Role of krüppel-like factor 5 in the proliferation and radial migration of neural precursor cells. T. FUCHIGAMI; A. SAKAMOTO; Y. HAYASHI; M. EMA; S. HITOSHI*. *Shiga Univ. of Med. Sci., Univ. of Tsukuba.*

1:00 B7 **412.17** The histone demethylase LSD1/KDM1 is required in mouse embryonic neural stem cells for perinatal viability. D. A. MYRICK*; M. A. CHRISTOPHER; W. ROSSELL; G. BASSELL; D. J. KATZ. *Emory Univ.*

2:00 B8 **412.18** Functional analysis of M003-A06/Zfp568 during brain development. K. LAI*; H. CHIEN; C. SHEN. *Academia Sinica, Inst. of Mol. Biol.*

3:00 B9 **412.19** Neurogenic genes Elavl4 and Sox1 are the downstream targets of miR-410. Y. TSAN*; K. O'SHEA. *Univ. of Michigan, Ann Arbor.*

4:00 B10 **412.20** Genetic and epigeneitc regulation in adult neural stem cell niche. D. A. GROW*; C. LIN. *Univ. of Texas San Antonio, Univ. of Texas San Antonio.*

1:00 B11 **412.21** Activation of the odorant receptor loci in mouse embryonic stem cells. I. G. PARVANOVA*; P. FEINSTEIN; S. CHEN. *Hunter Col., Weill Cornell Med. Col.*

2:00 B12 **412.22** ● Hydrocephalic cerebrospinal fluid is a friendly host for neural stem cell transplantation. J. P. MCALLISTER*; M. M. GUERRA; C. M. JARA; K. VIO; R. GONZALEZ; P. SALAZAR; S. RODRIGUEZ; C. E. JOHANSON; E. M. RODRIGUEZ. *Univ. Utah, Univ. Austral de Chile, Univ. Austral de Chile, Brown Univ.*

3:00 B13 **412.23** ● Generation, maintenance, and cryopreservation of neural progenitor cells derived from human pluripotent stem cells using the STEMdiff™ neural system. V. M. LEE*; A. BLAK; M. OLSON; J. ANTONCHUK; A. C. EAVES; T. E. THOMAS; S. A. LOUIS. *STEMCELL Technologies Inc.*

4:00 B14 **412.24** Cytoarchitectural analysis of the ventricular-subventricular zone after obstructive hydrocephalus. O. GONZALEZ-PEREZ*; T. CAMPOS; A. GALVEZ-CONTRERAS; N. MOY-LOPEZ; J. GUZMAN-MUNIZ; Z. AGUIRRE-TABOADA. *Psicologia/University of Colima.*

1:00 B15 **412.25** Screening the SCI microenvironment to drive human neural stem cell fate and migration. H. X. NGUYEN*; M. HOOSHMAND; S. HONG; N. UCHIDA; B. CUMMINGS; A. ANDERSON. *Univ. California, Irvine, StemCells, Inc.*

2:00 B16 **412.26** Effect of neutrophil and macrophage-secreted concentrations of complement proteins C1q and C3a on human neural stem cells *in vitro.* A. A. SALIBIAN*; K. M. PILTTI; J. NGUYEN; B. J. CUMMINGS; A. J. ANDERSON. *Univ. of California, Irvine Sch. of Med., Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine.*

3:00 B17 **412.27** Complement protein C1q has a concentration dependent effect on human neural stem cell proliferation and differentiation *in vitro.* K. PILTTI*; C. L. WORNE; E. DO; A. A. SALIBIAN; B. J. CUMMINGS; A. J. ANDERSON. *Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

413. Cell Migration: Mechanisms

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 B18 **413.01** Postnatal positioning of neuronal precursors in the medial limbic cortex: The role of wnt signaling pathways. M. BOITARD; V. PETRENKO; R. BOCCHI; B. VIALE; P. SALMON; J. Z. KISS*. *Dept Neurosci, Univ. Geneva Med. Sch.*

2:00 B19 **413.02** Cajal-Retzius cells instruct neuronal migration by coincidence signaling between secreted and contact-dependent guidance cues. C. GIL SANZ*; S. J. FRANCO; I. MARTINEZ-GARAY; A. ESPINOSA; S. HARKINS-PERRY; U. MUELLER. *The Scripps Res. Inst., Univ. of Oxford.*

3:00 B20 **413.03** The mechanism and physiological significance of proteolytic cleavage of Reelin. A. HISANAGA; T. KOHNO; M. HATTORI*. *Nagoya City Univ.*

4:00 B21 **413.04** Cortical interneurons require the combined activity of Jnk1 and Jnk2 to enter and navigate the developing cerebral cortex. A. K. MYERS; E. C. BAERGEN; D. W. MEECHAN; A. LAMANTIA; E. S. TUCKER*. *West Virginia Univ., The George Washington Univ. Med. Ctr., West Virginia Univ.*

1:00 B22 **413.05** Dab1 signaling modulates oligodendroglial migration during cortical development. H. BHATTI*; D. J. OSTERHOUT. *SUNY Upstate Med. Univ., SUNY Upstate Med. Univ.*

2:00 B23 **413.06** Glycine receptor activation controls cortical interneuron migration by regulating nucleokinesis. J. RIGO*; A. AVILA; P. VIDAL; L. NGUYEN. *Hasselt Univ., Univ. of Liège, Hasselt Univ.*

3:00 B24 **413.07** ● ▲ NGF, NRG1 and GDNF as chemoattractants and chemokinetic molecules for a Schwann cell line. E. KLEIN; B. TONG; D. MARTINEZ; J. HERNANDEZ; M. CORNEJO; M. E. DE BELLARD*. *Calif State Univ, Northridge, CSUN.*

4:00 B25 **413.08** Periventricular angiogenesis guided GABA neuron migration. P. K. THANKAMANI PANDIT*; S. LI; G. SZABO; A. VASUDEVAN. *McLean Hosp., Inst. of Exptl. Med.*

1:00 B26 **413.09** Ccm3/Pdcd10, a gene associated with cerebral cavernous malformations, is required for neuronal migration. A. LOUVI*; S. NISHIMURA; M. GUNEL. *Yale Sch. of Med.*

2:00 B27 **413.10** Role of the dyslexia susceptibility candidate gene Kiaa0319 during brain development in mouse. I. MARTINEZ GARAY*; L. GUIDI; Z. HOLLOWAY; M. BAILEY; A. VELAYOS-BAEZA; A. P. MONACO; Z. MOLNÁR. *Univ. of Oxford, The Wellcome Trust Ctr. for Human Genet., Tufts Univ.*

3:00 B28 **413.11** Abnormal expression of cation-chloride cotransporters results in impaired migration during corticogenesis. O. B. AKINOLA; S. POLUCH; S. L. JULIANO*. *USUHS.*

4:00 B29 **413.12** Defining a role for Rasputin in Fasciclin II-dependent neuronal migration. P. F. COPENHAVER*; T. L. SWANSON; L. J. PERRY. *Oregon Hlth. & Sci. Univ.*

1:00 B30 **413.13** Control of neural stem cell migration through EphB2 and ephrin-B2 mediated motility and repulsion in the adult brain. W. ZHOU*; J. MUNOZ. *Thomas Jefferson Univ., Nova Southeastern.*

2:00 B31 **413.14** Synapsin III regulates radial migration and orientation of pyramidal neurons *in vivo.* L. PERLINI*; J. SZCZURKOWSKA; B. A. BALLIF; A. PICCINI; S. GIOVEDÌ; F. BENFENATI §; L. CANCEDDA §. *Fondazione Inst. Italiano Di Tecnologia, The Univ. of Vermont, Universita' degli Studi di Genova.*

3:00 B32 **413.15** FoxO6 in control of murine cortical radial migration via regulation of axon guidance. R. PAAP*; S. OOSTERBROEK; R. D. SCHELLEVIS; A. VASTENHOUW-VAN DER LINDEN; M. F. M. HOEKMAN; M. P. SMIDT. *Univ. of Amsterdam, Univ. of Utrecht.*

4:00 B33 **413.16** ● Prenatal stress delays GABAergic cell migration independent of corticosterone and induces changes in early microglia. R. S. FINE; H. E. STEVENS*. *Yale Univ. Sch. of Med., Yale Univ. Sch. Med.*

1:00 B34 **413.17** Interactions between Amyloid Precursor Proteins and the heterotrimeric G protein Goα in the dynamic control of neuronal motility. J. M. RAMAKER*; T. L. SWANSON; J. A. ZWEIG; P. F. COPENHAVER. *Oregon Hlth. & Sci. Univ.*

2:00 C1 **413.18** mTOR in the determination of neuron size and positioning during brain development. M. KA*; W. KIM. *Univ. of Nebraska Med. Ctr.*

POSTER

414. Stem Cell Based Disease Models

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 C2 **414.01** Murine stem cell model of down syndrome. N. SINGHAL*; W. C. MOBLEY. *UCSD, UCSD.*

2:00 C3 **414.02** Synaptic deficits in neurons differentiated from induced pluripotent stem cells derived from Rett Syndrome patients. S. YOON*; G. T. MARCY; D. MA; G. J. AUGUSTINE; E. L. GOH. *Program in Neurosci. and Behavioral Disorder, Duke-NUS Grad. Med. Sch., Dept. of Physiology, Yong Loo Lin Sch. of Medicine, Natl. Univ. of Singapore, A*STAR-Duke-NUS Neurosci. Res. Partnership.*

3:00 C4 **414.03** Modeling motor neuron degeneration in Amyotrophic Lateral Sclerosis using embryonic stem cells. I. ALLODI*; L. H. COMLEY; S. NICHTERWITZ; M. STERNFELD; S. L. PFAFF; E. HEDLUND. *Karolinska Institutet, Salk Inst.*

4:00 C5 **414.04** Modelling the GABA cell phenotype by *in vitro* manipulation of genes associated with schizophrenia or bipolar disorder. S. SUBBURAJU*; A. J. COLEMAN; F. M. BENES. *Mailman Res. Center, McLean Hosp., McLean Hosp.*

1:00 C6 **414.05** Modelling aspects of FUS proteinopathies using induced pluripotent stem cells. C. SHUM*; A. NISHIMURA; B. BILICAN; J. WRIGHT; C. SMITH; G. FINNERTY; S. CHANDRAN; C. SHAW. *Inst. of Psychiatry, Euan MacDonald Ctr. for Motor Neurone Dis. Res.*

2:00 C7 **414.06** Functional characterization of a novel candidate gene for X-linked intellectual disability. A. CABRERA SOCORRO*; T. HIROSE; O. FERAUD; C. DIAZ; D. CHITAYAT; A. BENNACEUR-GRISCELLI; C. E. SCHWARTZ; G. NGUYEN; M. GROSZER. *Inst. Du Fer A Moulin,, Col. de France, Inserm, U935, The Prenatal Diagnosis and Med. Genet. Program, J.C. Self Res. Inst.*

3:00 C8 **414.07** Generation and characterization of transgene- and vrus-free induced pluripotent stem cells derived from Huntington's disease patient fibroblasts. F. QIAO*; Y. LIU; H. WANG. *Univ. of South Dakota.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 C9 **414.08** An isogenic human induced pluripotent stem cell model of Rett Syndrome reveals novel alterations in microRNA processing and downstream molecular targets. D. A. FELDMAN*; N. MELLIOS; S. D. SHERIDAN; S. KWOK; B. CRAWFORD; V. DANI; C. LE; S. HAGGARTY; M. SUR. *MIT, Massachusetts Gen. Hospital, Harvard Med. Sch.*

1:00 C10 **414.09** Towards remyelination therapy with oligodendrocyte precursor and Schwann cells derived from bone marrow stromal cells. D. K. SHUM*; Y. P. TSUI; W. Y. TAI; Y. S. CHAN. *Fac Med, The Univ. of Hong Kong, Fac Med, The Univ. of Hong Kong.*

2:00 C11 **414.10** Role of bone marrow derived Lin-ve stem cell in NMDA induced retinal degeneration mouse model. N. JINDAL*; S. PRABHAKAR; A. MUKHOPADHYAY; A. ANAND. *Post Grad. Inst. of Med. Educ. and Res., Post Grad. Inst. of Med. Educ. and Res., Stem cell biology Laboratory, Natl. Inst. of Immunol.*

3:00 C12 **414.11** iPS-derived neural cells from patients with familial Parkinson's disease carrying the A53T α-synuclein mutation. G. KOUROUPI*; K. TSIORAS; E. TAOUFIK; D. BOHL; G. BISCH; J. HEARD; M. XILOURI; K. VEKRELLIS; L. STEFANIS; R. MATSAS. *Hellenic Pasteur Inst., Unité Rétrovirus et Transfert Génétique, INSERM U622, Dept. of Neuroscience, Inst. Pasteur, Div. of Basic Neurosciences, Biomed. Res. Fndn. of the Acad. of Athens, Second Dept. of Neurology, Univ. of Athens Med. Sch.*

4:00 C13 **414.12** Transplantation of adenovirus generated induced pluripotent stem cells in the 51 CAG transgenic rat model of Huntington's disease. A. CRANE*; K. FINK; K. A. GRACE; A. K. ANTCLIFF; R. WYSE; M. LU; L. LESCAUDRON; J. ROSSIGNOL; G. L. DUNBAR. *Central Michigan Univ., Program in Neurosci., Univ. de Nantes, INSERM U1064, Dept. of Psychology, Field Neurosciences Inst., Col. of Med.*

1:00 C14 **414.13** Modelling transcellular spreading of cerebral proteinopathies in chimeric mouse brains. C. A. TRUJILLO*; F. GRUENINGER; M. BRITSCHGI; G. WOODRUFF; L. S. B. GOLDSTEIN; A. R. MUOTRI. *Univ. of California - San Diego, F. Hoffmann-La Roche AG, CNS Discovery, pRED, Univ. of California San Diego.*

2:00 C15 **414.14** Long-term function and survival of Cynomolgus monkey iPS cell-derived dopamine neurons following autologous transplantation in a non-human primate model of Parkinson's disease. P. HALLETT*; M. DELEIDI; A. ASTRADSSON; O. COOPER; T. OSBORN; M. MOORE; E. PEREZ-TORRES; A. BROWNELL; J. SCHUMACHER; R. SPEALMAN; O. ISACSON. *McLean Hospital/Harvard Med. Sc, Harvard Med. Sch. (NEPRC), Mass. Gen. Hosp./ Harvard Med. Sc.*

3:00 C16 **414.15** Alterations in telencephalic neuronal fate, neuronal calcium signaling and neurotransmitter release in iPSC models of bipolar disorder. M. BAME; H. CHEN; C. J. DELONG; T. J. HERRON; O. S. MABROUK; R. T. KENNEDY; M. G. MCINNIS; K. O'SHEA*. *Univ. Michigan Sch. Med., Univ. Michigan Sch. Med., Univ. Michigan Sch. Med., Univ. Michigan.*

4:00 C17 **414.16** The generation of glutamatergic neurons from induced pluripotent stem cells derived from schizophrenic patients. M. GROSS*; J. HUANG; K. LI; X. LI; X. MA. *Univ. of Connecticut Hlth. Ctr.*

1:00 C18 **414.17** Understanding pathogenesis of lissencephaly with patient-derived induced pluripotent stem cells. M. BERSHTEYN*; Y. HAYASHI; E. HSIAO; S. YAMANAKA; A. WYNSHAW-BORIS. *UCSF, Gladstone Inst. of Cardiovasc. Dis., UCSF, Case Western Reserve Univ. Sch. of Med.*

2:00 C19 **414.18** Survival, differentiation and functional effects of human iPSC-derived MGE progenitor cells in a model of temporal lobe epilepsy. B. HATTIANGADY*; Y. LIU; B. SHUAI; L. YAO; X. RAO; S. ZHANG; A. K. SHETTY. *Texas A&M Hlth. Sci. Ctr. Col. of Med., Central Texas Veterans Hlth. Care Syst., Waisman Center, Sch. of Med. and public health.*

3:00 C20 **414.19** Transcriptome and cellular phenotype of induced pluripotent stem cells derived from patients with autism. J. MARIANI*; G. COPPOLA; L. E. PROVINI; L. TOMASINI; F. M. VACCARINO. *Yale Univ., Yale Univ.*

4:00 C21 **414.20** Application of human ips cell-derived neurons for modeling Alzheimer's disease. R. LLANAS; C. CARLSON; A. THOMPSON; S. DELAURA; E. M. JONES*; V. OTT. *Cell. Dynamics Intl., Gist Consulting.*

1:00 C22 **414.21** Functional characterization of human induced pluripotent stem cell (hiPSC)-derived neurons in Gaucher Disease. M. GAVAL-CRUZ*; O. AWAD; R. A. FELDMAN; P. O'DONNELL. *Univ. of Maryland Med. Ctr., Univ. of Maryland Sch. of Med.*

2:00 C23 **414.22** ▲ Alterations in stem cell function following a persistent coxsackievirus infection of neural stem and progenitor cells, and accelerated disease progression in a mouse model of Alzheimer's disease. A. V. ZAMUDIO MONTES DE OCA*; S. ROBINSON; D. V. P. NGUYEN; G. TSUENG; R. FEUER. *San Diego State Univ.*

3:00 C24 **414.23** Development of Polyvinyl alcohol Chitosan fibrous biodegradable scaffold for nerve tissue engineering applications: *in vitro* study. S. NAGHAVI ALHOSSEINI*; F. MOZTARZADEH; S. KARGOZAR; M. DODEL; M. TAHRIRI. *Amirkabir Univ. of Technol., Sch. of Advanced Med. Technologies, Tehran Univ. of Med. Sci., Nanotechnology and Tissue Engin., Biomed. sciences, Amirkabir Univ. of Technol.*

POSTER

415. Differentiation of Pluripotent Stem Cells to Neural Lineages

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 C25 **415.01** Generation, characterization and *in vivo* safety evaluation of expandable GMP grade human pluripotent embryonic stem cell-derived neural stem cells. D. DOLEZALOVA; M. HRUSKA-PLOCHAN; D. M. QUACH*; L. S. GOLDSTEIN; M. MARSALA. *UCSD, Neuralstem Inc, UCSD.*

2:00 C26 **415.02** A functional study of mouse ESC-derived dopaminergic neurons. H. GU*; R. LAZARENKO; L. IACOVITTI; Q. ZHANG. *Vanderbilt Univ., Thomas Jefferson Univ.*

3:00 C27 **415.03** Role of TGF-β and BMP signaling in the trajectory of serotonergic differentiation from ES cells. A. YAMASAKI*; A. KASAI; M. KURITA; S. KIMOTO; A. HAYATA-TAKANO; N. SHINTANI; H. HASHIMOTO. *Osaka Univ., Osaka Univ., Osaka Univ., Osaka Univ., Osaka Univ.*

4:00 C28 **415.04** Reprogramming of adult ciliary epithelium cells for pluripotency *in vivo.* C. B. DEL DEBBIO*; D. E. HAMASSAKI. *Univ. of Sao Paulo.*

1:00 C29 **415.05** Cortical interneuron precursors within serum-free embryoid bodies comprised of human inducible pluripotent stem cells. M. W. NESTOR*; S. JACOB; C. WOODARD; S. HONG; A. A. SPROUL; S. A. NOGGLE. *The New York Stem Cell Fndn. Lab.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 C30 **415.06** Specification of functional central serotonergic neurons from human pluripotent stem cells. J. LU*; X. ZHONG; H. LIU; H. YE; C. HUANG; J. JONES; Z. DU; M. SHERAFAT; L. LI; S. ZHANG. *Univ. of Wisconsin-Madison, Waisman Ctr., Univ. of Wisconsin-Madison.*

3:00 C31 **415.07** Highly efficient motor neuron differentiation from human pluripotent stem cells depends upon temporal neural patterning and mechanisms underlying human motor neuron development. Q. QU*; K. LOUIS; D. LI; H. YANG; C. COX; F. WANG. *Univ. of Illinois.*

4:00 C32 **415.08** Are neural crest stem cells an optimal substrate for reprogramming? A. FAHMY*; I. BROKHMAN; D. VAN DER KOOY. *Univ. of Toronto.*

1:00 C33 **415.09** Critical role of astrocytes in promoting functional maturation of human neurons differentiated from induced pluripotent stem cells. X. TANG; L. ZHOU; A. WAGNER; M. MARCHETTO; A. MUOTRI; F. GAGE; G. CHEN*. *Penn State Univ., The Salk Inst., Sch. of Medicine, Univ. of California San Diego.*

2:00 C34 **415.10** Involvement of cannabinoid receptors on proliferation and differentiation into neural progenitor cells in mouse induced pluripotent stem cells. Y. WATANABE; T. ISHIZUKA*; A. OZAWA; H. GOSHIMA. *Natl. Def. Med. Col.*

3:00 D1 **415.11** Calcium signaling cascades during the neural differentiation of human embryonic stem cells. G. DAYANITHI*; O. FOROSTYAK; E. SYKOVA. *Inst. of Exptl. Med., Inst. Natl. de la Santé et da la Recherche Médicale, Unité de recherche U710-EPHE, Univ. Montpellier 2, Inst. of Exptl. Medicine, Acad. of Sci. of the Czech Republic, Charles University, Second Med. Fac., Inst. of Exptl. Medicine, Acad. of Sci. of the Czech Republic.*

4:00 D2 **415.12** Human pluripotent stem cell-derived radial glial-like cells with stable regional identities. J. LADEWIG*; L. OSTERMANN; F. MÜLLER; P. KOCH; O. BRÜSTLE. *Univ. of Bonn, Ctr. for Integrative Psychiatry.*

1:00 D3 **415.13** Isolation of multipotent nestin-expressing fair follicle stem cells derived from epidermis of elderly humans and TAT-VHL peptide-mediated neuronal differentiation of these cells. H. KANNO*; A. KUBO; T. YOSHIZUMI; T. MIKAMI; J. MAEGAWA. *Yokohama City Universuty Sch. of Med.*

2:00 D4 **415.14** Characterization of a technique for imaging and recording from human inducible pluripotent stem cells in serum-free embryoid bodies. S. JACOB; M. NESTOR; A. SPROUL; D. PAULL; S. HONG; B. CAMPOS; A. ALSAFFAR; S. NOGGLE; O. ARANCIO*. *The New York Stem Cell Fndn., Columbia Univ.*

3:00 D5 **415.15** ● Robust induction of neuronal progenitor cells from primate pluripotent stem cells maintained in a single-cell and feeder-free culture. T. ARAKI*; T. ONO; Y. SUZUKI; T. YAMASHITA; Y. KATO; N. SATO. *Mitsubishi Tanabe Pharma Corp.*

4:00 D6 **415.16** ▲ Upregulation of canonical Notch signaling pathway by an RBP-Jκ-interacting protein. ; D. HAN; K. YOON. *Sung Kyun Kwan Univ.*

1:00 D7 **415.17** Analysis of reprogramming-associated alterations using an isogenic human stem cell system. C. HAUBENREICH*; P. KOCH; M. LENZ; A. SCHUPPERT; H. CHAUVISTRÉ; M. ZENKE; O. BRÜSTLE. *Inst. of Reconstructive Neurobio., Aachen Inst. for Advanced Study in Computat. Engin. Sci. (AICES), RWTH Aachen Univ., Dept. of Cell Biology, Inst. of Biomed. Engin. and Helmholtz Inst. for Biomed. Engineering, RWTH Aachen Univ. Med. Sch.*

2:00 D8 **415.18** ● Characterization of functional human neuronal networks *in vitro.* D. A. FAYUK*; M. MÄKINEN; C. PRAJAPATI; S. PENKKI; A. HYYSALO; L. YLÄ-OUTINEN; S. NARKILAHTI. *Univ. of Tampere/BioMediTech.*

3:00 D9 **415.19** Understanding the regulation of dopaminergic differentiation in human pluripotent stem cells. J. CAI*; S. SCHLEIDT; E. KOSTUK; L. IACOVITTI. *Thomas Jefferson Univ.*

4:00 D10 **415.20** Neural activity measurement using PEDOT-PSS based electrode. K. TORIMITSU*; Y. FURUKAWA; A. SHIMADA; S. TSUKADA; K. SUMITOMO; M. NISHIZAWA; K. KATO; H. IWATA. *Tohoku Univ., NTT Basic Res. Labs., NTT Corp., Kyoto Univ.*

1:00 D11 **415.21** Retinal ganglion cells differentiated *in vitro* from retinal stem/progenitor cells of the ciliary margin possess positional information and are competent to respond to axon guidance cues. J. I. DI NAPOLI; G. J. CAVALLERO; L. FIORE; M. MEDORI; N. J. LUJILDE; J. DIAZ CARRIZO; K. DEL RIO-TSONIS; V. SANCHEZ; N. G. CARRI; G. E. SCICOLONE*. *Inst. of Cell Biol. and Neuroscience. Sch. of Medicine, UBA, Dept. of Zoology, Miami University., Inst. of Multidisciplinary Cell Biol. (IMBICE-CIC-CONICET).*

2:00 D12 **415.22** ● Derivation of oligodendrocyte progenitor cells from primate pluripotent stem cells maintained in a single-cell and feeder-free culture. T. YAMASHITA*; T. ONO; Y. SUZUKI; T. ARAKI; Y. KATO; N. SATO. *Mitsubishi Tanabe Pharma Corp.*

3:00 D13 **415.23** Characterization of neurons derived from human iPS cells with CREB phosphorylation and calcium dynamics. A. ENYA*; R. YAMANAKA; Y. SHINDO; T. KITOGO; K. HOTTA; K. OKA. *Keio Univ., ReproCELL Inc.*

4:00 D14 **415.24** Developmental maturation of AMPA, NMDA and GABAA receptor function in human cortical excitatory neurons derived from pluripotent stem cells. M. R. LIVESEY*; B. BILICAN; O. T. JAMES; J. QUI; G. HAGHI; P. C. KIND; G. E. HARDINGHAM; S. CHANDRAN; D. J. A. WYLLIE. *Univ. of Edinburgh, Univ. of Edinburgh.*

1:00 D15 **415.25** ▲ Nanog overexpression increases neuronal transdifferentiation of adipose derived stem cells. J. C. KIMMEL*; K. SUGAYA. *Univ. of Central Florida.*

2:00 D16 **415.26** ● Functional and spontaneously active networks of human stem cell-derived neurons, cultured on a bio-compatible 3D scaffolds; a multi-electrode array (MEA) study. I. SMITH*; E. M. WILLIAMSON; B. J. WHALLEY. *Univ. of Reading.*

3:00 D17 **415.27** ● Development of high throughput functional synaptic assays in neurons derived from human induced pluripotent stem cells and characterization of pharmacological responses. P. LAENG*; C. M. HEMPEL; J. J. MANN; J. L. MOHN; J. R. COTTRELL; D. J. GERBER. *Galenea Corp.*

4:00 D18 **415.28** ● Small molecule directed differentiation of human iPS cells to oligodendrocyte precursor cells. C. CHEN; N. ASBROCK; V. T. CHU*. *EMD Millipore.*

1:00 D19 **415.29** Toward humanizing neuronal screening assays: A novel system for differentiating iPSC to neurons. R. JOSEPHSON; R. HARVEY; H. YOKOE; J. M. AUERBACH*. *Globalstem.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

416. Axon Growth and Guidance: Chemotrophic Mechanisms II

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 D20 **416.01** EphrinB3/EphA4-mediated guidance of ascending and descending spinal tracts. S. PAIXAO; A. BALIJEPALLI; N. SERRADJ; J. H. MARTIN; R. KLEIN*. *Max-Planck Inst. Neurobiol, City Col. of the City Univ. of New York.*

2:00 D21 **416.02** Identification of factors underlying defective endosomal recycling in Huntington's disease. X. LI*; H. MCCLORY; E. SAPP; M. MCKEE; A. VALENCIA; M. DIFIGLIA. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

3:00 D22 **416.03** Loss of neural recognition molecule nb-3 delays the normal projection and terminal branching of developing corticospinal tract axons. Y. LIU*. *Inst. of Neuroscience, Soochow Univ.*

4:00 D23 **416.04** 14-3-3 proteins regulate commissural neuron responses to netrin. R. ALCHINI*; A. KAPLAN; C. KENT; S. RODRIGUES; F. CHARRON; T. KENNEDY; A. FOURNIER. *McGill Univ., Inst. de Recherches Cliniques de Montréal, McGill Univ.*

1:00 D24 **416.05** Trans-induced cis interaction in the tripartite netrin-G1 ligand, netrin-G1, and ptprf adhesion complex promotes excitatory synaptic development. Y. SONG*; H. LEE; E. LEE; P. PROSSELKOV; S. ITOHARA; E. KIM. *IBS, Lab. for Behavioral Genetics, Brain Sci. Institute, RIKEN.*

2:00 D25 **416.06** Prolonged brain derived neurotrophic factor deprivation changes capsaicin and cholecystokinin sensitivity in cultured nodose neurons. P. SENGUPTA*; P. SENGUPTA; S. M. SIMASKO. *Washington State Univ., Washington State Univ.*

3:00 D26 **416.07** microRNA regulation of proteoglycan biosynthesis controls cell migration in *C. elegans.* M. E. PEDERSEN*; G. SNIECKUTE; K. KAGIAS; C. NEHAMMER; H. A. MULTHAUPT; J. R. COUCHMAN; R. POCOCK. *Univ. of Copenhagen, BRIC.*

4:00 D27 **416.08** Protein synthesis dependent axon development of human neurons. R. H. NICHOL*, IV; A. D. ANDERSON; T. M. GOMEZ. *Univ. of Wisconsin-Madison.*

1:00 D28 **416.09** The role of RGMa and Neogenin in central nervous system development. J. CHARISH*; N. G. TASSEW; P. P. MONNIER. *Toronto Western Res. Inst., Univ. of Toronto, Univ. of Toronto.*

2:00 D29 **416.10** Axonal application of Sildenafil promotes axonal growth inhibited by chondroitin sulfate proteoglycans. Y. ZHANG*; M. CHOPP; Z. ZHANG. *HENRY FORD HOSPITAL.*

3:00 D30 **416.11** The synaptic cell adhesion molecules SynCAMs are involved in early sensory axon pathfinding. J. FREI*; E. T. STOECKLI. *Univ. of Zurich.*

4:00 D31 **416.12** Chondroitin Sulfate Proteoglycans in *Drosophila* melanogaster. K. G. JOHNSON*; N. WAGNER; K. GUTTENPLAN; L. KERSHBERG. *Pomona Col., Pomona Col., Pomona Col.*

1:00 D32 **416.13** Regional expression of EphA7 in rodent brain and ultrastructural localization in hippocampus and cerebellum. A. C. AMEGANDJIN*; W. JAMMOW; S. LAFOREST; M. RIAD; M. BAHARNOORI; F. BADEAUX; L. DESGROSEILLERS; E. PASQUALE; G. DROLET; G. DOUCET. *Univ. De Montréal, Ctr. de recherche du CHU, Univ. Laval, Univ. De Montréal, Sanford-Burnham Med. Res. Inst.*

2:00 D33 **416.14** Modulation of EphA forward signaling by TrkB neurotrophin receptors in RGC axons. K. CHO*; T. MCLAUGHLIN; Y. LIM; C. WANG; D. D. M. O'LEARY. *Salk Inst.*

3:00 D34 **416.15** Manipulating retinal development to explore the parameters of topographic map refinement. T. R. MCLAUGHLIN*; K. CHO; D. D. M. O'LEARY. *Salk Inst. / MNL-O.*

POSTER

417. Dendritic Growth and Branching I

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 D35 **417.01** Cerebral Cavernous Malformation 3 (CCM3) associates with STRAD and regulates LKB1-induced cell polarization. Z. Y. MANSARAY STORMS*; B. W. HOWELL. *SUNY Upstate Med. Univ.*

2:00 D36 **417.02** Altered neuronal architecture and plasticity in the visual cortex of MMP-3 deficient mice. J. AERTS*; J. NYS; K. SMOLDERS; L. CLAES; T. HU; L. MOONS; L. ARCKENS. *KU Leuven.*

3:00 D37 **417.03** The role of Glycogen Synthase Kinase 3β in dendrite development. Y. RUI*; K. R. MYERS; K. YU; A. WISE; H. C. HARTZELL; A. L. DE BLAS; J. Q. ZHENG. *Emory Univ., Univ. of Connecticut.*

4:00 D38 **417.04** F-actin bundling protein espin is required for normal dendritogenesis of Purkinje cells in postnatal mouse cerebellum. N. LUI*; K. KWAN. *Sch. of Life Sciences, The Chinese Univ. of Hong Kong, Ctr. for Cell and Developmental Biology. The Chinese Univ. of Hong Kong.*

1:00 D39 **417.05** PKC phosphorylation of a lipid-binding domain in the gamma-protocadherin C-terminus regulates FAK activation and cortical dendrite arborization. A. B. KEELER; M. J. MOLUMBY; J. A. WEINER*. *The Univ. of Iowa, The Univ. of Iowa, The Univ. of Iowa.*

2:00 D40 **417.06** Important domains of diacylglycerol kinase β for its neurite induction and branching ability. T. KANO; T. KOUZUKI; S. UEDA; M. YAMANOUE; N. SAITO; Y. SHIRAI*. *Kobe Univ., Kobe Univ.*

3:00 D41 **417.07** Cullin-1 based SCF E3 ligase complex directs 2 distinct modes of neuronal remodelling in *Drosophila* melanogaster. J. J. WONG*; S. LI; E. LIM; Y. WANG; H. ZHANG; D. KIRILLY; C. WU; Y. LIOU; H. WANG; F. YU. *Temasek Life Sci. Lab., Duke-NUS Grad. Med. Sch., 4Neuroscience Ctr. of Excellence, Louisiana State Univ. Hlth. Sci. Ctr., 2NUS Grad. Sch. for Integrated Sci. and Engin.*

4:00 D42 **417.08** Multiple domains of synapse-associated protein of 97 kDa (SAP97) are required for its dendrite growth promoting activity. L. ZHANG; A. JABLONSKI; J. MOJSILOVIC-PETROVIC; W. ZHOU; R. G. KALB*. *Children's Hosp of Philadelphia, Children's Hosp. of Philadelphia, Children's Hosp of Philadelphia, Anova Law Group.*

1:00 E1 **417.09** Kalirin-9 and kalirin-12 play an essential role in the ability of bdnf to stimulate neurite outgrowth and branching. Y. YAN*; R. E. MAINS; B. A. EIPPER. *Univ. of Connecticut Hlth. Ctr., Univ. of Connecticut Hlth. Ctr.*

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2:00 E2 **417.10** A subset of the neurodevelopmental functions of DSCAM and DSCAML1 depend on their PDZ-interacting C-termini. A. M. GARRETT*; A. L. D. TADENEV; P. G. FUERST; R. W. BURGESS. *The Jackson Lab., Univ. of Idaho.*

3:00 E3 **417.11** DCC-mediated netrin-1 signaling influences dendritic arbor orientation and growth dynamics in the developing Xenopus visual system. A. NAGEL*; S. MARSHAK; R. A. SANTOS; V. HUNG; S. COHEN-CORY. *Univ. of California.*

4:00 E4 **417.12** TLR7 negatively regulates dendrite outgrowth through the Myd88-c-Fos-IL-6 pathway and controls exploratory activity of mice. H. LIU*; Y. HONG; C. HUANG; C. CHEN; T. HUANG; Y. HSUEH. *Inst. of Mol. Biology, Academia Sinica, Grad. Inst. of Life Sciences, Natl. Def. Med. Ctr., Fac. of Life Sciences, Inst. of Genome Sciences, Natl. Yang-Ming Univ.*

1:00 E5 **417.13** Role of nuclear Cdk5 in activity-induced dendrite development. Z. LIANG*; Y. CHEN; K. LAI; N. Y. IP. *Hong Kong Univ. of Sci. & Technol.*

2:00 E6 **417.14** The GTPase Rem2 is a negative regulator of activity-dependent dendritic complexity. A. E. GHIRETTI*; A. R. MOORE; K. KENNY; N. C. LAU; S. D. VAN HOOSER; S. PARADIS. *Brandeis Univ.*

3:00 E7 **417.15** BTB/POZ domain containing Btbd3 mediates activity-dependent dendritic field patterning in the developing cerebral cortex. A. MATSUI*; T. SHIMOGORI. *RIKEN.*

4:00 E8 **417.16** LMTK1 regulates dendritic arborization by regulating movement of Rab11A-positive endosomes. S. HISANAGA*; T. URUSHIBARA; T. SAITO; A. ASADA; M. FUKUDA; M. TOMOMURA; T. TAKANO. *Tokyo Metropolitan Univ., Tohoku Univ., Meikai Univ. Sch. of Dent.*

1:00 E9 **417.17** Effects of Crmp4 knockdown and overexpression on neurite outgrowth and cell survivability in mouse hippocampal neuronal cells (HT-22 cells). H. WATANABE*; A. TSUTIYA; R. OHTANI-KANEKO. *Toyo Univ.*

2:00 E10 **417.18** Influence of CRMP4 in the olfaction and olfactory bulb development. A. TSUTIYA*; H. WATANABE; M. NISHIHARA; Y. GOSHIMA; R. OHTANI-KANEKO. *Toyo Univ., The Univ. of Tokyo, Yokohama City Univ. Grad. school of Med.*

3:00 E11-DP2 **417.19** Lis1 controls dynamics of neuronal filopodia and spines to impact synaptogenesis and social behavior. A. SUDAROV*; F. GOODEN; D. TSENG; W. GAN; M. E. ROSS. *Weill Med. Col. of Cornell Univ., New York Univ.*

POSTER

418. Motor System Development

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 E12 **418.01** The teetering mouse is a model of hereditary hypertrophic motor and sensory neuropathy. J. A. WATSON*; J. A. WILSON; S. M. WILSON. *Univ. Alabama, Birmingham, Univ. of Alabama.*

2:00 E13 **418.02** ● Channel-kinase TRPM7 is necessary for the differentiation and survival of dopaminergic neurons. A. R. DECKER*; M. S. MCNEILL; A. M. LAMBERT; J. D. OVERTON; Y. CHEN; P. PANULA; M. MASINO; L. RUNNELS; R. CORNELL. *Univ. of Iowa, Univ. of Iowa, Univ. of Minnesota, UMDNJ, Univ. of Helsinki, Univ. of Iowa.*

3:00 E14 **418.03** ▲ Effect of Resvertarol on the offspring of pregnant wistar rats which were subjected to hyperthermia. L. A. PICHARDO; N. PANIAGUA; M. O. BUTRON*; G. ESCALONA; S. R. ZAMUDIO; C. SÁNCHEZ; S. GUZMAN; F. DE LA CRUZ. *Escuela Nacional De Ciencias Biologicas.*

4:00 E15 **418.04** Developmental modularization of head and orofacial movements in fetal monkeys. D. Z. NARAYANAN*; S. I. HLAVATY; D. Y. TAKAHASHI; A. A. GHAZANFAR. *Princeton Univ., Princeton Univ., Princeton Univ.*

1:00 E16 **418.05** Effects of early intervention in pre-term babies using a neurodevelopmental approach. H. J. PELAYO*; V. REYES-MEZA; Y. SOLOVIEVA; L. QUINTANAR. *Mtría. Neuropsicología/Benemérita Univ. Autónoma de Puebla, UPAEP, Benemérita Univ. Autónoma de Puebla.*

2:00 E17 **418.06** Give movement spontaneity and self-discovery a chance in ASD subjects. D. WU; E. B. TORRES; J. V. JOSE*. *Indiana Univ., Rutgers Univ., Indiana Univ.*

3:00 E18 **418.07** ● Polycystin-2 mediates flow-dependent rhythmic activation of descending serotoninergic and noradrenergic hindbrain-spinal cord pathways during embryonic development. C. MAZZOCCO*; O. ABDOUN; F. BOCQUELET; G. COURTAND; L. ROUSSEAU; G. CHARVET; S. GHARBI; R. GUILLEMAUD; B. YVERT. *CNRS and Univ. Bordeaux, ESIEE-Paris, CEA-LETI.*

4:00 E19 **418.08** Genome wide expression profiling of the mesodiencephalic region identifies novel factors involved in early and late dopaminergic development. L. VON OERTHEL*; K. CHACRABARTY; A. HELLEMONS; F. CLOTMAN; A. ESPANA; M. GROOT KOERKAMP; F. C. P. HOLSTEGE; J. PASTERKAMP; M. SMIDT. *Swammerdam Inst. For Life Sci., Rudolf Magnus Inst. for neuroscience, Univ. Catholique de Louvain, Microarray Facility.*

1:00 E20 **418.09** Diffusion tensor imaging of the corpus callosum in adolescents with idiopathic scoliosis. E. FRANKO*; D. ROUSIE; P. JISSENDI; M. ROUSIE; O. JOLY. *Inst. of Neurology, UCL, Ctr. Hospitalier Regional Universitaire de Lille, Univ. Libre de Bruxelles, Inst. of Neurosci.*

2:00 E21 **418.10** Investigating the effect of anatomical location on Purkinje cell morphology. M. M. ABDELHACK*; H. NEDELESCU. *Okinawa Inst. of Sci. and Technol., Univ. of Antwerp.*

3:00 E22 **418.11** ▲ Role of microRNA in Cerebellar Development. T. MIGHELL; E. ARNESON; M. BOSCH; G. SOUKUP; A. SHIBATA*. *Creighton Univ., Creighton Univ., Creighton Univ.*

4:00 E23 **418.12** The function of Sim1 in the development of different V3 subpopulations in the mouse spinal cord. Y. ZHANG*; J. BLACKLAWS; J. BOROWSKA; G. LANUZA; M. GOULDING; D. DESKA-GAUTHIER. *Dalhousie Univ., Fundación Inst. Leloir, Salk Inst.*

1:00 E24 **418.13** Brain Plasticity: Timing of training-induced gray matter alterations. E. WENGER*; S. KÜHN; J. VERREL; J. MÅRTENSSON; U. LINDENBERGER; M. LÖVDÉN. *Max Planck Inst. For Human Develop., Karolinska Institutet and Stockholm Univ.*

2:00 E25 **418.14** Influence of pediatric vaccines on CNS development and behavior in the rhesus monkey. B. GADAD; W. LI; S. GRADY; U. YAZDANI; B. CURTIS; V. YUTUC; C. FERRIER; G. SACKETT; L. HEWITSON; D. C. GERMAN*. *U Texas Southwestern Med. Cntr., Univ. of Washington, The Johnson Ctr. for Child Hlth. and Develop.*

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3:00 E26 **418.15** DINE is essential for intramuscular branching of motor nerve. K. NAGATA*; S. KIRYU-SEO; S. MATSUMOTO; T. SAITO; H. KIYAMA; T. C. SAIDO. *RIKEN, Brain Sci. Inst., JSPS Res. Fellow, Nagoya University, Grad. Sch. of Med.*

4:00 E27 **418.16** Cortical network maturation during human development in the first eighteen months of life is characterized by a progressive decrease in high-frequency cortical rhythms. C. STAMOULIS*; V. VOGEL-FARLEY; G. DEGREGORIO; C. A. NELSON. *Harvard Med. Sch., Boston Children's Hosp., Boston Children's Hosp.*

1:00 E28 **418.17** Sensorimotor beta rhythm desynchronizes to goal-directed actions observation in one-week-old infant rhesus macaques. F. FESTANTE*; R. E. VANDERWERT; A. PAUKNER; S. J. SUOMI; N. A. FOX; P. F. FERRARI. *Univ. of Maryland, Children's Hosp. Boston, Eunice Kennedy Shriver Natl. Inst. of Child Hlth. and Human Develop., Univ. of Parma.*

2:00 E29 **418.18** Development of motor cooperation through joint-action. E. SATTA; S. FERRARI-TONIOLO; A. BATTAGLIA MAYER*. *SAPIENZA Univ. of Rome.*

3:00 E30 **418.19** The developmental profile of complex movement motor maps in rats using long duration intracortical microstimulation. A. SINGLETON*; A. R. BROWN; G. C. TESKEY. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

4:00 E31 **418.20** Myogenin expression and agrin-induced AChR clustering are enhanced by MyoD. E. ANDERSON*; W. A. GROW. *Midwestern Univ.*

1:00 E32 **418.21** ● Early postnatal experience ameliorates development of aberrant bilateral corticospinal tract and motor impairments in conditional Emx1-cre;EphA4 knockout mice. N. SERRADJ*; K. AUWARTER; R. MISIR; D. PATEL; K. KULLANDER; J. H. MARTIN. *CCNY, Uppsala niversity.*

2:00 E33 **418.22** Glutamatergic afferents participate in pattern formation in the mammalian striatum. V. V. RYMAR*; K. S. HE; A. F. SADIKOT. *Montreal Neurolog. Inst., McGill Univ.*

3:00 E34 **418.23** Developmental nicotine exposure enhances inhibitory synaptic transmission and reduces neuron size in motor neurons and interneurons critical for normal breathing. S. JAISWAL*; R. FREGOSI. *Univ. of Arizona.*

4:00 E35 **418.24** Quantitative analysis of corticospinal axon terminals in the cervical enlargement of the mouse during development. N. MURABE*; M. SAKURAI. *Teikyo Univ. Sch. of Med.*

1:00 E36 **418.25** A developmental shift in wiring specificity and signal processing among local cortical circuits of the rat motor system. J. BIANE*; J. M. CONNER; M. SCANZIANI; M. H. TUSZYNSKI. *UC San Diego, UC San Diego, HHMI, VA Med. Ctr.*

POSTER

419. Regeneration: CNS I

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 E37 **419.01** Exploring specificity in the rewiring of regenerated cone photoreceptor cells in zebrafish retina. T. YOSHIMATSU*; F. D. D'ORAZI; P. R. WILLIAMS; S. C. SUZUKI; R. O. WONG. *Biol. Structure, Univ. of Washington, Technische Univ. München.*

2:00 E38 **419.02** Re-connecting regenerated bipolar cell circuits in zebrafish retina. F. D. D'ORAZI*; T. YOSHIMATSU; S. C. SUZUKI; R. O. WONG. *Univ. of Washington.*

3:00 E39 **419.03** Induced proliferation of the choroid plexus epithelial cells. B. Z. BARKHO*; E. S. MONUKI. *Univ. of California, Irvine.*

4:00 E40 **419.04** ● BMP4 sufficiency for choroid plexus epithelial fate induction from mouse and human embryonic stem cells. M. WATANABE*; M. COUTTS; Y. KANG; F. B. CHAN; A. SHAH; E. S. MONUKI. *UC Irvine, UC Irvine, UC Irvine, UC Irvine.*

1:00 E41 **419.05** Gene expression analysis of intact neurons undergoing compensatory growth after CNS lesion. K. L. FINK*; C. S. SIEGEL; S. M. STRITTMATTER; W. B. CAFFERTY. *Yale Univ.*

2:00 E42 **419.06** An *in vivo* model to screen for enhancers of axon regeneration. L. J. HOFFSTAETTER; S. M. STRITTMATTER; W. B. CAFFERTY*. *Yale Univ., Yale Univ.*

3:00 E43 **419.07** Plasticity of intact motor pathways functionally compensates after complete corticospinal tract lesion in nogo-receptor-1 knockout mice. C. S. SIEGEL*; K. L. FINK; S. M. STRITTMATTER; W. B. CAFFERTY. *Yale Univ.*

4:00 E44 **419.08** The role of CRMP in axonal regrowth after spinal cord injury. J. NAGAI; Y. KITAMURA; N. YAMASHITA; K. TAKEI; Y. GOSHIMA; T. OHSHIMA*. *Waseda Univ., Grad. Sch. of Med., Yokohama City Univ.*

1:00 E45 **419.09** Protein-protein interactions involved in the transcriptional control of intrinsic axon growth ability in retinal ganglion cells. A. APARA*; Y. WANG; A. TRILLO; M. BLACKMORE; S. BHATTACHARYA; J. L. GOLDBERG. *Univ. of Miami Miller Sch. of Medicine, Bascom Palmer Eye Inst., Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Shool of Med., Marquette Univ., Univ. of Miami Miller Sch. of Med.*

2:00 E46 **419.10** IMP2 expression in the mouse nervous system. N. J. WIENS; V. VINARSKY; S. E. CHMIELEWSKI; E. CHO; K. S. LAU; I. PARK; J. ROSS; M. XU*, Dr. *Philadelphia Col. of Osteo. Med., PCOM.*

3:00 E47 **419.11** Identification of transcription factors regulating gap43 gene expression during optic nerve regeneration in zebrafish. I. VENKATESH*; A. J. UDVADIA. *Univ. of Wisconsin, Univ. of Wisconsin.*

4:00 E48 **419.12** Regulation of Krüppel-like transcription factor (KLF) family members promotes axon regeneration. Y. WANG*; A. APARA; M. BLACKMORE; D. P. BROWN JR.; A. E. TRILLO; J. L. BIXBY; V. P. LEMMON; J. L. GOLDBERG. *Bascom Palmer Eye Inst., Col. of health science, Marquette Univ., The Miami Project to Cure Paralysis, Shiley Eye Center, UC San Diego.*

1:00 E49 **419.13** Haploinsufficiency of mRNA binding protein ZBP1 leads to increased regenerative properties in an *in vitro* CNS lesion model. A. L. HAWTHORNE*; P. L. PRICE; J. L. TWISS; G. J. BASSELL. *Emory Univ., Drexel Univ.*

2:00 E50 **419.14** Roles of ASK1 in neuroprotection and axonal regeneration after optic nerve injury. D. KITTAKA*; K. NAMEKATA; T. KURIMOTO; X. GUO; C. HARADA; T. HARADA. *Tokyo Metropolitan Inst. of Med. Sci.*

3:00 E51 **419.15** Intrinsic upregulation of leukemia inhibitory factor (LIF) and subsequent activation of Jak/Stat signaling in adult zebrafish retina during optic nerve regeneration. K. OGAI*; K. SUGITANI; Y. KORIYAMA; H. NAKASHIMA; S. KATO. *Kanazawa Univ.*

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4:00 E52 **419.16** MMP-2 and MMP-14 co-regulate axonal outgrowth in the developing and regenerating central nervous system. L. MOONS*; K. LEMMENS; D. GAUBLOMME; T. BUYENS; E. JANSSENS; N. BEHRENDT; L. DE GROEF; I. VAN HOVE. *KULeuven, The Finsen Lab.*

1:00 E53 **419.17** Effect of ibuprofen on LPA-mediated growth cone collapse of embryonic chicken retinal axons. J. A. VINTON; E. BIRGBAUER*. *Winthrop Univ.*

2:00 E54 **419.18** ▲ Beta-catenin, an early developmental transcription factor, is upregulated in the Lumbriculid central nervous system during nerve regeneration. L. D. MOLINAR; P. R. QUESADA; M. GONZALEZ; V. G. MARTINEZ ACOSTA*. *Univ. of the Incarnate Word.*

3:00 F1 **419.19** Behavioral restoration of visual function following axolotl retinal damage. E. A. DEBSKI*; T. STEWART; N. MURPHY. *Univ. of Kentucky, Univ. of Kentucky.*

4:00 F2 **419.20** ● A novel *in vitro* Parkinson's model for compound screening based on the functional rescue of dopaminergic neurons using challenged midbrain cultures growing on micro electrode arrays. B. M. BADER*; C. FAHRUN; A. PIELKA; M. WINKLER; A. PODßUN; K. JÜGELT; O. H. U. SCHRÖDER; A. VOSS. *NeuroProof GmbH.*

1:00 F3 **419.21** Hyaluronic acid hydrogels for neural stem cell tri-dimensional culture and transplantation after stroke. L. R. NIH*; J. LAM; P. MOSHAYEDI; B. LOWRY; S. CARMICHAEL; T. SEGURA. *Univ. of Los Angeles.*

2:00 F4 **419.22** Direct-current electric fields elicit intensity-dependent regenerative behaviors in mammalian astrocytes. M. L. BAER*; D. DHAR; D. E. BROWN; S. C. HENDERSON; R. J. COLELLO. *Virginia Commonwealth Univ.*

3:00 F5 **419.23** Transcriptional regulation of the regeneration-associated gene arginase-1 in neurons: Necessity of AP-1 in overcoming myelin inhibitors by cAMP. T. C. MA*; W. MELLADO; A. BARCO; S. M. MORRIS, Jr.; R. R. RATAN; D. E. WILLIS. *Burke-Cornell Med. Res. Inst., Inst. de Neurociencias de Alicante, Univ. Miguel Hernandez/ Consejo Superior de Investigaciones Cientificas, Univ. of Pittsburgh.*

POSTER

420. Nicotinic Receptor Trafficking and Regulation

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 F6 **420.01** Determinants in the β and δ subunits regulate Golgi to surface trafficking of the muscle acetylcholine receptor. M. J. FERNS*; L. BORGES; J. RUDELL; K. BECK; M. CHANG. *Univ. California Davis, Univ. California Davis.*

2:00 F7 **420.02** Nicotine-induced subunit stoichiometry affects the stability and intracellular trafficking of α3β4 nicotinic receptors. F. MAZZO, F; F. PISTILLO, M; F. CLEMENTI, M; N. BORGESE, F; C. GOTTI*; S. COLOMBO, F. *CNR, Inst. of Neurosci., IRCCS NEUROMED, CNR, Neurosci. Inst.*

3:00 F8 **420.03** An integrative model of the multiple effects of genistein and cyclosporine A in functional upregulation of alpha 7 nAChRs in Xenopus oocytes. M. ISLAM*; P. SCHWARTZ; K. SUMMERS; J. ROSE; J. FARLEY. *Indiana Univ. Bloomington, Duke Univ. Med. Sch.*

4:00 F9 **420.04** Nicotine exploits a COPI-mediated process for chaperone-mediated upregulation of its receptors. B. J. HENDERSON*; R. SRINIVASON; W. A. NICHOLS; C. N. DILWORTH; D. F. GUTIERREZ; E. D. W. MACKEY; S. MCKINNEY; C. I. RICHARDS; H. A. LESTER. *Caltech, Caltech, Univ. of Kentucky.*

1:00 F10 **420.05** ● Yield of extracellular domain α4β2 nicotinic receptors depends on sequence and length of protease site upstream of M1. G. B. WELLS*; S. B. DHANANI; A. M. PERSON. *Texas A&M Univ. Hlth. Sci. Ctr.*

2:00 F11 **420.06** Tolerance development and receptor changes of mice differing in expression of alpha4 and beta2 nicotinic acetylcholine receptor subunits following chronic nicotine treatment. M. J. MARKS*; E. E. SIMMONS; E. E. MEYERS; C. WAGEMAN; M. MORETTI; F. FASOLI; C. GOTTI. *Univ. Colorado, CNR, Neurosci. Institute-Milano.*

3:00 F12 **420.07** Mecamylamine enhances nicotine-induced alpha4beta2* nAChR up-regulation in the plasma membrane of neurons. C. A. ZAMBRANO*; C. A. SHORT; R. M. SALAMANDER; S. R. GRADY; M. J. MARKS. *Univ. of Colorado.*

4:00 F13 **420.08** Exploring α4β2* nicotinic acetylcholine receptor-associated proteins with iTRAQ and transgenic mice. T. D. MCCLURE-BEGLEY*; K. L. STONE; C. M. COLANGELO; M. J. MARKS; S. R. GRADY; J. LINDSTROM; M. R. PICCIOTTO. *Univ. of Colorado, Yale Univ. Sch. of Med., Univ. of Colorado, Univ. of Pennsylvania Sch. of Med., Yale Univ. Sch. of Med.*

1:00 F14 **420.09** Nicotinic Acetylcholine autoreceptors in the interpeduncular nucleus. P. SCHOLZE*; F. BEIRANVAND; S. E. HUCK. *Med. Univ. Vienna.*

2:00 F15 **420.10** Cell surface localization of α3β4 nicotinic acetylcholine receptors is regulated by N-cadherin homotypic binding and actomyosin contractility. J. L. BRUSES*. *Univ. of Kansas Sch. of Med.*

3:00 F16 **420.11** Mouse strains carrying fluorescent nicotinic receptor subunits: Review and progress report. H. A. LESTER*; M. J. MARKS; S. R. GRADY; C. DILWORTH; Y. WANG; E. D. W. MACKEY; R. E. PENTON; C. XIAO; B. J. HENDERSON; P. DESHPANDE; G. OH; J. M. MIWA; S. LEONARD; R. FREEDMAN; R. M. DRENAN. *Caltech, Univ. of Colorado, Caltech, Purdue Univ., Lehigh Univ., Univ. of Colorado.*

4:00 F17 **420.12** Increased acetylcholinesterase expression through protein stabilization by active site directed reversible inhibitors. T. R. MORTON; S. G. ROSSI; R. L. ROTUNDO*. *Univ. Miami Sch. Med., Univ. Miami Sch. Med.*

1:00 F18 **420.13** Lynx1 regulates α4β2 nicotinic acetylcholine receptors via intracellular effects in the endoplasmic reticulum. W. NICHOLS*; B. J. HENDERSON; C. Y. YU; C. I. RICHARDS; J. M. MIWA; H. A. LESTER. *Caltech, Caltech, Univ. of Kentucky, Lehigh Univ.*

POSTER

421. GABA Receptors: Physiology and Pharmacology

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 F19 **421.01** Global kinetic modeling of γ-aminobutyric acid receptor macrocurrents based on allosteric principles. A. T. STERN*; T. WINKLER; S. A. FORMAN. *Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 F20 **421.02** The alpha-2 subunit influences a rapid inhibitory effect of insulin on $GABA_A$ receptors. D. B. WILLIAMS*. *Winston-Salem St Univ.*

3:00 F21 **421.03** Etomidate binding sites exert asymmetric allosteric effects in αβδ GABAA receptors. H. FENG*; S. FORMAN. *Massachusetts Gen. Hosp.*

4:00 F22 **421.04** Modulation of tonic GABA currents by anion channel antagonists and connexin hemichannel antagonists. C. B. RANSOM*; Z. YE; W. SPAIN; G. RICHERSON. *VA Puget Sound Hlth. Care Syst., Univ. of Washington, Univ. of Washington, Univ. of Iowa.*

1:00 F23 **421.05** Neurosteroidogenesis modulates thalamic activity via nucleus-specific effects on phasic and tonic inhibition. C. A. CHRISTIAN*; J. R. HUGUENARD. *Stanford Univ.*

2:00 F24 **421.06** Activity-dependent activation of thalamic extrasynaptic $GABA_A$ receptors revealed by paired nRT-VB recordings. M. B. HERD*; J. J. LAMBERT; D. BELELLI. *Univ. of Dundee.*

3:00 F25 **421.07** 2'-Methoxy-6-methylflavone modulates tonic inhibitory currents mediated by δ-containing GABAA receptors, and is neuroprotective following focal cerebral ischemia in mice. A. N. CLARKSON*; N. KARIM; L. BOOTHMAN-BURRELL; Z. DOSA; R. Y. NAGARAJA; L. JIN; P. VAN NIEUWENHUIJZEN; N. S. GAVANDE; M. M. HOLM; K. PARKER; G. A. R. JOHNSTON; J. R. HANRAHAN; J. A. NICOLAZZO; K. JENSEN; M. CHEBIB. *Univ. of Otago, The Univ. of Sydney, Aarhus Univ., Monash Univ., The Univ. of Sydnet.*

4:00 F26 **421.08** Phospholipase C-related inactive proteins are involved in the regulation of phasic and tonic inhibition in the barrel cortex. H. TOYODA*; M. SAITO; H. SATO; T. KANEMATSU; M. HIRATA; Y. KANG. *Osaka Univ. Grad. Sch. Dent., Hiroshima Univ., Kyushu Univ.*

1:00 F27 **421.09** $GABA_A$ receptor mediated tonic currents in five types of neurons of the mouse dentate gyrus. W. WEI; Z. PENG; I. MODY; C. R. HOUSER*. *David Geffen Sch. Med. UCLA, David Geffen Sch. Med. UCLA, David Geffen Sch. Med. UCLA.*

2:00 F28 **421.10** A persistent increase in extrasynaptic GABA-A receptor function contributes to post-anesthetic memory deficits. A. A. ZUREK*; J. YU; E. BRIDGWATER; B. A. ORSER. *Univ. of Toronto, Univ. of Toronto.*

3:00 F29 **421.11** PKA differentially regulates GABAA α4-mediated synaptic and tonic currents following ethanol exposure in cultured rat cerebral cortical neurons. S. L. CARLSON*; J. P. BOHNSACK; A. L. MORROW. *UNC Chapel Hill, UNC Chapel Hill.*

4:00 F30 **421.12** α5-subunit containing $GABA_A$Rs mediate tonic and slow synaptic inhibition in dentate gyrus granule cells of mouse hippocampus. E. D. ZARNOWSKA*; U. RUDOLPH; R. A. PEARCE. *Univ. Wisconsin Madison, McLean Hosp. and Harvard Med. Sch.*

1:00 F31 **421.13** $GABA_A$ receptor-mediated tonic currents are reduced in cortical neurons in $GABA_A$ receptor α4 subunit knockout mice. M. K. JAISWAL*; S. T. KEROS; P. A. GOLDSTEIN. *Weill Cornell Med. Col., Weill Cornell Med. Col.*

2:00 F32 **421.14** ● A bifunctional neurosteroid analogue reveals a basis for differential modulation of proximal versus distal inhibition. S. J. MENNERICK*; H. SHU; X. JIANG; A. TAYLOR; D. F. COVEY; C. F. ZORUMSKI. *Washington Univ., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

3:00 F33 **421.15** Allosteric activation of GABAA receptors by glutamate. M. GALLACHER*; D. BAPTISTA-HON; A. J. SAMSON; T. G. HALES. *Inst. of Academic Anaesthesia.*

4:00 F34 **421.16** ▲ Benzodiazepine-site agonists and inverse agonists cause opposite changes in the size of the GABA binding pocket of the GABA-A receptor. A. R. HAROLDSON*; M. P. GOLDSCHEN-OHM; M. V. JONES. *Univ. of Wisconsin-Madison.*

1:00 F35 **421.17** Cysteine substitutions define state-dependent accessibility and etomidate binding interactions in the α-M1 domain of $GABA_A$ receptors. S. A. FORMAN*; D. S. STEWART; M. HOTTA; R. DESAI. *Massachusetts Gen. Hosp., Harvard Med. Sch.*

2:00 F36 **421.18** An unexpected role of neuroligin-2 in regulating KCC2 and GABA functional switch. C. SUN*; L. ZHANG; G. CHEN. *Pennsylvania State Univ.*

3:00 F37 **421.19** ● Loss of hyperpolarizing GABA reduces the efficacy of diazepam in cultured hippocampal neurons. T. Z. DEEB*; Y. NAKAMURA; G. FROST; P. A. DAVIES; S. J. MOSS. *Tufts Univ., Tufts Univ.*

4:00 F38 **421.20** δ$GABA_A$ receptors contribute to the anxiolytic and ataxic, but not anti-nociceptive properties of gabapentin. J. YU*; R. P. BONIN; B. A. ORSER. *Univ. of Toronto, Ctr. de Recherche Université, Laval Robert-Giffard, Univ. of Toronto, Sunnybrook Hlth. Sci. Ctr.*

1:00 F39 **421.21** GABA signaling in mouse dorsal root ganglion neurons contributes to inflammatory pain. I. JANG*; Y. KIM; G. CHUNG; S. JUNG; S. OH. *Seoul Natl. Univ., Hanyang Univ.*

2:00 F40 **421.22** Methylene blue inhibits GABA(A) receptors by interaction with GABA binding site. Z. CHEN; S. YANG; R. HUANG*. *Univ. North Texas Hlth. Sci. Ctr-Fort Worth.*

3:00 F41 **421.23** PKCδ phosphorylation of $GABA_A$ delta subunit is required for ethanol sensitivity of α4β3δ receptors. D. F. WU*; J. DADGAR; R. O. MESSING. *The Univ. of Texas At Austin.*

4:00 F42 **421.24** Dysfunctional regulation of hypothalamic glutamatergic transmission in a mouse model of early-life adversity: Relevance to neurosteroids and programming of the stress response. B. G. GUNN; L. CUNNINGHAM; M. A. COOPER; N. L. CORTEEN; M. SEIFI; J. SWINNY; J. J. LAMBERT; D. BELELLI*. *Univ. Dundee, Univ. of Portsmouth.*

1:00 F43 **421.25** Mapping the engrailed 2 transcriptome in the ganglionic eminence of the developing mammalian nervous system. M. COGSWELL*; A. CARDENAS; Z. XIE; V. BORRELL; S. J. RUSSEK. *Boston Univ., Boston Univ., Boston Univ., The Inst. de Neurociencias.*

2:00 F44 **421.26** Pubertal hormones increase hippocampal expression of α4βδ GABARs via a BDNF-mediated pathway. S. S. SMITH*; A. MOHAMMAD; A. KUVER. *SUNY Downstate Med. Ctr.*

3:00 F45 **421.27** α4βδ GABAA receptors play a role in the synaptic pruning of dentate gyrus granule cells during adolescence of female mice. J. A. PARATO; S. AFROZ; J. K. CHAPIN*; S. S. SMITH. *SUNY Downstate Med. Ctr.*

4:00 F46 **421.28** Pubertal α4βδ $GABA_A$ receptors are critical for synaptic pruning and behavioral flexibility in female mice. S. AFROZ*; H. SHEN; S. S. SMITH. *SUNY Downstate Med. Ctr.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 G1 **421.29** Effect of esterification on onset and duration of anxiolytic and anticonvulsant activity by valerenic acid derivatives. J. HINTERSTEINER*; M. HAIDER; C. SCHWARZER; S. KHOM; M. MIHOVILOVIC; S. HERING. *Univ. of Vienna, Vienna Univ. of Technology, Inst. of Applied Synthetic Chem., Innsbruck Med. University, Inst. of Pharmacol.*

2:00 G2 **421.30** Structural basis of subunit specific modulation of GABAA receptors by valerenic acid derivatives. D. LUGER*; M. HAIDER; S. KHOM; B. STROMMER; M. D. MIHOVILOVIC; S. HERING. *Univ. of Vienna, Vienna Univ. of Technol.*

POSTER

422. Ion Channels: K+ Channels II

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 G3 **422.01** Transcriptional regulation of the sodium-activated potassium channel Slick by NFKB. D. TOMASELLO*; A. BHATTACHARJEE. *SUNY At Buffalo, SUNY at Buffalo.*

2:00 G4 **422.02** Molecular mechanisms underlying slow afterhyperpolarization in hippocampal neurons. N. I. KONONENKO*; A. DOVGAN; V. CHERKAS; T. TSUGORKA; D. MORDERER; A. RYNDITCH; L. HAYNES; R. D. BURGOYNE; P. BELAN. *Inst. Physiol, Key State Lab. of Mol. and Cell. Biol., Univercity of Liverpool.*

3:00 G5 **422.03** Developmental changes in voltage-gated potassium channel expression in the avian embryonic hypothalamus. M. A. DOCZI*; P. F. MCGRATH; J. M. CARROLL. *Norwich Univ.*

4:00 G6 **422.04** Essencial oil of Alpinia zerumbet and its constituents (TERPIENEN-4-OL and ALFA-TERPINENENO) blocked voltage-gated Na+ and K+ channels in small dorsal root ganglion. K. MORAIS VERAS; T. SANTOS-NASCIMENTO; A. PEREIRA-GONÇALVES; A. COELHO-DE-SOUZA; J. H. CARDOSO*. *Univ. Estadual do Ceara.*

1:00 G7 **422.05** A screen for peptides that alter BK channel-mediated alcohol behaviors. L. L. SCOTT*; S. IYER; A. PHILPO; A. SHEN; S. J. DAVIS; R. W. ALDRICH; S. J. MIHIC; J. PIERCE-SHIMOMURA. *The Univ. of Texas at Austin.*

2:00 G8 **422.06** Distinct BK currents are produced by Kcnma1 splice variants containing a novel phosphorylation site. J. P. WHITT*; C. SHELLEY; A. L. MEREDITH. *Univ. of Maryland Baltimore.*

3:00 G9 **422.07** Fluorinated 4-aminopyridines as new potassium channel blockers. P. BRUGAROLAS*; J. E. SANCHEZ-RODRIGUEZ; J. J. LACROIX; F. BEZANILLA; B. POPKO. *The Univ. of Chicago, The Univ. of Chicago.*

4:00 G10 **422.08** Functions of Kv4 mediated A-type potassium currents in striatal medium spiny neurons. E. DVORETSKOVA*; B. RUDY. *New York Univ. Langone Med. Ctr. / Neurosci. Inst.*

1:00 G11 **422.09** Mutation in a volatile anesthetic regulatory site of the TASK-3 potassium channel alters pore structure. R. H. CHOKSHI; J. COTTEN*. *Massachusetts Gen. Hosp.*

2:00 G12 **422.10** Kv currents in group III/ IV muscle afferent neurons. R. RAMACHANDRA*; K. S. ELMSLIE. *A.T. Still Univ.*

3:00 G13 **422.11** Epigenetic regulation of Kir4.1 in normal and pathological states: a focus on spinal cord injury. S. NWAOBI*; S. PERMASETTY; H. MINKEL; C. FLOYD; M. OLSEN. *Univ. of Alabama At Birmingham.*

4:00 G14 **422.12** Expression and localization of Kv2 channels and their AMIGO auxiliary subunits. M. M. COBB*; D. MANDIKIAN; J. S. TRIMMER. *Univ. of California Davis.*

1:00 G15 **422.13** Pathogenic plasticity of kv7.2/3 channel activity is essential for the induction of tinnitus. S. LI; V. CHOI; T. TZOUNOPOULOS*. *Univ. of Pittsburgh.*

2:00 G16 **422.14** (±)3,4-Methylenedioxyamphetamine inhibits the TEA-sensitive K(+) current in the hippocampus and the Kv2.1 current expressed in H1355 cells. Y. CHEN*; C. LIN; Y. LEUNG. *China Med. Univ., Kainan Univ.*

3:00 G17 **422.15** Characteristics of single large-conductance ca^{2+}-activated k^{+} channels and their regulation of actional potentials and excitability in parasympathetic cardiac motoneurons in the nucleus ambiguus. M. LIN; Z. CHENG*. *Univ. of Central Florida.*

4:00 G18 **422.16** Glioma proton concentration determines cell proliferation via pH_e-sensitive K^{+} conductance. A. HONASOGE*; H. SONTHEIMER. *Univ. of Alabama At Birmingham.*

1:00 G19 **422.17** Increased *in vivo* firing rates of SN DA neurons in A53T-SNCA mice are caused by reduction of functional A-type channels. M. SUBRAMANIAM*; S. GISPERT; G. AUBURGER; J. ROEPER. *Inst. For Neurophysiol., Inst. for Neurol. and Neurosurg.*

2:00 G20 **422.18** The role of KCC2-interacting partners in transporting and maintaining KCC2 in the membrane. J. C. PRESSEY*; V. MAHADEVAN; B. A. ACTON; M. A. WOODIN. *Univ. of Toronto.*

3:00 G21 **422.19** The functional expression of TREK2 is regulated by b-COP in cerebellar glia. E. KIM; Y. OLEG; N. PARK; Y. BAE; J. PARK; E. HWANG*. *Korea Inst. of Sci. and Technol., Sch. of Medicine,Gyeongsang Natl. Univ.*

4:00 G22 **422.20** ● Mechanical bioeffects of pulsed ultrasound modulate the activity of TREK-1 potassium channels. J. WU*; W. J. TYLER. *Virginia Tech. Carilion Res. Inst.*

1:00 G23 **422.21** The slow afterhyperpolarization properties depend on PIPK1γ. K. S. KIM*; K. M. DUIGNAN; H. SOH; A. V. TZINGOUNIS. *Univ. of Connecticut.*

POSTER

423. Neurotransmitter Release: Vesicle Recycling and Biogenesis

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 G24 **423.01** Endocytosis overshoot and compensatory endocytosis at the calyx of Held involve different molecular mechanisms. J. XU*; H. YUE. *Georgia Regents Univ.*

2:00 G25 **423.02** PI(4′5)P2 dependent and Ca^{2+}-regulated ER-plasma membrane interactions mediated by the Extended-Synaptotagmins. Y. SAHEKI*; F. GIORDANO; O. IDEVALL-HAGREN; S. COLOMBO; M. PIRRUCCELLO; I. MILOSEVIC; E. O. GRACHEVA; S. N. BAGRIANTSEV; N. BORGESE; P. DE CAMILLI. *Dept. of Cell Biology, HHMI, Yale Sch. of Med., Yale Sch. of Med., CNR Inst. of Neuroscience, Univ. degli Studi di Milano, Dept. of Physiology, Yale Sch. of Med., Univ. "Magna Graecia" of Catanzaro.*

● Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 G26 **423.03** Phosphatidylserine is important for clathrin-mediated endocytosis. K. VARGA*; Z. JIANG; L. GONG. *UIC.*

4:00 G27 **423.04** Role of PKG in regulating synaptic function at the *Drosophila* larval neuromuscular junction. J. S. DASON*; M. B. SOKOLOWSKI. *Univ. Toronto.*

1:00 G28 **423.05** Increased end plate denervation and motor impairment in midle-age mice with cholinergic hypofunction. C. GUATIMOSIM*; M. P. S. M. GOMES; J. N. ANDRADE; C. P. BASTOS; G. S. PEREIRA; V. F. PRADO; M. A. M. PRADO; L. P. L. SCHETINO. *Federal Univ. of Minas Gerais (UFMG), Biol. Sci. Inst. (ICB), Federal Univ. of Minas Gerais (UFMG), Biol. Sci. Inst. (ICB), Univ. of Western Ontario.*

2:00 G29 **423.06** Cytosolic transmitter concentration regulates vesicle cycling at hippocampal GABAergic terminals. L. BONET*; L. WANG; P. TU; K. R. AUBREY; S. SUPPLISSON. *IBENS, INSERM U1024, CNRS UMR8197, Inst. of Brain Functional Genomics, East China Normal Univ.*

3:00 G30 **423.07** ▲ Myosin IIB regurates synaptic vesicle trafficking at a cholinergic nerve terminal. M. HAYASHIDA; S. TANIFUJI; S. MOCHIDA*. *Tokyo Med. Univ.*

4:00 G31 **423.08** Minibrain kinase phosphorylates synaptojanin and promotes reliable synaptic vesicle recycling. C. CHEN; C. BREGERE; J. PALUCH; D. DICKMAN; K. T. CHANG*. *Zilkha Neurogenetic Inst., Dept. of Neurobiology, USC, USC.*

1:00 G32 **423.09** Adaptor protein complex 3-derived synaptic vesicles contribute primarily to asynchronous release and regulate the fidelity of neurotransmission at hippocampal mossy fibre terminals. A. EVSTRATOVA*; V. FAUNDEZ; K. TOTH. *Laval Univ., Emory Univ.*

2:00 G33 **423.10** NMR structural mapping reveals five binding sites for clathrin box motif peptides on the N-terminal domain of the clathrin heavy chain. E. M. LAFER*; K. E. CANO-MCCUE; Y. ZHUO; U. ILLANGOVAN; A. P. HINCK. *Univ. Texas Hlth. Sci. Ctr.*

3:00 G34 **423.11** Novel pHlu-dot sensor as a probe of modulation of vesicle fusion mode at hippocampal boutons. A. A. ALABI*; Q. ZHANG; R. W. TSIEN. *NYU Neurosci. Inst., Stanford Univ., Vanderbilt Univ.*

4:00 G35 **423.12** Genetic interaction between endophilin and Parkin. M. CAO*; I. MILOSEVIC; S. GIOVEDI; P. DE CAMILLI. *Yale Univ., Program in Cell. Neuroscience, Neurodegeneration and Repair, Howard Hughes Med. Inst.*

1:00 G36 **423.13** Effect of D_2O on the synaptic transmission. K. SHOUDAI*; M. WAKITA; S. MC; T. YAMAGA; N. AKAIKE. *Kumamoto Hlth. Sci. Univ.*

2:00 G37 **423.14** Cholesterol regulates transient and reversible exocytosis in presynaptic terminals. R. M. LAZARENKO*; I. KRISTAPONYTE; Q. ZHANG. *Vanderbilt Univ.*

POSTER

424. Transmitter Release: Docking, Fusion, and Calcium Dependence

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 G38 **424.01** RIM1α SUMOylation is required for fast synchronous synaptic vesicle exocytosis. F. GIRACH*; T. J. CRAIG; J. M. HENLEY. *Univ. of Bristol.*

2:00 G39 **424.02** The growth factor IGF accelerates recovery from botulinum neurotoxin-induced muscle paralysis and atrophy. J. P. APLAND*; A. C. BORRELL; B. C. MURRAY; E. J. GLOTFELTY; P. M. MCNUTT; J. P. PETRALI; M. ADLER. *USAMRICD, USAMRICD, USAMRICD.*

