

**WEDNESDAY
TO SATURDAY**

SAN DIEGO | NOVEMBER 9–13

Scientific Session Listings 1 – 104

Saturday Highlights

 Preregistration Required  Course Fee  Professional Development  Networking  Public Outreach  Online Content

Meet-the-Expert Series

8–9:15 a.m., 9:30–10:45 a.m.

Manchester Grand Hyatt: Annie, Emma, Ford, Madeleine, Mohsen

Careers Beyond the Bench

Organizer: Elisabeth Van Bockstaele, PhD

Panelists: Andrew Bean, PhD; Katja Brose, PhD; Joe Hardy, PhD; Bradley Voytek, PhD

9–11 a.m.

San Diego Convention Center: 31C

Success in Academia

Organizer: Patsy Dickinson, PhD

Panelists: Darcy Kelley, PhD; Kimberly McAllister, PhD; Donald Partridge, PhD; Aras Petrulelis, PhD; Bill Wright, PhD

9–11 a.m.

San Diego Convention Center: 30C

Dialogues Between Neuroscience and Society

The Creative Culture

Ed Catmull, PhD

President, Walt Disney and Pixar Animation Studios

Support contributed by: Elsevier

11 a.m.–1 p.m.

San Diego Convention Center: Ballroom 20

Getting the Most Out of SfN: The Annual Meeting and Beyond

Organizer: David Riddle, PhD;

Noah Sandstrom, PhD; Hermes Yeh, PhD

1–2 p.m.

San Diego Convention Center: 31C

Research Careers in Industry and the Private Sector

Organizer: Gretchen Snyder, PhD

Panelists: Pamala Adams, MS; Taleen Hanania, PhD; J.P. Johnson, PhD; Kenneth Maynard, PhD; Elizabeth Rex, PhD

1–3 p.m.

San Diego Convention Center: 30C

Fred Kavli Public Symposium

Fred Kavli Public Symposium on Creativity

Chair: Antonio Damasio, PhD

Support contributed by: The Kavli Foundation

1:30–4 p.m.

San Diego Convention Center: 6A

Symposium

Multilevel Analysis of Pattern Separation and Completion: A Role for Subregions of the Hippocampus **CME**

Chair: Craig Stark, PhD

1:30–4 p.m.

San Diego Convention Center: 6B

Symposium

The Neuronal Code(s) of the Cerebellum **CME**

Chair: Detlef H. Heck, PhD

1:30–4 p.m.

San Diego Convention Center: 6F

Minisymposium

How Do Cellular-Stress Response Pathways Control Brain Resistance During Aging and Neurodegenerative Disease? **CME**

Chair: Christian Neri, PhD

Co-chair: Richard I. Morimoto, PhD

1:30–4 p.m.

San Diego Convention Center: 28A

Minisymposium

Midbrain Morphogenesis Fate Specification and Regeneration **CME**

Chair: Raj Awatramani, PhD

1:30–4 p.m.

San Diego Convention Center: 6E

Minisymposium

The Choroid Plexus and Cerebrospinal Fluid: Emerging Roles in Development Disease and Therapy **CME**

Chair: Edwin S. Monuki, MD PhD

Co-chair: Maria Lehtinen, PhD

1:30–4 p.m.

San Diego Convention Center: 29D

Special Lecture

Interacting Influence of Sleep and Circadian Clocks on Human Physiology and Cognitive Performance **CME**

Charles A. Czeisler, MD, PhD

Harvard Medical School

2–3:10 p.m.

San Diego Convention Center: Ballroom 20

Plan to Attend

SUNDAY, NOV. 10

Special Lecture

Adjusting Brain Circuits for Learning and Memory **CME**

Pico Caroni, PhD

8:30–9:40 a.m.

San Diego Convention Center: Ballroom 20

Empirical Approaches to Neuroscience and Society Symposium

Gender Bias: Facing the Facts for the Future of Neuroscience

Chair: Jennifer L. Raymond, PhD

8:30–11 a.m.

San Diego Convention Center: 6A

Special Lecture

When Good Neurons Go Bad: Dopamine Neuron Regulation and its Disruption in Psychiatric Disorders **CME**

Anthony A. Grace, PhD

University of Pittsburgh

10–11:10 a.m.

San Diego Convention Center: Ballroom 20

Special Lecture

Age-Dependent Responses of Synapse Structure to Hippocampal Plasticity **CME**

Kristen M. Harris, PhD

University of Texas

11:30 a.m.–12:40 p.m.

San Diego Convention Center: Ballroom 20

Special Lecture

Transgenerational Epigenetics: Programming Behavior in a Dynamic Landscape **CME**

Tracy L. Bale, PhD

University of Pennsylvania

1:00–2:10 p.m.

San Diego Convention Center: Ballroom 20

Saturday Highlights

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

Challenges in Neuroscience Training

Organizers: Michael Levine, PhD; Barbara Lom, PhD; Konrad Zinsmaier, PhD

Panelists: John Bixby, PhD; Michael Friedlander, PhD; Rae Nishi, PhD; Jennifer Raymond, PhD; Alan Sved, PhD

2–4 p.m.

San Diego Convention Center: 11B

Tackling Bias: Best Practices for Recruiting and Retaining a Diverse Faculty

Organizers: Jill Becker, PhD; Anne Etgen, PhD; Kathie Olsen, PhD

2:30–5 p.m.

San Diego Convention Center: 31C

Brain Awareness Campaign Event

Igniting Brain Awareness Around the World   

3–4:30 p.m.

San Diego Convention Center: 16AB

NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Career

Organizer: Stephen Korn, PhD

Panelists: Nancy Desmond, PhD; Michelle Jones-London, PhD; Dennis Twombly, PhD; Alan Willard, PhD

3:30–5 p.m.

San Diego Convention Center: 30C

Presidential Special Lecture

The Mind of a Worm: Learning From the *C. Elegans* Connectome **CME**

Scott W. Emmons, PhD

5:15–6:25 p.m.

San Diego Convention Center: Ballroom 20

Poster Sessions

Diversity Fellows, International Fellows and Travel Award Recipients  

6:30–8:30 p.m.

San Diego Convention Center: Hall A

Career Development Topics: A Mentoring and Networking Event

7:30–10 p.m.

San Diego Convention Center: Hall A

Plan to Attend

SUNDAY, NOV. 10 (CONT.)

Peter and Patricia Gruber Lecture

Understanding Circuit Dynamics:

Variability Modulation and Homeostasis

Eve E. Marder, PhD

Brandeis University

2:30–3:40 p.m.

San Diego Convention Center: Ballroom 20

Presidential Special Lecture

A Molecular Geneticist's Approach to Understanding the Fly Brain **CME**

Gerald M. Rubin, PhD

Howard Hughes Medical Institute

5:15–6:25 p.m.

San Diego Convention Center: Ballroom 20

Chronological List of Saturday Sessions

Theme Descriptions

- | | | |
|---|--|--|
| A Development | D Sensory and Motor Systems | G Novel Methods and Technology Development |
| B Neural Excitability, Synapses, and Glia: Cellular Mechanisms | E Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge | H History, Teaching, Public Awareness, and Societal Impacts in Neuroscience |
| C Disorders of the Nervous System | F Cognition and Behavior | |