3:00 G40 **424.03** Influence of the synaptobrevin transmembrane domain on fusion pore flux in hippocampal synapses. C. CHIANG*; C. CHANG; M. B. JACKSON. *Univ. of Wisconsin Madison.*

4:00 G41 **424.04** The membrane anchor of synaptobrevin influences flux through fusion pores in Ca^{2+}-triggered exocytosis from chromaffin cells. C. CHANG*; M. B. JACKSON. *Univ. of Wisconsin-Madison, Univ. of Wisconsin Madison.*

1:00 G42 **424.05** SUMOylation of synapsin Ia regulates neurotransmitter release. L. T. TANG*; T. CRAIG; J. HENLEY. *Univ. of Bristol.*

2:00 G43 **424.06** Regulation of synaptic transmission by protein ubiquitination. A. CAPUTO; K. M. MYERS; A. VASHISHT; J. WOHLSCHLEGEL; F. E. SCHWEIZER*. *UCLA, Box 951763, UCLA, Box 951737.*

3:00 G44 **424.07** PKC-dependent phosphorylation of SNAP-25 is essential for the positive regulation of dopamine release in mouse brain. S. YAMAMORI*; M. TAKAHASHI. *Kitasato. Univ. Sch. of Medicine.*

4:00 G45 **424.08** Phosphorylation of syntaxin 3B by CaMKII regulates the formation of t-SNARE complexes. X. LIU; R. HEIDELBERGER; R. JANZ*. *UT-Houston Med. Sch., UT-Houston Med. Schl.*

1:00 G46 **424.09** The anionic phospholipid phosphatidylserine is required for synaptic vesicle exo- and endocytosis at larval neuromuscular junctions of *Drosophila.* M. IMAD*; C. GAY; E. IMLER; M. TORVUND; K. ZINSMAIER. *Univ. Arizona.*

2:00 G47 **424.10** Tomosyn and cdk5: A protein duet acting in concert to direct release properties of synaptic vesicles. V. A. CAZARES*; A. SUBRAMANI; W. W. HOERAUF; J. J. SALDATE; E. L. STUENKEL. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

3:00 G48 **424.11** Munc13-3 tightens influx-release coupling at granule cell-to-basket cell synapses in the mouse cerebellum. S. ISHIYAMA; J. EILERS*. *Univ. Leipzig.*

4:00 G49 **424.12** LDCV release from DRG neurons and its modulation by NPY. A. BOST; J. RETTIG; B. NIEMEYER; U. D. BECHERER*. *Univ. des Saarlandes, Univ. des Saarlandes, Univ. Des Saarlandes.*

1:00 G50 **424.13** Regulation of synaptic vesicle docking by Active Zone Material. J. SZULE*; M. HARLOW; J. JUNG; J. XU; F. FERNANDEZ DE MIGUEL; R. MARSHALL; U. J. MCMAHAN. *Texas A&M Univ., Stanford Univ., Univ. Nacional Autónoma de México.*

2:00 G51 **424.14** The role of dynamin and myosin 2 in regulating the mode of synaptic vesicle exocytosis. A. C. ASHTON*; D. A. BHUVA; D. SINGH; T. S. SIHRA. *Sch. of Pharm. and Biomed. Sci., Univ. of Central Lancashire, Univ. of Central Lancashire, Univ. Col. London.*

3:00 G52 **424.15** Bruchpilot and Synaptotagmin - partners for rapid neurotransmitter release? M. PAUL*; T. MARTINI; R. J. KITTEL; M. HECKMANN. *Inst. of Physiology, Dept. of Neurophysiol.*

4:00 G53 **424.16** Modeling of calcium channel-dependent vesicular release in small hippocampal synapses. Y. TIMOFEEVA; Y. S. ERMOLYUK; D. M. KULLMANN; K. E. VOLYNSKI*. *Dept. of Computer Sci. and Ctr. for Complexity Science, Univ. of Warwick,, UCL Inst. of Neurol.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 G54 **424.17** Vesicular antipsychotic drug release in the substantia nigra and dorsal raphe nucleus visualized by 2P microscopy. K. R. TUCKER*; E. S. LEVITAN. *Univ. of Pittsburgh.*

2:00 G55 **424.18** Electrophysiological properties of genetically targeted LH_b cells in the mouse anterior pituitary. P. K. MOGHADAM*; M. B. JACKSON. *Univ. of Wisconsin.*

3:00 G56 **424.19** Temporal and special change in residual Ca^{2+} regulates synaptic vesicle recycling and presynaptic short-term plasticity. M. MORI*; S. TANIFUJI; S. MOCHIDA. *Tokyo Med. Univ.*

4:00 G57 **424.20** Recording of whole-cell calcium currents from sub-micrometer sized synaptic boutons in hippocampal neuronal cultures using scanning ion conductance microscopy. U. VIVEKANANDA; P. NOVAK; K. VOLYNSKI; Y. E. KORCHEV; D. M. KULLMANN*. *Inst. Neurology, UCL, Imperial Col. London.*

1:00 G58 **424.21** Qualitative impact of cooperative Ca^{2+} buffers on intracellular Ca^{2+} dynamics. V. V. MATVEEV*. *New Jersey Inst. Tech.*

2:00 G59 **424.22** Multiple mechanisms of vesicle spontaneous release at the Calyx of Held synapse. J. DAI*; H. TIAN; J. SUN. *Inst. of Biophysics, Chinese Acad. of Sci.*

3:00 G60 **424.23** Short-term synaptic facilitation at the frog NMJ requires a second calcium binding site distinct from synaptotagmin. J. MA; L. KELLY; T. J. PRICE; J. INGRAM; S. D. MERINEY*; M. DITTRICH. *Carnegie Mellon Univ., Univ. Pittsburgh.*

4:00 H1 **424.24** Effects of intrathecal SNC80, delta opioid receptor agonist, with naltrindole or CTOP on formalin-induced flinching, substance P release and c-Fos expression in spinal dorsal horn. T. TERASHIMA*; X. QINGHAO; M. KOUCHEK; T. TAKASUSUKI; S. YAMAGUCHI; T. L. YAKSH. *Dokkyo Med. Univ., UCSD, Sahlgrenska Academy, Univ. of Gothenburg.*

1:00 H2 **424.25** Copine 6-dependent regulation of synaptic transmission. P. LIU*; M. KHVOTCHEV; E. T. KAVALALI. *Utsouthwestern Med. Ctr., Univ. of California,San Francisco.*

POSTER

425. Network Interactions: Oscillations and Synchrony III

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 H3 **425.01** Cellular mechanisms of gamma oscillations in the neocortex: Interactions of fast spiking interneurons and pyramidal cells. D. B. SALKOFF*; B. TAHVILDARI; M. MCGINLEY; M. WOLFEL; D. MCCORMICK. *Yale Med. Sch., Yale Med. Sch.*

2:00 H4 **425.02** Laminar profile of fast oscillations during cortical Up states *in vivo* and *in vitro.* D. JERCOG; M. RUIZ-MEJIAS; R. REIG; A. COMPTE*; M. V. SANCHEZ-VIVES. *IDIBAPS, ICREA.*

3:00 H5 **425.03** A more inhibited prefontal cortex underlies changes of slow and fast rhythms in TgDyrk1A, a mouse model of Down Syndrome. M. RUIZ-MEJIAS; M. MARTINEZ DE LAGRAN; M. MATTIA*; M. DIERSSEN; M. V. SANCHEZ-VIVES. *IDIBAPS (Institut D'Investigacions Biomediques August Pi I Sunyer), Ctr. for Genomic Regulation (CRG), Inst. Superiore di Sanità, Univ. Pompeu Fabra, CIBERER, ICREA (Institut Catala de Recerca i Estudis Avançats), Univ. de Barcelona.*

4:00 H6 **425.04** Role of persistent sodium current on cortical rhythms and excitability. M. V. SANCHEZ-VIVES*; M. PEREZ-ZABALZA; B. REBOLLO; L. CIRIA-SUAREZ; M. RUIZ-MEJIAS. *IDIBAPS (Institut D'Investigacions Biomediques August Pi I Sunyer), ICREA (Institut Catala de Recerca i Estudis Avançats).*

1:00 H7-DP2 **425.05** From neuron to network: Modeling the role of synaptic proteins in neuronal network activity. A. LAVI*; O. PEREZ; Y. YESHURUN; U. ASHERY. *Tel Aviv Univ.*

2:00 H8 **425.06** Resting GABA and glutamate concentrations do not predict visual gamma frequency and amplitude. H. COUSIJN*; S. HAEGENS; G. WALLIS; J. NEAR; M. STOKES; P. J. HARRISON; A. C. NOBRE. *Univ. of Oxford, Columbia Univ. Col. of Physicians and Surgeons, Nathan Kline Inst., Univ. of Oxford, McGill Univ.*

3:00 H9 **425.07** Network structure constrains the dynamics of spontaneous brain activity. K. SHEN*; R. HUTCHISON; G. BEZGIN; J. S. GATI; R. S. MENON; S. EVERLING; A. R. MCINTOSH. *Rotman Res. Inst., Robarts Res. Inst., Western Univ., Univ. of Toronto.*

4:00 H10 **425.08** Gap junctions facilitate propagation of synfire chain: A numerical simulation study. T. SHINOZAKI*; Y. NARUSE. *NICT, NICT.*

1:00 H11 **425.09** Roles of diverse inhibitory interneurons and pyramidal cells during persistent network states of barrel cortex. G. NESKE*; B. W. CONNORS. *Brown Univ.*

2:00 H12 **425.10** Functional neuronal network architecture is revealed by synchronous network burst dynamics on microelectrode arrays. S. THEISS*; J. SLOTTA; W. FLEISCHER; A. SCHNITZLER. *Univ. of Duesseldorf.*

3:00 H13 **425.11** Subicular activation preceding hippocampal ripples *in vitro.* N. MATSUMOTO*; H. NORIMOTO; N. MATSUKI; Y. IKEGAYA. *Lab. of Chem. Pharmacology, Grad. Sch. of Pharm. Sci., Univ. of Tokyo.*

4:00 H14 **425.12** The phase of thalamic alpha activity entrains cortical gamma-band activity in parietal cortex: evidence from resting state meg recordings. F. ROUX*; M. WIBRAL; W. SINGER; J. ARU; P. UHLHAAS. *Basque Ctr. On Brain, Language and Cognition (BCBL), Brain Imaging Ctr. (BIC), Max-Planck Inst. for Brain Res., Ernst-Struengmann Inst. (ESI), Frankfurt Inst. for Advanced Sci. (FIAS), Inst. for Neurosci. and Psychology, Glasgow Univ.*

1:00 H15 **425.13** ● Pharmacologically induced mu (7-10Hz) and gamma (30-80 Hz) oscillations in Layer V of the rat primary motor cortex *in vitro.* N. W. JOHNSON*; M. J. O'NEILL; K. A. WAFFORD; I. M. STANFORD; G. L. WOODHALL. *Aston Univ., Eli Lilly & Co Ltd, Eli Lilly & Co Ltd.*

2:00 H16 **425.14** Alpha-2 adrenergic receptor activation and Ih channel blockade modulate fast network oscillations in the rodent prefrontal cortex *in vitro.* N. ADAMS*; J. SHERFEY; M. A. WHITTINGTON; N. KOPELL; F. E. LEBEAU. *Newcastle Univ., Boston Univ., The Univ. of York, Newcastle Univ.*

3:00 H17 **425.15** Modularity of multi-neuron recordings: Decoding neural ensembles and population dynamics. M. D. HUMPHRIES*. *Univ. of Manchester.*

4:00 H18 **425.16** Critical role for noise and resonance in gamma band synchronization. R. A. TIKIDJI-HAMBURYAN*; E. RAWLS; C. C. CANAVIER. *Louisiana State Univ. Hlth. Sci. Ctr., Southern Federal Univ., Louisiana State Univ. Hlth. Sci. Ctr.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 H19 **425.17** Big Data-driven full-scale parallel computer model of the CA1 network: Insights into oscillatory interneuronal discharges. M. J. BEZAIRE*; I. SOLTESZ. *UC Irvine.*

2:00 H20 **425.18** A computational model of hippocampus capable of producing normal and abnormal HFOs. C. G. FINK*; S. GLISKE; T. ASSAF; W. STACEY. *Ohio Wesleyan Univ., Univ. of Michigan, Univ. of Michigan.*

3:00 H21 **425.19** Functional contribution of different interneuron subtypes to cortical network synchrony. M. AGETSUMA*; R. YUSTE. *Columbia Universtiy.*

4:00 H22 **425.20** Optogenetic pacemaking of hippocampal oscillations in awake behaving mice. D. JUSTUS*; F. FUHRMANN; H. KANEKO; D. FRIEDRICHS; T. BEUTEL; S. SCHOCH; M. FUHRMANN; S. REMY. *German Ctr. for Neurodegenerative Dis. (DZNE), Univ. of Bonn Med. Ctr., Univ. of Bonn Med. Ctr.*

1:00 H23 **425.21** Assessing functional connectivity underlying dynamics within *in vitro* excitatory and inhibitory neuronal networks. X. CHEN; R. DZAKPASU*. *Georgetown Univ., Georgetown Univ. Med. Ctr.*

POSTER

426. Axonal Plasticity

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 H24 **426.01** Structural plasticity of the axon initial segment in hippocampal organotypic slices. W. WEFELMEYER*; J. BURRONE. *King's Col. London.*

2:00 H25 **426.02** Rapid structural plasticity at the axon initial segment. M. D. EVANS*; A. S. DUMITRESCU; M. S. GRUBB. *King's Col. London.*

3:00 H26 **426.03** Serotonin controls the firing of subicular pyramidal neurons by inhibiting a T-type calcium current at the axon initial segment. A. PETERSEN*; C. S. JENSEN; J. PERRIER. *Copenhagen Univ., Copenhagen Univ.*

4:00 H27 **426.04** Regulation of action potential waveform by axonal GABAA receptors in cortical pyramidal neurons. Y. XIA*; Y. SHU; S. ZENG; Y. ZHAO. *Inst. of Neuroscience, Chinese Acad. of Sci., 1Britton Chance Ctr. for Biomed. Photonics, Wuhan Natl. Lab. for Optoelectronics, Huazhong Univ. of Sci. and Technol., Key Lab. of Biomed. Photonics of Ministry of Education, Dept. of Biomed. Engineering, Huazhong Univ. of Sci. and Technol.*

1:00 H28 **426.05** Local determination of AP waveform at release sites in unmyelinated axons of cerebellar molecular layer interneurons. Y. PARK*; M. J. ROWAN; G. DELCANTO; N. KAMASAWA; J. M. CHRISTIE. *Max Planck Florida Inst.*

2:00 H29 **426.06** Membrane depolarization and axon initial segment plasticity in developing hippocampal neurons. J. MUKANOWA*; J. BURRONE. *King's Col. London.*

3:00 H30 **426.07** Control of spike patterning and neurotransmission are uncoupled by distinct and regionally separate Kv channel complements in axons of cerebellar interneurons. M. J. ROWAN*; E. TRANQUIL; J. M. CHRISTIE. *Max Planck Florida Inst.*

4:00 H31 **426.08** Cortical demyelination dynamically alters intrinsic excitability and ion channel expression in the axon initial segment domain. M. S. HAMADA; M. H. KOLE*. *Netherl. Inst. For Neurosci.*

1:00 H32 **426.09** Type 3 dopamine receptors regulate axonal calcium in a distinct infralimbic pyramidal cell subclass. K. J. BENDER*; A. LIPTAK; R. L. CLARKSON. *Gallo Res. Center, UCSF, UCSF, UCSF.*

2:00 H33 **426.10** Cholinergic receptor induced long-lasting plasticity of hippocampal axonal KV7 channels. K. MARTINELLO*; D. A. BROWN; M. M. SHAH. *UCL-School of Pharm., UCL Neuroscience, Physiol. and Pharmacology,, UCL Sch. of Pharm.*

3:00 H34 **426.11** Repolarization of the action potential in varicose axons in mammalian brain. D. PEKALA; A. BAGINSKAS; H. SZKUDLAREK; M. RAASTAD*. *Emory Sch. of Med., Kaunas Univ. of Med., Jagiellonian Univ., Emory Univ. Sch. of Med.*

4:00 H35 **426.12** Mature axons in the adult brain contain translational machinery. M. R. AKINS*; H. E. BERK-RAUCH; K. Y. KWAN; N. SESTAN; H. A. CAMERON; J. R. FALLON. *Drexel Univ., Brown Univ., Yale Univ., Natl. Inst. of Mental Hlth., Brown Univ.*

POSTER

427. Astrocytes: Synapses

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 H36 **427.01** FABP7 expressed in astrocytes and regulates the excitatory synapse formation in mouse cerebral cortex. M. EBRAHIMI*; K. SHARIFI; Y. KAGAWA; A. ISLAM; Y. YASUMOTO; H. MIYAZAKI; S. KAWAMURA; Y. YAMAMOTO; T. SAWADA; T. YOSHIKAWA; Y. OWADA. *Yamaguchi Univ. Grad. Sch. of Med., RIKEN Brain Sci. Inst.*

2:00 I1 **427.02** How do astrocyte-secreted proteins hevin and SPARC control synaptic development in visual cortex? W. C. RISHER*; S. GARVEY; O. Y. CALHAN; S. SINGH; N. CALAKOS; C. EROGLU. *Duke Univ., Duke Univ., Duke Univ.*

3:00 I2 **427.03** Identification of a novel astrocyte to neuron signaling pathway that controls synapse formation and maturation. S. K. SINGH; A. PAMUKCU; C. EROGLU*. *Duke Univ, DUMC.*

4:00 I3 **427.04** Astrocytic protein MFG-E8 mediates synaptic connectivity *in vivo.* N. A. DECAROLIS*; U. HADITSCH; M. SIDDIQUI; D. PURGER; D. MADISON; T. PALMER. *Stanford Univ., Stanford Univ.*

1:00 I4 **427.05** Astrocyte regulation of neurotransmission synchrony at glutamate synapses. C. A. SOBIESKI*; D. C. CRAWFORD; S. MENNERICK. *Washington Univ. In St Louis, Washington Univ. In St Louis, Univ. of Texas Southwestern Med. Ctr., Washington Univ. in St Louis.*

2:00 I5 **427.06** Changes in the dynamics of a bidirectionally coupled astrocyte-neuron model caused by altered calcium signaling. R. HAVELA; M. LINNE*; J. HARKIN; L. MCDAID. *Tampere Univ. Technol., Univ. of Ulster.*

3:00 I6 **427.07** Age-related changes in the glia-neuron communication in the neocortex. Y. PANKRATOV*; A. RASOOLI-NEJAD; U. LALO. *Univ. of Warwick.*

4:00 I7 **427.08** Best1-mediated astrocytic glutamate lowers the threshold of synaptic plasticity. J. LEE*; H. PARK; K. HAN; J. SEO; S. M. DRAVID; J. WOO; H. CHUN; S. CHO; T. KIM; H. AN; B. YOON; R. BERLINGUER-PALMINI; G. MANNAIONI; S. F. TRAYNELIS; S. CHOI; C. LEE. *Korea Inst. of Sci. and Technol., Seoul Natl. Univ. Sch. of Dent., Creighton Univ., Dankook Univ., Newcastle Univ., Univ. of Florence, Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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1:00 I8 **427.09** Cl^- homeodynamics in astrocytic networks on activation of tripartite GABAergic synapses. A. FUKUDA*; K. EGAWA; J. YAMADA; T. FURUKAWA; Y. YANAGAWA. *Hamamatsu Univ. Sch. Med., Hamamatsu Univ. Sch. Med., Hirosaki Univ. Grad Sch. Med., Gunma Univ. Grad Sch. Med.*

2:00 I9 **427.10** Reciprocal signaling between cortical Parvalbumin expressing fast spiking interneurons and astrocytes. G. LOSI*; L. MARIOTTI; M. CAMMAROTA; M. SESSOLO; I. MARCON; S. BOVETTI; T. FELLIN; G. CARMIGNOTO. *Inst. of Neuroscience-Cnr and Univ. of Padova, Italian Inst. of Technol.*

3:00 I10 **427.11** Perisynaptic Schwann cells at neuromuscular junctions revert to an immature phenotype following denervation. A. P. PEREZ*; B. LAMOUREUX; I. ROUSSE; H. DARABID; R. ROBITAILLE. *Univ. De Montreal, GRSNC.*

4:00 I11 **427.12** Astrocytes in the nucleus of the solitary tract modulate synaptic transmission and respiratory activity. R. HUDA*; Z. CHANG; W. JIAO; D. R. MCCRIMMON; M. MARTINA. *Northwestern Univ.*

1:00 I12 **427.13** The dorsal root ganglion Sandwich Synapse: Novel transglial signaling between neuronal somata. G. M. ROZANSKI*; Q. LI; E. F. STANLEY. *Toronto Western Res. Inst.*

2:00 I13 **427.14** Synaptic-like connections between dystrophic axons and NG2+ cells: Another reason for regeneration failure after spinal cord injury. A. R. FILOUS*; T. A. EVANS; B. T. LANG; J. SILVER. *Case Western Reserve Univ., Case Western Reserve Univ.*

3:00 I14 **427.15** Perisynaptic glia mediate muscarine-induced enhancement of neurotransmitter release at the vertebrate neuromuscular junction. C. A. LINDGREN*; C. KAISER-NYMAN; J. DREIER. *Dept. of Biology, Grinnell Col.*

4:00 I15 **427.16** Astrocyte TNFα-dependent alteration of hippocampal excitatory synaptic transmission in a mouse model of Multiple Sclerosis. S. HABBAS; M. SANTELLO; H. STUBBE; G. ZAPPIA; N. LIAUDET; G. KOLLIAS; A. FONTANA; T. SUTER; A. VOLTERRA*. *Univ. of Lausanne, Inst. for Immunol., Clin. Immunol.*

POSTER

428. Astrocytes: Structural Plasticity and Glutamate Signaling

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 I16 **428.01** Identification and characterization of novel subtypes of astrocytes. Z. CHEN*; M. GHOSH; R. G. SATTLER; M. B. ROBINSON; J. D. ROTHSTEIN. *Johns Hopkins Univ., 2Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Johns Hopkins Univ.*

2:00 I17 **428.02** Identification of astrocyte-expressed proteins involved in structural plasticity. K. E. CARNEY*; P. VAN NIEROP; K. W. LI; A. B. SMIT; S. H. R. OLIET; M. H. G. VERHEIJEN. *Vrije Univ., Neurocentre Magendie, Univ. de Bordeaux.*

3:00 I18 **428.03** Spermine differentially affects astrocytic coupling in CA1 hippocampus as assessed by using dyes of different molecular weights and charges. J. BENEDIKT*; Y. KUCHERYAVYKH; C. G. NICHOLS; R. W. VEH; M. J. EATON; S. N. SKATCHKOV. *Univ. Central Del Caribe, Univ. Central Del Caribe, Washington Univ. Sch. of Med., Charite, Inst. of Integrative Anat., Univ. Central Del Caribe.*

4:00 J1 **428.04** Cellular mechanism for presynaptic inhibition of nociceptive afferents. R. K. CHRISTENSEN; R. DELGADO-LEZAMA; R. RUSSO; B. L. LIND; N. SCHMITT; A. V. PETERSEN; E. M. CARLSEN; J. PERRIER*. *Univ. of Copenhagen, CINVESTAV, IIBCE, Univ. of Copenhagen, Univ. Copenhagen.*

1:00 J2 **428.05** EphA4 regulates both the supraoptic nucleus neuron-glia structural plasticity and the social behavior responses to salt loading in rodent. D. ISACU; M. FREYBURGER; S. LAFOREST; A. C. AMEGANDJIN; D. GINGRAS; M. BAHARNOORI; M. CHAGNON; W. JAMMOW; M. LAUZON; L. DESGROSEILLERS; S. CHIERZI; K. K. MURAI; E. PASQUALE; G. DROLET; V. MONGRAIN; G. DOUCET*. *Univ. de Montréal, Ctr. de recherche de l'Hôpital du Sacré-Coeur, Ctr. de recherche du CHU de Québec, Univ. de Montréal, Univ. de Montréal, Montreal Gen. Hosp. Res. Inst., Sanford-Burnham Med. Res. Inst., Univ. Montreal.*

2:00 J3 **428.06** Glial cell types in auditory brainstem development and lesion-induced plasticity. M. L. DINH*; S. J. KOPPEL; M. J. KORN; K. S. CRAMER. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of Michigan.*

3:00 J4 **428.07** Optogenetic Activation of Gliotransmission. D. K. TAKAHASHI*; C. RAMAKRISHNAN; K. DEISSEROTH; J. HUGUENARD; D. PRINCE. *Stanford Univ., Stanford Univ., Stanford Univ.*

4:00 J5 **428.08** Exocytosis of gliotransmitters from astrocytes and its implications for synaptic plasticity in the neocortex. S. M. RASOOLI-NEJAD*; U. LALO; Y. PANKRATOV. *The Univ. of Warwick, Univ. of Warwick.*

1:00 J6 **428.09** Glutamate released from astrocyte system x_c^- mediates aglycemic neuronal cell death. T. L. THORN*; N. A. JACKMAN; S. J. HEWETT. *Syracuse Univ., SUNY Upstate Med. Univ., Univ. of Connecticut Hlth. Ctr.*

2:00 J7 **428.10** The potential role for system xc- in schizophrenic pathology. J. H. CLELAND*; V. LUTGEN; N. RADDATZ; K. QUALMANN; S. CHOI; D. A. BAKER. *Marquette Univ.*

3:00 J8 **428.11** Altered metabolic function of astrocytes in the aging brain. M. H. STRIDH*; J. D. NISSEN; L. F. MCNAIR; H. S. WAAGEPETERSEN. *Univ. of Copenhagen.*

4:00 J9 **428.12** ● DREADD-mediated enhancement of glial glutamate release in the NAcore inhibits cue-induced relapse to cocaine seeking. M. D. SCOFIELD*; R. J. SMITH; H. A. BOGER; P. W. KALIVAS. *Med. Univ. of South Carolina.*

1:00 J10 **428.13** Role of the calcineurin/NFAT pathway in astrocytic glutamate uptake: Implications for Alzheimer's disease. P. SOMPOL*; J. L. FURMAN; S. R. BATTEN; M. M. PLEISS; I. A. ARTIUSHIN; M. P. MURPHY; G. A. GERHARDT; C. M. NORRIS. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

2:00 J11 **428.14** Antagonistic interaction between adenosine A2A receptors and Na+/K+-ATPase-α2: Implications for astrocyte glutamate uptake. M. MATOS*; E. AUGUSTO; P. AGOSTINHO; R. A. CUNHA; J. CHEN. *Dept. of Neurology, Boston Univ., CNC-Center for Neurosci. and Cell Biology, Univ. of Coimbra, FMUC-Faculty of Medicine, Univ. of Coimbra.*

3:00 J12 **428.15** Mapping the spatial distribution of glutamate transport in individual astrocytes during cortical developmental and in a model of cortical malformation. M. ARMBRUSTER*; C. DULLA. *Tufts Univ., Tufts Univ.*

4:00 J13 **428.16** Dopamine depletion of the prefrontal cortex increases the glial glutamate transporter GLT-1. P. J. VOLLBRECHT*; A. Y. DEUTCH. *Vanderbilt Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 J14 **428.17** Identification and characterization of a novel, conserved metallo-β-lactamase domain containing regulator of glutamate and dopamine signaling. J. A. HARDAWAY*, III; S. M. WHITAKER; C. L. SNARRENBERG; Z. LI; H. WU; M. GHOSH; A. O. VALDIVIA; S. L. HARDIE; X. XU; P. LEVITT; M. ROBINSON; R. D. BLAKELY. *Vanderbilt Univ., Univ. of Michigan, Childrens Hosp. Los Angeles, USC, The Children's Hosp. of Philadelphia.*

2:00 J15 **428.18** Glutamate-induced changes in extracellular H+ fluxes measured from isolated Muller cells of the tiger salamander retina. B. K. TCHERNOOKOVA*; E. NAYLOR; M. OSBORN; B. SKINNER; E. STEINKE; L. RASMUSSEN; M. A. KREITZER; R. P. MALCHOW. *Univ. Of Illinois At Chicago, Indiana Wesleyan Univ., Univ. Of Illinois At Chicago.*

POSTER

429. APP Biology

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 J16 **429.01** Use of a gene reporter assay to investigate the effects of familial amyloid precursor protein mutations on neuronal viability. B. M. LAW*; C. J. COX; R. J. WILLIAMS. *Univ. of Bath.*

2:00 J17 **429.02** Genetic analysis of the *Drosophila* yata gene that controls intracellular trafficking of Amyloid precursor protein. M. SONE*; M. SHIOHARA. *Toho Univ.*

3:00 J18 **429.03** Potential roles of insulin-like growth factor-II receptor in amyloid precursor protein processing. Y. WANG*; S. KAR. *Univ. of Alberta, Univ. of Alberta.*

4:00 K1 **429.04** APP physiological and pathophysiological functions: Insights from APP Y682G mice. C. MATRONE*. *Aarhus Univ.*

1:00 K2 **429.05** Kinesin-1 mediates phosphorylation and processing of Amyloid-β Precursor Protein independently of transport: Relevance for late onset Alzheimer's disease. V. MURESAN*; Z. LADESCU MURESAN. *UMDNJ-New Jersey Med. Sch.*

2:00 K3 **429.06** ● SAPPα enhances neurite outgrowth through p75NTR. N. HASEBE*; M. UENO; Y. FUJITA; Y. FUJINO; T. YAMASHITA. *Osaka Univ., Grad. Sch. of Medicine, Osaka Univ., Cincinnati Children's Hosp. Med. Ctr., Grad. Sch. of Medicine, Osaka Univ.*

3:00 K4 **429.07** ER stress regulates amyloid precursor protein processing through ubiquitination-dependent degradation. E. JUNG*; S. KANG; J. PARK; I. MOOK-JUNG. *Seoul Natl. Univ.*

4:00 K5 **429.08** Predominance of neural X11L/Mint2 in the regulation of APP trafficking and metabolism among X11/Mint family proteins. R. MOTODATE*; Y. SAITO; T. SUZUKI. *Hokkaido Univercity.*

1:00 K6 **429.09** O-GlcNAcylation decreases APP endocytosis reducing Aβ secretion. Y. CHUN*; S. CHUNG. *Sungkyunkwan Univ. Sc. Med.*

2:00 K7 **429.10** Secreted APPα rescues LTP deficits in APPswe/PS1ΔE9 transgenic mice. K. D. PARFITT*; K. BOURNE; T. J. HINTZ; W. P. TATE; W. C. ABRAHAM. *Pomona Col., Brain Hlth. Res. Centre, Univ. of Otago, Brain Hlth. Res. Centre, Univ. of Otago, Brain Hlth. Res. Centre, Univ. of Otago.*

3:00 K8 **429.11** Phosphorylation of APP is not involved in the regulation of APP anterograde transport by kinesin-1. Y. SHIRAKI*; K. CHIBA; S. HATA; T. SUZUKI. *Lab. of Neuroscience, Grad. Sch. of Pharmaceut. Sci.*

4:00 K9 **429.12** Alzheimer's beta-peptide precursor protein roles in visual system development and neural plasticity: Monocular enucleation-induced secretion of sAPPα and inhibition of GSK3β. J. F. VASQUES*; R. G. J. GONÇALVES; P. CAMPELLO-COSTA; C. SERFATY; A. C. FARIA-MELIBEU. *UFF.*

1:00 K10 **429.13** The amyloid precursor protein intracellular domain affects synaptic transmission. E. TRILLAUD-DOPPIA*; A. DUDILOT; C. BOURGEOIS; J. BOEHM. *Univ. De Montreal.*

2:00 K11 **429.14** Mint proteins are required for synaptic activity-dependent APP trafficking and Aβ generation. S. E. SULLIVAN*; G. M. DILLON; J. M. SULLIVAN; A. HO. *Boston Univ.*

3:00 K12 **429.15** Biphasic proteolytic processing of APP upon proteasomal and mitochondrial inhibition: Relevance to Alzheimer disease. T. JEAN-LOUIS*; M. FIGUEIREDO-PEREIRA. *Hunter Col., Hunter College, CUNY.*

4:00 L1 **429.16** Benefits of the APP caspase cleavage site mutation at position D664 include attenuation of Aβ-induced post-synaptic AMPAR/NMDAR-mediated currents and attenuation of Aβ-induced spine loss in knock-in animals. H. S. NHAN*; C. ZHANG; B. MIDTHUNE; R. MALINOW; E. KOO. *UCSD.*

1:00 L2 **429.17** The Par3 polarity protein regulates APP trafficking and processing. M. SUN; H. ZHANG*. *Umdnj-Robert Wood Johnson Med. Chool.*

2:00 L3 **429.18** Mutagenesis of carboxyl-terminal tyrosines disrupts APP trafficking to lysosomes. J. TAM*; R. M. COBB; S. H. PASTERNAK. *Robarts Res. Inst., Western Univ., Western Univ.*

3:00 L4 **429.19** Impact of chemical downregulation (IU1) of the proteasome-associated deubiquitinating enzyme Usp14 activity on protein degradation by the proteasome: Relevance to Alzheimer disease. M. J. KIPROWSKA*; V. ZHUKAREVA; M. FIGUEIREDO-PEREIRA. *Hunter College, CUNY, LifeSensors Inc.*

4:00 L5 **429.20** Effect of dentate gyrus-specific APP expression on neurogenesis. K. CHIANG*; K. KASUGA; E. H. KOO. *UCSD.*

1:00 L6 **429.21** Pre-synaptic amyloid-β impairs synaptic functions anterogradely in site-specific amyloid precursor protein expressing triple transgenic mice. K. KASUGA; S. TYAN; I. LING; K. MIYAMICHI; L. LUO; E. H. KOO*. *UCSD, Stanford Univ.*

2:00 L7 **429.22** Pre-synaptic Aβ induced Synaptic dysfunction in hippocampal network. S. TYAN*; K. KASUGA; M. KAZUNARI; L. LUO; S. LEUTGEB; E. H. KOO. *UCSD, Stanford Univ., UCSD.*

3:00 L8 **429.23** APP and its beta-C-terminal fragment induce endosomal dysfunction and disrupt neurotrophic signaling. W. XU*; A. WEISSMILLER; X. WANG; W. MOBLEY; J. DING; C. WU. *Dept. of Neurology, Ruijin Hospital, Shanghai Jiaotong Univ. Sch. of, Dept. of Neurosciences, Univ. of California, San Diego.*

4:00 L9 **429.24** Epoxygenase system modulates amyloid precursor protein (APP) processing *in vitro.* N. K. MULE*; S. KOLLAR; A. CRONIN; A. MAROWSKY; M. ARAND. *Univ. of Zurich.*

POSTER

430. Genetics and Functional Genomics

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 L10 **430.01** Alzheimer's associated gene PICALM: expression and splicing in the human brain. I. PARIKH; J. SIMPSON; S. ESTUS*. *Univ. of Kentucky, Sanders-Brown Ctr. Aging.*

2:00 L11 **430.02** Copy number variation association with Alzheimer's disease using ordered subset analysis. B. KELLERMAYER*; B. TRUMMER; D. LAL; L. YAN; C. MA; S. LIU; K. SZIGETI. *Univ. At Buffalo, Univ. At Buffalo, Roswell Park Cancer Inst.*

3:00 L12 **430.03** Identifying the transcription regulatory region of C9ORF72 gene. C. CHIU*; T. YEH; C. LU; H. WANG. *Chang Gung Mem. Hosp., Chang Gung Mem. Hosp., Chang Gung Univ.*

4:00 L13 **430.04** Alzheimer's disease is associated with altered frontal cortex insulin receptor signaling influenced by epigenetic modifications. J. S. RAO*; A. JAMIL; S. I. RAPOPORT. *Natl. Inst. on Aging, NIH, NIH.*

1:00 L14 **430.05** Analysis of novel genetic factors in the common form of Alzheimer's disease. J. MIRON*; D. DEA; L. LAMARRE-THÉROUX; J. FRAPPIER; C. PICARD; J. POIRIER. *Douglas Inst.*

2:00 L15 **430.06** Altered CpG methylation in sporadic Alzheimer's disease is associated with APP and MAPT dysregulation. A. IWATA*; K. NAGATA; H. HATSUTA; H. TAKUMA; M. BUNDO; K. IWAMOTO; A. TAMAOKA; S. MURAYAMA; T. C. SAIDO; S. TSUJI. *Univ. Tokyo, RIKEN BSI, Tokyo Metropolitan Geriatric Hosp., Univ. of Tsukuba, Univ. Tokyo.*

3:00 L16 **430.07** Effect of β-amyloid exposure on epigenetic regulation in Alzheimer's disease. E. LANA*; X. SHEN; M. HANSSON; B. WIEHAGER; M. ANKARCRONA; C. UNGER LITHNER. *Karolinska Institutet.*

4:00 L17 **430.08** Identification of regulatory networks controlled by Egr1 genome-wide in brain of Alzheimer's disease mouse model. A. A. CRONICAN*; N. F. FITZ; F. A. DAVENPORT; E. L. CASTRANIO; J. SCHUG; R. KOLDAMOVA; I. LEFTEROV. *Univ. of Pittsburgh, Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 L18 **430.09** Genetics of ABCA7 expression in Alzheimer's disease. J. B. VASQUEZ; T. S. MCCLINTOCK*; S. ESTUS. *Univ. Kentucky.*

2:00 M1 **430.10** Extracellular miRNA isolated from CSF and blood serum as potential biomarkers for neurodegenerative diseases. I. MALENICA*; K. BURGOS; J. ALDRICH; L. GHAFFARI; A. COURTRIGHT; B. RAKELA; R. METPALLY; W. TEMBE; T. BEACH; K. VAN KEUREN-JENSEN. *Translational Genomics Res. Inst., Banner Sun Hlth. Res. Inst.*

3:00 M2 **430.11** Investigating the role of endocytosis in Alzheimer's disease. G. R. HOWELL*; I. SOTO; L. C. GRAHAM; H. M. JACKSON; G. L. SOUSA; G. W. CARTER. *The Jackson Lab.*

4:00 M3 **430.12** Multiplexed RNA amplicon sequencing reveals altered gene expression and functional regulatory variants in dementia with Lewy bodies. R. MASCARENHAS*; R. M. SMITH; A. C. PAPP; D. W. SCHARRE; M. KATAKI; W. SADEE. *The Ohio State Univ., The Ohio State Univ.*

1:00 M4 **430.13** Changes of expression of choline acetyltransferase by the NRSF/REST in the neocortex and hippocampus in a transgenic mouse model for Alzheimer´s disease (3xTg-AD). E. ORTA*; A. FERIA-VELASCO; S. Y. DÍAZ-CINTRA. *Univ. De Guadalajara, Univ. de Guadalajara, Univ. Nacional Autónoma de México.*

2:00 M5 **430.14** Coffee and Alzheimer's disease: Does craving precede protection? D. S. KERR*; V. J. YAMAMOTO; V. J. R. DE PAULA; O. V. FORLENZA. *Lim-27 - Inst. De Psiquiatria - Univ. De Sao Paulo.*

3:00 M6 **430.15** Genomic mosaicism produced by DNA content variation (DCV) in sporadic Alzheimer's disease. D. BUSHMAN*; J. W. WESTRA; G. E. KAESER; J. CHUN. *UCSD, The Scripps Res. Inst., Selventa.*

4:00 M7 **430.16** ● Blood-Brain-Crosstalk: Plasma signaling proteome profiling for the discovery of pathological pathways in Alzheimer's disease. P. A. JAEGER*; K. LUCIN; M. BRITSCHGI; B. VARDARAJAN; A. PODTELEZHNIKOV; R. HUANG; L. ANDREY; B. BOEVE; A. BOXER; L. FARRER; N. FINCH; N. GRAFF-RADFORD; H. JOHNS; A. KARYDAS; D. KNOPMAN; R. MAYEUX; R. NARASIMHAN; R. PETERSEN; S. PRADHAN; R. RADEMAKERS; P. ST. GEORGE-HYSLOP; C. SUN; S. YOUNKIN; B. MILLER; T. WYSS-CORAY. *Univ. of California San Diego, Stanford Univ. Sch. of Med., Free Univ., Boston Univ. Schools of Med., Merck, RayBiotech, Mayo Clin., Univ. of California San Francisco, Boston Univ. Schools of Med. and Publ. Hlth., Mayo Clin., Columbia Univ. Med. Ctr., Univ. of Toronto, Cambridge Univ.*

1:00 M8 **430.17** Understanding the transcriptome of asymptomatic or preclinical Alzheimer's disease. S. E. ELLIS; D. E. ARKING; D. IACONO; O. PLETNIKOVA; G. L. RUDOW; C. TALBOT, Jr; R. O'BRIEN; S. RESNICK; J. C. TRONCOSO*. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Natl. Inst. on Aging, Johns Hopkins Univ.*

2:00 M9 **430.18** A single-nucleotide polymorphism (SNP) in the dopamine transporter gene, DAT1, is associated with increased risk for Alzheimer's disease and cognitive impairment in the elderly. F. F. ROUSSOTTE*; A. W. TOGA; C. R. JACK, Jr; M. W. WEINER; P. M. THOMPSON. *UCLA, Mayo Clin., UCSF.*

3:00 M10 **430.19** Mitochondrial genetic variants and white matter integrity in young adults. M. N. BRASKIE*; O. KOHANNIM; N. JAHANSHAD; A. W. TOGA; N. K. HANSELL; S. D. GORDON; A. F. MCRAE; K. L. MCMAHON; G. I. DEZUBICARAY; M. J. WRIGHT; P. M. THOMPSON. *Univ. California Los Angeles, UCLA, Queensland Inst. of Med. Res., Ctr. for Advanced Imaging, Univ. of Queensland, Sch. of Psychology, Univ. of Queensland.*

4:00 M11 **430.20** RNA sequencing of posterior cingulate astrocytes in Alzheimer's patients reveals altered expression of immunity genes. W. S. LIANG*; J. ALDRICH; A. KURDOGLU; L. PHILLIPS; G. SERRANO; D. W. CRAIG; T. G. BEACH; J. VALLA; E. M. REIMAN. *Translational Genomics, Translational Genomics Res. Inst., Banner Sun Hlth. Res. Inst., Midwestern Univ., Banner Alzheimer's Inst.*

1:00 M12 **430.21** Single population expression profile analysis of hippocampal CA1 pyramidal neurons in an established murine model of Down syndrome (DS) and Alzheimer's disease (AD). M. J. ALLDRED*; S. H. LEE; E. PETKOVA; S. D. GINSBERG. *Nathan Kline Inst., New York Univ. Langone Med. Ctr., Nathan Kline Inst., Nathan Kline Inst., New York Univ. Langone Med. Ctr., New York Univ. Langone Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 M13 **430.22** genes related to neuronal activation and apoptosis are differentially expressed in vulnerable brain regions in young 5xFAD transgenic mice. S. *Univ. of Tennessee Hlth. Sci. Ctr.*

POSTER

431. Parkinson's Disease: Human Studies

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 M14 **431.01** Angiotensin II type 1 receptor accumulates within nuclei of dopaminergic neurons in nigrosome 1, suggesting a role for nuclear oxidative stress in Parkinson's disease. W. ZAWADA*; R. E. MRAK; J. BIEDERMANN; Q. D. PALMER; O. ABOUD; S. T. GRIFFIN. *Univ. of Arkansas For Med. Sci., Univ. of Toledo, Central Arkansas Veterans Hlth. Syst.*

2:00 M15 **431.02** A role for non-dominant motor area in movement planning: Deficits in Parkinson's disease (PD). H. B. MEZIANE; C. MOISELLO; D. BLANCO; J. LIN; B. PERFETTI; A. DI ROCCO; M. F. GHILARDI*. *CUNY, Univ. "G. d'Annunzio", NYU Sch. of Med.*

3:00 M16 **431.03** Performing a reaching task induces frequency-specific changes in the resting state EEG: Insights from Parkinson's disease. C. MOISELLO*; H. B. MEZIANE; D. BLANCO; J. LIN; A. LOGGINI; A. DI ROCCO; M. F. GHILARDI. *CCNY, Univ. of Genova, NYU Sch. of Med.*

4:00 M17 **431.04** Measuring perceived and performance-based executive dysfunction in Parkinson's disease. K. LANNI; J. ROSS; C. HIGGINSON; E. DRESSLER; K. A. SIGVARDT*; L. ZHANG; N. MALHADO-CHANG; E. DISBROW. *VA Northern California Hlth. Care Syst., UC Davis, VA Northern California Hlth. Care Syst., Loyola Univ., Univ. California - Davis, Dept. of Neurol., UC Davis, UCSF.*

1:00 M18 **431.05** Impaired motor preparation under conditions of response uncertainty in Parkinson's disease. E. DRESSLER; A. ARAVINDAKSHAN; J. ROSS; K. SIGVARDT; L. ZHANG; N. MALHADO-CHANG; E. A. DISBROW*. *UC Davis, VA Northern California Hlth. Care Syst., UC Davis, UC Davis, UC Davis, UCSF.*

2:00 N1 **431.06** Effect of action observation on bradykinesia assessment. S. E. COOPER*. *Cleveland Clin. Fndn.*

3:00 N2 **431.07** The Strength-Dexterity test can detect differences in dynamic control of fingertip forces between individuals with Parkinson's disease and non-disabled older adults. N. KO*; E. L. LAWRENCE; S. DAYANIDHI; W. HU; A. DICONTI; J. LERNER; C. WINSTEIN; B. FISHER; P. REQUEJO; F. J. VALERO-CUEVAS. *USC.*

4:00 N3-DP3 **431.08** EEG abnormalities in patients with Parkinson's disease during online grasp adaptation. J. R. LUKOS*; S. A. HILLYARD; E. J. KAESTNER; M. E. HERNANDEZ; J. SNIDER; E. TUNIK; E. HALGREN; H. POIZNER. *Army Res. Lab., Unversity of California, San Diego, Unversity of California, San Diego, Univ. of Med. and Dent. of New Jersey.*

1:00 N4 **431.09** Contralateral and ipsilateral effect of STN DBS on motor performance in Parkinson's disease. C. DUVAL*; J. DANEAULT; B. CARIGNAN; A. F. SADIKOT. *Univ. du Québec À Montréal, Ctr. de Recherche Inst. Universitaire de Gériatrie de Montréal, McGill Univ., Univ. du Québec à Montréal.*

2:00 N5 **431.10** ▲ Animal-naming in patients with Parkinson's disease. Y. ALAMRI*; M. MACASKILL; D. MYALL; J. DALRYMPLE-ALFORD; T. ANDERSON. *New Zealand Brain Res. Inst., Univ. of Otago, Univ. of Canterbury, Christchurch Publ. Hosp.*

3:00 N6 **431.11** Comparing spatial and temporal assimilation in a bimanual diadochokinesis task in Parkinson's and Huntington's disease. J. DANEAULT*; B. CARIGNAN; A. F. SADIKOT; C. DUVAL. *McGill Univ., Univ. du Québec à Montréal.*

4:00 N7 **431.12** Striatal and insular dopamine dysfunction are interrelated and disrupt cognitive processing in Parkinson's disease. L. CHRISTOPHER*; C. MARRAS; S. DUFF-CANNING; Y. KOSHIMORI; A. E. LANG; S. HOULE; A. STRAFELLA. *PET Imaging Centre, Ctr. For Addiction and Mental Health, Univ. of Toront, Toronto Western Hosp. (Movement Disorders Centre) & Res. Inst. (Division of Brain, Imaging and Behavior - Systems Neuroscience, BIB-SN), UHN, Univ. of Toronto.*

1:00 N8-DP5 **431.13** Altered gait patterns in future Parkinson's fallers revealed by performance of a secondary motor task. G. KERR*; M. COLE; J. WOOD; P. SILBURN. *Queensland Univ. Technol., Australian Catholic university, Queensland Univ. of Technol., Univ. of Queensland.*

2:00 N9 **431.14** Repetitive finger movement performance differs between Parkinson's disease and atypical Parkinsonian syndromes. E. L. STEGEMOLLER*; M. D. TILLMAN; N. MCFARLAND; S. SUBRAMONY; M. S. OKUN; C. J. HASS. *Univ. of Florida.*

3:00 N10 **431.15** Motor symptom subgroups in Parkinson's disease: Cognitive impairment and structural brain changes. D. PUTCHA*; A. JAYWANT; R. S. ROSS; A. CRONIN-GOLOMB; C. E. STERN. *Boston University, Ctr. For Memory and Brain, Boston Univ.*

4:00 N11 **431.16** Spared and impaired aspects of attention in Parkinson's disease: Distractor vulnerability correlates with lower cortical cholinergic innervation. K. KIM*; T. WU; N. SYED; M. MüLLER; N. BOHNEN; M. SARTER; C. LUSTIG. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Neurol. Service and GRECC, VAAAHS.*

1:00 N12 **431.17** Alteration of corticostriatal connectivity in impulse control behaviors in Parkinson's disease. E. YOON; Y. KIM*; J. LEE; I. SONG; B. JEON. *Seoul Natl. Univ. Col. of Med., Seoul Natl. Univ. Boramae Med. Cener, Seoul Natl. Univ. Boramae Med. Ctr., Seoul Nation Univ. Hosp., Seoul Natl. Univ. Hosp.*

2:00 N13 **431.18** Dopaminergic neurotransmission during gambling in Parkinson's disease with and without pathological gambling. M. B. CALLESEN; K. V. HANSEN; A. GJEDDE; J. LINNET; A. MOLLER*. *PET centre & CFIN, Aarhus Univ. Hosp., Neurosci. and Pharmacol.*

3:00 N14 **431.19** Does reduced brainstem ability to integrate anticipatory postural adjustments with stepping movements underlie freezing of gait in Parkinson's disease? J. NONNEKES; A. C. H. GEURTS; L. B. OUDE NIJHUIS; K. VAN GEEL; A. H. SNIJDERS; B. R. BLOEM; V. WEERDESTEYN*. *Radboud Univ. Med. Ctr., Radboud Univ. Med. Ctr.*

4:00 N15 **431.20** Paradoxical effect of dopamine replacement therapy on memory in early Parkinson's disease: Relationship to side of motor onset. B. HANNA-PLADDY*; R. PAHWA; K. LYONS. *Emory Univ. Sch. Med., Univ. of Kansas Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 N16 **431.21** Neural correlates of cognitive interference and response switching in mild Parkinson disease. T. SCHULTE*; E. V. SULLIVAN; A. PFEFFERBAUM; N. C. HUANG; E. M. MULLER-OEHRING. *SRI Intl., Stanford Univ. Sch. of Med., Valley Parkinson Clin.*

2:00 N17 **431.22** Impulsivity in Parkinson disease. I. R. PUNEKAR*; M. A. BURACK; J. W. MINK. *Univ. of Rochester.*

3:00 N18 **431.23** ● Reproducibility and validation of standardized handwriting tasks. E. J. SMITS*; A. J. TOLONEN; L. CLUITMANS; M. VAN GILS; B. A. CONWAY; R. C. ZIETSMA; N. M. MAURITS. *Univ. Med. Ctr. Groningen, VTT Tech. Res. Ctr. of Finland, Univ. of Strathclyde, Manus Neurodynamica Ltd.*

POSTER

432. Parkinson's Disease: Mechanisms of Neuroprotection

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 O1 **432.01** Neuroprotection of dopaminergic neurons in Parkinson disease models by a second generation 6-aminoquinoxaline derivatives. G. LE DOUARON*; F. SCHMIDT; M. AMAR; H. KADAR; B. SÉON-MÉNIEL; L. FERRIÉ; D. TOUBOUL; A. BRUNELLE; P. P. MICHEL; R. RAISMAN-VOZARI; B. FIGADÈRE. *INSERM UMR 975 (ex U679) - CNRS UMR 7225 - CHU Pitié-Salpêtrière Ctr. De Reche, CNRS-UMR 8076 BiOCIS, Univ. Paris-Sud, INSERM UMR 975 - CNRS UMR 7225 – CRICM, CHU Pitié-Salpêtrière, Inst. de Chimie des Substances Naturelles, CNRS UPR 2301, CNRS-UMR 8076 BiOCIS, Univ. Paris-Sud.*

2:00 O2 **432.02** Pharmacological stimulation of sigma-1 receptors has neurorestorative effects in experimental parkinsonism. V. FRANCARDO*; F. BEZ; H. NISSBRANDT; T. WIELOCH; K. RUSCHER; M. A. CENCI. *Lund Univ., The Sahlgrenska Academy, Univ. of Gothenburg, Lund Univ.*

3:00 O3 **432.03** DNSP-11 is protective in the MPP+ and TaClo models of parkinson's disease. C. M. FOX*; S. HALASZ; R. STOWELL. *Moravian Col.*

4:00 O4 **432.04** Localized neurotrophin delivery across the blood-brain barrier using focused ultrasound and microbubbles. O. O. OLUMOLADE*; G. SAMIOTAKI; S. WANG; E. E. KONOFAGOU. *Columbia Univ., Columbia Univ.*

1:00 O5 **432.05** ▲ Effects of different protocols of physical exercise on markers mitochondrial biogenesis in animals induced to parkinson disease. T. TUON*; C. PAGANINI; P. SOARES; C. TROMM; B. POZZI; C. SOUZA; J. QUEVEDO; R. PINHO. *Univ. Do Extremo Sul Catarinense - UNESC, Unesc.*

2:00 O6 **432.06** Transplantation of fetal dopamine neurons reduces expression of tyrosine hydroxylase-positive cells in the striatum of a non-human primate model of Parkinson's disease. A. BUBAK*; D. REDMOND; J. ELSWORTH; R. ROTH; T. COLLIER; B. BLANCHARD; J. SLADEK JR. *Univ. of Colorado-Denver Anschutz Med. Campus, Yale Univ., Yale Univ., Yale Univ. Sch. of Med., Michigan State Univ., Univ. of Colorado-Denver Anschutz Med. Campus.*

3:00 O7 **432.07** Antiapoptotic effects of 2,3-dichloro-5,8-dimethoxy-1,4-naphthoquinone on salsolinol-induced toxicity in human sh-sy5y cells: a mechanistic study. S. T. WHITE*; R. L. COPELAND, Jr. *Howard Univ.*

4:00 O8 **432.08** The beta-lactam antibiotic, ceftriaxone, attenuates tyrosine hydroxylase loss in a 6-hydroxydopamine parkinson's disease animal model. T. CHOTIBUT*; R. DAVIS; V. BONDADA; J. W. GEDDES; M. F. SALVATORE. *Louisiana State Univ. Hlth. Sci. Ctr., Univ. of Kentucky Col. of Med.*

1:00 O9 **432.09** Neuroprotective effects of fumarates against MPTP mouse model of Parkinson's disease. L. YANG; N. AMMAL KAIDERY; S. TARANNUM; N. SMIRNOVA; M. JIN; S. WAKADE; J. MORGAN; F. BEAL; R. RATAN; I. GAZARYAN; B. THOMAS*. *Med. Col. of Georgia, Burke Med. Res. Inst., Med. Col. of Georgia, Weill Med. Col. of Cornell Univ.*

2:00 O10 **432.10** ▲ Parkinson disease and pain: Bioaminergic modulation on nociceptive plasticity in hemiparkinsonian rats. R. L. PAGANO*; E. T. FONOFF; M. B. BERZUINO; A. P. CAMPOS. *Sírio-Libanês Hosp., Div. of Functional Neurosurgery, Dept. of Neurology, Univ. of Sao Paulo Med. Sch.*

3:00 O11 **432.11** Effects of rAAV-mediated knockdown of GD3 synthase (GD3S) on MPTP-induced neurodegeneration and executive dysfunction. P. MAITI*; M. P. MCDONALD; T. S. REX. *Univ. of Tennessee Hlth. Sci. Ctr., Vanderbilt Univ.*

4:00 O12 **432.12** Increased mitochondrial Complex IV activity by copper pre-treatment reduces MPP+-induced mitochondrial striatal damage. S. SAAVEDRA; S. MONTES*; L. L. HERNÁNDEZ; D. DELLA VALLE; M. OROZCO-IBARRA; C. RÍOS; J. GUEVARA; M. RUBIO-OSORNIO. *Natl. Inst. of Neurol. and Neurosurgery., Natl. Inst. Neurol. Neurosurg, Natl. Inst. of Neurol. and Neurosurg., Natl. Autonomous Univ. of México,.*

1:00 P1 **432.13** Oxidized DJ-1 affects cell protection under the oxidative stress condition through regulation of the MAP kinase signaling. I. KATO*; H. MURATA; H. MAITA; S. M. M. IGUCHI-ARIGA; H. ARIGA. *Hokkaido Univ., Hokkaido Univ.*

2:00 P2 **432.14** ▲ Epicatechin administration reduces circling behavior and dopamine depletion MPP^+-inducted in rat. E. GOROSTIETA-SALAS; R. OSORNIO*; S. MONTES; C. GÓMEZ; C. RÍOS; J. GUEVARA. *Natl. Inst. of Neurol. and Neurosurg., INNN, MVS., Natl. Inst. of Neurol. and Neurosurg., Natl. Autonomous Univ. of México, Natl. Inst. of Neurol. and Neurosurg., Natl. Autonomous Univ. of México.*

3:00 P3 **432.15** Cortical and muscular improvement and alleviation of bradykinesia induced by eight weeks of interval training in patients with Parkinson's disease. J. MARUSIAK; K. A. KISIEL-SAJEWICZ*; A. JASKÓLSKA; J. MENCEL; E. ŻELIGOWSKA; R. ANDRZEJEWSKA; A. JASKÓLSKI. *Univ. Sch. of Physical Educ. In Wroclaw, Fac. of Physiotherapy.*

4:00 P4 **432.16** Chronic nicotine administration inhibits cell proliferation in the subventricular zone of 6-Hydroxydopamine lesioned rats. A. C. EQUIHUA*; J. R. GARCIA-MONTES; A. BORONAT; M. PALOMARES-RIVERO; D. MILLÁN-ALDACO; R. DRUCKER-COLIN; M. GUERRA-CRESPO. *Inst. De Fisiología Celular, UNAM.*

1:00 P5 **432.17** ● Peripheral administration of brain-permeant dominant negative TNF inhibitor XPro1595 in a rat model of Parkinson's disease. M. G. TANSEY*; C. J. BARNUM; J. CHANG; J. CHUNG; X. CHEN; R. J. TESI. *Emory Univ. Sch. of Med., FPRT Bio.*

2:00 P6 **432.18** Optimizing NTS-Polyplex as a tool for gene transfer to cultured dopamine neurons. D. HERNANDEZ-BALTAZAR; D. MARTINEZ-FONG; L. TRUDEAU*. *Ctr. de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional (CINVESTAV-IPN), Univ. Montreal Fac Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 P7 **432.19** Memantine preferentially inhibits extrasynaptic over synaptic NMDA currents in rat substantia nigra dopamine neurons. Y. WU; S. W. JOHNSON*. *Oregon Hlth. & Sci. Univ., Portland VA Med. Ctr.*

4:00 P8 **432.20** The PACAP-regulated gene selenoprotein T is involved in the protection of catecholaminergic neurons and its absence leads to a Parkinsonism-like phenotype. L. BOUKHZAR; A. CHAGRAOUI; D. CARTIER; M. CASTEX; A. FALLUEL-MOREL; M. ERRAMI; I. LIHRMANN; Y. ANOUAR*. *INSERM U982, Abdelmalek Esaadi Univ.*

1:00 P9 **432.21** Magnolol against 6-hydroxydopamine-induced loss of tyrosine hydroxylase involve map-kinase signaling pathways. Q. PENG*; K. YUNG. *Biol. Department, Hong Kong Baptist Univ.*

2:00 P10 **432.22** The C-terminal domain of tetanus toxin prevents inflammatory process occurrence and enhances the motor asymmetry in rats with dopaminergic lesion. A. SÁNCHEZ GONZÁLEZ*; P. DE LA CRUZ; L. MENDIETA; A. CANDALIJA; J. AGUILERA; D. LI Mon. *Lab. De Neurofarmacología/Benemerita Univ. Autonoma De Puebla, Benemerita Univ. Autonoma de Puebla, Univ. of Pittsburgh, Univ. Autonoma de Barcelona.*

3:00 P11 **432.23** Physiologically relevant oxy-radical formation of neuromelanin by photostimulation: Effects of iron and calcium. D. HEDGES*; N. D. SCHILATY; W. BADAL; C. E. MORRISON; R. K. WATT; S. STEFFENSEN. *Brigham Young Univ.*

4:00 P12 **432.24** Exercise on running wheels reduces α-synuclein aggregation and improves motor and cognitive function in a transgenic mouse model of Parkinson's disease. W. ZHOU*; J. CUMMISKEY; C. R. FREED. *Univ. of Colorado Denver, Univ. of Colorado Denver.*

1:00 P13 **432.25** Increase in intracellular magnesium concentration has protective effect in MPP^+ model of Parkinson's disease in PC12 cells. Y. SHINDO*; R. YAMANAKA; K. SUZUKI; K. HOTTA; K. OKA. *Keio Univ., Keio Univ.*

POSTER

433. Huntington's Disease: Mechanisms II

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 P14 **433.01** Preconditioning of mesenchymal stem cells by lithium and valproic acid prior to intranasal delivery improves motor functions in the N171-82Q mouse model of Huntington's disease. G. R. LINARES*; C. CHIU; L. TSAI; D. CHUANG. *NIH, Natl. Taiwan Univ.*

2:00 P15 **433.02** A role for the microtubule associated protein tau protein in the pathogenesis of Huntington's disease. R. VUONO*; S. E. WNDER-RHODES; R. A. BARKER. *Univ. of Cambridge.*

3:00 P16 **433.03** Hyperexcitability in Huntington's disease skeletal muscle caused by chloride and potassium channel dysfunction. A. A. VOSS*; C. W. WATERS; G. VARUZHANYAN; R. J. TALMADGE. *California State Polytechnic University, Pomona.*

4:00 P17 **433.04** Genomic landscape of transcriptional and epigenetic dysregulation in early onset polyglutamine disease. A. BARCO; D. M. GUIRETTI; J. P. LOPEZ-ATALAYA; L. M. VALOR*. *Inst. De Neurociencias (UMH-CSIC).*

1:00 P18 **433.05** White matter abnormalities in Hdh250Q mutant huntingtin knock-in mice. J. JIN*; A. LANGSETH; M. TAO; Q. PENG; S. KANG; M. JIANG; Z. GUO; J. C. TRONCOSO; C. A. ROSS; D. BERGLES; W. DUAN. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ.*

2:00 Q1 **433.06** Class IIa HDAC inhibitors as a therapy for Huntington's disease. O. AZIZ; C. A. LUCKHURST; D. YATES; K. L. MATTHEWS; M. TESSARI; S. WILKINSON; I. GOWERS; I. BOOGAARD; J. VANN; G. CREIGHTON-GUTTERIDGE; R. WILLIAMS; D. ALLCOCK; R. BURLI; P. BRECCIA; A. J. STOTT; S. D. PENROSE; M. WALL; M. LAMERS; R. JARVIS; L. STONES; A. F. HAUGHAN; H. MCNEIL; D. FISCHER; G. MCALLISTER; D. MACDONALD; M. MAILLARD; M. BECONI; V. BEAUMONT; I. MUNOZ-SANJUAN; C. DOMINGUEZ*. *BioFocus, Galapagos, BioFocus, CHDI Managment Inc.*

3:00 Q2 **433.07** Non-coding RNA pathways in Huntington's disease. A. HOSS; B. L. WOLOZIN*; R. MYERS. *Boston Univ. Schl Med., Boston Univ. Schl Med., Boston Univ. Sch. of Med.*

POSTER

434. Motor Neuron Disease: Mechanisms II

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 Q3 **434.01** Identifying the genetic and molecular mechanisms of smn-1 synaptic defects. M. DIMITRIADI*; G. KALLOO; K. NGUYEN; D. HALL; A. HART. *Brown Univ., Albert Einstein Col. of Med.*

2:00 Q4 **434.02** Reduced calreticulin levels link endoplasmic reticulum stress and fas-triggered cell death in motoneurons vulnerable to amyotrophic lateral sclerosis. B. PETTMANN*; N. BERNARD; C. PELLEGRINO; C. E. HENDERSON; C. RAOUL. *INSERM - INMED, Fac. of Biol. and Medicine, Univ. of Lausanne, Ctr. for Motor Neuron Biol. and Disease, Columbia Univ., The Neurosci. Inst. of Montpellier, Inserm UMR1051, St. Eloi Hosp.*

3:00 Q5 **434.03** Genetic ablation of IP3 receptor 2 decreases survival of ALS mice and increases cytokine expression. K. STAATS*; S. HUMBLET-BARON; A. ABREU-BENTO; C. HISATSUNE; K. MIKOSHIBA; A. LISTON; W. ROBBERECHT; L. VAN DEN BOSCH. *Vesalius Res. Center, VIB, KU Leuven, KU Leuven, VIB, RIKEN, BSI.*

4:00 Q6 **434.04** Exacerbated spinal neuronal activity precedes lumbar A-motoneuron degeneration in transgenic SOD H46R and G93A rats: a role of AMPA receptor. M. HRUSKA-PLOCHAN; O. PLATOSHYN; J. RAVITS; M. MARSALA*. *UCSD, UCSD.*

1:00 Q7 **434.05** TAR DNA-binding protein-43 localization and function are coupled to mitochondrial physiology. J. J. GRAY*; H. M. WILKINS; D. A. LINSEMAN. *Univ. of Denver, Dept. of Veteran's Affairs.*

2:00 Q8 **434.06** Do ineffective treatment strategies in ALS relate to differences in the blood-CNS barrier impairment in humans versus an animal model? S. N. GARBUZOVA-DAVIS*; P. R. SANBERG. *Univ. South Florida, Univ. of South Florida.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 Q9 **434.07** TDP-43 mislocalization, formation of p62 foci and NFKB activation triggered by ALS-linked C9ORF72 expansion repeats. A. AYOUAZ*; D. PHANEUF; J. KRIZ; J. JULIEN. *Univ. Laval CHUQ, Univ. Laval -centre de recherche CHU de Québec, Univ. Laval - centre de recherche CHU de Québec.*

4:00 Q10 **434.08** Implication of system xc- and microglial glutamate in amyotrophic lateral sclerosis (ALS) mouse models. P. MESCI; S. ZAIDI; S. MILLECAMPS; C. S. LOBSIGER; H. SATO; M. MALLAT; S. BOILLEE*. *INSERM U975/ UPMC/ CNRS/ ICM, Yamagata Univ.*

1:00 Q11 **434.09** Involvement of plc and erk pathways in spinal muscular atrophy astrocytes. T. N. PATITUCCI*; J. V. MCGIVERN; J. A. NORD; A. K. SMITH; M. E. BARABAS; C. L. STUCKY; A. D. EBERT. *Med. Col. of Wisconsin.*

2:00 Q12 **434.10** The survival of motor neuron protein in axonal mRNA localization and transport in spinal motor neurons. C. FALLINI*; P. DONLIN-ASP; J. P. ROUANET; G. J. BASSELL; W. ROSSOLL. *UMASS Med. Sch., Emory Univ.*

3:00 Q13 **434.11** FUS regulates transcription termination through binding to nascent RNA. A. MASUDA; T. OKUNO; T. OKAMOTO; K. OHNO*. *Nagoya Univ. Grad. Sch. of Med., Nagoya Univ. Grad Sch. Med.*

4:00 Q14 **434.12** Novel mutation of HNRNPA1 in ALS and its proteinopathy. J. YAN; K. B. AHMETI; N. A. SIDDIQUE; H. DENG*; H. ZHAI; F. FECTO; L. M. KINSLEY; Y. YANG; T. SIDDIQUE. *Northwestern Univ. Feinberg Sch. of Med.*

1:00 Q15 **434.13** Sigma-1 receptor mutation in Amyotrophic lateral sclerosis causes neuronal inclusions of TDP-43. K. FUKUNAGA*; H. TAGASHIRA; N. SHIODA. *Tohoku Univ. Grad Sch. Pharm Sci.*

2:00 Q16 **434.14** Humoral basis of neuroinflammation in amyotrophic lateral sclerosis. P. R. ANDJUS*; M. MILOŠEVIĆ; M. STENOVEC; M. KREFT; Z. STEVIĆ; R. ZOREC. *Univ. of Belgrade, Inst. of Pathophysiology, Univ. of Ljubljana, Med. Fac., Dept. of Biology, Univ. of Ljubljana, Biotechnical Fac., Inst. of Neurology, Clin. Ctr. of Serbia.*

3:00 Q17 **434.15** Astrocytes carrying an Amyotrophic Lateral Sclerosis-linked mutation in Fused in Sarcoma (FUS) trigger degeneration of wild-type motor neurons. A. T. KIA*; K. KRISHNAMURTHY; A. BOGUSH; D. TROTTI; P. PASINELLI. *Thomas Jefferson Univ.*

4:00 Q18 **434.16** Neuronal toxicity of the ALS-linked intronic GGGGCC repeat expansions of the C9ORF72 gene. W. TAN*; X. WEN; D. TROTTI; P. PASINELLI. *Farber Inst. For Neurosci.*

1:00 R1 **434.17** PGC-1α is a sex-dependent disease modifier of human and experimental amyotrophic lateral sclerosis in part via Vegf-A. P. WEYDT*; J. ESCHBACH; B. SCHWALENSTÖCKER; S. SOYAL; T. MEYER; H. BAYER; D. WIESNER; C. AKIMOTO; A. NILSSON; A. BIRVE; L. DUPUIS; K. DANZER; P. M. ANDERSEN; A. C. LUDOLPH; W. PATSCH; A. WITTING. *Ulm Univ., Paracelsus Med. Univ., Charite, Umea Univ., INSERM.*

2:00 R2 **434.18** Defective transport of acetylCoA into the ER lumen leads to defects of the immune and nervous system as well as increased propensity to malignancies in the mouse. Y. PENG*; M. LI; B. CLARKSON; M. PEHAR; R. SULLIVAN; M. SANDOR; L. PUGLIELLI. *Univ. of Wisconsin, VAH-GRECC 11G, 2500 Overlook Terrace, Madison, WI 53705.*

3:00 R3 **434.19** Generation and characterization of a zebrafish C9ORF72 ALS model. S. BOEYNAEMS; A. BENTO-ABREU; M. TIMMERS; P. VAN DAMME; L. M. VAN DEN BOSCH*; W. ROBBERECHT. *Lab. of Neurobiology, Vesalius Res. Center, VIB, Leuven, Belgium, Exptl. Neurol. (Department of Neurosciences) and Leuven Res. Inst. for Neurosci. and Dis. (LIND), Univ. of Leuven (KU Leuven), Leuven, Belgium, Neurology, Univ. Hosp. Leuven, Leuven, Belgium, Campus Gasthuisberg O/N4.*

4:00 R4 **434.20** Motor neuron specific translational profiling in a transgenic mouse model of ALS. B. ZHAO*; E. ROGAEVA; L. ZINMAN; J. KEITH; M. HEIMAN; J. DOUGHERTY; J. ROBERTSON. *Univ. of Toronto, Ctr. for Res. in Neurodegenerative Dis., Sunnybrook Hlth. Sci. Ctr., MIT, Howard Hughes Med. Inst., Washington Univ. in St. Louis.*

1:00 R5 **434.21** S-glutathionylation of STIM1 underlies calcium signaling and cell secretion dysregulation in mutant SOD1 astrocytes. H. KAWAMATA*; S. BURSTEIN; G. MANFREDI. *Weill Med. Col. of Cornell Univ.*

POSTER

435. Motor Neuron Disease: Animal Models

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 R6 **435.01** MST1 functions as a key modulator of neurodegeneration in a mouse model of ALS. J. LEE*; J. SHIN; S. HWANG; B. GWAG; A. C. MCKEE; J. LEE; N. W. KOWALL; H. RYU; D. LIM; E. CHOI. *Korea Univ., GNT pharma, Boston Univ. Sch. of Med. and VA Boston Healthcare Syst., Korea Advanced Inst. of Sci. and Technol., Col. of Pharmacy, Korea Univ.*

2:00 R7 **435.02** C-terminal fragment of TDP-43 induce chronic motor neuron degeneration in mouse spinal cord. M. NAGAI*; A. KAWANAMI; T. NIHIRA; K. NISHIYAMA; Y. MIZUNO. *Kitasato Univ.*

3:00 R8 **435.03** TDP-43 aggregation produced by *in utero* electroporation and its properties in the mouse motor neurons. M. AKAMATSU*; H. TAKUMA; T. YAMASHITA; T. OKADA; K. ISHII; K. KEINO-MASU; S. KWAK; M. MASU; A. TAMAOKA. *Univ. of Tsukuba, Univ. of Tokyo, Univ. of Tsukuba.*

4:00 R9 **435.04** Early synaptic defects in a *Drosophila* model of FUS-related ALS. M. SHAHIDULLAH*; H. FEI; S. LEMARCHAND; J. ZHANG; M. DALVA; P. PASINELLI; I. B. LEVITAN. *Thomas Jefferson Univ.*

1:00 R10 **435.05** Identification of a novel axon guidance regulator. N. TORPE*; R. POCOCK. *BRIC.*

2:00 S1 **435.06** ● Behavioral baseline of the MPTP-treated common marmoset in preclinical studies on Parkinson's disease. K. ANDO*; T. INOUE; S. OHBA; T. ITOH. *Central Inst. for Exptl. Animals.*

3:00 S2 **435.07** Investigation of Oxr1 function as a novel regulator of oxidative stress-induced neurodegeneration. K. X. LIU*; B. EDWARDS; Y. WU; M. J. FINELLI; K. E. DAVIES; P. L. OLIVER. *Univ. of Oxford, MRC Functional Genomics Unit.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 S3 **435.08** Treatment of intestinal pseudo-obstruction prevents sudden death and gives rise to progressive neurodegeneration in mutant TDP-43 (A315T) mice. S. HERDEWYN; L. VAN DEN BOSCH; W. ROBBERECHT; P. VANDEN BERGHE; P. VAN DAMME*. *Neurol. Department, UZ Leuven, Lab. of Neurobiology, Vesalius Res. Center, VIB, Exptl. Neurol. (Department of Neurosciences) and Leuven Res. Inst. for Neurosci. and Dis. (LIND), Univ. of Leuven (KU Leuven), Translational Res. in Gastrointestinal Disorders and Leuven Res. Inst. for Neurosci. and Dis. (LIND), Univ. of Leuven (KU Leuven).*

1:00 S4 **435.09** Dual effects of Galectin-1 in amyotrophic lateral scrolosis. K. YUKO*; K. SAKUMI; Y. NAKABEPPU. *Divison of Neurofunctional Genomics, Med. Bioregulation Kyushu Univ.*

2:00 S5 **435.10** Pathological assessment of neuromuscular junction morphology, myofiber structure, and motorneuron retrograde transport systems in mice missing muscle-synthesized BDNF. A. E. TAISTO; M. R. MADIGAN; R. L. DANGREMOND; E. N. OTTEM*. *Northern Michigan Univ.*

3:00 S6 **435.11** Induction of ubiquilin differs between different SOD1 trangenic strains. T. BRANNSTROM*; S. SIRKKA. *Umea Univ.*

4:00 S7 **435.12** Motor neuron-derived osteopontin is an aggravation factor in the disease onset of ALS mice. M. NIIKURA; S. TANABE; Y. MORIWAKI; K. YAMANAKA; H. MISAWA*. *Keio Univ. Fac Pharm, Lab. for Motor Neuron Dis., RIKEN Brain Sci. Inst., Res. Inst. Envrn. Med. Nagoya Univ.*

1:00 S8 **435.13** H63D HFE shortens survival and accelerates disease progression in an ALS mouse model. W. NANDAR*; E. NEELY; Z. SIMMONS; J. R. CONNOR. *The Pennsylvania State University, , M. S. Hershey Med. Ctr., The Pennsylvania State University, , M. S. Hershey Med. Ctr.*

2:00 S9 **435.14** Generation and characterization of rat model for autosomal dominant hereditary spastic paraplegia (SPG6). F. WATANABE*. *660 Biomed. Res. Tower.*

3:00 S10 **435.15** Development and characterization of single-copy insertion *C. elegans* ALS models. J. YERSAK*; P. O'HERN; H. L. BENNETT; A. C. HART. *Brown Univ., Brown Univ.*

4:00 S11 **435.16** ● Brain and spinal cord histology over age in the Tar6/6 mouse model of familial Amyotrophic Lateral Sclerosis. R. WRONSKI; D. HAVAS; S. ROHLER; S. FLUNKERT; U. PANZENBOECK; B. HUTTER-PAIER*. *QPS-Austria Gmbh, Med. Univ. of Graz.*

1:00 S12 **435.17** The roles of TGF-β1 in the disease progression of ALS mice. F. ENDO; O. KOMINE; T. WYSS-CORAY; K. YAMANAKA*. *RIKEN Brain Sci. Inst., Stanford Univ. Sch. of Med., Res. Inst. of Envrn. Medicine, Nagoya Univ.*

2:00 S13 **435.18** Distinct roles for C3aR and CD88 in the disease progression of ALS in hSOD1G93A mice. J. LEE*; N. A. KAMARUZAMMAN; J. N. T. FUNG; T. M. WOODRUFF; P. G. NOAKES. *Sch. of Biomed. Sciences, the Univ. of Queensland, Queensland Brain Institute, the Univ. of Queensland.*

3:00 S14 **435.19** Ablation of neuronal TDP-43 develops FTLD/ALS phenotypes in mice. H. TAKEUCHI*; H. HORIUCHI; H. MIZOGUCHI; A. SUZUMURA; L. KWONG; J. TROJANOWSKI; V. LEE. *Res. Inst. of Envrn. Medicine, Nagoya Univ., Ctr. for Neurodegenerative Dis. Res., Res. Inst. of Envrn. Medicine, Nagoya Univ.*

4:00 S15 **435.20** Extracellular domain of neurotrophin receptor p75 as a novel biomarker for disease in the sod1g93a mouse model of amyotrophic lateral sclerosis. S. R. SHEPHEARD*; T. CHATAWAY; D. SCHULTZ; M. ROGERS; R. A. RUSH. *Flinders Univ., Flinders Med. Ctr.*

1:00 S16 **435.21** ▲ 3-dimensional reconstruction of cholinergic postsynaptic densities of mouse motoneurons in normal and ALS conditions. E. M. BAKER*; T. A. LOSENEGGER; J. R. KIM; T. A. MAVLYUTOV. *Univ. of Wisconsin.*

POSTER

436. Aging: Oxidative Stress

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 S17 **436.01** Dissociating oxidative damage and memory: NMDAR-redox regulation of memory during normal aging. A. KUMAR*; W. LEE; A. RANI; T. C. FOSTER. *Univ. of Florida, Univ. of Wisconsin.*

2:00 S18 **436.02** Is redox state, NAD(P)H, glutathione or ROS most important for control of aging and Alzheimer disease? G. J. BREWER*; D. GHOSH. *UC Irvine, Southern Illinois Univ. Sch. Med.*

3:00 T1 **436.03** Identification of an upstream cause of ROS in aging and Alzheimer's disease confirmed by additive redox treatments. D. GHOSH*; G. J. BREWER. *SIU Sch. of Med.*

4:00 T2 **436.04** Oxidative stress and testosterone in aging men and women: Role in Alzheimer's disease and neurodegeneration. R. L. CUNNINGHAM*; S. O'BRYANT; J. HALL; M. SINGH; R. BARBER. *Univ. North Texas Hlth. Sci. Ctr.*

1:00 T3 **436.05** Androgens decrease cell viability in oxidative stressed dopamine neurons through Caspase-1 mediated signaling. S. HOLMES*; C. SU; M. SINGH; R. CUNNINGHAM. *Univ. of North Texas Hlth. Sci. Ctr.*

2:00 T4 **436.06** Protective potential of 17-beta-estradiol on membrane linked functions in aging female rats: A behavioral, biochemical and ultrastructural study. P. KUMAR*; R. K. KALE; N. Z. BAQUER. *Jawaharlal Nehru Univ.*

3:00 T5 **436.07** Oxidative stress in aging is associated with brain demyelination: Some new evidence. X. CHEN*; J. PAREDES; T. M. PREUSS; J. G. HERNDON; J. K. RILLING. *Emory Univ., Emory Univ., Emory Univ., Emory Univ.*

4:00 T6 **436.08** Insulin signaling pathway is involved in the regulation of monoamine oxidase-A. Z. WEI*; S. GARG; B. CHAHARYN; D. D. MOUSSEAU. *Univ. of Saskatchewan.*

1:00 T7 **436.09** Increased DNA damage in brain is associated with reduced longevity in a novel obese rat model. J. K. SINHA*; S. GHOSH; U. SWAIN; M. RAGHUNATH. *Natl. Inst. of Nutr. (NIN), Jawaharlal Nehru Technological Univ. (JNTU).*

2:00 T8 **436.10** The improvement of cellular function in normal aging by melatonin is mediated by altering mitochondria bioenergetics. A. J. IDOWU*; Y. BAI. *Lagos State Univ. Col. of Med., Univ. of Texas Hlth. Sci. Ctr.*

3:00 T9 **436.11** Parp-1 inhibition prevents nad(h) hyperoxidation following severe hypoxia but is not neuroprotective. P. K. SHETTY AMPAR*; F. GALEFFI; D. TURNER. *Durham VA Med. Ctr. and Duke Univ. Med. Ctr. and.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 T10 **436.12** The cellular prion protein (PrPC) has an impact on the development of atherosclerosis in mice. G. MITTEREGGER-KRETZSCHMAR; M. SHAKARAMI; H. A. KRETZSCHMAR*. *Inst. Neuropathologie.*

1:00 T11 **436.13** NADH-quinone oxidoreductse 1 (NQO1): A potential therapeutic target for neurodegeneration and mitochondrial dysfunction. D. HYUN*; J. KIM; S. KIM. *Ewha Womans Univ.*

2:00 T12 **436.14** ● Antioxidant extracts from rosemary and spearmint improve learning, memory and reduce oxidative stress in samp8 mice. S. A. FARR*; M. L. NIEHOFF; M. A. CEDDIA; K. A. HERRILINGER; B. J. LEWIS; S. FENG; J. E. MORLEY. *St. Louis University/VA Med., St. Louis Univ. Sch. of Med., Kemin Foods LC, St. Louis Univ. Sch. of Med.*

POSTER

437. Dystonia

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 T13 **437.01** Functional characterization of torsinA variant forms. J. HETTICH*; S. RYAN; O. NORBERTO DE SOUZA; L. SARAIV; S. TSAI; N. A. ATAI; X. ZHANG; C. C. DA HORA; R. KOTHARY; N. CALAKOS; E. SNAPP; M. ERICSSON; K. GRUNDMANN; X. O. BREAKEFIELD; F. C. NERY. *Dept. of Med. Genet. Univ. of Tuebingen, Mol. Neurogenetics Unit, Neurosci. Center, Dept. of Neurol. and Ctr. for Mol. Imaging Research, Massachusetts Gen. Hosp. and Program in Neuroscience, Harvard Med. Sch., Ottawa Hosp. Res. Inst., Bioinformatic laboratory, Modeling and Simulation of Biosystems-LABIO, Ctr. for Translational Neuroscience, Duke Univ. Med. Ctr., Dept. of Anat. and Structural Biology, Albert Einstein Col. of Med. of Yeshiva Univ., Dept. of Cell Biology, Harvard Med. Sch.*

2:00 T14 **437.02** A mouse model of tic disorder. V. M. POGORELOV*; H. R. SMITH; G. F. BUCHANAN; C. PITTENGER. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., VA Med. Ctr., Yale Univ. Sch. of Medicine, Child Study Center, Interdepartmental Neurosci. Program.*

3:00 T15 **437.03** DYT1 Dystonia mutant protein retains partial function *in vivo.* C. E. WEISHEIT*; C. LIANG; W. T. DAUER. *Univ. of Michigan.*

4:00 T16 **437.04** Diffusion tensor imaging reveals cerebellar, thalamic and global white matter abnormalities in a rat model of Kernicterus. D. REISINGER; J. ZHANG; M. SCHAFFHAUSER; M. BUELOW; J. MARX; P. CARR; M. PORAMBO; M. V. JOHNSTON; A. FATEMI*. *Kennedy Krieger Inst., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

1:00 T17 **437.05** Neuromagnetic correlates of self-paced and rhythmic movements in focal hand dystonia. A. S. PILLAI*; R. PAINE; S. JIN; M. HALLETT. *NIH, Seoul Natl. Univ. Hosp.*

2:00 T18 **437.06** Vocal changes in dystonic rats are associated with abnormal breathing rhythm but not lowered lung pressure. M. S. LEDOUX*; Y. ZHAO; T. RIEDE. *Univ. Tennessee, Univ. of Utah.*

3:00 U1 **437.07** Dopamine receptor and $G\alpha_{olf}$ expression in DYT1 dystonia mouse models. L. ZHANG*; D. MCCARTHY; N. SHARMA; P. BHIDE. *Florida State Univ., Dept. of Neurology, Massachusetts Gen. Hosp. and Harvard Med. Sch.*

4:00 U2 **437.08** Developmental deficiency of Tor1A in central nervous system leads to selective cell-autonomous neurodegeneration in the motor system. C. LIANG*; W. T. DAUER. *Univ. of Michigan Med. Sch.*

1:00 U3 **437.09** DYT6 dystonia-related mutations in THAP1 affect the association with the transcriptional co-activator, HCF-1. E. J. HERGENREDER; R. MODA; M. TURMAN; C. SENGEL; R. SOBERMAN; N. SHARMA; C. BRAGG*. *Harvard Med. Sch.*

2:00 U4 **437.10** ADX48621 the novel negative allosteric modulator (NAM) of metabotropic glutamate (mGluR5) receptor rescues electrophysiological alterations in DYT1 dystonia. G. SCIAMANNA*; G. MANDOLESI; G. DIXON; S. POLI; A. PISANI. *Fondazione Santa Lucia, Addex Therapeut., Univ. di Roma Tor Vergata.*

3:00 U5-DP6 **437.11** Cerebellar initiation of dystonia in genetic animals models of DYT1, DYT11, and DYT12. R. FREMONT*; A. TEWARI; K. KHODAKHAH. *Albert Einstein Col. of Med.*

4:00 U6 **437.12** ● Muscarinic modulation of striatal dopamine efflux in a cholinergic-specific tor1a knockout mouse model of dystonia. K. L. ESKOW JAUNARAJS*; C. N. THOMPSON; Y. LI; D. G. STANDAERT. *Univ. of Alabama-Birmingham, Univ. of Florida.*

1:00 U7 **437.13** Persistently abnormal neuronal discharge activity in the basal ganglia and thalamus in spontaneously recovered dystonic rats. D. KUMBHARE; M. S. BARON*; K. CHANIARY. *Virginia Commonwealth Univ., Veterans Affairs Med. Ctr., VCUMC/VCUHS, Veterans Affair Med. Ctr., Virginia Commonwealth Univ.*

2:00 U8 **437.14** Transient dystonia correlate with parkinsonism, striatal dopamine reserve, and nigral damage after MPTP in nonhuman primates. S. A. NORRIS*; S. D. TABBAL; L. TIAN; S. K. LOFTIN; J. S. PERLMUTTER. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

3:00 U9 **437.15** Mapping dysfunctional brain activity in adults with focal dystonia using ALE meta-analysis. E. GOLFINOPOULOS*; F. H. GUENTHER. *Boston Univ.*

4:00 U10 **437.16** Lack of dystonia-associated protein torsinA in nerve terminals of central neurons. N. C. HARATA*; J. KOH; S. IWABUCHI. *Univ. Iowa Col. Med.*

1:00 U11 **437.17** Reduced arm kinaesthetic acuity in spasmodic dysphonia. Y. CHEN*; J. AMAN; J. KONCZAK; P. J. WATSON. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

2:00 U12 **437.18** Normal striatal dopamine D1-like receptor binding in primary focal dystonia. S. M. MOERLEIN*; M. KARIMI; T. VIDEEN; H. FLORES; J. PERLMUTTER. *Washington Univ., Washington Univ., Washington Unievrsity.*

3:00 U13 **437.19** Frequency of deep brain stimulation systematically affects cortical responses in childhood dystonia. N. H. BHANPURI*; M. BERTUCCO; J. C. NISHIDA; D. FERMAN; T. D. SANGER. *USC, USC, USC.*

4:00 U14 **437.20** Excessive phase-amplitude coupling in the motor cortex of dystonia patients with arm involvement. C. DE HEMPTINNE*; E. S. RYAPOLOVA-WEBB; J. L. OSTREM; N. B. GALIFIANAKIS; P. A. STARR. *Univ. of California San Francisco, Univ. of California San Francisco.*

1:00 U15 **437.21** Reduced Na+,K+ ATPase isoform α3 expression causes hyperactivity and altered anxiety levels in a mouse model for Rapid-onset Dystonia Parkinsonism. T. HOLM*; S. G. PEDERSEN; P. BØTTGER; A. HEUCK; P. NISSEN; K. LYKKE-HARTMANN. *Aarhus Univ., Aarhus Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

438. Ischemia: Cellular Mechanisms

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 U16 **438.01** Anoxic preconditioning and blockage of HIF hydroxylation differently attenuates ischemia-induced changes in intracellular calcium signaling in CA1 and CA3 hippocampal neurons. N. V. VOITENKO*; O. KOPACH; A. MAISTRENKO; I. LUSHNIKOVA; V. DOSENKO; G. SKIBO. *Bogomoletz Inst. of Physiol., Intl. Ctr. of Mol. Physiol.*

2:00 U17 **438.02** Alterations in proteins involved in signaling and barrier functions following chronic urinary bladder ischemia. A. S. WOLF-JOHNSTON*; M. SUNAGAWA; S. SHINDE; M. NOMIYA; N. SAWADA; K. ANDERSSON; T. HISAMITSU; L. BIRDER. *Univ. Pittsburgh, Showa Univ., Wake Forest Univ.*

3:00 U18 **438.03** Autophagy blocking increases OGD-induced mortality in cerebral cortical and hippocampal slices. D. PEREZ-RODRIGUEZ*; B. ANUNCIBAY-SOTO; I. L. LLORENTE; M. SANTOS-GALDIANO; N. DÍAZ-MORALES; E. FONT; C. C. PÉREZ-GARCÍA; A. FERNÁNDEZ-LÓPEZ. *Univ. De Leon, Inst. De Biomedicina, Univ. De Leon, Inst. De Biomedicina.*

4:00 V1 **438.04** Damage and recovery following white matter stroke: A key role for age. S. ROSENZWEIG*; W. MUI; M. R. YETZKE; M. E. REITMAN; S. T. CARMICHAEL. *Univ. of California, Los Angeles (UCLA).*

1:00 V2 **438.05** Expression and localization of IL-6 and PACAP receptor in mouse brain after global ischemia. T. NAKAMACHI*; N. KAGAMI; M. HORI; A. YOSHIKAWA; K. SUGIYAMA; N. IMAI; T. SEKI; S. ARATA; S. SHIODA. *Showa Univ., Showa Univ. Sch.of Med.*

2:00 V3 **438.06** ● The death gene BNIP3 regulates excessive autophagy by interacting with LC3 in delayed neuronal death in stroke. R. SHI*; S. ZHU; J. KONG. *Univ. of Manitoba, Univ. of Manitoba.*

3:00 V4 **438.07** Neuroprotection by acidosis revisited: Inhibition of Na+/H+ exchange prevents NMDA- and ischemia-induced neuronal death by suppressing superoxide production. S. WON*; A. M. BRENNAN-MINNELLI; T. I. LAM; Y. SHEN; A. V. SAVOS; C. HEFNER; Y. SHI; D. SUN; R. A. SWANSON. *UCSF and SFVAMC, Univ. of Pittsburgh.*

4:00 V5 **438.08** GPR3 protects neurons from apoptosis via Phosphatidylinositol 3-Kinase and mitogen-activated protein-kinase signaling pathway. S. TANAKA*; T. MIYAGI; I. HIDE; T. SEKI; N. SAKAI. *Hiroshima Univ. Sch. of Biomed. Sci.*

1:00 V6 **438.09** D609 mediated cell cycle arrest in microglia: Involvement of sphingomyelin synthase-2. A. GUSAIN*; J. F. HATCHER; U. V. WESLEY; R. J. DEMPSEY. *Univ. of Wisconsin, William S. Middleton Veterans Affairs Hosp.*

2:00 V7 **438.10** HIF-1a and Notch-1 collaborate to promote neuronal cell death in ischemic stroke. D. JO*; Y. CHENG; J. PARK; S. MANZANERO; S. BAIK; M. P. MATTSON; T. V. ARUMUGAM. *Sungkyunkwan Univ., Natl. Inst. on Aging Intramural Res. Program, The Univ. of Queensland.*

3:00 V8 **438.11** Anaphase-promoting complex and its activator Cdh1 are crucial for the maintenance of glucose metabolic balance of ischemic neurons *in vitro.* Y. ZHANG*; C. ZHANG. *Johns Hopkins Univ. Sch. of Med., Tongji Hospital, Tongji Med. College, Huazhong Univ. of Sci. and Technol.*

4:00 V9 **438.12** Optogenetic analysis of function and structure of parvalbumin neurons following transient global ischemia in mice. Y. XIE*; S. CHEN; T. H. MURPHY. *Univ. of British Columbia, Univ. of British Columbia.*

1:00 V10 **438.13** Sonic hedgehog controls polydendrocyte differentiation after focal cerebral ischemia. P. HONSA*; J. KRISKA; M. ANDEROVA. *2nd Med. Fac. Prague, Inst. of Exptl. Med.*

2:00 V11 **438.14** Reactive astrocytes express hyperpolarization-activated cyclic nucleotide-gated channels following brain ischemia. M. ANDEROVA*; P. HONSA; H. PIVONKOVA; V. RUSNAKOVA; L. HARANTOVA; D. DZAMBA; O. BUTENKO; M. KUBISTA. *Inst. Exper Med. ASCR, 2nd Med. Fac. Prague, Inst. of Biotech.*

3:00 V12 **438.15** The role of transglutaminase 2 in ischemic astrocytes. J. FEOLA*; Y. NUZBROKH; S. GUNDEMIR; G. JOHNSON. *Univ. of Rochester, Univ. of Rochester.*

4:00 W1 **438.16** Effect of global cerebral ischemia on neuronal and astrocytic mitochondria in brain. T. KRISTIAN; K. OWENS; J. H. PARK; R. CABATBAT; M. M. LIPINSKI*. *Univ. of Maryland Sch. of Med., Veterans Affairs Maryland Hlth. Ctr. Syst.*

1:00 W2 **438.17** MicroRNA-21 regulates apoptotic cell death of neuroprogenitor cells after ischemic stroke. X. LIU*; M. CHOPP; X. WANG; L. KARP; Z. ZHANG. *Henry Ford Hosp., Henry Ford Hosp., Henry Ford Hosp., Henry Ford hospital.*

2:00 W3 **438.18** ● Measurement of extracellular magnesium level in rat brain after ischemic stroke. Z. HUANG*; C. UNG; Z. FILIPOVIC; E. L. TROY; R. W. COLBURN; J. F. IACI; D. BUTTON; A. O. CAGGIANO; T. J. PARRY. *Acorda Therapeut.*

3:00 W4 **438.19** AMPA receptor activation and Ca^{2+} entry cause 'feed-forward' enhancement of glutamate release during ischemia in white matter. Z. YE*; D. HANSSEN; M. HAMNER; B. R. RANSOM. *Univ. Washington.*

4:00 W5 **438.20** Adenosine-mediated spreading depression is modulated by metabolic status. B. LINDQUIST*; C. W. SHUTTLEWORTH. *UNM Sch. of Med.*

1:00 W6 **438.21** Resistance of nigral dopaminergic neurons to hypoxic spreading depression-like depolarization. R. N. KARUNASINGHE*; J. LIPSKI. *Univ. of Auckland.*

2:00 W7 **438.22** Characterization of GABAA receptor activation during spreading depolarization in brain slices. I. AIBA*; C. W. SHUTTLEWORTH. *Univ. of New Mexico.*

POSTER

439. Ischemia: Pharmacologic Neuroprotection

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 W8 **439.01** ▲ Therapeutic effects of prothymosin alpha-derived small peptides in the stroke model induced by thrombosis and tPA-treatment. H. KONDO*. *Nagasaki Univ.*

2:00 W9 **439.02** Genetic deletion of Smad1 is protective following transient ischemic stroke. J. K. WONG*; L. CHEN; H. ZOU. *Icahn Sch. of Med. at Mount Sinai.*

3:00 W10 **439.03** ● Pharmacokinetics and toxicity of a neuroprotective cembranoid. P. FERCHMIN*; P. CATZ; A. FURIMSKY; K. O'LOUGHLIN; L. RAUSCH; C. GREEN; V. A. ETEROVIC. *Univ. Central Del Caribe, SRI Intl.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 W11 **439.04** kATP-channel opening up-regulates neuroprotective mitochondrial protein. S. YAMAMOTO*; M. THURA; S. KOIZUMI; H. IHARA; E. V. GOLANOV. *Hamamatsu Univ. Sch. Med., Wakayama Med. Univ., Feinstein Inst. for Med. Res.*

1:00 W12 **439.05** Pre-B-cell colony-enhancing factor protects against neuron death through regulation of mitochondrial morphology and biogenesis in the cerebral ischemia. X. WANG; H. LI; S. DING*. *Univ. of Missouri.*

2:00 W13 **439.06** Neuregulin 1 protects pyramidal neurons after ischemia by activating ErbB4 in parvalbumin-postive interneurons. Y. CHEN*; Q. ZHANG; D. HAN; Y. DONG; L. THIRI; D. W. BRANN; L. MEI. *Georgia Regents Univ.*

3:00 W14 **439.07** Delayed administration of bone marrow mesenchymal stem cell conditioned media significantly improves outcome after retinal ischemia in rats. J. C. DREIXLER*; J. N. POSTON; I. BALYASNIKOVA; A. R. SHAIKH; K. Y. TUPPER; S. M. CONWAY; M. M. MARCET; M. S. LESNIAK; S. ROTH. *Univ. Chicago.*

4:00 W15 **439.08** Preclinical development of D192935, a prophylactic neuroprotectant intended for use in patients at high risk of ischemic brain injury. F. BAHJAT; G. WEST; S. G. KOHAMA; C. GLYNN; S. L. STEVENS; D. DEANE; T. R. HOBBS; H. URBANSKI; L. RENNER; M. STENZEL-POORE*. *OHSU, Colorado Brain & Spine Institute, Swedish Med. Ctr., Oregon Natl. Primate Res. Ctr., Oregon Natl. Primate Res. Ctr., OHSU.*

1:00 W16 **439.09** Over expression of PKA (CβPKA) is neural protective after the global cerebral ischemia. H. ZHU; W. WEI; L. ZHANG; L. WANG*. *Georgia Regents Univ., Shanghai Jiaotong Univ., Georgia Regents Univ.*

2:00 W17 **439.10** ● ▲ Different effects of soy protein isolate and isoflavones on skilled ladder rung walking performance after stroke in adult male rats. A. N. KNAPP*; E. D. GRISLEY; N. HAND; W. J. BANZ; D. A. BUTTEIGER; D. G. WALLACE; J. L. CHEATWOOD. *SIU Sch. of Med., SIU Sch. of Med., SIUC, Solae, LLC, Northern Illinois Univ.*

3:00 W18 **439.11** Blockage of Connexin 43-forming gap junction channels protects against ischemic brain injury in a hypoxia/ischemia neonatal rat model. X. XU*; X. LI; G. DU; Z. MIAO; H. ZHAO. *Soochow Univ., The Second Affiliated Hosp. of Soochow Univ.*

4:00 X1 **439.12** Periodic 17β-estradiol pretreatment protects rat brain from cerebral ischemic damage via estrogen receptor-β. A. P. RAVAL*; R. BORGES-GARCIA; M. RACINE; W. JAVIER MORENO; M. PEREZ-PINZON; H. BRAMLETT. *Univ. of Miami, Univ. of California, Bruce W. Carte Dept. of Veterans Affairs Med. Center,.*

1:00 X2 **439.13** Disrupting SFK-mediated activation of pannexin-1 is neuroprotective in ischemia. N. L. WEILINGER*; J. BIALECKI; R. J. THOMPSON. *Hotchkiss Brain Inst., Hotchkiss Brain Inst.*

2:00 X3 **439.14** Region-specific effects of the oxygen and glucose deprivation model of ischaemia on SUMO pathway proteins in organotypic hippocampal slices. V. C. SILVEIRINHA*; G. J. STEPHENS; H. I. CIMAROSTI. *Univ. of Reading, Univ. of Reading.*

3:00 X4 **439.15** ● FTY720-induced suppression of circulating T cells is not associated with neuroprotection in experimental cerebral ischemia. M. TAUCHI*; M. TEJADA BONILLA; U. WEINZIERL; H. B. HUTTNER; S. SCHWAB; R. KOLLMAR. *Univ. Hosp. Erlangen, Univ. Hosp. Erlangen, Kurume Univ., Darmstadt Clin.*

4:00 X5 **439.16** Dopamine D1- and adenosine 2A-receptor antagonists have additive striatal neuroprotection in neonatal hypoxia-ischemia. B. WANG*; Z. YANG; J. LEE; J. ARMSTRONG; A. LARSEN; J. JAMROGOWICZ; E. KULIKOWICZ; L. MARTIN; R. KOEHLER. *Johns Hopkins Univ. Sch. of Med.*

1:00 X6 **439.17** Systemic hemin therapy attenuates blood-brain barrier disruption after experimental intracerebral hemorrhage. X. LU; J. CHEN-ROETLING; R. F. REGAN*. *Thomas Jefferson Univ., Thomas Jefferson Univ.*

2:00 X7 **439.18** Withanoside-iv is neuroprotective in a mouse model of ischemic stroke. A. RAGHAVAN*; Z. SHAH. *Univ. of Toledo.*

3:00 X8 **439.19** MMP-2 KO protected against injuries to the proteins of the cerebral microvascular basal lamina and tight junction after 1 h of ischemia and 23 h of reperfusion. A. LU*; Y. SUOFU; J. BRODERICK; J. CLARK. *Univ. of Cincinnati.*

4:00 X9 **439.20** Translating A_1 adenosine receptor agonist-induced torpor to therapeutic hypothermia. T. R. JINKA; V. M. COMBS; K. L. DREW*. *Univ. Michigan, Univ. Alaska.*

1:00 X10 **439.21** Neuroglobin, an endogenous neuroprotective factor in rats and arctic ground squirrel brain - A comparative study. S. BHOWMICK*; K. DREW. *Univ. of Alaska Fairbanks.*

2:00 X11 **439.22** Diet-induced ketosis protects against focal cerebral ischemia in aged rat. K. XU*; Y. ZHANG; Y. LUO; J. C. LAMANNA; M. A. PUCHOWICZ. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

3:00 X12 **439.23** Neuroprotective effects of G-protein-coupled estrogen receptor in cellular death induced by oxygen/glucose deprivation model. D. F. LOPES*; L. S. NOVAES; N. B. SANTOS; E. A. DUQUE; G. WIEZEL; C. SCAVONE; C. D. MUNHOZ. *Univ. De Sao Paulo.*

4:00 X13 **439.24** Therapeutic benefits of combined treatments of pharmacologically induced hypothermia plus thrombolysis after embolic stroke in mice. F. TIAN; L. WEI; Y. ZHAO; V. PECORAVO; S. YU*. *Emory Univ., Emory Univ.*

1:00 X14 **439.25** Mu opioid receptor activation attenuates potassium homeostasis dysfunction in the pre-bötzinger complex of the brainstem. K. DOBISZEWSKI; A. A. HILL*; A. GHALY; C. PRODAN. *New Jersey Inst. of Technol., Rutgers, The State Univ. of New Jersey, New Jersey Inst. of Technol.*

2:00 X15 **439.26** Sexually differential effects of TrkB signaling after neonatal hypoxia and ischemia. P. CENGIZ*; W. SUN; D. KINTNER; V. CHANANA; U. CIKLA; P. FERRAZZANO; R. SHAPIRO; J. LEVINE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

3:00 X16 **439.27** Nitric oxide selectively suppresses HCN1 mediated currents in native brainstem neurons. C. KOPP-SCHEINPFLUG*; I. D. FORSYTHE. *LMU Munich, Univ. of Leicester.*

● Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

440. Hypoxia and Ischemia: Stem Cells

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 X17 **440.01** Biopolymer hydrogels promote neural precursor cell survival as a transplanted matrix in stroke. P. MOSHAYEDI*; J. LAM; A. BERG; L. NIH; S. AZGHADI; W. LOWRY; T. SEGURA; S. CARMICHAEL. *Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles.*

2:00 X18 **440.02** GalR3 activation promotes adult neural stem cell survival in response to a diabetic milieu. S. MANSOURI; S. BARDE; H. ORTSÄTER; M. EWEIDA; V. DARSALIA; Å. SJÖHOLM; T. G. HOKFELT*; C. PATRONE. *Karolinska Institutet, Karolinska Inst., Södersjukhuset AB.*

3:00 Y1 **440.03** Intra-arterial delivery of mesenchymal stem cell protects brain in a rat model of stroke. P. BHATTACHARYA*; A. P. RAVAL; C. DONG; W. ZHAO; J. M. HARE; D. R. YAVAGAL. *Leonard M.Miller Sch. of Med., Leonard M.Miller Sch. of Med.*

4:00 Y2 **440.04** Differential distribution of G-CSF transduced human mesenchymal stem cells in stroke. A. J. NURMI*; T. HUHTALA; M. MURALIDHAR; A. KHARAZI; N. VARTIAINEN; L. TOLPPANEN. *Charles River Discovery Res. Services, Stemedica Cell Technologies, Inc.*

1:00 Y3 **440.05** Multimodal human neural stem cell-based brain repair for cerebral ischemia in a mouse model. J. LEE*; L. HUANG. *Tulane Univ. Sch. of Med.*

2:00 Y4 **440.06** Dual roles of iPS cell transplantation in an ischemic stroke model: Cell replacement and trophic factor delivery. M. J. CHAU*; S. YU; L. WEI. *Emory Univ.*

3:00 Y5 **440.07** Administration of human umbilical cord blood cells reduce hypoxic-ischemic brain injury in the neonatal rat. T. HATTORI*; Y. SATO; T. KONDO; Y. ICHINOHASHI; S. SUZUKI; M. YAMAMOTO; T. KOTANI; H. HIRATA; K. NAKANISHI; M. HAYAKAWA. *Nagoya Univ. Sch. of Med., Nagoya Univ. Hosp., Nagoya Univ. Grad. Sch. of Med., Nagoya Univ. Sch. of medicine, Nagoya Univ. Sch. of medicine, Inst. for Developmental Research, Aichi Human Service Ctr.*

4:00 Y6 **440.08** ▲ Intranasal delivery of bone marrow stem cells increases neurogenesis and angiogenesis after ischemic stroke of mice. Y. S. KIM*; M. CHAU; S. P. YU; L. WEI. *Emory Univ.*

1:00 Y7 **440.09** Intranasal administration of induced-pluripotent stem cell derived neural progenitors improves functional recovery following ischemic stroke in mice. T. C. DEVEAU*; K. YUENGLING; S. P. YU; L. WEI. *Emory Univ., Emory Univ.*

2:00 Y8 **440.10** Stimulation of CHR2 expressing grafted neural stem cells in experimental stroke model. M. DAADI*; S. LEE; B. BAJAR; M. LO; C. RAMAKRISHNAN; G. SUN; K. DEISSEROTH; G. STEINBERG. *Stanford Univ., Stanford Univ.*

3:00 Y9 **440.11** Effect of human bone marrow mesenchymal stem cells on behavioral outcome after intra-arterial infusion in MCAO rats. J. T. JOLKKONEN*; B. MITKARI; E. KERKELÄ; F. NITZSCHE; T. HUHTALA; K. KUPTSOVA; J. HUTTUNEN; J. NYSTEDT; M. KORHONEN. *Neurology, Univ. of Eastern Finland, Finnish Red Cross Blood Service, A.I. Virtanen Institute, Univ. of Eastern Finland.*

4:00 Y10 **440.12** ● Analysis of hematopoietic stem cells in long-term survived middle cerebral artery occluded stroke mice. X. REN*; H. HU; J. W. SIMPKINS. *West Virginia Univesity Robert C. Byrd Healthe Sci. Ctr.*

1:00 Z1 **440.13** NF-κB is critically involved in hematopoietic growth factor-induced synaptic network regeneration and angiogenesis in the peri-infarct cortex and functional recovery in chronic stroke. L. ZHAO*; L. CUI. *SUNY Upstate Med. Univ.*

2:00 Z2 **440.14** Ginkgo biloba (EGb 761) enhances neurogenesis after ischemic stroke. S. NADA; J. TULSULKAR; Z. A. SHAH*. *Univ. of Toledo Col. of Pharm. and Pharmaceut. Sci.*

POSTER

441. Multiple Sclerosis: Mechanisms and Therapeutic Perspectives

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 Z3 **441.01** Mitochondria as a target of neuroprotection caused by Interferon- β in experimental allergic encephalomyelitis. D. TRISLER*; V. K. C. NIMMAGADDA; C. T. BEVER, Jr; S. I. V. JUDGE; T. MAKAR. *Univ. Maryland Sch. Med., Veteran Affairs Med. Ctr., VA Multiple Sclerosis Ctr. of Excellence, EAST.*

2:00 Z4 **441.02** Dexamethasone treatment amieliorates the progression of experimental autoimmune encephalomyelitis symptoms but aggravates the neuroinflamation in C57BL/6 mice. N. B. DOS SANTOS; D. C. F. LOPES; L. S. NOVAES; E. A. DUQUE; G. WIEZEL; J. P. S. PERON; C. D. MUNHOZ*. *Univ. of São Paulo, Univ. of Sao Paulo.*

3:00 Z5 **441.03** Upregulation of voltage-gated calcium channels in astrocytes of a mouse model of multiple sclerosis produced by murine encephalomyelitis virus of Theiler. E. SOTO*; R. VEGA; N. RUBIO; A. ALMANZA; F. MERCADO; M. ARÉVALO; L. GARCIA-SEGURA. *Univ. Autonoma De Puebla, Univ. Autónoma de Puebla, Consejo Superior de Investigación Científica, Inst. Nacional de Psiquiatría "Ramón de la Fuente".*

4:00 Z6 **441.04** ● Glatiramer acetate guards against rapid memory decline during relapsing-remitting experimental autoimmune encephalomyelitis. P. LOPRESTI*. *Univ. of Illinois At Chicago.*

1:00 Z7 **441.05** Small molecule antagonist of prostaglandin E2 receptor ameliorates experimental autoimmune encephalomyelitis. F. C. IP*; Y. NG; W. YE; N. Y. IP. *Hong Kong Univ. Sci. & Tech., Hong Kong Univ. Sci. & Tech., HKUST Shenzhen Res. Inst., Jinan Univ., Jinan Univ.*

2:00 Z8 **441.06** Effectiveness of MSC therapeutic administration on rats affected by chronic experimental autoimmune encephalomyelitis. A. SCUTERI*; E. DONZELLI; R. RIGOLIO; M. MONFRINI; E. BALLARINI; A. CHIORAZZI; B. SALA; C. MEREGALLI; G. CAVALETTI; G. TREDICI. *Univ. Milan-Bicocca.*

3:00 Z9 **441.07** Deletion of signal transducer and activator of transcription 3 in myeloid cells confers resistance to experimental autoimmune encephalomyelitis. H. LU*; A. J. STEELMAN; J. LI. *Texas A&M Univ.*

4:00 Z10 **441.08** The role of integrin/chemokine receptor interactions in the pathogenesis of experimental autoimmune encephalomyelitis. G. BANISADR*; J. R. PODJOL; L. A. PICCININI; S. LANKER; S. D. MILLER; R. J. MILLER. *Northwestern Univ., Northwestern Univ., Biogen Idec, Inc.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 Z11 **441.09** System xc- inhibition improves histopathological and clinical outcomes in experimental autoimmune encephalomyelitis. K. S. EVONUK*; B. J. BAKER; C. M. SESTERO; R. E. DOYLE; M. A. TIMBERLAKE, II; H. SONTHEIMER; C. RAMAN; T. M. DESILVA. *Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

2:00 Z12 **441.10** Oxygen therapy for the treatment of experimental autoimmune encephalomyelitis. M. M. WHITE*; C. T. MCNABB; A. L. HARRIS; J. R. WILSON; P. N. FUCHS. *The Univ. of Texas at Arlington, The Univ. of Texas at Arlington.*

3:00 Z13 **441.11** Dock8 is a therapeutic target for CNS inflammation. K. NAMEKATA*; X. GUO; K. KAWAMURA; D. KITTAKA; C. HARADA; T. HARADA. *Tokyo Metropolitan Inst. of Med. Sci.*

4:00 Z14 **441.12** ● The dichotomy and polar opposites observed between the experimental acute encephalitis murine model and human secondary progressive multiple sclerosis; insight into their respective pathogeneses via a neuropeptide mediated mechanism. C. E. MOORE*; T. AHTONIEMI; J. OKSMAN; K. LEHTIMAKI; M. GIMENEZ; N. VARTIANEN; M. HAQ; D. MCINTOSH; H. LOPEZ; J. WOLOOSZYNEK; K. ETZEL; S. HAQ. *Portsmouth Hosp. NHS Trust, Charles River Discovery Res. Services, Maidstone and Tunbridge Hosp. NHS Trust, McIntosh scientific, Murigenics Inc., Daval Intl. Ltd.*

1:00 Z15 **441.13** Estrogen receptor (ER) β expression in oligodendrocytes is required for attenuation of clinical disease by an ERβ ligand in a mouse model of multiple sclerosis. A. J. KHALAJ*; J. NAKAI; S. MOORE; J. YOON; Z. WINCHESTER; T. YOO; S. KUMAR; S. K. TIWARI-WOODRUFF. *UCLA, UCLA.*

2:00 Z16 **441.14** The role of lymphotoxin-alpha in meningeal inflammation and grey matter pathology in multiple sclerosis. E. J. BROWNE*; R. M. SCHALKS; R. REYNOLDS. *Imperial Col. London.*

3:00 Z17 **441.15** Magnetic Transfer MRI to monitor disease progression in rodent model of Multiple Sclerosis. S. HUANG*; J. CHOI; T. CRANDALL; B. JENKINS; J. MANDEVILLE; A. SAVINAINEN; D. YU; A. GRAY; T. DELLOVADE; G. DAI; D. GRAHAM. *EMD Serono Res. and Develop. Inst., Massachusetts Gen. Hosp.*

4:00 Z18 **441.16** Immunohistochemical characterization of Multiple sclerosis plaques in human brain. S. A. BENKOVIC*, JR; J. BAUN; C. SEGOVIA; B. TIPTON; C. ZURHELLEN; R. C. SWITZER III. *Neurosci. Associates.*

1:00 AA1 **441.17** Targeting the spinal CB2 receptor for the pain of multiple sclerosis. W. FU*; B. TAYLOR. *Univ. of Kentucky.*

2:00 AA2 **441.18** Effects of multiple sclerosis on bimanual task performance. S. L. GORNIAK*; M. PLOW; J. L. ALBERTS. *Univ. of Houston, Cleveland Clin.*

3:00 AA3 **441.19** Intracortical inhibition alteration during the remission phase of multiple sclerosis: Relation to white and grey matter damage. J. C. NANTES*; J. ZHONG; B. WHATLEY; L. KOSKI. *Transcranial Magnetic Stimulation Laboratory, McGill Univ. Hlth. Ctr.*

POSTER

442. Brain Injury III

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 AA4 **442.01** FGFs in the adult neocortex: roles in astrogliosis and in neurogenesis. W. KANG*; F. BALORDI; G. FISHELL; J. M. HÉBERT. *Albert Einstein Col. of Med., New York Univ.*

2:00 AA5 **442.02** Intravenous Pycnogenol® is neuroprotective following traumatic brain injury. M. A. ANSARI*; K. N. ROBERTS; S. W. SCHEFF. *Univ. Kentucky.*

3:00 AA6 **442.03** Transmission from the motor cortex to spinal cord neurons and limb muscles after unilateral cortical lesion (TBI) in adult rats. A. S. HUNANYAN*; H. A. PETROSYAN; V. ALESSI; V. L. ARVANIAN. *VA Med. Ctr., Stony Brook Univ.*

4:00 AA7 **442.04** Augmented inhibition from CCK-positive basket cells decreases CA1 excitability after mTBI. C. P. PALMER*; B. N. JOHNSON; J. A. ELKIND; B. PUTNAM; A. S. COHEN. *The Univ. of Pennsylvania, The Children's Hosp. of Philadelphia.*

1:00 AA8 **442.05** Conserved transcription factor binding sites overrepresented in inflammatory response genes following controlled cortical impact model of traumatic brain injury. M. C. SURLES-ZEIGLER*; T. E. WHITE; A. S. GATES; G. FORD; B. FORD. *Morehouse Sch. of Med., Morehouse Col.*

2:00 AA9 **442.06** Mild TBI causes sleep disturbances which are mitigated by dietary therapy. M. M. LIM*; J. ELKIND; G. XIONG; R. GALANTE; J. ZHU; L. ZHANG; J. LIAN; N. KUZMA; A. I. PACK; A. S. COHEN. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

3:00 AA10 **442.07** Acute cortical changes following a concussion. M. CINELLI*; K. POWERS; J. KALMAR. *Wilfrid Laurier Univ.*

4:00 AA11 **442.08** Mild Traumatic Brain Injury affects intrinsic excitability and excitatory synaptic transmission in the medial prefrontal cortex. C. SMITH*; G. XIONG; C. P. PALMER; J. A. ELKIND; B. J. PUTNAM; A. S. COHEN. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

1:00 AA12 **442.09** MicroRNA overexpression increases cortical neuronal vulnerability to injury. J. S. TRUETTNER*; D. MOTTI; W. D. DIETRICH. *Univ. Miami Miller Sch. of Med.*

2:00 AA13 **442.10** What's in a shape? Fractal dimension assessment of brain morphometry as a biomarker to predict cognitive outcome in Traumatic Brain Injury. V. RAJAGOPALAN; A. DAS; L. ZHANG; G. R. WYLIE; G. H. YUE*. *Kessler Fndn., Kessler Fndn., LZ Biomedical, LLC, Kessler Fndn. Res. Ctr.*

3:00 AA14 **442.11** Investigation of treatment failure in hydrocephalus using human shunt explants. C. HARRIS*; K. PEARSON; K. TRETT; S. ZHU; N. TASKIN; P. CHONG; B. ROYSAM; S. BROWD; A. ANDERSON; W. SHAIN. *Seattle Children's Res. Inst., Univ. of Houston, Seattle Children's Hosp., Univ. of Washington.*

4:00 AA15 **442.12** Mechanisms of recovery in the severely injured brain: Physiological correlates of restoration of the anterior forebrain mesocircuit. J. D. DROVER; M. M. CONTE; J. D. VICTOR; N. D. SCHIFF*. *Weill Cornell Med. Col.*

1:00 AA16 **442.13** Shape analysis of the hippocampus and amygdala in traumatic brain injury. S. BAE; C. E. BUELER; A. STOECKEL; J. KING; E. MCGLADE; M. LOPEZ-LARSON; D. A. YURGELUN-TODD*. *The Brain Institute, Univ. of Utah.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 AA17 **442.14** ● Longitudinal study of the effects of subcallosal cingulate deep brain stimulation for treatment-resistant depression on the power spectrum of the resting electroencephalogram. T. J. NAUVEL*; H. S. MAYBERG; N. D. SCHIFF. *Weill Cornell Med. Col., Emory Univ. Sch. of Med.*

3:00 AA18 **442.15** Reversal of central thalamic and globus pallidus resting metabolic profiles: A marker of impaired anterior forebrain mesocircuit function. E. A. FRIDMAN*; B. J. BEATTIE; A. BROFT; S. LAUREYS; N. D. SCHIFF. *Weill Cornell Med. Col., Mem. Sloan-Kettering Cancer Ctr., Collumbia Univ., Liège Univ. Hosp.*

4:00 BB1 **442.16** The long-term effects of traumatic brain injury at 7 or 10 days of age in mice. N. MISTRY*; D. L. BRODY; R. E. HARTMAN. *Loma Linda Univ., Washington Univ.*

1:00 BB2 **442.17** Late recovery of communication in severe brain injury associated with structural changes in Broca's area: A High Angular Resolution Diffusion Imaging (HARDI) study. D. J. THENGONE*; M. M. CONTE; H. U. VOSS; N. D. SCHIFF. *Weill Cornell Med. Col.*

2:00 BB3 **442.18** ● Use of quantitative anisotropy, 3D segmented atlas and computational analysis to identify subcortical lesions common to diffuse mild traumatic brain injury in rats. P. P. KULKARNI*; W. KENKEL; S. FINKLESTEIN; M. REN; M. NEDELMAN; C. F. FERRIS. *Northeastern Univ., Biotrofix, Ekam Imaging.*

3:00 BB4 **442.19** Is post-concussion symptom exacerbation during exercise related to an inappropriate cerebral blood flow response? K. MARSDEN; N. STRACHAN; B. MONTELEONE; P. AINSLIE; P. VAN DONKELAAR*. *UBC - Okanagan.*

4:00 BB5 **442.20** Timing is everything: Use of time-frequency spectrograms to determine command following in disorders of consciousness. A. M. GOLDFINE*; P. B. FORGACS; M. M. CONTE; J. D. VICTOR; N. D. SCHIFF. *Burke Rehabil. Inst., Weill Cornell Med. Col., Rockefeller Univ. Hosp.*

1:00 BB6 **442.21** Neurodegeneration and recovery in a mouse model of acute brain injury. M. KISLIN*; M. PAVELIEV; L. KHIROUG; H. RAUVALA. *Univ. of Helsinki.*

2:00 BB7 **442.22** Post-concussion alterations in the acute and long-term phases of a sports-related concussion in female athletes. E. CHAMARD*; M. LASSONDE; L. HENRY; Y. BOULANGER; H. THEORET*. *Dept. de psychologie, Univ. De Montréal, Fonds de Recherche Québécois Nature et Technologies (FRQNT), UPMC Sports Concussion Clin., St-Luc Hosp.*

3:00 BB8 **442.23** ● Electroencephalographic inverse localization of cortical loci generating epileptiform activity in comatose acute traumatic brain injury patients. A. IRIMIA; M. S. Y. GOH; C. M. TORGERSON; M. C. CHAMBERS; P. M. VESPA; R. KIKINIS; J. D. VAN HORN*. *UCLA, UCLA, Harvard Med. Sch.*

4:00 BB9 **442.24** Anti-edema effects of erythropoietin in traumatic brain injury. R. G. GATTO*; N. B. CHAUHAN. *Univ. of Illinois At Chicago, Univ. of Illinois at Chicago, Jesse Brown VA Med. Ctr.*

1:00 BB10 **442.25** Reframing the big picture: Characterization of patients with disorders of consciousness and evidence of covert high-level cognitive functions. P. B. FORGACS*; M. M. CONTE; N. D. SCHIFF. *Weill Cornell Med. Col., The Rockefeller Univ.*

2:00 BB11 **442.26** Two different models of traumatic brain injury induce similar deficits in sensory processing in the immediate post-injury period. V. P. A. JOHNSTONE; S. SHULTZ; E. B. YAN; T. O'BRIEN; R. RAJAN*. *Monash Univ., Univ. of Melbourne, The Royal Melbourne Hosp., Monash Univ.*

POSTER

443. Oxidative Stress, Mitochondrial Function and Neurodegeneration

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 BB12 **443.01** On the pro-oxidant effect of quinolinic acid and 3-hydroxykynurenine in cultured striatal slices of Nrf2 knockout mice. A. L. COLÍN GONZÁLEZ*; J. C. TOBÓN-VELASCO; P. D. MALDONADO; J. PEDRAZA-CHAVERRÍ; A. CUADRADO; A. SANTAMARIA. *Inst. Nacional De Neurologia Y Neurocirugia, Univ. Nacional Autónoma de México, Inst. de Investigaciones Biomédicas – UAM.*

2:00 CC1 **443.02** Therapeutic effect of curcumin on striatal degeneration in rats: Enzymatic system of glutathione modulated by Nrf2. R. A. SANTANA MARTINEZ*; J. PEDRAZA-CHAVERRÍ; A. SANTAMARÍA; P. D. MALDONADO. *Natl. Inst. of Neurol. and Neurosurg., Univ. Nacional Autónoma de México.*

3:00 CC2 **443.03** Modulation of the activation of Nrf2 factor by the intensity of a redox challenge induced by quinolinic acid. C. A. SILVA*, SR; J. C. TOBÓN-VELASCO; M. E. CHÁNEZ-CÁRDENAS; A. SANTAMARÍA; P. D. MALDONADO. *Natl. Inst. of Neurol. and Neurosurg., Natl. Inst. of Neurol. and Neurosurg.*

4:00 CC3 **443.04** ● Nrf2 activation by dimethyl fumarate and bardoxolone - *in vitro* and *in vivo* analysis. J. COURADE*; C. ALBRECHT; U. FRITZ; A. MINGORANCE-LE MEUR; H. GERETS; G. KUMAR; E. JIGOREL; E. JNOFF; R. KAMINSKI. *UCB Pharma S.A., EVOTEC AG.*

1:00 CC4 **443.05** Analysis of neuronal and glial Nrf2 pathway activation in individual cells co-cultured from mouse forebrain. K. L. WHEATON; M. T. SPYCHALSKI; K. OBRIETAN; K. R. HOYT*. *Ohio State Univ., Ohio State Univ.*

2:00 CC5 **443.06** E-FABP functions as an antioxidant during palmitic acid-induced oxidative stress and subsequently diminishes apoptosis in NGF-differentiated PC12 cells. M. L. MONTERO*; J. LIU; M. DE LEON; L. BU. *Loma Linda Univ.*

3:00 CC6 **443.07** Cerebrospinal fluid from multiple sclerosis patients induces oxidative stress and mitochondrial dysfunction in unmyelinated neurons. O. GOMEZ VIDAURRE*; I. KATZSAND; J. D. HAINES; K. P. ADULA; C. MCGRAW; M. VARGHESE; C. PARDO-VILLAMIZAR; A. VIDAL-JORDANA; E. SOTIRCHOS; J. ILIEVA; G. M. PASINETTI; P. CALABRESI; A. E. MILLER; F. D. LUBLIN; P. CASACCIA. *Mount Sinai Sch. of Med., Mount Sinai Med. Ctr., Mount Sinai Sch. of Med., Johns Hopkins Hosp.*

4:00 CC7 **443.08** Prohibitin (PHB) stabilizes respiratory chain complexes from degradation induced by oxidative stress in PC12 cells. L. QIAN; G. MANFREDI; C. IADECOLA; P. ZHOU*. *Weill Med. Coll Cornell Univ., Weill Med. Coll Cornell Univ.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 149 for details.

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1:00 CC8 **443.09** Effects of radiofrequency radiation on catecholaminergic systems and oxidative stress in the rat brain. E. CUEVAS*; B. ROBINSON; S. LANTZ; M. WYDE; N. WALKER; P. HOWARD; S. IMAM; M. PAULE; S. ALI. *Natl. Ctr. For Toxicological Reserch/Fda, NIEHS/NTP, Natl. Ctr. For Toxicological Reserch/Fda.*

2:00 CC9 **443.10** Prohibitin expression improves mitochondrial function under oxidative stress in PC12 cells. C. J. ANDERSON*; A. KAHL; L. QIAN; G. MANFREDI; C. IADECOLA; P. ZHOU. *Weill Cornell Med. Col.*

3:00 CC10 **443.11** Resveratrol attenuate acute immobilization stress induced anxiety with possible involvement of cytokines, prostaglandins, mitochondria, HPA-axis and oxidative stress. L. MACHAWAL*; A. KUMAR. *Dept. of Pharmacology, Univ. Inst. of Pharmaceut. Science,Panjab Uni, Panjab Univ.*

4:00 CC11 **443.12** Decreases of the oxidative damage on the striatum and cortex of the mice exposed to ozone after administration of nitric oxide synthases inhibitors. J. MARTINEZ-LAZCANO*; C. G. CISNEROS-LIVERA; E. GONZALEZ -GUEVARA; V. CUSTODIO; M. HERNANDEZ-CERON; M. RUBIO; M. RUBIO; C. PAZ. *INNyN, INNyN, UNAM, UAM.*

1:00 CC12 **443.13** Pacap27 is neuroprotective against tat-mediated neurotoxicity. S. J. ROZZI*; V. AVDOSHINA; I. MOCCHETTI. *Georgetown Univ., Georgetown Univ.*

2:00 CC13 **443.14** Protective effect of erythropoietin in neuronal cell damage by hydrogen peroxide-induced oxidative stress according to the timing of treatment. S. KANG*. *Chung-Ang Univ. Col. of Med.*

3:00 CC14 **443.15** Cellular stress alters the relative position of chromosomes in human neuronal cells. A. M. CHOW*; H. V. S. GANESH; I. R. BROWN. *Univ. of Toronto Scarborough.*

4:00 DD1 **443.16** Novel oxyindole derivatives protect HT22 cells from oxidative and ER stress. Y. HIRATA*; K. FURUTA; K. OH-HASHI; K. KIUCHI. *Gifu Univ.*

1:00 DD2 **443.17** Neuroprotective properties of phytochemicals against paraquat-induced oxidative stress and neurotoxicity in *Drosophil*a melanogaster. J. JUNG*; H. KWON. *Seoul Natl. Univ.*

2:00 DD3 **443.18** Ciliary neurotrophic factor augments mitochondrial bioenergetics in cultured sensory neurons derived from diabetic rodents. S. ROY CHOWDHURY*; A. SALEH; E. AKUDE; D. SMITH; D. MORROW; L. TESSLER; N. CALCUTT; P. FERNYHOUGH. *St. Boniface Hosp. Res. Ctr., Univ. of Manitoba, Univ. of California.*

3:00 DD4 **443.19** IL-1beta phosphorylates STAT3 to augment mitochondrial bioenergetics and drive axon regeneration in adult neurons. A. SALEH*; S. K. ROY CHOWDHURY; D. R. SMITH; S. BALAKRISHNAN; L. TESSLER; E. SCHARTNER; A. BILODEAU; R. VAN DER PLOEG; P. FERNYHOUGH. *St. Boniface Hosp. Res. Ctr., Univ. of Manitoba.*

4:00 DD5 **443.20** Mitochondrial impairment induced by 3-nitropropionic acid is potentiated by endogenous metalloprotease activity inhibition in cultured rat striatal neurons. A. SANTAMARIA DEL ANGEL; G. GUTIERREZ-OSPINA; P. MONTES DE OCA B.*. *Inst. Nacional De Neurologia Y Neurocirugia, Inst. de Investigaciones Biomédicas, UNAM.*

POSTER

444. Neurologic Disease: Cellular Mechanims and Oxidative Stress

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 DD6 **444.01** Functional adaptation of NMDA receptors following HIV-1 Tat-induced potentiation. K. A. KROGH*; S. A. THAYER. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 DD7 **444.02** Nerve injury-associated modulation of HCN channel function contributes to neuropathic pain processing in the medial prefrontal cortex. S. CORDEIRO MATOS*; Z. ZHANG; P. SEGUELA. *Montreal Neurolog. Institute, McGill Univ.*

3:00 DD8 **444.03** Role of cerebral sodium-glucose transporter on the development of neuronal damage after focal and global ischemic stress. S. TOKUYAMA*; Y. YAMAZAKI; S. HARADA. *Kobe Gakuin Univ. Library Yakugaku.*

4:00 DD9 **444.04** Spinal injury-induced spasticity: Modulation by spinal glycine mimetic compounds. K. KAMIZATO*; O. KAKINOHANA; M. MARSALA. *UCSD.*

1:00 DD10 **444.05** Palmitoylation of TRPML3 regulates membrane trafficking and autophagy. H. KIM*; D. KIM; S. CHOI; M. KIM. *Sungkyunkwan University, Sch. of Med.*

2:00 DD11 **444.06** Diallyltrisulfide effect on behavioral, biochemistry and morphological changes induced in a model of cerebral ischemia in rat. P. MALDONADO*; C. A. SILVA; A. MORENO-ZAMUDIO; A. ORTÍZ-PLATA; M. E. CHÁNEZ-CÁRDENAS. *Inst. Nacional De Neurologia Y Neurocirugia, Inst. Nacional De Neurologia Y Neurocirugia.*

3:00 DD12 **444.07** Dendrimer nanodevices for treatment of neonatal brain injury. S. KANNAN*; M. BULOW; E. NANCE; M. MISHRA; A. JYOTI; M. PORAMBO; M. JOHNSTON; A. FATEMI; R. KANNAN. *Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ.*

4:00 DD13 **444.08** Edaravone alone or in combination with tissue plasminogen activator reduces infarction in experimental thrombotic stroke. Y. SUN*; D. LINDQUIST; C. KUAN. *Emory Univ. Sch. of Med., Cincinnati Children's Hosp. Med. Ctr.*

1:00 DD14 **444.09** Calcium imaging of cultured drgs exposed to an organophosphate pesticide. M. W. MCNERNEY*; B. HUDSON; K. KULP; F. QIAN; H. SHETH; H. CHEN; E. MUKERJEE; D. ANEX; E. WHEELER; S. PANNU. *Lawrence Livermore Natl. Lab., Lawrence Livermore Natl. Lab.*

2:00 DD15 **444.10** Hydrogen peroxide increases tonic inhibitory current in hippocampal neurons. A. PENNA*; D. WANG; B. ORSER. *Univ. of Toronto, Univ. of Toronto, Sunnybrook Hlth. Sci. Ctr.*

3:00 DD16 **444.11** The role of Bcl-xL inhibitors in Fmr1 mutant phenotype. P. LICZNERSKI*; M. BROWN; L. K. KACZMAREK; R. J. LEVY; E. A. JONAS. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Children's Natl. Med. Ctr., Yale Univ. Sch. of Med.*

4:00 DD17 **444.12** ▲ Investigation of novel biomarkers for the prevention of post-subarachnoid hemorrhage vasospasms. E. CARLSON*; K. VAN KEUREN-JENSEN; A. COURTRIGHT; R. METPALLY; Y. KALANI. *Tgen, TGen, Barrows Neurolog. Inst.*

1:00 DD18 **444.13** The role of intracellular zinc and iron release in oxidative injury to neurons and glial cells. D. C. GILLIS; S. KIM; J. LI*. *Texas A&M Univ., Texas A&M Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 EE1 **444.14** ▲ Postnatal methylmercury exposure alters glutamate receptor mRNA expression in rat spinal cord. A. COLON*; A. L. PEREZ-MEDINA; W. D. ATCHISON. *Michigan State Univ., Michigan State Univ.*

POSTER

445. Neurotoxicity and Neurodegeneration I

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 EE2 **445.01** Propofol-induced dendritic spine loss on pyramidal neurons in the early postnatal rat cerebral cortex is prevented by premature expression of the cation-chloride cotransporter KCC2. T. BODOGAN; H. FIUMELLI; A. BRINER; K. DEMETER; C. LACOH; K. KAILA; L. VUTSKITS*. *Univ. of Geneva Med. Sch., King Abdullah Univ. of Sci. and Technol., Hungarian Acad. of Sci., Univ. of Helsinki, Univ. Hosp. of Geneva, Univ. of Geneva Med. Sch.*

2:00 EE3 **445.02** PGE2 EP1 receptor deletion augments hemorrhagic injury and cognitive deficits. N. SINGH*; B. MA; S. NARUMIYA; S. DORE. *Ctr. For Translational Res. In Neurodegenerative Disease, Univ. of Fl, Natl. Inst. on Aging, Kyoto Univ., Univ. of Florida.*

3:00 EE4 **445.03** Microglia-derived cytokines induce neural precursor cell apoptosis via the Bcl-2 family member Puma. J. GUADAGNO*; S. P. CREGAN. *Robarts Res. Institute, Univ. of Western Ontario, Robarts Res. Inst.*

4:00 EE5 **445.04** Identification of a novel interaction between GSK3β and p25 alters canonical Wnt signaling: Implications for Alzheimer's disease and other forms of neurodegeneration. H. CHOW*; K. HERRUP; J. ZHANG. *Div. of Life Sci., The Hong Kong Univ. of Sci. and Technol., Rugters Univ., Xiamen Univ.*

1:00 EE6 **445.05** Ligand of translocator protein stimulates neurosteroid synthesis and reverses pathology in a mouse model of Alzheimer`s disease. A. M. BARRON*; L. M. GARCIA-SEGURA; D. CARUSO; A. JAYARAMAN; J. LEE; R. C. MELCANGI; B. JI; M. HIGUCHI; C. J. PIKE. *Natl. Inst. of Radiological Sci., CSIC, Univ. degli Studi di Milano, USC, USC, Univ. degli Studi di Milano.*

2:00 EE7 **445.06** Performance deficits produced by partial body exposures to space radiation. B. M. RABIN*; B. SHUKITT-HALE; K. CARRIHILL-KNOLL; S. GOMES; N. HEROUX. *Univ. Maryland Baltimore County, Human Nutr. Res. Ctr. on Aging.*

3:00 EE8 **445.07** Oxidative stress effect on transcription factor Forkhead Box O 1a, cell cycle and apoptotic death in hippocampus of rats exposed to ozone. N. GOMEZ-CRISOSTOMO*; E. RODRÍGUEZ-MARTÍNEZ; S. RIVAS-ARANCIBIA. *UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO.*

4:00 EE9 **445.08** ALS astrocytes adopt natural killer properties to induce motor neuron death. S. SONG*; C. J. MIRANDA; L. BRAUN; K. MEYER; A. K. BEVAN; A. FRAKES; L. FERRAIUOLO; S. LIKHITE; K. D. FOUST; K. J. CAMPBELL; M. J. MCCONNELL; C. M. WALKER; B. K. KASPAR. *The Nationwide Childrens Hosp. Res. Inst., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Nationwide Childrens Hosp. Res. Inst., Univ. of Virginia, Univ. of Virginia, The Ohio State Univ.*

1:00 EE10 **445.09** Co-chaperone CHIP attenuates neuronal death upon ER stress. F. CABRAL MIRANDA*; J. ADÃO-NOVAES; H. PETRS-SILVA; L. B. CHIARINI. *UFRJ.*

2:00 EE11 **445.10** ▲ Effects of stimulation with extremely low frequency electromagnetic fields on the cerebellar structure of adult male rats. L. ANDRES-BARBA*; L. CAÑEDO-DORANTES; C. CUELLAR-LEMUS; A. FERIA-VELASCO. *Univ. De Guadalajara, Univ. Autónoma de Morelos.*

3:00 EE12 **445.11** Early reduction in kynurenine 3-monooxygenase activity is followed by enhanced kynurenic acid levels in the brain of quinolinic acid phosphoribosyltransferase-deficient mice. K. V. SATHYASAIKUMAR*; M. TARARINA; F. M. NOTARANGELO; M. A. R. THOMAS; K. J. HORNING; B. ZAMBROWICZ; G. HANSEN; R. SCHWARCZ. *Maryland Psychiatric Res. Center, Univ. of Maryland Sch. of Med., Lexicon Pharmaceuticals, Inc.,.*

4:00 EE13 **445.12** Aldehyde dehydrogenase-2 expression is altered in the nigrostriatal pathway following a neurotoxic regimen of methamphetamine. R. C. MURRAY*; K. A. JILES; J. A. DOORN; K. A. HORNER. *Mercer Univ. Sch. of Med., Univ. of Iowa Col. of Pharm.*

1:00 EE14 **445.13** Myelin basic protein (MBP) exerts neurotoxicity on cultured hippocampal neurons through its binding to surface of plasma membrane. J. ZHANG*; X. SUN; S. X. ZHENG; J. H. LUO. *Institue of Neuroscience, Zhejiang Univ.*

2:00 EE15 **445.14** Peri-adolescent amphetamine exposure causes longstanding deficits in central white matter integrity in omega-3 fatty acid deficient rats: A diffusion tensor imaging study. N. M. DANGELO; D. M. LINDQUIST; R. K. MCNAMARA*. *Univ. of Cincinnati Col. of Med. and Cincinnati Children's Hosp. Med. Ctr., Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati.*

3:00 EE16 **445.15** Molecularly targeted anti-cancer drugs alter neural cell number in the subventricular and subgranular zones during development. J. L. RITTER*; J. EDWARDS; M. RONCAL; V. GALLO; J. SCAFIDI. *Children's Natl. Med. Ctr.*

4:00 EE17 **445.16** Neuroprotective effect of Liriopis platyphyllae tuber extract against acute ischemic stroke on middle cerebral artery occlusion in rats. T. OHR*; S. KANG; H. JUNG; Y. PARK. *Dongguk Univ., Oriental Med. R&D Ctr.*

1:00 EE18 **445.17** Hydrogen sulfide mitigates intracerebral homocysteine induced neurovascular remodeling. P. K. KAMAT*. *UNIVERSITY OF LOUISVILLE.*

2:00 FF1 **445.18** Depression-like behavior in the chronic phase after cranial irradiation. Y. SON*; J. KIM; S. KANG; S. LEE; J. KIM; J. KIM; S. KIM; T. SHIN; J. KIM; U. JUNG; C. MOON. *Chonnam Natl. Univ., Chonnam Natl. Univ., Jeju Natl. Univ., Dongnam institute of radiological & medical sciences, Radiation Res. Div. for Bio-Technology Inst.*

3:00 FF2 **445.19** Transcriptome and methylome effects of ketamine and Bisphenol A on the developing cerebral cortex during the brain growth spurt period. K. KULTIMA; B. SCHOLZ; E. FREYHULT; H. ALM*. *Uppsala Univ., Uppsala Univ.*

4:00 FF3 **445.20** Investigating the relationship between cognitive impairment and the inflammatory responses following exposure to gulf war agents at early and late time points using a mouse model of GWI. Z. ZAKIROVA*; M. TWEED; G. CRYNEN; J. REED; L. ABDULLAH; F. CRAWFORD; M. MULLAN; V. MATHURA; G. AIT-GHEZALA. *Roskamp Inst., The Open Univ.*

1:00 FF4 **445.21** Neuroprotective effects of anthocyanin and natural substance in ethanol and $a\beta_{(1-42)}$-induced neurodegenerative *in vivo* and *in vitro.* T. KIM*; H. BADSHA; A. AHMAD; M. KIM; M. PARK; M. KIM. *Gyeongsang Natl. Univ.*

2:00 FF5 **445.22** Neuroprotective effect of neochlorogenic acid against neurotoxicity by inhibition of microglial activation. J. HUR*; S. CHOI. *Korea Food Res. Inst., Korea Food Res. Inst.*

3:00 FF6 **445.23** Retinal GABAergic activity is increased in streptozotocin-induced diabetes. J. MOORE-DOTSON*; R. E. MAZADE; A. S. BERNSTEIN; M. J. ROMERO-ALESHIRE; H. L. BROOKS; E. D. EGGERS. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

4:00 FF7 **445.24** XY sex chromosome complement, compared with XX, in the CNS confers a greater neurodegenerative response to injury. S. DU; N. ITOH; S. ASKARINAM; H. HILL; A. P. ARNOLD; R. VOSKUHL*. *UCLA, UCLA, UCLA.*

1:00 FF8 **445.25** Interleukin-1 receptor antagonist treatment of amyotrophic lateral sclerosis (ALS) patients with predominant lower motor neuron involvement. A. ZYCHLINSKY*; A. MAIER; N. DEIGENDESCH; F. MEISSNER; K. MOLAWI; C. MÜNCH; T. HOLM; R. MEYER; T. MEYER. *Max Planck Inst. For Infection Biol., Charité.*

2:00 FF9 **445.26** SH3-binding protein 5 mediates the neuroprotective effect of Humanin by inhibiting c-Jun NH2-terminal kinase. Y. HASHIMOTO*; Y. TAKESHITA; M. NAWA; H. UCHINO; M. MATSUOKA. *Tokyo Med. Univ., Tokyo Med. Univ., Tokyo Med. Univ., Tokyo Med. Univ.*

3:00 FF10 **445.27** Long-lasting and acute effects of lipopolysaccharide-induced sepsis in mice. S. T. ANDERSON*; S. COMMINS; A. N. COOGAN. *Natl. Univ. of Ireland, Maynooth.*

4:00 GG1 **445.28** ● Heat shock protein signalling has a protective role in chemotherapy-induced peripheral neuropathy. I. J. MALIK*; B. LEE; R. MADSEN; K. THIRSTRUP. *H. Lundbeck A/S.*

1:00 GG2 **445.29** Japanese Encephalitis Virus induced inhibition of Neural stem/progenitor cells (NSPCs) self renewal is mediated by Krüppel-like factor 4 (Klf4). M. C. THOUNAOJAM*; K. KUNDU; A. BASU. *Natl. Brain Res. Ctr.*

2:00 GG3 **445.30** The newly identified striatal marker Doublecortin-like kinase 3 (Dclk3) may be a molecular determinant of striatal vulnerability in Huntington's disease. L. FRANCELLE*; L. GALVAN; M. GAILLARD; G. LIOT; M. DE CHALDÉE D'ABBAS; M. GUILLERMIER; D. HOUITTE; M. CHAIGNEAU; C. JOSÉPHINE; G. BONVENTO; C. MALGORN; F. PETIT; C. JAN; N. DUFOUR; J. ELALOUF; S. HUMBERT; F. SAUDOU; N. DÉGLON; E. BROUILLET. *CEA, DSV, I²BM, MIRCen, LMN and URA CEA-CNRS 2210, Inst. Curie, CNRS UMR 3306 and Inserm U1005, CEA, iBiTec-S, SBIGeM.*

POSTER

446. Neuro-Oncology I

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 GG4 **446.01** Merlin regulates spinal cord neural stem cell proliferation in an ErbB2-dependent manner. C. GARCIA*; D. H. GUTMANN. *Washington Univ. in St Louis.*

2:00 GG5 **446.02** Neural stem cells producing an inducible and soluble form of Gas1 track and inhibit intracranial glioma growth. A. LÓPEZ-ORNELAS; P. VERGARA; J. V. SEGOVIA-VILA*. *Cinvestav-IPN, Cinvestav-IPN.*

3:00 GG6 **446.03** A bacterial protein toxin, cytotoxic necrotizing factor-1 (CNF1) provides long-term survival in a murine glioma model. C. CERRI*; E. VANNINI; A. PANIGHINI; A. FABBRI; S. LISI; N. BENEDETTO; R. VANNOZZI; C. FIORENTINI; M. COSTA; M. CALEO. *CNR, Inst. Superiore di Sanità, Scuola Normale Superiore, Neurochirurgia, Azienda Ospedaliero-Universitaria Pisana.*

4:00 GG7 **446.04** Acetaminophen reduces glioblastoma growth in culture: A mechanistic study. R. LEKHRAJ*; P. LALEZARI; S. LALEZARI; I. LALEZARI; A. PIDEL; S. MINICK; W. JAGGERNAUTH; D. CASPER. *Montefiore Med. Ctr. and the Albert Einstein Col. of Med., Montefiore Med. Ctr. and the Albert Einstein Col. of Med., Montefiore Med. Ctr. and the Albert Einstein Col. of Med.*

1:00 GG8 **446.05** 9-HODE-activated GPCR, G2A induces epithelial-to-mesenchymal transition of human astrocytoma cells prior to generation of stem cell-like properties. K. KISHIMOTO*; T. HARAGUCHI; K. SHIMIZU; A. YAMAGUCHI; T. YOSHIHARA; N. OHSHIMA; K. TATEI; Y. IIDA; S. TOBITA; Y. TSUSHIMA; T. IZUMI. *Gunma University, Grad. Sch. of Med., Gunma University, Grad. Sch. of Med., Gunma University, Grad. Sch. of Sci. and Technol., Suzuka Univ. of Med. Sci., Gunma University, Grad. Sch. of Med.*

2:00 GG9 **446.06** Possible pathways for human telomerase RNA interference inhibits cell proliferation of retinoblastoma cells. Y. LEE*; Y. CAI; M. TSAI; L. TIEN. *Fu-Jen Catholic Univ., Shin Kong Wu Ho-Su Mem. Hosp.*

3:00 GG10 **446.07** ● A mouse model of chemotherapy-related fatigue (CRF) is independent of depressive-like behavior. J. A. ZOMBECK*; G. D. LYNG; S. T. SONIS. *Biomodels, Biomodels LLC.*

4:00 GG11 **446.08** Stem cells internalized multi-drug loaded nanoparticles for targeted controlled release of drugs at tumor sites. M. S. THU; H. XIE; J. W. SMITH; E. Y. SNYDER*. *Sanford|Burnham Med. Res. Inst., Sanford|Burnham Med. Res. Inst., Sanford|Burnham Med. Res. Inst.*

1:00 GG12 **446.09** ▲ Differences in the genetic profile in recurrent gbm. K. V. LEAL BAUTISTA*; S. OROZCO-SUAREZ; B. NETTEL-RUEDA; I. FELIX-ESPINOZA; G. CASTELLANOS-PALLARES; G. GUINTO-BALANZAR; I. GRIJALVA; I. FERIA-ROMERO. *Inst. Mexicano Del Seguro Social, Inst. Mexicano del Seguro Social.*

2:00 GG13 **446.10** ● Ubiquitination and transport of PTEN in cells revealed by bimolecular-fluorescence complementation. Y. LI*; J. HOWITT; S. TAN. *Florey Inst. of Neurosci. and Mental Hlth.*

3:00 GG14 **446.11** ▲ Bone marrow-derived mesenchymal stem cells in the treatment of glioma. D. DUES*; L. HUFFMAN; K. FINK; T. HULSE; J. ROSSIGNOL; G. DUNBAR. *Field Neurosciences Institute; Lab. For Restorative Neurol., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst.*

4:00 GG15 **446.12** Aberrant activation of hh/gli signaling triggers the cell migration/invasion in human glioma cells. S. LUO*; Q. LU; T. LIU; D. HUANG; D. LI; J. KUANG; L. XU; J. MEI; Z. SUN; Z. YAN. *The First Affiliated Hospital, Nanchang Univ., Nanchang Univ., The First Affiliated Hosp. of Nanchang Univ., The First Affiliated Hospital, Nanchang Univ., Tsinghua Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 GG16 **446.13** Perovskite nanoparticles: a tool for MRI-guided magnetic fluid hyperthermia-based glioblastoma treatment. P. JENDELOVA*; K. TURNOVCOVA; V. HERYNEK; E. POLLERT; M. VEVERKA; P. VEVERKA; K. JIRAKOVA; M. HAJEK; E. SYKOVA. *Inst. of Exptl. Medicine, ASCR, Charles University, Second Fac. of Med., Inst. for Clin. and Exptl. Med., Inst. of Physics ASCR.*

2:00 GG17 **446.14** Effect of long-term morphine treatment on the progression of bone metastases. D. A. BARRIÈRE*; É. MIDAVAINE; L. DORÉ-SAVARD, PhD; J. LONGPRÉ; P. SARRET. *Univ. of Sherbrooke.*

3:00 GG18 **446.15** Pharmacological inhibition of the CCL2/CCR2 chemokinergic system reduces bone cancer-related pain behaviors. E. MIDAVAINE*; D. BARRIÈRE; P. TÉTREAULT; J. LONGPRÉ; P. SARRET. *Univ. De Sherbrooke.*

4:00 HH1 **446.16** Expression and function of fatty acid binding protein 7 in glioma stem cells. Y. YASUMOTO*; H. SADAHIRO; K. SHARIFI; Y. KAGAWA; M. EBRAHIMI; A. ISLAM; H. MIYAZAKI; S. KAWAMURA; Y. YAMAMOTO; T. SAWADA; M. SUZUKI; Y. OWADA. *Yamaguchi Univ. Grad. Sch. of Med., Yamaguchi Univ. Grad. Sch. of Med.*

1:00 HH2 **446.17** Detection of primary cilia in human glioblastoma. M. R. SARKISIAN*; D. SIEBZEHNRUBL; L. DELEYROLLE; D. SILVER; F. SIEBZEHNRUBL; S. GUADIANA; G. SRIVINASAN; L. HOANG-MINH; S. SEMPLE-ROWLAND; D. STEINDLER; B. REYNOLDS. *Univ. Florida, Univ. Florida.*

2:00 HH3 **446.18** IDH1 modulates the immune response to glioblastoma. R. CORDNER*; M. JHUN; A. PANWAR; H. QIANGWANG; N. YEAGER; P. BUTTE; J. MCABEE; A. MADIROS; A. TAKEI; X. FAN; E. JOUANNEAU; K. BLACK; C. WHEELER. *Cedars-Sinai Med. Ctr.*

3:00 HH4 **446.19** ASC deficiency prevents medulloblastoma incidence in a Smoothened transgenic mouse model. E. R. KNIGHT*; E. PATEL; A. CROWTHER; J. P. TING; T. R. GERSHON; M. DESHMUKH. *Univ. of North Carolina At Chapel Hill.*

4:00 HH5 **446.20** Ketone esters and hyperbaric oxygen therapy prolong survival in a systemic metastatic brain tumor model. D. P. D'AGOSTINO*; A. POFF; C. ARI; C. GOLDHAGEN; T. SEYFRIED. *Univ. South Florida, Col. Med., Univ. of South Florida, Boston Col.*