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							
001	The Creative Culture	Dialogues Between Neuroscience and Society		Ballroom 20	9 Sat	11 a.m.-1 p.m.	
002	Fred Kavli Public Symposium on Creativity	Fred Kavli Public Symposium		6A	9 Sat	1:30-4 p.m.	
003	Multilevel Analysis of Pattern Separation and Completion: A Role for Subregions of the Hippocampus	Symposium		6B	9 Sat	1:30-4 p.m.	2.5
004	The Neuronal Code(s) of the Cerebellum	Symposium		6F	9 Sat	1:30-4 p.m.	2.5
005	Midbrain Morphogenesis, Fate Specification, and Regeneration	Minisymposium		6E	9 Sat	1:30-4 p.m.	2.5
006	How Do Cellular-Stress Response Pathways Control Brain Resistance During Aging and Neurodegenerative Disease?	Minisymposium		28A	9 Sat	1:30-4 p.m.	2.5
007	The Choroid Plexus and Cerebrospinal Fluid: Emerging Roles in Development, Disease, and Therapy	Minisymposium		29D	9 Sat	1:30-4 p.m.	2.5
008	Interacting Influence of Sleep and Circadian Clocks on Human Physiology and Cognitive Performance	Special Lecture		Ballroom 20	9 Sat	2-3:10 p.m.	1.25
009	The Mind of a Worm: Learning From the <i>C. Elegans</i> Connectome	Presidential Special Lecture		Ballroom 20	9 Sat	5:15-6:25 p.m.	1.25
Nanosymposia (1–5 p.m.)							
010	Parkinson's Disease: Cellular and Genetic Mechanisms	Nanosymposium		24A	9 Sat	1-4:30 p.m.	
011	Brain Injury: Models and Human Studies	Nanosymposium		32B	9 Sat	1-4:30 p.m.	
012	Spinal Cord Injury: Mechanisms and Therapies	Nanosymposium		23A	9 Sat	1-4:30 p.m.	
013	Mood Disorders: Human Biomarkers, Treatment, and Post Mortem Studies	Nanosymposium		30B	9 Sat	1-3:15 p.m.	
014	Cocaine: Neural Mechanisms of Addiction I	Nanosymposium		33C	9 Sat	1-4:15 p.m.	
015	Visual Decision-Making	Nanosymposium		1B	9 Sat	1-3:15 p.m.	
016	Brain-Machine Interface	Nanosymposium		5B	9 Sat	1-3:15 p.m.	
017	Cellular and Molecular Control of Circadian Timing	Nanosymposium		2	9 Sat	1-3:15 p.m.	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
018	Human Learning: Feedback, Reinforcement, and Reward	Nanosymposium		4	9 Sat	1-4:30 p.m.	
019	Learning and Memory: Physiology	Nanosymposium		7B	9 Sat	1-4:15 p.m.	
Theme H Posters (1–5 p.m.)							
020	History of Neuroscience	Theme H Poster	LLL11-LLL27	Halls B-H	9 Sat	1-5 p.m.	
021	Neuroscience Courses for Undergraduates, Graduates, and Professional Students	Theme H Poster	LLL28-LLL56	Halls B-H	9 Sat	1-5 p.m.	
022	Undergraduate Neuroscience Programs and Resources	Theme H Poster	LLL57-MMM9	Halls B-H	9 Sat	1-5 p.m.	
023	Professional Skills Development and Neuroscience Outreach	Theme H Poster	MMM10-MMM33	Halls B-H	9 Sat	1-5 p.m.	
024	Neuroscience for K-12	Theme H Poster	MMM34-NNN12	Halls B-H	10 Sun	8 a.m.-noon	
025	Brain Awareness Week Activities	Theme H Poster	NNN13-NNN23	Halls B-H	10 Sun	8 a.m.-noon	
026	Neuroscience Community Outreach	Theme H Poster	NNN24-NNN36	Halls B-H	10 Sun	8 a.m.-noon	
027	Ethics and Policy	Theme H Poster	NNN37-NNN55	Halls B-H	9 Sat	1-5 p.m.	
Posters (1–5 p.m.)							
028	Synapse Formation: CNS I	Poster	A1-A24	Halls B-H	9 Sat	1-5 p.m.	
029	Activity-Dependent Changes in Connectivity	Poster	A25-B20	Halls B-H	9 Sat	1-5 p.m.	
030	Developmental Cell Death	Poster	B21-C3	Halls B-H	9 Sat	1-5 p.m.	
031	Visual System Development	Poster	C4-C33	Halls B-H	9 Sat	1-5 p.m.	
032	Cholinergic Modulation of the Dopaminergic System	Poster	C34-D9	Halls B-H	9 Sat	1-5 p.m.	
033	Peptide and Purine Receptors	Poster	D10-D26	Halls B-H	9 Sat	1-5 p.m.	
034	Other GPCRs (G Protein-Coupled Receptor)	Poster	D27-E1	Halls B-H	9 Sat	1-5 p.m.	
035	Ion Channels: Calcium Channels	Poster	E2-E33	Halls B-H	9 Sat	1-5 p.m.	
036	Transporters: Other	Poster	E34-E53	Halls B-H	9 Sat	1-5 p.m.	
037	Homeostatic Plasticity I	Poster	E54-F17	Halls B-H	9 Sat	1-5 p.m.	
038	Synaptic Plasticity: Short-Term Plasticity	Poster	F18-F41	Halls B-H	9 Sat	1-5 p.m.	
039	Synaptic Plasticity: Structural Plasticity I	Poster	F42-G20	Halls B-H	9 Sat	1-5 p.m.	
040	Alzheimer's Disease: APP Biology	Poster	G21-G50	Halls B-H	9 Sat	1-5 p.m.	
041	Alzheimer's Animal Models: Small Molecule Tx	Poster	G51-H20	Halls B-H	9 Sat	1-5 p.m.	
042	ApoE and Cholesterol	Poster	H21-I1	Halls B-H	9 Sat	1-5 p.m.	
043	Alzheimer's Disease: Neuropharmacology and Neurotransmitters	Poster	I2-I13	Halls B-H	9 Sat	1-5 p.m.	
044	Alzheimer's Disease Imaging and Biomarkers I	Poster	I14-J14	Halls B-H	9 Sat	1-5 p.m.	
045	Alzheimer's Disease: Imaging and Biomarkers II	Poster	J15-L9	Halls B-H	9 Sat	1-5 p.m.	
046	Parkinson's Disease: Gene and Neurotoxin Studies	Poster	L10-M6	Halls B-H	9 Sat	1-5 p.m.	
047	Huntington's Disease: Other	Poster	M7-N4	Halls B-H	9 Sat	1-5 p.m.	
048	Motor Neuron Disease: Therapeutics	Poster	N5-O11	Halls B-H	9 Sat	1-5 p.m.	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
049	Human Biomarkers of Autism	Poster	O12-Q6	Halls B-H	9 Sat	1-5 p.m.	
050	Mental Retardation and Autism: Animal Models	Poster	Q7-Q18	Halls B-H	9 Sat	1-5 p.m.	
051	Epilepsy: Seizure Induction and Prediction	Poster	R1-S9	Halls B-H	9 Sat	1-5 p.m.	
052	Epilepsy: Animal Models	Poster	S10-T11	Halls B-H	9 Sat	1-5 p.m.	
053	Epilepsy: Anticonvulsant Targets and Treatments	Poster	T12-V1	Halls B-H	9 Sat	1-5 p.m.	
054	Ischemia: Recovery	Poster	V2-W8	Halls B-H	9 Sat	1-5 p.m.	
055	Recovery from Stroke: Sprouting, Neurogenesis, and Rehabilitation	Poster	W9-X3	Halls B-H	9 Sat	1-5 p.m.	
056	Stroke Recovery: Pharmacologic and Non-Pharmacologic Treatment	Poster	X4-Y2	Halls B-H	9 Sat	1-5 p.m.	
057	Excitotoxicity: Mechanisms and Therapeutic Strategies	Poster	Y3-Z2	Halls B-H	9 Sat	1-5 p.m.	
058	Interneuron Deficits in Models of Psychiatric Disorders	Poster	Z3-Z12	Halls B-H	9 Sat	1-5 p.m.	
059	Mood Disorders: Animal Models I	Poster	Z13-BB6	Halls B-H	9 Sat	1-5 p.m.	
060	Alcohol and Nicotine Interactions	Poster	BB7-CC5	Halls B-H	9 Sat	1-5 p.m.	
061	Nicotine: Developmental Effects	Poster	CC6-DD6	Halls B-H	9 Sat	1-5 p.m.	
062	Amphetamine and Related Drugs: Reinforcement, Seeking, and Reinstatement	Poster	DD7-EE6	Halls B-H	9 Sat	1-5 p.m.	
063	Neurodegenerative Diseases (AD, PD, MS, Stroke)	Poster	EE7-GG8	Halls B-H	9 Sat	1-5 p.m.	
064	Extrastriate Cortex: Organization and Circuitry	Poster	GG9-HH2	Halls B-H	9 Sat	1-5 p.m.	
065	Visual Learning and Categorization	Poster	HH3-II5	Halls B-H	9 Sat	1-5 p.m.	
066	Pain Imaging and Perception I	Poster	II6-II18	Halls B-H	9 Sat	1-5 p.m.	
067	Analgesics	Poster	JJ1-JJ12	Halls B-H	9 Sat	1-5 p.m.	
068	Pain Models: Pharmacology I	Poster	JJ13-LL8	Halls B-H	9 Sat	1-5 p.m.	
069	Mechanisms of Neuropathic Pain: Glia	Poster	LL9-MM10	Halls B-H	9 Sat	1-5 p.m.	
070	Somatosensory Plasticity	Poster	NN1-NN10	Halls B-H	9 Sat	1-5 p.m.	
071	Somatosensory Plasticity: Barrel Cortex	Poster	NN11-OO12	Halls B-H	9 Sat	1-5 p.m.	
072	Somatosensory: Thalamocortical Processes	Poster	OO13-PP14	Halls B-H	9 Sat	1-5 p.m.	
073	Somatosensory Cortex: Functional Studies	Poster	PP15-QQ10	Halls B-H	9 Sat	1-5 p.m.	
074	Spinal Cord Injury: Motor Systems I	Poster	QQ11-RR4	Halls B-H	9 Sat	1-5 p.m.	
075	Reflexes and Reflex Modulation	Poster	RR5-RR22	Halls B-H	9 Sat	1-5 p.m.	
076	Basal Ganglia Physiology: Parkinson's Disease	Poster	RR23-SS6	Halls B-H	9 Sat	1-5 p.m.	
077	Basal Ganglia: Systems Behavior	Poster	SS7-TT6	Halls B-H	9 Sat	1-5 p.m.	
078	Voluntary Motor Control: Motor Learning I	Poster	TT7-UU24	Halls B-H	9 Sat	1-5 p.m.	
079	Brain-Machine Interface I	Poster	UU25-WW6	Halls B-H	9 Sat	1-5 p.m.	
080	Brain-Machine Interface II	Poster	WW7-XX6	Halls B-H	9 Sat	1-5 p.m.	
081	Hormonal Modulation of Cognition	Poster	XX7-ZZ1	Halls B-H	9 Sat	1-5 p.m.	
082	Neurosteroid Regulation	Poster	ZZ2-ZZ10	Halls B-H	9 Sat	1-5 p.m.	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
083	Sexual Behavior and Partner Preference	Poster	ZZ11-ZZ20	Halls B-H	9 Sat	1-5 p.m.	
084	Early Life Stress: Neural, Neurochemical, and Physiologic Effects	Poster	ZZ21-AAA14	Halls B-H	9 Sat	1-5 p.m.	
085	Stress-Modulated Pathways: Cortex, Hippocampus, and Striatum	Poster	AAA15-BBB18	Halls B-H	9 Sat	1-5 p.m.	
086	Energy Metabolism, Blood Flow, and Homeostasis	Poster	BBB19-DDD5	Halls B-H	9 Sat	1-5 p.m.	
087	Human Long-Term Memory: Encoding	Poster	DDD6-EEE21	Halls B-H	9 Sat	1-5 p.m.	
088	Cognitive Enhancing Effects of Exercise and Practice	Poster	EEE22-FFF11	Halls B-H	9 Sat	1-5 p.m.	
089	Human Cognition: Cognitive Aging I	Poster	FFF12-GGG13	Halls B-H	9 Sat	1-5 p.m.	
090	Timing and Temporal Processing	Poster	GGG14-GGG40	Halls B-H	9 Sat	1-5 p.m.	
091	Executive Functioning in Animals: Aging and Disorders	Poster	GGG41-HHH4	Halls B-H	9 Sat	1-5 p.m.	
092	Associative, Non-Associative, and Skill Learning	Poster	HHH5-HHH16	Halls B-H	9 Sat	1-5 p.m.	
093	Fear and Aversive Learning and Memory: Extinction I	Poster	HHH17-HHH46	Halls B-H	9 Sat	1-5 p.m.	
094	Animal Learning and Memory: Cortical and Hippocampal Circuits I	Poster	III1-III27	Halls B-H	9 Sat	1-5 p.m.	
095	Learning and Memory: Physiology I	Poster	III28-III42	Halls B-H	9 Sat	1-5 p.m.	
096	Drug Seeking and Taking	Poster	III43-JJJ9	Halls B-H	9 Sat	1-5 p.m.	
097	Cocaine	Poster	JJJ10-JJJ19	Halls B-H	9 Sat	1-5 p.m.	
098	Behavioral Pharmacology of Social Stress and Drugs	Poster	JJJ20-JJJ34	Halls B-H	9 Sat	1-5 p.m.	
099	Human Neuroscience: Rewards, Learning, Decisions, and High-Level Processes	Poster	JJJ35-JJJ54	Halls B-H	9 Sat	1-5 p.m.	
100	Staining, Tracing, and Imaging Techniques II	Poster	JJJ55-KKK14	Halls B-H	9 Sat	1-5 p.m.	
101	Bioinformatics	Poster	KKK15-KKK29	Halls B-H	9 Sat	1-5 p.m.	
102	Computation, Modeling, and Simulation I	Poster	KKK30-KKK52	Halls B-H	9 Sat	1-5 p.m.	
103	Computation, Modeling, and Simulation II	Poster	KKK53-KKK66	Halls B-H	9 Sat	1-5 p.m.	
104	Data Analysis and Statistics I	Poster	KKK67-LLL8	Halls B-H	9 Sat	1-5 p.m.	
Workshops, Meetings, and Events (Friday, Nov. 8 - Saturday, Nov. 9)							
PDW01	Neurobiology of Disease Workshop: Human Brain Disorders in a Dish: Induced Pluripotent Stem Cell Models of Disease	Professional Development Workshops		6A	8 Fri	8 a.m.-5 p.m.	
PDW02	Short Course #1: Chemo and Optogenetics: Light and Chemical Control of Neuronal Circuits	Professional Development Workshops		6B	8 Fri	8 a.m.-6 p.m.	
PDW03	Short Course #2: The Science of Large Data Sets: Spikes, Fields, and Voxels	Professional Development Workshops		6F	8 Fri	8:30 a.m.-6:30 p.m.	
PDW04-A	Meet-the-Expert: Session 1	Professional Development Workshops		Manchester Grand Hyatt: Annie, Emma, Ford, Madeleine, Mohsen	9 Sat	8-9:15 a.m.	

Session Number	Session Title	Presentation Type	Poster Board Number	Location	Date	Session Time	CME Hours
PDW05	Careers Beyond the Bench	Professional Development Workshops		31C	9 Sat	9-11 a.m.	
PDW06	Success in Academia	Professional Development Workshops		30C	9 Sat	9-11 a.m.	
PDW04-B	Meet-the-Expert: Session 2	Professional Development Workshops		Manchester Grand Hyatt: Annie, Emma, Ford, Madeleine, Mohsen	9 Sat	9:30-10:45 a.m.	
PDW07	Getting the Most Out of SfN: The Annual Meeting and Beyond	Professional Development Workshops		31C	9 Sat	1-2 p.m.	
PDW08	Research Careers in Industry and the Private Sector	Professional Development Workshops		30C	9 Sat	1-3 p.m.	
PDW09	Challenges in Neuroscience Training	Professional Development Workshops		11B	9 Sat	2-5 p.m.	
PDW19	Tackling Bias: Best Practices for Recruiting and Retaining a Diverse Faculty	Professional Development Workshops		31C	9 Sat	2:30 - 5 p.m.	
ME01	Brain Awareness Campaign Event: Igniting Brain Awareness around the World	Meetings and Events		16AB	9 Sat	3-4:30 p.m.	
PDW11	NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Career	Professional Development Workshops		30C	9 Sat	3:30-5 p.m.	
ME02	Diversity Fellows Poster Session	Meetings and Events		Hall A	9 Sat	6:30-8:30 p.m.	
ME03	International Fellows Poster Session	Meetings and Events		Hall A	9 Sat	6:30-8:30 p.m.	
ME04	Travel Award Recipients Poster Session	Meetings and Events		Hall A	9 Sat	6:30-8:30 p.m.	
PDW12	Career Development Topics: A Mentoring and Networking Event	Professional Development Workshops		Hall A	9 Sat	7:30 - 10 p.m.	