POSTER

447. Somatosensory and Pain: Animal Models

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 HH6 **447.01** Immunohistochemical localization of TRPM8 in the trigeminovascular system of the cynomolgus monkey. H. LIU; M. DOVLATYAN; N. GAVVA; S. RAO; A. DHAKA; S. MILLER*. *Amgen Inc., Univ. of Washington, Amgen Inc.*

2:00 HH7 **447.02** Chronic pain leads to glial activation throughout the limbic system and disruption in mesolimbic dopaminergic system that interferes with opioid reward. A. M. TAYLOR*; A. CASTONGUAY; A. J. TAYLOR; N. MURPHY; A. GHOGHA; Y. DEKONINCK; C. J. EVANS; C. M. CAHILL. *UCLA, Univ. of California, Irvine, Univ. Laval, UCLA, UCLA.*

3:00 HH8 **447.03** Epidermal innervation of the rat footpad and correlation with pain behavior following partial sciatic nerve injury. M. BECHAKRA; A. OVERBECK; J. L. JONGEN*. *Erasmus MC.*

4:00 HH9 **447.04** Ventral posterolateral deep brain stimulation in neuropathic pain shortens pain response on cold allodynia. J. KIM*; S. LEE; K. MIN; S. KIM; H. JUNG; J. CHANG. *Yonsei Univ. Coll of Med., Yonsei Univ. Col. of Med., Seoul Natl. Univ.*

1:00 HH10 **447.05** Low dose lipopolysaccharide reduces susceptibility to cortical spreading depression in an astrocytic-Stat3 dependent manner. J. R. VARGAS*; T. J. HANAK; M. V. SOFRONIEW; K. C. BRENNAN. *Univ. of Utah, Univ. of California.*

2:00 HH11 **447.06** Nav1.7 global knockout mice recapitulate human congenital indifference to pain. J. GINGRAS*; S. SMITH; D. JOHNSON; D. MATSON; K. NYE; M. PETERSON; J. ROTTMAN; R. BEILER; A. MALMBERG; S. I. MCDONOUGH. *Amgen Inc.*

3:00 HH12 **447.07** Role of MeCP2 in pain and its regulation by microRNAs. M. T. MANNERS*; Y. TIAN; R. GAO; Z. ZHOU; S. AJIT. *Drexel Univ. Col. of Med., Univ. of Pennsylvania.*

4:00 HH13 **447.08** Antinociceptive effects and abuse liability of the imidazoline I2 receptor agonist 2-BFI in rats. D. THORN*; J. X. LI. *Univ. At Buffalo.*

1:00 HH14 **447.09** Morphine-tolerant-like behavioral and cellular changes in the spinal cord of the dopamine D3 receptor knockout mouse. K. L. BREWER*; C. BARAN; A. JENSEN; G. LOEFFLER; S. CLEMENS. *Brody Sch. Med. East Carolina Univ., Brody Sch. Med. East Carolina Univ., Brody Sch. Med. East Carolina Univ.*

2:00 HH15 **447.10** Potent analgesic effects of a store-operated calcium channel inhibitor. X. GAO*; R. GAO; Y. TIAN; J. E. BARRETT; H. HU. *Drexel Univ.*

3:00 HH16 **447.11** A novel calcium signaling mediated by store-operated calcium channels in spinal cord dorsal horn neurons. H. HU*; R. PAN; J. XIA. *Drexel Univ. Col. of Med.*

4:00 HH17 **447.12** Galanin stimulates neurite outgrowth from sensory neurons of the Dorsal Root Ganglia by inhibition of Cdc42 and Rho GTPases and activation of cofilin. S. HOBSON; P. VANDERPLANK; R. POPE; N. KERR; D. WYNICK*. *Univ. of Bristol.*

1:00 HH18 **447.13** Autophagy was activated in the spinal dorsal horn following spinal nerve ligation-induced neuropathic pain. E. ZHANG*; S. CHO; M. YI; H. KIM; D. KIM; W. LEE. *Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. Sch. of Med.*

2:00 II1 **447.14** Effect of sustained low-iron diet in mice on the expression and function of adenosine receptors: Implications for Restless Leg Syndrome. C. J. EARLEY*; R. ALLEN; S. GULYANI; W. RUIQIAN; C. QUIROZ; M. MATTSON; S. FERRÉ. *Johns Hopkins Sch. Med., Johns Hopkins Med. Institutions, Natl. Inst. of Aging, Natl. Inst. on Drug Abuse.*

3:00 II2 **447.15** Neuroprotectin D1 protects neuropathic pain after nerve trauma via neuronal and glial mechanisms. Z. XU*; X. LIU; T. BERTA; C. PARK; N. LÜ; C. N. SERHAN; R. JI. *Duke Univ. Med. Ctr., Brigham and Women's Hosp., Duke Univ. Med. Ctr.*

4:00 II3 **447.16** Antihyperalgesic effects of systemic diazepam in $GABA_A$ receptor point-mutated mice carrying only one diazepam-sensitive $GABA_A$ receptor subtype. W. T. RALVENIUS*; D. BENKE; U. RUDOLPH; H. U. ZEILHOFER. *Inst. of Pharmacol. and Toxicology, Univ. Zürich, Lab. of Genet. Neuropharmacology, McLean Hosp. and Dept. of Psychiatry, Harvard Med. Sch., Inst. of Pharmaceut. Sciences, ETH Zürich.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 II4 **447.17** Internal differences between evoke and spontaneous pain mediate the divergent effect of depression on pain. N. WANG*; J. WANG; F. LUO. *Inst. of Psychology, Chinese Acad. of Sciences; Key Lab. of Mental H.*

2:00 II5 **447.18** Gender-dependent activation of ERK and pain sensitivity in acid-induced chronic muscle pain. Y. WEN*; S. TSAI; R. HUANG; Y. LIU; Y. CHIANG. *China Med. Univ. Hosp., China Med. Univ., China Med. Univ. Hosp., China Med. Univ.*

3:00 II6 **447.19** *In vivo* whole-cell recording of neocortical neurons during cortical spreading depression. P. M. SAWANT*; F. E. DUDEK; K. C. BRENNAN. *Univ. of Utah Sch. of Med., Univ. Utah Sch. Med., Univ. Utah Sch. Med.*

4:00 II7 **447.20** Whisker primary afferents in streptozotocin-diabetic rats show remarkable sub-millisecond reliability to tactile stimulation. O. J. FREEMAN*; M. R. BALE; N. J. GARDINER; R. S. PETERSEN. *Univ. of Manchester, Inst. de Neurociencias de Alicante UMH-CSIC.*

1:00 II8-DP4 **447.21** *In vivo* cell specific characterization of cortical spreading depression. J. MENDEZ*; J. THERIOT; K. C. BRENNAN. *Univ. of Utah.*

2:00 II9 **447.22** ▲ 5-HT$_{1A}$, GABA/BDZ and opioid receptors, but not NO-cyclicGMP-K^{+} channels pathway, are involved in the antinociceptive and/or anti-inflammatory activities of acacetin. A. CARBALLO*; F. J. LÓPEZ MUÑOZ; M. E. GONZÁLEZ TRUJANO. *Ctr. De Investigacion Y De Estudios Avanzados Del IPN, Inst. Nacional de Psiquiatría "Ramón de la Fuente Muñiz".*

3:00 II10 **447.23** ▲ Antinociceptive effect of the bioflavonoid rutin involves an anxiolytic-like response after local administration into the basolateral amygdala but not into the ventrolateral periaqueductal gray matter in the formalin test in rats. A. HERNÁNDEZ LEÓN*; J. A. FERNÁNDEZ GUASTI; M. E. GONZÁLEZ TRUJANO. *Ctr. of Res. and Advanced Studies of the Natl. Polytechnic Inst., Natl. Inst. of Psychiatry "Ramon de la Fuente Muñiz".*

4:00 II11 **447.24** Inhibition of spinal PKMζ reverses persistent referred allodynia induced by injection of acidic saline in the rat thigh. H. NASIR*; S. DING; A. LAFERRIERE; T. J. CODERRE. *McGill Univ., McGill Univ., Byram Hills, Alan Edwards Ctr. for Res. on Pain.*

1:00 II12 **447.25** Time course of spinal secretion of inflammatory cytokines in a rat model of incisional pain. M. A. MEDEIROS*; N. M. SOUZA; L. L. CASTRO; R. FRANÇA; J. TALBOT; T. M. CUNHA. *UFRRJ, São Paulo Univ.*

2:00 II13 **447.26** Sodium channels contribute to degeneration of dorsal root ganglion neurites induced by mitochondrial dysfunction in an *in vitro* model of small fiber neuropathy. A. PERSSON*; I. KIM; P. ZHAO; M. ESTACION; J. A. BLACK; S. G. WAXMAN. *Yale Univ.*

3:00 II14 **447.27** Hyperalgesia during wakefulness is disclosed by synchronization of somatosensory EEG resembling NREM sleep. P. J. SOJA*; S. SOOD; R. SANOJA; T. MARIAM; E. BENDA; R. TADAVARTY. *Univ. British Columbia.*

4:00 II15 **447.28** Peripheral inhibition of glutamate synthesis reduces elevation of glutaminase in rat peptidergic dorsal root ganglion neurons during adjuvant induced arthritis. Z. ZHANG*; K. E. MILLER. *Oklahoma State Univ-CHS.*

1:00 II16 **447.29** The effects of paclitaxel treatment on axonal transport. B. BOBER*; E. GUTIERREZ; S. SHAH. *UCSD.*

2:00 II17 **447.30** Anatomical evidence that thalamocortical neurons are activated in conjunction with EEG synchronization during central sensitization following intraplantar injection of formalin. E. BENDA*; U. KUMAR; P. J. SOJA. *Univ. of British Columbia.*

POSTER

448. Alcohol Self-Administration: Pharmacology and Genetics

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 II18 **448.01** Anaplastic lymphoma kinase prevents excessive ethanol consumption and reward. A. W. LASEK*; R. MAIYA; L. N. CATES; T. NADAV; L. CASAL; U. HEBERLEIN; A. J. ROBERTS. *Univ. of Illinois At Chicago, Ernest Gallo Clin. and Res. Ctr. at UCSF, The Scripps Res. Inst.*

2:00 JJ1 **448.02** ● Increased alcohol consumption in urocortin3 knock out mice. M. L. SMITH*; J. LI; A. RYABININ. *OHSU.*

3:00 JJ2 **448.03** Effects of neonatal testosterone on intermittent access ethanol consumption in female C57Bl/6J mice. J. F. DEBOLD*; A. M. GEADA; L. S. HWA; K. A. MICZEK. *Tufts Univ., Tufts Univ. Sch. of Med.*

4:00 JJ3 **448.04** Limbic system transcriptome profiling in alcohol-preferring and nonpreferring rats. M. WIECZOREK*; A. M. STANKIEWICZ; J. GOSCIK; R. STEFANSKI; W. DYR; D. RYGLEWICZ; A. H. SWIERGIEL; P. LISOWSKI. *Dept. Neurophysiology, Univ. of Lodz, Inst. of Genet. and Animal Breeding, Bialystok Univ. of Technol., Inst. Psychiatry & Neurol., Gdansk Univ., Inst. of Genet. and Animal Breeding.*

1:00 JJ4 **448.05** The relationship between social structure, voluntary alcohol consumption, and tyrosine hydroxylase in three Peromyscus species. A. E. PERKINS*; A. C. CAPPS; S. J. KELLY. *Univ. of South Carolina.*

2:00 JJ5 **448.06** Stress-related alcohol consumption in heavy drinkers correlates with expression of miR-10a, miR-21 and components of the TAR-RNA binding protein (TRBP)-associated complex. R. D. BEECH*; J. J. LEFFERT; A. LIN; K. A. HONG; J. HANSEN; S. UMLAUF; S. MANE; H. ZHAO; R. SINHA. *Yale Univ. Sch. Med., Yale Univ. Sch. Med., Yale Univ. Sch. Med., Yale Univ. Sch. Med.*

3:00 JJ6 **448.07** A neuroproteomic fingerprint of Homer2-mediated alcohol preference. S. P. GOULDING*; C. CONTET; K. K. SZUMLINSKI; C. C. WU. *Univ. of Colorado Anschutz Med. Campus, The Scripps Res. Inst., Univ. of California, Santa Barbara, Univ. of Pittsburgh.*

4:00 JJ7 **448.08** Epigenetic and pharmacological regulation of 5HT3 receptors controls compulsive ethanol seeking. J. M. BARKER*; H. ZHANG; J. J. VILLAFANE; T. L. WANG; J. R. TAYLOR. *Yale Univ., Yale Univ., Yale Univ.*

1:00 JJ8 **448.09** Involvement of 5-HT2CR RNA-editing in alcohol preference. Y. WATANABE*; K. YOSHIMOTO; H. TATEBE; K. NISHIKURA; M. KIMURA; M. TANAKA. *Kyoto Pref. Univ. Med., Kyoto Pref. Univ. Med., The Wistar Inst., Tamagawa Univ.*

2:00 JJ9 **448.10** ● Effect of SUVN-A60203, a 5-HT$_{6}$ antagonist on alcohol consumption and preference in rats. P. JAYARAJAN*; R. NIROGI; A. SHINDE; R. MEDAPATI; V. GOURA; S. V. YATHAVAKILLA. *Suven Life Sci. Ltd.*

3:00 JJ10 **448.11** Effects of ceftriaxone on systemic and central expression of anti- and pro-inflammatory cytokines in alcohol-preferring (P) rats exposed to ethanol. P. RAO*; S. AHMED; Y. SARI. *UNIVERSITY OF TOLEDO.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 JJ11 **448.12** The peroxisome proliferator-activated receptor α agonist, fenofibrate, decreases alcohol-seeking and -taking behaviors. T. A. KOSTEN*; K. J. WINOSKE. *Baylor Col. of Med.*

1:00 JJ12 **448.13** The interactive effects of caffeine on ethanol drinking and locomotor sensitization in c57bl/6j mice. H. HAUN*; C. MAY; C. HAZELBAKER; C. HAWKINS; M. ZIPPERLY; M. LOPEZ; W. C. GRIFFIN. *Med. Univ. of South Carolina.*

2:00 JJ13 **448.14** Ethanol drinking behavior in TSRI sardinian alcohol-preferring rats is modulated by a cross-talk between the sigma-1 and the opioid receptor systems. M. VALENZA*; L. STEARDO; P. COTTONE; V. SABINO. *Boston Univ. Sch. of Med., Rockefeller Univ., "Sapienza" Univ. of Rome.*

3:00 JJ14 **448.15** Chronic social stress during adolescence increases CRF gene expression in rat amygdala and operant alcohol self-administration. P. E. OLIVEIRA*; P. C. BIANCHI; F. C. CRUZ; R. M. LEAO; C. S. PLANETA. *Univ. Estadual Paulista.*

4:00 JJ15 **448.16** The il-1 receptor influences alcohol consumption in c57 mice. S. C. KARLSSON*; F. REHMAN; E. BARBIER; M. SOLOMON; J. D. TAPOCIK; A. THORSELL; M. HEILIG; J. R. SCHANK; J. R. SCHANK. *NIH/NIAAA, Karolinska Inst., Linkopings Univ.*

1:00 JJ16 **448.17** CaMKIIα is required for alcohol seeking behavior and alcohol induced pain. X. TIAN; Y. XIANG; X. HU; Z. J. WANG*. *UIC, Univ. Illinois.*

2:00 JJ17 **448.18** Impact of social context on pharmacological intervention of alcohol consumption in two social rodent species. C. HOSTETLER*; V. A. WAKELING; A. E. RYABININ. *Oregon Hlth. & Sci. Univ.*

3:00 JJ18 **448.19** Circadian rhythms and voluntary ethanol intake in male and female ethanol-preferring (P, HAD-2) rats during long-term ethanol access. W. MCCULLEY*, III; M. E. FECTEAU; V. A. PENDLETON; A. M. ROSENWASSER. *Univ. of Maine.*

4:00 KK1 **448.20** Modulation of voluntary ethanol intake by environmental lighting regimen in mice. A. M. ROSENWASSER*; W. D. MCCULLEY, III; M. C. FIXARIS; J. C. CRABBE. *Univ. of Maine, Oregon Hlth. & Sci. Univ.*

1:00 KK2 **448.21** Naltrexone reduces the effectiveness of ethanol-related cues to support non-extinguished operant responding in rats. C. J. HEYSER*; G. F. KOOB. *UCSD, The Scripps Res. Inst.*

2:00 KK3 **448.22** Behavioral characterization of a mouse model of binge caffeine and alcohol co-consumption. B. M. FRITZ*; M. COMPANION; S. L. BOEHM, II. *Indiana Univ. Purdue Univ. - Indianapolis, Indiana Alcohol Res. Ctr.*

3:00 KK4 **448.23** Inhibitory control and perseveration in alcohol addiction: A computational approach. S. BALTA*; A. BECK; L. DESERNO; A. HEINZ; K. OBERMAYER. *Technische Univ. Berlin, Bernstein Ctr. for Computat. Neurosci., Charite Univ. Med., Max-Planck-Institute for Human Cognitive and Brain Sci.*

4:00 KK5 **448.24** Relativity of biased agonism in models of depression, anxiety and ethanol consumption. R. M. VAN RIJN*; J. I. DEFRIEL; J. LU; J. L. WHISTLER. *Ernest Gallo Clin. and Res. Ctr.*

1:00 KK6 **448.25** Critical role for SK3 channels in mediating chronic intermittent ethanol exposure-induced escalation of drinking in BXD mice. A. PADULA*; N. S. MCGUIER; W. C. GRIFFIN III; M. F. LOPEZ; M. F. MILES; H. C. BECKER; P. J. MULHOLLAND. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Virginia Commonwealth Univ.*

2:00 KK7 **448.26** The role of histamine H3 receptor in brain dopaminergic regulation in mice. J. P. VANHANEN*; S. NUUTINEN; P. PANULA. *Insitute of Biomedicine, Anat.*

3:00 KK8 **448.27** Neuropeptide Y in high drinking in the dark selectively bred mice. A. M. BARKLEY-LEVENSON*; A. E. RYABININ; J. C. CRABBE. *Oregon Hlth. & Sci. Univ., VA Med. Ctr.*

4:00 LL1 **448.28** ● Early ethanol intake in alcohol preferring P vs. Wistar and Sprague Dawley rats: Parallel operation of choice and total fluid limit regulate drinking pattern and bout parameters. A. V. AZAROV*; D. J. WOODWARD. *Neurosci Res. Inst. North Carolina.*

1:00 LL2 **448.29** Sex-dependent effects of stress on limited access ethanol consumption. D. K. COZZOLI*; M. N. STRONG; M. A. TANCHUCK; C. B. HOROWITZ; D. A. FINN. *Oregon Hlth. and Sci. Univ., VA Med. Ctr. Res.*

2:00 LL3 **448.30** Sucrose-free operant ethanol self-administration in C57BL/6J mice. T. A. MEYERS*; E. Y. MAIER; D. A. HERNANDEZ; R. A. MORRISETT. *Univ. of Texas At Austin, Univ. of Texas At Austin.*

POSTER

449. Cocaine: Neural Mechanisms of Addiction III

Theme C: Disorders of the Nervous System

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 LL4 **449.01** Effects of cocaine self-administration on synaptic glutamate transmission in the rat medial prefrontal cortex. J. E. DILGEN*; A. LAVIN. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

2:00 LL5 **449.02** Enhanced hippocampus-mediated dopaminergic neurotransmission in the nucleus accumbens following repeated cocaine. J. L. BARR*; G. FORSTER; E. M. UNTERWALD. *Temple Univ., The Univ. of South Dakota.*

3:00 LL6 **449.03** Inhibition of the mammalian target for rapamycin (mTOR) pathway by rapamycin blocks cocaine-induced locomotor sensitization and stereotypy. K. S. FROHMADER*; C. AYDIN; S. FLAGEL; H. AKIL. *Univ. of Michigan.*

4:00 LL7 **449.04** Regulation of extinction of cocaine-induced place preference by midkine, not by pleiotrophin, is related to a differential phosphorylation of peroxiredoxin 6 and aconitase in dorsal striatum and prefrontal cortex. G. HERRADON*; E. GRAMAGE; M. VICENTE-RODRÍGUEZ; S. BOLLEN; C. PÉREZ-GARCÍA. *Pharmacol. Lab, CEU San Pablo Univ., Univ. of Michigan.*

1:00 LL8 **449.05** Differential phosphoproteome of the striatum from pleiotrophin knockout and midkine knockout mice treated with cocaine. E. GRAMAGE*; M. VICENTE-RODRÍGUEZ; G. HERRADÓN; C. PÉREZ-GARCÍA. *Univ. of Michigan, Univ. CEU San Pablo.*

2:00 LL9 **449.06** A potential role for H-Ras in cocaine self-administration. A. OLEVSKA*; R. E. BERNARDI; R. BRAMBILLA; R. SPANAGEL. *Central Inst. of Mental Hlth. (CIMH), Inst. of Exptl. Neurology, Div. of Neuroscience, San Raffaele Scientific Inst. and Univ. Milano.*

3:00 LL10 **449.07** Metabolome analysis in reward-relevant brain regions after early and late withdrawal from cocaine self-administration in rats. B. A. SORG*; X. ZHANG; R. P. TODD; J. O. SCHENK; H. H. HILL, Jr. *Washington State Univ., Washington State Univ.*

4:00 LL11 **449.08** ▲ Modulation of cocaine-induced functional brain activation by mGluR2/3 agonism assessed by manganese-enhanced magnetic resonance imaging. M. DUDEK; L. DOKLEJA; P. HYYTIA*. *Univ. of Helsinki.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 LL12 **449.09** AKAP signaling in the nucleus accumbens shell promotes the reinstatement of cocaine seeking. L. A. GUERCIO*; H. D. SCHMIDT; C. PIERCE. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 MM1 **449.10** Transcriptomic study of environmental enrichment and cocaine-taking behavior in rat nucleus accumbens. Y. ZHANG*; F. KONG; H. M. SPRATT; M. SINHA; C. R. ANDERSEN; D. LI; X. FAN; B. A. LUXON; T. A. GREEN. *Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

3:00 MM2 **449.11** ▲ Effects of modulating CART-expressing neurons on cocaine-induced conditioned place preference. J. TAO*; A. POPESCU; M. POO. *Univ. of California, Berkeley.*

4:00 MM3 **449.12** ● Profiling miRNA expression in human midbrain dopamine neurons in cocaine addiction. N. C. ADI*; S. P. GARAMSZEGI; X. XIE; D. C. MASH*. *Univ. Of Miami.*

1:00 MM4 **449.13** Role of cholinergic transmission from the laterodorsal tegmental nucleus to the ventral tegmental area in cocaine-induced place preference. K. KANEDA*; F. SHINOHARA; Y. KIHARA; S. IDE; M. MINAMI. *Hokkaido Univ.*

2:00 MM5 **449.14** Withdrawal from cocaine self-administration alters activin/SMAD3-signaling. A. M. GANCARZ*; G. L. SCHROEDER; C. PANGANIBAN; D. N. ADANK; M. A. KAUSCH; S. D. CLARK; D. M. DIETZ. *State Univ. of New York At Buffalo, State Univ. of New York At Buffalo,.*

3:00 MM6 **449.15** Activation of protein kinase C is required for AMPA receptor GluR1 phosphorylation at serine 845 in the dorsal striatum following repeated cocaine administration. E. CHOE*; J. OH; J. YANG; I. RYU; S. SEO; J. KIM. *Pusan Natl. Univ.*

4:00 MM7 **449.16** esilient GluN2B-containing NMDA receptors impair synaptic flexibility in cocaine self-administering rats. E. HAWKEN*; J. DEBACKER; C. NORMANDEAU; C. DI PROSPERO; A. A. JONES; S. HAYTON; E. C. DUMONT. *Queen's Univ., Queen's Univ., Standford Univ.*

1:00 MM8 **449.17** Temporal and persistent effects of mild oxidative stress on striatum-dependent behaviors in rats. S. TODA*; S. KOSUGI; Y. IGUCHI; Y. MINABE. *Kanazawa Univ. Sch. of Med.*

2:00 MM9 **449.18** Anxiety during cocaine withdrawal: Regulation by the dorsal raphe 5-ht2c receptor and gaba network. C. P. CRAIGE*; S. LEWANDOWSKI; L. G. KIRBY; E. M. UNTERWALD. *Temple Univ. Sch. of Med., Ctr. for Substance Abuse Res.*

3:00 MM10 **449.19** Cocaine-induced plasticity deficits in the male offspring of cocaine-experienced sires. M. E. WIMMER*; F. M. VASSOLER; P. I. ORTINSKI; S. L. WHITE; H. D. SCHMIDT; G. SADRI-VAKILI; C. PIERCE. *Univ. Pennsylvania, Tufts Univ., Univ. of Pennsylvania, Mass Gen. Hosp.*

4:00 NN1 **449.20** Cocaine and cocaine expectancy depress inhibition of the dopamine system and cocaine reward by leptin signaling. Z. YOU*; B. WANG; Q. LIU; Y. WU; R. A. WISE. *NIDA-IRP/NIH/DHHS.*

POSTER

450. Olfactory Coding: Second Order Regions

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 NN2 **450.01** Bulbs Gone Wild: Comparing three-dimensional reconstructions of the Main Olfactory Bulb from feral and research strains of mice. E. SALCEDO*; K. HANSON; T. JONAS; L. LOW; D. RESTREPO. *Univ. Colorado AMC.*

2:00 NN3 **450.02** ● Effect of changing density of A-type and H-type currents on stochastic synchrony. Y. RHO*; S. D. BURTON; G. B. ERMENTROUT; N. N. URBAN. *Univ. of Pittsburgh, Carnegie Mellon Univ., Ctr. for the Neural Basis of Cognition.*

3:00 NN4 **450.03** Natural odor processing in a 3D olfactory bulb model. M. MIGLIORE*; M. L. HINES; F. CAVARRETTA; G. M. SHEPHERD. *Natl. Res. Council, Yale Univ.*

4:00 NN5 **450.04** State-dependent coding and temporal firing patterns of olfactory bulb interneurons in awake mice. B. N. CAZAKOFF; B. Y. LAU; K. L. CRUMP; H. S. DEMMER; S. D. SHEA*. *Cold Spring Harbor Lab., Cold Spring Harbor Lab.*

1:00 NN6 **450.05** Odor coding in the olfactory bulb of the sea lamprey. W. W. GREEN*; H. ZHANG; R. DUBUC; B. S. ZIELINSKI. *Univ. of Windsor, Univ. de Montréal, Univ. du Québec à Montréal.*

2:00 NN7 **450.06** Participation of synchronized top-down inputs from the anterior piriform cortex to the olfactory bulb in the enhanced elimination of granule cells during postprandial period. S. KOMANO*; H. MANABE; M. OTA; I. KUSUMOTO-YOSHIDA; T. YOKOYAMA; K. MORI; M. YAMAGUCHI. *The Univ. of Tokyo, CREST (JST).*

3:00 NN8 **450.07** Interneuron functional diversity in the mouse accessory olfactory bulb. M. A. MAKSIMOVA; J. M. TORRES; J. P. MEEKS*. *UT Southwestern Med. Ctr.*

4:00 NN9 **450.08** Biogenic amine based plasticity in projection neurons in early olfactory processing may be driven by cAMP coupled receptor pathways. D. T. PROTAS*; B. H. SMITH. *Arizona State Univ.*

1:00 NN10 **450.09** Lateral inhibition and odor mixture integration among distinct subpopulations of olfactory bulb output neurons imaged *in vivo.* M. N. ECONOMO*; M. WACHOWIAK. *Univ. of Utah, Univ. of Utah.*

2:00 NN11 **450.10** Dynamics of olfactory neural codes in the antennal lobe of the Manduca sexta moth. E. SHLIZERMAN*; J. RIFFELL; J. KUTZ. *Univ. of Washington, Univ. of Washington.*

3:00 NN12 **450.11** Glomerular and granule layer inhibition govern olfactory bulb output on distinct timescales. I. FUKUNAGA*; J. T. HERB; M. KOLLO; E. S. BOYDEN; A. T. SCHAEFER. *Max-planck-Institute For Med. Res., MRC Natl. Inst. for Med. Res., Univ. of Heidelberg, MIT, Univ. Col. London.*

4:00 NN13 **450.12** Impaired GABAB-receptor function in adult-born olfactory bulb interneurons. M. VALLEY*; C. MAZO; G. LEPOUSEZ; L. HENDERSON; S. INVERSO; P. LLEDO. *Inst. Pasteur.*

1:00 NN14 **450.13** fMRI of odor vs. direct micro-stimulation measures layer-specific hemodynamic regulation in the olfactory bulb. A. J. POPLAWSKY*; H. FUKUDA; X. ZONG; B. IORDANOVA; S. KIM. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

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▲ Indicates a high school or undergraduate student presenter.

2:00 NN15 **450.14** Contribution of inhibitory neuronal activity to hemodynamic responses in olfactory bulb. H. FUKUDA*; A. J. POPLAWSKY; B. IORDANOVA; X. ZONG; A. VAZQUEZ; S. KIM. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 NN16 **450.15** Pattern decorrelation in population of olfactory bulb output neurons predicts odor discrimination in mice. O. GSCHWEND*; N. M. ABRAHAM; I. RODRIGUEZ; A. CARLETON. *Univ. of Geneva.*

4:00 NN17 **450.16** The anatomical basis for modulatory convergence in the antennal lobe of Manduca sexta. J. METHENY; A. M. DACKS*. *West Virginia Univ.*

1:00 NN18 **450.17** Behavioral state regulates the generation of respiration rhythm-paced fast and slow gamma oscillations in the rat olfactory bulb. H. MANABE*; N. ONISAWA; K. NARIKIYO; K. MORI. *Univ. Tokyo, Japan Sci. and Technol. Agency, CREST.*

2:00 OO1 **450.18** Dynamics of reward mediated neural plasticity in early olfactory processing. I. SINAKEVITCH; J. CHEN; R. HUERTA; M. BAZHENOV; B. H. SMITH*. *Arizona State Univ., Univ. of California, Univ. of California, Univ. of California.*

3:00 OO2 **450.19** Dynamic sensory representations in the olfactory bulb: Modulation by wakefulness and experience. M. W. CHU*; H. KATO; J. ISAACSON; T. KOMIYAMA. *UCSD, UCSD.*

4:00 OO3 **450.20** Histamine enhances the temporal resolution of antennal lobe responses to periodic stimuli in the moth Manduca sexta: A role for centrifugal input from flight sensory motor centers. S. P. BRADLEY*; B. HOUOT; A. K. SNYDER; R. V. M. RIO; A. M. DACKS; K. C. DALY. *West Virginia Univ., Univ. de Bourgogne.*

1:00 OO4 **450.21** *In vivo* imaging of odor-evoked responses in the mouse olfactory bulb using the FP voltage sensor ArcLight and the calcium sensor GCaMP3. D. A. STORACE*; L. B. COHEN; U. SUNG. *Yale Univ., Korea Inst. of Sci. and Technol.*

2:00 OO5 **450.22** Sparse learning of odorant representations in the olfactory bulb. H. S. DEMMER; Y. WEI; A. KOULAKOV*; S. D. SHEA. *Cold Spring Harbor Lab., Cold Spring Harbor Lab.*

3:00 OO6 **450.23** Neural circuit abstractions in the fruit fly brain. A. A. LAZAR*; W. LI; N. H. UKANI; C. YEH; Y. ZHOU. *Columbia Univ.*

4:00 OO7 **450.24** The tradeoff between information format and capacity in olfactory neurons exhibiting oscillatory synchrony. Z. N. ALDWORTH*; M. A. STOPFER. *NIH-NICHD.*

1:00 OO8 **450.25** Odor information processing through reciprocal connectivity between mitral cells and external plexiform layer interneurons in the olfactory bulb. L. HUANG*; I. GARCIA; K. CORDINER; P. SAGGAU; B. ARENKIEL. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Rice Univ., Baylor Col. of Med., Jan and Dan Duncan Neurolog. Res. Inst.*

2:00 OO9 **450.26** Gain control network conditions in early sensory coding. T. NOWOTNY*; E. SERRANO; R. LEVI; B. H. SMITH; R. HUERTA. *Univ. of Sussex, Univ. Autonoma de Madrid, Univ. of Florida, Arizona State Univ., UCSD.*

3:00 OO10 **450.27** Role of odorant receptors and ligands in the axon guidance of olfactory sensory neurons. F. F. CONTE*; F. PAPES. *UNICAMP.*

4:00 OO11 **450.28** Stimulus-dependent lateral excitation and inhibition revealed via selective optical activation of an individual olfactory glomerulus. O. R. BRAUBACH*; T. TOMBAZ; R. HOMMA; T. BOZZA; L. B. COHEN; Y. CHOI. *Korea Inst. of Sci. and Technol. (KIST), Marine Biol. Lab., Yale Sch. of Med., Northwestern Univ., HHMI Janelia Farm.*

1:00 OO12 **450.29** Dynamic modulation of spontaneous synaptic activity in intracellular recordings from olfactory bulb interneurons in awake mice. I. YOUNGSTROM*; B. W. STROWBRIDGE. *Case Western Reserve Univ.*

2:00 OO13 **450.30** Postnatal development of intrinsic properties of mouse olfactory mitral cell. Y. YU*; S. TRIPATHY; N. N. URBAN. *Carnegie Mellon Univ.*

POSTER

451. Olfaction: Receptors, Transduction, and Central Circuits

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 OO14 **451.01** Differential odor-processing by two classes of principal neurons in the piriform cortex *in vivo.* H. H. HUANG; J. M. BEKKERS*. *John Curtin Sch. Med. Res.*

2:00 OO15 **451.02** *In vivo* imaging of the activity of cortical feedback projections in the mouse olfactory bulb. A. M. BOYD*; A. PETERS; T. KOMIYAMA; J. S. ISAACSON. *UCSD, UCSD, UCSD.*

3:00 OO16 **451.03** Olfactory computations in Habenular circuits. S. K. JETTI*; N. VENDRELL LLOPIS; E. YAKSI. *Neuroelectronics Res. Flanders.*

4:00 OO17 **451.04** Neural coding in the complete set of mushroom body output neurons in *Drosophila.* T. HIGE*; Y. ASO; G. M. RUBIN; G. C. TURNER. *Cold Spring Harbor Lab., Howard Hughes Med. Inst.*

1:00 OO18 **451.05** Laminar specificity of inhibitory circuits in piriform cortex. A. M. LARGE; A. M. OSWALD*. *Univ. of Pittsburgh.*

2:00 PP1 **451.06** Control of GABA release and glomerular output by metabotropic glutamate receptors in the olfactory bulb. J. D. ZAK*; N. E. SCHOPPA. *Univ. of Colorado, AMC.*

3:00 PP2 **451.07** Ultrastructure and synaptic connectivity of the afferent terminals of the main and accessory olfactory bulb neurons in the rat anterior piriform cortex and medial amygdala. S. PARK; S. KIM; C. MOON*; Y. BAE. *Sch. of Dentistry, Kyungpook Natl. Univ., DGIST, Dept. of Brain Sci., Sch. of Dentistry, Kyungpook Natl. Univ.*

4:00 PP3 **451.08** Optical detection of glutamate transients within olfactory bulb glomeruli. J. N. BOURNE*; J. D. ZAK; C. G. DULLA; N. E. SCHOPPA. *Univ. of Colorado Anschutz Med. Campus, Tufts Univ. Sch. of Med.*

1:00 PP4 **451.09** Feedforward vs. feedback inhibition to regulate the sparse firing of olfactory neurons. T. KEE*; P. SANDA; N. GUPTA; M. STOPFER; M. BAZHENOV. *Univ. of California, Riverside, NIH.*

2:00 PP5 **451.10** Decoding of temporally patterned sparse codes by mushroom body output neurons. N. GUPTA*; M. STOPFER. *NIH.*

3:00 PP6 **451.11** Massive long-range intracortical and centrifugal excitatory innervation within olfactory circuits. W. YANG*; A. YOUNG; Q. SUN. *Univerisity of Wyoming.*

4:00 PP7 **451.12** Optogenetic analysis of intracortical circuits in the piriform cortex. J. CHOY*; Y. SHIMA; S. B. NELSON; J. M. BEKKERS. *The John Curtin Sch. of Med. Res., Brandeis Univ.*

Mon. PM

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1:00 PP8 **451.13** The role of nitric oxide in olfactory memory is modulated by circadian time. S. L. GAGE*; A. NIGHORN. *Univ. of Arizona.*

2:00 PP9 **451.14** The mouse olfactory peduncle: Survey of postnatal development. P. C. BRUNJES*; L. COLLINS; S. OSTERBERG; A. PHILLIPS. *Univ. Virginia.*

3:00 PP10 **451.15** Patterns of olfactory system scaling in rodents and other mammals. S. SRINIVASAN; C. F. STEVENS*. *Salk Inst., Kavli Inst. for brain and mind.*

4:00 PP11 **451.16** Temporal aspects of the sense of smell: A study using magnetoencephalography. T. J. VAN HARTEVELT*; T. KJÆRGAARD; E. JEGINDØ; A. B. A. STEVNER; H. R. MOHSENI; M. W. WOOLRICH; C. MARGOT; A. MØLLER; T. Z. AZIZ; T. OVESEN; M. L. KRINGELBACH. *Univ. of Oxford, Aarhus Univ., Aarhus Univ. Hosp., Univ. of Oxford, Firmenich SA, Univ. of Oxford.*

1:00 PP12 **451.17** Intraglomerular gap junctions augment interglomerular synchrony in a sparsely-connected olfactory bulb network. F. R. POUILLE*; T. S. MCTAVISH; L. E. HUNTER; D. RESTREPO; N. E. SCHOPPA. *Univ. of Colorado, AMC, Univ. of Colorado, AMC, Univ. of Colorado, AMC, Univ. of Colorado, AMC.*

2:00 PP13 **451.18** Relating olfactory function to white matter structure in humans: A combined neurobehavioral and DTI analysis. T. ROLHEISER*; F. OLSON; E. FUJIWARA; P. SERES; N. MALYKHIN. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

3:00 PP14 **451.19** Laminar organization of neural projections in the olfactory cortex. C. G. LAU*; C. MAZO; V. N. MURTHY. *Harvard Univ.*

4:00 PP15 **451.20** ▲ Vitamin A deficiency attenuates olfactory receptor neuron responses in mice. A. E. HOMAN; H. M. STONER; L. COATES*. *Allegheny Col., Allegheny Col.*

1:00 PP16 **451.21** Generation of olfactory sensory neurons *in vitro* by overexpression of defined transcription factors. F. TOLENTINO*; F. PAPES. *State Univ. of Campinas.*

2:00 PP17 **451.22** ● Cellular and molecular mechanism of olfactory imprinting in *Drosophila.* T. CHAKRABORTY*; L. M. CURRIER; D. GREEN; J. W. WANG. *UCSD.*

3:00 PP18 **451.23** Ca^{2+}-dependent Cl^- channels recorded in chemosensory cilia of vertebrate olfactory receptor neurons. R. DELGADO; J. BACIGALUPO*. *Univ. of Chile.*

4:00 PP19 **451.24** Physicochemical vs. vibrational descriptors for predicting olfactory receptor responses. M. SCHMUKER*; S. GABLER; J. SOELTER. *Freie Univ. Berlin, Bernstein Ctr. for Computat. Neurosci.*

1:00 PP20 **451.25** Time-of-day specific changes in odorant sensitivity in the malaria mosquito Anopheles gambiae determined by electroantennograms are correlated with diurnal rhythms in odorant binding proteins. G. E. DUFFIELD*; N. A. BONAR; S. S. C. RUND; M. M. CHAMPION; J. P. GHAZI; C. M. HOUK; Z. SYED. *Univ. of Notre Dame, Univ. of Notre Dame.*

POSTER

452. Olfaction: Behavior, Perception, and Its Relation to Neurophysiology

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 PP21 **452.01** Multiple perceptible signals from a single olfactory glomerulus. M. SMEAR*; A. RESULAJ; J. ZHANG; T. BOZZA; D. RINBERG. *HHMI/ JFRC, Northwestern Univ.*

2:00 PP22 **452.02** Olfactory alterations in transgenic 3xTg-AD female mice. G. CORONAS-SAMANO; W. PORTILLO-MARTINEZ; R. PAREDES; A. AGUILAR-VAZQUEZ; I. MEDINA-AGUIRRE; S. DIAZ-CINTRA*. *UNAM Campus Juriquilla.*

3:00 PP23 **452.03** Distinct roles of bulbar muscarinic and nicotinic receptors in olfactory discrimination learning. S. DEVORE*; L. DE ALMEIDA; C. LINSTER. *Cornell Univ.*

4:00 PP24 **452.04** ● Determinants of pleasantness in olfactory stimuli. G. S. TANG*; C. T. SIMONS; C. C. WU; M. U. SHANKAR; S. M. MCCLURE. *Stanford Univ., Givaudan Flavors Corp.*

1:00 QQ1 **452.05** Statistical learning of inhibitory topology in the olfactory bulb external plexiform layer. T. A. CLELAND*; P. RITTNER. *Cornell Univ.*

2:00 QQ2 **452.06** Comparison of orthonasal to retronasal smell in those with chemosensory dysfunction. A. R. HIRSCH*; A. P. ROUSSOS; S. FREELS. *Smell & Taste Treatment and Res. Fndn., Univ. of Illinois at Chicago.*

3:00 QQ3 **452.07** A neural circuit mediating the influence of social cues on foraging behavior in *Drosophila.* S. M. KIM*; T. NGO; O. A. ZANINOVICH; K. I. KO; J. W. WANG. *UCSD.*

4:00 QQ4 **452.08**vFunctional activity and odor recognition memory in patients with probable and possible Alzheimer's disease. K. CROSS*; C. MURPHY. *Karalani Cross, San Diego State Univ., UCSD.*

1:00 QQ5 **452.09** GABA(a) receptor independent gamma oscillations in olfactory bulb slices. S. T. PEACE*; B. JOHNSON; A. MOLNAR; T. A. CLELAND. *Cornell Univ., Cornell Univ., Cornell Univ.*

2:00 QQ6 **452.10** A comparison of Egr-1 and c-Fos immediate-early gene expression profiles following appetitive or aversive odor-tastant conditioning. S. LUO*; K. M. GRUVER; N. FUJIWARA; X. ZHUO; M. EINHORN; T. A. CLELAND. *Cornell Univ.*

3:00 QQ7 **452.11** Genetic control of sexually dimorphic pheromone attraction in *C. elegans.* D. S. PORTMAN*; K. FAGAN; J. BENNETT. *Univ. of Rochester.*

4:00 QQ8 **452.12** Measuring and improving human resilience to olfactory stressors. B. D. WINSLOW*; E. GOODRICH; J. HOOK; R. V. N. ODEN; D. JONES. *Design Interactive, Inc.*

1:00 QQ9 **452.13** The influence of NMDA receptor subunit GluN3a (NR3a) on olfactory morphology and function in mice. J. LEE*; L. WEI; S. P. YU. *Emory Univ.*

2:00 QQ10 **452.14** Behavioral effects of bulbar neuromodulation. C. LINSTER*; S. DEVORE; T. DILLON; O. ESCANILLA; M. LEWIS; N. MANDAIRON; L. MANELLA. *Cornell Univ.*

3:00 QQ11 **452.15** The role of piriform associative connections in odor quality and category coding. X. BAO*; L. L. G. RAGUET; J. D. HOWARD; S. M. COLE; J. A. GOTTFRIED. *Northwestern Univ., École Normale Supérieure.*

4:00 QQ12 **452.16** Methodological considerations for conducting odor-guided tasks in rodents. W. M. YODER*; B. SETLOW; J. L. BIZON; D. W. SMITH. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

1:00 QQ13 **452.17** Effects of interaction between photostimulation and odor stimulation by essential oil in human. S. TUKAIEV*; I. ZIMA; S. KRIZHANOVSKIY; A. CHERNINSKYI; S. SOBISHCHANSKYI; O. ZALEVSKA; O. RADCHUK; M. MAKARCHUK. *Natl. Taras Shevchenko Univ. of Kyiv, Inst. of Biol., Inst. of Communication and Health, Univ. della Svizzera italiana, Natl. Taras Shevchenko Univ. of Kyiv, Inst. of Biol.*

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2:00 QQ14 **452.18** Categorical dimensions of human odor descriptor space revealed by non-negative matrix factorization. J. B. CASTRO*; S. P. QUINN; A. RAMANATHAN; C. S. CHENNUBHOTLA. *Bates Col., Carnegie Mellon & Univ. of Pittsburgh, Oak Ridge Natl. Lab., Univ. of Pittsburgh.*

3:00 QQ15 **452.19** The odor of Osmanthus fragrans attenuates food intake. T. TSUJI*; T. YAMAMOTO; T. INUI; S. BAKHSHISHAYAN; K. KIDA; S. TANAKA; M. KOGO. *Osaka Univ., Kio Univ., Osaka Univ., Osaka Univ., Osaka Police Hosp.*

4:00 QQ16 **452.20** Olfactory bulb as model system for the cellular and molecular dissection of memory. M. TONG*; T. A. CLELAND. *Cornell Univ.*

1:00 QQ17 **452.21** Locus Coeruleus activity patterns affect olfactory bulb physiology and odor memory. L. C. MANELLA*; S. DEVORE; C. LINSTER. *Cornell Univ.*

2:00 QQ18 **452.22** Olfactory sensitivity to pheromone 3-ketopetromyzonol sulfate and bile acids in several lamprey species. M. HUERTAS*; T. BUCHINGER; W. LI; N. JOHNSON. *Michigan State Univ., USGS.*

3:00 QQ19 **452.23** Olfactory path following behavior in the mouse. P. W. JONES*; A. ZHANG; A. HARSCH; N. N. URBAN. *Carnegie Mellon Univ., Univ. of Pittsburgh.*

4:00 QQ20 **452.24** ▲ Response to olfaction in Caenorhabditis elegans follows the Weber-Fechner law. M. MAKINO*; H. SHIDARA; K. HOTTA; K. OKA. *Keio Univ.*

1:00 QQ21 **452.25** AIY interneurons involved in the cross modality adaptation in Caenorhabditis elegans. H. SHIDARA*; J. KOBAYASHI; R. TANAMOTO; K. HOTTA; K. OKA. *Biophysics and Neuroinformatics, Fac. Of Sci. And Technology, Keio Unive.*

2:00 QQ22 **452.26** Behavioral study of air borne odor guided navigation in rats. U. RAHEJA*; U. S. BHALLA. *Natl. Ctr. For Biol. Sci., Natl. Ctr. for Biol. Sci.*

3:00 QQ23 **452.27** Setting the tone: The effects of cholinergic modulation on olfactory perceptual learning. A. SCHILIT*; K. G. BATH. *Brown Univ.*

4:00 QQ24 **452.28** Olfactory search behavior in mice: A novel task design that moves beyond a single sniff. D. H. GIRE*; V. KAPOOR; A. SEMINARA; A. ARRIGHI-ALLISAN; V. N. MURTHY. *Harvard Univ., Harvard Univ., CNRS.*

1:00 QQ25 **452.29** Development of pheromone antagonists for sea lamprey control. A. M. SCOTT*; M. HUERTAS; N. LIU; S. K. GUNTURU; L. A. KUHN; W. LI. *Michigan State Univ., Michigan State Univ.*

2:00 QQ26 **452.30** innexin7-containing gap junctions contribute to olfactory discrimination in *Drosophila.* J. M. CAMPUSANO*; N. FUENZALIDA-URIBE; B. SILVA. *P. Univ. Catolica Chile.*

POSTER

453. Auditory System: Cortical Processing and Human Studies of Natural Sounds

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 RR1 **453.01** Effects of motherhood on the ultrasound frequency map in mouse core auditory cortex. K. N. SHEPARD*; R. C. LIU. *Emory Univ.*

2:00 RR2 **453.02** Plastic changes in responses to harmonic-type and noise-type pup calls in the auditory cortex of mother rats. M. KUDOH*; Y. NISHIDA; G. OGAWA. *Dept Physiol, Teikyo Univ. Sch. Med.*

3:00 RR3 **453.03** Responses of the guinea pig auditory cortex to communication sounds with degraded temporal fine structure or temporal envelope. J. EDELINE*; Y. AUSHANA; C. HUETZ; C. LORENZI. *Ctr. De Neurosciences Paris-Sud, Audition Team.*

4:00 RR4 **453.04** Nonlinear spectro-temporal and spatio-temporal receptive fields in primary auditory cortex. I. L. THORSON; S. V. DAVID*. *Oregon Hlth. & Sci. Univ.*

1:00 RR5 **453.05** Perceptual and neural mechanisms of timbre perception. S. M. TOWN*; H. ATILGAN; K. C. WOOD; J. K. BIZLEY. *UCL.*

2:00 RR6 **453.06** ▲ Cues for auditory streaming during a natural marmoset cocktail party. L. A. WONG*; C. R. TOARMINO; C. T. MILLER. *Cortical Systems and Behavior Laboratory, Univ. of California, San Deigo.*

3:00 RR7 **453.07** Investigating auditory processing in awake marmosets using fMRI. C. TOARMINO*; C. C. YEN; D. A. LEOPOLD; C. T. MILLER; A. C. SILVA. *UC San Diego, NIH, NIH.*

4:00 RR8 **453.08** Limitations on vocal control during spectral interference in common marmosets. R. J. MORRILL*; C. T. MILLER. *Univ. of California, San Francisco, UCSD.*

1:00 RR9 **453.09** Audio-visual interactions in neurons from voice-sensitive auditory cortex and the superior-temporal sulcus. C. PERRODIN*; C. KAYSER; N. K. LOGOTHETIS; C. I. PETKOV. *Max Planck Inst. for Biol. Cybernetics, Univ. of Glasgow, Univ. of Manchester, Newcastle Univ. Med. Sch.*

2:00 RR10 **453.10** The responses of primate premotor cortex neurons during natural vocal production. C. T. MILLER*; A. THOMAS; L. DE LA MOTHE. *UCSD, UC Berkeley, Tennessee State Univ.*

3:00 RR11 **453.11** Coupled oscillator dynamics of vocal turn-taking in monkeys. D. Y. TAKAHASHI*; D. Z. NARAYANAN; A. A. GHAZANFAR. *Princeton Univ., Princeton Univ., Princeton Univ.*

4:00 RR12 **453.12** Vocal-respiratory coupling in marmoset monkeys. J. I. BORJON*; D. Y. TAKAHASHI; A. A. GHAZANFAR. *Princeton Univ., Princeton Univ., Princeton Univ.*

1:00 RR13 **453.13** Activation related to training process for recognizing the noise-vocoded speech sounds: An fMRI study. S. MURAI*; K. I. KOBAYASI; H. RIQUIMAROUX. *Doshisha Univ., Doshisha Univ., Doshisha Univ.*

2:00 RR14 **453.14** Genetic and parametric analysis of infant vocalization between C57BL/6J, DBA/2J, and reciprocal F1 hybrids. S. ROY*; M. L. SCATTONI; D. H. HECK; L. LU; R. W. WILLIAMS. *Univ. Of Tennessee Hlth. Sci. Ctr., Inst. Superiore di Sanita.*

3:00 RR15 **453.15** Cortical activity is coupled with speech's sentence and syllable rate during reading aloud. M. BOURGUIGNON; V. JOUSMÄKI; M. OP DE BEECK; B. MARTY; V. WENS; P. VAN BOGAERT; S. GOLDMAN; R. K. HARI*; X. DE TIÈGE. *ULB-Hôpital Erasme, UNI – ULB Neurosci. Inst., Aalto Univ.*

4:00 RR16 **453.16** Grey matter volume in SMA predicts individual differences in auditory imagery. N. LAVAN*; C. LIMA; A. HALPERN; S. SCOTT. *UCL, Bucknell Univ.*

1:00 RR17 **453.17** How we use action planning and predictive models to optimize speech processing while talking. J. WANG*; D. MATHALON; B. ROACH; J. REILLY; S. KEEDY; J. SWEENEY; J. FORD. *UT Southwestern Med. Ctr., Univ. of California, San Francisco, San Francisco VA Med. Ctr., Northwestern Univ. Feinberg Sch. of Med., Univ. of Chicago, Univ. of Texas Southwestern Med. Ctr., Univ. of California, San Francisco.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 RR18 **453.18** The functional organization of human non-primary auditory cortex. S. V. NORMAN-HAIGNERE*; J. MCDERMOTT; N. KANWISHER. *MIT, MIT.*

POSTER

454. Auditory System: Model Systems and Subcortical Processing of Natural Sounds

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 RR19 **454.01** From sounds to meaning: Neural representation of calls in the avian auditory cortex. J. E. ELIE*; F. E. THEUNISSEN. *Univ. of California Berkeley.*

2:00 RR20 **454.02** Effects of developmental vocal learning on cortical auditory coding. J. W. SCHUMACHER*; S. M. N. WOOLLEY. *Columbia Univ., Columbia Univ.*

3:00 RR21 **454.03** Auditory representations of vocal gestures in zebra finches. H. A. SOULA; J. E. ELIE; M. SCHACHTER; F. E. THEUNISSEN*. *Natl. Inst. of Applied Sci., UC Berkeley, UC Berkeley.*

4:00 RR22 **454.04** Mate preference in female bengalese finches: Behavioral and neural influences. J. L. DUNNING*; S. PANT; K. MURPHY; A. A. KRENTZEL; L. REMAGE-HEALEY; A. BASS; Z. COBURN; J. F. PRATHER. *Univ. of Wyoming, Univ. of Massachusetts Amherst.*

1:00 RR23 **454.05** Mechanisms of signal and noise integration in auditory cortical neurons. K. E. PERKS; E. CAPORELLO; T. Q. GENTNER*. *UCSD, UCSD.*

2:00 RR24 **454.06** Neural recordings from the midbrain SC of the behaving, echolocating bat. M. J. WOHLGEMUTH*, III; C. F. MOSS. *Univ. of Maryland, Univ. of Maryland.*

3:00 RR25 **454.07** Temporal control of sonar call production supports target tracking by bats. N. B. KOTHARI; M. WOHLGEMUTH; C. F. MOSS*. *Univ. of Maryland, Univ. of Maryland, Univ. Maryland.*

4:00 RR26 **454.08** Spatial correlations of multi-unit local field potential responses to natural sound in auditory midbrain. D. LYZWA*; M. J. HERRMANN. *Dep. Nonlinear Dynamics Max Planck Inst. For Dynamics and Self-Organization, IPAB, Sch. of Informatics.*

1:00 SS1 **454.09** Amplitude-modulation tuning in the auditory midbrain provides a robust mechanism for vowel coding. L. H. CARNEY*; T. LI; J. M. MCDONOUGH. *Univ. Rochester.*

2:00 SS2 **454.10** Oxytocin-based neuromodulation of mammalian social behavior. B. J. JONES*; R. C. FROEMKE. *New York University, Sch. of Med.*

3:00 SS3 **454.11** Plasticity in hierarchical auditory cortical processing of behaviorally relevant vocalizations revealed by Arc/Arg 3.1 mRNA expression. T. N. IVANOVA*; R. C. MAPPUS; C. GROSS; G. J. BASSELL; R. C. LIU. *Emory Univ., Emory Univ., Emory Univ.*

4:00 SS4 **454.12** Neurophysiologically influenced natural coding for sound. L. S. SMITH*; A. K. ABEL. *Univ. of Stirling, Univ. of Stirling.*

POSTER

455. Auditory System: Neural Circuits and Functional Recovery

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 SS5 **455.01** Variation in excitability of medial olivocochlear neurons in murine models of hearing loss. J. L. SINCLAIR; M. BARNES-DAVIES; I. D. FORSYTHE*. *Univ. of Leicester, The Univ. of Leicester, Univ. of Leicester.*

2:00 SS6 **455.02** Recovery of central auditory function in mice following profound peripheral deafferentation: A combined behavioral and neurophysiological study. A. R. CHAMBERS*; Y. YUAN; A. S. EDGE; M. C. LIBERMAN; D. B. POLLEY. *Harvard Med. Sch., Eaton-Peabody Laboratories, Massachusetts Eye and Ear Infirmary, Fudan Univ.*

3:00 SS7 **455.03** Gene expression changes in the cochlear spiral ganglion after deafening. E. M. BAILEY*; S. H. GREEN. *Univ. of Iowa.*

4:00 SS8 **455.04** Mild hearing loss disrupts the normal development of membrane and firing properties in auditory-recipient striatum. K. PENIKIS*; T. M. MOWERY; V. C. KOTAK; D. H. SANES. *NYU.*

1:00 SS9 **455.05** Deafness-induced changes in phosphorylation of S6 ribosomal protein in the chick auditory brainstem. B. J. CARROLL*; R. HYSON. *Florida State Univ.*

2:00 SS10 **455.06** Amplified somatosensory and visual cortical projections underlie crossmodal plasticity in the anterior auditory field of the early-deaf. N. CHABOT*; M. A. KOK; S. G. LOMBER. *Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario.*

3:00 SS11 **455.07** Duration of acoustic experience shapes development of auditory cortex cartography. C. WONG*; D. KÜHNE; A. KRAL; S. G. LOMBER. *The Univ. of Western Ontario, Hannover Med. Univ., The Univ. of Western Ontario.*

4:00 SS12 **455.08** Cortico-cortical connections subserving crossmodal plasticity in auditory field of the anterior ectosylvian sulcus (FAES) in the early-deaf. M. A. MEREDITH*; N. CHABOT; S. G. LOMBER. *Virginia Commonwealth Univ. Sch. Med., U. Western Ontario.*

1:00 TT1 **455.09** Dendritic spine density is enhanced by deafness-induced crossmodal plasticity in the auditory field of the anterior ectosylvian sulcus (FAES). H. R. CLEMO*; S. G. LOMBER; M. A. MEREDITH. *Virginia Commonwealth U Sch. Med., Univ. of Western Ontario.*

2:00 TT2 **455.10** Astrocyte-secreted thrombospondins are required for hair cell afferent synapse formation. M. MUSTAPHA*. *Stanford Univ.*

3:00 TT3 **455.11** Developmental sharpening of thalamocortical and intracortical inputs during receptive field refinement of auditory cortical neurons. Y. J. SUN*; H. W. TAO; L. I. ZHANG. *USC Zilhka Neurogenetic Inst.*

4:00 TT4 **455.12** NMDA receptor blockade: Evidence from AEP mismatch negativity in rats on lack of NR2B-subunit contribution to cognitive disruption. R. BIERMANS; A. AHNAOU; J. B. KELLEY*; J. A. KEMP; W. H. DRINKENBURG. *Janssen Res. & Development, A division of Janssen Pharmaceutica NV.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 TT5 **455.13** Afferents from dorsal raphe nucleus to the cochlear root neurons: A serotonergic system in the primary acoustic startle circuit. A. V. DA SILVA*; R. S. BEDUSCHI; M. G. MARTINS; N. O. BARIONI; S. HORMIGO; R. GOMEZ-NIETO; D. E. LÓPEZ; J. A. C. HORTA-JÚNIOR. *São Paulo State Univ. - UNESP, Inst. de Neurociências de Castilla y León (INCYL), Univ. de Salamanca, Inst. de Investigación Biomédica de Salamanca (IBSAL). Univ. de Salamanca.*

2:00 TT6 **455.14** Molecular profiles of parvalbumin and calbindin positive neurons in the rhesus macaque auditory midbrain and brainstem. D. T. GRAY*; J. R. ENGLE; M. L. RUDOLPH; G. H. RECANZONE. *UC Davis Ctr. For Neurosci., Univ. of Arizona.*

3:00 TT7 **455.15** Direct projections from numerous subcollicular nuclei to the auditory thalamus in the rat. A. S. BERREBI*; F. BERNARDO; M. GOMEZ-ALVAREZ; M. APARICIO; E. MARQUEZ; D. SLOAN; E. SALDAÑA. *Sensory Neurosci. Res. Ctr., Univ. of Salamanca Med. Sch.*

4:00 TT8 **455.16** Effects of noise exposure on sound processing in the mouse primary auditory cortex. O. ZELENKA; O. NOVAK; T. HROMADKA; J. M. SYKA*. *Inst. Exptl. Med. ASCR.*

1:00 TT9 **455.17** Critical period for the maturation of inhibitory transmission in the auditory cortex closes by postnatal day 19. T. M. MOWERY*; V. KOTAK; D. SANES. *New York Univ.*

2:00 TT10 **455.18** Correlated activity in the auditory system following noise induced hearing loss. C. H. PARSONS*; S. C. CHEN; N. D. SOBARUN; J. W. MORLEY. *Univ. of Western Sydney, Univ. of Sydney.*

3:00 TT11 **455.19** Cell-type specific knockouts of netrin-G2 and NGL-2 lead to impaired auditory responses at different ages. A. MASUDA*; H. GOTO; Q. ZHANG; K. YAGUCHI; S. AKIYOSHI; S. ITOHARA. *RIKEN Brain Sci. Inst. - Wako.*

POSTER

456. Multisensory: Spatial Factors in Cross-Modal Processing

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 TT12 **456.01** ● A behavioral paradigm to assess multisensory processing in mice. J. SIEMANN*; G. BAMBERGER; J. D. ALLISON; M. T. WALLACE. *Vanderbilt Univ. Neurosci. Grad. Program, Med. Associates Inc., Vanderbilt Univ., Vanderbilt Univ.*

2:00 UU1 **456.02** Characterization of somatosensory inputs into the auditory midbrain: Somatotopy and latencies. C. GLOECKNER*; J. TILLESON; D. KASTL; B. SMITH; H. LIM. *Univ. of Minnesota.*

3:00 UU2 **456.03** Cross-modal experience instantiates specific multisensory integration capabilities in Superior Colliculus Neurons. L. YU*; J. XU; T. R. STANFORD; B. A. ROWLAND; B. E. STEIN. *Wake Forest Univ. Sch. of Med., Sch. of Life Science, East China Normal Univ.*

4:00 UU3 **456.04** The effects of adult visual deprivation on multisensory integration in the cat superior colliculus. L. KURELA*; J. KRUEGER FISTER; A. R. NIDIFFER; W. H. LEE; M. T. WALLACE. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

1:00 UU4 **456.05** Predicting the temporal evolution of multisensory responses. R. L. MILLER*; B. A. ROWLAND; B. E. STEIN. *Wake Forest Univ. Sch. of Med.*

2:00 UU5 **456.06** Stimulus redundancy reduces the effectiveness of multisensory enhancement in the alert cat superior colliculus. T. J. PERRAULT*, Jr.; J. W. VAUGHAN; L. P. KENISTON; B. E. STEIN; B. A. ROWLAND. *Wake Forest Univ. Sch. of Med.*

3:00 UU6 **456.07** Habituation dynamics of multisensory superior colliculus neurons in the alert cat. B. A. ROWLAND*; J. VAUGHAN; L. P. KENISTON; B. E. STEIN; T. J. PERRAULT, Jr. *Wake Forest Sch. of Med.*

4:00 UU7 **456.08** Problems in acquiring multisensory integration capabilities in adulthood. J. XU*; L. YU; T. R. STANFORD; B. A. ROWLAND; B. E. STEIN. *Wake Forest Univ. Sch. of Med., Sch. of Life Science, East China Normal Univ.*

1:00 UU8 **456.09** Local field potentials reveal novel multisensory interactions in cat cortex. J. KRUEGER FISTER*; L. R. KURELA; A. R. NIDIFFER; W. H. LEE; T. A. HACKETT; M. T. WALLACE. *Vanderbilt Univ., Vanderbilt Univ.*

2:00 UU9 **456.10** Multisensory decision making is reflected in the brainstem. H. MENG*; A. ZAIDEL; D. E. ANGELAKI. *Baylor Col. of Med.*

3:00 UU10 **456.11** Supervised cue calibration relies on the multisensory percept and involves monkey area VIP. A. ZAIDEL*; W. MA; D. E. ANGELAKI. *Baylor Col. of Med.*

4:00 UU11 **456.12** Multisensory integration reduces biases in heading perception caused by moving objects. R. L. SEILHEIMER*; K. DOKKA; G. C. DEANGELIS; D. E. ANGELAKI. *Baylor Col. of Med., Univ. of Rochester.*

1:00 UU12 **456.13** Near optimal multisensory integration of approximate numbers. I. KANITSCHEIDER; A. BROWN; M. B. RYAN; A. POUGET*; A. CHURCHLAND. *Univ. of Geneva, Cold Spring Harbor Lab., Univ. Rochester.*

2:00 UU13 **456.14** Intraparietal sulcus forms multisensory spatial priority maps. T. ROHE*; U. NOPPENEY. *Max Planck Inst. For Biol. Cybernetics, Univ. of Birmingham.*

3:00 UU14 **456.15** Neural correlates of selective visual and auditory attention for directional movement. H. KADOTA*; K. MATSUZAKI. *Kochi Univ. of Technol.*

4:00 UU15 **456.16** Multisensory integration using a stochastic gradient descent algorithm (SGD). A. PORRAS*; R. LLINÁS. *NYU Sch. of Med., NYU Sch. of Med.*

1:00 UU16 **456.17** Context-dependant effects of visual and body orientation cues on the kinematics of arm pointing movements: Congruence matters!. C. SCOTTO DI CESARE*; F. SARLEGNA; C. BOURDIN; D. MESTRE; L. BRINGOUX. *Inst. of Movement Sci.*

2:00 UU17 **456.18** Towards a computational account of the rubber hand illusion. M. J. SAMAD*; A. J. CHUNG; L. SHAMS. *UCLA, UCLA.*

3:00 UU18 **456.19** Reach paths reveal early availability of external spatial coordinates in touch remapping. J. BRANDES*; T. HEED. *Univ. of Hamburg.*

4:00 UU19 **456.20** Rotating straight ahead or translating in circles: How we learn to integrate contradictory multisensory self-motion cue pairings. M. KALIUZHNA*; M. PRSA; S. P. GALE; S. LEE; O. BLANKE. *EPFL, Ctr. for Neuroprosthetics, Sch. of Life Sciences, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland; Lab. of Cognitive Neuroscience, Brain Mind Institute, Sch. of Life Sciences, Ecole Polytechnique Fédérale de Lausanne, Lausanne,.*

1:00 UU20 **456.21** Suboptimal causal inference in multisensory heading perception. K. DOKKA*; W. MA; D. E. ANGELAKI. *Washington Univ. In St. Louis, Baylor Col. of Med.*

2:00 UU21 **456.22** Visual and auditory biases in spatial perception and their interactions. B. ODEGAARD*; D. R. WOZNY; L. SHAMS. *UCLA, Carnegie Mellon Univ.*

3:00 UU22 **456.23** Proprioceptive localization of the hand in Ehlers-Danlos Syndrome patients and healthy controls. H. A. CLAYTON*; D. Y. P. HENRIQUES. *York Univ.*

4:00 UU23 **456.24** Difference in cross auditory-visuospatial processing between early- and late-blind individuals: An fMRI study. Q. TAO*; C. CHAN; Y. LUO; J. LI; K. TING; J. WANG; T. LEE. *Hong Kong Polytechnic Univ., Beijing Normal Univ., China Rehabil. Res. Ctr., The Univ. of Hong Kong.*

POSTER

457. Vision: Subcortical Pathways I

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 UU24 **457.01** Analysis of retinal ganglion cell convergence onto geniculate relay neurons using trans-synaptic circuit mapping with modified rabies viruses. O. J. MULLINS*; F. OSAKADA; E. M. CALLAWAY; P. NGUYEN; A. D. HUBERMAN. *Univ. of California, San Diego, The Salk Inst. for Biol. Studies, UCSD.*

2:00 UU25 **457.02** Visual responses in the mouse somatosensory thalamus. R. J. LUCAS*; T. M. BROWN; A. E. ALLEN. *Univ. Manchester.*

3:00 UU26 **457.03** Using the mouse to explore the role of inhibition in visual thalamic circuits *in vivo.* V. SURESH*; U. CIFTCIOGLU; B. LALA; F. T. SOMMER; J. HIRSCH. *USC, Univerversity of Califonia, Berkeley.*

4:00 VV1 **457.04** Response characteristics of the striatal neurons to visual motion in freely moving rats. A. J. NAGY*; T. PUSKAS; G. BENEDEK; A. NAGY; A. BERENYI. *Univ. of Szeged, Fac. of Med., Neurosci. Inst.*

1:00 VV2 **457.05** Neuronal responses to stationary and dynamic visual stimuli of the caudate nucleus in behaving cat. T. NAGYPÁL*; P. GOMBKOTO; R. AVERKIN; T. PUSKAS; A. BERENYI; G. BENEDEK; A. NAGY. *Univ. of Szeged, Fac. of Medicine, Dept. of Physiol., Ctr. for Mol. and Behavioral Neuroscience, Rutgers Univ., Res. Group for Cortical Microcircuits of the Hungarian Acad. of Sciences, Univ. of Szeged, Univ. of Szeged, NYU Neurosci. Institute, New York Univ.*

2:00 VV3 **457.06** Two genetically defined luminance pathways linking pretectum to visual thalamus in the mouse. P. M. FOGERSON*; D. M. BERSON. *Brown Univ.*

3:00 VV4-DP7**457.07** Multimodal computation in the superior colliculus of running mice. E. H. FEINBERG*; M. MEISTER. *Harvard Univ., Caltech.*

4:00 VV5 **457.08** Postnatal development of the subcortical visual system in naked mole-rats. C. M. DENGLER-CRISH*; S. D. CRISH. *Northeast Ohio Med. Univ.*

1:00 VV6 **457.09** Impact of pulvinar on cortical processing in the primary visual cortex. J. LAI*; S. THOMAS; C. CASANOVA. *Ecole D'Optometrie, Univ. De Montreal.*

2:00 VV7 **457.10** Cross-modal training modifies the functional role of cortico-collicular pathways from the anterior ectosylvian sulcus (AES) in visual cortex-lesioned cats. H. JIANG*; B. E. STEIN; J. G. MCHAFFIE. *Wake Forest Univ. Sch. of Med.*

3:00 VV8 **457.11** Exposure to cross-modal cues during anesthesia ameliorates lesion-induced visual orientation deficits in cats. J. G. MCHAFFIE*; H. JIANG; B. E. STEIN. *Wake Forest Univ. Sch. Med.*

4:00 VV9 **457.12** Relation of koniocellular pathway activity to low frequency (delta) electroencephalogram power in anaesthetised marmosets. A. N. PIETERSEN*; B. MUNN; S. K. CHEONG; R. TOWNSEND; P. GONG; S. G. SOLOMON; P. R. MARTIN. *Save Sight Institute, The Univ. of Sydney, ARC centre of excellence in Vision Sci., Univ. of Sydney, Univ. of Sydney, Inst. of Behavioural Neurosci.*

1:00 VV10 **457.13** The isthmic control of the the tectofugal system in the awake condition. C. MORALES; B. REYNAERT; J. MPODOZIS; J. LETELIER; G. J. MARÍN*. *Facultad de Ciencias, Univ. de Chile, Univ. Finis Terrae.*

2:00 VV11 **457.14** Selectivity for small and slowly-moving visual targets in a class of superior colliculus neurons with large dendritic arbors and spatial receptive fields. S. D. GALE*; G. J. MURPHY. *Janelia Farm Res. Campus, HHMI.*

POSTER

458. Visual Motion: Behavior, Imaging and Models

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 VV12 **458.01** Early visual experience is necessary to shape global motion neural system but not biological motion. D. BOTTARI*; N. TROJE; P. LEY; B. SHENOY; R. KEKUNNAYA; B. RÖDER. *Univ. of Hamburg, Queen's Univ., LVPEI.*

2:00 VV13 **458.02** A neural circuit for binding spatially localized objects from streaming visual information. Z. WANG; A. T. SORNBORGER; L. TAO*. *Peking Univ., Univ. of California at Davis.*

3:00 VV14 **458.03** Psychophysical correlates of surround dynamics in MT. J. CHURAN*; C. C. PACK. *McGill Univ.*

4:00 VV15 **458.04** Anisotropy in spatial summation properties of human Ocular-Following Response (OFR). B. M. SHELIGA*; C. QUAIA; E. J. FITZGIBBON; B. G. CUMMING. *Natl. Eye Inst/NIH.*

1:00 VV16 **458.05** Motion detection mechanisms: Contrasting counter-evidence with evidence to the contrary. J. DUIJNHOUWER*; B. KREKELBERG. *Rutgers Univ.*

2:00 VV17 **458.06** Mechanisms for discrimination following adaptation to radial motion. N. E. NIKOLOVA*; M. J. MORGAN. *Max Planck Inst. Für Neurologische Forschung, City Univ. London.*

3:00 VV18 **458.07** Assessing seizure susceptibility using visual psychophysics tests. P. YAZDANI*; J. READ; R. WHITTAKER; A. TREVELYAN. *Newcastle Univ., Clin. Neurophysiology, Royal Victoria Infirmary.*

4:00 VV19 **458.08** Mechanisms for color- and luminance-defined motions in human visual system studied by psychophysical and functional brain-imaging techniques. I. KURIKI*; H. XIE; R. TOKUNAGA; K. MATSUMIYA; S. SHIOIRI. *Tohoku Univ., Tohoku Univ., Ritsumeikan Uninversity.*

1:00 VV20 **458.09** Temporal dynamics of the action observation network. R. TUCCIARELLI*; L. TURELLA; N. WEISZ; A. LINGNAU. *Univ. of Trento.*

2:00 VV21 **458.10** Watch your head, watch your step: Imaging the neural basis of obstacle avoidance during self-motion. R. HUANG*; C. CHEN; K. L. HOLSTEIN; M. I. SERENO. *UCSD, UCL/Birkbeck.*

3:00 VV22 **458.11** Brain regions recruited during the perception of dynamic objects. J. A. PYLES*; M. J. TARR. *Carnegie Mellon Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 WW1 **458.12** Perception of complex motion patterns in humans and pigeons. J. NANKOO*; C. R. MADAN; M. L. SPETCH; D. R. WYLIE. *Univ. of Alberta, Univ. of Alberta.*

1:00 WW2 **458.13** Perception of a sliding surface along the bottoms of the feet indicates the availability of a signal for postural equilibrium and gaze stabilization. D. W. SIRKIN*. *CSP-CTF.*

2:00 WW3 **458.14** Functional imaging of the temporal cortex during action execution and observation. M. KILINTARI*; V. RAOS; H. E. SAVAKI. *FORTH/IACM, Univ. of Crete Med. Sch.*

3:00 WW4 **458.15** Identification of an intercept trajectory among multiple moving objects in a scene is enhanced by self-motion. S. A. BEARDSLEY*; F. J. CALABRO; L. M. VAINA. *Marquette Univ., Boston Univ., Med. Col. of Wisconsin, Harvard Med. Sch.*

4:00 WW5 **458.16** ● Rapid measurement of spatiotemporal contrast sensitivity in behaving macaque monkeys. A. PAWAR*; P. A. LADDIS; S. GEPSHTEIN; T. D. ALBRIGHT. *Salk Inst.*

POSTER

459. Attention: Cognitive and Behavioral Studies

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 WW6 **459.01** ▲ Threat potentiates early visual processing but reduces attentional selectivity. A. M. BURTON; M. PACZYNSKI; A. P. JHA*. *Univ. of Miami.*

2:00 WW7 **459.02** Task set modulates the response of human v1 during auditory and visual tasks. J. C. GRIFFIS*; A. ELKHETALI; R. VADEN; K. VISSCHER. *Univ. of Alabama At Birmingham.*

3:00 WW8 **459.03** Modulation of connectivity in sensory cortex during task performance. A. ELKHETALI*; R. J. VADEN; R. NENERT; K. M. VISSCHER. *UAB.*

4:00 WW9 **459.04** Incorporation of visual feedback of hand position during performance of fMRI computerized behavioural tests. M. KARIMPOOR; F. TAM; T. SCHWEIZER; S. GRAHAM*. *Sunnybrook Res. Institute, Univ. of Toronto, Sunnybrook Res. Inst., Keenan Res. Ctr. of the Li Ka Shing Knowledge Inst. of St. Michael's Hosp., Sunnybrook Res. Inst.*

1:00 WW10 **459.05** Exploring the dynamics of distributed neuronal activity within the human brain during arithmetic processing with numerals, words, or symbols. I. KASIKCI*; D. HERMES; B. FOSTER; V. RANGARAJAN; J. SHUM; J. PARVIZI. *Istanbul University, Inst. of Exptl. Medicine, Dept. of Neuroscie, Stanford Univ.*

2:00 WW11 **459.06** Attentional deployment is modulated by response requirement and long-term training. Z. QU*; Y. SU; Y. DING. *Sun Yat-Sen Univ.*

3:00 WW12 **459.07** FMRI response changes depending on task-load at V1 and FFA. Y. SUNG*; U. CHOI; S. OGAWA. *Kansei Fukushi Res. Institute, Tohoku Fukushi Univ., Neurosci. Res. Institute, Gachon Univ. of Med. and Sci.*

4:00 WW13 **459.08** Beta band phase synchronization reveals early saliency transmission of unattended visual feature between parietal and occipital areas. T. NAITO; M. KOMATSU; Y. KAKIMOTO*; O. ARAKI. *Tokyo Univ. of Sci.*

1:00 WW14 **459.09** Network dynamics of top-down and bottom-up attention in prefrontal and visual cortices. K. K. SELLERS*; F. FROHLICH. *Univ. of North Carolina, Chapel Hill.*

2:00 WW15 **459.10** Visual search for faces in macaques. S. EIFUKU*; R. NAKATA; R. TAMURA. *Univ. Toyama, Grad Sch. Med. Pharm Sci.*

3:00 WW16 **459.11** Pupil light response betrays the locus of attention. B. A. EBITZ*; M. L. PLATT. *Duke Univ.*

4:00 WW17 **459.12** Uncertainty and expected reward jointly bias attention in the parietal lobe. N. C. FOLEY*; J. GOTTLIEB. *Columbia Univ.*

1:00 WW18 **459.13** Neural structures involved in the dynamic control of attention during natural viewing: An fMRI study in the macaque. T. KANEKO*; B. E. RUSS; D. A. LEOPOLD. *Kyoto Univ., Natl. Inst. of Hlth.*

2:00 WW19 **459.14** The role of sex hormones in global-local visual processing. O. PETASIS*; B. PLETZER; L. CAHILL. *Univ. of California, Irvine, Univ. of Salzburg.*

POSTER

460. Pain Transduction: Non-TRP Channels and Molecules

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 WW20 **460.01** Role of Anoctamin 1 in mediating chronic pain in nociceptors. U. OH*; B. LEE; H. CHUN; H. KIM; J. CHA; G. HONG; J. OH; J. WEE. *Seoul Natl. Univ. Col. Pharm, Seoul Natl. Univ.*

2:00 WW21 **460.02** A769662- a novel voltage-gated sodium channel blocker. M. N. ASIEDU*; T. J. PRICE; G. DUSSOR. *Univ. of Arizona.*

3:00 WW22 **460.03** Facilitation of T-type calcium currents by endogenous and exogenous hydrogen sulfide in $Ca_v3.2$-expressing HEK293 cells. A. KAWABATA*; Y. MIYAMOTO; F. SEKIGUCHI; D. KANAOKA; S. YOSHIDA; T. OHKUBO. *Kinki Univ. Sch. of Pharm., Fukuoka Dent. Col.*

4:00 XX1 **460.04** Post-transcriptional and post-translational modulation of Kv3.4 channels in a rat model of neuropathic pain. B. ZEMEL*; D. RITTER; T. HALA; A. LEPORE; M. O'LEARY; M. COVARRUBIAS. *Thomas Jefferson Univ.*

1:00 XX2 **460.05** The effects of phospholipids on acid-sensing ion channels (ASICs). H. KWEON; D. KIM; B. SUH*. *Daegu Gyeongbuk Inst. of Sci. and Technol.*

2:00 XX3 **460.06** AMPA/kainate receptor stimulation of corneal peripheral afferents: Antagonism by DNQX. B. K. CARR*; K. E. MILLER. *Oklahoma State Univ. Ctr. For Hlth. Sci.*

3:00 XX4 **460.07** RQ-00311651, a novel T-type Ca^{2+} channel blocker: Electrophysiological characterization and anti-hyperalgesic/anti-allodynic activity in somatic and visceral pain models. F. SEKIGUCHI*; Y. KAWARA; D. KANAOKA; Y. KAWAISHI; M. TSUBOTA; E. KAWAKAMI; T. OZAKI; S. YOSHIDA; T. OHKUBO; A. KAWABATA. *Kinki Univ. Sch. of Pharm., Kinki Univ. Sch. of Sci. and Engin., Fukuoka Dent. Col.*

4:00 XX5 **460.08** ● ▲ Pharmacological properties of a fully human therapeutic antibody antagonist of ASIC channels: *in vivo* efficacy in mouse models of nociception. M. L. LACROIX-FRALISH*; R. VILLANUEVA; M. M. DROST; M. J. GARCIA; S. D. CROLL; N. PAPADOPOULOS; A. J. MURPHY; L. E. MACDONALD. *Regeneron Pharmaceuticals, Inc.*

1:00 XX6 **460.09** ● Generation and *in vitro* characterization of fully human anti-ASIC antibodies: A promising new class of analgesic agents. N. ALESSANDRI-HABER*; M. SIVULA; E. C. TSENG; M. GAO; M. MORRA; N. J. PAPADOPOULOS; A. J. MURPHY; L. E. MACDONALD. *Regeneron Pharmaceuticals.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 XX7 **460.10** Ginip a new galpha-i interacting protein defines a subpopulation of nociceptors involved in injury-induced mechanical pain hypersensitivity in mice. L. LO RÉ*; S. GAILLARD; P. MALAPERT; S. ALONSO; A. ALLOUI; A. ESCHALIER; A. MOQRICH. *IBDM - Inst. De Biologie Du Développement De Marseille, Lab. de Pharmacologie Médicale-UMR 766 INSERM.*

3:00 XX8 **460.11** FXYD2, γ subunit of Na^+,K^+-ATPase, contributes to persistent mechanical allodynia induced by inflammation. X. ZHANG*; F. WANG; K. LI; B. CAI; X. HU; Y. LU. *Inst. of Neuroscience, Chinese Acad. of Sci.*

4:00 XX9 **460.12** ● Intraplantar BoNT-B reduces spinal activation by an effect upon central afferent terminals and at postsynaptic sites. M. MARINO; Q. XU; T. TERASHIMA; J. STEINAUER; K. EDDINGER; T. L. YAKSH*. *Univ. California, Univ. California, Dokkyo Med. Univ.*

1:00 XX10 **460.13** Regulatory role of miR-124 in bone cancer pain condition. S. ELRAMAH; M. BASTIDE; T. LESTE-LASSERRE; A. BROCHARD; F. NAGY; M. LANDRY; A. FAVEREAUX*. *Univ. of Bordeaux Interdisciplinary Inst. For Neurosci. - UMR 5297 C, INSERM U862.*

2:00 XX11 **460.14** Sensory neurons regulate Toll-like receptor 4 (TLR4) signaling in glia derived from dorsal root ganglia (DRG). K. TSE*; K. CHOW; W. LEUNG; Y. WONG; H. WISE. *The Chinese Univ. of Hong Kong, The Univ. of Hong Kong, The Hong Kong Univ. of Sci. and Technol.*

POSTER

461. Descending Modulation: Anatomical and Physiological Studies

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 XX12 **461.01** Release of substance P (SP) in the rat rostral ventromedial medulla (RVM): Modulation by inflammatory injury and presynaptic N-methyl-D-aspartate receptors (NMDARs). M. V. HAMITY*; U. P. MADUKA; K. S. WALTERS; D. L. HAMMOND. *Univ. Iowa, Univ. Iowa, Univ. Iowa.*

2:00 YY1 **461.02** Reconfirmation of interaction between monoaminergic neuron and BDNF in RVM with Imipramine for reducing depression related to chronic pain. S. YASUDA; T. KAKEDA; Y. IDA; H. YAMAGATA; Y. IWANAGA; S. SONODA; H. SUZUKI; T. IBUKI*; T. ISHIKAWA. *Yamaguchi Univ., Kyoto Prefectural Univ. Med.*

3:00 YY2 **461.03** The spinoparabrachial pathway drives state changes in brainstem pain-modulating neurons. Z. ROEDER; Q. CHEN; S. DAVIS; J. D. CARLSON; M. M. HEINRICHER*. *Oregon Hlth. & Sci. Univ.*

4:00 YY3 **461.04** Activation of "NEUTRAL" cells in the RVM by noxious craniofacial stimulation. S. G. KHASABOV*; K. OKAMOTO; A. KATAGIRI; D. A. SIMONE; D. A. BEREITER. *Univ. of Minnesota.*

1:00 YY4 **461.05** Electrophysiological property of spinaly projecting serotonergic neurons in the nucleus raphe magnus in bac transgenic mice. T. FUKUSHIMA*. *Dokkyo Univ. Schl Med.*

2:00 YY5 **461.06** Nicotinic receptor-mediated direct and indirect excitation of periaqueductal gray neurons that project to the rostral ventromedial medulla. I. C. UMANA*; C. A. DANIELE; D. S. MCGEHEE. *Univ. of Chicago, Univ. of Chicago.*

3:00 YY6 **461.07** Dopaminergic pathway activation in the nucleus accumbens inhibits the nociception mediated by C-fibers, but not by A-ð fibers. C. A. PARADA*; P. R. MARIÃO; E. V. DIAS; C. SARTORI; C. H. TAMBELI. *State Univ. of Campinas - Unicamp.*

4:00 YY7 **461.08** Inhibition of spinal cord dorsal horn neuron activities by electrical stimulation of the central nucleus of the amygdala. M.; A. LI; Y. PENG. *Univ. of Texas at Arlington.*

1:00 YY8 **461.09** Noradrenaline dramatically increases GABAergic inputs through beta adrenoceptor activation in medial division of the central nucleus of amygdala. S. YAMAMOTO; Y. TAKAHASHI*; Y. K. SUGIMURA; A. M. WATABE; M. TANAKA; F. KATO. *Univ. of Tsukuba, Jikei Univ. Sch. Med.*

2:00 YY9 **461.10** Descending noradrenergic control of conditioned pain modulation and postoperative pain trajectory in rats. R. A. PARKER; F. WANG; K. HAYASHIDA; T. J. MARTIN; J. C. EISENACH; C. M. PETERS*. *Wake Forest Univ. Hlth. Sci., Wake Forest Med. Sch.*

3:00 YY10 **461.11** Tonic activation of the descending alpha-adrenergic system contributes to hyperalgesia following chronic constriction injury in male and female rats. M. A. WAGNER; S. KUHNKE; J. E. HOLDEN*. *The Univ. of Michigan.*

4:00 YY11 **461.12** Restoration of descending noradrenergic tone with chronic spinal reboxetine supresses the development of neuropathic sensitisation in the tibial nerve transection model. S. HUGHES*; L. HICKEY; B. LUMB; A. PICKERING. *Univ. of Bristol.*

1:00 YY12 **461.13** Noradrenergic surround inhibition within the locus coeruleus. R. PERRINS*; Y. LI; L. HICKEY; A. E. PICKERING. *Univ. of Bristol.*

2:00 ZZ1 **461.14** Characterisation of canine adenoviral vectors for retrograde optogenetic control of locus coeruleus neurones in rats. Y. LI*; L. HICKEY; R. PERRINS; S. SALINAS; E. J. KREMER; A. E. PICKERING. *Univ. of Bristol, Insitut de Genetique Moleculaire de Montpellier.*

3:00 ZZ2 **461.15** The endocannabinoid system mediates aerobic exercise-induced antinociception in rats. G. GALDINO*; T. ROMERO; J. SILVA; D. AGUIAR; I. DUARTE; J. CRUZ; V. DI MARZO; A. PEREZ. *Federal Univ. of Alfenas, Federal Univ. of Minas Gerais, Endocannabinoid Res. Group.*

4:00 ZZ3 **461.16** ▲ An unfamiliar environment affects evoked activity in periaqueductal gray: A pilot study. A. J. ROSSI*; C. N. CARLAY; M. C. ZRULL. *Appalachian State Univ., Appalachian State Univ.*

1:00 ZZ4 **461.17** Role of extrasynaptic GABAA receptors in the periaqueductal gray in morphine tolerance. K. J. TONSFELDT*; M. LI; K. L. SUCHLAND; S. L. INGRAM. *Oregon Hlth. & Sci. Univ.*

2:00 ZZ5 **461.18** The degree of descending control of spinal nociception in an area of primary hyperalgesia is dependent on the peripheral domain of afferent input. R. A. R. DRAKE; B. M. LUMB; L. F. DONALDSON*. *Univ. of Bristol.*

3:00 ZZ6 **461.19** Central terminal sensitization of TRPV1 by descending 5-HT facilitation is a key determinant of chronic pain. Y. KIM*. *Johns Hopkins Univ. Sch. of Med.*

4:00 ZZ7 **461.20** Unveiling the antinociceptive effect of motor cortex stimulation using optogenetics. Y. ZHANG*; S. LIU; T. C. FRANCIS; M. K. LOBO; F. TAO. *Johns Hopkins Univ. Sch. of Med., Univ. of Maryland Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

462. Pain Models: Behavior II

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 ZZ8 **462.01** AMPA receptor signaling in the nucleus accumbens regulates depression-like behaviors in the chronic neuropathic pain state. J. WANG*; Y. GOFFER; D. XU; S. EBERLE; M. LEE; J. D'AMOUR; R. FROEMKE; E. ZIFF. *NYU Sch. of Med.*

2:00 ZZ9 **462.02** Mice with perispinal injection of HIV gp120Bal develop extensive pain-related pathologies similar to that observed in the HIV-1-infected patients who developed chronic pain. S. YUAN*; S. TANG; J. CHEN; B. GELMAN; S. SARNA. *The Univ. of Texas Med. Br. at Galveston, The Univ. of Texas Med. Br. at Galveston, The Univ. of Texas Med. Br. at Galveston.*

3:00 ZZ10 **462.03** Opioid efficacy in a rat model of full thickness thermal injury. J. E. NYLAND*; T. H. GARZA; T. M. SLATER; M. FOWLER; J. L. CLIFFORD; L. N. PETZ; D. R. LOYD. *US Army Inst. of Surgical Res.*

4:00 ZZ11 **462.04** Chronic ethanol consumption prolongs plantar incision-induced postsurgical pain. S. LIU*; C. LI; Y. ZHANG; J. SKINNER; R. JOHNS; F. TAO. *Johns Hopkins Univ.*

1:00 ZZ12 **462.05** A behavioral characterization of acute postoperative pain in rats. S. EBERLE*; M. LEE; D. XU; M. RAHMAN; A. ZOU; J. WANG. *New York Univ. Sch. of Med., Columbia Univ. in the City of New York.*

2:00 ZZ13 **462.06** Muscle pain may be linked to thermoregulation as indicated by correlations between musculoskeletal hyperalgesia and body temperature in mice after daily forced swims at 26°C or 41°C. R. E. ABDELHAMID*; K. J. KOVÁCS; M. G. NUNEZ; A. A. LARSON. *Univ. of Minnesota.*

3:00 ZZ14 **462.07** Mast cell degranulation elicits light aversion in mice: Implications for migraine. A. TYE*; A. RADDANT; E. KAISER; A. KUBRAS; A. RUSSO. *Univ. of Iowa, Univ. of Iowa.*

4:00 ZZ15 **462.08** CGRP sites of action in light aversive behavior. B. N. MASON; A. KUBURAS; A. RECOBER; S. LUU; D. TRANEL*; A. F. RUSSO. *Univ. Iowa, Univ. Iowa.*

1:00 ZZ16 **462.09** Light aversive behavior in mice lacking rgs9. A. KUBURAS; S. THOMPSON; N. O. ARTEMYEV; B. MARQUEZ DE PRADO*; A. F. RUSSO. *Univ. of Iowa, Univ. of Iowa, Univ. Iowa.*

2:00 ZZ17 **462.10** A screen of prophylactic anti-migraine medications in a chronic nitroglycerin mouse model. I. TARASH; B. MCGUIRE; A. CHARLES; A. A. PRADHAN*. *UCLA, UIC, UCLA, UCLA.*

3:00 ZZ18 **462.11** ● Limb weight bearing changes using a dynamic weight bearing (DWB) assay are pharmacologically distinct from tactile allodynia in mice. M. J. GARCIA*; D. ZHANG; M. M. DROST; L. A. CORTES-BURGOS; L. E. MACDONALD; S. D. CROLL; M. L. LACROIX-FRALISH. *Regeneron Pharmaceuticals.*

4:00 ZZ19 **462.12** ▲ Toward a novel model of pain in zebrafish: Identification of behavioral responses on exposure to water containing acetic acid. A. CURRIE*; E. J. GAIDIS; J. E. MANOR; E. P. WIERTELAK. *Macalester Col., Macalester Col.*

1:00 ZZ20 **462.13** ▲ Impact of Rhizoma corydalis on putative descending opiate-based analgesia circuitry in the rat formalin assay of nociception. E. J. GAIDIS*; E. P. WIERTELAK. *Macalester Col., Macalester Col.*

2:00 ZZ21 **462.14** The elusive rat model of conditioned placebo analgesia. C. T. MCNABB*; M. M. WHITE; A. L. HARRIS; P. N. FUCHS. *Univ. of Texas at Arlington.*

3:00 ZZ22 **462.15** ● Measurement of sleep architecture and cognitive performance in a rat model of inflammatory pain as novel and clinically-relevant pain outcome measurements. R. WODARSKI*; K. A. WAFFORD; G. GILMOUR; W. F. SEIDEL; D. KELLETT; B. J. EASTWOOD; E. A. SHANKS; D. M. EDGAR; J. D. KENNEDY. *Eli Lilly UK, Eli Lilly & Co.*

4:00 ZZ23 **462.16** Evaluation of oral ulcer-induced pain using newly developed behavioral assays in rats. S. HITOMI; K. ONO; S. KURAMITSU; K. MIYANO; Y. UEZONO; M. MATOBA; K. INENAGA*. *Kyushu Dent. Univ., Natl. Cancer Ctr. Res. Inst., Natl. Cancer Ctr.*

1:00 ZZ24 **462.17** Analysis of sleep disorders under chronic pain using optogenetic tool: Effects of activation of dorsal raphe nucleus-serotonergic neuron and locus coeruleus-noradrenergic neuron. A. YAMASHITA*; M. YANASE; A. HAMADA; Y. SUHARA; C. KITABATAKE; N. KUZUMAKI; M. NARITA; D. IKEGAMI; M. NARITA. *Dept. of Pharmacology. Hoshi Univ., Dept. of Physiol. Keio Univ.*

2:00 ZZ25 **462.18** Cardiovascular responses after noxious and non-noxious stimuli in a rat model of neuropathic pain. J. R. SILVA*; D. C. LA GATTA; L. H. A. CAMARGO; M. B. M. SANT ANNA; M. L. SILVA; L. R. B. MORAES. *Univ. of Sao Paulo.*

3:00 ZZ26 **462.19** Steroid modulation of nociception in *Drosophila.* G. K. GANTER*; A. E. PANAITIU; J. R. M. O'BRIEN; K. M. KINCAID; A. L. MCPARLAND; A. E. MADU; G. D. VESENKA. *Univ. of New England.*

4:00 AAA1 **462.20** Modelling and assessing post-spinal cord injury neuropathic pain. A. M. M. EMRAJA; A. TOFT; J. S. RIDDELL*. *Univ. of Glasgow.*

POSTER

463. Somatosensation: Peripheral and Spinal Cord Representations

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 AAA2 **463.01** Visualization of putative peripheral ChAT-expressing primary afferent cell bodies and spinal projections using ChAT-cre/Gsat transgenic mice. I. A. SPEIGEL*; M. SAWCHUK; F. J. ALVAREZ; H. KIMURA; S. HOCHMAN. *Emory Univ., Shiga Univ. of Med. Sci.*

2:00 AAA3 **463.02** TGR5 sensitizes TRPA1 which mediates bile acid evoked pruritus. T. LIEU*; P. ZHAO; D. P. POOLE; M. GRACE; D. D. JENSEN; P. MCINTYRE; N. W. BUNNETT. *Monash Inst. of Pharmaceut. Sci., RMIT.*

3:00 AAA4 **463.03** Lack of cortical contributions to large-scale reorganization in the primary somatosensory cortex after dorsal spinal cord injuries in macaque monkeys. N. A. KAMBI*; R. RAJAN; P. CHAND; V. ARORA; N. JAIN. *Natl. Brain Res. Ctr.*

4:00 AAA5 **463.04** Analysis of evoked spinal potentials following electrical stimulation of peripheral nerves. N. HESAM SHARIATI*; M. OBRADOVIC; R. B. GORMAN; J. L. PARKER; M. J. COUSINS. *Saluda Med. and Natl. ICT Australia, Grad. Sch. of Biomed. Engineering, Univ. of New South Wales, Pain Mgmt. Res. Inst. and Kolling Institute, Univ. of Sydney at the Royal North Shore Hosp.*

1:00 AAA6 **463.05** Investigation of the effects of perspiration on pruritus. K. M. SANDERS*; L. A. NATTKEMPER; A. D. P. PAPOIU; G. YOSIPOVITCH. *Wake Forest Univ. Sch. of Med., Wake Forest Univ. Sch. of Med., Wake Forest Univ. Sch. of Med., Wake Forest Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 AAA7 **463.06** Cutaneous t-cell lymphoma and pruritus: The role of il-31 in the skin. L. NATTKEMPER*; E. M. SINGER; A. H. ROOK; G. YOSIPOVITCH. *Wake Forest Sch. of Med., Univ. of Pennsylvania, Wake Forest Univ.*

3:00 AAA8 **463.07** Cutaneous inflammation amplifies mechanical currents in CGRP-expressing sensory neurons. A. WEYER*; C. L. O'HARA; C. L. STUCKY. *Med. Col. of Wisconsin.*

4:00 AAA9 **463.08** Contribution of an inactivating factor of a mechanotransducer channel to kinetics of fast-adapting mechanosensitive current. K. FUJITA*. *Kashimori Lab, Univ. of Electro-Communications.*

1:00 AAA10 **463.09** ● Increased variability in amplitude of the N_1 component in the Cord Dorsum Potential evoked by cutaneous nerve stimulation in the chronically undernourished rat. S. QUIROZ-GONZÁLEZ; B. SEGURA*; J. GUADARRAMA; I. JIMÉNEZ-ESTRADA. *State Univ. of Ecatepec Valley (UNEVE), State of Mexico, FES-Iztacala, UNAM, Ctr. Invst and Adv Studies.*

2:00 AAA11 **463.10** Enhanced insulin clearance in mice lacking TRPM8 channels. D. MCCOY*; L. ZHOU; A. NGUYEN; A. WATTS; C. DONOVAN; D. MCKEMY. *USC, Shanghai Univ. of TCM.*

3:00 AAA12 **463.11** Channelopathy contributes to proprioceptive deficits following chemotherapy. T. C. COPE*; J. VINCENT; K. WIECZERZAK; P. NARDELLI; M. RICH. *Wright State Univ.*

4:00 AAA13 **463.12** ▲ Inflammation alters muscle stretch receptor and muscle tension responses to stretch in the mouse extensor digitorum longus muscle. J. A. FRANCO*; K. A. WILKINSON. *San José State Univ., San José State Univ.*

1:00 AAA14 **463.13** A role for acid-sensing ion channel 3 in proprioception. S. LIN*; Y. CHENG; C. CHEN. *Academia Sinica, Inst. of Life Sci., Inst. of Biomed. Sci., Inst. of Biomed. Sci., Inst. of Zoology, Natl. Taiwan Univ.*

2:00 AAA15 **463.14** A new signaling pathway between epithelial cells and neurons triggers itch via the atopic dermatitis cytokine TSLP. L. THE*; S. R. WILSON; D. M. BAUTISTA. *UC Berkeley.*

3:00 AAA16 **463.15** Extreme hyperexcitability in sensory neurons following a sodium channel NaV1.8 hypermorphic mutation. S. R. GARRISON*; A. J. WEYER; M. E. BARABAS; B. BEUTLER; C. L. STUCKY. *Med. Col. of Wisconsin, The Scripps Res. Inst.*

4:00 AAA17 **463.16** Parvalbumin-expressing cells provide presynaptic (axo-axonic) inputs on to myelinated afferents in the rat spinal dorsal horn. D. I. HUGHES*; K. A. BOYLE; S. A. SHEHAB; D. T. SCOTT; J. S. RIDDELL; R. J. CALLISTER; B. A. GRAHAM; E. KUMAMOTO; T. YASAKA. *Univ. of Glasgow, UAE Univ., Univ. of Newcastle, Saga Univ.*

1:00 AAA18 **463.17** 3' UTR-extended mRNA isoform expression in populations of sensory neurons: Form and function. B. J. HARRISON*; R. FLIGHT; G. VENKAT; C. GOMES; T. HUTSON; U. SANKAR; J. TWISS; L. MOON; E. ROUCHKA; J. PETRUSKA. *Univ. Louisville, Univ. of Lousville, Univ. of Lousville, Drexel Univ., King's Col. London, Univ. of Lousville, Drexel Univ., Univ. of Lousville, Univ. of Louisville.*

POSTER

464. Sensorimotor Maps

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 AAA19 **464.01** Layer specific membrane potential dynamics of layers 2/3 and 5 excitatory neurons in forepaw somatosensory cortex of awake mice. W. ZHAO; J. F. A. POULET. *Max Delbrück Ctr. For Mol. Medicine(MDC), Charité Universitätsmedizin.*

2:00 AAA20 **464.02** Age-related loss of motor cortical maps and its reversal with estradiol replacement in female rats. R. P. ALLRED*; W. YIN; N. A. DONLAN; A. C. GORE; T. A. JONES. *Univ. of Texas At Austin, Univ. of Texas At Austin.*

3:00 AAA21 **464.03** ▲ The cortical representation of genitals in the male rat: A C-Fos/Cytochrome oxidase mapping study. D. C. ESQUIVEL FRANCO*; M. TAPIA-RODRÍGUEZ; D. DÍAZ; M. GÓMEZ-CHAVARÍN; G. GUTIERREZ-OSPINA. *Biomed. Res. Inst. - UNAM, Fac. of Medicine- UNAM.*

4:00 AAA22 **464.04** Men's genital structures mapped on the sensory cortex: fMRI evidence. B. R. KOMISARUK*; K. ALLEN; N. WISE; E. FRANGOS; W. BIRBANO. *Rutgers, The State Univ. of New Jersey.*

1:00 AAA23 **464.05** Neural body representation of incongruous-feeling body parts in transsexual individuals. L. K. CASE*; V. S. RAMACHANDRAN. *UCSD.*

2:00 AAA24 **464.06** Neurophysiological and anatomical studies of area 3a using common marmosets. D. KOKETSU*; N. HATANAKA; T. ISA; A. NAMBU. *Natl. Inst. for Physiological Sci., Natl. Inst. for Physiological Sci.*

3:00 AAA25 **464.07** Effect of cTBS to dorsolateral prefrontal cortex and primary somatosensory cortex on movement related gating. K. E. BROWN*; J. K. FERRIS; W. R. STAINES; L. A. BOYD. *Univ. of British Columbia, Univ. of Waterloo.*

4:00 AAA26 **464.08** Functional modulation of deafferented forelimb barrel cortex in rat. J. T. RAMSHUR; T. DECOSTA-FORTUNE; C. LI; A. CURRY; R. S. WATERS*. *Univ. of Memphis, Univ. Tennessee Hlth. Sci. Ctr.*

1:00 BBB1 **464.09** Primary forepaw somatosensory cortex is involved in cold temperature perception in mice. N. MILENKOVIC*; W. ZHAO; T. ALBERT; J. WALCHER; J. E. SIEMENS; G. R. LEWIN; J. F. A. POULET. *MDC - Neurocure, MDC, Heidelberg Univ.*

2:00 BBB2 **464.10** ● Myelinated axons of GABAergic neurons in cortical gray matter. K. D. MICHEVA*; J. BUCHANAN; F. COLLMAN; N. GHORI; K. D. PHEND; R. J. WEINBERG; S. J. SMITH. *Stanford Univ. Sch. Med., Univ. of North Carolina.*

POSTER

465. Somatosensory: Receptive Fields and Response Properties

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 BBB3 **465.01** Active touch strategies of mice performing aperture width discrimination. B. PERRONE; W. RAYBURN; J. T. RITT*. *Boston Univ.*

2:00 BBB4 **465.02** ● Temporal delay in somatosensory information processing is correlated with upregulation of inhibition and deficits in somatosensory behaviour in rats exposed to chronic protein deficiency. R. CHAUDHARY*; M. C. DAROKHAN; Z. DAROKHAN; R. RAMACHANDRA; R. KATREDDI; V. REMA. *Natl. Brain Resear Ctr.*

● Indicated a real or perceived conflict of interest, see page 149 for details.

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3:00 BBB5 **465.03** Characterization of receptive field properties in forelimb corticostriatal circuits before and after extensive skilled reaching training. N. IVICA*; U. RICHTER; P. PETERSSON. *Integrative Neurophysiol. and Neurotechnology.*

4:00 BBB6 **465.04** Neurovascular coupling of two receptive fields in rat somatosensory cortex. J. THERIOT*; A. TOGA; N. PRAKASH; S. JU; K. BRENNAN. *Univ. of Utah, Univ. of California, Univ. of California, Univ. of California, City of Hope Natl. Cancer Ctr., Univ. of California.*

1:00 BBB7 **465.05** State changes under isoflurane anesthesia modulate signal transmission in the rat's barrel cortex. T. A. EWERT*; C. VAHLE-HINZ; A. K. ENGEL. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. Med. Ctr. Hamburg-Eppendorf.*

2:00 BBB8 **465.06** Active perception of virtual texture frequency in the whisker-related sensorimotor system of the rat. P. GEORGIEVA; D. BRUGGER; C. SCHWARZ*. *Univ. Tuebingen.*

3:00 BBB9 **465.07** Suppression of rat vibrissa motor cortex activity during social facial touch. C. L. EBBESEN*; M. BRECHT. *BCCN Berlin.*

4:00 BBB10 **465.08** Processing of complex stimuli in the rodent primary sensory cortex. A. RAMIREZ*; J. MEREL; E. PNEVMATIKAKIS; L. PANINSKI; K. MILLER; R. BRUNO. *Columbia Univ.*

1:00 BBB11 **465.09** Cross-whisker adaptation of neurons in the rat thalamic ventral posterior medial (VPM) nucleus. M. JUBRAN*; I. LAMPL. *Weizmann Inst. of Sci., Weizmann Inst. of Sci.*

2:00 BBB12-DP8 **465.10** Representation of global motion in the mouse barrel cortex, a voltage sensitive dye (VSD) imaging study. E. VILARCHAO; D. E. SHULZ*; I. FÉRÉZOU. *CNRS.*

3:00 BBB13 **465.11** Convergence of afferent and corticofugal signals in the brainstem trigeminal interpolaris nucleus of mice. P. M. KNUTSEN*; D. KLEINFELD. *UCSD.*

4:00 BBB14 **465.12** Electrophysiological and anatomical substrates of digit representations in the primary somatosensory cortex (area 3b). L. LAZAR*; P. CHAND; R. RAJAN; N. JAIN. *Natl. Brain Res. Ctr.*

1:00 BBB15 **465.13** How location and intensity of touch stimuli affect leech sensor cells and interneurons. F. PIRSCHEL; J. KRETZBERG*. *Univ. of Oldenburg.*

2:00 BBB16 **465.14** EEG proprioceptive steady state evoked potentials in closed-loop motor control. A. AKININ*; N. GOVIL; G. CAUWENBERGHS; H. POIZNER. *UCSD, UCSD.*

3:00 BBB17 **465.15** Investigation of cutaneous afferent vibration sensitivity from the glabrous skin of the human foot sole. N. STRZALKOWSKI*; L. BENT. *Univ. of Guelph.*

4:00 BBB18 **465.16** Cortico-cortical connectivity during motor execution and imagery assessed by correlation of N30 SEPs and EEG : rTMS study. Y. FUJIWARA*; J. USHIBA; K. AONO; O. TAKAHASHI; Y. MASAKADO. *Yokohama, Dept. of Biosci. and Informatics, Fac. of Sci. and Technology, Keio Univ., Dept. of Rehabil. Medicine, Tokai Univ. Sch. of Med., Ichikawa City Rehabil. Med. Ctr.*

1:00 BBB19 **465.17** EEG activity evoked from the microstimulation of single mechanoafferents in humans. R. ACKERLEY*; H. BACKLUND WASLING; M. TRULSSON; J. WESSBERG. *Univ. of Gothenburg, Karolinska Institutet.*

2:00 BBB20 **465.18** Effect of local cooling on jaw-stretch reflex of masseter muscle of healthy human. E. S. ATIS*; K. WANG; Y. OONO; L. ARENDT-NIELSEN. *Marmara Universitesi, Aalborg Univ.*

3:00 BBB21 **465.19** Vibration perception threshold on the foot sole under seated and standing postures using vibration frequencies to activate specific low threshold cutaneous mechanoreceptors. C. S. HAYES*; R. MILDREN; L. BENT. *Univ. of Guelph.*

4:00 BBB22 **465.20** Does age affect skin sensitivity on the foot dorsum and ankle? M. C. YIP*; C. HARPUR; C. LOWREY; S. BROWN; L. BENT. *Univ. of Guelph, Queen's Univ.*

POSTER

466. Spinal Cord Injury: Plasticity I

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 BBB23 **466.01** ● Application of a batch active learning algorithm to spinal cord injury therapy. T. DESAUTELS*; J. CHOE; P. GAD; M. S. NANDRA; J. W. BURDICK; Y. TAI; R. R. ROY; H. ZHONG; V. R. EDGERTON. *Caltech, Univ. of California, Univ. of California, Univ. of California, Caltech, Caltech, Univ. of California, Univ. of California, Univ. of California.*

2:00 BBB24 **466.02** Survival and migration of adult rat eGFP-OECs after a complete spinal cord transection. R. R. KHANKAN; K. G. GRIFFIS; I. B. WANNER; H. ZHONG; R. R. ROY; V. R. EDGERTON; P. E. PHELPS*. *UCLA, Terasaki Life Sci. Building.*

3:00 BBB25 **466.03** The effects of transcutaneous electrical nerve stimulation on spasticity in rats after spinal cord injury. S. HAHM*; S. PARK; Y. YOON; S. HONG; J. KIM. *Korea Univ., Korea Univ.*

4:00 BBB26 **466.04** The importance of congruent sensory feedback in EMG-controlled assisted reaching for people with tetraplegia. E. A. CORBETT*; N. A. SACHS; E. J. PERREAULT. *Rehabil. Inst. of Chicago, Northwestern Univ., Northwestern Univ.*

1:00 CCC1 **466.05** Treatment with 5HT and NMDA induces stepping in spinally transected adult rats while maintaining spinal cord plasticity. M. M. STRAIN*; K. H. LEE; A. L. NIEMERSKI; J. W. GRAU. *Texas A&M, Texas A&M.*

2:00 CCC2 **466.06** Physiological properties of spinal neurons after exercise training in adult mice with incomplete spinal cord injury. M. M. RANK*; L. R. DUNN; J. R. FLYNN; M. P. GALEA; R. CALLISTER; R. J. CALLISTER. *Univ. of Newcastle, Univ. of Melbourne.*

3:00 CCC3 **466.07** Anatomical and functional correlates of grasping recovery after bilateral pyramidotomy and rehabilitative training in adult rats. A. C. MOSBERGER*; A. GHOSH; J. C. MIEHLBRADT; N. T. LINDAU; L. C. BACHMANN; H. KASPER; M. WIECKHORST; M. E. SCHWAB. *Brain Res. Institute, Univ. of Zurich, D-HEST ETH Zurich, Inst. of Neuroinformatics, Univ. of Zurich, ETH Zurich.*

4:00 CCC4 **466.08** Identification of interneurons activated during paw withdrawal learning in tibialis anterior spinal circuitry labeled by pseudorabies virus-152. M. S. JOSEPH*; A. LEVINE; M. S. XIAO; A. HORNAK; E. GONZALES; H. ZHONG; R. R. ROY; N. J. K. TILLAKARATNE; S. PFAFF; V. EDGERTON. *Univ. of California Los Angeles, UCLA, UC San Diego, UCLA, UCLA, UCLA, UCLA.*

1:00 CCC5 **466.09** Identification of interneuronal networks for different stepping behaviors in adult spinal rats. P. SHAH*; G. GARCIA-ALIAS; S. ZACH; S. AHSAN; H. ZHONG; R. ROY; N. TILLAKARATNE; Y. GERASIMENKO; V. EDGERTON. *UCLA, UCLA, Pavlov Inst. of Physiol., UCLA.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 CCC6 **466.10** Ca^{2+} permeable AMPA receptor activity mediates maladaptive plasticity in the injured spinal cord. J. R. HUIE*; E. STUCK; K. H. LEE; K. IRVINE; J. C. BRESNAHAN; M. S. BEATTIE; J. W. GRAU; A. R. FERGUSON. *UCSF, Texas A&M Univ., Stanford Univ.*

3:00 CCC7 **466.11** SCI alters the effect of GABAergic system on nociception: Different effect of GABA-A antagonist bicuculline on capsaicin-induced allodynia in sham vs. spinally transected rats. Y. HUANG*; K. H. LEE; S. M. GARRAWAY; J. W. GRAU. *Texas A&M Univ.*

4:00 CCC8 **466.12** Daily passive cycling partially restores the loss of excitatory response to quipazine on the hindlimb extensor, but not flexor, monosynaptic reflex in spinalized rats. J. W. CHOPEK*; C. W. MACDONELL; K. GARDINER; P. F. GARDINER. *Univ. of Manitoba.*

1:00 CCC9 **466.13** Timing in the absence of supraspinal input: Integration of fixed spaced stimulation. K. H. LEE*; M. M. STRAIN; Y. HUANG; J. W. GRAU. *Texas A&M Univ., Texas A&M Univ.*

2:00 CCC10 **466.14** Noninvasive reactivation of dormant motor descending control after complete paralysis. Y. P. GERASIMENKO*; D. LU; M. MODABER; E. MORIKAWA; R. VIRANI; P. GAD; R. R. ROY; V. R. EDGERTON. *Pavlov Inst. of Physiol, UCLA, UCLA, UCLA, UCLA.*

3:00 CCC11 **466.15** Sub-threshold spinal cord stimulation facilitates spontaneous motor activity in spinal rats. P. GAD*; J. CHOE; P. SHAH; G. GARCIA-ALIAS; M. RATH; Y. GERASIMENKO; H. ZHONG; R. R. ROY; V. R. EDGERTON. *Univ. Of California Los Angeles, university of california, university of california.*

4:00 CCC12 **466.16** TITLE: 10 Hz rTMS improves contralateral hand function in individuals with tetraplegia - A pilot study. J. RIOS-GOMES*; E. C. FIELD-FOTE. *Univ. of Miami.*

1:00 DDD1 **466.17** Relationship between epidurally evoked motor potentials under non-weight-bearing or weight-bearing conditions and stepping patterns in spinal rats. B. N. PHAM*, JR; P. GAD; J. CHOE; M. NANDRA; Y. GERASIMENKO; Y. TAI; H. ZHONG; R. ROY; V. EDGERTON. *UCLA, UCLA, UCLA, UCLA, Caltech, Pavlov Inst. of Physiol., UCLA, UCLA, UCLA.*

2:00 DDD2 **466.18** Mapping spinal cord motor excitation and muscle recruitment in humans using epidural stimulation of the lumbrosacral spinal cord. C. A. ANGELI*; K. GURLEY; Y. GERASIMENKO; V. EDGERTON; S. HARKEMA. *Frazier Rehab Inst., Univ. of Louisville, UCLA.*

3:00 DDD3 **466.19** Is tizanidine really selective for group II pathways? M. A. LYLE*; T. NICHOLS. *Georgia Inst. of Technol.*

4:00 DDD4 **466.20** Therapeutic potential of sensory tongue stimulation combined with rehabilitation therapy for balance and gait function in people with incomplete SCI: a pilot study. R. MALIK; A. CHISHOLM; J. BLOUIN; J. BORISOFF; S. FORWELL; T. LAM*. *Univ. British Columbia, Intl. Collaboration on Repair Discoveries, Univ. British Columbia, British Columbia Inst. of Technol., Univ. British Columbia.*

1:00 DDD5 **466.21** Effects of epidural stimulation of the lumbosacral spinal cord in standing after motor complete spinal cord injury. E. REJC*; C. ANGELI; V. R. EDGERTON; Y. GERASIMENKO; S. J. HARKEMA. *Univ. of Louisville, Frazier Rehab Institute, Kentucky One Hlth., UCLA, Pavlov Inst. of Physiol.*

2:00 DDD6 **466.22** Exercise regulation of perineuronal net expression in the central nervous system. C. C. SMITH*; R. MAURICIO; L. NOBRE; R. WUST; B. MARSH; H. ROSSITER; R. ICHIYAMA*. *Univ. of Leeds.*

3:00 DDD7 **466.23** Plasticity of the lumbar inhibitory synaptic transmission underlying recovery of locomotion in transected rats. H. BRAS*; K. SADLAOUD; L. KHALHI; P. BOULENGUEZ; A. VIALLAT-LIEUTAUD; L. VINAY. *CNRS, CNRS, AMU, CNRS, AMU, INT.*

4:00 DDD8 **466.24** Increased expression of chondroitin sulphate proteoglycans in the lumbar spinal cord of bipedally step trained spinal rats. Y. D. AL'JOBOORI*; B. C. MARSH; H. ZHONG; R. R. ROY; J. W. FAWCETT; V. R. EDGERTON; R. M. ICHIYAMA. *Univ. of Leeds, Physiological Sci. and Neurobio. and Brain Res. Institute, Univ. of California, Los Angeles, Univ. of Cambridge, Cambridge Ctr. for Brain Repair.*

1:00 DDD9 **466.25** Corticospinal tract axons extensively regenerate into grafts of neural stem cells after spinal cord injury. K. KADOYA*; K. NGUYEN; Y. WANG; L. GRAHAM; C. LEE; G. POPLAWSKI; E. BOEHLE; J. DULIN; J. CONNER; P. LU; M. TUSZYNSKI. *UCSD, VAMC.*

2:00 DDD10 **466.26** Evoked movements of paralyzed limbs via wireless control of intraspinal microstimulation. P. GRAHN*; K. H. LEE; A. KASASBEH; C. J. KIMBLE; A. BIEBER; J. JEONG; D. A. LOBEL; K. BENNET; J. LUJAN. *Mayo Clin., Mayo Clin., Mayo Clin.*

3:00 DDD11 **466.27** Preservation of the spinal locomotor output due to 12 years of sustained effort of orthotic gait rehabilitation in an individual with complete spinal cord injury. N. KAWASHIMA*; K. NAKAZAWA. *Nat'l Rehab Ctr. Japan, U Tokyo.*

4:00 DDD12 **466.28** ● Anti-Nogo-A antibody and delayed locomotor training have a beneficial synergistic effect on functional recovery in a partial spinal cord injury rodent model. B. MARSH*; L. SCHNELL; M. SCHWAB; R. M. ICHIYAMA. *Univ. of Leeds, Brain Res. Inst.*

1:00 EEE1 **466.29** ● A wireless microelectrode implant for spinal cord stimulation and recording in rats. M. S. NANDRA*; P. GAD; J. CHOE; H. ZHONG; R. ROY; R. EDGERTON; Y. TAI. *Caltech, UCLA, Caltech.*

POSTER

467. Motoneurons: Plasticity after Lesion and in Disease

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 EEE2 **467.01** Microtubule dynamics in developing and diseased axons. T. KLEELE*; P. MARINKOVIC; M. BRILL; R. NAUMANN; E. E. WEIGAND; D. BISHOP; M. KERSCHENSTEINER; L. GODINHO; T. MISGELD. *Tech. Univ. Munich, Ludwig-Maximilians Univ. München, Max-Planck-Institute of Mol. Cell Biol. and Genet., Indiana Univ. Sch. of Medicine–Muncie, Indiana Univ. Sch. of Medicine-Muncie.*

2:00 EEE3 **467.02** Axonal regeneration and motor recovery after fibrin sealant ventral root reimplantation combined with bone marrow mononuclear cells engrafting. M. V. DE CASTRO*; R. BARBIZAN; A. GOES; A. RODRIGUES; B. BARRAVIERA; R. FERREIRA; A. OLIVEIRA. *Univ. of Campinas (UNICAMP), UNICAMP, UFMG, USP, UNESP.*

3:00 EEE4 **467.03** Botulinum neurotoxins A and E undergo retrograde axonal transport in primary motor neurons. L. RESTANI*; F. GIRIBALDI; M. MANICH; K. BERCSENYI; G. MENENDEZ; O. ROSSETTO; M. CALEO; G. SCHIAVO. *CNR Neurosci. Inst., Mol. NeuroPathobiology Laboratory, Cancer Res. UK London Res. Inst., Dept. of Biomed. Sciences, Univ. of Padova.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 EEE5 **467.04** Selective withdrawal of synaptic inputs onto motoneurons in trkB knockout mice. A. W. ENGLISH*; X. ZHU; P. J. WARD. *Emory Univ. Sch. Med.*

1:00 EEE6 **467.05** Recovery of ChAT and VAchT levels down-regulated in transected rat facial motoneurons. K. NAKAJIMA*; T. ICHIMIYA; S. YAMAMOTO; R. KIKUCHI; S. KOHSAKA. *Soka Univ., Natl. Inst. of Neurosci.*

2:00 EEE7 **467.06** ▲ Change of GABA-related molecules in axotomized rat facial nucleus. R. KIKUCHI*; S. KOHSAKA; K. NAKAJIMA. *Dept. of Bioinformatics, Fac. of Engineering, Soka Univ., Dept. of Neurochemistry, Natl. Inst. of Neurosci.*

3:00 EEE8 **467.07** Alterations at the C-bouton in rat lumbar motoneurons following peripheral nerve injury. S. ROMER*; A. S. DEARDORFF; E. SHERMADOU; M. JOHNSON; R. SHRIT; R. E. W. FYFFE. *Wright State Univ., Wright State Univ.*

4:00 EEE9 **467.08** A proposed mechanism for cholinergic state dependent modification of motoneuron excitability at the C-bouton. A. S. DEARDORFF*; S. H. ROMER; P. M. SONNER; R. E. W. FYFFE. *Wright State Univ., Wright State Univ.*

1:00 EEE10 **467.09** ▲ Age-related changes in glial cell line-derived neurotrophic factor content in skeletal muscle. S. E. JERGER*; J. M. SPITSBERGEN. *Western Michigan Univ., Western Michigan Univ.*

2:00 EEE11 **467.10** Morphological study on dendritic arborization pattern of motoneurons: Diversity among pools innervating different types of muscles. S. FUKUDA*; H. MAEDA; N. YOSHIOKA; N. MURABE; H. KAMEDA; M. SAKURAI. *Teikyo Univ. Sch. of Med. Dept. of Physiol.*

3:00 EEE12 **467.11** Autophagy dysregulation in X-linked spinal bulbar muscular atrophy stems from interference of polyglutamine-expanded androgen receptor with TFEB function. H. C. MIRANDA*; C. J. CORTES; Y. BATLEVI; H. FRANKOWSKI; A. R. MUOTRI; G. A. GARDEN; A. R. LA SPADA. *UCSD, Univ. of Washington.*

4:00 EEE13 **467.12** Neuroprotection with gonadal steroids following partial motoneuron depletion: Dependence on steroid receptor activation and hormone action at the target musculature. D. R. SENGELAUB*; Y. CAI; M. CHUNG; J. MNAYARJI. *Indiana Univ.*

1:00 EEE14 **467.13** Comparison of canine recurrent laryngeal nerve image analysis using true-color image versus stereology methods. M. MCRAY; J. M. BARKMEIER-KRAEMER*. *Univ. of California, Davis, Univ. of California - Davis.*

POSTER

468. Motor Cortex: Stimulation and Recording in Motor Tasks (TMS, Microstimulation, Optogenetics)

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 EEE15 **468.01** A novel electro-motor impulse function reduces the variability of the MEP induced by TMS. C. V. RIZZO-SIERRA*; A. GONZALEZ-CASTAÑO; S. DEEPESHWAR; F. E. LEON-SARMIENTO. *St. Thomas Univ., Univ. Minuto de Dios & Biosoft Res. Group, Unicolciencias, Swami Vivekananda Yoga Res. Fndn. (SVYASA University), Univ. Nacional, Univ. of Pennsylvania.*

2:00 EEE16 **468.02** ● Optogenetic control of targeted motor neurons in freely moving rats. K. MONTGOMERY*; C. L. TOWNE; S. M. IYER; K. DEISSEROTH; S. L. DELP. *Stanford Univ.*

3:00 EEE17 **468.03** Motor-related bold activations obtained by individual ICA for personalized TMS navigation. J. DUANN*; M. LU; C. CHEN; C. TSAI. *China Med. Univ., China Med. Univ., Univ. California San Diego, China Med. Univ. Hosp., China Med. Univ., China Med. Univ. Hosp., Natl. Chung Hsing Univ.*

4:00 EEE18 **468.04** Transient increase of human neuromagnetic oscillation in the primary motor cortex (M1) following anodal transcranial DC stimulation (tDCS). M. YUSUKE*; T. MIMA; M. MATSUHASHI; H. FUKUYAMA. *Human Brain Res. Ctr.*

1:00 EEE19 **468.05** Exploring the impact of motor skill learning on corticospinal excitability in Val66Met polymorphism carriers. O. MORIN-MONCET*; V. BEAUMONT; L. DE BEAUMONT; H. THEORET. *Univ. De Montreal, Univ. De Montreal.*

2:00 EEE20 **468.06** What repetitive transcranial magnetic stimulation parameters best induce short-term inhibition of primary motor cortex? C. YEN*; R. M. CHAPMAN; S. M. MORTON. *Univ. of Iowa, Univ. of Iowa, Univ. of Delaware.*

3:00 EEE21 **468.07** Spatio-temporal analysis of neuromagnetic motor responses in patient with multiple sclerosis: A MEG study. S. HWANG*; B. KIM; W. CHANG; H. JUNG; J. CHANG. *Dept. of Neurosurgery, Yonsei University, Col. of Med., Med. Res. Center, Yonsei Univ. Col. of Med., Dept. of Neurosurgery, Yonsei Univ. Col. of Med.*

4:00 EEE22 **468.08** Test-retest reliability of transcranial magnetic stimulation: implications for longitudinal studies in Parkinson's disease. M. R. RAFFERTY*; S. MADHAVAN; D. M. CORCOS. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

1:00 EEE23 **468.09** Anodal transcranial direct current stimulation alters elbow flexor muscle recruitment strategies. C. KRISHNAN*; R. RANGANATHAN; S. KANTAK; Y. Y. DHAHER; W. Z. RYMER. *Univ. of Michigan, Northwestern Univ., Rehabil. Inst. of Chicago, Moss Rehabil. Res. Inst.*

2:00 EEE24 **468.10** Corticospinal excitability of the deltoid and infraspinatus muscles at different arm elevation angles. Y. LIN; A. KARDUNA*. *Univ. of Oregon, Univ. of Oregon.*

3:00 EEE25 **468.11** Elicitation of submovement primitives by intracortical microstimulation. S. A. OVERDUIN*; A. G. RICHARDSON; M. CHEN; S. GOWDA; C. TOMLIN; J. M. CARMENA. *UC Berkeley, Univ. of Pennsylvania, Univ. of California, Berkeley.*

4:00 EEE26 **468.12** Cortical voluntary activation and responsiveness of corticospinal tract to a remote muscle during cycling exercise sustained to task failure. S. K. SIDHU*; J. C. WEAVIL; M. VENTURELLI; R. S. RICHARDSON; M. J. ROSSMAN; R. S. GARTEN; M. AMANN. *Univ. of Utah, Univ. of Utah, Geriatric Research, Educ. and Clin. Center, Veteran Affairs Med. Ctr.*

1:00 FFF1 **468.13** The novel combination of Paired Associative Stimulation & Virtual Reality in rehabilitation of the upper extremity post-stroke. I. LAFOND*. *NJIT/UMDNJ.*

2:00 FFF2 **468.14** Muscle relaxation of the foot increases intracortical inhibition of hand area. K. KATO*; N. MIZUGUCHI; T. MURAOKA; K. KANOSUE. *Waseda Univ., Japan Society for Promotion of Sci. Res. Fellow, Natl. Inst. of Information and Communications Technol., Nihon Univ., Waseda university.*

3:00 FFF3 **468.15** Neural recording system with fiber-optic data transmission and power delivery implanted in freely moving rat. S. PARK*; I. OZDEN; M. YIN; Y. SONG; A. V. NURMIKKO. *Brown Univ., Seoul Natl. Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 FFF4 **468.16** Transcranial direct current stimulation induces immediate changes in spontaneous cortical activity: A simultaneous tDCS-EEG study. A. ROY*; B. BAXTER; K. CASSADY; B. HE. *Univ. of Minnesota.*

POSTER

469. Cerebellum: Plasticity and Climbing Fibers

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 FFF5 **469.01** Emergence of a 600 Hz up-state Purkinje cell firing in alert mice. G. CHERON*; C. PRIGOGINE; J. CHERON; J. MARQUEZ-RUIZ; R. D. TRAUB; B. DAN. *Fsm-Université Libre De Bruxelles, Univ. Libre De Bruxelles, Univ. Libre De Bruxelles, Univ. Pablo de Olavide, BM T.J. Watson Res. Ctr., Univ. Libre de Bruxelles.*

2:00 FFF6 **469.02** Ablation of BK channels in Purkinje cell impairs LTD timing plasticity in awake animals. J. MARQUEZ-RUIZ*; C. PRIGOGINE; J. CHERON; C. AMMANN; B. DAN; M. SAUSBIER; P. RUTH; G. CHERON. *División de Neurociencias. Univ. Pablo de Olavide, Lab. of Electrophysiology, Univ. de Mons, 7000, Lab. of Neurophysiol. and Movement Biomechanics, CP601, Univ. Libre de Bruxelles, 1070, Dept. of Neurology, Hôpital Universitaire des Enfants Reine Fabiola, Univ. Libre de Bruxelles (ULB), Dept. of Pharmacol. and Toxicology, Univ. of Tübingen, D-72076.*

3:00 FFF7 **469.03** A role for cerebellar plasticity in a whisker-based object localization task. C. B. OWENS*; N. RAHMATI; L. W. J. BOSMAN; S. LINDEMAN; S. K. JOCHEN; F. ZANDSTRA; B. K. E. KOEKKOEK; M. NEGRELLO; C. I. DE ZEEUW. *Erasmus MC, Netherlands Inst. for Neurosci.*

4:00 FFF8 **469.04** Netrin-G2 KO mouse is an animal model of essential tremor. A. AJIMA*; T. YOSHIDA; K. YAGUCHI; H. GOTO; S. ITOHARA. *Lab.Behavioral Genetics, RIKEN Brain Sci. Inst.*

1:00 FFF9 **469.05** Cerebellar inhibitory synaptic plasticity, rebound potentiation, contributes to adaptation of vestibulo-ocular reflex. S. TANAKA*; S. KAWAGUCHI; T. HIRANO. *Kyoto Univ., Grad. Sch. of Brain Science, Doshisha Univ.*

2:00 FFF10 **469.06** Intrinsic plasticity in cerebellar Purkinje cells is accompanied by a reduction in complex spike pauses. G. GRASSELLI; H. TITLEY; C. HANSEL*. *Univ. of Chicago, Univ. of Chicago, Univ. Chicago.*

3:00 FFF11 **469.07** Classical delayed conditioning of forelimb movements in Archaerhodopsin-1 mice using optogenetic approaches. K. LEE*; P. J. MATHEWS; A. M. B. REEVES; R. E. SERRANO; T. S. OTIS. *UCLA, UCLA.*

4:00 FFF12 **469.08** Mechanisms contributing to cluster formation in the inferior olivary nucleus in brainstem slices from postnatal mice. M. KØLVRAA; F. C. MÜLLER; H. JAHNSEN*; J. C. REKLING. *Dept. of Neurosci. & Pharmacology, Univ. of Copenhagen.*

1:00 FFF13 **469.09** Chronic calcium imaging of cerebellar network activity in awake sensory processing. A. GIOVANNUCCI*; A. BADURA; S. S. -. H. WANG. *Princeton Univesrity, Princeton Univ., Princeton Univ.*

2:00 FFF14 **469.10** Information coding plasticity of cerebellar Purkinje cells in voluntary balance control. R. X. LEE*; J. HUANG; C. HUANG; C. YEN. *Natl. Taiwan Univ., Natl. Taiwan Univ., Univ. of Missouri - Kansas City.*

3:00 FFF15 **469.11** Subthreshold membrane potential oscillations in the primate inferior olive are slower than in rodents. J. TURECEK; V. Z. HAN; K. A. GRANT; J. P. WELSH*. *Seattle Children's Res. Inst., Oregon Natl. Primate Res. Ctr.*

4:00 FFF16 **469.12** A signal from the past? Modulation in climbing fiber activity during trial-by-trial adaptation in the oculomotor vermis of rhesus monkeys. M. A. JUNKER*; D. ENDRES; P. DICKE; P. THIER. *Hertie Inst. For Clin. Brain Res., Werner Reichardt Ctr. for Integrative Neurosci.*

1:00 FFF17 **469.13** Duration of complex spikes grades single-trial plasticity and learning. Y. YANG*; S. G. LISBERGER. *Duke Univ., Duke Univ., Howard Hughes Med. Inst.*

2:00 FFF18 **469.14** Mechanisms for predicting the sensory consequences of movements in a cerebellum-like circuit. T. REQUARTH*; P. KAIFOSH; N. B. SAWTELL. *Columbia Univ., Columbia Univ.*

3:00 FFF19 **469.15** Gating of sensory information to the rat cerebellum during rearing behaviour. C. L. LAWRENSON*; T. C. WATSON; R. APPS. *The Univ. of Bristol.*

4:00 FFF20 **469.16** Degeneration of neurons in the principal nucleus of the inferior olive of the human: evidence from silver staining. J. S. BAIZER*; K. WONG; P. R. HOF; C. C. SHERWOOD; S. F. WITELSON. *Univ. at Buffalo, Mount Sinai Sch. of Med., The George Washington Univ., McMaster Univ.*

1:00 FFF21 **469.17** Electrophysiological monitoring of the cerebellar evoked potentials following fluid percussion injury. G. ORDEK*; J. GROTH; M. SAHIN. *NJIT, NJIT.*

2:00 FFF22 **469.18** A computational model of the cerebellum with learning at parallel fiber - Basket cell synapses. W. C. LENNON*, JR; T. YAMAZAKI; R. HECHT-NIELSEN. *Univ. of California, Univ. of Electro-Communications.*

3:00 FFF23 **469.19** The CS-intensity effect as a sensorimotor contingency. I. HERREROS-ALONSO*; G. MAFFEI; S. BRANDI; M. SANCHEZ-FIBLA; P. F. M. J. VERSCHURE. *SPECS Univ. Pompeu Fabra, Institució Catalana de Recerca i Estudis Avançats, ICREA.*

4:00 FFF24 **469.20** Spike timing regulation on the millisecond scale by distributed synaptic plasticity at the cerebellum granular layer. J. A. GARRIDO*; E. ROS; E. D'ANGELO. *Consorzio Nazionale Interuniversitario Per Le Scienze Fisiche Della Materia (CNI, Univ. of Pavia, Univ. of Granada, IRCCS Inst. Neurologico Nazionale C. Mondino, Consorzio Interuniversitario per le Scienze Fisiche della Materia (CNISM).*

1:00 FFF25 **469.21** Basis of adaptive filter computations: New insights from granular layer network modelling. C. RÖSSERT*; P. DEAN; S. SOLINAS; E. D'ANGELO; J. PORRILL. *Dept. of Psychology, Univ. of Sheffield, IRCCS C. Mondino, Dept. of Neuroscience, Univ. of Pavia.*

2:00 FFF26 **469.22** Real-life time computer simulation of long-term cerebellar motor learning. T. YAMAZAKI*; J. IGARASHI; S. NAGAO. *The Univ. of Electro-Communications, OIST, RIKEN Brain Sci. Inst.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

470. Inhibition in Basal Ganglia Loops

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 GGG1 **470.01** ▲ Dopamine modulates GABA release in striato-nigral, pallido-nigral and striato-pallidal terminals regulating L-type calcium channels. L. SÁNCHEZ*; S. RECILLAS; R. CABALLERO; A. SIERRA; D. ERLIJ; J. ACEVES; B. FLORAN. *CINVESTAV, CINVESTAV, CINVESTAV, Sunny Downstate Med. Ctr.*

2:00 GGG2 **470.02** ▲ Blockade of GAT-1 and GAT-3 transporters in rat the globus pallidus, decreases motor activity. M. MUNOZ ARENAS*; F. PAZ-BERMUDEZ; B. FLORÁN; I. D. LIMÓN. *Lab. De Neurofarmacologia, Benemérita Univ. Autónoma de Puebla, Ctr. de Investigación y de Estudios Avanzados-IPN, D.F., México.*

3:00 GGG3 **470.03** Environmental enrichment accelerates maturation of inhibitory circuitry within the murine striatum. A. M. O'CONNOR*; C. A. LEAMEY; A. SAWATARI. *Bosch Inst.*

4:00 GGG4 **470.04** Network topology of the striatal microcircuit. J. E. PÉREZ-ORTEGA*; M. DUHNE; V. PLATA; M. A. ARIAS; E. GALARRAGA; J. BARGAS. *Inst. De Fisiología Celular - Univ. Nacional Autónoma De México.*

1:00 GGG5 **470.05** Powerful inhibitory action of mu opioid receptors (MOR) on cholinergic interneuron excitability in the dorsal striatum. G. PONTERIO; A. TASSONE; G. SCIAMANNA; P. BONSI; V. VANNI; E. RIAHI; P. LONGONE*; A. PISANI. *Fondazione Santa Lucia, Shahid Beheshti Univ. of Med. Sci., Univ. di Roma "TorVergata".*

2:00 GGG6 **470.06** Corticostriatal polysynaptic responses from striatal direct and indirect projection neurons. M. A. ARIAS*; B. J. VIZCARRA-CHACÓN; M. B. PÉREZ-RAMÍREZ; D. TAPIA; J. BARGAS; E. GALARRAGA. *Inst. de Fisiología Celular UNAM.*

3:00 GGG7 **470.07** Histamine H3 receptor activation selectively inhibits adenosine A2A receptor-mediated stimulation of depolarization-evoked [3H]-GABA release from rat globus pallidus synaptosomes. G. E. MORALES FIGUEROA*; R. GONZALEZ-PANTOJA; J. ESCAMILLA-SÁNCHEZ; J. ARIAS-MONTAÑO. *CINVESTAV, CINVESTAV.*

4:00 GGG8 **470.08** RNAi screening of GABAA receptor function in the external globus pallidus. T. Y. HUANG*; V. HERNANDEZ; K. YOUNG; C. S. CHAN. *Northwestern Univ.*

1:00 GGG9 **470.09** Kv4 channels shape the intrinsic excitability of external globus pallidus neurons. V. HERNANDEZ*; T. Y. HUANG; K. A. YOUNG; C. S. CHAN. *Northwestern Univ.*

2:00 GGG10 **470.10** Optogenetic characterization of the murine pallidostriatal synapse. K. E. GLAJCH*; D. J. HEGEMAN; D. A. KELVER; C. S. CHAN. *Northwestern Univ.*

3:00 GGG11 **470.11** Regulation of striatal neurons' excitability by pallidal input. D. A. KELVER*; K. E. GLAJCH; C. S. CHAN. *Northwestern Univ., Northwestern Univ.*

4:00 GGG12 **470.12** Optogenetic assessment of heterosynaptic suppression of inputs in the ventral striatum. J. M. BROOKS*; G. G. CALHOON; P. O'DONNELL. *Univ. of Maryland.*

1:00 GGG13 **470.13** Modulation of intrastriatal connections by presynaptic membrane potential. S. N. SZYDLOWSKI; H. PLANERT; I. POLLAK DOROCIC; K. MELETIS; G. SILBERBERG*. *Karolinska Inst., NeuroCure Charite.*

2:00 GGG14 **470.14** Increased bridging collaterals are associated with enhanced inhibition of external pallidal neurons by the 'direct' striatonigral pathway. M. CAZORLA; M. O. CHOHAN*; F. CARVALHO; M. SHEGDA; N. CHUHMA; S. RAYPORT; S. AHMARI; C. KELLENDONK; H. MOORE. *New York State Psychiatric Inst., Columbia Univ., Columbia Univ., New York State Psychiatric Inst.*

3:00 GGG15 **470.15** Tic related neuronal activity in freely moving rats. I. BAR-GAD*; D. YAEL; M. BRONFELD. *Bar-Ilan Univ.*

4:00 GGG16 **470.16** CB2 receptors activation inhibits [3H] glutamate release at subthalamo-nigral terminals. R. SANCHEZ*; G. LOPEZ-RAMIREZ; F. PAZ-BERMUDEZ; B. FLORAN. *CINVESTAV.*

POSTER

471. Voluntary Motor Control: Motor Learning II

Theme D: Sensory and Motor Systems

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 GGG17 **471.01** Characterization of VTA input to primary motor cortex during motor learning. S. LEEMBURG*; A. LUFT. *Univ. of Zurich.*

2:00 GGG18 **471.02** Influence of different task conditions on reward-based motor learning of cart-pole balancing. N. LUDOLPH*; M. A. GIESE; W. ILG. *Ctr. for Integrative Neurosci.*

3:00 GGG19 **471.03** Does the nervous system account for muscle dynamics in voluntary movement control? C. J. HASSON*. *Northeastern Univ.*

4:00 GGG20 **471.04** Prospective error determines motor learning: A step towards a unified model of motor learning. K. TAKIYAMA*; M. HIRASHIMA; D. NOZAKI. *Tamagawa Univ. / JSPS, The Univ. of Tokyo.*

1:00 GGG21 **471.05** Savings in visuomotor adaptation depends on perturbation magnitude. J. R. MOREHEAD*; S. QASIM; M. CROSSLEY; R. B. IVRY. *UC Berkeley.*

2:00 GGG22 **471.06** Unilateral stroke produces hemisphere-specific bilateral deficits. S. MANI*; R. L. SAINBURG. *Pennsylvania State Univ., Pennsylvania State Univ.*

3:00 GGG23 **471.07** Unambiguous dynamics in Cartesian and Object-based (but not arbitrary) coordinates can be learned. D. W. FRANKLIN*; A. V. BATCHELOR; D. M. WOLPERT. *Univ. Cambridge, Univ. of Cambridge.*

4:00 GGG24 **471.08** Interfacing a biomimetic model of sensorimotor cortex with a musculoskeletal model and a robotic arm. S. DURA-BERNAL*; X. ZHOU; G. L. CHADDERDON; A. PRZEKWAS; W. W. LYTTON. *SUNY Downstate Med. Ctr., CFD Res. Corp, Kings County Hosp.*

1:00 GGG25 **471.09** An improved motor efficiency after the dimensionality reduction on the Spinal-Like Regulator model. J. SUNWOO*; J. GOODNER; G. LOEB. *USC.*

2:00 GGG26 **471.10** ▲ Enhancing sensitivity to timing in a throwing task. B. E. HAFFNER*; M. E. HUBER; D. STERNAD. *Northeastern Univ., Northeastern Univ., Northeastern Univ.*

3:00 GGG27 **471.11** Retinotopic representation of visuomotor adaptation. E. POH*; G. WALLIS; S. RIEK; A. DE RUGY; T. CARROLL. *The Univ. of Queensland.*

4:00 GGG28 **471.12** Reach-to-grasp task training and motor learning in children with cerebral palsy. M. T. ROBERT; H. SVEISTRUP; R. GUBEREK; M. F. LEVIN*. *McGill Univ., Univ. of Ottawa, Ctr. for Interdisciplinary Res. in Rehabil., McGill Univ.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 149 for details.