Dynamic Posters — Saturday PM

Saturday'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, visit SfN.org

Theme	Abstract Title	Presenter Name	Dynamic Poster Location	Paper Poster Location	Paper Poster Pres. No.
Dynamic Posters (1-5 p.m.)					
Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms	Intracellular Na ⁺ levels appear to be elevated in early development: Implications for chloride transporters	Casie Lindsly	DP1	E34	36.01
Theme C: Disorders of the Nervous System	Brain-Machine-Interfaces (BMI) in paralysis	Niels Birbaumer	DP2	N7	48.03
Theme C: Disorders of the Nervous System	Optogenetic activation of superior colliculus attenuates experimental seizures	Patrick Forcelli	DP4	U11	53.18
Theme D: Sensory and Motor Systems	Restoring sensation in amputees with nerve cuff electrodes	Daniel Tan	DP5	QQ6	73.16
Theme D: Sensory and Motor Systems	Top-down modulation of the thalamocortical loop during active tactile discrimination	Miguel Pais-Vieira	DP6	OO14	72.02
Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge	A novel mechanism for fast neurovascular coupling	Elizabeth Hillman	DP7	CCC10	86.18
Theme F: Cognition and Behavior	Working memory performance is related to increased functional connectivity in middle-aged adults and decreased functional connectivity in older adults	Helen Macpherson	DP8	FFF24	89.13
Theme F: Cognition and Behavior*	Super-resolution evaluation of stimulant-induced changes in VMAT2 subcellular distribution*	Christopher German*	DP3*	CC6*	157.06*
Theme G: Novel Methods and Technology Development	Single neuron morphology in mouse primary visual cortex	Staci Sorensen	DP9	KKK11	100.27
Theme H: History, Teaching, Public Awareness, and Societal Impacts in Neuroscience	The 'protoplasm' as the primary site of general anesthetic action. A contribution to the bicentennial of Claude Bernard's birth	Misha Perouansky	DP10	LLL16	20.06SA

*Paper presentation will occur during the morning poster session on Sunday, Nov. 10, 9–10 a.m.

Friday — Saturday Workshops, Meetings & Events

Professional Development, Advocacy, and Networking Resources

Preregistration Required Course Fee Professional Development Networking Public Outreach Online Content

Friday, Nov. 8

Neurobiology of Disease Workshop

Human Brain Disorders in a Dish: Induced Pluripotent Stem Cell Models of Disease

Support contributed by: National Institute of Neurological Disorders and Stroke

Organizers: Ricardo Dolmetsch, PhD
Arnold R. Kriegstein, MD, PhD

8 a.m.–5 p.m.

San Diego Convention Center: 6A

Contact: profdev@sfn.org

There has been an explosion of interest in using induced pluripotent stem cells (iPSCs) to model human disease and human development. The excitement over the obvious benefits may need to be tempered with caution concerning unanswered questions about the validity of various disease models as well as concerns over technical issues. With this burst of new information comes an opportunity to take stock of the landscape and integrate the findings into an updated, modern view of human disease exploration. The workshop aims to help frame important unanswered research questions related to iPSC-based disease modeling and stimulate the interest and understanding of investigators new to the field. A reception at the close of the day gives students and faculty the opportunity to interact and explore remaining questions informally. Target audience: graduate students, postdoctoral fellows, and junior faculty.

Workshop Fees

Short Course

(includes lunch and syllabus book)

Student Member	\$135
Student Nonmember	\$165
Postdoctoral Member	\$200
Postdoctoral Nonmember	\$245
Faculty Member	\$265
Faculty Nonmember	\$325

Neurobiology of Disease Workshop.....\$35
(includes breakfast, lunch, and reception)

Note: Preregistration is required for Short Courses and the Neurobiology of Disease Workshop.
To register, visit SfN.org/registration.

Short Course #1

Chemo and Optogenetics: Light and Chemical Control of Neuronal Circuits

Partial support contributed by: Bristol-Myers Squibb

Organizer: Luis de Lecea, PhD

8 a.m.–6 p.m.

San Diego Convention Center: 6B

Contact: profdev@sfn.org

Optogenetics, a combination of optical and genetic methods that render neurons sensitive to light, has revolutionized systems neuroscience, allowing us to functionally map neuronal circuits with unprecedented precision. Deisseroth, broadly known as the inventor of optogenetics, will review the development of new optogenetic tools that allows us to manipulate neurons and circuits over different time scales. Other speakers will give examples of how optogenetics has allowed establishing causal relationships between the activity of neuronal circuits and complex behaviors. An alternative method, chemogenetics, allows interrogation of neuronal circuits using synthetic ligands. Advantages and comparisons between these two technologies will be discussed.

Short Course #2

The Science of Large Data Sets: Spikes, Fields, and Voxels

Organizer: Uri Eden, PhD

8:30 a.m.–6:30 p.m.

San Diego Convention Center: 6F

Contact: profdev@sfn.org

Modern methods for imaging and recording brain activity allow us to collect massive amounts of data across a wide range of spatial and temporal scales. Researchers now routinely record spike trains from hundreds of neurons across multiple brain regions, continuous fields from numerous brain sites over days at a time, and imaging data containing hundreds of gigabytes of information. In order to make use of the exciting new opportunities afforded by this explosion of data, it is imperative for researchers to understand and be able to apply principled statistical methods that take advantage of the structure present in diverse neural datasets. This short course will provide an overview of classic and modern data analysis methods and will cover general principles of signal processing and statistical inference methods, with a focus on three common classes of signals: spike trains, electromagnetic fields at multiple spatial scales, and fMRI data.

Saturday, Nov. 9

Meet-the-Expert Series

8–9:15 a.m., 9:30–10:45 a.m.

Manchester Grand Hyatt: Annie, Emma, Ford, Madeleine, Mohsen

Contact: profdev@sfn.org

Experts will describe their research techniques and accomplishments in a personal context that offers participants a behind-the-scenes look at factors influencing each expert's work. The session offers an opportunity for students and postdoctoral researchers to engage the expert in an informal dialogue over breakfast. No registration is required, but seating is limited.

Session 1, 8–9:15 a.m.

Fred H. Gage, PhD

Neuronal Plasticity and Neural Diversity

Partial support contributed by: Emory University/Yerkes National Primate Research Center

Manchester Grand Hyatt: Madeleine

This discussion will focus on the evidence supporting the birth and maturation of new neurons in the adult dentate gyrus of the hippocampus in the mammalian brain. The mechanism by which the cells integrate into the dentate gyrus and their functional significance with regard to neural plasticity will be discussed. In addition, there will be a focus on the recent finding that LINE-1 and Alu retroelements are active in neuronal progenitor cells and the germline, providing additional mechanisms for neuronal diversification.

Erik Herzog, PhD

Coordinated Circadian Clocks in the Lab, Classroom, and Clinic

Manchester Grand Hyatt: Mohsen

We wake and sleep, eat, and fast on a daily basis. These biological, circadian rhythms are common across all phyla. In mammals, these rhythms are intrinsic to glia, neurons, and many other cell types in the brain and body. How is the mammalian brain organized to generate daily rhythms in physiology and behavior? What happens when environmental or genetic events disrupt normal circadian rhythms? This session will discuss how studies of the network of circadian clocks in the brain and body are revealing insights into how oscillators couple, kids struggle to learn in school, and clinicians may be able to improve patient outcomes in brain cancers, mood disorders, and obesity.

Saturday, Nov. 9 (cont.)

George Koob, PhD

The Neurocircuitry of Addiction: From Motivation to Allostasis

Manchester Grand Hyatt: Annie

Understanding the neural mechanisms of motivation has gained tremendously from our study of the archetypal disturbance of motivation: addiction. Addiction can be defined as disorder of compulsive drug use with loss of control in intake and the emergence of a negative motivational state during withdrawal. While reward dysregulations historically have been addressed as breaks with homeostasis in concepts such as sensitization and opponent processes, recent formulations suggest drug addiction is a reward deficit, stress surfeit, executive function disorder that follows an allostatic process rather than a homeostatic process. Our understanding of the neurobiology of addiction is providing valuable insight into the neurobiology of motivation per se and how motivational systems change in psychopathology.

Steve Scott, PhD

Making and Using Robots to Study Sensorimotor Function and Quantify Neurological Impairments

Manchester Grand Hyatt: Ford

The presentation contains three separate yet intertwined themes. First, selecting a less traveled path through academic training from engineering to neuroscience can provide unique opportunities for research that spans disciplines and fields. Second, the development and use of novel robotic technology quantifies and modifies limb movement, leading to several new discoveries on the fundamentals of sensorimotor control and impairments associated with stroke and other neurological injuries/disorders. Finally, this same technology led to the creation of a start-up company with an objective to create a next generation technology for neurological assessment.

Session 2, 9:30–10:45 a.m.

Christine Gall, PhD

Building a Substrate Map for Memory Encoding at Single Synapses

Manchester Grand Hyatt: Emma

Advances in understanding the neurobiological mechanisms underlying enduring synaptic plasticity, in particular long-term potentiation (LTP), have provided opportunities to address specific, long-held questions about memory encoding. How are neuromodulatory substances (e.g., BDNF, estrogen) involved? Where are the links broken in learning disorders? Can the analysis of synaptic signaling be used to map the loci of memory encoding (engrams)?

This session will focus on how insight into the mechanisms of LTP and advances in light microscopy are being used to address these questions and others pertaining to enduring functional plasticity in the adult brain.

Paul Glimcher, PhD

Learning to Be an Interdisciplinary Scientist at the Border of the Natural and Social Sciences

Manchester Grand Hyatt: Mohsen

More neuroscientists find themselves working in highly interdisciplinary environments where a thorough knowledge of other scientific approaches can make the difference between high-impact successes and near-total failure. How does one gain deep expertise in another discipline? How can one learn to “see” a problem through the eyes of a scientist who has been trained in a completely different way? This session will offer an overview of Glimcher’s path from physiologist to economist-neuroscientist highlighting both the challenges and opportunities that collaborations with social scientists can provide.

Bryan Roth, MD, PhD

Translating Basic Discoveries Into Neurotherapeutics

Manchester Grand Hyatt: Ford

This session highlights emerging technologies for translating basic science discoveries into new therapies for neuropsychiatric diseases. A case-study approach will illustrate how we can discover potential therapeutics for both rare, single-gene disorders in the autism spectrum and for relatively common, polygenic disorders such as schizophrenia. Additionally, the translational potential of newly developed synthetic biology tools such as DREADDs will be discussed.

Hongjun Song, PhD

Understanding Neural Stem Cells and Neurogenesis: One Cell at a Time

Manchester Grand Hyatt: Annie

Knowledge of neural stem cell properties and neurogenesis is fundamental to our understanding of neural development and brain disorders with developmental origins. This session will discuss multidisciplinary approaches for addressing basic questions in mammalian neurogenesis *in vivo*, from prospective clonal analysis of individual adult neural stem cell behavior to “single-cell” genetic manipulation of proliferating neural progenitors, from seamless reconstruction of complex axonal projections of individual newborn neurons to circuit regulation of neurogenesis in response to animal experience.