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1:00 GGG29 **471.13** Inter-limb generalization of visuomotor adaptation is similar for sagittal and horizontal plane reaching. T. J. CARROLL*; E. POH; T. DUARTE FERREIRA; A. DE RUGY. *The Univ. of Queensland.*

2:00 GGG30 **471.14** Brain networks underlying observational motor learning. H. MCGREGOR*; P. L. GRIBBLE. *Western Univ.*

3:00 GGG31 **471.15** Motor skill acquisition leads to increased reliance on feedforward control. L. BASHFORD; D. KOBAK; C. MEHRING*. *Imperial Col. London, Albert-Ludwigs-University Freiburg, Imperial Col. London.*

4:00 GGG32 **471.16** Generalization of context-dependent internal models. L. P. SELEN*; A. M. E. SARWARY; W. MEDENDORP. *Radboud Univ.*

1:00 GGG33 **471.17** Reaching adaptation: Schizophrenia patients differentially correct internal and external disturbances. J. MA*; Y. ZHOU; S. LIU; H. JIA,; K. WEI. *Peking Univ., Anding Hosp., Peking Univ.*

2:00 GGG34 **471.18** Sensitivity of motor adaptation depends on history of experienced errors. D. J. HERZFELD*; P. A. VASWANI; R. SHADMEHR. *Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 GGG35 **471.19** Does perturbation structure affect how the internal model is altered, and is this process M1-dependent? C. SCHOFIELD*; A. YEDDALA; A. JACKSON. *Newcastle Univ.*

4:00 GGG36 **471.20** Visuomotor feedback gains regulated by internal model uncertainty. S. FRANKLIN*; D. W. FRANKLIN. *Univ. of Cambridge.*

1:00 GGG37 **471.21** Switching of the trial-by-trial learning rule from error-based correction to strategy during mirror-reversal reaching. S. KASUGA*; J. USHIBA; D. NOZAKI. *Keio Univ., The Univ. of Tokyo.*

2:00 GGG38 **471.22** Increase of end-point errors in reaching induced by microstimulation to the primary motor and premotor cortices. M. INOUE*; M. UCHIMURA; S. KITAZAWA. *Juntendo Univ. Sch. of Medicine, Dept. of Physiolgy 1, Osaka Univ., Osaka Univ.*

3:00 GGG39 **471.23** Beta post-movement rebound in motor error monitoring and adaptation. H. TAN*; N. JENKINSON; P. BROWN. *Univ. of Oxford.*

4:00 GGG40 **471.24** Does interlimb transfer of force-field adaptation depend on visual feedback? F. R. SARLEGNA*; H. LEFUMAT; L. BRINGOUX; C. BOURDIN; J. VERCHER. *CNRS & Aix-Marseille Univ.*

1:00 GGG41 **471.25** The effects of gaze locations on explicit strategy in visuomotor learning. M. K. RAND*; S. RENTSCH. *Ifado-Leibniz Res. Ctr.*

2:00 GGG42 **471.26** Extinction interferes with the retrieval of visuomotor memories through a mechanism involving the primary motor cortex. J. I. VILLALTA; S. M. LANDI; A. FLO; V. M. DELLA MAGGIORE*. *Univ. of Buenos Aires, Lab. of Neural Systems- The Rockefeller Univ., Language, Cognition and Develop. Lab- Intl. Sch. for Advanced Studies.*

3:00 GGG43 **471.27** Structural brain changes detected on MRI in response to long term skilled motor training in mice. K. L. NG; Y. ZHANG; M. Y. LI; S. R. ZEILER; J. ZHANG; R. J. O'BRIEN*. *Johns Hopkins Hosp., Johns Hopkins Univ., Johns Hopkins Bayview Med. Ctr., Johns Hopkins Univ.*

4:00 GGG44 **471.28** Older adults learn to increase safety margins in dynamic object manipulation. D. STERNAD*; C. J. HASSON. *Northeastern Univ., Northeastern Univ.*

1:00 GGG45 **471.29** The effect of visuomotor transformations on the directionality of planning of movement versus correction of an ongoing movement. S. DUROCHER*; V. GRITSENKO; J. KALASKA. *Physiologie, Univ. De Montreal, West Virginia Univ.*

2:00 GGG46 **471.30** Accuracy and adaptation to visuomotor gain changes in reaching and reversal movements using auditory feedback of distance and hand speed. C. P. GHEZ*; A. T. FAITH. *Columbia Univ., Arizona State Univ.*

POSTER

472. Rapid and Membrane Effects of Estrogens

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 GGG47 **472.01** Estradiol membrane signaling modulates the translocator protein (TSPO) via protein kinase A (PKA) in hypothalamic astrocytes. C. CHEN; J. KUO*; P. MICEVYCH. *UCLA, UCLA Med. Ctr., UCLA.*

2:00 GGG48 **472.02** Rapid estrogen signaling in a model of hypothalamic AVPV neurons. M. A. SMITH*; P. MICEVYCH. *UCLA.*

3:00 HHH1 **472.03** Beta-Arrestin 1 regulates estrogen membrane signaling in hypothalamic neurons. A. M. WONG*; M. C. ABRAMS; P. E. MICEVYCH. *UCLA.*

4:00 HHH2 **472.04** Neuroimmune regulation of aromatase expression in the female songbird brain. C. J. SALDANHA*; A. L. PEDERSEN; C. J. MILLIKEN-MEHOS; K. A. DUNCAN. *Dept. of Biology. American Univ., Dept. of Psychology. American Univ., Vassar Col.*

1:00 HHH3 **472.05** ● Synergistic effects of norepinephrine and estradiol on auditory-evoked electrophysiological responses in the zebra finch auditory forebrain. M. IKEDA*; D. JEON; L. REMAGE-HEALEY. *Univ. of Massachusetts, Univ. of Massachusetts, Amherst, Univ. of Massachusetts.*

2:00 HHH4 **472.06** Biochemical evidence for sex-specific estradiol modulation of ERα-mGluR1 interactions in the hippocampus. N. TABATADZE*; R. M. MAY; G. Z. HUANG; C. S. WOOLLEY. *Northwestern Univ.*

3:00 HHH5 **472.07** Analyses of electrographic and behavioral seizures show acute modulation of kainic acid seizures by neurosteroid estradiol in the hippocampus. S. M. SATO*; M. J. MAGDA; R. M. MAY; C. S. WOOLLEY. *Northwestern Univ.*

4:00 HHH6 **472.08** Agonsim of GPER1 is anxiolytic and is correlated with Estrogen Receptor α phosphorylation and spinophilin expression in the hippocampus of the male mouse. K. POLLARD; D. HART; M. NILGES; S. CLARK; N. VASUDEVAN*. *Tulane Univ., Tulane Univ., Tulane Univ.*

1:00 HHH7 **472.09** Estrogen receptor interactions with metabotrophic glutamate receptors underlie estradiol-regulation of dendritic spines. B. PETERSON*; R. L. MEISEL; P. G. MERMELSTEIN. *Univ. of Minnesota.*

2:00 HHH8 **472.10** Palmitoylation of estrogen receptors is essential for neuronal membrane signaling. J. MEITZEN*; J. I. LUOMA; M. I. BOULWARE; V. L. HEDGES; P. G. MERMELSTEIN. *North Carolina State Univ., Stanford Univ., Univ. of Wisconsin-Milwaukee, Univ. of Minnesota.*

3:00 HHH9 **472.11** The membrane estrogen receptor ligand STX rapidly enhances GABAergic signaling in NPY/AgRP neurons: Role in mediating the anorexigenic effects of 17β-estradiol. M. J. KELLY*; A. W. SMITH; M. A. BOSCH; E. J. WAGNER; O. K. RØNNEKLEIV. *Oregon Hlth. and Sci. U, Oregon Natl. Primate Res. Ctr., Western Univ. of Hlth. Sci.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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4:00 HHH10 **472.12** Aromatase activity is essential for the maintenance of hippocampal synapses in females but not in males. N. BRANDT*; R. VIERK; L. FESTER; G. M. RUNE. *Inst. of Neuroanatomy.*

1:00 HHH11 **472.13** Regulatory interactions of estrogen and reelin during cortical development. M. MESEKE; R. A. BENDER*; E. FOERSTER; G. M. RUNE. *Univ. of Hamburg Med. Ctr., Inst. of Anat. I, Univ. Hamburg, Med. Ctr.*

2:00 HHH12 **472.14** Hippocampus-synthesized estrogen and androgen rapidly modulate LTP and dendritic spines. S. KAWATO*; Y. HOJO; Y. OOISHI; H. MUKAI; M. YOSHIYA. *Univ. of Tokyo, Univ. of Tokyo.*

3:00 HHH13 **472.15** ERα interact with GPER1 to mediate a neuroprotective effect in MPTP mice. M. BOURQUE*; M. MORISSETTE; T. DI PAOLO. *Ctr. De Recherche Du CHU De Québec, CHUL, Laval Univ.*

4:00 HHH14 **472.16** *In vivo* progesterone receptor-expressing actions of prodrug-derived 17β-estradiol are antagonized in the brain by the estrogen-receptor antagonist ICI182,780. I. J. MERCHENTHALER*; M. LANE; K. TATRAI-PROKAI; L. PROKAI. *Dept. of Epidemiology, Anatomy/Neurobiology, Univ. of Maryland, Sch. of Med., UNT Syst. Col. of Pharm., Univ. of North Texas.*

POSTER

473. Sexual Differentiation of Physiology and Behavior

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 HHH15 **473.01** Estradiol does not affect transcript levels of tubulin specific chaperone protein A in the LMAN of juvenile zebra finches. L. QI*; J. WADE. *Michigan State Univ., Michigan State Univ.*

2:00 HHH16 **473.02** Sex differences in newly-born microglia, mast cells, and neuroimmune signaling in the developing brain. K. M. LENZ*; L. A. PICKETT; H. L. SWAIM; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med., Univ. of Maryland Baltimore.*

3:00 HHH17 **473.03** The role of endocannabinoids in mediating sex differences in the developing amygdala. K. J. ARGUE*; K. M. LENZ; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med., Univ. of Maryland Baltimore.*

4:00 HHH18 **473.04** ● Conditional knockout of DNMT3a in the preoptic area of newborn female mice masculinizes behavior in adulthood. M. M. MCCARTHY*; B. M. NUGENT; S. J. RUSSO; G. E. HODES. *Univ. Maryland Sch. Med., Yale Univ., Mount Sinai Scool of Med.*

1:00 HHH19 **473.05** Testosterone works through functional androgen receptors to modulate cell activity in response to an anxiogenic stimulus. C. CHEN*; C. L. JORDAN; S. M. BREEDLOVE. *Michigan State Univ.*

2:00 HHH20 **473.06** Effects of prenatal testosterone on steroid-independent reproductive behavior of hybrid B6D2F1 mice. P. BHARADWAJ; S. VENU; J. PARK*. *Univ. of Massachusetts, Boston.*

3:00 HHH21 **473.07** ▲ Male rat sexual behavior is disrupted by prenatal exposure to letrozole. S. OLVERA-HERNÁNDEZ*; A. FERNÁNDEZ-GUASTI. *CINVESTAV.*

4:00 HHH22 **473.08** Effects of estrogenic compounds exposure within 24 h after birth on partner preference and sexual behavior in female rats. C. KOMINE*; M. KAMISHIMA; M. YOSHIDA; Y. KONDO; M. KAWAGUSHI. *Meiji Univ., Meiji Univ., Natl. Inst. of Hlth. Sci., Teikyo Univ. of Sci.*

1:00 HHH23 **473.09** ▲ Neonatal treatment of two phytoestrogens on female rat anxiety and depression. A. CRUZ - BENITES; A. FERREIRA-NUNO*; J. OLAYO - LORTIA; M. TARRAGÓ - CASTELLANOS; A. MORALES - OTAL. *Univ. Autonoma Metropolitana.*

2:00 HHH24 **473.10** Dynamic and sexually dimorphic microRNA expression patterns in the ventral and dorsal hippocampus during pubertal development. S. A. PRINS*; N. N. MOTT; E. PINCETI; T. R. PAK. *Loyola Univ. Med. Ctr.*

3:00 HHH25 **473.11** Maintenance of ERα in the SNB target muscle maintains estrogen sensitivity of SNB dendrites outside the early postnatal period. L. M. RUDOLPH*; D. R. SENGELAUB. *Indiana Univ.*

4:00 HHH26 **473.12** Neuromolecular mechanisms for sex differences in response to maternal deprivation by early weaning. T. KIKUSUI*; M. TAKAKI; H. TAKANASHI; Y. SHIMOKAWA; N. KANBARA; M. NAGASAWA; K. MOGI. *Azabu Univ.*

1:00 HHH27 **473.13** Permanent influence of neonatal exposure to ethinyl estradiol on expression of estrogen receptor α in female rat brain. T. SHIGA*. *Meiji Univ.*

POSTER

474. Respiratory Regulation: Hypoxia and Obstructive Sleep Apnea

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 HHH28 **474.01** Cerebellar Purkinje cell loss in developing Lurcher mice influences respiratory compensatory responses to acute hypercapnia and hypoxia. M. A. CALTON*; P. E. DICKSON; R. M. HARPER; D. GOLDOWITZ; G. MITTLEMAN. *Univ. of Memphis, UCLA, Univ. of British Columbia.*

2:00 HHH29 **474.02** Cardiovascular regulatory sites show lateralized responses impaired in amplitude and latency to pressor challenges in obstructive sleep apnea. R. M. HARPER*; J. A. OGREN; R. KUMAR; P. M. MACEY; M. A. WOO; R. K. HARPER; F. L. YAN-GO. *UCLA, Neurobio., UCLA Brain Res. Inst., UCLA Sch. of Nursing, UCLA, Neurol.*

3:00 HHH30 **474.03** Regional cerebral blood flow alterations in obstructive sleep apnea. S. K. YADAV*; R. KUMAR; P. M. MACEY; D. J. J. WANG; M. A. WOO; R. M. HARPER. *UCLA, Univ. of California, Univ. of California, Univ. of California.*

4:00 HHH31 **474.04** Global and regional brain putamen volume alterations in obstructive sleep apnea. R. KUMAR*; S. FARAHVAR; J. A. OGREN; P. M. MACEY; M. A. WOO; F. L. YAN-GO; R. M. HARPER. *UCLA, UCLA, UCLA Brain Res. Inst., UCLA.*

1:00 HHH32 **474.05** ▲ Obstructive sleep apnea and cortical thickness in males and females. N. HARIS*; R. M. HARPER; R. KUMAR; M. A. WOO; F. L. YAN-GO; P. M. MACEY. *UCLA, UCLA, UCLA, UCLA, UCLA.*

2:00 HHH33 **474.06** Pituitary adenylate cyclase-activating peptide (PACAP) plays a critical role in survival of adult mice exposed to chronic intermittent hypoxia suggesting an important role for PACAP in sleep apnea. R. J. WILSON*; E. V. FERGUSON; P. CIECHANSKI; K. T. BARRETT. *Univ. of Calgary, HBI.*

3:00 HHH34 **474.07** Obstructive sleep apnea in rats promotes sleep fragmentation without sleep deprivation. A. P. PANSANI*; M. V. ROSSI; R. B. MACHADO; G. SCHOORLEMMER; S. L. CRAVO. *Federal Univ. of São Paulo, Federal Univ. of São Paulo.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 HHH35 **474.08** Acute inhibition of 5-HT neurons alters the response to anoxia-induced respiratory arrest and autoresuscitation in neonatal mice. A. E. CORCORAN*; R. DOSUMU-JOHNSON; R. D. BRUST; S. M. DYMECKI; E. E. NATTIE. *Geisel Sch. of Med. at Dartmouth, Harvard Med. Sch.*

1:00 HHH36 **474.09** Effects of TRPA1 channel antagonism on hypoxic and hypercapnic ventilatory responses. K. TAKEDA*; M. POKORSKI; Y. SATO; Y. OYAMADA; Y. OKADA. *Natl. Hosp. Organization Murayama Med. Ctr., Med. Res. Center, Polish Acad. of Sci., BSI, RIKEN, Natl. Hosp. Organization Tokyo Med. Ctr.*

2:00 HHH37 **474.10** Angiotensin II alters leptin and leptin downstream signaling in the carotid body during intermittent hypoxia. J. CIRIELLO*; S. A. MESSENGER; J. M. MOREAU. *Univ. Western Ontario, Univ. Western Ontario.*

3:00 HHH38 **474.11** ● Hypoxic modulation on respiratory neuron network during perinatal period. A. ARATA*; M. SHIGA; H. SHIMOMURA; T. TANIZAWA. *Hyogo Col. of Med., Hyogo Col. of Med.*

4:00 HHH39 **474.12** Neuronal nitric oxide synthase does not mediate ventilatory acclimatization to hypoxia in rat. M. E. PAMENTER; A. D. GO; Z. FU; I. MARFONE; S. GUPTA; F. L. POWELL*, Jr. *Univ. of California San Diego, Univ. of British Columbia.*

1:00 HHH40 **474.13** Involvement of purinergic receptors of the lateral parabrachial nucleus on respiratory responses to hypoxia. M. F. MENEZES; M. T. FAVERO; J. V. MENANI; P. M. DE PAULA*. *Dent. Schl-UNESP.*

2:00 HHH41 **474.14** Acute moderate hypoxia reduces the number of activated Hypocretin/Orexin neurons in chicken embryos. J. P. LANDRY*; S. WIEBE; M. POMPEIANO. *McGill.*

3:00 HHH42 **474.15** The secondary anoxic depression of inspiratory activity in the rhythmic medullary slice is attenuated by endogenous ATP, possibly via astrocyte-mediated, glutamatergic excitation of inspiratory neurons. Y. ZHANG*; A. V. GOURINE; S. KASPAROV; T. S. ALVARES; G. D. FUNK. *Univ. of Alberta, Univ. of Alberta, Univ. Col. London, Univ. of Bristol, Univ. of Alberta.*

4:00 HHH43 **474.16** Endogenous activation of P2Y1 receptors in the preBötzinger Complex *in vivo* attenuates the secondary hypoxic respiratory depression. V. RAJANI*; N. Y. CHU; J. D. ZWICKER; S. PAGLIARDINI; N. MARINA; S. KASPAROV; A. V. GOURINE; G. D. FUNK. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. Col. London, Univ. of Bristol.*

POSTER

475. Early Life Stress: Effects on Anxiety, Social Function and Depression

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 HHH44 **475.01** Neonatal hippocampal lesions alter emotional behavior and cortisol response to an acute stressor in adult rhesus monkeys. J. RAPER*; M. E. WILSON; M. M. SANCHEZ; J. BACHEVALIER. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Emory Univ.*

2:00 HHH45 **475.02** Increased anxious behaviors to social stimuli in adult rhesus macaques with neonatal perirhinal lesions. E. E. JOHNSON*; J. RAPER; J. BACHEVALIER. *Yerkes, Emory Univ.*

3:00 HHH46 **475.03** Multiple anesthetic exposure in infant rhesus monkeys alters emotional reactivity to an acute stressor. M. C. ALVARADO*; J. RAPER; K. L. MURPHY; T. M. DAVIS; J. M. JOHNSON; M. G. BAXTER. *Yerkes Natl. Primate Res. Center/Emory Univ., Emory Univ., Icahn Sch. of Med. at Mount Sinai, The Univ. of Oxford.*

4:00 III1 **475.04** Reduced anxiety-like behaviour and 5-HT concentrations in the amygdala of male rats submitted to maternal deprivation and individual housing in adulthood. D. SUCHECKI*; K. K. DORSA; M. BUNSCHEIT; R. B. MACHADO. *Univ. Federal De Sao Paulo.*

1:00 III2 **475.05** Developmental high fat diet exposure induces long-term changes in anxiety behaviour and glucocorticoid signaling in the brain. P. O. MCGOWAN*; W. C. DE VEGA; A. SASAKI. *Univ. of Toronto.*

2:00 III3 **475.06** Dopaminergic modulation of emotional and social deficits induced by prenatal glucocorticoid exposure. A. RODRIGUES*; S. BORGES; B. COIMBRA; C. SOARES-CUNHA; J. PÊGO; N. SOUSA. *Univ. of Minho, Life and Hlth. Sci. Res. Inst. (ICVS), ICVS/3B's - PT Government Associate Laboratory, Braga/Guimarães, Portugal.*

3:00 III4 **475.07** Maternal oxytocin at birth alters offspring behavior. W. KENKEL*; J. R. YEE; S. W. PORGES; C. F. FERRIS; S. CARTER. *Northeastern Univ., Univ. of North Carolina.*

4:00 III5 **475.08** Evidence that periodic maternal deprivation mediates aspects of intergenerational transmission of low anxiety behavior and influences neuroplasticity in the amygdala. R. LOTT*; A. BERMAN; S. DONALDSON. *Univ. of Massachusetts Boston.*

1:00 III6 **475.09** Early-life stress effects on social interaction and medial prefrontal cortex dendritic morphology in young male and female rats. M. R. FARRELL*; F. HOLLAND; H. C. BRENHOUSE; R. M. SHANSKY. *Northeastern Univ.*

2:00 III7 **475.10** NMDA receptor antagonism in the hippocampus ameliorates acute stress potentiation of aggressive behaviors in the post-weaning isolation-reared mice. C. CHANG*; P. GEAN. *Dept. of Pharmacology, Natl. Cheng-Kung Univ., Inst. of Basic Med. Sci. of Natl. Cheng-Kung Univ.*

3:00 III8 **475.11** Long term effects of acute physical stress and social isolation in juvenility on anxiety- and depressive-like behaviours are not mitigated by access to a palatable diet. J. MACKAY*; S. GRAITSON; J. S. JAMES; C. CAYER; P. KENT; Z. MERALI. *Univ. of Ottawa Inst. of Mental Hlth. Res., Univ. of Ottawa, Univ. of Ottawa.*

4:00 III9 **475.12** Maternal separation in pre-weaning period attenuates the effect of social isolation stress on HPA responsiveness in adult rats. F. BIGGIO*; M. PISU; V. LOCCI; A. GARAU; G. BOERO; M. MOSTALLINO; C. UTZERI; P. OLLA; G. BIGGIO; M. SERRA. *Univ. of Cagliari, C.N.R. Inst. of Neurosci.*

1:00 III10 **475.13** ● Maternal antidepressant use alters hippocampal plasticity and stress-related behaviour of male and female offspring. A. R. GOBINATH*; J. L. WORKMAN; L. A. M. GALEA. *Univ. of British Columbia, Univ. of British Columbia.*

2:00 III11 **475.14** Maternal care of the pups is the base of higher stress responses in adult high-yawning rats. C. URIBE*; M. CORTES; J. R. EGUIBAR. *Inst. De Fisiología BUAP.*

3:00 III12 **475.15** The match/mismatch hypothesis of psychiatric disorders: A new way of linking early experiences and adult environment to stress vulnerability. M. V. SCHMIDT*; S. L. LESUIS; K. V. WAGNER; J. HARTMANN; S. SANTARELLI. *Max Planck Inst. of Psychiatry.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 III13 **475.16** Unpredictable stress in neonates leads to enhanced anxiety and changes to anxiety related genes in adulthood. R. M. SULLIVAN; E. C. SARRO*; G. A. BARR. *New York Univ., New York Univ., New York Univ., Nathan Kline Inst. for Psychiatric Res., Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

1:00 III14 **475.17** Effect of early-post natal maternal separation on HPA axis activity, body weight, food intake and depressive-like behavior of adult rats. V. ALCÁNTARA-ALONSO*; E. ESTRADA; M. AMAYA; P. DE GORTARI. *Inst. Nacional De Psiquiatría.*

2:00 III15 **475.18** Early life abuse switches passive fear expression to active fear expression and abolishes maternal protection of pups. R. E. PERRY*; R. M. SULLIVAN. *Nathan Kline Institute, New York Univ., NYU Sackler Inst., New York Univ. Sch. of Med., NYU Neurosci. Inst.*

3:00 III16 **475.19** ▲ Early life stress, drug abuse, exercise effects on BDNF and sex-influenced exercise differences. K. DOLD*; E. HENSLEIGH; M. PIERCE; S. LYNCH; A. FOWLER; K. ABUALI; A. JAGER; J. EGAN; M. ORLEWICZ; L. M. PRITCHARD. *Univ. of Nevada, Las Vegas.*

4:00 III17 **475.20** ● Oxytocin, a potent anti-stress in prenatally stressed rats, an animal model of depression, acting in the hippocampus. S. MACCARI*, Prof; E. GATTA; H. BOUWALERH; M. SOICHOT; F. NICOLETTI; J. MAIRESSE. *Neuroplasticity Team Umr8576 CNRS Univ. Lille1, Faculté de Médecine de Lille, UDSL, Sapienza Univ.*

1:00 III18 **475.21** Neuro-immune and behavioural consequences of chronic prenatal stress in affected offspring. S. CRAMPTON*; A. V. GOLUBEVA; L. DESBONNET; D. EDGE; K. O'HALLORAN; J. F. CRYAN; G. W. O'KEEFFE. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork.*

2:00 III19 **475.22** The combined impact of prenatal and adolescent stress exposure on adult anxiety-related behaviors. K. M. SCHULZ*; C. DRAKE-FRAZIER; M. B. BURKE; K. FRAZIER; I. RAMOS; K. DAVIS. *Denver Veterans Admin. Med. Ctr., Univ. of Colorado-AMC, Univ. of Denver.*

3:00 III20 **475.23** Infant attachment associated with pain produces later-life depressive-like behavior that is rescued by maternal odor and intra-amygdala serotonin manipulation. M. RINCÓN CORTÉS*; G. A. BARR; R. M. SULLIVAN. *Nathan Kline Inst., NYU Sackler Inst., Child Study Ctr. at the NYU Sch. of Med., Children's Hosp. of Philadelphia, Perelman Sch. of Med., Univ. of Pennsylvania, NYU Neurosci. Inst.*

4:00 III21 **475.24** The role of cholinergic system in emotional hyper-reactivity induced by prenatal stress. A. RODRIGUES; S. BORGES; B. COIMBRA; C. SOARES-CUNHA; J. PÊGO; J. BESSA*; N. SOUSA. *Life and Hlth. Sci. Res. Inst. (ICVS).*

1:00 III22 **475.25** Prenatal stress impairs learning and memory performance in rats in a sex-dependent manner: Role for the medial prefrontal cortex? Y. LAI; P. J. BRUNTON*. *Univ. of Edinburgh.*

POSTER

476. Feeing Hormones and Hindbrain

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 III23 **476.01** Impact of high-fat feeding on basic helix-loop-helix transcription factors controlling enteroendocrine cell differentiation. Y. SAKAR; B. LANGELIER; F. DEVIME; M. COVASA*. *UMR1913-MICALIS, INRA, Western Univ. of Hlth. Sci.*

2:00 III24 **476.02** Role of GLP-1 and CCK in reduced responsiveness to intestinal nutrients in high-fat fed obese-prone rats. F. A. DUCA*; M. COVASA. *INRA- Micalis, Western Univ. of the Hlth. Sci.*

3:00 III25 **476.03** Evidence for a central action of insulin on food intake and energy expenditure in the guinea pig. C. C. NESTOR*; A. I. BORGQUIST; S. KU; A. W. SMITH; E. J. WAGNER; O. K. RONNEKLEIV; M. J. KELLY. *OHSU, Western Univ. of Hlth. Sci., Oregon Natl. Primate Res. Ctr.*

4:00 III26 **476.04** Electrophysiological properties of neurons of the Locus Coeruleus and evidence for their role in energy homeostasis. L. PAEGER*; S. TOVAR; S. HESS; D. A. MORGAN; C. HAUSEN; H. S. BRÖNNEKE; B. HAMPEL; J. ACKERMANN; N. EVERS; H. BÜNING; T. WUNDERLICH; K. RAHMOUNI; J. C. BRÜNING; P. KLOPPENBURG. *Biocentre, Cologne Excellence Cluster on Cell. Stress Responses in Aging-Associated Dis. (CECAD), Univ. of Cologne, Univ. of Cologne, M, Univ. of Iowa, Max Planck Inst. for Neurolog. Res., Cologne Excellence Cluster on Cell. Stress Responses in Aging-Associated Dis. (CECAD), Univ. of Cologne, Univ. of Cologne.*

1:00 III27 **476.05** Lipopolysaccharide induces inflammatory STAT and NF-kB signaling in the area postrema. T. RIEDIGER*; L. LOI; T. BORNER; C. CORDANI; T. A. LUTZ. *Univ. of Zurich, Zurich Ctr. for Integrative Human Physiol. (ZIHP).*

2:00 III28 **476.06** Glucose, insulin and CCK activate nesfatin-1 neurons in the hypothalamic paraventricular nucleus. D. GANTULGA*; Y. MAEJIMA; M. NAKATA; T. YADA. *Sch. of Biomedicine, Hlth. Sci. Univ., Jichi Med. Univ., Natl. Inst. for Physiological Sci.*

3:00 III29 **476.07** Orphan G protein-coupled receptor expression in the hypothalamic arcuate nucleus. P. MAO*; Y. FANG; M. J. KELLY; O. K. RØNNEKLEIV. *Oregon Hlth. & Sci. Univ., Div. of Neurosci. Oregon Natl. Primate Res. Ctr.*

4:00 III30 **476.08** Low glucose decreases action potential firing of catecholamine neurons in the nucleus of the solitary tract indirectly by reducing glutamate inputs. B. L. ROBERTS*; S. APPLEYARD. *Washington State Univ., Washington State Univ.*

1:00 III31 **476.09** CA and non-CA neurons have different mechanism to facilitate synaptic transmission in mice NTS. H. ZHAO*; S. M. APPLEYARD. *Washington State Univ.*

2:00 III32 **476.10** NMDA receptor-mediated synapsin I phosphorylation in NTS vagal afferent terminals: A potential contribution to reduction of food intake by hindbrain MC4 receptor activation. R. C. RITTER*; H. SHIINA; C. A. CAMPOS. *Washington State Univ.*

3:00 III33 **476.11** Hypothalamic CART neuronal projections to the dorsal raphe and/or the locus coeruleus in the rat. H. S. LEE*; Y. S. YOON; J. S. LEE. *Konkuk Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 III34 **476.12** The area postrema but not vagal afferents mediate cancer-induced anorexia and body weight loss in hepatoma tumor bearing rats. T. BORNER*; M. ARNOLD; J. RUUD; A. BLOMQVIST; W. LANGHANS; T. A. LUTZ; T. RIEDIGER. *Inst. of Vet. Physiology, Univ. of Zurich, ETH Zurich, Linköping Univ., Zurich Ctr. for Integrative Human Physiol. (ZIHP).*

1:00 III35 **476.13** Increased vagal sensory neuron and intestinal axon bundle number in mice with smooth muscle-knockout (KO) of brain-derived neurotrophic factor (BDNF) may contribute to augmented intestinal mechanoreceptor innervation and satiation. J. E. BIDDINGER*; E. A. FOX. *Purdue Univ.*

2:00 III36 **476.14** Vertical gastric sleeve surgery does not reduce body fat accumulation or body weight gain in lean Sprague Dawley male rats. K. CZAJA*; P. DI LORENZO; L. BALLSMIDER; C. CALLAHAN. *Washington State Univ., State Univ. of New York, Washington State Univ.*

3:00 III37 **476.15** Association of afferent and efferent connections of the parabrachial nucleus (PBN) with refeeding-activated brain areas. G. ZSÉLI; B. VIDA; R. M. LECHAN*; C. FEKETE. *Dept. of Endocrine Neurobio., Inst. of Exptl. Medicine, Hungarian Acad. of Sci., Tufts Med. Ctr.*

4:00 III38 **476.16** Peripheral administration of oxytocin inhibits food intake through oxytocin receptors in the hindbrain and periphery. J. E. BLEVINS*; J. M. HO; V. T. ANEKONDA; B. W. THOMPSON; G. J. MORTON; D. G. BASKIN. *Dept Veteran Affairs Med. Ctr., Univ. of Washington, Diabetes and Obesity Ctr. of Excellence.*

1:00 III39 **476.17** Plasma adipokines correlate with brain volumes in the elderly: An Alzheimer's disease Neuroimaging Initiative (ADNI) study. P. RAJAGOPALAN*; X. HUA; A. TOGA; C. JACK, Jr.; M. WEINER; P. THOMPSON. *Lab. of Neuroimaging, UCLA, UCLA, Mayo clinic, UCSF.*

POSTER

477. Molecular and Cellular Control of Circadian Clocks

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 III40 **477.01** Novel PER2 alleles for familial advanced sleep phase. S. C. CHONG*; G. BHAGAVATULA; W. C. HALLOWS; P. A. KURIEN; Y. HUANG; E. QUINN; L. PENNACCHIO; C. R. JONES; L. J. PTÁČEK; Y. FU. *Univ. of California, San Francisco, George Washington Univ., Icahn Sch. of Med. at Mount Sinai, DOE Joint Genome Inst., Lawrence Berkeley Natl. Lab., Univ. of Utah, Howard Hughes Med. Inst.*

2:00 III41 **477.02** The investigation of the circadian rhythm to mRNA clock gene from salivary glands cells. T. HAGA*; K. OSADA; T. WATANABE; A. TAGUCHI; A. MUTO; Y. OGAWA; T. YANAGIDA; M. NAKANO; Y. SASUGA; N. YAMAGUCHI. *2-16-1 Sugao.*

3:00 III42 **477.03** Analysis of clock gene and protein expression in the rat olfactory bulb using, immunohistochemistry, qPCR and western blotting. N. DE ZAVALIA*; V. L. HARBOUR; Y. WEIGL; B. ROBINSON; R. CAO; S. AMIR. *Concordia Univ.*

4:00 III43 **477.04** Emergence of circadian rhythms during adult neurogenesis *in vitro.* A. MALIK*; R. J. JAMASBI; M. E. GEUSZ. *BOWLING GREEN STATE UNIVERSITY, Bowling Green State Univ.*

1:00 III44 **477.05** Glucocorticoid regulates Period2 expression with a novel mechanism accompanying a core clock gene, BMAL1. S. CHEON*. *Seoul Natl. Univ.*

2:00 III45 **477.06** The presence of endogenous glucocorticoids is necessary for both normal clock gene expression and acute stress-induced clock gene expression in extra-SCN regions of the rat brain. L. E. CHUN*; J. A. CHRISTENSEN; L. WOODRUFF; L. R. HINDS; R. L. SPENCER. *Univ. of Colorado Boulder.*

3:00 III46 **477.07** Stress-induced PER1 expression in the rat limbic forebrain and hypothalamus. S. AL-SAFADI*; A. AL-SAFADI; M. BRANCHAUD; S. RUTHERFORD; B. ROBINSON; S. AMIR. *Concordia Univ.*

4:00 JJJ1 **477.08** Glucocorticoid-dependent dynamic modulation of sgk1 gene expression within oligodendrocyte-dense white matter of rat brain in response to acute stress and time of day. L. R. HINDS*; J. A. CHRISTENSEN; L. E. CHUN; L. R. WOODRUFF; R. L. SPENCER. *Univ. of Colorado Boulder.*

1:00 JJJ2 **477.09** Chronic glycogen synthase kinase 3-beta (GSK3β) activation or inhibition in the hippocampus and suprachiasmatic nucleus regulates the molecular circadian clock amplitude and period. R. C. BESING*; J. R. PAUL; L. M. HABLITZ; R. L. JOHNSON; R. A. MANS; L. L. MCMAHON; K. L. GAMBLE. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

2:00 JJJ3 **477.10** Glycogen synthase kinase 3 (GSK3) activity regulates persistent sodium currents to promote excitability of suprachiasmatic nucleus neurons. J. R. PAUL*; K. L. GAMBLE. *Univ. of Alabama At Birmingham.*

3:00 JJJ4 **477.11** Monitoring Per1 oscillations in primary cultures of suprachiasmatic nucleus neurons expressing Venus. R. P. IRWIN*; O. CRAVETCHI; H. M. CHENG; K. OBRIETAN; C. N. ALLEN. *Oregon Hlth. & Sci. Univ., Univ. of Toronto Mississauga, The Ohio State Univ.*

4:00 JJJ5 **477.12** Per1 is essential for the single-cell coupling of molecular and electrophysiological circadian rhythms. J. JONES*; D. G. MCMAHON. *Vanderbilt Univ.*

1:00 JJJ6 **477.13** Hypothalamic pathophysiology in the BACHD mouse model of Huntington's disease: Suprachiasmatic clues to circadian dysfunction. D. A. KULJIS*; T. KUDO; C. S. COLWELL. *Dept. of Neurobiology, UCLA, UCLA.*

2:00 JJJ7 **477.14** The investigation for the rhythm of GABA in the mouse SCN. A. MUTO*; K. OSADA; T. WATANABE; A. WATANABE; T. HAGA; Y. OGAWA; T. YANAGIDA; M. NAKANO; Y. SASUGA; N. YAMAGUCHI. *Japan.*

3:00 JJJ8 **477.15** Depletion of the vesicular GABA transporter from neurons of the suprachiasmatic nucleus induces behavioral arrhythmicity. N. KLETT*; H. S. GOMPF; P. M. FULLER; C. N. ALLEN. *Oregon Hlth. & Sci. Univ., Harvard Med. Sch., Oregon Hlth. & Sci. Univ.*

4:00 JJJ9 **477.16** The diurnal firing properties of vasoactive intestinal polypeptide neurons in the suprachiasmatic nucleus. T. HERMANSTYNE*; E. D. HERZOG; J. M. NERBONNE. *Washington University, St. Louis Sch. of Med., Washington University, St. Louis Sch. of Med.*

1:00 JJJ10 **477.17** SCN function and circadian entrainment are modulated by GIRK channels. L. M. HABLITZ*; J. R. PAUL; H. E. MOLZOF; R. L. JOHNSON, Jr.; R. C. BESING; K. L. GAMBLE. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

2:00 JJJ11 **477.18** Circadian-driven differences in action potential waveform and alternative splicing influence BK current properties. C. SHELLEY*; J. P. WHITT; J. R. MONTGOMERY; A. L. MEREDITH. *Univ. of Maryland Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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3:00 JJJ12 **477.19** Glucose effects on the rat suprachiasmatic nucleus neurons. R. CHENG*; R. HUANG. *Chang Gung Univ.*

4:00 JJJ13 **477.20** Glycolytic activation of Na/K pumps contributes to extracellular acidification in the rat suprachiasmatic nucleus. H. LIN*; R. HUANG. *Chang Gung Univ.*

1:00 JJJ14 **477.21** The influence of ovarian steroids on core clock gene expression in the amygdala and adrenal gland of female rhesus macaques. D. H. EGHLIDI*; H. F. URBANSKI. *Div. of Neurosci. Oregon Natl. Primate Res. Ctr., Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

POSTER

478. Sleep: Molecular, Cellular, and Pharmacological

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 JJJ15 **478.01** Comparative genetic analysis of *C. elegans* and D. melanogaster sleep. K. SINGH; M. WALSH; A. C. HART*. *Brown Univ., Brown Univ., Brown Univ.*

2:00 JJJ16 **478.02** The effects of ethanol vapor on alcohol dehydrogenase, ethanol sensitivity, and activity patterns in period mutants of *Drosophila* melanogaster. J. A. SEGGIO*; S. AHMAD. *Bridgewater State Univ., Colby Col.*

3:00 JJJ17 **478.03** High-speed visualization of calcium mediated sub-threshold oscillations in the pedunculopontine nucleus using a novel ratiometric imaging technique. J. R. HYDE*; F. J. URBANO; E. GARCIA-RILL. *Univ. of Arkansas For Med. Sci., Univ. of Buenos Aires.*

4:00 JJJ18 **478.04** Muscarinic modulation of gamma band activity in the pedunculopontine nucleus (PPN). N. KEZUNOVIC*; J. HYDE; B. GOITIA; V. BISAGNO; F. URBANO; E. GARCIA-RILL. *Univ. of Arkansas For Med. Sci., Univ. of Buenos Aires.*

1:00 JJJ19 **478.05** Visualizing P/Q- and N-type calcium channels in the pedunculopontine nucleus. B. R. LUSTER*; J. R. HYDE; E. GARCIA-RILL; F. J. URBANO. *Univ. of Arkansas For Med. Sci., Univ. of Arkansas For Med. Sci., Univ. of Buenos Aires.*

2:00 JJJ20 **478.06** Effect of Modafinil on P/Q-type calcium channel-dependent oscillations in the PPN. S. M. DONOFRIO*; N. KEZUNOVIC; F. J. URBANO; E. GARCIA-RILL. *Univ. of Arkansas For Med. Sci., Univ. of Buenos Aires.*

3:00 JJJ21 **478.07** Mechanism of leptin action on arousal. P. B. BECK*; F. J. URBANO; E. GARCIA-RILL. *Univ. Arkansas, Med. Sci., Univ. of Buenos Aires.*

4:00 JJJ22 **478.08** Further studies on layer 6b orexin/hypocretin-sensitive cortical neurons. A. WENGER*; A. DUPRE; M. MUHLETHALER; M. SERAFIN. *Univ. of Geneva.*

1:00 JJJ23 **478.09** The orexin-enhanced afterhyperpolarization (oeAHP) in serotonergic dorsal raphe (DR) neurons is produced by activation of either OX1 or OX2 receptors, does not require PKC signaling and slows the firing rate produced by the orexin-mediated depolarization (omD). M. ISHIBASHI*; I. GUMENCHUK; T. INOUE; C. S. LEONARD. *New York Med. Coll, Waseda Univ.*

2:00 JJJ24 **478.10** Orexin peptides complement glutamate to signal from orexin to histamine neurons. C. SCHOENE*; A. GONZALEZ; S. CAINS; C. BLOMELEY; D. BURDAKOV. *MRC Natl. Inst. for Med. Res.*

3:00 JJJ25 **478.11** Microinjections of the hypocretin antagonist almorexant vs. GABAergic agonist zolpidem in basal forebrain show differential effects on cortical adenosine levels in freely-moving rats. J. VAZQUEZ-DEROSE*; A. NGUYEN; S. GULATI; T. MATHEW; T. C. NEYLAN; T. S. KILDUFF. *SRI Intl., UCSF San Francisco.*

4:00 JJJ26 **478.12** Forbrain CRH overexpression facilitates activation of mesopontine cholinergic neurons in response to sleep deprivation. M. KIMURA*; M. L. CURZI; C. FLACHSKAMM; F. HOLSBOER; J. M. DEUSSING. *Max Planck Inst. of Psychiatry.*

1:00 JJJ27 **478.13** Ketone bodies regulate sleep homeostasis. S. CHIKAHISA*; N. SHIMIZU; T. SHIUCHI; H. SÉI. *Inst. of Hlth. Biosciences, The Univ. of Tokushima Grad. Sch.*

2:00 JJJ28 **478.14** A-type K+ currents (IA) regulate circadian locomotor behavior and PER2 expression. D. GRANADOS-FUENTES*; T. HERMANSTYNE; Y. CARRASQUILLO; J. M. NERBONNE; E. D. HERZOG. *Washington Univ., Washington Univ., Washington Univ., Washington Univ.*

3:00 JJJ29 **478.15** ΔFosB immunoreactivity increases in specific thalamic and hypothalamic nuclei following chronic sleep restriction in rats. K. SEMBA*; S. HALL; J. BURNS; S. DEURVEILHER. *Dalhousie Univ.*

4:00 JJJ30-DP9 **478.16** ▲ Identification of sleep-promoting neurons in the ventrolateral preoptic nucleus as glucose-sensing neurones. T. GALLOPIN*; C. VARIN; H. GEOFFROY; P. FORT; A. RANCILLAC. *CNRS 7637-ESPCI Paristech, INSERM, U1028, CNRS, UMR5292, Neurosci. Res. Ctr.*

1:00 JJJ31 **478.17** Distribution of alpha 1, 3 and 5 GABAa receptor subunits in the sublaterodorsal nucleus (SLD) of the rat. C. LIANG; T. NGUYEN; G. A. MARKS*. *VA North Texas Hlth. Care Syst., Univ. of Texas Southwestern Med. Ctr., VA North Texas Hlth. Care Syst.*

2:00 JJJ32 **478.18** Number of histamine neurons is increased in human narcolepsy with cataplexy. J. JOHN*; T. C. THANNICKAL; R. MCGREGOR; L. RAMANATHAN; H. OHTSU; S. NISHINO; N. SAKAI; A. YAMANAKA; C. STONE; J. M. SIEGEL. *VA Greater Los Angeles HealthCare Syst., Univ. of California, Tohoku Univ., Stanford Univ. Sch. of Med., Nagoya Univ.*

3:00 JJJ33 **478.19** The neurokinin-1 receptor regulates electroencephalogram non-rapid eye movement sleep slow-wave activity locally. M. R. ZIELINSKI*; S. A. KARPOVA; X. YANG; D. GERASHCHENKO. *Harvard Univ. and Veterans Affairs Boston Healthcare Syst., Peking Univ.*

4:00 JJJ34 **478.20** Activation of Peroxisome Proliferator-Activated Receptor (PPAR alpha) increases wakefulness and decreases sleep in rats. E. MURILLO-RODRIGUEZ*; K. GUZMÁN; E. PACHECO-PANTOJA; M. R. OPP; O. ARIAS-CARRIÓN; G. ARANKOWSKY-SANDOVAL. *Lab. Neuroci Mol Integr. Escuela de Medicina, Dept. de Neuropatología Molecular. Inst. de Fisiología Celular.Universidad Nacional Autónoma de México, Escuela de Medicina, División Ciencias de la Salud. Univ. Anáhuac Mayab, Dept. of Anesthesiology, Univ. of Michigan, Unidad de Trastornos del Movimiento y Estimulación Magnética Transcraneal.Hospital Gen. "Dr. Manuel Gea González", Ctr. de Investigaciones Regionales "Dr. Hideyo Noguchi". Univ. Autónoma de Yucatán.*

1:00 JJJ35 **478.21** ● CD73 is required for the wakefulness dependent elevation of astrocyte-derived adenosine. T. BLUTSTEIN*; L. I. SCHMITT; P. G. HAYDON. *Tufts Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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2:00 JJJ36 **478.22** Effect of cholinergic stimulation in prefrontal cortex on electroencephalographic activation and sleep-wake states. D. PAL*; W. J. LIPINSKI; S. WISIDAGAMAGE; D. J. KLARR; G. A. MASHOUR. *Univ. of Michigan.*

3:00 JJJ37 **478.23** Astrocyte-derived adenosine: a hub in the neurovascular coupling response to glucose in the VLPO. A. RANCILLAC*; E. SCHARBARG; M. DAENENS; C. AMATORE; F. LEMAITRE; M. GUILLE COLLIGNON; T. GALLOPIN. *CNRS UMR 7637, ESPCI ParisTech, CNRS UMR 8640, UPMC, ENS.*

4:00 JJJ38 **478.24** Reconciliation of the reciprocal interaction and flip-flop models of rapid eye movement sleep generation. K. P. GRACE*; L. E. VANSTONE; R. L. HORNER. *Univ. of Toronto.*

1:00 JJJ39 **478.25** Changes in brain-derived neurotrophic factor (BDNF) protein levels in frontal cortex and basal forebrain during chronic sleep restriction in rats. S. DEURVEILHER*; J. WALLINGFORD; R. CURRIE; J. FAWCETT; K. SEMBA. *Dalhousie Univ.*

2:00 JJJ40 **478.26** Sleep deprivation impairs hippocampal translation that is mediated specifically via the mTORC1 signaling pathway. J. H. CHOI*; E. J. DAVIS; L. PEIXOTO; M. WIMMER; P. J. HERNANDEZ; R. HAVEKES; P. PIERRE; T. ABEL. *Univ. of Pennsylvania, Ctr. d'Immunologie de Marseille-Luminy (INSERM).*

3:00 JJJ41 **478.27** Effects of sleep deprivation and fragmentation on cellular stress over aging. A. STERN*; N. NAIDOO. *The Univ. of Pennsylvania.*

4:00 JJJ42 **478.28** Sleep deprivation effects over neurogenesis after different recovery times in adult BalB/C male mice. S. SOTO-RODRIGUEZ*; G. LOPEZ-ARMAS; O. GONZALEZ-PEREZ; S. LUQUIN DE ANDA; R. RAMOS-ZUÑIGA; J. GARCIA-ESTRADA; R. E. GONZALEZ-CASTAÑEDA. *Kukulkan 4874, Univ. de Guadalajara, Univ. de Colima, Ctr. de Investigacion Biomedica de Occidende.*

1:00 JJJ43 **478.29** Sleep deprivation modify mitochondrial membrane fluidity in hippocampal tissue of balbC female/male mice. G. D. LÓPEZ*; S. SOTO-RODRIGUEZ; C. JAGOW; G. ORTIZ; F. PACHECO-MOISES; O. GONZALEZ-PEREZ; S. LUQUIN DE ANDA; R. RAMOS-ZÚÑIGA; R. GONZALEZ-CASTAÑEDA. *Univ. of Guadalajara, Ctr. de Enseñanza Técnico Industrial, Inst. Tecnológico y de estudios superiores, Campus Guadalajara. México, Lab. Desarrollo-Envejecimiento, División Neurociencias, Ctr. de Investigación Biomédica de Occidente (CIBO-IMSS), Guadalajara. México, Ctr. Universitario de Ciencias Exactas e Ingeniería, UdG. México, Univ. of Colima, 2 Inst. Tecnológico y de estudios superiores, Campus Guadalajara. México.*

2:00 JJJ44 **478.30** Genome-wide association study identifies novel susceptible locus rs9390170 on 6q24 for restless legs syndrome in a Korean population. H. LEE*; C. CHO; S. KANG; H. YOON; Y. PARK; J. MOON; H. YANG; H. SONG; K. JUNG; J. HAN; H. SHIN; L. KIM. *Korea Univ. Anam Hosp., Sch. of Medicine, Gachon Univ., Korea Univ. Ansan Hosp., Inje University, Ilsan Paik Hosp., Korea Univ. Anam Hosp., Seoul Sleep Ctr., Komoki Sleep Ctr.*

POSTER

479. Emotion and Development

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 JJJ45 **479.01** The neural basis of emotion regulation in young children. P. SPECHLER*; S. BLANKENSHIP; S. PADMALA; L. PESSOA; L. DOUGHERTY. *Univ. of Maryland.*

2:00 JJJ46 **479.02** An fMRI study of behavioral response inhibition in adolescents with and without histories of heavy prenatal alcohol exposure. A. L. WARE*; M. A. INFANTE; J. W. O'BRIEN; S. F. TAPERT; E. P. RILEY; S. N. MATTSON. *San Diego State Univ., UCSD, VA San Diego Healthcare Syst.*

3:00 JJJ47 **479.03** EEG correlations in adolescents and adults: A step towards understanding the ontogeny of working memory. J. C. HEVIA*; M. HERNÁNDEZ-GONZÁLEZ; L. RIZO-MARTÍNEZ; M. A. GUEVARA. *Univ. De Guadalajara.*

4:00 JJJ48 **479.04** ● Adaptive working memory training in at-risk kindergarten-aged children is linked with reduced inattention. J. G. FOY*; V. A. MANN; M. R. FOY. *Loyola Marymount Univ., UC Irvine.*

1:00 JJJ49 **479.05** Childhood trauma associated with dysfunctional emotion regulation and amygdala structure and function. A. M. MORALES*; A. C. DEAN; M. KOHNO; D. GHAHREMANI; E. D. LONDON. *UCLA.*

2:00 JJJ50 **479.06** Neural correlates underlying dynamic changes in food craving and the cognitive reappraisal of appetitive cues in children and adolescents. C. INSEL*; J. A. SILVERS; A. POWERS; C. HELION; T. TESLOVICH; J. WEBER; B. J. CASEY; W. MISCHEL; K. N. OCHSNER. *Columbia Univ., Weill Cornell Med. Ctr.*

3:00 JJJ51 **479.07** An 8-month exercise intervention improves uncinate fasciculus white matter anisotropy in overweight children. D. J. SCHAEFFER*; C. E. KRAFFT; N. F. SCHWARZ; L. CHI; A. L. RODRIGUE; J. E. PIERCE; J. D. ALLISON; N. E. YANASAK; T. LIU; C. L. DAVIS; J. E. MCDOWELL. *Univ. of Georgia, Med. Col. of Georgia.*

4:00 JJJ52 **479.08** Improving children´s executive functions: Effects of a 20-week movement-based interventional program on the executive functions of 12-year-old students. K. BORISS*; M. PFITZNER; N. NEUBER. *Inst. Für Sportwissenschaft.*

1:00 JJJ53 **479.09** ● Improving cognitive capacities in school-aged children: A large-scale, multi-site implementation of a web-based cognitive training program in academic settings. N. NG*; D. A. STERNBERG; B. KATZ; J. L. HARDY; M. D. SCANLON. *Lumos Labs, Inc, Univ. of Michigan.*

2:00 JJJ54 **479.10** ▲ Deviant behavior correlates with cortical thickness in adolescents. A. S. PANE*; Y. YANG. *CHLA, Div. of Res. on Children, Youth, & Families, USC.*

3:00 JJJ55 **479.11** Attention, memory and executive functions in children with obstructive sleep apnea. S. HUICOCHEA-ARREDONDO; V. PATIÑO-TORREALVA; B. TELLEZ-ALANIS*. *Fac Psy, UAEM, Fac Psy, UAEM.*

4:00 JJJ56 **479.12** Functional changes in the emotion network during adolescence. M. VINK*; J. M. DERKS; M. H. J. HILLEGERS; R. S. KAHN. *UMC.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 JJJ57 **479.13** The study of the effect of Buddhist integrated education on executive function in pre-adolescents: The behavioral study. K. SAMPOON*; N. PHIANCHANA; S. CHAITHIRAYANON; N. KOTCHABHAKDI; N. CHUTABHAKDIKUL; V. SIRIPORNPANICH. *Inst. of Mol. Biosciences, Mahidol Univ., Fac. of Medicine, Srinakharinwirot Univ.*

2:00 JJJ58 **479.14** Connectivity-based segregation of striatum predicts developmental differences in temporal discounting. S. M. MCCLURE*; W. VAN DEN BOS; C. A. RODRIGUEZ. *Stanford Univ.*

POSTER

480. Working Memory and Executive Function II

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 JJJ59 **480.01** Transcranial magnetic stimulation to left and right parietal regions reveals their distinct contributions to cognitive control over working memory biases of attention. A. KIYONAGA*; F. KORB; D. SOTO; T. EGNER. *Duke Univ., Imperial Col. London.*

2:00 JJJ60 **480.02** Investigating the electrophysiological basis of visual working memory using magnetoencephalography and voxel-based morphometry. S. TYLL*; A. MAASS; E. DÜZEL. *Univ. of Magdeburg.*

3:00 JJJ61 **480.03** Improving working memory capacity by training attentional filtering - An fMRI study. M. SCHMICKER*; M. SCHWEFEL; N. G. MÜLLER. *Deutsches Zentrum Für Neurodegenerative Erkrankungen, Otto-von-Guericke Univ.*

4:00 JJJ62 **480.04** Domain general and domain specific neural networks in working memory. D. LI*; S. E. CHRIST; N. COWAN. *Univ. of Missouri.*

1:00 JJJ63 **480.05** Noise in neural populations accounts for errors in visual working memory. P. M. BAYS*. *Univ. Col. London.*

2:00 JJJ64 **480.06** Neurocognitive effects of increased working memory load on prospective memory. R. STEIMKE*; C. STELZEL; L. M. PASCHKE; V. U. LUDWIG; R. GASCHLER; T. GOSCHKE; N. KATHMANN; H. WALTER. *Charité Universitätsmedizin, Dept. of Psychology, Technische Univ. Dresden, Dept. of Psychology, Humboldt Universtiät zu Berlin, Berlin Ctr. for Advanced Neuroimaging, Charité Universitätsmedizin, Berlin Sch. of Mind and Brain, Humboldt Univ. zu Berlin, Dept. of Psychology, Univ. Koblenz-Landau.*

3:00 JJJ65 **480.07** Working memory: Looking at gating and maintenance with the keep-track task. J. MOLLICK*; A. BRANT; N. FRIEDMAN; R. C. O'REILLY. *Univ. of Colorado Boulder, Pennsylvania State Univ., Univ. of Colorado Boulder, Univ. of Colorado Boulder.*

4:00 JJJ66 **480.08** Striatal contributions to the encoding of novel information into working memory. L. S. GEIGER*; M. ZANGL; A. SCHAEFER; T. VAN RAALTEN; A. MEYER-LINDENBERG; H. TOST. *Central Inst. of Mental Health, Heidelberg Univ., Rudolf Magnus Inst. of Neurosci.*

1:00 JJJ67 **480.09** Retrospective attention facilitates both short and long-term memory: Support for a single memory system. S. A. REAVES*; J. STRUNK; P. VERHAEGHEN; A. DUARTE. *Georgia Inst. of Technol.*

2:00 JJJ68 **480.10** Synchrony in occipital cortex predicts the precision of visual working memory representations. D. E. ANDERSON*; E. K. VOGEL; E. AWH. *Univ. of Oregon.*

3:00 JJJ69 **480.11** Reconstructing the population dynamics of early visual cortex during working memory. M. RAHMATI; G. T. SABER; C. E. CURTIS*. *NYU.*

4:00 JJJ70 **480.12** Neural modulation of executive function while performing emotional biased working memory task: An fMRI study. M. OSAKA*; K. YAOI; T. MINAMOTO; N. OSAKA. *Osaka Univ., Kyoto Univ.*

1:00 KKK1 **480.13** A novel spatial working memory and attention test on paired symbols shows developmental deficits in schizophrenia patients. W. LI*; W. SONG. *Shanghai Jiao Tong Univ.*

2:00 KKK2 **480.14** Electrocorticographic measurements of alpha oscillations predict strength of memory encoding. T. J. COFFEY*; J. JACOBS. *Drexel Univ., Drexel Univ.*

3:00 KKK3 **480.15** Effective coupling: Working memory training related changes in resting-state functional connectivity and task-related activity. K. NASHIRO*; C. HAMILTON; C. BASAK. *Ctr. For Vital Longvevity, Univ. of Texas At Dallas, Rice Univ., Ctr. for Vital Longvevity, Univ. of Texas at Dallas.*

4:00 KKK4 **480.16** Neural substrate of making it through the goal. C. HOSODA*; K. TANAKA; M. TATEKAWA; M. HONDA; R. OSU; T. HANAKAWA. *ATR, Univ. of Tokyo, SIT, NCNP.*

1:00 KKK5 **480.17** ▲ Characterizing the temporal dynamics of hierarchical cognitive control. C. RANTI*; C. H. CHATHAM; D. BADRE. *Brown Univ.*

2:00 KKK6 **480.18** Large-scale meta-analysis of functional specializations in prefrontal cortex. C. L. ASPLUND*; B. YEO; F. M. KRIENEN; S. N. YAAKUB; M. W. L. CHEE. *Yale-NUS Col., Duke-NUS Grad. Med. Sch., Harvard Univ.*

3:00 KKK7 **480.19** A comparison of saccade and reach planning signals in human frontal and parietal cortex. B. LAWRENCE*; C. CURTIS. *New York Univ.*

4:00 KKK8 **480.20** Visual working memory in preclinical mild cognitive impairment. R. N. NEWSOME*; J. RUPPEL; V. M. SMITH; S. FERBER; M. D. BARENSE. *Univ. of Toronto, Rotman Res. Inst.*

POSTER

481. Decision Making: Value

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 KKK9 **481.01** Effector-specific and effector-independent neural computations underlying value-based decision making. J. T. COLAS*; A. M. HARRIS; A. RANGEL. *Caltech, Claremont McKenna Col., Caltech.*

2:00 KKK10 **481.02** Propagation of choice signals from lateral parietal to anterior medial prefrontal cortex during value-based decision-making in humans: Evidence from fMRI informed model-based EEG. T. LARSEN*; J. P. O'DOHERTY. *Caltech.*

3:00 KKK11 **481.03** Decision costs may explain anterior cingulate engagement in a "foraging" context. A. SHENHAV*; M. A. STRACCIA; M. M. BOTVINICK; J. D. COHEN. *Princeton Univ.*

4:00 KKK12 **481.04** Evidence for relative coding of reward probability and range adaptation in the medial prefrontal cortex. ; S. WU. *Natl. Yang-Ming Univ., Natl. Yang-Ming Univ.*

1:00 KKK13 **481.05** Neural measurements of subjective value as a tool for 'contingent valuation'. M. KHAW*; D. A. GRAB; M. A. LIVERMORE; C. A. VOSSLER; P. W. GLIMCHER. *New York Univ., New York Univ., Univ. of Tennessee - Knoxville.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 KKK14 **481.06** The influence of episodic imagination on intertemporal decision making in pathological gambling. A. WIEHLER*; S. F. MIEDL; J. PETERS. *Dept. of Systems Neurosci.*

3:00 KKK15 **481.07** Controlling the impulse for reward: A fMRI study of inhibitory control over monetary reward. R. HESTER*; E. CHEN; K. CHARLES-WALSH. *Univ. of Melbourne.*

4:00 KKK16 **481.08** Divisive normalization implements an efficient neural coding of value. R. WEBB*; P. W. GLIMCHER; K. LOUIE. *New York Univ.*

1:00 KKK17 **481.09** The effects of hunger and satiety on neural activity within subjects during the willingness-to-pay task. M. S. MACKEY*; J. PARNASS; R. AUPPERLE; M. P. PAULUS. *UCSD, Univ. of Missouri.*

2:00 KKK18 **481.10** Interactions between threat and anticipation of monetary gains and losses. J. CHOI*; S. PADMALA; P. SPECHLER; L. PESSOA. *Univ. of Maryland -- Col. Park.*

3:00 KKK19 **481.11** How response control is exerted over a motivating stimulus during Pavlovian-to-Instrumental transfer. S. FREEMAN*; I. RAZHAS; A. R. ARON. *UCSD.*

4:00 KKK20 **481.12** Value and context driven activity in fronto-parietal regions guide intertemporal decision-making. C. A. RODRIGUEZ*; S. M. MCCLURE. *Stanford Univ.*

1:00 KKK21 **481.13** Neural and behavioral mechanisms of action selection in value-based decisions: A computational approach. V. N. CHRISTOPOULOS*; J. BONAIUTO; R. ANDERSEN. *Caltech.*

2:00 KKK22 **481.14** Range-adapting subjective value signals in the human ventral striatum. K. M. COX*; J. W. KABLE. *Univ. of Pennsylvania.*

3:00 KKK23 **481.15** Salience processing and evidence accumulation after errors: An fMRI and EEG experiment. A. NAVARRO-CEBRIAN*; T. A. VEGA; A. S. KAYSER. *UCSF, Univ. of California.*

4:00 KKK24 **481.16** Primary motor cortex encodes relative action value signals that integrate stimulus value and effort cost at the time of choice. S. LIM*; J. T. COLAS; J. O. DOHERTY; A. RANGEL. *Univ. of Missouri - Kansas City, Caltech.*

1:00 KKK25 **481.17** Distinct regions of anterior cingulate cortex signal prediction and outcome evaluation. A. JAHN*; D. NEE; W. ALEXANDER; J. BROWN. *Indiana Univ., Univ. of California, Berkeley, Ghent Univ.*

2:00 KKK26 **481.18** The intrinsic organization of the human orbito-medial prefrontal cortex and the functional role of its subdivisions. Z. SAMARA*; E. EVERS; A. GOULAS; H. UYLINGS; J. RAMAEKERS; P. STIERS. *Maastricht Univ., VU Univ. Med. Ctr.*

3:00 KKK27 **481.19** White matter correlates of decision-making biases in older adults. J. J. CHEN*; Y. SU; A. TERESHCHENKO; S. M. RESNICK; W. I. TSENG; J. O. GOH. *Natl. Taiwan University, Col. of Med., Natl. Inst. on Aging.*

4:00 KKK28 **481.20** If decisions get tough, then better be smart: Age and individual differences in delay discounting under conflict. B. EPPINGER*; H. R. HEEKEREN; S. LI. *TU Dresden, Max-Planck Inst. for Human Develop., Freie Univ. Berlin.*

1:00 KKK29 **481.21** Altered brain response to a delayed discounting task in adults recovered from anorexia nervosa during satiety and hunger. C. WIERENGA*; A. BISCHOFF-GRETHE; A. MELROSE; L. TORRES; L. IRVINE; U. BAILER; W. KAYE. *Univ. of California San Diego.*

2:00 KKK30 **481.22** Cognitive and electrophysiological changes following an episode of severe sepsis. E. L. ZELINSKI*; J. M. SUTHERLAND; S. A. K. OBERG; D. KNIGHT; M. S. TATA; C. DOIG; R. J. SUTHERLAND. *Canadian Ctr. For Behavioural Neurosci., Univ. of Calgary.*

3:00 KKK31 **481.23** Intracranial EEG correlates of behavioral flexibility in Human decision-making. P. DOMENECH*; V. WYART; J. ISNARD; F. MAUGUIERE; E. KOECHLIN. *Ecole Normale Superieure, P. Wertheimer teaching hospital.*

4:00 KKK32 **481.24** A neural circuit model of Bayesian inference via MCMC exploiting neuronal noise. A. TICCHI*; A. A. FAISAL. *Imperial Col., Univ. of Bologna, Imperial Col.*

POSTER

482. Social Cognition: Disorders

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 KKK33 **482.01** Toward a deeper characterization of the social phenotype of Williams syndrome: The association between personality and social drive. R. NG*; A. JARVINEN, 2nd; P. FILLET, 3rd; U. BELLUGI, 4th. *Univ. of Minnesota, Twin Cities, Salk Inst.*

2:00 KKK34 **482.02** Williams Syndrome: Toward a deeper characterization of the social phenotype: The strong association between personality and social drive. P. FILLET*; R. NG; A. ARNOLD; Y. SEARCY; P. LAI; A. JARVINEN; M. DEWITT; J. REILLY; J. KORENBERG; U. BELLUGI. *Salk Inst., Univ. California San Diego, San Diego State Univ., Univ. of Utah.*

3:00 KKK35 **482.03** Aberrant basal ganglia morphology in Williams syndrome across development: Implications for dysregulated motor and social behavior. A. ARNOLD*; T. BROWN; M. ERHART; U. BELLUGI; E. HALGREN. *Salk Inst. For Biol. Studies, UCSD, Salk Inst. for Biol. Studies.*

4:00 KKK36 **482.04** Imaging metal distribution in Williams syndrome spatially and across time: From cultured cells to postmortem brain tissue. E. L. OHAYON*; T. CHAILANGKARN; A. R. MUOTRI; P. V. CHU; A. R. MUNOZ; U. BELLUGI; T. J. SEJNOWSKI; A. LAM. *The Salk Inst., Neurolinx Res. Inst., UCSD, Salk Inst. for Biol. Studies.*

1:00 KKK37 **482.05** Williams syndrome: Autonomic nervous system correlates of increased social behavior. D. CRIVELLI*; A. JARVINEN; A. ARNOLD; P. LAI; R. NG; U. BELLUGI. *Catholic Univ. of the Sacred Heart, Salk Inst. For Biol. Studies, San Diego State Univ., Univ. of California San Diego, Salk Inst.*

2:00 KKK38 **482.06** ▲ Williams syndrome: Perception of affective musical pieces and production of novel music on demand. B. TANG*; P. LAI; U. BELLUGI. *The Salk Inst. For Biol. Studies, UCSD, San Diego State Univ., The Salk Inst. for Biol. Studies.*

3:00 KKK39 **482.07** Characterizing the social and affective phenotype of children with neurodevelopmental disorders. P. T. LAI*; C. YU; D. TRAUNER; J. REILLY; U. BELLUGI. *Salk Inst. For Biol. Studies, Univ. of California San Diego, San Diego State Univ., Univ. of California San Diego, San Diego State Univ.*

4:00 KKK40 **482.08** Williams syndrome: Cognitive and social behaviors from the mystery box. W. WONG*; P. T. LAI; L. P. SALAMANCA; A. J. ARNOLD; A. MUOTRI; E. HALGREN; K. SEMEFERDI; U. BELLUGI; J. REILLY; J. R. KORENBERG. *The Salk Inst. for Biol. Studies, UCSD, San Diego State Univ., Univ. of California San Diego, UCSD Sch. of Med., UC San Diego, Univ. of Utah.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 KKK41 **482.09** Williams Syndrome: Unraveling the enigma of the social phenotype: Insights from autism. A. M. JARVINEN-PASLEY*; U. BELLUGI; Y. SEARCY; J. REILLY; D. MILLS; D. CRIVELLI; A. MUOTRI; E. HALGREN; K. SEMENDEFERI; J. R. KORENBERG. *Salk Inst., Salk Inst., San Diego State Univ., Bangor Univ., Univ. Cattolica del Sacro Cuore, UCSD, UCSD, UC San Diego, Univ. of Utah.*

2:00 KKK42 **482.10** Williams syndrome: Epigenetics, genome-wide methylation and phenotype. L. DAI*; R. WEISS; J. KORENBERG. *Univ. Utah, Univ. of Utah.*

3:00 KKK43 **482.11** Structural neuroimaging of social cognition in PPA and bvFTD. B. M. COUTO*; S. J. BAEZ; F. MANES; P. MONTANES; P. REYES; D. MATALLANA; A. IBANEZ. *INECO, INECO, Hosp. San Ignacio.*

4:00 KKK44 **482.12** Does a diagnosis of autism explain variability in Theory of Mind brain regions? N. DUFOUR*; E. REDCAY; L. YOUNG; P. L. MAVROS; J. MORAN; C. TRIANTAFYLLOU; J. GABRIELI; R. SAXE. *MIT, Univ. of Maryland, Boston Col., Harvard Univ.*

1:00 KKK45 **482.13** Impaired Theory of Mind in Autism may arise from impaired learning of others' intentions. G. AYAZI*; C. A. HUTCHERSON; J. P. O'DOHERTY; R. ADOLPHS; D. A. STANLEY. *Caltech.*

2:00 KKK46 **482.14** Different mechanisms for coordinating with other's rhythms in autistic and control adults. M. KAWASAKI*; K. KITAJO; K. FUKAO; T. MURAI; Y. YAMAGUCHI; Y. FUNABIKI. *Univ. of Tsukuba, RIKEN BSI-TOYOTA Collaboration Ctr., RIKEN Brain Sci. Inst., Kyoto Univ., Tezukayamagakuin Univ.*

3:00 KKK47 **482.15** Neurofunctional and behavioral changes following mu neurofeedback training in children on the autism spectrum. M. DATKO*; J. A. PINEDA; R. MUELLER. *UC San Diego, UC San Diego, San Diego State Univ.*

4:00 KKK48 **482.16** Different patterns of atypical grey and white matter lateralization in males and females with autism. D. L. FLORIS*; L. R. CHURA; M. LAI; R. J. HOLT; J. SUCKLING; S. BARON-COHEN; M. D. SPENCER. *Autism Res. Ctr., Herchel Smith Building for Brain and Mind Sci.*

1:00 KKK49 **482.17** Autistic traits in the general population are associated with reduced gray matter density in areas relevant for social cognitive functioning. A. GOSSEN*; K. N. SPRECKELMEYER; G. KOHLS; R. T. SCHULTZ; G. GRÜNDER. *Uniklinik RWTH Aachen, JARA – Translational Brain Med., Stanford University, Jordan Hall, The Children's Hosp. of Philadelphia.*

2:00 KKK50 **482.18** ▲ Atypical patterns of imitation network connectivity are associated with sociocommunicative impairment in autism spectrum disorders. Y. I. CABRERA*; I. FISHMAN; C. KEOWN; R. MÜLLER. *San Diego State Univ., San Diego State Univ.*

3:00 KKK51 **482.19** Aberrant fronto-striatal responses during the valuation of partner reputation for reciprocity in generalized social anxiety disorder. D. A. FITZGERALD*; M. WARDLE; M. ANGSTADT; C. S. SRIPADA; K. L. PHAN. *Univ. of Illinois At Chicago, Univ. of Chicago, Univ. of Michigan, Jesse Brown VA Med. Ctr.*

4:00 KKK52 **482.20** Impaired integration of intention and outcome for moral judgment in patients with frontal lobe lesions and frontotemporal dementia. A. M. IBANEZ*, SR; F. MANES; D. HUEPE; A. SLACHEVSKY; C. GELORMINI; T. TORRALVA; L. SPOSATO; B. COUTO; S. BAEZ. *Neurosci. Laboratory/ Univ. Diego Portales, Inst. of Cognitive Neurol. (INECO) and CONICET, Inst. of Cognitive Neurol. (INECO), Hosp. del Salvador y Univ. de Chile.*

1:00 KKK53 **482.21** The influence of cognitive processing therapy upon remediation of neural social prediction error signaling in PTSD. J. A. AIMONE*; W. WILLIAMS; K. MCCURRY; B. C. FRUEH; D. GRAHAM; P. CHIU; B. KING-CASAS. *Virginia Tech. Carilion Res. Inst., Baylor Univ., Salem VA Med. Ctr., VA, Univ. of Hawaii at Hilo, Virginia Tech., Virginia Tech. CArilion Sch. of Med., Virginia Tech.*

POSTER

483. Medial Temporal Lobe Anatomy, Pharmacology and Function

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 KKK54 **483.01** Signalling, epigenetic and gene transcriptional changes in the rat hippocampus during Morris water maze training. S. D. CARTER*; K. R. MIFSUD; E. A. SAUNDERSON; J. N. A. PONT; J. M. H. M. REUL. *Univ. of Bristol.*

2:00 KKK55 **483.02** Strain differences in expression of microRNAs in the hippocampus assessed using next generation sequencing technology: Comparison of DBA/2J and C57BL/6J mouse strains. K. M. HAMRE*; A. PANDEY; M. MULLIGAN; J. INGELS; J. YUE; L. LU. *Univ. Tennessee Hlth. Sci. Ctr., Univ. Tennessee Hlth. Sci. Ctr., Univ. Tennessee Hlth. Sci. Ctr.*

3:00 KKK56 **483.03** The cellular mechanism of tau dissemination via mononuclear phagocytosis and exosome secretion. H. ASAI*; S. IKEZU; K. SEBASTIAN; T. IKEZU. *Boston Univ. Sch. of Med., Göttingen Univ. Med. Sch., Boston Univ. Sch. of Med.*

4:00 KKK57 **483.04** The role of neurogenesis in the dentate gyrus for spatial pattern separation. B. A. KENT*; P. BEKINSCHTEIN; C. OOMEN; A. L. BEYNON; D. CLEMENSON; J. S. DAVIES; F. H. GAGE; T. J. BUSSEY; L. SAKSIDA. *Univ. of Cambridge, Univ. of Buenos Aires, Swansea Univ., The Salk Inst.*

1:00 KKK58 **483.05** Distribution of neurotransmitter receptors in the pigeon hippocampal formation: A further basis for comparison with mammals. C. HEROLD*; V. P. BINGMAN; M. SAUVAGE; N. PALOMERO-GALLAGHER; K. ZILLES; O. GÜNTÜRKÜN. *C. & O. Vogt-Institute For Brain Research, Heinrich-Heine Univ. Duesseldorf, Dept. of Psychology and J. P. Scott Ctr. for Neurosci., Res. Dept. of Neuroscience, Mercator Res. Group, Inst. of Neurosci. and Med. INM-1, Res. Ctr. Juelich, Dept. of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen Univ., Dept. of Biopsychology, Inst. of Cognitive Neuroscience, Fac. of Psychology.*

2:00 KKK59 **483.06** A proposed standardization for quantifying damage to the hippocampus in rodents. H. LEHMANN*; G. A. SCOTT; J. E. TAYLOR; N. R. MELVIN. *Trent Univ., Univ. of Ontario Inst. of Technol., Quest Univ. Canada.*

3:00 KKK60 **483.07** Brain stimulation in dorsal hippocampus or dorsolateral thalamus did not affect the place conditioning. Y. SHEN*; Y. HUANG; R. LIAO. *Dept. of Psychology, Natl. Chengchi University., Inst. of Neuroscience, Natl. Chengchi, Res. Ctr. for Mind, Brain and Learning, Natl. Chengchi Univ.*

4:00 KKK61 **483.08** ATF4 down-regulation in mouse hippocampus impairs long-term spatial memory, memory flexibility and alters dendritic spine morphology. S. PASINI*; C. CORONA; J. LIU; L. GREENE; M. SHELANSKI. *Columbia Univ.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 KKK62 **483.09** Firing characteristics of rat dorsal subicular neurons in a Go/No-Go task. S. NAKAMURA*; S. D. DOLZANI; D. C. COOPER. *Inst. for Behavioral Genetics, Univ. of Colorado.*

2:00 KKK63 **483.10** Selective optogenetic dissection of the entorhinal-hippocampal circuits in the formation and retrieval of episodic fear memory. J. SUH*; S. TONEGAWA. *MIT.*

3:00 KKK64 **483.11** Hippocampal sharp wave ripple events during operant task relative to the performance and theta oscillation in rats. S. FUJIWARA*; Y. IZAKI; T. FUNABASHI; T. AKEMA. *Dept. Physiol. St. Marianna Univ. Sch. Med.*

4:00 KKK65 **483.12** Projection to the perirhinal and entorhinal cortex from the basal forebrain in rats. H. KONDO*; L. ZABORSZKY. *Rutgers Univ.*

1:00 KKK66 **483.13** Topographical organization in Layer 2 of the Medial Entorhinal Cortex. S. RAY*; R. NAUMANN; A. BURGALOSSI; Q. TANG; H. SCHMIDT; M. BRECHT. *Bernstein Ctr. For Computat. Neurosci., Humboldt Univ.*

POSTER

484. Incentive Learning and Memory

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 KKK67 **484.01** ▲ The effect of social defeat stress on sign- and goal-tracking behaviors. K. H. LONG*; R. KELLY; P. BLANDINO, Jr.; H. AKIL; S. B. FLAGEL. *Univ. of Michigan, Univ. of Michigan.*

2:00 KKK68 **484.02** Alterations in the propensity to sign- and goal-track and neurobiological correlates in selectively bred rats exposed to cocaine during adolescence. J. GARCIA-FUSTER*; A. PARSEGIAN; P. BLANDINO, Jr.; H. AKIL; S. B. FLAGEL. *IUNICS. Univ. of the Balearic Islands, Univ. of Michigan, Univ. of Michigan.*

3:00 KKK69 **484.03** Sign-tracking responses are insensitive to outcome devaluation. A. KAWA*; M. F. CARROLL; D. J. CALU. *NIDA.*

4:00 KKK70 **484.04** Extinction attenuates specific Pavlovian-to-instrumental transfer in appetitive learning. A. R. DELAMATER*; R. DERMAN; H. NASSER. *Brooklyn Col. CUNY, Brooklyn Col. - CUNY.*

1:00 LLL1 **484.05** The role of mesolimbic phasic dopamine signaling in valued-based decision-making. A. L. COLLINS*; V. Y. GREENFIELD; R. LAUGHLIN; K. M. WASSUM. *UCLA, Brain Res. Institute, UCLA.*

2:00 LLL2 **484.06** Brain expression of pCREB in rats exposed to incentive downshift. M. R. PAPINI*; A. C. GLUECK; T. S. DENNIS; L. I. PERROTTI; C. TORRES. *Texas Christian Univ., Texas Christian Univ., Univ. of Texas at Arlington, Univ. of Jaen.*

3:00 LLL3 **484.07** Optogenetic activation of dorsal raphe serotonin neurons enhances patience for future rewards. K. W. MIYAZAKI*; K. MIYAZAKI; K. F. TANAKA; A. YAMANAKA; A. TAKAHASHI; K. DOYA. *Okinawa Inst. of Sci. and Technol. (OIST), Keio Univ., Nagoya Univ., Natl. Inst. of Genet.*

4:00 LLL4 **484.08** Neuronal responses of central nucleus of the amygdala during extinction and overexpectation. M. D. IORDANOVA*; M. L. D. DEROCHE; G. O. R. ESBER; B. F. SADACCA; G. M. SCHOENBAUM. *Univ. of Maryland Baltimore, Johns Hopkins Med. Ctr., Natl. Inst. of Drug Abuse Intramural Res. Program.*

1:00 LLL5 **484.09** The projection from medial ventral pallidum to the mediodorsal thalamus mediates the response-biasing properties of Pavlovian cues on action selection in Pavlovian-instrumental transfer. B. K. LEUNG*; B. W. BALLEINE. *The Univ. of Sydney, Brain and Mind Res. Inst.*

2:00 LLL6 **484.10** Dopamine D1 and delta-opioid receptors cooperate in the nucleus accumbens shell to guide stimulus-based choice. V. LAURENT*; J. BERTRAN-GONZALEZ; B. C. CHIENG; B. W. BALLEINE. *Brain & Mind Res. Inst., Queensland Brain Inst.*

3:00 LLL7 **484.11** Disconnection of the amygdala central nucleus and the basolateral amygdala causes habits to emerge more rapidly. N. LINGAWI*; B. BALLEINE. *Brain and Mind Res. Institute, Univ. of Sydney.*

4:00 LLL8 **484.12** Involvement of medial prefrontal cortex dopamine receptors during taste aversive learning and extinction after chronic consumption of sugar. S. CAYNAS*; G. RODRÍGUEZ-GARCÍA; M. I. MIRANDA. *Univ. Nacional Autonoma de Mexico - Inst. de Neurobiologia.*

1:00 LLL9 **484.13** Effect of food deprvation on a delayed nonmatch-to-place T-maze task. E. JANG; B. KAANG*. *Seoul Natl. Univ., Seoul Natl. Univ.*

POSTER

485. Learning and Memory: Physiology II

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 LLL10 **485.01** Omission of expected reward and its effect on neuronal plasticity; an evolutionary conserved response? M. A. VINDAS*; I. B. JOHANSEN; O. FOLKEDAL; L. H. STIEN; B. O. BRAASTAD; T. S. KRISTIANSEN; E. HÖGLUND; Ø. ØVERLI. *Norwegian Univ. of Life Sci., Univ. of Oslo, Inst. of Marine Res., Danish Inst. for Fisheries Res.*

2:00 LLL11 **485.02** Effect of prenatal stress on spatial learning and memory in male and female rats at three different ages: Effect of postnatal tactile handling. A. GUERRERO-AGUILERA; C. RUBIO-OSORNIO; S. GALVAN-ARZATE; S. RETANA MARQUEZ*. *Univ. Autonoma Metropolitana, Inst. Nacional de Neurologia y Neurocirugia Manuel Velasco Suarez, Inst. Nacional de Neurologia y Neurocirugia Manuel Velasco Suarez.*

3:00 LLL12 **485.03** ▲ Enhanced pyramidal cell responses to lateral olfactory tract input in the anterior piriform cortex parallel early odor preference memory with multiday training in rat pups. C. FONTAINE*; C. W. HARLEY; Q. YUAN. *Mem. Univ. of Newfoundland, Univ. of Victoria, Mem. Univ. of Newfoundland, Mem. Univ. of Newfoundland.*

4:00 LLL13 **485.04** Prostacyclin synthase-overexpression in mice impacts memory and anxiety-like behavior. O. OHIA*; C. VOLLERT; C. BERRIDGE; S. P. SO; K. RUAN; J. ERIKSEN. *Univ. of Houston.*

1:00 LLL14 **485.05** Attentional processing in the parafascicular thalamus following unexpected changes in predicted outcomes. J. TRAGESER*; J. POURDAVOUD. *Johns Hopkins Univ.*

2:00 LLL15 **485.06** Role of activated transcription factor 4 (ATF4) in hippocampal synaptic plasticity. C. CORONA*; S. PASINI; J. LIU; L. GREENE; M. SHELANSKI. *Columbia Univ.*

3:00 LLL16 **485.07** Inhibition of glycogen synthase kinase 3 impairs motor learning but not motor control. L. CHAGNIEL*; G. BUREAU; C. LATAPY; J. BEAULIEU; M. CYR. *Univ. Du Quebec A Trois-Rivieres, Laval Univ. CRIUSMQ.*

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4:00 LLL17 **485.08** Context-dependent spatial patterns of persistent firing for multitasking. K. P. DAIE; M. GOLDMAN; E. AKSAY*. *Weill Cornell, UC Davis.*

1:00 LLL18 **485.09** ▲ Role of the protein Kv 4.2 in striatum during the memorisation and automation of complex motor skill learning. S. PRUNEAU*; G. BUREAU; M. CYR. *Univ. Du Québec À Trois-Rivières.*

2:00 LLL19 **485.10** The role of IL-4 and IL-13 in spatial learning and memory. N. MAKENA*; T. BROMBACHER; J. S. WOMERSLEY; F. BROMBACHER. *Univ. of Cape Town, Univ. of Cape Town, Univ. of Cape Town.*

3:00 LLL20 **485.11** The role of NMDA receptors in working memory in macaque prefrontal cortex. B. V. VUGT*; T. VAN KERKOERLE; P. ROELFSEMA. *Netherlands Inst. For Neurosci., Netherlands Inst. for Neurosci.*

4:00 LLL21 **485.12** Circadian and cognitive costs of nocturnal activity for a diurnal brain. C. A. MARTIN-FAIREY*; L. SMALE; A. A. NUNEZ. *Michigan State University, Michigan State Univ.*

1:00 LLL22 **485.13** Memory enhancement in exercised rats: Role of histaminergic neural activity. N. GRINSPUN*; R. FALCON; J. L. VALDES. *Univ. of Chile.*

2:00 LLL23 **485.14** Single-neuron activity changes during acquisition, extinction, and reacquisition of an operant response. S. STAROSTA*; O. GUNTURKUN; M. C. STUTTGEN. *Ruhr Univ.*

3:00 LLL24 **485.15** Probing the neural circuits underlying working memory in head-fixed mice performing virtual navigation. T. SHUMAN*; C. C. KABA; J. FRIEDMAN; P. GOLSHANI. *UCLA, UCLA, West Los Angeles Veteran's Affairs Med. Ctr.*

4:00 LLL25 **485.16** The role of environmental boundaries in the ontogeny of the hippocampal neural code for space. F. CACUCCI*; L. MUSSIG; J. HAUSER; T. WILLS. *Univ. Col. London, Univ. Col. London.*

POSTER

486. Neural Mechanisms Mediating Fear and Anxiety

Theme F: Cognition and Behavior

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 LLL26 **486.01** Ontogeny of context fear generalization. I. ZHURAVKA; A. M. POULOS*. *Univ. of California, Los Angeles,.*

2:00 LLL27 **486.02** Recruitment of an amygdala-accumbens circuit promotes the persistence of fear extinction. S. CORREIA*; A. M. GRAYBIEL; K. A. GOOSENS. *MIT McGovern Inst.*

3:00 LLL28 **486.03** Systemically administered oxytocin reduces background in subjects who display lower levels of baseline startle responding. J. B. ROSEN*; L. AYERS; A. AGOSTINI; J. SCHULKIN. *Univ. Delaware, Univ. of Delaware, Georgetown Univ.*

4:00 LLL29 **486.04** Relationship of the startle response amplitude with sympathetic nerve and cardiovascular functions of normotensive rats after intravenous injection of the beta-blocker metoprolol tartrate. T. SATO*. *Tohoku Bunka Gakuen Univ.*

1:00 LLL30 **486.05** Independent hypothalamic circuits for social and predator fear. B. A. SILVA*; C. MATTUCCI; N. CANTERAS; C. GROSS. *EMBL Mouse Biol. Unit, EMBL, Univ. of Sao Pulo.*

2:00 LLL31 **486.06** Anandamide interacts with nitric oxide to control anxiety-like behaviors in the dorsal periaqueductal gray of rats. F. S. GUIMARAES*; P. A. BATISTA; M. V. FOGAÇA. *Sch. Med. Ribeirao Preto-Usp.*

3:00 LLL32 **486.07** Essential role of CaMKIIα in regulating state of anxiety. L. ZHANG*; H. ZHU; W. WEI; F. LI; L. WANG. *Shanghai Jiaotong Univ., Georgia Regents Univ., Shanghai Jiaotong Univ.*

4:00 LLL33 **486.08** A comparison of multiple behavioral tests for measurement of anxiety in C57BL/6J mice. L. B. TUCKER*; J. T. MCCABE. *Uniformed Servies Univ. of the Hlth. Sci., Ctr. for Neurosci. and Regenerative Med.*

1:00 LLL34 **486.09** Gap junctions in the ventral hippocampus-medial prefrontal cortex pathway are involved in anxiety regulation. T. J. SCHOENFELD*; B. HSUEH; M. B. RUNKLE; A. D. KLOTH; S. S. WANG; E. GOULD. *NIMH/NIH, Princeton Univ.*

2:00 LLL35 **486.10** Chronic stress-induced enhanced fear memories are resistant to reconsolidation in an animal model of post-traumatic stress disorder. A. N. HOFFMAN*; A. PARGA; N. G. LORSON; P. R. PAODE; L. R. WATTERSON; E. M. NIKULINA; R. P. HAMMER, Jr.; C. D. CONRAD. *Arizona State Univ., Univ. of Arizona Col. of Med., Arizona State Univ.*

3:00 LLL36-DP10 **486.11** Anxiety and altered insula connectivity at rest. J. BIJSTERBOSCH*; S. SMITH; S. FORSTER; O. JOHN; S. BISHOP. *Univ. of Oxford, Univ. of California Berkeley, Univ. of Oxford.*

4:00 LLL37 **486.12** Role of orexins in anxiety produced in rats exposed to a single episode of footshock stress. H. WANG; X. CHEN; S. LI*; L. ZHANG; M. VRONTAKIS; G. J. KIROUAC. *Univ. of Manitoba, Univ. of Manitoba, Univ. of Manitoba.*

1:00 LLL38 **486.13** Prefrontal parvalbumin-expressing interneurons control fear expression. J. COURTIN*; F. CHAUDUN; R. ROZESKE; C. GONZALEZ-CAMPO; T. BIENVENU; H. WURTZ; C. HERRY. *Neurocentre Magendie Inserm U862.*

2:00 LLL39 **486.14** α2-containing GABAA receptors in basolateral amygdala mediate the anxiolytic-like actions of benzodiazepines. E. ENGIN*; R. KEIST; J. FRITSCHY; U. RUDOLPH. *Harvard Med. Sch., Univ. of Zurich.*

3:00 LLL40 **486.15** Rats with high-yawning (HY) frequency show more anxiety on two standardized tests. M. PALACIOS*; C. URIBE; M. CORTES; J. EGUIBAR. *Inst. of Physiol. Benemérita Univ. Autónoma De Puebla.*

4:00 LLL41 **486.16** Microarray analysis of cis-acting expression quantitative trait loci (eQTL) in a novel fearful D x H recombinant inbred strain with a DBA/2J background. D. M. YILMAZER-HANKE*; J. BOUMA; J. MCGEE; E. WALSH; K. BEISEL; J. HANKE. *Creighton Univ., Boys Town Natl. Res. Hosp., Otto-von-Guericke Univ.*

1:00 LLL42 **486.17** ● Disruption of kappa opioid receptor function reduces stress effects on anxiety-like behavior. A. V. VAN'T VEER*; F. I. CARROLL; B. M. COHEN; W. A. CARLEZON, Jr. *McLean Hospital/Harvard Med. Sch., Res. Triangle Inst.*

2:00 LLL43 **486.18** Neuron-specific SUMO1-3 knockdown in mice impairs novel object recognition and fear conditioning. W. YANG*; L. WANG; S. ZHAO; H. SHENG; R. RODRIGUIZ; W. WETSEL; W. PASCHEN. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

3:00 LLL44 **486.19** A2 noradrenergic neurons induce stress and promote depression and anxiety. C. M. TOURINO*; S. HAYTON; R. MALENKA; L. DE LECEA. *Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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4:00 LLL45 **486.20** ▲ Blocking cannabinoid (CB1) receptors impairs the learning of safety signals. B. C. SCOTT; C. BARROWS; S. A. TERSHNER*. *Western New England Univ.*

1:00 LLL46 **486.21** Protective effect of environmental enrichment on stress-induced anxiety: the role of glucocorticoid receptor, ERK and CREB pathways on basolateral amygdala activity. L. S. NOVAES*; D. C. F. LOPEZ; N. B. SANTOS; E. A. DUQUE; G. WIEZEL; C. SCAVONE; C. D. MUNHOZ. *Univ. De Sao Paulo.*

2:00 LLL47 **486.22** Dysregulation of brain corticotropin-releasing factor (CRF) systems mediates behavioral changes following predator odor stress. N. W. GILPIN*; E. A. ROLTSCH; B. B. BAYNES; J. P. MAYEUX; A. M. WHITAKER; B. A. BAIAMONTE; Y. LU; H. N. RICHARDSON. *Louisiana State Univ. Hlth. Sci. Ctr., Univ. of Massachusetts at Amherst.*

3:00 LLL48 **486.23** Investigating an acute reduction in an anxiety-like response following stress exposure in exercising mice. B. D. HARE*; J. SIBOLD; B. GOLIJANIN; W. A. FALLS. *Univ. of Vermont.*

4:00 LLL49 **486.24** Role of arginine vasopressin on the amygdaloid modulation of fear and anxiety in the rat. E. PALOMARES*; O. HERNÁNDEZ PÉREZ; M. CRESPO RAMÍREZ; K. FUXE; M. PÉREZ DE LA MORA. *Inst. de Fisiología Celular, Div. of Cell. and Mol. Neurochemistry.*

1:00 LLL50 **486.25** Chronic administration of catechin decreases depression and anxiety-like behaviors in a rat model using chronic corticosterone injections. B. LEE*; B. SUR; I. SHIM; H. LEE; D. HAHM. *Kyung Hee Univ., The Grad. Sch. of Basic Sci. of Oriental Medicine, Col. of Oriental Medicine, Kyung Hee Univ.*

2:00 LLL51 **486.26** Lesions restricted to the posterior aspect of the paraventricular nucleus of the thalamus attenuate fear in fear conditioned rats. S. LI; Y. LI; G. J. KIROUAC*. *Faculties of Dentistry, Univesity of Manitoba, Inst. of Psychology, Chinese Acad. of Sci., Faculties of Dent. and Medicine, Univesity of Manitoba.*

3:00 LLL52 **486.27** Dopamine D1 and Corticotropin Releasing Hormone Receptor subtype 1 interaction in emotional responses. L. BROCCOLI*; R. E. BERNARDI; N. HIRTH; R. RIMONDINI; H. PALOMARES; M. PÉREZ DE LA MORA; N. J. JUSTICE; W. H. SOMMER; K. FUXE; R. SPANAGEL; J. M. DEUSSING; A. C. HANSSON. *Central Inst. of Mental Hlth., Univ. of Bologna, Natl. Autonomous Univ. of Mexico, Baylor Col. of Med., Karolinska Inst., Max Planck Inst. of Psychiatry.*

4:00 LLL53 **486.28** Environmental and genetic studies of rodent empathy. J. B. PANKSEPP*; A. RYABININ; G. LAHVIS. *Oregon Hlth. and Sci. Univ.*

1:00 LLL54 **486.29** Amygdala-hippocampal-prefrontal cortical circuitry underlying recent and remote memory traces for successful and impaired fear extinction. E. A. KNAPSKA*; W. SZADZINSKA; K. ROKOSZ; M. MIKOSZ. *Nencki Inst. of Exptl. Biol. PAS.*

2:00 LLL55 **486.30** Social buffering through intermittent interactions in conspecific triads. J. O. TAYLOR; J. R. PETERSON; B. G. COOPER*. *Texas Christian Univ.*

POSTER

487. Genomics, Bioinformatics, and Systems Biology

Theme G: Novel Methods and Technology Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 LLL56 **487.01** Genome-wide single-base resolution of 5-hydroxymethylcytosine using a novel sequencing method. X. SUN; D. TAN; L. CUI*; X. JIA. *Zymo Res. Corp.*

2:00 LLL57 **487.02** Blood-based IVDMIA and longitudinal molecular marker analysis in the rat chronic constrictive injury: Disease biology and benchmark profiling. C. P. G. GERALD; A. S. FISHER; M. D. CHIKINA; C. M. TAYLOR; Y. GE; M. INGLESE*; M. S. DUXON; N. UPTON. *Transcription Diagnostics Inc., Mount Sinai Sch. of Med., Transpharmation Ltd.*

3:00 LLL58 **487.03** ● Differentiate biomarkers of disease from post mortem changes with rapid heat inactivation. B. ORBACK; M. SÖDERQUIST*. *Denator AB, Denator AB.*

4:00 LLL59 **487.04** ● Increased sample quality enables identification/monitoring of peptide biomarkers. U. SOLLENBERG; M. SÖDERQUIST; M. BORÉN; K. SKOLD*; P. SVENNINGSSON; P. ANDRÉN. *Denator AB, Karolinska Institutet, Uppsala Univ.*

1:00 LLL60 **487.05** ● A fast, effective alternative method for exosome isolation and cytometry-based multiparameter characterization of surface markers. S. GUTIERREZ*; I. STRUG; A. CAPPIONE; J. L. SMITH; M. MABUCHI; S. SUHRAWARDY; T. NADLER. *EMD Millipore.*

2:00 LLL61 **487.06** Microenvironment control promotes faster primary neuron culture stabilization. P. J. HUNG*; C. S. CHEN; T. A. GAIGE. *EMD Millipore.*

3:00 LLL62 **487.07** G-protein coupled receptor single-nucleotide polymorphism distribution in primate genomes. D. B. GOSWAMI*; L. M. OGAWA; J. M. WARD; G. M. MILLER; E. J. VALLENDER. *Harvard University, Harvard Med. School, New England Primate Res. Ctr.*

4:00 LLL63 **487.08** ▲ Behavioural and Blood-Based transcriptomic analysis of the monosodium iodoacetate model of osteoarthritis in the rat. A. S. FISHER; M. D. CHIKINA; C. M. TAYLOR; Y. GE; M. S. DUXON; C. P. G. GERALD; N. UPTON*. *TRANSPHARMATION LTD, Mount Sinai Sch. of Med., Transcription Diagnostics Inc.,.*

1:00 LLL64 **487.09** Activity regulated transcript identification in the hippocampus and the genetic association with AD risk. A. L. SINIARD*; J. J. CORNEVEAUX; A. N. ALLEN; M. K. CHAWLA; M. N. TURK; R. A. REIMAN; H. E. ROSE; C. A. BARNES; M. J. HUENTELMAN. *Tgen, Arizona Alzheimer's Consortium, ARL Div. of Neural Systems, Univ. of Arizona - Memory & Aging and Evelyn F McKnight Brain Inst.*

2:00 LLL65 **487.10** ▲ Gene expression profiling of human astrocytes treated with Bexarotene and related compounds. R. RICHHOLT*; I. S. PIRAS; A. M. PERSICO; M. J. HUENTELMAN. *TGen Neurogenomics Div., Arizona Alzheimer's Consortium, Univ. Campus Bio-Medico.*

3:00 MMM1 **487.11** ● Kuiqpick - a low cost system for brain microdissection and live single cell collection. S. L. KARSTEN*; Z. MA; A. BRAGIN; L. C. KUDO. *NeuroInDx, Inc., Neuroindx, Inc., David Geffen Sch. of Med. at UCLA.*

4:00 MMM2 **487.12** Rna-seq sheds light on molecular diversity in intrinsically photosensitive retinal ganglion cells (iprgcs). D. J. BERG*; D. M. BERSON. *Brown Univ.*

1:00 MMM3 **487.13** ROCK inhibitor development for cognitive enhancement and blockade of tau phosphorylation. M. TURK*; M. D. ADAMS; T. WANG; T. DUNCKLEY; M. J. HUENTELMAN. *Arizona State Univ., Translational Genomics Res. Inst., Arizona Alzheimer's Consortium, Translational Drug Develop.*

2:00 MMM4 **487.14** Proteomic analysis of the mouse hippocampus reveals differences between male and females in the C57BL/6J inbred strain. J. L. BUNDY*; K. B. MADDOX; C. M. VIED; R. S. NOWAKOWSKI. *Florida State Univ. Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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3:00 MMM5 **487.15** Proteome variability of postsynaptic density (PSD) fractions analyzed by quantitative mass spectrometry. F. SAKAUE*; C. M. COLANGELO; L. M. CHUNG; G. IVOSEV; T. B. ABBOTT; A. C. NAIRN. *Yale Univ., Yale Univ., Yale Univ., AB Sciex.*

4:00 MMM6 **487.16** ● Exploring neuronal intracellular signaling networks using PhosphoSitePlus. J. M. KORNHAUSER*; E. SKRZYPEK; B. ZHANG; B. MURRAY; V. LATHAM; P. V. HORNBECK. *Cell Signaling Technology, Inc, Cell Signaling Technology, Inc.*

1:00 MMM7 **487.17** Protein microarray approaches for determining substrate-enzyme interactions in the ubiquitin-proteasome pathway. C. LOCH; V. A. ZHUKAREVA*; M. J. ENGLEKA; J. E. STRICKLER. *Lifesensors.*

2:00 MMM8 **487.18** Isolation and subsequent cultivation of primary cortical neurons using optimized gentle digestion method. H. WU*; K. OPPERMAN; B. KABOORD. *Thermofisher Scientific, Thermo Fisher Scientific.*

3:00 MMM9 **487.19** Nascent proteomes in response to brain ischemia. F. BIAN*; T. YANG; Y. LI; R. P. SIMON; A. ZHOU. *Morehouse Sch. of Med.*

4:00 MMM10 **487.20** Di-omic analysis of the mouse hippocampus reveals relationships between the transcriptome and proteome. C. M. VIED; J. L. BUNDY; R. S. NOWAKOWSKI*. *FSU Col. of Med.*

1:00 MMM11 **487.21** Single cell transcriptome mapping through cortical development. C. YE*; B. LEVI; J. GRIMLEY; Y. WANG; A. NELSON; R. MARTINEZ; A. KROSTAG; E. THOMSEN; R. MAY; A. KAYKAS. *Allen Inst. For Brain Sci.*

2:00 MMM12 **487.22** Prediction and identification of neuropeptides from precursors using neuropeptidomics approach. F. PETRUZZIELLO*; G. RAINER; F. XIAOZHE ZHANG. *UNIVERSITY OF FRIBOURG.*

3:00 MMM13 **487.23** ● Implications of the connectome for the anatomy of brain disorders. N. CROSSLEY*; A. MECHELLI; J. SCOTT; P. VERTES; F. CARLETTI; P. MCGUIRE; E. BULLMORE. *Inst. of Psychiatry, King's Col. London, Univ. of Cambridge.*

4:00 MMM14 **487.24** Altered energy homeostasis mediated by AMP-activated protein kinase in Alzheimer's disease revealed by Multifactor Network Analysis. L. CABERLOTTO*; M. LAURIA; P. NGUYEN; M. SCOTTI. *COSBI.*

1:00 MMM15 **487.25** ● Engineered human stem cells to elucidate *in vitro* neural development and disease. J. GRIMLEY*; A. KROSTAG; J. MARKEN; R. MARTINEZ; R. MAY; A. NELSON; S. YAO; R. DOLMETSCH; A. KAYKAS. *Allen Inst. For Brain Sci.*

2:00 MMM16 **487.26** Specific proteomic analysis of mitochondria in dopamine neurons. A. CHEN*; G. CRAFT; C. COLANGELO; A. C. NAIRN. *Yale Univ., Yale Univ.*

3:00 MMM17 **487.27** High-speed robotic handling of live adult *Drosophila* melanogaster for biological investigation. J. SAVALL*; E. HO; M. J. SCHNITZER. *Stanford Univ.*

POSTER

488. Staining, Tracing, and Imaging Novel Methods

Theme G: Novel Methods and Technology Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 MMM18 **488.01** Generation of inter-region connection strength for a mouse brain connectivity atlas. N. H. CAIN*; L. NG; L. KUAN; C. LAU; Y. LI; D. FENG; J. HARRIS; S. OH; Q. WANG; C. KOCH; H. ZENG; S. MIHALAS. *Allen Inst. For Brain Sci.*

2:00 MMM19 **488.02** Cell-type specific projection maps in whole mouse brain. J. A. HARRIS*; S. W. OH; L. NG; M. MORTRUD; B. OUELLETTE; T. NGUYEN; K. HIROKAWA; S. SORENSEN; P. BOHN; J. HOHMANN; A. BERNARD; C. DANG; A. JONES; C. KOCH; H. ZENG. *Allen Inst. For Brain Sci.*

3:00 MMM20 **488.03** Exploring the mouse brain projectome through large-scale spatial mapping and quantification. L. NG; C. LAU; L. KUAN; Y. LI; D. FENG; T. DOLBEARE; F. LEE; G. GU; W. WAKEMAN; C. R. GERFEN; A. BERNARD; J. A. HARRIS; S. W. OH*; M. J. HAWRYLYCZ; C. DANG; H. ZENG. *Allen Inst. for Brain Sci., Natl. Inst. of Mental Hlth.*

4:00 MMM21 **488.04** Cortical projections to the superior colliculus in mouse. Q. WANG*; J. A. HARRIS; S. W. OH; L. NG; A. BERNARD; M. MORTRUD; B. OUELLETTE; J. G. HOHMANN; C. KOCH; H. ZENG. *The Allen Inst. For Brain Sci.*

1:00 MMM22 **488.05** Allen Brain Atlas: An integrated spatially mapped portal for organizing and discovering transcriptomic and projectomic relationships in the mouse brain. L. NG; C. LAU; L. KUAN; Y. LI; D. FENG; T. DOLBEARE; F. LEE; G. GU; W. WAKEMAN; S. M. SUNKIN*; C. DANG; M. HAWRYLYCZ. *Allen Inst. for Brain Sci.*

2:00 MMM23 **488.06** Optoelectronic Nanoprobes for the Neural Network. K. E. KITKO*; T. HONG; Y. XU; Q. ZHANG. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

3:00 MMM24 **488.07** Glycoprotein from an attenuated rabies strain increases an affinity toword non-neuronal cells and long-range projection neurons. T. MORI*; Y. YOSHIMURA. *Natl. Inst. For Physiological Sci.*

4:00 MMM25 **488.08** Using infrared fluorescent protein (iRFP) for monitoring and modulating neuronal activity. B. K. HARVEY*; C. T. RICHIE; L. R. WHITAKER; L. V. FORTUNO; H. A. BALDWIN; D. B. HOWARD; Y. ZHANG; J. J. HINKLE; M. A. VERDECIA; B. T. HOPE. *NIDA - NIH, NIDA - NIH, NIDA - NIH.*

1:00 MMM26 **488.09** ● A new cell line for screening of P2X2 channel activity modulators. A. RENGANATHAN CHANDRIKA*; M. STEEPHAN; R. RAVEENDRAN; S. SUDARSANADEVI; S. PAUL; A. G. MOHANAN; M. MADHAVAN; R. OMKUMAR. *Rajiv Gandhi Ctr. For Biotech., Rajiv Gandhi Ctr. for Biotech.*

2:00 MMM27 **488.10** Gene transfer using electroporation in the deep brain regions of postnatal mammals. N. OHMURA*; T. SATOH; K. KAWASAKI; Y. HATA. *Div. Integrative Biosci, Tottori Univ. Grad Sch. Med. Sci., Div. Neurobiol, Sch. Life Sci, Fac Med, Tottori Univ.*

3:00 MMM28 **488.11** Balance training induced neuroplasticity in young traumatic brain injury patients. D. DRIJKONINGEN*; K. CAEYENBERGHS; C. VANDER LINDEN; S. SUNAERT; J. DUYSENS; S. SWINNEN. *KU Leuven, Ghent Univ., Ghent Univ. hospital, Univ. hospital KU Leuven.*

4:00 MMM29 **488.12** Visualizing real-time changes in c-Fos expression associated with post-injury plasticity. Y. JOUROUKHIN*; D. GLOVER; A. GILAD; G. PELLED. *Kennedy Krieger Instittute, Johns Hopkins Univ. Sch. of Med.*

1:00 MMM30 **488.13** Fast quantification of cytosolic [Ca^{2+}] with subcellular resolution using Fluorescent Lifetime Imaging Microscopy. S. L. GRATIY*; H. UHLIROVA; Y. YANG; P. A. SAISAN; E. S. NORHEIM; Q. CHENG; K. L. WELDY; S. SAKADŽIć; J. M. CONNER; J. CUI; T. GONZALEZ; D. A. BOAS; E. MASLIAH; G. T. EINEVOLL; A. DEVOR; A. M. DALE. *UCSD, UCSD, UCSD, Norwegian Univ. of Life Sci., Harvard Med. Sch.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 MMM31 **488.14** Evaluation of neural cell activity with motion vector prediction method. K. NAKAGAWA*; S. OSHIMA; E. MATSUI; M. YOSHIDA; A. NIWA; M. SAITO; T. NAKAHATA; H. YADA. *Sony Corp., Kyoto Univ.*

3:00 MMM32 **488.15** High resolution fluorescence imaging in deep regions of the fixed mouse brain by a novel optical clearing reagent. Y. AOYAGI*; R. KAWAKAMI; H. OSANAI; K. IIJIMA; T. NEMOTO. *Grad. Sch. of Information Sci. and Technology, Hokkaido Univ., Res. Inst. for Electronic Science, Hokkaido Univ.*

4:00 MMM33 **488.16** Evaluation of the optical H_2O_2 sensor HyPer: Response properties, ratiometric 2-photon excitation and fluorescence lifetime imaging. M. MUELLER*; J. WELLER; K. KIZINA; G. BAO. *Univ. Goettingen.*

1:00 MMM34 **488.17** A correlative light and electron microscopy approach for reconstructing syringeal motor neuron circuits in a songbird. T. TEMPLIER*; C. P. H. ELEMANS; R. H. R. HAHNLOSER. *Univ. of Zurich and ETH Zurich, Univ. of Zurich and ETH Zurich, Univ. of Southern Denmark.*

2:00 MMM35 **488.18** Average MRI brain template of Capuchin monkeys. T. HAYASHI*; M. OHBAYASHI; S. KIM. *Univ. of Tokyo Sch. of Med., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 MMM36 **488.19** Techniques to eliminate charging and reduce beam damage for SBEM imaging. B. TITZE*; W. DENK. *Max Planck Inst. for Med. Res.*

4:00 MMM37 **488.20** Cell-type selective transcranial wide-field calcium imaging combined with Yellow Cameleon 2.60 transgenic mice and macro-zoom microscopy. S. KUROKI*; H. TSUTSUI; T. MICHIKAWA; M. IWAMA; A. MIYAWAKI; S. ITOHARA. *RIKEN Brain Sci. Inst., Waseda Univ., Osaka Univ., RIKEN Brain Sci. Inst., Saitama Univ.*

1:00 MMM38 **488.21** Optogenetic control of cofilin-induced actin dynamics in dendritic spines. A. ZAHEDI*; S. MORTAZAVI; I. ETHELL. *Univ. of California, Riverside, Univ. of California, Riverside.*

2:00 MMM39 **488.22** Development of new fluorescence voltage sensor proteins. U. SUNG*; M. ALLAHVERDIZADEH; T. HUGHES; L. B. COHEN; B. J. BAKER. *KIST, Montana State Univ., Yale Univ.*

3:00 MMM40 **488.23** Imaging whole cleared mouse brains with the Ultramicroscope (light-sheet microscope). H. DODT*; K. BECKER; C. HAHN; S. SAGHAFI. *Tech. Univ. Vienna, Med. Univ. of Vienna.*

4:00 MMM41 **488.24** Structured synaptic connectivity between hippocampal regions. S. DRUCKMANN; L. FENG; C. YOOK; B. LEE; T. ZHAO; J. C. MAGEE; J. KIM*. *Janelia Farm Res. Campus, HHMI, Korea Inst. of Sci. and Technol.*

1:00 MMM42 **488.25** ● Towards large volume serial block-face electron microscopy of the songbird brain. J. KORNFELD*; F. SVARA; M. STETNER; S. BENEZRA; G. KOSCHE; M. S. FEE; M. LONG; W. DENK. *Max Planck Inst. For Med. Res., MIT, New York Univ.*

2:00 MMM43 **488.26** ● Improving immunofluorescence staining in rodent brain tissue. C. F. MANNING*; J. S. TRIMMER. *UC Davis.*

3:00 MMM44 **488.27** Subthalamic nucleus direct visualization with 3 tesla MRI: From monkey brain to human brain. K. HOSOMI*; S. SENOVA; P. BRUGIERES; J. DAUGUET; J. GURRUCHAGA; N. OUERCHEFANI; J. LEFAUCHEUR; C. JAN; R. ARON-BADIN; E. BROUILLET; P. HANTRAYE; S. PALFI. *AP-HP, Groupe Henri-Mondor Albert-Chenevier, Univ. Paris 12 UPEC, URA CEA CNRS 2210, MIRCen, I²BM, CEA, AP-HP, Groupe Henri-Mondor Albert-Chenevier, Univ. Paris 12 UPEC, AP-HP, Groupe Henri-Mondor Albert-Chenevier, Univ. Paris 12 UPEC.*

4:00 MMM45 **488.28** ● Practical resolution in nanoscopy for neuroscience. M. REUSS; F. FÖRDOS; O. ÖKTEM; B. HÖGBERG; H. BLOM; H. B. BRISMAR*. *The Royal Inst. of Technol., Sci. for Life Lab., Karolinska Institutet.*

1:00 MMM46 **488.29** Quantitative assessment of acetyl-carnitine effects on anesthetic-induced neuronal death using microPET/CT Imaging. C. WANG*; X. ZHANG; G. NEWPORT; M. PAULE; S. LIU; M. BERRIDGE; S. APANA; S. ALI; W. SLIKKER, Jr. *Natl. Ctr. For Toxicological Research/FDA, 3D Imaging LLC.*

2:00 NNN1 **488.30** Fluorescent approach for the evaluation of phagocytic clearance of cell death in focal brain ischemia. V. V. DIDENKO*; C. L. MINCHEW. *Baylor Col. of Med.*

POSTER

489. Staining, Tracing, and Imaging Techniques III

Theme G: Novel Methods and Technology Development

Mon. 1:00 PM – *San Diego Convention Center,* Halls B-H

1:00 NNN2 **489.01** Method to Improve handling characteristics of free-floating brain sections after immunohistochemical staining for amyloid. C. ZURHELLEN*; B. TIPTON; J. BAUN; R. C. SWITZER III. *Neurosci. Associates.*

2:00 NNN3 **489.02** ▲ Comparison of bone marrow-derived mesenchymal stem cells with different labels. J. D. DUFFY*; A. NEALE; K. FINK; A. CRANE; J. ROSSIGNOL; G. L. DUNBAR. *Central Michigan Univ., Field Neurosciences Inst. Lab. for Restorative Neurol., Dept. of Psychology, Col. of Med., Field Neurosciences Inst.*

3:00 NNN4 **489.03** ▲ Assessing quantification of metal concentration in epilepsy and Williams syndrome brain tissue using x-ray fluorescence imaging: A validation study. L. K. FRUTOS*; E. L. OHAYON; A. LAM. *Green Neurosci. Laboratory, Neurolinx Res. Inst., Salk Inst. for Biol. Studies, Toronto Western Res. Institute, Univ. of Toronto.*

4:00 NNN5 **489.04** A new mouse GCaMP5 reporter allele for reliable tracing and *in vivo* calcium imaging in Cre-dependent cell lineages. J. M. GEE*; M. N. ECONOMO; M. ROTHERMEL; S. C. MORRIS; M. WACHOWIAK; M. R. CAPECCHI; K. S. WILCOX; J. A. WHITE; P. TVRDIK. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

1:00 NNN6 **489.05** Utilizing commercial microwave for rapid and effective immunostaining. K. OWENS; J. H. PARK; T. KRISTIAN*. *Veterans Affairs Maryland Hlth. Ctr. Syst., Univ. Maryland Sch. Med.*

2:00 NNN7 **489.06** ● Aged dogs demonstrate reduced brain metabolism as measured by FDG-PET-MR. J. A. ARAUJO*; K. SOKOLNICKI; J. HESTERMAN; J. HOPPIN; D. E. ARAUJO; H. DOBSON. *Univ. of Toronto, InterVivo Solutions Inc, inviCRO LLC, VivoCore Inc, CanCog Technologies Inc.*

3:00 NNN8 **489.07** Mouse models enabling imaging of specific neuronal subtypes. S. F. ROCKWOOD*; M. OSBORNE; M. LESSARD; M. SASNER. *The Jackson Lab.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 NNN9 **489.08** Morphological plasticity of the mouse suprachiasmatic nucleus revealed by a multiscale imaging approach. A. J. PEREZ*; M. L. BERLANGA; K. KIM; D. D. JOHNSON, Jr.; M. HATORI; E. A. BUSHONG; T. J. DEERINCK; H. LE; M. SEYEDHOSSEINI; R. J. GIULY; D. LEE; E. JURRUS; T. TASDIZEN; M. H. ELLISMAN; S. PANDA. *UCSD, The Salk Inst. for Biol. Studies, Scientific Computing and Imaging Inst.*

1:00 NNN10 **489.09** ▲ Cocaine-induced behavioral sensitization is associated with increased striatal neuroactivity as measured by manganese enhanced magnetic resonance imaging (MEMRI) in freely moving rats. K. DESAI*; F. GHODDOUSSI; R. J. KOHLER; A. T. EAPEN; K. E. BOSSE; A. C. CONTI; B. A. BERKOWITZ; S. A. PERRINE. *Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med., John D. Dingell VA Med. Ctr., Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med.*

2:00 NNN11 **489.10** Site-specific biotinylation of neurotrophins and their receptors by the insertion of short versatile peptide tags. T. DE NADAI; L. MARCHETTI; F. BONSIGNORE; D. PORCIANI; G. SIGNORE; F. BELTRAM; S. LUIN; A. CATTANEO*. *BioSNS Laboratory, Scuola Normale Superiore, NEST, Scuola Normale Superiore and Inst. Nanoscienze, IIT@NEST, Ctr. for Nanotechnology Innovation, Scuola Normale Superiore.*

3:00 NNN12 **489.11** ● High-speed 3D *in-vivo* imaging of neuronal populations using laser scanning intersecting plane tomography. V. VOLETI*; M. B. BOUCHARD; C. LACEFIELD; R. M. BRUNO; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ.*

4:00 NNN13 **489.12** Comprehensive automated production and validation strategies enhance reliability and reproducibility of immunoreagents. R. CLARK; W. A. SPECKMANN*; R. BROCKETT; B. LAPP. *Millipore.*

1:00 NNN14 **489.13** ▲ A novel antibody (EN-1) labels enteric nervous cells in echinoderm normal and regenerating intestine. J. SAENZ*; G. VALENTÍN; J. GARCÍA-ARRARAS. *Univ. of Puerto Rico.*

2:00 NNN15 **489.14** Automated, high-throughput electron microscopy analysis of experience-dependent synaptic changes in the neocortex. S. CHANDRASEKARAN*; S. NAVLAKHA; J. URBAN-CIECKO; A. L. BARTH. *Carnegie Mellon Univ., Carnegie Mellon Univ., Carnegie Mellon Univ.*

3:00 NNN16 **489.15** Hippocampal volume estimation in children: Validity of automated methods. D. SCHOEMAKER*; J. C. PRUESSNER. *McGill Univ.*

4:00 NNN17 **489.16** Brain BLAQ: Post-hoc thick section histochemistry for assessment of optogenetic construct expression in striatal afferents. P. CODY; D. KUPFERSCHMIDT; D. M. LOVINGER*; W. SHAIN; M. I. DAVIS. *Natl. Inst. Alcohol Abuse & Alcohol, Natl. Inst. Alcohol Abuse & Alcohol, Univ. of Washington Sch. of Med.*

1:00 NNN18 **489.17** Structural and functional mapping of zebrafish visual circuits with transsynaptic virus and calcium imaging. Y. A. PAN*; C. RIEGLER; K. BEIER; C. L. CEPKO; F. ENGERT; A. F. SCHIER. *Harvard Univ., Med. Col. of Georgia, Univ. of Vienna, Stanford Univ., Harvard Med. Sch., Howard Hughes Med. Inst.*

2:00 NNN19 **489.18** Comparing automatic versus manual electrode localization methods. W. HINDS*; R. WILLIAMS; M. SPERLING; A. SHARAN; K. MOXON. *Drexel Univ., Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Thomas Jefferson Univ. Hosp.*

3:00 NNN20 **489.19** Quantification of phenotypic changes of neurons using automated analysis of confocal images of neuronal network cultures. M. PAPADAKIS; B. OZCAN; J. LUISI*; D. JIMENEZ; I. A. KAKADIARIS; F. LAEZZA; D. LABATE. *Univ. of Houston, Univ. of Texas Med. Br., Univ. de Costa Rica, Univ. of Houston.*

4:00 NNN21 **489.20** Array tomography methods for conjugate proteometric and ultrastructural analysis of synapses and neural circuitry. J. BUCHANAN*; F. C. COLLMAN; K. D. MICHEVA; N. GHORI; K. D. PHEND; R. J. WEINBERG; S. J. SMITH. *Stanford Univ. Med. Sch., UNC Med. Sch.*

1:00 NNN22 **489.21** ● Pulsed LED illumination reduces phototoxicity in living cells. K. K. ASWANI*; J. JONKMAN; F. XU. *Lumen Dynamics Group, Univ. Hlth. Network.*

2:00 NNN23 **489.22** ● A cloud-based image library of the rodent brain. G. A. JOHNSON*; A. BADEA; E. CALABRESE; H. GRUBER; C. LIU; D. MARQUES; J. NOTHIAS; E. VENTURA. *Duke Univ., Elsevier, Elsevier, Vizua.*

3:00 NNN24 **489.23** Successful models, how to make and distribute them, lessons from the past and future directions. A. JANKE*. *Ctr. For Advanced Imaging.*

4:00 NNN25 **489.24** Correlative light-sheet and two-photon microscopy: An integrated approach to explore mouse brain on multiple scales. L. SILVESTRI; A. ALLEGRA MASCARO; I. COSTANTINI; L. SACCONI*; F. S. PAVONE. *European Lab. For Non-Linear Spectroscopy.*

1:00 NNN26 **489.25** Waxholm Space Atlas of the rat brain with detailed hippocampal subdivisions. J. G. BJAALIE*; E. A. PAPP; L. J. KJONIGSEN; G. A. JOHNSON; M. P. WITTER; T. B. LEERGAARD. *Univ. Oslo, Duke Univ. Med. Ctr., NTNU.*

2:00 NNN27 **489.26** Resting state functional connectivity in the human spinal cord at 7 Tesla. R. L. BARRY; S. A. SMITH; A. N. DULA; J. C. GORE*. *Vanderbilt Univ., Vanderbilt Univ.*

3:00 NNN28 **489.27** Comparison of MR diffusion characteristics of hippocampal subfields in rabbit and mouse brains. T. JI*; P. VENKATASUBRAMANIAN; J. PYCH; F. R. LENDACKI; A. W. WYRWICZ. *Northshore Univ. Healthsystem, Pritzker Sch. of Medicine, Univ. of Chicago.*

4:00 NNN29 **489.28** New methods to remove pulse artifacts and analyze EEG rhythms recorded in the MRI scanner. P. KRISHNASWAMY*; G. BONMASSAR; E. PIERCE; P. PURDON; E. BROWN. *MIT, Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., MIT.*

1:00 NNN30 **489.29** Pydpiper - A flexible toolkit for constructing novel registration pipelines. M. FRIEDEL*; M. C. VAN EEDE; R. M. HENKELMAN; J. P. LERCH. *Mouse Imaging Ctr., Hosp. for Sick Children.*

2:00 NNN31 **489.30** ● A mouse brain atlas collection registered in Waxholm Space. A. BADEA*; M. SHERRIER; J. C. NOULS; K. B. GHAGHADA; Y. QI; G. A. JOHNSON. *Duke Univ. Med. Ctr., Texas Children's Hosp.*

POSTER

490. Computation, Modeling, and Simulation VI

Theme G: Novel Methods and Technology Development

Mon. 1:00 PM – San Diego Convention Center, Halls B-H

1:00 NNN32 **490.01** $DISC$ A spiking model of superior colliculus for bottom-up saliency. J. MOORKANIKARA NAGESWARAN*; M. RICHERT; S. SOKOL; C. PETRE; F. PIEKNIEWSKI; B. SZATMARY; E. IZHIKEVICH. *Brain Corp.*

2:00 NNN33 **490.02** Beyond inhibition: Lateral modulation of plasticity of feedforward synapses in a spiking model of V1. C. PETRE*; M. RICHERT; B. SZATMARY; E. IZHIKEVICH. *Brain Corp.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

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3:00 NNN34 **490.03** Balanced excitation and inhibition in a spiking model of V1. F. PIEKNIEWSKI*; M. RICHERT; D. FISHER; B. SZATMARY; C. PETRE; S. SOKOL; E. IZHIKEVICH. *Brain Corp., Johns Hopkins Univ.*

4:00 NNN35 **490.04** Emergence of bottom-up saliency in a spiking model of v1. B. SZATMARY*; M. RICHERT; J. NAGESWARAN; C. PETRE; F. PIEKNIEWSKI; S. SOKOL; E. IZHIKEVICH. *Brain Corp.*

1:00 NNN36 **490.05** Neural clustering inferred from weight-wiring statistics in local cortical networks. V. KLINSHOV*; J. TERAMAE; V. NEKORKIN; T. FUKAI. *Inst. of Applied Physics, RIKEN Brain Sci. Inst.*

2:00 NNN37 **490.06** A probabilistic model predicting responses of retinal ganglion cells to natural images. N. IVZAN*; N. M. GRZYWACZ. *Univ. of Southern California (USC).*

3:00 NNN38 **490.07** Networks of spiking neurons with noise have an inherent capability to generate heuristic solutions to complex constraint satisfaction problems. S. HABENSCHUSS*; Z. JONKE; W. MAASS. *Graz Univ. of Technol.*

4:00 NNN39 **490.08** Spontaneous emergence of simple and complex receptive fields in a spiking model of V1. E. M. IZHIKEVICH*; F. PIEKNIEWSKI; J. NAGESWARAN; C. PETRE; M. RICHERT; S. SOKOL; P. MEIER; M. BUIBAS; D. FISHER; B. SZATMARY. *Brain Corp.*

1:00 NNN40 **490.09** Self-tuning spike-timing dependent plasticity curves to simplify models and improve learning. M. RICHERT*; B. SZATMARY; E. IZHIKEVICH. *Brain Corp., Brain Corp.*

2:00 NNN41 **490.10** Neural circuits naturally encode probability distributions over network states, and over trajectories of network states. W. MAASS*; S. HABENSCHUSS; Z. JONKE. *Graz Univ. of Technol.*

3:00 NNN42 **490.11** Order and chaos in the inhibitory network of the striatum. A. P. PONZI*; J. R. WICKENS. OIST.

4:00 NNN43 **490.12** Inferring collective spiking from motif statistic data of neural networks. Y. HU*; J. TROUSDALE; K. JOSIC; E. SHEA-BROWN. *Univ. of Washington, Univ. of Houston, Univ. of Houston, Univ. of Washington.*

1:00 NNN44 **490.13** Emergent connectivity, behavior and attention in a spiking model of the primate visual cortex. D. FISHER*; P. MEIER; J. MOORKANIKARA NAGESWARAN; B. SZATMÁRY; E. M. IZHIKEVICH. *Brain Corp.*

• Indicated a real or perceived conflict of interest, see page 149 for details.

▲ Indicates a high school or undergraduate student presenter.

Conflict of Interest Statements

The following presenters, signified by a dot (•) in the program, indicated a real or perceived conflict of interest.

Presenters listed without a dot in the program had no financial relationships to disclose.

ABSTRACT NUMBER	STATEMENT
294	**S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-founder and CSO of BKIN Technologies.
296	**I. Gozes:** A. Employment/Salary (full or part-time):; Allon Therapeutics Inc. (Director).
296.05	**I. Gozes:** A. Employment/Salary (full or part-time):; Allon Therapeutics Inc. (Director).
297.04	**J. Dubnau:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; DART LLC.
298	**A. Lampert:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PI of a drug study with Merck Sharp & Dohme Corp.
298.05	**T.R. Cummins:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research Grant from Eli Lilly.
298.06	**A. Lampert:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PI of a drug study with Merck Sharp & Dohme Corp.
298.07	**A.D. Piekarz:** A. Employment/Salary (full or part-time):; Post-Doctoral Research Scientist—Eli Lilly and Company. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); I have received supplies, equipment, and salary support from Eli Lilly and Company for my Post-Doctoral research project. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); I receive Eli Lilly and Company stock as part of my employee compensation.
306.02	**D. Zala:** A. Employment/Salary (full or part-time):; Inserm.
306.08	**M. Oestergaard:** A. Employment/Salary (full or part-time):; ISIS Pharmaceuticals. **H. Kordasiewicz:** A. Employment/Salary (full or part-time):; ISIS Pharmaceuticals. **A.T. Watt:** A. Employment/Salary (full or part-time):; ISIS Pharmaceuticals. **S.M. Freier:** A. Employment/Salary (full or part-time):; ISIS Pharmaceuticals. **E. Swayze:** A. Employment/Salary (full or part-time):; ISIS Pharmaceuticals. **P. Seth:** A. Employment/Salary (full or part-time):; ISIS Pharmaceuticals. **C.F. Bennett:** A. Employment/Salary (full or part-time):; ISIS Pharmaceuticals.
306.09	**B. Zeitler:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **J.R. Pearl:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **S. Froelich:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **Q. Yu:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **D.E. Paschon:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **J.C. Miller:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **D. Li:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **K. Marlen:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **D. Guschin:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **I. Ankoudinova:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **D. Shivak:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **A. Narayanan:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **L. Zhang:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **M. Mendel:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **E.J. Rebar:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **F.D. Urnov:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **P.D. Gregory:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc. **H.S. Zhang:** A. Employment/Salary (full or part-time):; Sangamo BioSciences, Inc.
308.04	**W. Drevets:** A. Employment/Salary (full or part-time):; Johnson & Johnson, Inc.
308.07	**R.H. Yolken:** F. Consulting Fees (e.g., advisory boards); Dr. Yolken is a member of the Stanley Medical Research Institute Board of Directors and Scientific Advisory Board.
308.12	**T.T. Winton-Brown:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Imaging support provided by MRI facilities at GlaxoSmithKline, Hammersmith London.
310.01	**A. Vu:** A. Employment/Salary (full or part-time):; Advanced MRI Technologies. **D.A. Feinberg:** A. Employment/Salary (full or part-time):; Advanced MRI Technologies.

ABSTRACT NUMBER STATEMENT

312.02 **A.L. Gotter:** A. Employment/Salary (full or part-time):; Merck Research Laboratories. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Laboratories. **P.L. Tannenbaum:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **C.J. Winrow:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **J. Stevens:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **S.V. Fox:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **J. Binns:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **J. Brunner:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **D. Cui:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **S.J. Tye:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **J. Uslaner:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs. **J.J. Renger:** A. Employment/Salary (full or part-time):; Merck Research Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Labs.

313.01 **E.O. Neftci:** A. Employment/Salary (full or part-time):; Institute for Neural Computation, UCSD. **B. Pedroni:** A. Employment/Salary (full or part-time):; Department of Bioengineering, UCSD. **S. Das:** A. Employment/Salary (full or part-time):; Electrical and Computer Engineering, UCSD, Institute of Neural Computation, UCSD. **K. Kreutz-Delgado:** A. Employment/Salary (full or part-time):; Electrical and Computer Engineering, UC San Diego, Institute for Neural Computation, UC San Diego, Swartz Center for Computational Neuroscience, UC San Diego. **G. Cauwenberghs:** A. Employment/Salary (full or part-time):; Department of Bioengineering, UCSD, Jacobs School of Engineering, UCSD, Institute for Neural Computation, UCSD.

313.03 **J.F. Hunzinger:** A. Employment/Salary (full or part-time):; Qualcomm Research. **Y.C. Yoon:** A. Employment/Salary (full or part-time):; Qualcomm Research. **T. Zheng:** A. Employment/Salary (full or part-time):; Qualcomm Research.

ABSTRACT NUMBER STATEMENT

315.13 **L.M. Cochard:** Other; Center of Excellence in Neurosciences of the Université de Montréal (CENUM), CNS Research Group (GRSNC). **L.K. Hamilton:** Other; Center of Excellence in Neurosciences of the Université de Montréal (CENUM), CNS Research Group (GRSNC). **S.E. Joppé:** Other; Center of Excellence in Neurosciences of the Université de Montréal (CENUM), CNS Research Group (GRSNC). **A. Aumont:** Other; Center of Excellence in Neurosciences of the Université de Montréal (CENUM), CNS Research Group (GRSNC). **K.J. Fernandes:** Other; Center of Excellence in Neurosciences of the Université de Montréal (CENUM), CNS Research Group (GRSNC).

316.27 **K.E. Lewis:** A. Employment/Salary (full or part-time):; Syracuse University. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Syracuse University, NIH, NSF,.

317.01 **B.V. Zlokovic:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; ZZ Biotech.

317.04 **M. Saarma:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Academy of Finland. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Founder and shareholder of Hermo Pharma Ltd. **M.D. Gershon:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Shire Pharmaceuticals. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lexicon Genetics. F. Consulting Fees (e.g., advisory boards); Danone, USA.

319.12 **S.J. Moss:** F. Consulting Fees (e.g., advisory boards); Sage pharmaceuticals, AstraZeneca.

319.15 **S.J. Moss:** F. Consulting Fees (e.g., advisory boards); SAGE Therapeutics, AstraZeneca.

320.09 **W. Wang:** A. Employment/Salary (full or part-time):; The Ohio State University. **A. Putra:** A. Employment/Salary (full or part-time):; The Ohio State University. **B. Ma:** A. Employment/Salary (full or part-time):; The Ohio State University. **M. Zhou:** A. Employment/Salary (full or part-time):; The Ohio State University.

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320.11 **M.R. Brown:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research was supported by a grant from Autifony Therapeutics. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); AUT compounds were supplied by Autifony Therapeutics. **C.H. Large:** A. Employment/Salary (full or part-time):; Full-time employee of Autifony Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-founder of Autifony Therapeutics. **G. Alvaro:** A. Employment/Salary (full or part-time):; Full-time employee of Autifony Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-founder of Autifony Therapeutics. **L.K. Kaczmarek:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research was supported by a grant from Autifony Therapeutics. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); AUT compounds were supplied by Autifony Therapeutics.

320.15 **S. Shahabi Mohamamd shahi:** A. Employment/Salary (full or part-time):; Full time. **L. McKillop:** Other; Placement student. **T. Buijs:** Other; Placement student. **J.D. Findlay:** A. Employment/Salary (full or part-time):; Full time. **D. Ursu:** A. Employment/Salary (full or part-time):; Full time. **M.J. Lorite:** A. Employment/Salary (full or part-time):; Full time. **S.W. Hughes:** A. Employment/Salary (full or part-time):; Full time.

320.23 **K. Kaufmann:** A. Employment/Salary (full or part-time):; Vanderbilt University. **I. Romaine:** A. Employment/Salary (full or part-time):; Vanderbilt University. **E. Days:** A. Employment/Salary (full or part-time):; Vanderbilt University. **C. Pascual:** A. Employment/Salary (full or part-time):; AfaSci, Inc. **L. Yang:** A. Employment/Salary (full or part-time):; AfaSci, Inc. **B. Zou:** A. Employment/Salary (full or part-time):; AfaSci, Inc. **A. Malik:** Other; AfaSci, Inc. **Y. Du:** A. Employment/Salary (full or part-time):; vanderbilt University. **G. Sliwoski:** A. Employment/Salary (full or part-time):; Vanderbilt University. **R. Morrison:** A. Employment/Salary (full or part-time):; Vanderbilt University. **J. Denton:** A. Employment/Salary (full or part-time):; Vanderbilt University. **C. Niswender:** A. Employment/Salary (full or part-time):; Vanderbilt University. **S. Daniels:** A. Employment/Salary (full or part-time):; Vanderbilt University. **G. Sulikowski:** A. Employment/Salary (full or part-time):; Vanderbilt University. **X.S. Xie:** A. Employment/Salary (full or part-time):; AfaSci, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AfaSci, Inc. **C. Lindsley:** A. Employment/Salary (full or part-time):; Vanderbilt University. **C. Weaver:** A. Employment/Salary (full or part-time):; Vanderbilt University.

320.24 **B. Zou:** A. Employment/Salary (full or part-time):; AfaSci, Inc. **C. Pascual:** A. Employment/Salary (full or part-time):; AfaSci, Inc. **L. Yang:** A. Employment/Salary (full or part-time):; AfaSci, Inc. **X. Xie:** A. Employment/Salary (full or part-time):; AfaSci, Inc.

323.09 **I.A. Sindi:** Other; Ministry of high education at Saudi Arabia.

324.18 **F. Melissa:** A. Employment/Salary (full or part-time):; Brain Research Institute, University/ETH Zürich.

328.02 **B.A. Barres:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Annexon, Inc.

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328.10 **T. Maruyama:** A. Employment/Salary (full or part-time):; Ono Pharmaceutical Company.

328.15 **H. Patel:** A. Employment/Salary (full or part-time):; Biogen Idec. **R. Huang:** A. Employment/Salary (full or part-time):; Biogen Idec. **Z. Fei:** A. Employment/Salary (full or part-time):; Biogen Idec. **L. Yang:** A. Employment/Salary (full or part-time):; Biogen Idec. **K. Rhodes:** A. Employment/Salary (full or part-time):; Biogen Idec. **A. Dunah:** A. Employment/Salary (full or part-time):; Biogen Idec. **J. Chavez:** A. Employment/Salary (full or part-time):; Biogen Idec.

329.06 **D.L. Price:** A. Employment/Salary (full or part-time):; Neuropore Therapies.

329.15 **D.L. Price:** A. Employment/Salary (full or part-time):; Neuropore Therapies, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuropore Therapies, Inc. **D. Bonhaus:** A. Employment/Salary (full or part-time):; Neuropore Therapies, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuropore Therapies, Inc. **A.D. Paulino:** A. Employment/Salary (full or part-time):; Neuropore Therapies, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuropore Therapies, Inc.

329.18 **M. Nedelman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging, Animal Imaging Research.

329.24 **K.A. Allers:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **T. Kaulisch:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **S. Kreuz:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **D. Mennerich:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **H. Schauerte:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **B. Stierstorfer:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **D. Stiller:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **C. Sweatman:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **M. Winter:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim. **L. Kussmaul:** A. Employment/Salary (full or part-time):; Boehringer Ingelheim.

ABSTRACT NUMBER STATEMENT

330.12 **J. Shen:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH NS041779. **E. Valente:** A. Employment/Salary (full or part-time):; University of Salerno, Italy. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Italian Ministry of Health (Ricerca Corrente 2013, Ricerca Finalizzata Malattie Rare 2008, Giovani Ricercatori 2009), The Italian Telethon Foundation (GGP10140), MIUR (FIRB Accordi di Programma 2010). **M. Federici:** A. Employment/Salary (full or part-time):; Fondazione Santa Lucia. **N.B. Mercuri:** A. Employment/Salary (full or part-time):; University of Rome Tor Vergata. **P. Bonsi:** A. Employment/Salary (full or part-time):; Fondazione Santa Lucia. **A. Pisani:** A. Employment/Salary (full or part-time):; University of Rome Tor Vergata. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Italian Ministry of Health (Giovani Ricercatori 2009), The Italian Ministry of Instruction, University and Research (MIUR, PRIN 2011), INAIL.

330.13 **V.M. Andre:** A. Employment/Salary (full or part-time):; UCB Pharma. **I. Jacques:** A. Employment/Salary (full or part-time):; UCB Pharma. **M. Wood:** A. Employment/Salary (full or part-time):; UCB Pharma. **C. Wolff:** A. Employment/Salary (full or part-time):; UCB Pharma.

330.16 **C. Houseden:** A. Employment/Salary (full or part-time):; Cambridge Cognition.

330.19 **M.D. Wood:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **A. ates:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **M. Gillard:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **Z. Sands:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **F. Lebon:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **M. Ledecq:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **F. Moureau:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **P. Van Durm:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **A. Frycia:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **M. Benoit:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **E. Jnoff:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **B. Allemand:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **D. Scheller:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **P. Foerch:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **A. Michel:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **R. Barnaby:** A. Employment/Salary (full or part-time):; UCB Pharma SA. **M. Burton:** A. Employment/Salary (full or part-time):; UCB Pharma SA.

331.03 **R. Penn:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NTF Therapeutics, Inc (patent holder).

331.05 **R.D. Penn:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NTF Therapeutics.

331.06 **M. Saarma:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Hermo Pharma Ltd. **R.D. Penn:** A. Employment/Salary (full or part-time):; NTF Therapeutics.

ABSTRACT NUMBER STATEMENT

331.07 **M. Saarma:** A. Employment/Salary (full or part-time):; University of Helsinki. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; For CDNF research we had no industry money- from university, Academy of Finland, private foundations and MJFF. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Founder and shareholder in the Hermo Pharma Ltd company that develops CDNF based drug. F. Consulting Fees (e.g., advisory boards); For NRTN mutant research we had the research contract with CNS Theapeutics Inc.

331.08 **S.K. Moestrup:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cytoguide.

331.14 **T. Smith:** A. Employment/Salary (full or part-time):; Phenomenome Discoveries Inc. **V. Senanayake:** A. Employment/Salary (full or part-time):; Phenomenome Discoveries Inc. **D. Goodenowe:** A. Employment/Salary (full or part-time):; Phenomenome Discoveries Inc.

332.19 **A. Weiss:** A. Employment/Salary (full or part-time):; IRBM Promidis S.r.l.

333.11 **S. Oakeshott:** A. Employment/Salary (full or part-time):; PsychoGenics, Inc. **R. Port:** A. Employment/Salary (full or part-time):; PsychoGenics, Inc. **J. Sutphen:** A. Employment/Salary (full or part-time):; PsychoGenics, Inc. **J. Berger:** A. Employment/Salary (full or part-time):; PsychoGenics, Inc. **J. Watson-Johnson:** A. Employment/Salary (full or part-time):; PsychoGenics, Inc. **A.M. Farrar:** A. Employment/Salary (full or part-time):; PsychoGenics, Inc. **S. Ramboz:** A. Employment/Salary (full or part-time):; PsychoGenics, Inc. **D. Brunner:** A. Employment/Salary (full or part-time):; PsychoGenics, Inc.

335.15 **M.T. Miller*:** A. Employment/Salary (full or part-time):; F. Hoffmann-La Roche Ltd. **F. Boukhtouche:** A. Employment/Salary (full or part-time):; F. Hoffmann-La Roche Ltd. **S. Aigner:** A. Employment/Salary (full or part-time):; F. Hoffmann-La Roche Ltd. **R. Jagasia:** A. Employment/Salary (full or part-time):; F. Hoffmann-La Roche Ltd. **A. Ghosh:** A. Employment/Salary (full or part-time):; F. Hoffmann-La Roche Ltd.

336.10 **S.A. Weiss:** A. Employment/Salary (full or part-time):; Columbia University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; R25 10416928. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); K08 NS48871.

336.18 **B. Litt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuropace. F. Consulting Fees (e.g., advisory boards); NeuroVista.

338.02 **P. Raghavan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Allergan Medical.

338.05 **A. Machado:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); IntElect Medical, ATI, Cardionomics, Boston Scientific. F. Consulting Fees (e.g., advisory boards); IntElect Medical, Monteris, Boston Scientific.

ABSTRACT NUMBER	STATEMENT
338.08	**H. Kawamoto:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); a stockholder of Cyberdyne Inc. Ibaraki, Japan. **Y. Sankai:** A. Employment/ Salary (full or part-time):; CEO of Cyberdyne Inc. Ibaraki, Japan.
339.12	**M. Khrestchatisky:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Michel Khrestchatisky is director of the UMR7259 CNRS-AMU laboratory and founder and shareholder in the biotechnology company VECT-HORUS.
339.21	**E.L. Adams:** A. Employment/Salary (full or part-time):; Quincy Bioscience. **J.R. Moyer:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Quincy Bioscience.
340.07	**M. El-Etr:** A. Employment/Salary (full or part-time):; INSERM France. **C. Boucher:** A. Employment/Salary (full or part-time):; INSERM. **M. Rame:** A. Employment/Salary (full or part-time):; INSERM France. **A. Ghoumari:** A. Employment/ Salary (full or part-time):; INSERM France. **M. Schumacher:** A. Employment/Salary (full or part-time):; INSERM France. **R. Sitruk-ware:** A. Employment/Salary (full or part-time):; Population Council.
340.16	**S. Kim:** A. Employment/Salary (full or part-time):; Full time. **J. Kim:** A. Employment/Salary (full or part-time):; full time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Principal investigator.
340.25	**B. Lapp:** A. Employment/Salary (full or part-time):; EMD Millipore. **R. Clark:** A. Employment/Salary (full or part-time):; EMD Millipore. **R. Brockett:** A. Employment/Salary (full or part-time):; EMD Millipore. **F.A. Ahmadi:** A. Employment/ Salary (full or part-time):; EMD Millipore. **K. Long:** A. Employment/Salary (full or part-time):; EMD Millipore. **W. Speckmann:** A. Employment/Salary (full or part-time):; EMD Millipore.
341.16	**P.K. Yip:** A. Employment/Salary (full or part-time):; Funding was provided by the CDMRP/SCIRP award (reference W81XWH-10-1-1040). **A. Michael-Titus:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Received funding for the CDMRP/SCIRP award (reference W81XWH-10-1-1040).
342.03	**R.D. Theiss:** A. Employment/Salary (full or part-time):; Governors State University, US Department of Veterans Affairs. **J.T. Cerdenia:** A. Employment/Salary (full or part-time):; Rehabilitation Institute of Chicago.
343.04	**C. Tan:** A. Employment/Salary (full or part-time):; WVU Health Science Center. **J.W. Simpkins:** A. Employment/ Salary (full or part-time):; WVU Health Science Center.
343.12	**B. Bk:** A. Employment/Salary (full or part-time):; NIH. **Y. Ya-Li Zheng:** A. Employment/Salary (full or part-time):; NIH. **V. shukla:** A. Employment/Salary (full or part-time):; NIH. **N.D. . Amin:** A. Employment/Salary (full or part-time):; NIH. **P. Philip Grant:** A. Employment/Salary (full or part-time):; NIH. **H.C. Pant:** A. Employment/Salary (full or part-time):; NIH.
344.12	**D.R. Lynch:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Euroimmune - Clinical NDMAR antibody test.
344.13	**B. West:** A. Employment/Salary (full or part-time):; Plexxikon, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Plexxikon Inc. **K.N. Green:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Plexxikon Inc.
344.24	**A.J. Symes:** A. Employment/Salary (full or part-time):; Uniformed Services University Health Sciences, Department of Defense.
345.03	**T. Kanazawa:** A. Employment/Salary (full or part-time):; Osaka Medical College. **S. Maruyama:** A. Employment/ Salary (full or part-time):; Osaka Medical College. **H. Kikuyama:** A. Employment/Salary (full or part-time):; Shin-Abuyama Hospital. **M. Ikeda:** A. Employment/Salary (full or part-time):; Fujita Health University. **J. Koh:** A. Employment/ Salary (full or part-time):; Osaka Medical College. **N. Iwata:** A. Employment/Salary (full or part-time):; Fujita Health University. **H. Yoneda:** A. Employment/Salary (full or part-time):; Osaka Medical College.
346.01	**S.P. Zehntner:** A. Employment/Salary (full or part-time):; Biospective. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biospective. **B.J. Bedell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biospective. F. Consulting Fees (e.g., advisory boards); Biospective.
346.05	**D.J. Lodge:** F. Consulting Fees (e.g., advisory boards); Dey Pharmaceuticals.
346.08	**D.J. Lodge:** F. Consulting Fees (e.g., advisory boards); Dey Pharmaceuticals.
346.21	**M.A. Geyer:** A. Employment/Salary (full or part-time):; UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Intracellular Therapeutics, Johnson & Johnson, NIDA, NIMH, and the U.S. Veteran's Administration VISN 22 Mental Illness Research, Education, and Clinical Center. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Equity interest in San Diego Instruments. F. Consulting Fees (e.g., advisory boards); Abbott, Acadia, Addex, Cerca, Lundbeck, Merck, Neurocrine, Omeros, Takeda, and Teva. **J.W. Young:** A. Employment/Salary (full or part-time):; UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Lundbeck, Omeros. F. Consulting Fees (e.g., advisory boards); Amgen.
347.02	**P.A. Babalola:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); employees of Pfizer - commercial support. **Z.A. Hughes:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); employees of Pfizer - commercial support. **N.J. Brandon:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Research support (Dopamine measurement).
347.14	**J.J. Joshi:** A. Employment/Salary (full or part-time):; Pfizer. **V. Reinhart:** A. Employment/Salary (full or part-time):; Pfizer. **D. Volfson:** A. Employment/Salary (full or part-time):; Pfizer. **T.A. Lanz:** A. Employment/Salary (full or part-time):; Pfizer.

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347.15 **V.L. Reinhart:** A. Employment/Salary (full or part-time):; Pfizer. **T. Nguyen:** A. Employment/Salary (full or part-time):; Pfizer. **T.A. Lanz:** A. Employment/Salary (full or part-time):; Pfizer.

348.07 **E.L. Sabban:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); IP at NYMC, Stressout Inc. **L.I. Serova:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); IP at NYMC.

348.08 **L.I. Serova:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); IP at NYMC.

348.23 **D.S. Kreiss:** A. Employment/Salary (full or part-time):; Colgate University.

348.24 **D.S. Kreiss:** A. Employment/Salary (full or part-time):; Colgate University.

349.23 **E.P. Zorrilla:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); TP-10 generously provided by Pfizer, Inc.

350.05 **C. Wahlestedt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); cofounder of Epignetix Inc.

350.15 **R.L. Huganir:** F. Consulting Fees (e.g., advisory boards); Millipore.

352.05 **P. White:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed, University of Rochester Medical School. **F. Gilels:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed, University of Rochester Medical School.

354.17 **P.A. Tallal:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Scientific Learning Corporation, Posit Science Corporation. F. Consulting Fees (e.g., advisory boards); Scientific Learning Corporation.

360.18 **A. Onken:** A. Employment/Salary (full or part-time):; University of Geneva. **G.C. DeAngelis:** A. Employment/Salary (full or part-time):; University of Rochester. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grant EY016178. **D.E. Angelaki:** A. Employment/Salary (full or part-time):; Rice University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grant EY019087. **A. Pouget:** A. Employment/Salary (full or part-time):; University of Geneva. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; James McDonnell Foundation, FNS 31003A_143707.

364.01 **H. Mazyar:** A. Employment/Salary (full or part-time):; University of Southern California. **B.S. Tjan:** A. Employment/Salary (full or part-time):; University of Southern California.

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366.08 **J. Dyhrfjeld-Johnsen:** A. Employment/Salary (full or part-time):; Sensorion. **A. Broussy:** A. Employment/Salary (full or part-time):; Sensorion. **M. Petremann:** A. Employment/Salary (full or part-time):; Sensorion. **V. Brieuc:** A. Employment/Salary (full or part-time):; Sensorion. **L. Nguyen Cong Duc:** A. Employment/Salary (full or part-time):; Sensorion.

367.10 **G.P. Siegmund:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MEA Forensic Engineers and Scientists.

368.11 **C.Y. Saab:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Medtronic.

368.12 **C.Y. Saab:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boston Scientific (PI-initiated).

369.01 **B. Greenwood-Van Meerveld:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; GlaxoSmithKline.

369.15 **C.M. Primus:** A. Employment/Salary (full or part-time):; Primus Consulting. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Primus Consulting.

369.16 **R.H. Morland:** A. Employment/Salary (full or part-time):; MRC CASE award to the London Pain Consortium in collaboration with Pfizer.

370.06 **C. Baastrup:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Gabapentin (study drug) was supplied by Pfizer UK. **N. Andrews:** A. Employment/Salary (full or part-time):; Previously employed by Pfizer UK.

371.11 **T. Williams-Stinnette:** A. Employment/Salary (full or part-time):; Eli Lilly & Company. **C.L.A. Ruble:** A. Employment/Salary (full or part-time):; Eli Lilly & Company. **S.P. Arneric:** A. Employment/Salary (full or part-time):; Eli Lilly & Company.

372.03 **Y. Tomina:** A. Employment/Salary (full or part-time):; Japan Society for the Promotion of Science. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Japan Society for the Promotion of Science. **M. Takahata:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Japan Society for the Promotion of Science.

373.01 **D. Kipke:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroNexus Technologies.

373.16 **D. McDonnall:** A. Employment/Salary (full or part-time):; Ripple.

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373.19	**G.J. Gage:** A. Employment/Salary (full or part-time):; Backyard Brains, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Greg has an ownership interest in Backyard Brains. **T.C. Marzullo:** A. Employment/Salary (full or part-time):; Backyard Brains. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Tim also has an ownership interest in Backyard Brains.
373.21	**J.R. Eles:** A. Employment/Salary (full or part-time):; University of Pittsburgh. **C. Weaver:** A. Employment/Salary (full or part-time):; University of Pittsburgh. **X.T. Cui:** A. Employment/Salary (full or part-time):; University of Pittburgh.
373.22	**T. Kim:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patents. **S.F. Giszter:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patents.
374.18	**H.M. Herr:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); iWalk Inc.
377.09	**M.G. Tansey:** F. Consulting Fees (e.g., advisory boards); consultant for Karyopharm and Angiochem. Other; ex-employee of Xencor Inc which is developing XPro for neurological indications but is not a paid consultant and does not hold significant financial stake in the company.
380.20	**N. Lajud:** A. Employment/Salary (full or part-time):; INSTITUTO MEXICANO DEL SEGURO SOCIAL. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Supported by grants from IMSS (PROT FIS/IMSS/PROT/G11/976).
382.07	**M. Nishihara:** Other; Corresponding author.
383.09	**I.F. Perez:** A. Employment/Salary (full or part-time):; Marienela Buendia, Maria Gonzalez. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Isbery Pérez, Raian Contreras. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Luis Betancourt. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pedro Rada, Daniel Paredes, Miguel Skirzewski. F. Consulting Fees (e.g., advisory boards); Luis Hernández.
384.11	**L.A. Kilpatrick:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Amylin Pharmaceuticals, LLC.
385.04	**S. Krumm:** A. Employment/Salary (full or part-time):; Novartis Foundation. **K.I. Taylor:** A. Employment/Salary (full or part-time):; Swiss National Science Foundation Ambizione Fellowship PZ00P1_126493, Young Clinical Researcher Grant from the University of Basel.
385.17	**Y. Yu:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); National Science Foundation under Grant ECCS-1126707. **L.A. Gabel:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); National Science Foundation under Grant ECCS-1126707.
387.02	**J.W. Young:** A. Employment/Salary (full or part-time):; UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Lundbeck, NIMH, Omeros, and the U.S. Veteran's Administration VISN 22 Mental Illness Research, Education, and Clinical Center. F. Consulting Fees (e.g., advisory boards); Amgen. **M.A. Geyer:** A. Employment/Salary (full or part-time):; UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Intracellular Therapeutics, Johnson & Johnson, NIDA, NIMH, and the U.S. Veteran's Administration VISN 22 Mental Illness Research, Education, and Clinical Center. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Equity Interest in San Diego Instruments. F. Consulting Fees (e.g., advisory boards); Abbott, Acadia, Addex, Cerca, Lundbeck, Merck, Neurocrine, Omeros, Takeda, and Teva. **G.A. Light:** A. Employment/Salary (full or part-time):; UCSD. **X. Zhou:** A. Employment/Salary (full or part-time):; UCSD.
393.06	**H. Amita:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Japan Society for Promotion of Science.
394.02	**C. Litterst:** A. Employment/Salary (full or part-time):; Bio-Rad.
394.07	**Y. Takimoto:** A. Employment/Salary (full or part-time):; Healthcare System. **X. Wu:** A. Employment/Salary (full or part-time):; HealthCare System.
394.10	**E. Bigelow:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Diagnostic Biochips. **X.T. Cui:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Diagnostic Biochips. **B. Jamieson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Diagnostic Biochips.
394.18	**D. Weldon:** A. Employment/Salary (full or part-time):; EMD Millipore. **H. Liu:** A. Employment/Salary (full or part-time):; EMD Millipore. **Y. Williams:** A. Employment/Salary (full or part-time):; EMD Millipore. **G. Johnston:** A. Employment/Salary (full or part-time):; Emd Millipore.
394.20	**M. Niedringhaus:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Mead Johnson. **Y. Wang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cell Microsystems, UNC Chapel Hill. **N. Allbritton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cell Microsystems, UNC Chapel Hill. **A.M. Taylor:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Mead Johnson.

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394.23 **J. Pihl:** A. Employment/Salary (full or part-time):; Cellectricon AB. **P. Karila:** A. Employment/Salary (full or part-time):; Cellectricon AB. **S. Aspengren:** A. Employment/Salary (full or part-time):; Cellectricon AB. **A. Karlsson:** A. Employment/Salary (full or part-time):; Cellectricon AB. **M. Karlsson:** A. Employment/Salary (full or part-time):; Mattias Karlsson.

394.26 **S. Gangar:** A. Employment/Salary (full or part-time):; Novus Biologicals. **T. Maslanik:** A. Employment/Salary (full or part-time):; Novus Biologicals. **G. Mack:** A. Employment/Salary (full or part-time):; Novus Biologicals. **K. Padgett:** A. Employment/Salary (full or part-time):; Novus Biologicals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Novus Biologicals.

395 **J. Eberwine:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent inventor for TIVA, TIPeR, aRNA. Stock in LBS Technologies.

395.05 **E. Boyden:** F. Consulting Fees (e.g., advisory boards); GSK.

396 **H. Song:** F. Consulting Fees (e.g., advisory boards); Roche.

396.02 **Y. Sun:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); small research grants from Roche and GSK.

401 **D.J. Anderson:** A. Employment/Salary (full or part-time):; Full-time Investigator, Howard Hughes Medical Institute. F. Consulting Fees (e.g., advisory boards); Allen Institute for Brain Science Scientific Advisory Board, Allen Institute for Brain Science Mindscope Advisory Board, Allen Institute for Brain Science Connectional Atlas Advisory Council. Other; Stem Cells Inc. Scientific Adviosory Board.

403.06 **C.E. Moussa:** Other; Dr. Moussa has a provisional patent application to use Tyrosine Kinase Inhibitors as a therapry for neurodegeneration.

403.12 **K. Kastanenka:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen Idec. **T. Bussiere:** A. Employment/Salary (full or part-time):; Biogen Idec. **F. Qian:** A. Employment/Salary (full or part-time):; Biogen Idec. **P. Weinreb:** A. Employment/Salary (full or part-time):; Biogen Idec. **K. Rhodes:** A. Employment/Salary (full or part-time):; Biogen Idec. **B. Bacskai:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen Idec.

405.04 **A.V. Goonawardena:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; F. Hoffmann – La Roche Ltd., Basel, Switzerland.

412.01 **J. Wang:** A. Employment/Salary (full or part-time):; Georgia Regents Univ. and VA Medical Center. **C. Wakade:** A. Employment/Salary (full or part-time):; Georgia Regents Univ. and VA Medical Center. **R.K. Yu:** A. Employment/Salary (full or part-time):; Georgia Regents Univ. and VA Medical Center.

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412.22 **J.P. McAllister:** A. Employment/Salary (full or part-time):; University of Utah. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Hydrocephalus Association. F. Consulting Fees (e.g., advisory boards); NIH. **C.E. Johanson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Hydrocephalus Association. **E.M. Rodriguez:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Hydrocephalus Association, Fondecyt, Chile.

412.23 **V.M. Lee:** A. Employment/Salary (full or part-time):; STEMCELL Technologies Inc. **A. Blak:** A. Employment/Salary (full or part-time):; STEMCELL Technologies Inc. **M. Olson:** A. Employment/Salary (full or part-time):; STEMCELL Technologies Inc. **J. Antonchuk:** A. Employment/Salary (full or part-time):; STEMCELL Technologies Inc. **A.C. Eaves:** A. Employment/Salary (full or part-time):; STEMCELL Technologies Inc. **T.E. Thomas:** A. Employment/Salary (full or part-time):; STEMCELL Technologies Inc. **S.A. Louis:** A. Employment/Salary (full or part-time):; STEMCELL Technologies Inc.

413.07 **M.E. De Bellard:** A. Employment/Salary (full or part-time):; CSUN.

413.16 **H.E. Stevens:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Research Fellowship from APIRE/Wyeth Pharmaceuticals.

415.15 **T. Araki:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **T. Ono:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **Y. Suzuki:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **T. Yamashita:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **Y. Kato:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **N. Sato:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation.

415.18 **D.A. Fayuk:** A. Employment/Salary (full or part-time):; University of Tampere.

415.22 **T. Yamashita:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **T. Ono:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **Y. Suzuki:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **T. Araki:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **Y. Kato:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation. **N. Sato:** A. Employment/Salary (full or part-time):; Mitsubishi Tanabe Pharma Corporation.

415.26 **E.M. Williamson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; GSK Nutrition. **B.J. Whalley:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; GSK Nutrition.