Rachel Wilson, PhD

Small Brain, Big Problems

Manchester Grand Hyatt: Madeleine

The focus of the Wilson laboratory is to understand some of the computations that occur in the early stages of sensory processing and to describe the cellular, synaptic, and circuit mechanisms underlying these computations. *Drosophila* are used as a model organism to investigate these questions; however, because some of the fundamental problems of early sensory processing are likely to be common to all species, some of the lessons learned from this simple brain will provide clues to understanding similar problems in more complex brains. This session will discuss recent findings as well as general considerations relating to the use of simple nervous systems to understand fundamental principles of circuit function.

Careers Beyond the Bench

Organizer: Elisabeth Van Bockstaele, PhD

Panelists: Andrew Bean, PhD; Katja Brose, PhD; Joe Hardy, PhD; Bradley Voytek, PhD

9–11 a.m.

San Diego Convention Center: 31C

Contact: profdev@sfn.org

The workshop will discuss career trajectories of individuals in non-academic settings. An emphasis will be placed on providing tips to prepare for a career shift, tools for networking, and strategies to build your resume. Panelists will address the following questions: (1) What career trajectories are available with an MS vs PhD in neuroscience? (2) What are the most effective strategies for transitioning into a non-academic research career? (3) What qualifications, skills and traits are needed for a career in science communication? (4) What are the skills that “tech” companies are looking for and how to use social and real-life networking to help make a career transition.

Success in Academia

Organizer: Patsy Dickinson, PhD

Panelists: Darcy Kelley, PhD; Kimberly McAllister, PhD; Donald Partridge, PhD; Aras Petrulis, PhD; Bill Wright, PhD

9–11 a.m.

San Diego Convention Center: 30C

Contact: profdev@sfn.org

This workshop presents an overview of the factors that lead to success in a variety of academic institutions. Panelists include successful neuroscientists at institutions ranging from small liberal arts colleges to top research-oriented universities. They will consider the types of activities and attributes that are important in achieving success in their institutions, describe

the paths that led them to their current positions, and answer questions from the audience.

Getting the Most Out of SfN: The Annual Meeting and Beyond

Organizer: David Riddle, PhD;
Noah Sandstrom, PhD; Hermes Yeh, PhD
1–2 p.m.

San Diego Convention Center: 31C
Contact: profdev@sfn.org

Students and others new to the annual meeting are invited to this session where experienced participants will share tips on how to get the most out of the annual meeting experience, both during and after Neuroscience 2013. Whether you are looking for networking strategies or simply ways to make your experience productive and enjoyable, this session will be beneficial. Learn strategies for navigating the annual meeting, discuss professional development tools available during and after the meeting, and ask questions.

Research Careers in Industry and the Private Sector

Support contributed by: Autism Speaks

Organizer: Gretchen Snyder, PhD
Panelists: Pamala Adams, MS; Taleen Hanania, PhD; J.P. Johnson, PhD; Kenneth Maynard, PhD; Elizabeth Rex, PhD

1–3 p.m.
San Diego Convention Center: 30C
Contact: profdev@sfn.org

Research opportunities for neuroscientists in the commercial world have increased due to the growth of the biotech industry and the commercialization of academic-based technology. This workshop will showcase competitive and exciting research careers in diverse settings including innovative biotechs, contract research organizations, and large pharmaceutical companies. Participants will relate their experiences in conducting research with a commercial goal and advise on issues such as job-seeking strategies and mid-career transitions from bench science into management/business tracks.

Challenges in Neuroscience Training

Organizers: Michael Levine, PhD; Barbara Lom, PhD; Konrad Zinsmaier, PhD
Panelists: John Bixby, PhD; Michael Friedlander, PhD; David Morilak, PhD; Rae Nishi, PhD; Jennifer Raymond, PhD; Alan Sved, PhD
2–5 p.m.
San Diego Convention Center: 11B
Contact: profdev@sfn.org

Higher education and scientific research landscapes are changing dramatically, affecting how undergraduate and graduate programs prepare the next generation of neuroscientists. This workshop features two panel discussions examining major issues and best practices in neuroscience education such as research funding, program assessment, diversity, pedagogy, mentoring, and career development. One discussion will be led by a panel of graduate program directors, while the other will feature university administrators sharing their perspectives on neuroscience education.

Tackling Bias: Best Practices for Recruiting and Retaining a Diverse Faculty

Organizers: Jill Becker, PhD; Anne Etgen, PhD; Kathie Olsen, PhD
2:30–5 p.m.
San Diego Convention Center: 31C
Contact: profdev@sfn.org

SfN provides concrete strategies for recruitment, advancement, and creating a favorable work climate for female faculty and faculty from diverse backgrounds in neuroscience. This interactive workshop will use IWiN materials to present data showing that while implicit bias affects the progress of women and underrepresented minorities in science, it can be mitigated. Speakers will discuss concrete steps you can take to contain and minimize the influence of implicit bias on evaluation.

Brain Awareness Campaign Event Igniting Brain Awareness Around the World

3–4:30 p.m.
San Diego Convention Center: 16AB
Contact: baw@sfn.org

Share your outreach successes with BAW organizers from all over the world, and celebrate the winners of the third annual Brain Awareness Video Contest and other education award winners. Hear from Jean-François Gariépy, PhD, winner of SfN's 2008 Next Generation Award, about the great opportunities social media presents for public outreach and how SfN can help you develop world-wide brain awareness.

NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Career

Organizers: Stephen Korn, PhD
Panelists: Nancy Desmond, PhD; Michelle Jones-London, PhD; Dennis Twombly, PhD; Alan Willard, PhD
3:30–5 p.m.
San Diego Convention Center: 30C
Contact: profdev@sfn.org

This workshop will discuss factors that NIH staff has found to be important to the success of trainees in the realm of both training itself and grant writing. Funding opportunities will be discussed in the context of different issues that arise for different funding mechanisms that contribute to successful and unsuccessful applications. Brief talks will be followed by an extensive question and answer session.

Diversity Fellows Poster Session

6:30–8:30 p.m.
San Diego Convention Center: Hall A
Contact: profdev@sfn.org

Join a special poster session and networking event featuring participants in the Neuroscience Scholars Program and other diversity fellowship programs

International Fellows Poster Session

Organizer: Bruce Ransom, MD, PhD
6:30–8:30 p.m.
San Diego Convention Center: Hall A
Contact: globalaffairs@sfn.org

Meet the next generation of leading young investigators from across the globe, including award-winning young investigators selected by the International Brain Research Organization, the Japan Neuroscience Society, and the Federation of European Neuroscience Societies.

Travel Award Recipients Poster Session

Partial support contributed by: Lilly USA LLC
6:30–8:30 p.m.
San Diego Convention Center: Hall A
Contact: awards@sfn.org

This networking event honors award-winning posters from undergraduate and graduate students and postdoctoral fellows selected by SfN's Professional Development, Membership and Chapters, and Neuroscience Departments and Programs committees.

Career Development Topics: A Mentoring and Networking Event

7:30–10 p.m.
San Diego Convention Center: Hall A
Contact: profdev@sfn.org

Experienced neuroscientists will be on hand to offer mentoring on a wide range of topics in an informal, roundtable format. Topics include work-life balance, securing grants, career transitions, careers away from the bench, choosing graduate schools of postdoctoral fellow positions, and many others. Participants from diverse backgrounds, fields, and work sectors are encouraged to attend.

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
Friday, Nov. 8					
Alzheimer's Workshop: Alzheimer's Research From Different Perspectives	http://mhens.unimaas.nl/vervolgpagina/6/45/Alzheimer%92s_Disease_workshop_Alzheimer_Research_from_different_perspectives/	8:30 a.m.–5 p.m.	Bay Resort Hotel, San Diego Bay	N/A	2
Nicotinic Acetylcholine Receptor-Based Therapeutics: Emerging Frontiers in Basic Rsch and Clinical Sci	cmpinc.net/nicotinic2013	8:30 a.m.–6 p.m.	Paradise Point Resort	N/A	3
Society for the Neurobiology of Language	neurolang.org	8:30 a.m.–7 p.m.	San Diego Westin Hotel	N/A	2
5th International Workshop on Advances in Electrocoricography	ecog.info	8:30 a.m.–5:30 p.m.	Marriott San Diego Gaslamp Quarter	660 K Street San Diego, CA 92101	2
8th Brain Research Conference — RNA Metabolism in Neurological Disease	brainresearchconference.com	9 a.m.–7 p.m.	Sheraton San Diego Hotel and Marina	N/A	1
12th Annual Molecular and Cellular Cognition Society Meeting	molcellcog.org	9 a.m.–5 p.m.	San Diego Convention Center	Room 29A	2
23rd Neuropharmacology Conference — The Synaptic Basis of Neurodegenerative Disorders	neuropharmacology-conference.elsevier.com	9 a.m.–7 p.m.	Sheraton San Diego Hotel and Marina	N/A	1
Barrels XXVI	regonline.com/barrels26	8 a.m.–4:30 p.m.	UCSD CaL It Auditorium	N/A	3
Cell Symposia — The Networked Brain	cell-symposia-networkedbrain.com	9 a.m.–9 p.m.	Sheraton San Diego Hotel and Marina	Grand Ballroom A and B	1
International Neuroethics Society Annual Meeting	neuroethicssociety.org	8 a.m.–7:30 p.m.	San Diego Marriot Marquis	San Diego Ballroom Salon B	2
J. B. Johnston Club for Evolutionary Neuroscience	alice.powers@stonybrook.edu	8 a.m.–9 p.m.	Horton Grand Hotel	N/A	2
Translational and Computational Motor Control: From Theory to Neurorehabilitation	shannonwild@llmsi.com	8 a.m.–5 p.m.	HardRock Hotel	N/A	2

Title	More Information	Time	Location	Room	Key
Brain Pathways to Recovery From Alcohol Dependence	changhai.cui@nih.gov	8:30 a.m.–5:30 p.m.	San Diego Convention Center	Room 24A	2
Cognitive and Neurobiological Aging in the Dog	christinad@vivocore.com	9 a.m.–5 p.m.	San Diego Convention Center	Room 32B	3
Mechanisms of Communication: Critical Periods and Social Learning	Tgentner@ucsd.edu	8 a.m.–7:30 p.m.	Scripps Seaside Forum	N/A	3
Mechanisms of Misfolded Protein Propagation in Neurodegenerative Diseases	sutherlandm@ninds.nih.gov	8:30 a.m.–4:30 p.m.	Manchester Grand Hyatt	Madeleine A–D	2
National Institute on Drug Abuse Frontiers in Addiction Research Mini-Convention	seiservices.com/nida/frontiers2013/	8 a.m.–6 p.m.	Westin Gaslamp Quarter in San Diego	N/A	2
Society for Social Neuroscience	s4sn.org	7:30 a.m.–8 p.m.	Hilton San Diego Bayfront	Sapphire 400, 410 and Ballrooms AB	3
The Neurosciences Institute: Past, Present, and Future	Teresa.Allen@braincorporation.com	9 a.m.–10 p.m.	Auditorium of The Neurosciences Institute, San Diego	N/A	3
Tucker-Davis Symposium on Advances and Perspectives in Auditory Neurophysiology	med.upenn.edu/apan	7 a.m.–7 p.m.	Hilton San Diego Bayfront	Sapphire Ballrooms CD	3
Using NEURON to Model Cells and Networks	ted.carnevale@yale.edu	9 a.m.–5 p.m.	neuron.yale.edu/neuron/courses	N/A	2
Galanin SfN Pre meeting 2013	regonline.com/galanin_premmeeting	8:30 a.m.–5 p.m.	Crowne Plaza San Diego — Mission Valley	N/A	3
Saturday, Nov. 9					
Galanin SfN Pre meeting 2013	regonline.com/galanin_premmeeting	8:30–10:30 a.m.	Crowne Plaza San Diego — Mission Valley	N/A	3
g.tec's Brain-Computer Interface Workshop	vogtcgtec.at	6:30–9:30 p.m.	San Diego Convention Center	11B	1
NeuroRehabilitation Social	horakf@ohsu.edu	6:30–8:30 p.m.	Hilton San Diego Bayfront	Aqua 308	2
Using the Neuroscience Gateway Portal for Parallel Simulations	ted.carnevale@yale.edu	8:30–10:30 a.m.	nsgportal.org/workshop.html	N/A	2

Notes

Notes

Notes

Notes

Complete Session Listing

Saturday PM

DIALOGUES BETWEEN NEUROSCIENCE AND SOCIETY

San Diego Convention Center

001. The Creative Culture

Sat. 11:00 AM - 1:00 PM — Ballroom 20

Speaker: E. CATMULL, President, Walt Disney and Pixar Animation Studios

Support contributed by Elsevier

Many think creativity is the result of singular genius. However, the reality of creativity is far more complex and interesting. The central issues include removing hidden barriers to creativity and candor. We pay special attention to protecting barely formed ideas; the dynamic balance between technology and art; the necessity of structured processes to get the job done; and the random, unpredictable nature of what we do. In particular, we need to give thoughtful attention to the culture itself, for out of this culture arises new technology, new ideas, and artistic expression.