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415.27	**P. Laeng:** A. Employment/Salary (full or part-time):; Galenea Corp. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Galenea Corp.
415.28	**C. Chen:** A. Employment/Salary (full or part-time):; EMD Millipore. **N. Asbrock:** A. Employment/Salary (full or part-time):; EMD Millipore. **V.T. Chu:** A. Employment/Salary (full or part-time):; EMD Millipore.
418.02	**M.S. McNeill:** A. Employment/Salary (full or part-time):; University of Iowa.
418.07	**C. Mazzocco:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Eurogentec SA (Belgium) synthesized the anti-PC2 antibody through a collaboration with CNRS. **B. Yvert:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Eurogentec SA (Belgium) synthesized the anti-PC2 antibody through a collaboration with CNRS.
418.21	**J.H. Martin:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH R01NS079569, March of Dimes Research Foundation; Columbia University Motor Neuron Center Grant.
419.04	**M. Watanabe:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent application. **E.S. Monuki:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent application.
419.20	**B.M. Bader:** A. Employment/Salary (full or part-time):; NeuroProof GmbH. **A. Pielka:** A. Employment/Salary (full or part-time):; NeuroProof GmbH. **M. Winkler:** A. Employment/Salary (full or part-time):; NeuroProof GmbH. **A. Podßun:** A. Employment/Salary (full or part-time):; NeuroProof GmbH. **K. Jügelt:** A. Employment/Salary (full or part-time):; NeuroProof GmbH. **O.H.U. Schröder:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroProof GmbH. **A. Voss:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroProof GmbH.
420.05	**G.B. Wells:** A. Employment/Salary (full or part-time):; Texas A&M University System Health Science Center.
421.14	**D.F. Covey:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sage Therapeutics. F. Consulting Fees (e.g., advisory boards); Sage Therapeutics. **C.F. Zorumski:** F. Consulting Fees (e.g., advisory boards); Sage Therapeutics.
421.19	**S.J. Moss:** F. Consulting Fees (e.g., advisory boards); SAGE Therapeutics and Astrazeneca.
422.20	**W.J. Tyler:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); WJT has multiple patents pending on non-invasive brain stimulation and owns shares in Neurotrek, Inc.
425.13	**N.W. Johnson:** A. Employment/Salary (full or part-time):; Eli Lilly.
428.12	**M.D. Scofield:** A. Employment/Salary (full or part-time):; Medical University of South Carolina. **R.J. Smith:** A. Employment/Salary (full or part-time):; Medical University of South Carolina. **H.A. Boger:** A. Employment/Salary (full or part-time):; Medical University of South Carolina. **P.W. Kalivas:** A. Employment/Salary (full or part-time):; Medical University of South Carolina.
429.06	**Y. Fujita:** A. Employment/Salary (full or part-time):; full. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grant for Core Reseach for Evolutional Science and Technology from the Japan Science and Technology Agency. **Y. Fujino:** A. Employment/Salary (full or part-time):; full. **T. Yamashita:** A. Employment/Salary (full or part-time):; full. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grant for Core Reseach for Evolutional Science and Technology from the Japan Science and Technology Agency.
430.16	**R. Huang:** A. Employment/Salary (full or part-time):; RayBiotech.
431.23	**E.J. Smits:** A. Employment/Salary (full or part-time):; part of grant mentioned in B. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; FP7-SME-2010-1 prgramme - Grant agreement 262291. **A.J. Tolonen:** A. Employment/Salary (full or part-time):; part of grant mentioned in B. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; FP7-SME-2010-1 programme - Grant agreement 262291. **L. Cluitmans:** A. Employment/Salary (full or part-time):; part of grant mentioned in B. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; FP7-SME-2010-1 programme - Grant agreement 262291. **M. van Gils:** A. Employment/Salary (full or part-time):; part of grant mentioned in B. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; FP7-SME-2010-1 programme - Grant agreement 262291. **R.C. Zietsma:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending: PCT/GB2011/050898. **N.M. Maurits:** A. Employment/Salary (full or part-time):; part of grant mentioned in B. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; FP7-SME-2010-1 programme - Grant agreement 262291.
432.17	**M.G. Tansey:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Subcontract to FPRT Bio through MJFF award. **R.J. Tesi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CEO of FPRT Bio.
435.06	**K. Ando:** A. Employment/Salary (full or part-time):; Central Institute for Experimental Animals.

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435.16 **R. Wronski:** A. Employment/Salary (full or part-time):; QPS-Austria Gmbh. **D. Havas:** A. Employment/Salary (full or part-time):; QPS-Austria GmbH. **S. Rohler:** A. Employment/Salary (full or part-time):; QPS-Austria GmbH. **S. Flunkert:** A. Employment/Salary (full or part-time):; QPS-Austria Gmbh. **B. Hutter-Paier:** A. Employment/Salary (full or part-time):; QPS-Austria GmbH.

436.14 **S.A. Farr:** A. Employment/Salary (full or part-time):; VA Medical Center. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Kemin Foods LC. **K.A. Herrilinger:** A. Employment/Salary (full or part-time):; Kemin Foods LC. **B.J. Lewis:** A. Employment/Salary (full or part-time):; Kemin Foods LC. **S. Feng:** A. Employment/Salary (full or part-time):; Kemin Foods LC.

437.12 **K.L. Eskow Jaunarajs:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH P50NS037409-13. **D.G. Standaert:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH P50NS037409-13.

438.06 **R. Shi:** A. Employment/Salary (full or part-time):; Manitoba Health Research Council (MHRC) / Manitoba Institute of Child Health (MICH). C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Dr. Spencer B. Gibson, Manitoba Institute of Cell Biology, Winnipeg, Manitoba, Canada.

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438.18 **Z. Huang:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc. **C. Ung:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc. **Z. Filipovic:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc. **E.L. Troy:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc. **R.W. Colburn:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc. **J.F. Iaci:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc. **D. Button:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc. **A.O. Caggiano:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc. **T.J. Parry:** A. Employment/Salary (full or part-time):; Acorda Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics, Inc.

439.03 **P. Ferchmin:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Universidad Central del Caribe. **V.A. Eterovic:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Universidad Central del Caribe.

439.10 **W.J. Banz:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Solae, LLC. **D.A. Butteiger:** A. Employment/Salary (full or part-time):; Solae, LLC. **J.L. Cheatwood:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Solae, LLC.

439.15 **M. Tauchi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Novartis Pharma.

440.12 **X. Ren:** A. Employment/Salary (full or part-time):; Robert C. Byrd Health Sciences Center, Department of Physiology & Pharmacology, Center for Basic and Translational Stroke Research, West Virginia University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH PO1 AG022550, NIH PO1 AG027956.

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441.04	**P. LoPresti:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; TEVA Pharmaceutical Industries (Israel).
441.12	**C.E. Moore:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock. **T. Ahtoniemi:** A. Employment/Salary (full or part-time):; Employment. **J. Oksman:** A. Employment/Salary (full or part-time):; Employment. **K. Lehtimaki:** A. Employment/Salary (full or part-time):; Employment. **M. gimenez:** A. Employment/Salary (full or part-time):; Employment. **N. Vartianen:** A. Employment/Salary (full or part-time):; Employment. **D. McIntosh:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent holder. **H. Lopez:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Contracted research. **J. Wolooszynek:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; contracted research. **K. Etzel:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Contracted research. **S. Haq:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock.
442.14	**H.S. Mayberg:** F. Consulting Fees (e.g., advisory boards); St. Jude Medical Neuromodulation. Other; Holds intellectual property in the field of DBS for depression.
442.18	**P.P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **S. Finklestein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biotrofix. **M. Nedelman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research, Ekam Imaging.
442.23	**J.D. Van Horn:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Kitware, Inc.
443.04	**J. Courade:** A. Employment/Salary (full or part-time):; UCB pharma. **C. Albrecht:** A. Employment/Salary (full or part-time):; EVOTEC AG. **U. Fritz:** A. Employment/Salary (full or part-time):; EVOTEC AG. **A. Mingorance-Le Meur:** A. Employment/Salary (full or part-time):; UCB pharma. **H. Gerets:** A. Employment/Salary (full or part-time):; UCB pharma. **G. Kumar:** A. Employment/Salary (full or part-time):; UCB pharma. **E. Jigorel:** A. Employment/Salary (full or part-time):; UCB pharma. **E. Jnoff:** A. Employment/Salary (full or part-time):; UCB pharma. **R. Kaminski:** A. Employment/Salary (full or part-time):; UCB pharma.
445.28	**I.J. Malik:** A. Employment/Salary (full or part-time):; H. Lundbeck A/S. **B. Lee:** A. Employment/Salary (full or part-time):; H. Lundbeck A/S. **R. Madsen:** A. Employment/Salary (full or part-time):; H. Lundbeck A/S. **K. Thirstrup:** A. Employment/Salary (full or part-time):; H. Lundbeck A/S.
446.07	**J.A. Zombeck:** A. Employment/Salary (full or part-time):; Biomodels LLC. **G.D. Lyng:** A. Employment/Salary (full or part-time):; Biomodels LLC. **S.T. Sonis:** A. Employment/Salary (full or part-time):; Biomodels LLC.
446.10	**Y. Li:** A. Employment/Salary (full or part-time):; University of Melbourne, Florey Institute of Neuroscience and Mental Health.
448.02	**A. Ryabinin:** A. Employment/Salary (full or part-time):; OHSU.
448.10	**P. Jayarajan:** A. Employment/Salary (full or part-time):; Suven Life Sciences LTD. **R. Nirogi:** A. Employment/Salary (full or part-time):; Suven Life Sciences LTD. **A. Shinde:** A. Employment/Salary (full or part-time):; Suven Life Sciences LTD. **R. Medapati:** A. Employment/Salary (full or part-time):; Suven Life Sciences LTD. **V. Goura:** A. Employment/Salary (full or part-time):; Suven Life Sciences LTD. **S.V. Yathavakilla:** A. Employment/Salary (full or part-time):; Suven Life Sciences LTD.
448.28	**D.J. Woodward:** Other; financial interst in Neuroplex Inc. that provided instrumentation for the study.
449.12	**D.C. Mash*:** A. Employment/Salary (full or part-time):; University of Miami. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; DA06227.
450.02	**Y. Rho:** A. Employment/Salary (full or part-time):; Dept. of Mathematics, University of Pittsburgh. **S.D. Burton:** A. Employment/Salary (full or part-time):; Carnegie Mellon University. **G.B. Ermentrout:** A. Employment/Salary (full or part-time):; University of Pittsburgh. **N.N. Urban:** A. Employment/Salary (full or part-time):; Carnegie Mellon University.
451.22	**T. Chakraborty:** A. Employment/Salary (full or part-time):; NSF 0920668. **J.W. Wang:** A. Employment/Salary (full or part-time):; NSF 0920668.
452.04	**G.S. Tang:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Givaudan Flavors Corporation. **C.T. Simons:** A. Employment/Salary (full or part-time):; Givaudan Flavors Corporation. **M.U. Shankar:** A. Employment/Salary (full or part-time):; Givaudan Flavors Corporation. **S.M. McClure:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Givaudan Flavors Corporation.
456.01	**G. Bamberger:** A. Employment/Salary (full or part-time):; Med Associates Incorporated.
458.16	**A. Pawar:** A. Employment/Salary (full or part-time):; Salk Institute.

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460.08 **M.L. LaCroix-Fralish:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals, Inc. **R. Villanueva:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals, Inc. **M.M. Drost:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals, Inc. **M.J. Garcia:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals, Inc. **S.D. Croll:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals, Inc. **N. Papadopoulos:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals, Inc. **A.J. Murphy:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals, Inc. **L.E. Macdonald:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals, Inc.

460.09 **N. Alessandri-Haber:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. **M. Sivula:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. **E.C. Tseng:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. **M. Gao:** A. Employment/Salary (full or part-time):; regeneron pharmaceuticals. **M. Morra:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. **N.J. Papadopoulos:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. **A.J. Murphy:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. **L.E. MacDonald:** A. Employment/Salary (full or part-time):; Regeneron pharmaceuticals.

460.12 **T.L. Yaksh:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Solstice Neurosciences, NIH Grant NS16541. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Solstice Neurosciences.

ABSTRACT NUMBER STATEMENT

462.11 **M.J. Garcia:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **D. Zhang:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **M.M. Drost:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **L.A. Cortes-Burgos:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **L.E. Macdonald:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **S.D. Croll:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **M.L. Lacroix-Fralish:** A. Employment/Salary (full or part-time):; Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals.

462.15 **R. Wodarski:** A. Employment/Salary (full or part-time):; Lilly. **K.A. Wafford:** A. Employment/Salary (full or part-time):; Lilly. **G. Gilmour:** A. Employment/Salary (full or part-time):; Lilly. **W.F. Seidel:** A. Employment/Salary (full or part-time):; Lilly. **D. Kellett:** A. Employment/Salary (full or part-time):; Lilly. **B.J. Eastwood:** A. Employment/Salary (full or part-time):; Lilly. **E.A. Shanks:** A. Employment/Salary (full or part-time):; Lilly. **D.M. Edgar:** A. Employment/Salary (full or part-time):; Lilly. **J.D. Kennedy:** A. Employment/Salary (full or part-time):; Lilly.

463.09 **B. Segura:** Other; i have nothing.

464.10 **K.D. Micheva:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aratome, LLC. **R.J. Weinberg:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Aratome, LLC. **S.J. Smith:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aratome, LLC.

465.02 **R. Chaudhary:** A. Employment/Salary (full or part-time):; National Brain Research Centre. **R. Katreddi:** A. Employment/Salary (full or part-time):; National Brain Research Centre. **V. Rema:** A. Employment/Salary (full or part-time):; National Brain Research Centre.

466.01 **T. Desautels:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Some of the work described in this submission is the subject of a US provisional patent application filed and owned by the California Institute of Technology.

466.28 **R.M. Ichiyama:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Novartis.

ABSTRACT NUMBER	STATEMENT
466.29	**M.S. Nandra:** Other; Some of the work described in this submission is the subject of a US provisional patent application filed and owned by the California Institute of Technology.
468.02	**C.L. Towne:** A. Employment/Salary (full or part-time):; Circuit Therapeutics. **K. Deisseroth:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Circuit Therapeutics. F. Consulting Fees (e.g., advisory boards); Circuit Therapeutics. **S.L. Delp:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Circuit Therapeutics. F. Consulting Fees (e.g., advisory boards); Circuit Therapeutics.
472.05	**L. Remage-Healey:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH.
473.04	**S.J. Russo:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Johnson & Johnson. **G.E. Hodes:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Johnson & Johnson.
474.11	**A. Arata:** A. Employment/Salary (full or part-time):; Dept. of Physiol.Hyogo College of Med.
475.13	**A.R. Gobinath:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Coast Capital Savings Depression Research Fund. **J.L. Workman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Coast Capital Savings Depression Research Fund. **L.A.M. Galea:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Coast Capital Savings Depression Research Fund.
475.20	**S. Maccari:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Fondation de France.
478.21	**P.G. Haydon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); GliaCure Inc.
479.04	**J.G. Foy:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Pearson Education, Inc.
479.09	**N. Ng:** A. Employment/Salary (full or part-time):; Lumos Labs, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc. **D.A. Sternberg:** A. Employment/Salary (full or part-time):; Lumos Labs, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc. **B. Katz:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc. **J.L. Hardy:** A. Employment/Salary (full or part-time):; Lumos Labs, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc. **M.D. Scanlon:** A. Employment/Salary (full or part-time):; Lumos Labs, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc.
486.17	**F.I. Carroll:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US patents claiming the composition of JDTic. **B.M. Cohen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); pending patents on pyrimidines to treat bipolar disorders, kappa-opioid agonists in bipolar mania, and on mitochondrial replacement. **W.A. Carlezon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US patent covering the use of kappa antagonists in the treatment of depression. Other; The American College of Neuropsychopharmacology and Concert Pharmaceuticals.
487.03	**B. Orback:** A. Employment/Salary (full or part-time):; Denator AB. **M. Söderquist:** A. Employment/Salary (full or part-time):; Denator AB.
487.04	**U. Sollenberg:** A. Employment/Salary (full or part-time):; Denator AB. **M. Söderquist:** A. Employment/Salary (full or part-time):; Denator AB. **M. Borén:** A. Employment/Salary (full or part-time):; Denator AB. **K. Skold:** A. Employment/ Salary (full or part-time):; Denator AB.
487.05	**S. Gutierrez:** A. Employment/Salary (full or part-time):; EMD Millipore. **I. Strug:** A. Employment/Salary (full or part-time):; EMD Millipore. **A. Cappione:** A. Employment/Salary (full or part-time):; EMD Millipore. **J.L. Smith:** A. Employment/ Salary (full or part-time):; EMD Millipore. **M. Mabuchi:** A. Employment/Salary (full or part-time):; EMD Millipore. **S. Suhrawardy:** A. Employment/Salary (full or part-time):; EMD Millipore. **T. Nadler:** A. Employment/Salary (full or part-time):; EMD Millipore.
487.11	**S.L. Karsten:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ownership interest. **A. Bragin:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership interest. **L.C. Kudo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest.
487.16	**J.M. Kornhauser:** A. Employment/Salary (full or part-time):; Cell Signaling Technology. **E. Skrzypek:** A. Employment/ Salary (full or part-time):; Cell Signaling Technology. **B. Zhang:** A. Employment/Salary (full or part-time):; Cell Signaling Technology. **B. Murray:** A. Employment/Salary (full or part-time):; Cell Signaling Technology. **V. Latham:** A. Employment/Salary (full or part-time):; Cell Signaling Technology. **P.V. Hornbeck:** A. Employment/Salary (full or part-time):; Cell Signaling Technology.

ABSTRACT NUMBER STATEMENT

487.23 **E. Bullmore:** A. Employment/Salary (full or part-time):; GlaxoSmithKline, Clinical Unit Cambridge, Cambridge, UK.

487.25 **R. dolmetsch:** A. Employment/Salary (full or part-time):; Stanford University.

488.09 **A. Renganathan Chandrika:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); CIP Filing No. 13/661,787 on U.S Patent 8,304,198 (granted) (PCT/ IN08/000370). **M. Steephan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); U.S Patent 8,304,198 (granted), CIP Filing No. 13/661,787 on U.S Patent 8,304,198 (granted) (PCT/IN08/000370), Europe Patent Filing No:08789892.0, Indian Patent Filing No: 1276/ CHE/2007. **R. Raveendran:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); U.S Patent 8,304,198 (granted), CIP Filing No. 13/661,787 on U.S Patent 8,304,198, Europe Patent Filing No:08789892.0, Indian Patent Filing No: 1276/CHE/2007. **S. Sudarsanadevi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U.S Patent 8,304,198 (granted), CIP Filing No. 13/661,787 on U.S Patent 8,304,198, Europe Patent Filing No:08789892.0, Indian Patent Filing No: 1276/ CHE/2007. **A.G. Mohanan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); CIP Filing No. 13/661,787 on U.S Patent 8,304,198 (granted) (PCT/ IN08/000370). **M. Madhavan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); U.S Patent 8,304,198 (granted), CIP Filing No. 13/661,787 on U.S Patent 8,304,198, Europe Patent Filing No:08789892.0, Indian Patent Filing No: 1276/CHE/2007. **R. Omkumar:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U.S Patent 8,304,198 (granted), CIP Filing No. 13/661,787 on U.S Patent 8,304,198, Europe Patent Filing No:08789892.0, Indian Patent Filing No: 1276/ CHE/2007.

488.25 **W. Denk:** Other; License income from SBEM technology.

488.26 **J.S. Trimmer:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NIH grant NS34383.

488.28 **M. Reuss:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abberior Instruments.

489.06 **J.A. Araujo:** A. Employment/Salary (full or part-time):; InterVivo Solutions. F. Consulting Fees (e.g., advisory boards); CanCog Technologies, VivoCore Inc. **K. Sokolnicki:** A. Employment/Salary (full or part-time):; inviCRO. **J. Hesterman:** A. Employment/Salary (full or part-time):; inviCRO. **J. Hoppin:** A. Employment/Salary (full or part-time):; inviCRO. **D.E. Araujo:** A. Employment/Salary (full or part-time):; VivoCore. **H. Dobson:** A. Employment/ Salary (full or part-time):; CanCog.

489.11 **M.B. Bouchard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder. **E.M.C. Hillman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder.

ABSTRACT NUMBER STATEMENT

489.21 **K.K. Aswani:** A. Employment/Salary (full or part-time):; Lumen Dynamics. **J. Jonkman:** F. Consulting Fees (e.g., advisory boards); Lumen Dynamics.

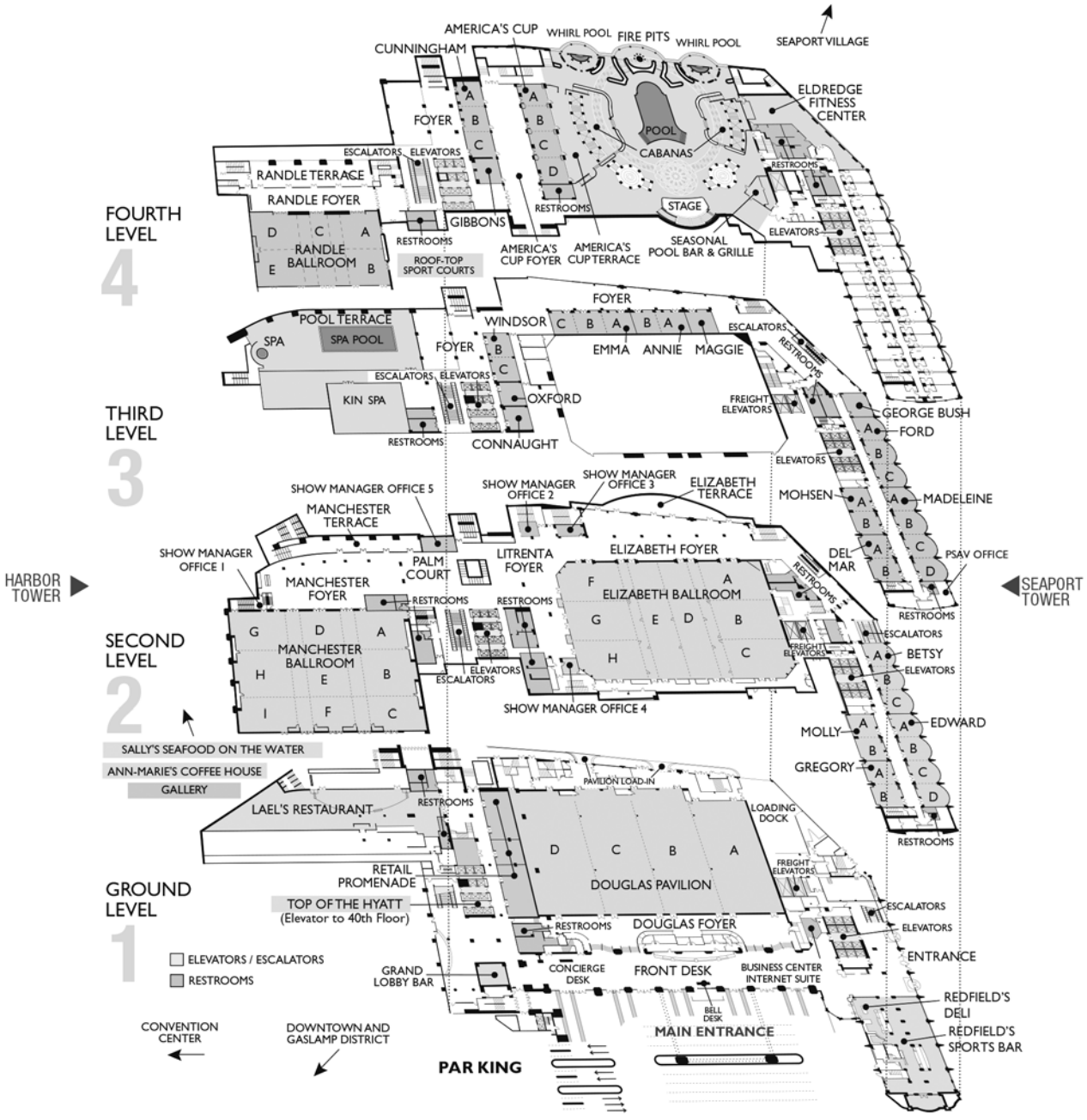
489.22 **G.A. Johnson:** F. Consulting Fees (e.g., advisory boards); Elsevier. **H. Gruber:** A. Employment/Salary (full or part-time):; Elsevier. **D. Marques:** A. Employment/Salary (full or part-time):; Elsevier. **J. Nothias:** A. Employment/Salary (full or part-time):; Vizua. **E. Ventura:** A. Employment/Salary (full or part-time):; Vizua.

489.30 **G.A. Johnson:** F. Consulting Fees (e.g., advisory boards); Elsevier.

490.01 **S. Sokol:** A. Employment/Salary (full or part-time):; John Hopkins University. **C. Petre:** A. Employment/Salary (full or part-time):; Brain Corporation. **F. Piekniewski:** A. Employment/Salary (full or part-time):; Brain Corporation. **B. Szatmary:** A. Employment/Salary (full or part-time):; Brain Corporation. **E. Izhikevich:** A. Employment/Salary (full or part-time):; Brain Corporation.

Hotel Floor Plans

Manchester Grand Hyatt

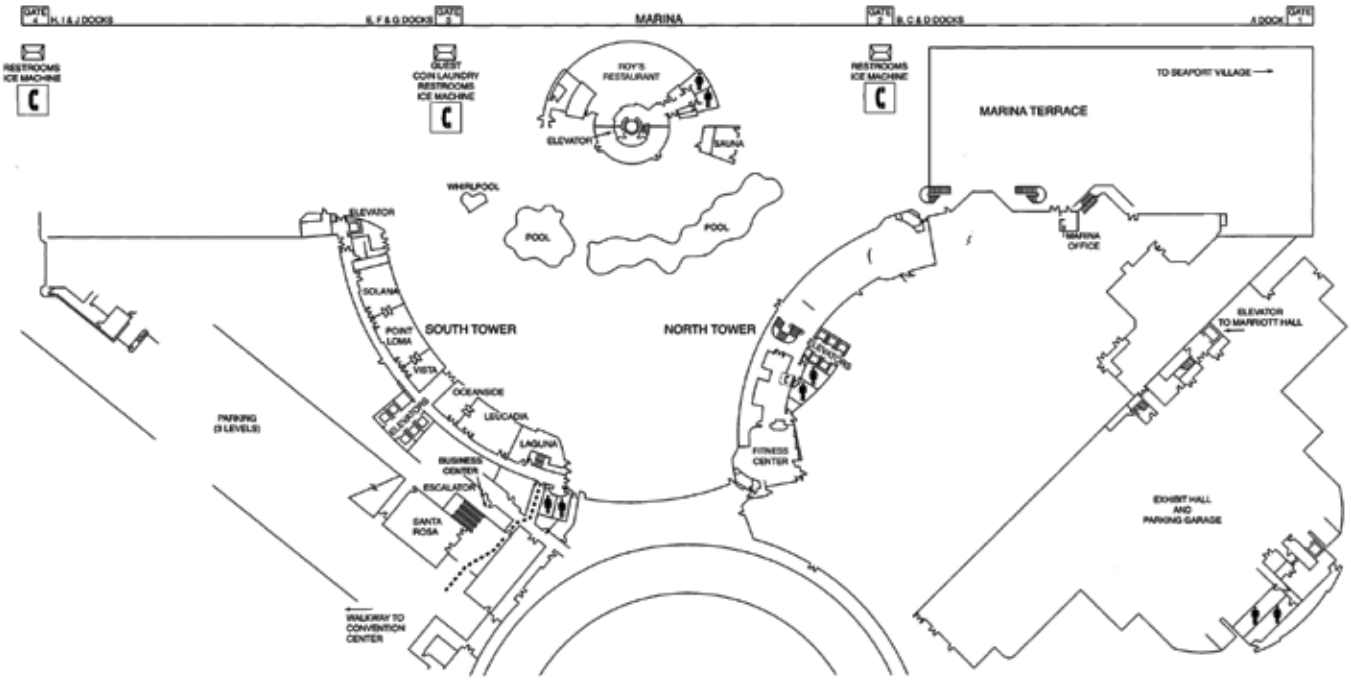


Marriott Marquis & Marina

South Tower

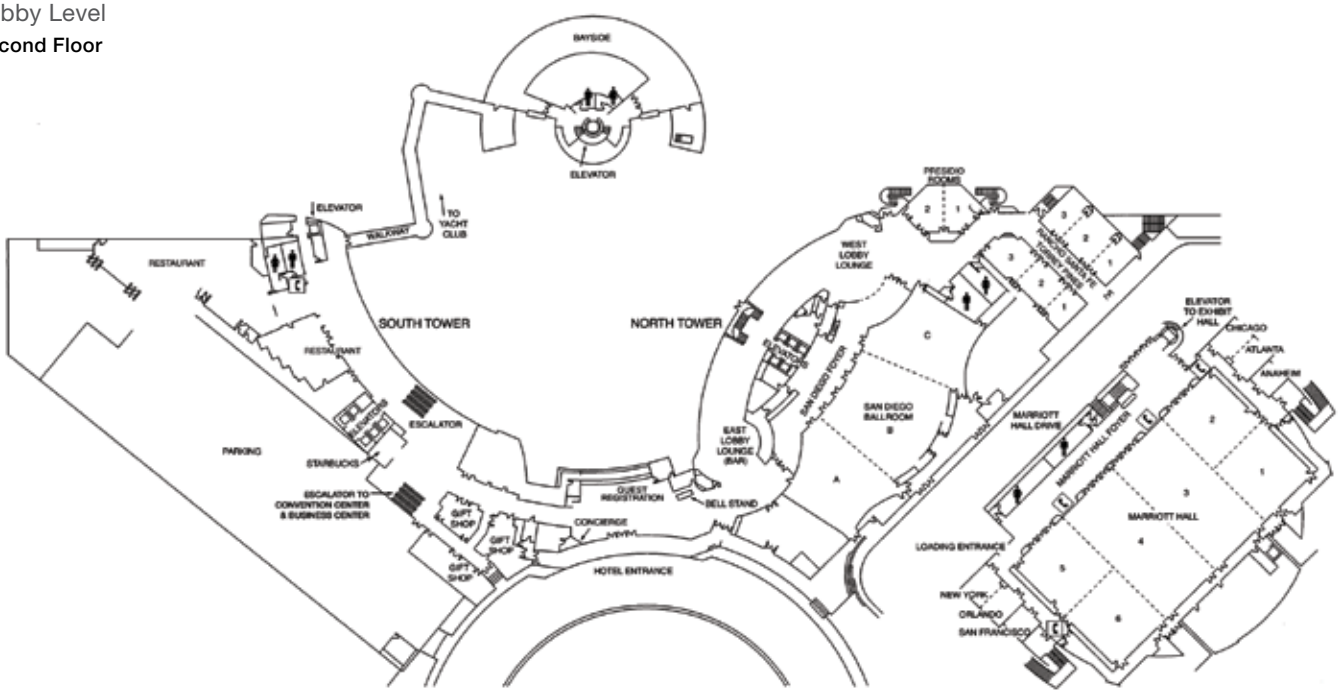
North Tower

Level 1



Lobby Level

Second Floor



Hotel Floor Plans

Marriott Marquis & Marina (continued)

South Tower

1st Floor
Laguna
Leucadia
Oceanside
Point Loma
Santa Rosa
Solana
Vista

2nd Floor
Bayside

3rd Floor
Balboa
Cardiff
Carlsbad
Del Mar
Encinitas
Marina Ballroom D–G
Miramar
Mission Hills
Palomar

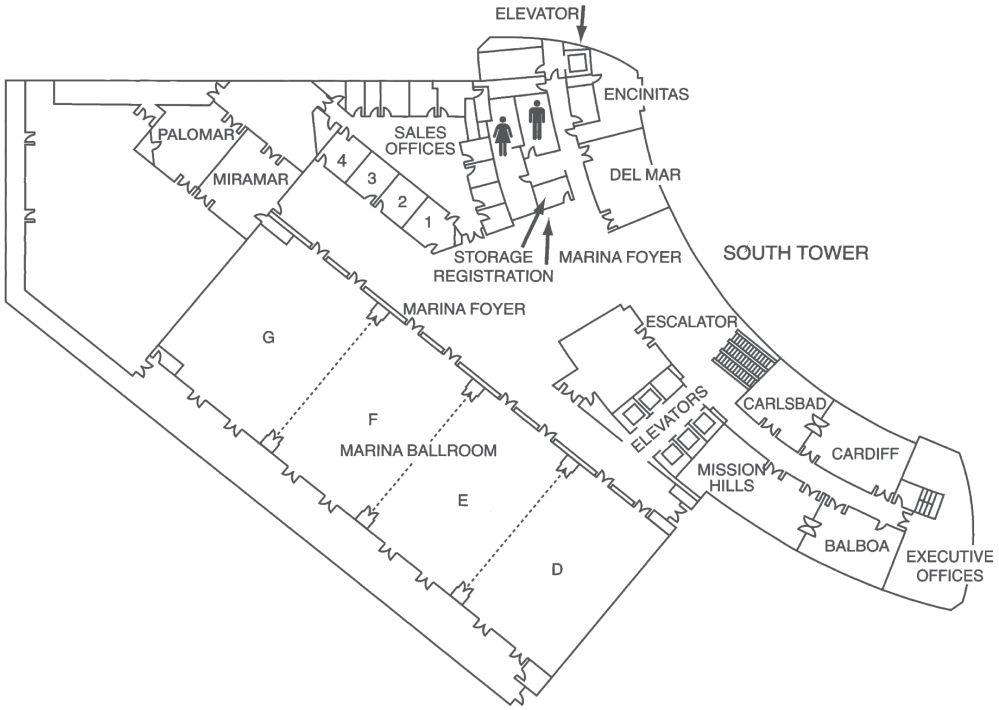
4th Floor
Catalina
Coronado
Dana Point
La Costa
La Jolla
La Mesa
Malibu
Newport Beach

North Tower

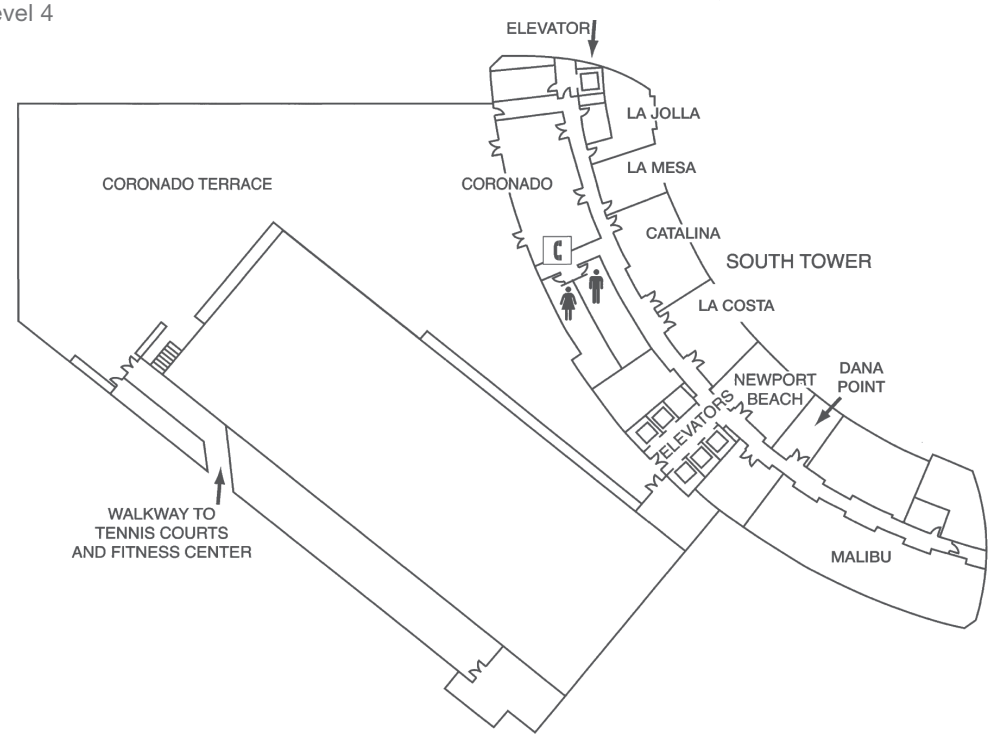
Lobby Level
Presidio 1–2
Rancho Santa Fe 1–3
San Diego Ballrooms A–C
Torrey Pines 1–3

Marriott Hall
Anaheim
Atlanta
Chicago
Marriott Hall 1–6
New York
Orlando
San Francisco

Level 3

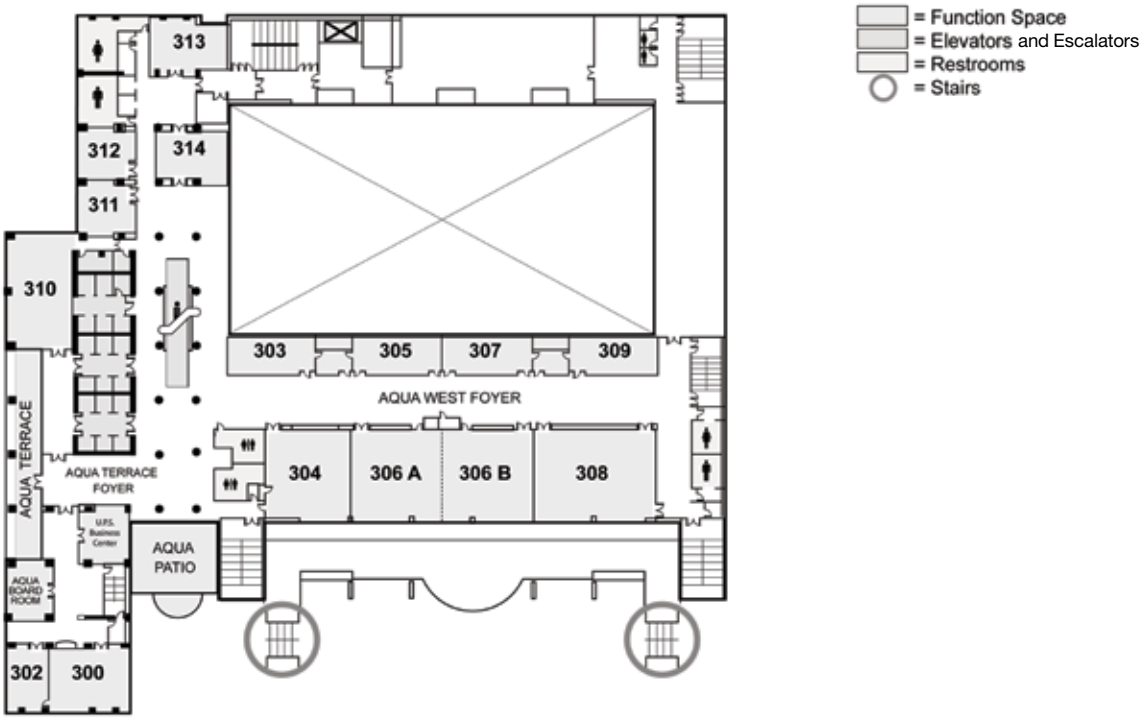


Level 4

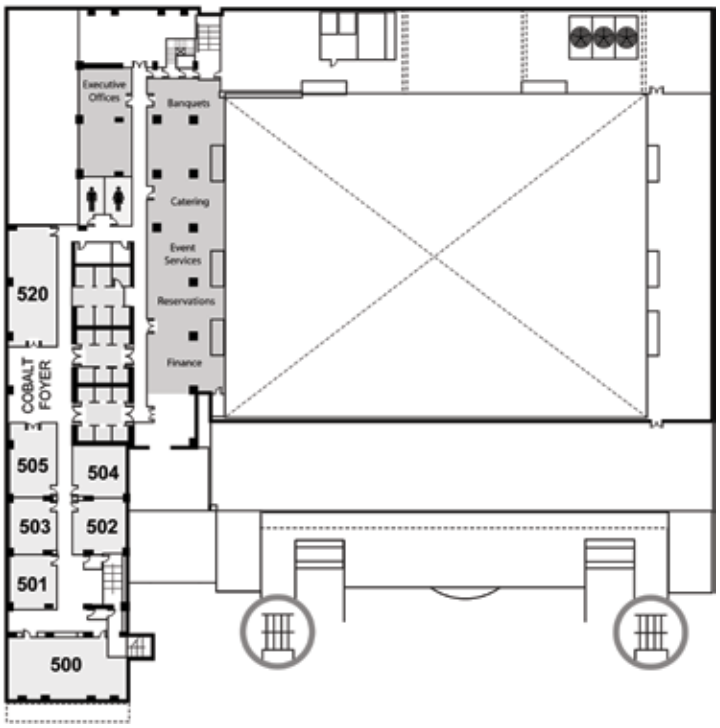


Hilton San Diego Bayfront

Aqua Level



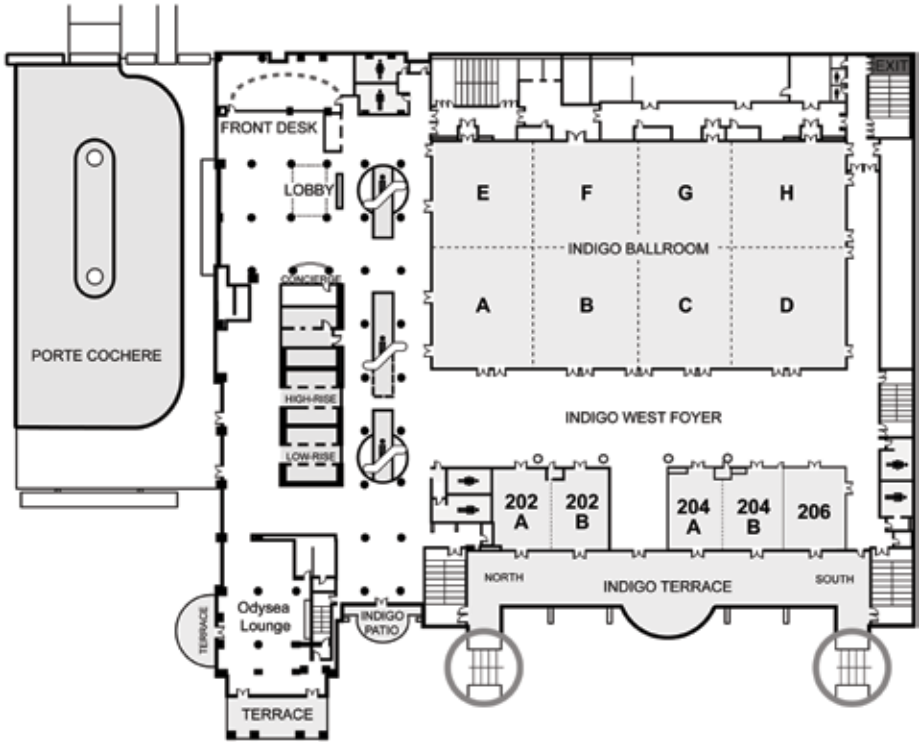
Cobalt Level



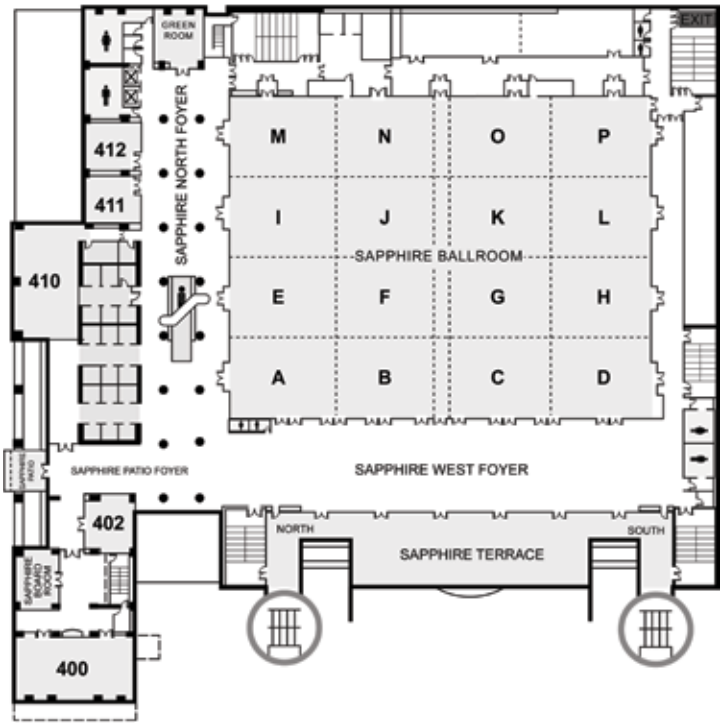
Hotel Floor Plans

Hilton Dan Diego Bayfront

Indigo Level



Sapphire Level



= Function Space
= Elevators and Escalators
= Restrooms
= Stairs

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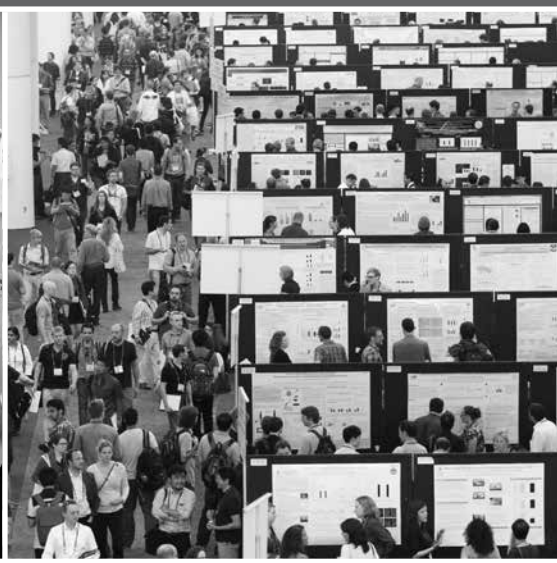

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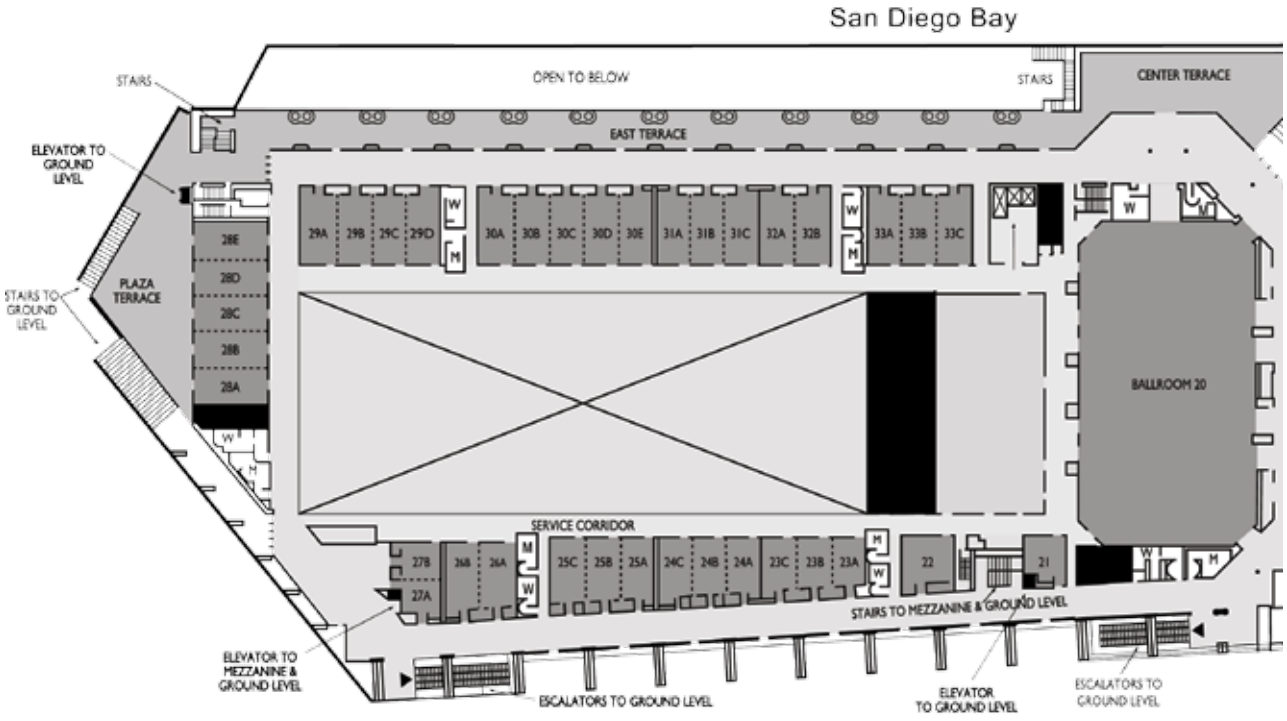
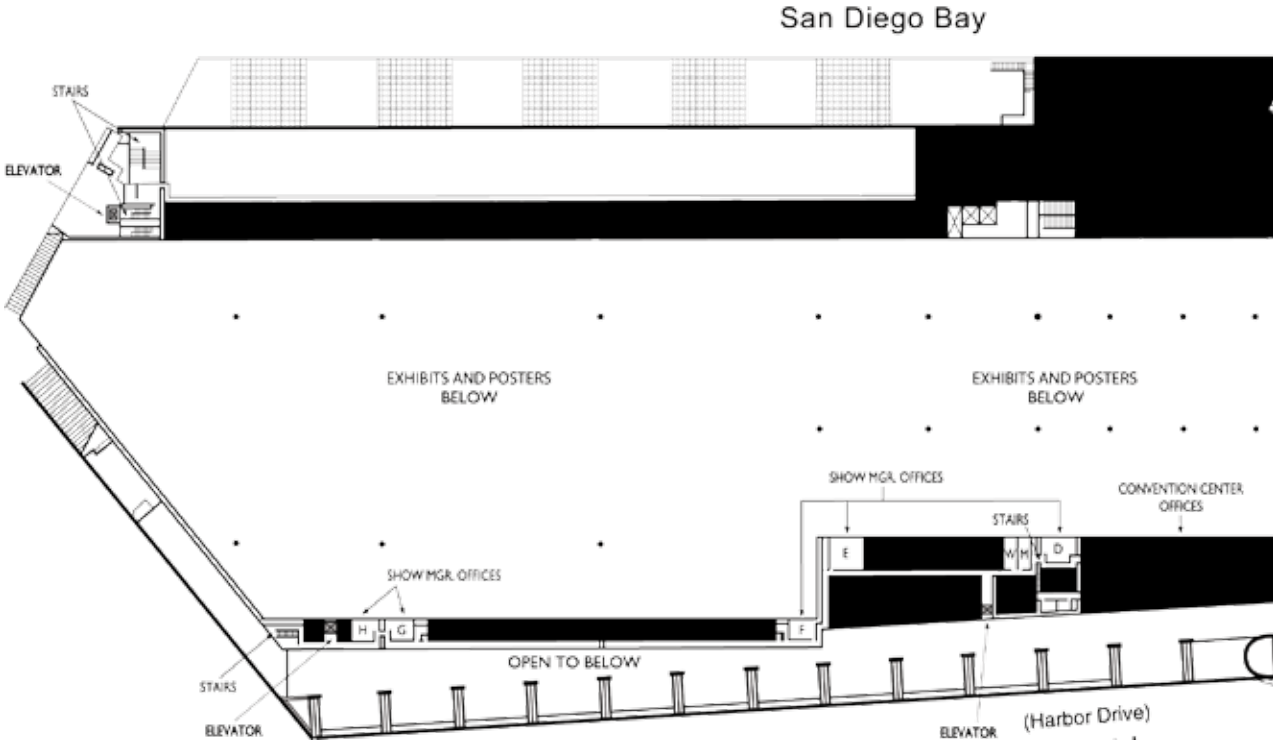
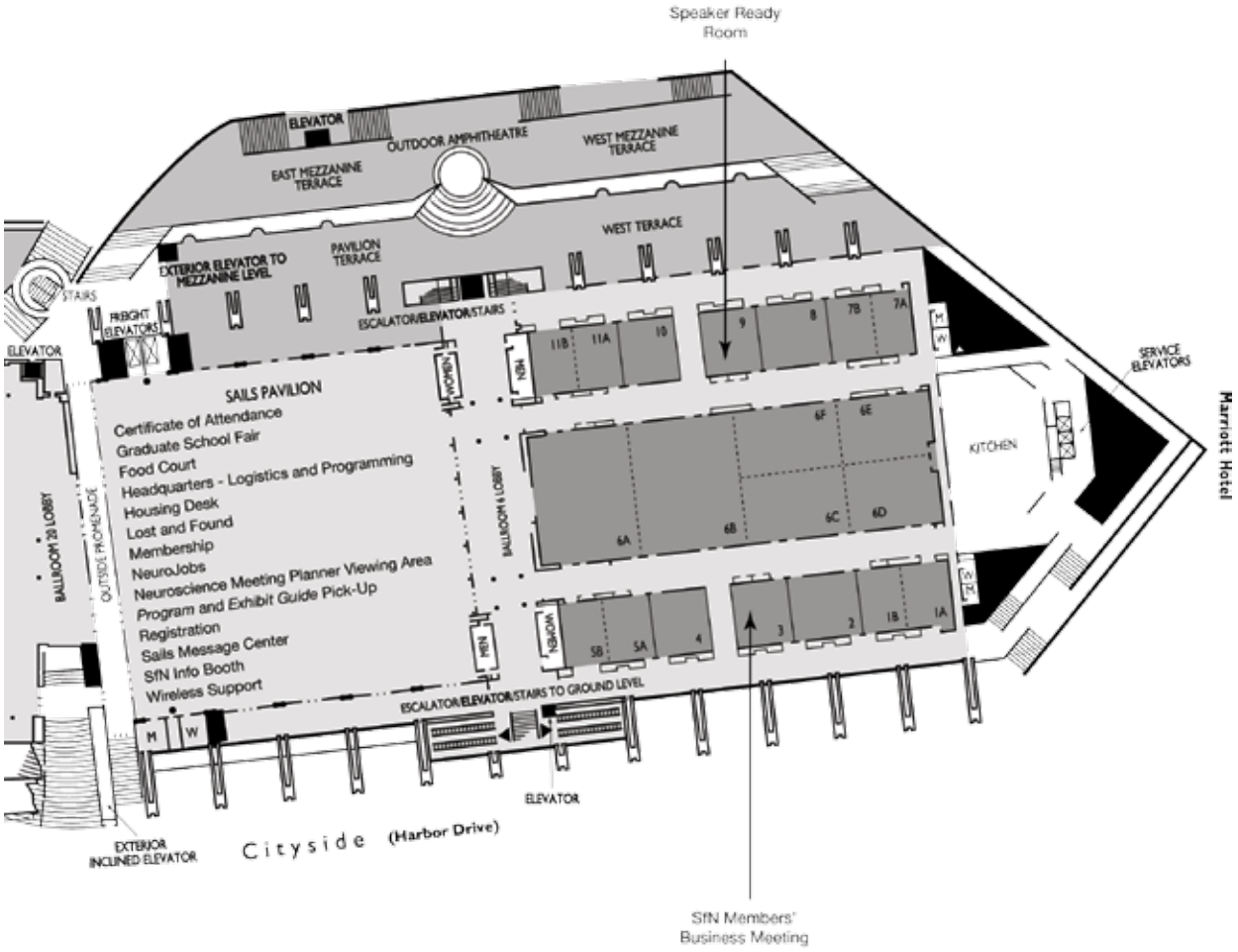
Convention Center Floor Plans

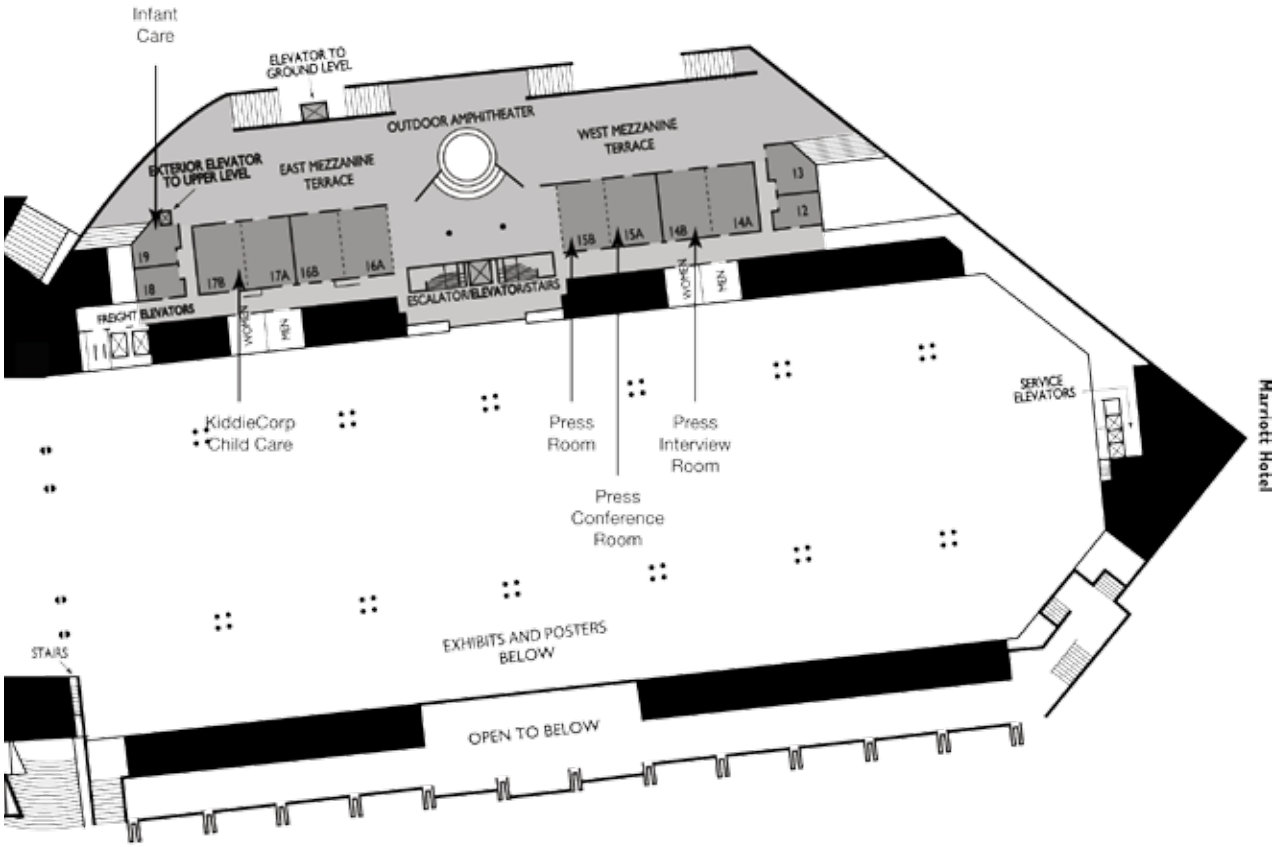
San Diego Convention Center Floor Plan, Upper Level



San Diego Convention Center Floor Plan, Mezzanine Level




Speaker Ready Room
ELEVATOR
OUTDOOR AMPHITHEATRE
EAST MEZZANINE TERRACE
WEST MEZZANINE TERRACE
WEST TERRACE
PAVILION TERRACE
EXTERIOR ELEVATOR TO MEZZANINE LEVEL
STAIRS
FREIGHT ELEVATORS
ESCALATOR/ELEVATOR/STAIRS
SERVICE ELEVATORS
Marriott Hotel
KITCHEN
SAILS PAVILION
Certificate of Attendance
Graduate School Fair
Food Court
Headquarters - Logistics and Programming
Housing Desk
Lost and Found
Membership
NeuroJobs
Neuroscience Meeting Planner Viewing Area
Program and Exhibit Guide Pick-Up
Registration
Sails Message Center
SfN Info Booth
Wireless Support
BALLROOM 20 LOBBY
OUTSIDE PROMENADE
BALLROOM 6 LOBBY
WOMEN
MEN
ESCALATOR/ELEVATOR/STAIRS TO GROUND LEVEL
EXTERIOR INCLINED ELEVATOR
Cityside (Harbor Drive)
SfN Members' Business Meeting


Infant Care
ELEVATOR TO GROUND LEVEL
OUTDOOR AMPHITHEATER
WEST MEZZANINE TERRACE
EXTERIOR ELEVATOR TO UPPER LEVEL
EAST MEZZANINE TERRACE
FREIGHT ELEVATORS
ESCALATOR/ELEVATOR/STAIRS
WOMEN
MEN
SERVICE ELEVATORS
Marriott Hotel
KiddieCorp Child Care
Press Room
Press Interview Room
Press Conference Room
EXHIBITS AND POSTERS BELOW
STAIRS
OPEN TO BELOW

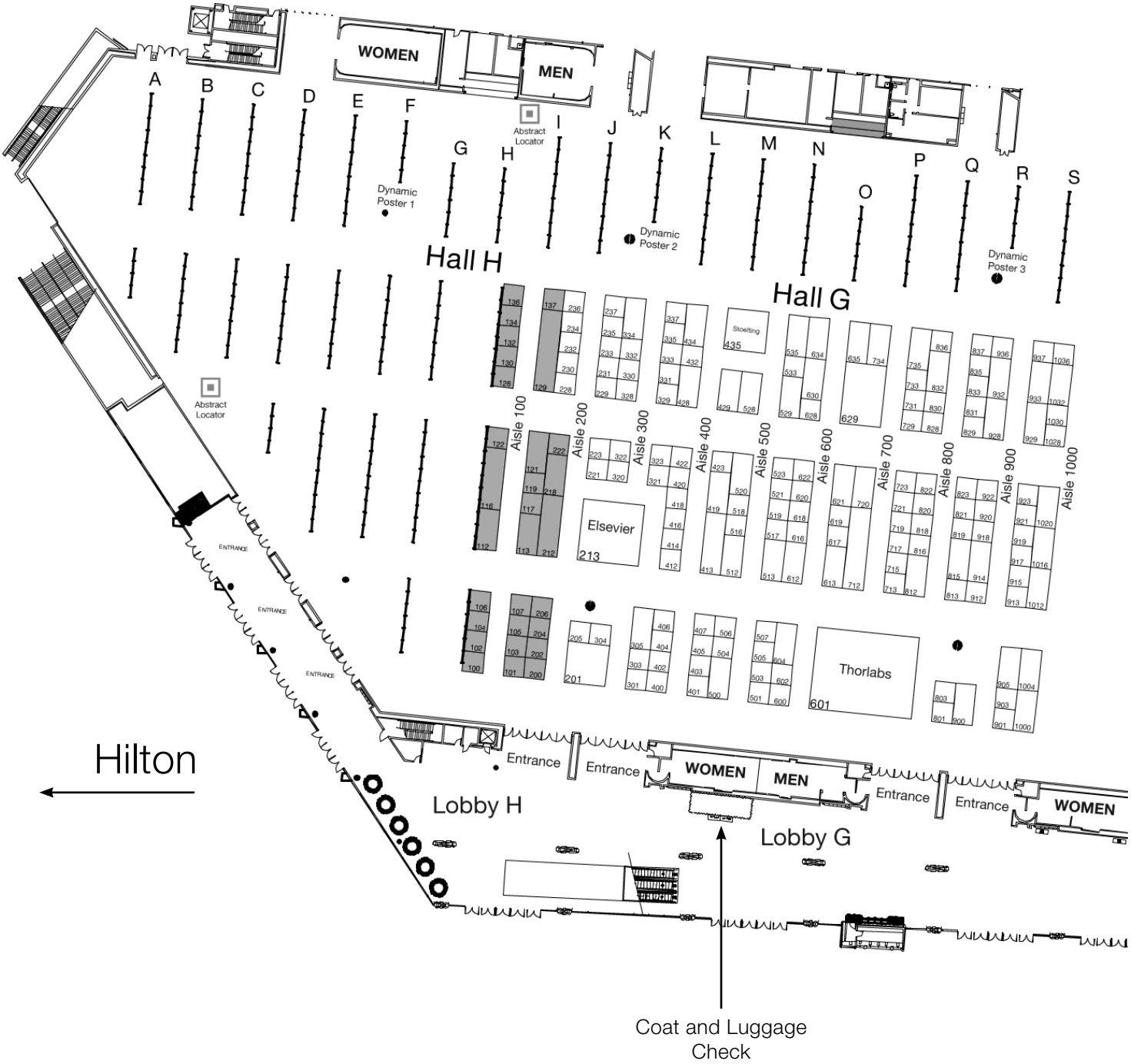
Convention Center Floor Plans

San Diego Convention Center Floor Plan, Exhibit Halls

San Diego Convention Center: Halls B-H
Meeting Dates: Nov. 9–13
Exhibit Dates: Nov. 10–13

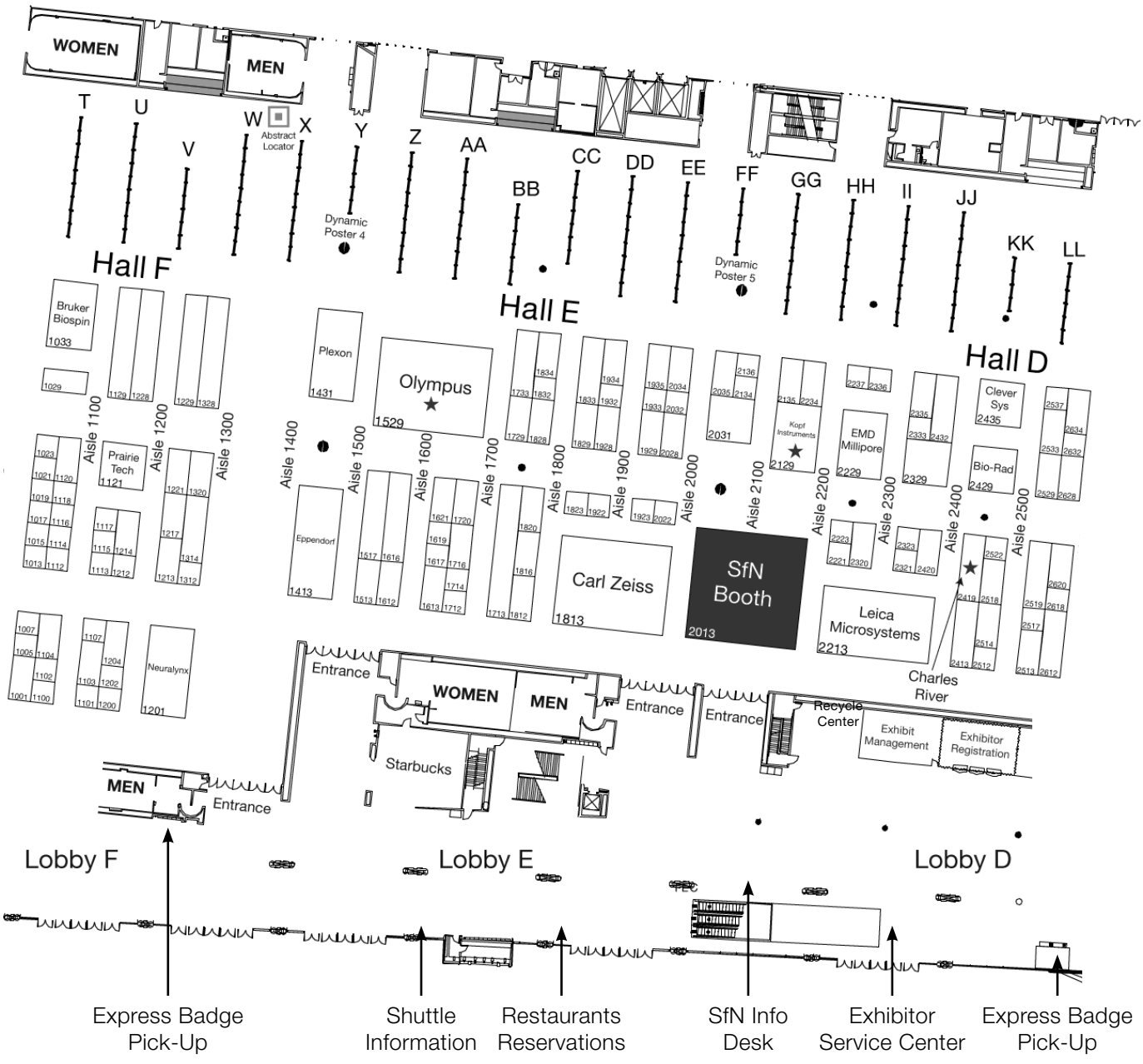
Hall entrances open at noon on Saturday, Nov. 9 and at 7 a.m. on Sunday, Nov. 10 to Wednesday, Nov. 13 for poster presenter setup. Poster sessions are open for all attendees at 1 p.m. on Saturday, Nov. 9 and 8 a.m. Sunday, Nov. 10 to Wednesday, Nov. 13.

NOTE: Floor plans subject to change. For current floor plan, visit SfN.org/exhibits.



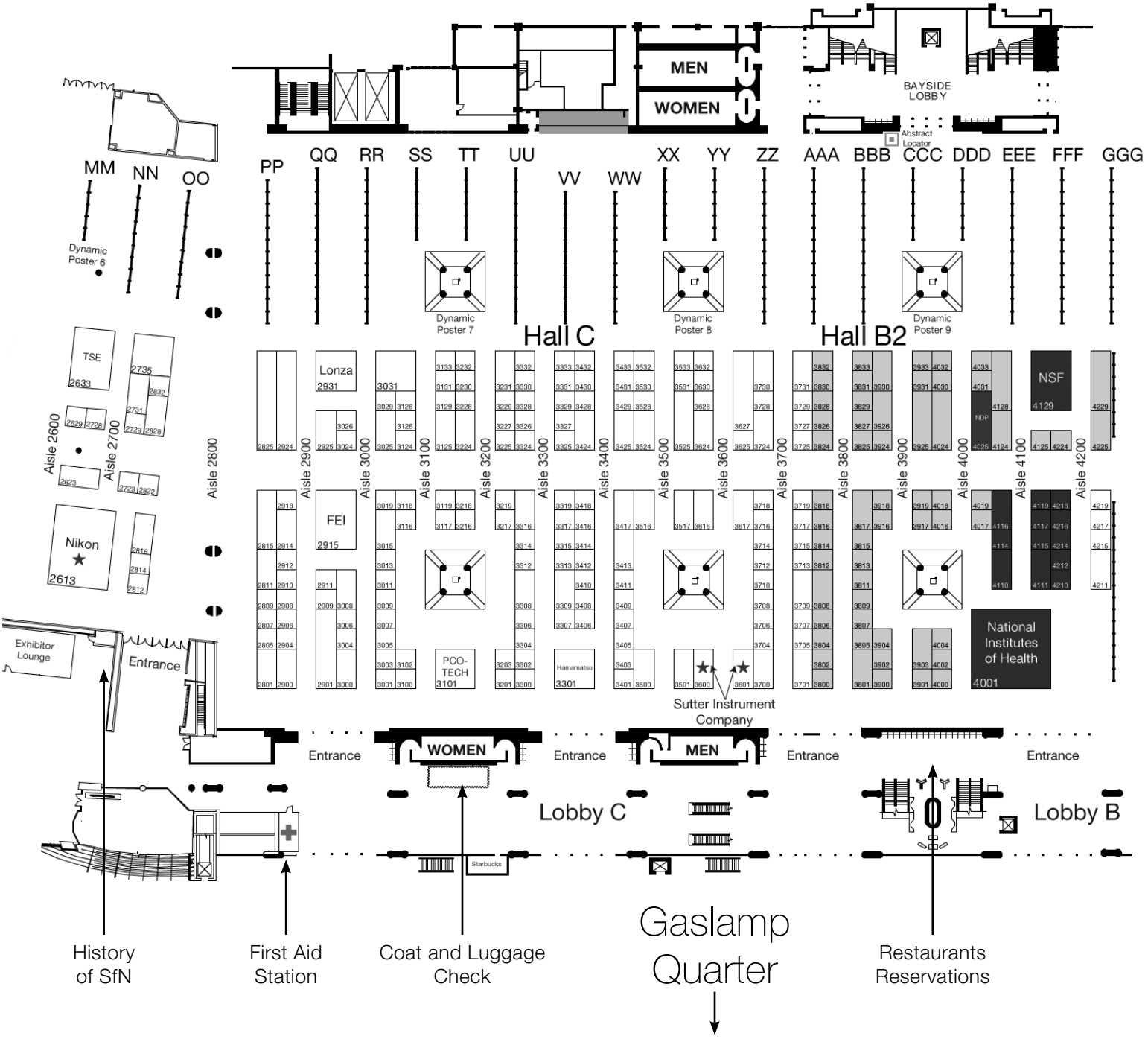
KEY

- ▣ Abstract Locators
- ■ Concession Areas
- ■ Institutions
- ■ Publishers
- ■ Nonprofits
- ★ Sustaining Associate Members



Convention Center Floor Plans

San Diego Convention Center Floor Plan, Exhibit Halls



KEY

- ▣ Abstract Locators
- ■ Concession Areas
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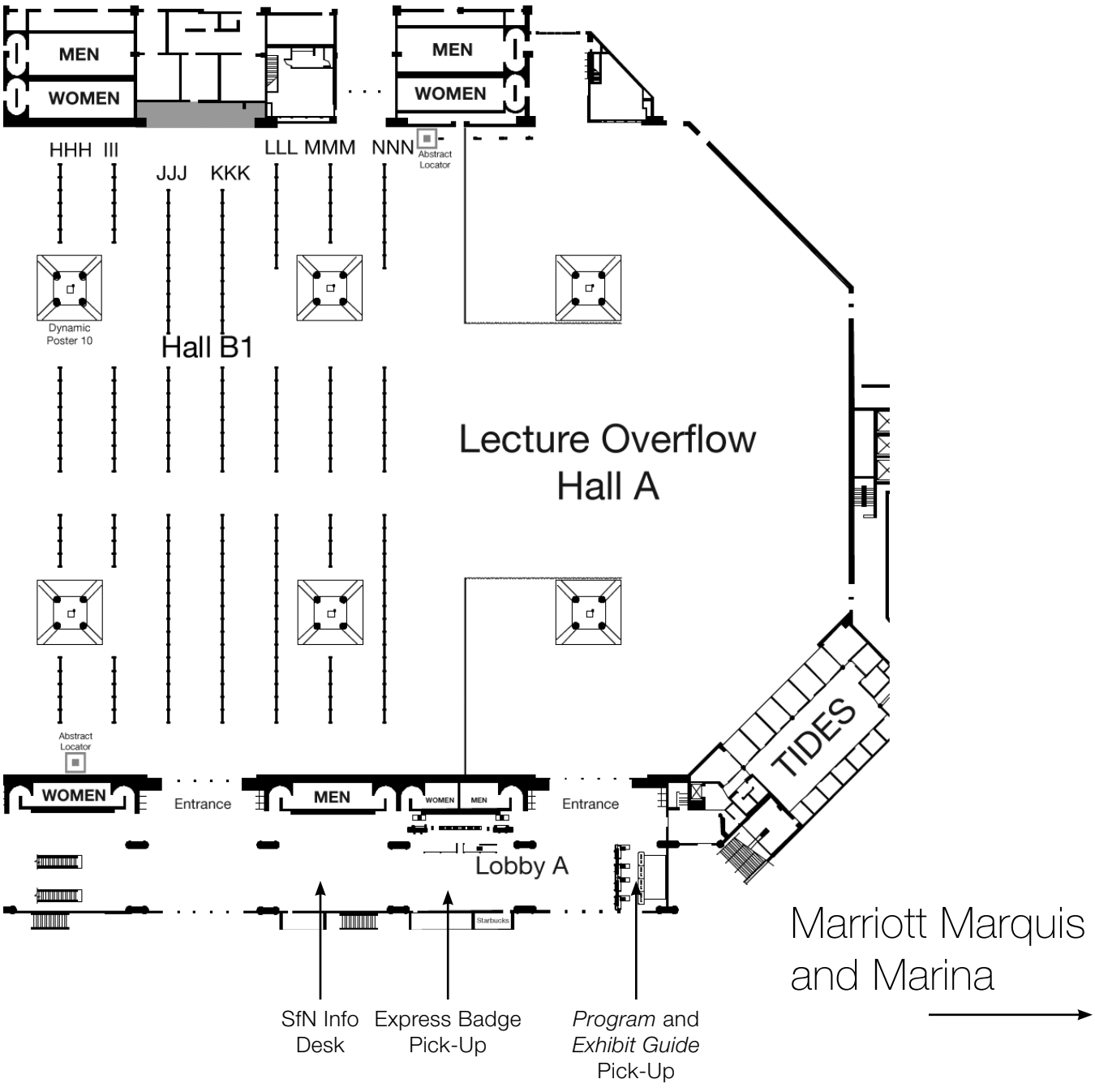
- ■ Publishers
- ■ Nonprofits
- ★ Sustaining Associate Members



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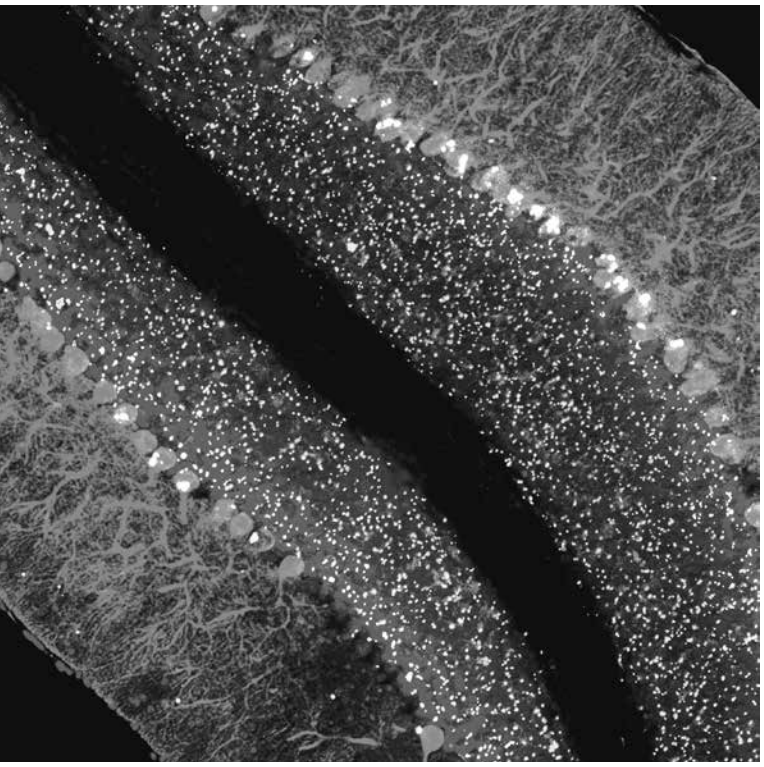

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