FRED KAVLI PUBLIC SYMPOSIUM *San Diego Convention Center*

002. Fred Kavli Public Symposium on Creativity

Sat. 1:30 PM - 4:00 PM — 6A

Chair: A. DAMASIO

Support contributed by The Kavli Foundation

Creativity is one of the defining traits of humanity. It manifests itself in the organization of social systems (e.g. moral, political, and economic), in the arts (from music, painting, and theater to literature and film), and in all manner of inventions (from scientific explanations and technical instruments to complex engineered systems). How does the brain work to produce such extraordinary results? Do these varied endeavors share brain strategies and structures? Join two neuroscientists, a composer (and a piano), a visual artist, and an inventor/scientist/engineer for a discussion on the neuroscience of creativity.

- 2.01 Introduction.
- 2.02 The neuroscience of creativity. A. DAMASIO. *USC*.
- 2.03 The mind's ear: dreaming and thinking music. B. ADOLPHE. *The Chamber Music Society of Lincoln Ctr.*
- 2.04 Moods and imagination. K. REDFIELD JAMISON. *Johns Hopkins Univ. Sch. of Med.*
- 2.05 Creativity in the visual arts. V. MUNIZ. *vikmunz.net*.
- 2.06 Invention. D. HILLIS. *Applied Minds*.
- 2.07 Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

003. Multilevel Analysis of Pattern Separation and Completion: A Role for Subregions of the Hippocampus — CME

Sat. 1:30 PM - 4:00 PM — 6B

Chair: C. STARK

The hippocampus plays a critical role in memory and its disruption is tied to many disorders. Our understanding of the hippocampus has been advanced recently by experimentally testing computational models' predictions about the role of hippocampal subfields in pattern separation and pattern completion. The speakers will address the computational basis of pattern separation and completion as well as behavioral and neural evidence based on lesions, unit recordings, human fMRI, and disorders.

- 1:30 3.01 Introduction.
- 1:35 3.02 Computational bases and functions for pattern separation in the dentate gyrus and pattern completion in the CA3 region of the hippocampus. E. ROLLS. *Oxford Ctr. For Comp Neurosci*.
- 2:10 3.03 The effects of dentate gyrus dysfunction on spatial, context, and odor pattern separation and CA3 dysfunction on cue- based pattern completion. R. KESNER. *Univ. Utah*.
- 2:45 3.04 Neural network mechanisms for pattern separation in the dentate gyrus. J. LEUTGEB. *UCSD*.
- 3:20 3.05 The role of human hippocampal subfields in pattern separation, aging, and MCI. C. STARK. *Univ. CA, Irvine*.
- 3:55 3.06 Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

004. The Neuronal Code(s) of the Cerebellum — CME

Sat. 1:30 PM - 4:00 PM — 6F

Chair: D. H. HECK

This symposium will highlight new findings related to the neuronal code used by cerebellar neurons for the representation of behavioral and sensory processes. New *in vivo* and *in vitro* experimental results, as well as modeling studies, provide evidence for key roles of both temporal precision of individual action potentials and slow modulations of action potential rate. The presentations by a diverse and multinational group of speakers will showcase different approaches and perspectives.

- 1:30 4.01 Introduction.
- 1:35 4.02 A role for synchronous Purkinje activity in controlling cerebellar output. A. PERSON. *Univ. of Colorado Sch. of Med.*
- 2:10 4.03 Linear information processing by the cerebellar cortex. K. KHODAKHAH. *Albert Einstein Col. Med.*
- 2:45 4.04 Spatiotemporal firing patterns in the cerebellum. C. DE ZEEUW. *Erasmus MC*.
- 3:20 4.05 How does cerebellar cortex control spiking in the cerebellar nuclei? D. JAEGER. *Emory Univ.*
- 3:55 4.06 Closing Remarks.

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

MINISYMPOSIUM *San Diego Convention Center*

005. **Midbrain Morphogenesis, Fate Specification, and Regeneration** — CME

Sat. 1:30 PM - 4:00 PM — 6E

Chair: R. AWATRAMANI

This minisymposium will cover topics from early ventral midbrain morphogenesis to subsequent fate specification events, particularly of dopamine neurons, and how knowledge from developmental studies can be directly translated to the stem cell-based derivation of dopamine neurons.

- 1:30 **5.01** Introduction.
- 1:35 **5.02** Apicobasal polarity and neural tube closure in the midbrain. S. AGARWALA. *Univ. of Texas at Austin*.
- 1:55 **5.03** Wnts, microRNAs, and midbrain development. R. AWATRAMANI. *Northwestern Univ.*
- 2:15 **5.04** Transcriptional control of midbrain dopaminergic development and function. S. ANG. *NIMR*.
- 2:35 **5.05** Transcription factors define dopamine neuron diversity. M. SMIDT. *UVA*.
- 2:55 **5.06** Programming and reprogramming the dopaminergic cell fate for regenerative medicine. K. KIM. *McLean Hospital/Harvard Med. Sch.*
- 3:15 **5.07** Controlling the human pluripotent stem cell: implications for dopamine neuron reprogramming and developmental genetics. R. MCKAY. *NIH*.
- 3:35 **5.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

006. **How Do Cellular-Stress Response Pathways Control Brain Resistance During Aging and Neurodegenerative Disease?** — CME

Sat. 1:30 PM - 4:00 PM — 28A

Chair: C. NERI
Co-Chair: R. I. MORIMOTO

Cell-stress response pathways play vital roles throughout the lifetime of an individual by regulating the response to chronic or acute stress. However, how they control brain function is poorly understood. Additionally, understanding the role of these pathways in diseased neuron resistance has important therapeutic implications. This minisymposium will address these questions based on the results of recent investigations, with the goal of promoting interdisciplinary research strategies.

- 1:30 **6.01** Introduction.
- 1:35 **6.02** A systems approach to cell stress and proteostasis networks in health and disease. R. I. MORIMOTO. *Northwestern Univ.*
- 1:55 **6.03** Longevity genes in neural stem cell aging. A. BRUNET. *Stanford Univ. Sch. of Med.*
- 2:15 **6.04** Dissecting the role of axonal transport in aging and neurodegeneration. S. ENCALADA. *The Scripps Res. Inst.*
- 2:35 **6.05** Regulation of neuronal cell death: from apoptosis to necroptosis. J. YUAN. *Harvard Med. Sch.*
- 2:55 **6.06** Neuronal signaling regulates stress resistance and proteostasis in the nematode *C. elegans*. E. COHEN. *The Hebrew Univ. of Jerusalem*.

- 3:15 **6.07** Dissecting early-stage neuron survival deficiency in Huntington's disease. C. NERI. *INSERM*.

- 3:35 **6.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

007. **The Choroid Plexus and Cerebrospinal Fluid: Emerging Roles in Development, Disease, and Therapy** — CME

Sat. 1:30 PM - 4:00 PM — 29D

Chair: E. S. MONUKI
Co-Chair: M. LEHTINEN

While universally recognized as the source of cerebrospinal fluid (CSF), the choroid plexus (CP) has been one of the most understudied tissues in neuroscience. However, recent work has begun to illuminate how the CP and CSF regulate development and disease in ways that extend far beyond historical roles and how CP cells can be generated and used for CSF-based therapies. This minisymposium combines new and established investigators to capture this newfound excitement surrounding the CP and CSF.

- 1:30 **7.01** Introduction.
- 1:35 **7.02** Pericytes, sonic hedgehog, and the coordinated development of cell lineages of the brain choroid plexus. S. DYMECKI. *Harvard Med. Sch.*
- 1:55 **7.03** The embryonic cerebrospinal fluid provides proliferative, neurogenic cues for neural stem cells. M. LEHTINEN. *Children's Hosp. Boston*.
- 2:15 **7.04** Choroid plexus function in the neural stem cell niche. C. BJORNSSON. *Neural Stem Cell Inst.*
- 2:35 **7.05** Mapping the origins and treatment of choroid plexus carcinoma. R. GILBERTSON. *St. Jude Children's Res. Hosp.*
- 2:55 **7.06** ● Static and dynamic assessment of brain interstitial fluid and CSF provides insights into Alzheimer's disease pathogenesis. D. HOLTZMAN. *Washington Univ.*
- 3:15 **7.07** Stem cell-derived choroid plexus epithelial cells as a secretory cell-of-choice for CNS therapies. E. MONUKI. *UC Irvine Sch. of Med.*
- 3:35 **7.08** Closing Remarks.

SPECIAL LECTURE *San Diego Convention Center*

008. **Interacting Influence of Sleep and Circadian Clocks on Human Physiology and Cognitive Performance** — CME

Sat. 2:00 PM - 3:10 PM — Ballroom 20

Speaker: C. A. CZEISLER, *Harvard Med. Sch.*

Mammalian circadian clocks regulate the timing and duration of sleep. In humans, sleep and circadian clocks interact to affect many aspects of both physiology (including endocrine, metabolic, cardiovascular, immune and respiratory physiology) and behavior (including activity, alertness, performance, mood, vigilance, attention and eating). As a consequence, the interaction of sleep and circadian clocks has major implications for not only health and disease but also safety and productivity.

PRESIDENTIAL SPECIAL LECTURE *San Diego Convention Center*

009. The Mind of a Worm: Learning from the *C. Elegans* Connectome — CME

Sat. 5:15 PM - 6:25 PM — Ballroom 20

Speaker: S. W. EMMONS, *Albert Einstein Col. of Med.*

Support contributed by Janssen

The connectome of the roundworm *C. elegans* reveals the neural pathways that underlie its motivated and purposeful behavior. New connectomics data suggest the topology of a neural network contributes to integration of multiple sensory inputs in a decision-making process that guides a multistep behavioral pathway. Our thoughts, memories, and behavior are emergent collective properties of a vast network of neurons. Determining the wiring diagram of the nervous system of a tiny animal is a first step towards learning how patterns of connectivity contribute to the rapid, robust, and economic function of the brain.

NANOSYMPOSIUM

010. Parkinson's Disease: Cellular and Genetic Mechanisms

Theme C: Disorders of the Nervous System

Sat. 1:00 PM — *San Diego Convention Center, 24A*

- 1:00 **10.01** ● ▲ Retromer protein Vps35 interacts with LRRK2 to regulate locomotor activity, survival and sensitivity to rotenone in a *Drosophila* model of Parkinson's disease. S. A. WONG; J. CAO; R. LINHART; M. TRAN; A. HUYNH; C. ARDREY; C. HSU; J. M. PARK; B. PHI; J. KURIAN; S. SHEA; G. STASSINOS; E. YADIDI; K. VENDEROVA*. *Univ. of the Pacific*.
- 1:15 **10.02** ● Trafficking of Cathepsin-D in the endo-lysosomal system is affected by α -synuclein. M. S. NIELSEN*; P. KALLUNKI; R. POHLMANN; M. NYEGAARD; R. V. BENJAMINSEN; L. T. ANDREASEN; P. H. JENSEN; C. MATRONE. *Univ. of AARHUS, Lundbeck A/S, Univ. of Münster, Tech. Univ. of Denmark*.
- 1:30 **10.03** Dual proteostasis effect of glucocerebrosidase in the pathology of Parkinson's disease using patient derived induced pluripotent stem cells. H. J. FERNANDES*; E. HARTFIELD; J. BADGER; J. VOWLES; S. EVETTS; K. TALBOT; M. HU; S. COWLEY; W. JAMES; R. WADE-MARTINS. *Univ. of Oxford, OPDC, Univ. of Oxford, Univ. of Oxford*.
- 1:45 **10.04** Pathogenic LRRK2 modulates degradative receptor trafficking by regulation of late endosomal budding. P. GÓMEZ-SUAGA; E. FDEZ; M. BLANCA RAMÍREZ; S. N. HILFIKER*. *CSIC*.
- 2:00 **10.05** V-1 maintains and augments nigrostriatal dopaminergic function through actin polymerization *in vitro* and *in vivo*. I. KAWAHATA*; Y. LAI; S. OHTAKU; J. MORITA; S. KATO; A. TABUCHI; M. TSUDA; K. OHASHI; K. MIZUNO; Y. IZUMI; T. KUME; A. AKAIKE; Y. TOMIOKA; H. ICHINOSE; K. KOBAYASHI; T. YAMAKUNI. *Tohoku Univ., Fukushima Med. Univ., Toyama Univ., Tokyo Univ., Kyoto Univ., Tokyo Inst. of Technol.*
- 2:15 **10.06** Systematic comparison of the effects of alpha-synuclein mutations on its oligomerization and aggregation. T. F. OUTEIRO*; D. LAZARO; E. RODRIGUES; E. GERHARDT; P. GUERREIRO. *Univ. Med. Ctr. Goettingen*.

- 2:30 **10.07** Endogenous neurotoxins induce α -synuclein aggregation in parkin knockdown PC12 cell model. H. QING*; J. LU; Y. ZHANG; C. HAN; R. WANG; M. XU; Y. DENG. *Beijing Inst. of Technol., Beijing Inst. Technol.*
- 2:45 **10.08** Detection of oligomeric α -synuclein using a novel sandwich ELISA as a potential early diagnosis of Parkinson's disease. S. M. WILLIAMS*; M. SIERKS. *Arizona State Univ., Arizona State Univ.*
- 3:00 **10.09** Adenosine A2A receptor - A putative player in alpha-synuclein induced LTP impairment. L. V. LOPES*; D. G. FERREIRA; J. E. COELHO; H. V. MIRANDA; A. ALBINO-TEIXEIRA; T. F. OUTEIRO. *Inst. de Medicina Molecular, Fac Med. Lisbon, Univ. Med. Ctr., Faculdade de Medicina, Univ. do Porto, Portugal*.
- 3:15 **10.10** Apolipoprotein A1 and Parkinson's disease risk. A. S. CHEN-PLOTKIN*; C. SWANSON; K. LI; M. D. GALLAGHER; T. L. UNGER; V. VAN DEERLIN; J. TROJANOWSKI; H. HURTIG; R. GOLDMANN GROSS; C. ZABETIAN. *Univ. of Pennsylvania Dept of Neurol., Univ. of Pennsylvania, Univ. of Washington*.
- 3:30 **10.11** Atypical 'dopamine transporter deficiency syndrome' in an adult male: Molecular characterization of new transporter variants. F. H. HENRIKSEN*; T. SKJØRRINGE; S. YASMEEN; N. V. ARENDS; T. F. ANDREASSEN; K. ERREGER; M. KARLSBORG; A. GALLI; L. E. HJERMIND; L. B. MØLLER; U. GETHER. *The Panum Inst., Kennedy Ctr., Vanderbilt Univ., Copenhagen Univ. Hosp., Copenhagen Univ. Hosp.*
- 3:45 **10.12** Extracellular LRRK2 secretion in exosomes. K. B. FRASER*; J. A. MOBLEY; D. G. STANDAERT; A. B. WEST. *Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham*.
- 4:00 **10.13** Neuronal IL-13Ra1 contributes to loss of dopaminergic cells during inflammation. B. CONTI*; B. MORRISON; M. SANCHEZ-ALAVEZ; S. SUGAMA; K. KIM; P. MAHER; M. MARCONDES. *Scripps Resch Inst., Nippon Med. Sch., McLean Hospital/Harvard Med. Sch., Salk Inst. for Biol. Studies*.
- 4:15 **10.14** A direct interaction between LRRK2 and specific β -tubulin isoforms regulates tubulin post-translational modification and is disrupted by the R1441G Roc domain mutation. K. HARVEY*; B. M. H. LAW; V. A. SPAIN; V. H. L. LEINSTER; D. C. BERWICK. *Univ. Col. London*.

NANOSYMPOSIUM

011. Brain Injury: Models and Human Studies

Theme C: Disorders of the Nervous System

Sat. 1:00 PM — *San Diego Convention Center, 32B*

- 1:00 **11.01** Interaction between excitatory and inhibitory neurotransmitters in the primary motor cortex: Insight from studies in healthy controls and concussed athletes. S. TREMBLAY*; V. BEAULÉ; S. PROULX; M. MARJANSKA; J. DOYON; M. LASSONDE; H. THÉORET. *Univ. De Montreal, Univ. of Montreal, McGill Univ., Univ. of Minnesota, Univ. of Montreal*.
- 1:15 **11.02** Prospective memory processing following mild traumatic brain injury. A. SIMMONS*; A. D. SPADONI; J. B. LOHR; E. W. TWAMLEY; I. STRIGO. *UCSD, Veterans Hlth. Syst.*

● Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:30 **11.03** Disruptions in plasticity and network activity in the hippocampus after diffuse brain injury in swine. A. V. ULYANOVA; K. BROWNE; M. GROVOLA; V. E. JOHNSON; D. CULLEN; J. A. WOLF*. *Univ. of Pennsylvania.*
- 1:45 **11.04** Long term manifestation of cerebellar biochemical, histopathological and functional changes after mild and severe fluid percussion injury in rodents. E. KAN*; E. LING; J. LU. *DSO Natl. Labs., Natl. Univ. of Singapore.*
- 2:00 **11.05** The influence of neural progenitor cell treatment on aberrant adult neurogenesis following fluid percussion injury in mice. L. B. NGWENYA*; H. FARHADI. *The Ohio State Univ. Wexner Med. Ctr.*
- 2:15 **11.06** How does mechanism of injury relate to patterns of white matter tract damage following traumatic brain injury? P. J. GROVER*; Y. LI; P. J. HELLYER; R. LEECH; D. J. SHARP. *Imperial Col. London, Imperial Col.*
- 2:30 **11.07** Early structural and immunohistochemical changes associated with blast traumatic brain injury in a porcine model. Report from the United Kingdom Blast Injury Porcine Study (BIPs). D. BAXTER*; S. GENTLEMAN; P. J. HELLYER; M. MIDWINTER; E. KIRKMAN; S. WATTS; D. J. SHARP. *Imperial Col. London, Royal Ctr. for Defence Med., Imperial Col. London, Defence Sci. and Technol. Lab.*
- 2:45 **11.08** Association of mild traumatic brain injury with maladaptive brain response to the anticipation of heat pain. I. STRIGO*; A. SPADONI; J. LOHR; A. SIMMONS. *UC San Diego, Veterans Affairs San Diego Healthcare Syst., UC San Diego, UC San Diego.*
- 3:00 **11.09** Neural biomarkers of treatment response in combat trauma. A. D. SPADONI*; I. A. STRIGO; S. B. NORMAN; A. N. SIMMONS. *UCSD, VA San Diego Healthcare Syst.*
- 3:15 **11.10** Characterization of a novel rate-alterable voice-coil fluid percussion traumatic brain injury model. R. ABDUL WAHAB*; R. ORDAZ; B. J. PFISTER; B. G. LYETH. *New Jersey Inst. of Technol., Univ. of California Davis.*
- 3:30 **11.11** Repeated mild traumatic brain injuries dysregulate cerebral energy metabolism and inflammatory responses. Z. M. WEIL*; K. R. GAIER. *Ohio State Univ. Med. Ctr.*
- 4:00 **11.12** Characterization of neurobehavioral, neuropathological and proteomic profiles in a novel animal model of co-morbid posttraumatic stress disorder and mild traumatic brain injury. J. O. OJO*; M. GREENBERG; J. REED; G. CRYNEN; S. FERGUSON; B. MOUZON; C. BACHMEIER; D. DIAMOND; M. MULLAN; F. CRAWFORD. *The Roskamp Inst., James A Haley Veterans Hosp., Univ. of South Florida.*
- 3:45 **11.13** Sex differences in the effects of traumatic brain injury on alcohol self-administration and hypocretin expression in rats. J. K. SHAW*; D. P. FOX; R. RAGHUPATHI. *Drexel Univ. Col. of Med.*
- 4:15 **11.14** Thalamic atrophy and awareness in disorders of consciousness. M. M. MONTI*; J. CHIANG; E. S. LUTKENHOFF. *UCLA.*
- 1:15 **12.02** RNA-Seq characterization of spinal cord injury transcriptome in acute/subacute phases: a resource for understanding the pathology at the systems level. K. CHEN; S. DENG; H. LU; D. KIM; Q. CAO; J. WU*. *The Univ. of Texas Med. Sch. at Houston, The Univ. of Texas Med. Sch. at Houston.*
- 1:30 **12.03** Chondroitin sulfate proteoglycans modulate the survival and differentiation of spinal cord stem/progenitor cells. S. M. DYCK; A. ALIZADEH; E. H. PROULX; S. KARIMI-ABDOLREZAEI*. *Univ. of Manitoba.*
- 1:45 **12.04** Wnt inhibition combined with preconditioning lesion promotes plasticity and functional recovery via circuit remodeling. E. R. HOLLIS*; M. PESSIAN; N. ISHIKO; K. TOLENTINO; C. LEE; N. CALCUTT; Y. ZOU. *Univ. Calif San Diego, Univ. Calif San Diego.*
- 2:00 **12.05** Resident neural stem cells limit tissue damage and neuronal loss after spinal cord injury. H. SABELSTROM*; M. STENUDD; P. REU; D. DIAS; C. GÖRITZ; J. FRISÉN. *Karolinska Institutet.*
- 2:15 **12.06** Critical role for protease activated receptors in kallikrein 6-mediated astrogliosis. M. RADULOVIC*; H. YOON; J. WU; I. SCARISBRICK. *Mayo Grad. Sch., Mayo Clin.*
- 2:30 **12.07** Novel glycolipid markers of chronic pain following spinal cord injury. C. L. NILSSON*; K. B. NILSSON; H. HE; H. LIU; A. SHAVKUNOV; Y. S. GWAK; S. N. HASSLER; K. M. JOHNSON; N. L. YOUNG; A. G. MARSHALL; C. E. HULSEBOSCH. *Univ. of Texas Med. Br., Lund Univ., Natl. High Magnetic Field Lab., Univ. of Texas Med. Br., Natl. High Magnetic Field Lab.*
- 2:45 **12.08** Affinity release of Chondroitinase ABC from a methylcellulose hydrogel for treatment of spinal cord injury. M. M. PAKULSKA*; K. VULIC; M. S. SHOICHET. *Univ. of Toronto, Univ. of Toronto, Univ. of Toronto.*
- 3:00 **12.09** ● Optimizing administration of Multistem® for the treatment of acute contusion spinal cord injury. S. A. BUSCH*; M. A. DEPAUL; M. PALMER; B. T. LANG; J. A. HAMILTON; R. CUTRONE; A. E. TING; R. J. DEANS; R. W. MAYES; J. SILVER. *Athersys, Inc., Case Western Reserve Univ.*
- 3:15 **12.10** Riluzole associated plasticity of spared axonal connections following high cervical hemileision. K. SATKUNENDRARAJAH*; M. G. FEHLINGS; F. NISSIRI; S. KARADIMAS. *Toronto Western Res. Inst.*
- 3:30 **12.11** SLIC and Allen Classification as predictors of injury severity in teardrop fractures. B. AARABI*; K. CRANDALL; J. SLAVIN; N. BEATY; N. AKHTAR-DANESH. *Univ. of Maryland Sch. of Med., McMaster Univ.*
- 3:45 **12.12** Human induced pluripotent stem cells and an immortalized human spinal progenitor cell line - a comparison in the treatment of rat spinal cord injury. E. M. SYKOVA*; N. ROMANYUK; T. AMEMORI; P. JENDELOVA. *Inst. Exptl. Med. ASCR, Charles University, Second Fac. of Med.*
- 4:00 **12.13** Modified methacrylate hydrogels improve tissue repair and stem cell survival in spinal cord injury. A. HEJCL*; J. RUZICKA; M. KAPCALOVA; E. KRUMBHOLCOVA; M. PRADNY; J. MICHALEK; P. JENDELOVA; E. SYKOVA. *Inst. of Exptl. Med. ASCR, Inst. of Exptl. Med. ASCR, Inst. of Macromolecular Chem. ASCR.*

NANOSYMPOSIUM

012. Spinal Cord Injury: Mechanisms and Therapies

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, 23A

- 1:00 **12.01** The role of myelination in induced pluripotent stem cell derived neural stem cells transplantation mediated recovery following spinal cord injury. R. P. SALEWSKI*; R. A. MITCHEL; M. FEHLINGS. *Univ. Hlth. Network.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:15 **12.14** Changes in cortical connectivity in individuals with spinal cord injury. A. CHOE; V. BELEGU*; J. PEKAR; J. W. McDONALD. *Hugo Moser Res. Inst. At Kennedy Krieger, Inc., Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ.*

NANOSYMPOSIUM

013. Mood Disorders: Human Biomarkers, Treatment, and Post Mortem Studies

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, 30B

- 1:00 **13.01** Effects of exercise on anxiety and depression disorders: Review of meta-analyses and neurobiological mechanisms. H. BUDDE*; I. HELMICH; M. WEGNER. *Med. Sch. Hamburg, Inst. of Hlth. Promotion and Clin. Movement Science, German Sports Univ. Cologne, Inst. of Sport Science, Univ. of Bern.*
- 1:15 **13.02** 12-weeks supervised exercise training plus motivational interviewing can reduce depression symptoms in youth with major depressive disorder. R. CALLISTER; A. GILES; Y. NASSTASIA; A. BAKER; S. HALPIN; B. DASCOMBE; L. HIDES; B. KELLY; R. J. CALLISTER*. *Univ. of Newcastle, QUT.*
- 1:30 **13.03** Regionally specific association between fibroblast growth factor-2 expression and symptom profile in patients with mood disorders. J. M. HEISLER*; D. A. CRUZ; J. C. O'CONNOR. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*
- 1:45 **13.04** **Withdrawn.**
- 2:00 **13.05** Abnormal fatty acid composition in the frontopolar cortex of patients with mood disorders - Kraepelin's dichotomy still alive. Y. TATEBAYASHI*. *Tokyo Metropolitan Inst. of Med. Sci.*
- 2:15 **13.06** ▲ Expression of ADAR enzymes in major depression: A bioinformatic approach. M. N. VIERRA*; M. S. SODHI. *UIC Col. of Pharm.*
- 2:30 **13.07** Sex hormones modulate a fronto-limbic brain network involved in the evaluation of positive and negative monetary outcomes. J. MACOVEANU*; S. HENNINGSSON; L. PINBORG; G. M. KNUDSEN; V. FROKJAER; H. R. SIEBNER. *Danish Res. Ctr. for Magnetic Resonance, Rigshospitalet.*
- 2:45 **13.08** ● Hyperresponsive amygdala in healthy 14-year-old adolescents with family history of depression. M. PILHATSCH*; N. C. VETTER; T. HÜBNER; M. N. SMOLKA. *Technische Univ. Dresden.*
- 3:00 **13.09** Serotonin 2A receptor clustering in lymphocytes as a putative biomarker of depression. H. J. CARUNCHO*; T. RIVERA-BALTANAS; J. MARTINEZ-VILLAMARIN; E. STERNER; L. E. KALYNCHUK; J. OLIVARES. *Univ. of Saskatchewan, CHUVI, Hosp. Meixoeiro, Univ. of Saskatchewan, Univ. of Saskatchewan.*

NANOSYMPOSIUM

014. Cocaine: Neural Mechanisms of Addiction I

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, 33C

- 1:00 **14.01** Cocaine users with low distress tolerance evidence lower prefrontal activation during a stressful goal directed task. S. B. DAUGHTERS*; T. J. ROSS; J. RYAN; J. SUROW; E. A. STEIN. *Univ. of North Carolina Chapel Hill, Neuroimaging Res. Branch, Natl. Inst. on Drug Abuse, NIH.*
- 1:15 **14.02** Role of CRF receptors in the induction and expression of behavioral and neural social stress-induced cross-sensitization to cocaine and self-administration "binge". E. N. HOLLY*; C. O. BOYSON; L. ALBRECHET-SOUZA; A. SHIMAMOTO; L. A. WEINER; J. F. DEBOLD; K. A. MICZEK. *Tufts Univ., Tufts Univ.*
- 1:30 **14.03** Mechanisms underlying repeated cocaine-induced suppression of GIRK signaling in the prefrontal cortex. M. C. HEARING*; L. KOTECKI; R. LUJAN; K. WICKMAN. *Univ. of Minnesota, Univ. de Castilla-La Mancha.*
- 1:45 **14.04** Role of lactate transport in the reconsolidation of cocaine reward memory. J. SHI*; Y. ZHANG; Y. LUO; Y. XUE; S. AI; J. LIU; L. SUO. *Natl. Inst. On Drug Dependence of Peking Univ.*
- 2:00 **14.05** The glutamate transporter activator riluzole attenuates cocaine-induced hyperlocomotion in juvenile but not adult mice. R. M. O'CONNOR*; J. F. CRYAN. *Univ. Col. Cork.*
- 2:15 **14.06** Viral-mediated transfer of DREADDs reveals a differential role of the corticostriatal pathway in cocaine taking and cocaine seeking behavior. K. A. KERSTETTER*; J. F. NEUMAIER; S. M. FERGUSON. *Seattle Children's Res. Inst., Univ. of Washington, Univ. of Washington.*
- 2:30 **14.07** Deletion of proSAA abolishes cocaine sensitization and increases anxiety-like behavior under highly aversive conditions. D. MARCUS*; C. HASKINS; M. ANSONOFF; J. PINTAR; D. MORGAN. *Indiana Univ., Penn State Col. of Med., Penn State Col. of Med., Univ. of Med. and Dent. of New Jersey.*
- 2:45 **14.08** Human brain entropy mapping using thousands of subjects and its application in a drug addiction study. Z. WANG*; J. SUH; Y. LI; Z. SINGER; R. EHRMAN; A. V. HOLE; C. P. O'BRIEN; A. R. CHILDRESS. *Univ. of Pennsylvania.*
- 3:00 **14.09** Gelatinase (MMP-2 and MMP-9) activity in nucleus accumbens during cocaine-primed reinstatement of cocaine seeking. S. M. SPENCER*; A. SMITH; H. SHEN; P. KALIVAS. *Med. Univ. of South Carolina, Peking Univ.*
- 3:15 **14.10** Decreased resting state functional connectivity after acute cocaine administration in awake non-human primates. E. MALTBIE*; K. MURNAME; G. KAUNDINYA; L. HOWELL. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Emory Univ.*
- 3:30 **14.11** Predominance of striatal d1 over d2 receptor signaling during cocaine intoxication in chronically cocaine-exposed mice. C. DU*; K. PARK; Y. PAN; N. D. VOLKOW. *Stony Brook Univ., Natl. Inst. on Drug Abuse.*
- 3:45 **14.12** Sigma-1 receptor-dependent trafficking of Kv1.2 channels to the cell surface shapes neuronal and behavioral responses to cocaine. S. KOURRICH*; T. HAYASHI; J. CHUANG; S. TSAI; T. SU; A. BONCI. *NIH/NIDA, UCSF, Johns Hopkins Univ. Sch. of Med.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:00 **14.13** The role of the endogenous OFQ/NOP receptor system in cocaine reward. K. LUTFY*; A. TSENG; A. HAMID; P. V. MARQUEZ; M. GARG. *Western Univ. of Hlth. Sci.*

NANOSYMPOSIUM

015. Visual Decision Making

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, 1B

- 1:00 **15.01** Top-down influences on sensory processing during perceptual decision-making and attention. R. M. HAEFNER*; P. BERKES; J. FISER. *Brandeis Univ.*
- 1:15 **15.02** How can single sensory neurons predict behavior? X. S. PITKOW*; S. LIU; D. E. ANGELAKI; G. C. DEANGELIS; A. POUGET. *Univ. of Rochester, Baylor Col. of Med., Univ. de Genève.*
- 1:30 **15.03** Predicting decisions about the fine discrimination of orientation from neuronal population responses in monkey V1 and V4. S. TANABE*; A. ZANDVAKILI; A. KOHN. *Albert Einstein Col. of Med.*
- 1:45 **15.04** Low-frequency LFP signals reflect behavioral outcomes in areas V1 and V4 during a discrimination task. M. HU*; A. R. ANDREI; V. DRAGOL. *Univ. Texas-Houston, Med. Sch.*
- 2:00 **15.05** Shape detection decisions are best predicted by broadly selective signals in area V4. K. F. WEINER*; G. M. GHOSE. *Univ. of Minnesota.*
- 2:15 **15.06** Reward effects on sensory representations in humans revealed by drift-diffusion model fitting. N. CICMIL*; A. J. PARKER; K. KRUG. *Oxford Univ., Oxford Univ.*
- 2:30 **15.07** The formation of hierarchical decisions in the visual cortex. P. R. ROELFSEMA*; A. ZYLBERBERG; B. OUELLETTE; C. DE ZEEUW; M. SIGMAN; J. A. M. LORTEIJE. *Netherlands Inst. for Neurosci., Netherlands Inst. for Neurosci., Lab. of Integrative Neuroscience, Physics Dept.*
- 2:45 **15.08** Causal mapping of lateral prefrontal regions to separate stages of perceptual decision making. D. RAHNEV*; A. LARSON; M. D'ESPOSITO. *UC Berkeley.*
- 3:00 **15.09** Noise sources and decision variables in perceptual and motor brightness discriminations. D. B. LISTON*; L. S. STONE. *NASA Ames Res. Ctr., San Jose State Univ.*

NANOSYMPOSIUM

016. Brain-Machine Interface

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, 5B

- 1:00 **16.01** • Anatomical, temporal, and spectral parameter characterization of human electrocorticographic signals for sleep and wake state detection in brain computer interface applications. M. PAHWA*; M. KUSNER; C. D. HACKER; S. K. BANDT; D. T. BUNDY; K. WEINBERGER; E. C. LEUTHARDT. *Washington Univ., Washington Univ., Washington Univ., Washington Univ.*
- 1:15 **16.02** Optoelectronic silicon nanowires for high-resolution neurostimulation *in vivo* and *in vitro*. M. L. KHRAICHE*; S. HA; W. FREEMAN; G. CAUWENBERGHS; G. SILVA. *UCSD, Dept. of Ophthalmology.*

- 1:30 **16.03** • Highly customizable neural micro molded arrays. A. HOGAN; R. BHANDARI*; X. XIE; F. SOLZBACHER; S. NEGI. *Blackrock Microsystems, Univ. of Utah.*
- 1:45 **16.04** A practical, intuitive brain-computer interface for communicating a “yes” or “no” by listening. N. J. HILL*; E. RICCI; S. HAIDER; L. MCCANE; S. HECKMAN; J. R. WOLPAW; T. VAUGHAN. *Wadsworth Center, New York State Dept. of Hlth.*
- 2:00 **16.05** Cortical adaptation during electrocorticographic brain-machine interface skill acquisition. A. D. DEGENHART*; E. C. TYLER-KABARA; J. L. COLLINGER; M. L. BONINGER; W. WANG. *Univ. Pittsburgh, Ctr. for the Neural Basis of Cognition, Univ. Pittsburgh, DVA, Univ. Pittsburgh.*
- 2:15 **16.06** Mind-body awareness training in the initial learning of a sensorimotor rhythm based brain-computer interface. K. E. CASSADY*; A. J. DOUD; B. HE. *Univ. of Minnesota.*
- 2:30 **16.07** Cortical stimulation triggered from cycles of ECoG oscillations produces subsequent changes in effective intracortical connectivity in monkeys. S. ZANOS*; I. REMBADO; O. ROBINSON; R. SCHAEFER; E. FETZ. *University of Washington, Inst. Italiano di Tecnologia.*
- 2:45 **16.08** • Longevity of the neurotrophic electrode in humans. P. R. KENNEDY*; R. A. E. BAKAY; A. J. CERVANTES. *Neural Signals Inc, Rush Med. Ctr., Belize Healthcare Partners Med. Ctr.*
- 3:00 **16.09** Fascicle-specific placement of mf-life arrays for nerve-machine interface. S. VASUDEVAN*; B. R. BOTTERMAN; J. CHENG; E. W. KEEFER. *Univ. of Texas At Arlington, Univ. of Texas Southwestern Med. Ctr., Plexon Inc.*

NANOSYMPOSIUM

017. Cellular and Molecular Control of Circadian Timing

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

Sat. 1:00 PM – San Diego Convention Center, 2

- 1:00 **17.01** Circadian regulation of intracellular and intercellular calcium signaling in suprachiasmatic nucleus astrocytes. M. J. ZORAN*. *Texas A&M Univ.*
- 1:15 **17.02** Large-scale imaging of circadian calcium rhythm in the suprachiasmatic nucleus. R. ENOKI*; S. HONMA; K. HONMA. *Hokkaido Univ.*
- 1:30 **17.03** Simultaneous imaging of circadian rhythms of intracellular Calcium and clock gene expression in single suprachiasmatic nucleus neurons. T. NOGUCHI*; D. K. WELSH. *UCSD, UCSD, Veterans Affairs San Diego Healthcare Syst.*
- 1:45 **17.04** Bmal1 is an essential regulator for circadian cytosolic calcium rhythms in suprachiasmatic nucleus neurons. M. IKEDA*; T. OZAKI; M. IKEDA. *Toyama Univ., Nagoya Univ., Saitama Med. Univ.*
- 2:00 **17.05** Period1 regulates membrane properties in neurons in the suprachiasmatic nucleus. T. KUDO; C. S. COLWELL*. *UCLA.*
- 2:15 **17.06** “Heterogeneity” and “coherence” in the phase distribution of SCN clock cells. K. LEE*; B. JEONG; J. HONG. *Korea Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:30 **17.07** Lim homeodomain transcription factor 1 is necessary for SCN terminal differentiation and function. J. L. BEDONT*; T. LEGATES; E. SLAT; M. BYERLY; J. ZHANG; H. WANG; J. HU; J. QIAN; G. WONG; E. HERZOG; S. HATTAR; S. BLACKSHAW. *Johns Hopkins Med. Inst., Johns Hopkins Univ., Washington Univ. in St. Louis.*
- 2:45 **17.08** Delayed cryptochrome degradation influences electrical activity of suprachiasmatic nucleus neurons. S. WEGNER; M. D. C. BELLE; A. T. L. HUGHES; H. PIGGINS*. *Univ. Manchester.*
- 3:00 **17.09** Translational control of Vip modulates synchrony and entrainment of the suprachiasmatic circadian clock. R. CAO*; B. ROBINSON; H. XU; C. GKOGKAS; A. KHOUTORSKY; A. LIU; S. AMIR; N. SONENBERG. *McGill Univ., Concordia Univ., The Univ. of Memphis.*

NANOSYMPOSIUM

018. Human Learning: Feedback, Reinforcement, and Reward

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, 4

- 1:00 **18.01** The neurocomputational basis of self-control. A. RANGEL*. *Caltech.*
- 1:15 **18.02** Control of primate's benefit-cost ratio by manipulating localized circuits in the frontostriatal network. A. M. GRAYBIEL*; K. AMEMORI. *MIT.*
- 1:30 **18.03** Connectivity profiles reveal the relationship between brain areas for reward-guided learning and decision making in human and monkey frontal cortex. F. NEUBERT*; R. B. MARS; J. SALLE; M. F. S. RUSHWORTH. *Univ. of Oxford.*
- 1:45 **18.04** Neural and behavioral correlates of instrumental outcome divergence. M. LILJEHOLM*; J. P. O'DOHERTY. *CALIFORNIA INSTITUTE OF TECHNOLOGY.*
- 2:00 **18.05** A taxonomy of different motor learning processes. J. A. TAYLOR*; K. M. BOND; J. W. KRAKAUER; R. B. IVRY. *Princeton Univ., Johns Hopkins Univ., Univ. of California, Berkeley.*
- 2:15 **18.06** Interaction between procedural and declarative category learning systems. M. J. CROSSLEY*; F. G. ASHBY. *UC Berkeley, UC Santa Barbara.*
- 2:30 **18.07** A neural mechanism underlying failure of optimal choice with multiple alternatives. B. K. CHAU*; N. KOLLING; L. T. HUNT; M. E. WALTON; M. F. S. RUSHWORTH. *Univ. of Oxford, Univ. of Oxford.*
- 2:45 **18.08** Action value comparisons in dorsolateral prefrontal cortex control choice between goal-directed actions. R. W. MORRIS*; A. DEZFOULI; K. GRIFFITHS; B. BALLEINE. *Sydney Univ., Brain & Mind Res. Inst., Schizophrenia Res. Inst.*
- 3:00 **18.09** Motor adaptation when maximizing reward is in conflict with minimizing error. P. VASWANI*; R. SHADMEHR. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*
- 3:15 **18.10** EEG and fMRI correlates of dynamic decision parameters during reinforcement learning. M. J. FRANK*; C. GAGNE; J. CAVANAGH; S. MASTERS; E. NYHUS; D. BADRE. *Brown Univ., Brown Univ.*

- 3:30 **18.11** Learning how to choose: Continuous time models of cortical normalization predict an adaptive and efficient value code. T. LOFARO*; K. LOUIE; R. WEBB; A. TYMULA; P. W. GLIMCHER. *Gustavus Adolphus Col., New York Univ.*
- 3:45 **18.12** Acute stress effects on model-based versus model-free reinforcement learning. R. OTTO*; C. RAIQ; E. PHELPS; N. DAW. *New York Univ., New York Univ.*
- 4:00 **18.13** Sensitivity to reinforcement history as a novel method for assessing the goal-directedness of instrumental behavior. T. K. PATTERSON*; B. J. KNOWLTON. *UCLA.*
- 4:15 **18.14** Reward-based learning increases the modularity of corticomesolimbic functional networks. E. DAYAN*; J. M. HAMANN; L. G. COHEN. *NINDS/NIH, Univ. Med. Ctr. Hamburg-Eppendorf.*

NANOSYMPOSIUM

019. Learning and Memory: Physiology

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, 7B

- 1:00 **19.01** Zinc deficiency contributes to age-related cognitive decline: Reversal by zinc supplementation with no effect in younger animals. G. MOY*; L. A. SANDUSKY; E. C. MCNAY. *Univ. At Albany.*
- 1:15 **19.02** Critical role for the insulin-regulated glucose transporter-4 in hippocampally-dependent memory. J. PEARSON-LEARY*; A. J. GEORGE; J. SAGE; E. C. MCNAY. *Univ. At Albany.*
- 1:30 **19.03** Dorsal hippocampus is a site of action for cognitive enhancement by Angiotensin IV, which involves GluT4. L. A. SANDUSKY*; E. C. MCNAY. *State Univ. of New York At Albany, State Univ. of New York At Albany.*
- 1:45 **19.04** Impairment of neuronal insulin signalling and GluT4 translocation by oligomeric beta-amyloid: Importance of tertiary amyloid structure and impact on metabolism. K. O'LEARY*; M. VIDAL; E. C. MCNAY. *Univ. At Albany.*
- 2:00 **19.05** Functional and Neurochemical Relationship between brain plasticity and food intake. Y. OOMURA*; S. MORIGUCHI; S. AOU; K. FUKUNAGA. *Kyushu Univ. Univ. Med. Sch., Tohoku Univ., Kyushu Inst. Technol., Tohoku Univ.*
- 2:15 **19.06** Single-domain antibodies that bind oligomeric beta-amyloid reverse cognitive deficits produced by high-fat diet-induced obesity. E. C. MCNAY*; D. M. OSBORNE; D. P. FITZGERALD; B. M. ANDERSON; P. M. TESSIER. *Univ. At Albany, Rensselaer Polytechnic Inst.*
- 2:30 **19.07** Dysfunctional learning: What happens in the ventral cochlear nucleus when one gets the answer to an acoustically cued question wrong? C. D. WOODY*. *UCLA Med. Cntr. NPI 58-258.*
- 2:45 **19.08** Synergistic effects of dual stimulation of the caudate and nucleus accumbens on learning. C. KWON*; S. R. PATEL; J. T. GALE; E. N. ESKANDAR. *Harvard Med. Sch., Cleveland Clinic, Lerner Sch. of Med.*
- 3:00 **19.09** Differential expression of the voltage-gated K currents in CA1 pyramidal neurons of the rostral and ventral hippocampus. I. SOKOLOVA; E. RUDBECK*; R. VLKOLINSKY; G. NELSON. *Loma Linda Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:15 **19.10** Head-direction cells are found in the reuniens thalamic nucleus in freely moving rat. M. M. JANKOWSKI*; M. TSANOV; N. F. WRIGHT; S. D. VANN; J. T. ERICHSEN; J. P. AGGLETON; S. M. O'MARA. *Trinity Col. Inst. of Neuroscience, Trinity Col. Dublin, Sch. of Psychology, Cardiff Univ., Sch. of Optometry and Vision Sciences, Cardiff Univ.*
- 3:30 **19.11** Altered glucocorticoid signalling mediates the impact of recurrent hypoglycemia on hippocampal cognitive and neural function. D. M. OSBORNE*; E. C. MCNAY. *Univ. At Albany.*
- 3:45 **19.12** ▲ Caffeine treatment interacts with insulin to downregulate mTORC1 in hippocampal neuronal culture. D. P. FITZGERALD*; G. A. MOY; E. C. MCNAY. *Univ. At Albany.*
- 4:00 **19.13** Insulin and thyroid hormone interact in the hippocampus to regulate spatial working memory. A. J. GEORGE*; V. JAHAGIRDAR; E. C. MCNAY. *Univ. At Albany.*
- 4:00 **LLL22 20.12SA** ▲ The need for quantum processing in the brain. S. ZHAO. *Univ. of California, Berkeley.*
- 1:00 **LLL23 20.13SA** The University of Puebla is the base of pharmaceutical sciences including those for the treatment of mental illness. J. EGUIBAR; M. CORTES; A. HUERTA-JARAMILLO. *Benemerita Univ. Autonoma de Puebla, Benemérita Univ. Autónoma de Puebla.*
- 2:00 **LLL24 20.14SA** Thermal circuit analogs in the brain and "friendly" stimulation during sleep rhythms: Modulation of TMS/TES. J. F. GOMEZ-MOLINA; L. F. BOTERO; J. CIRO; A. L. GOMEZ-MOLINA. *Intnl Group of Neuro Cra 64c#48-94(603), Member Grupo de Neurociencias Clínica Las Americas Calle 3 #29a-97, Intnl Group of Neuro Cra 64c#48-94(603).*
- 3:00 **LLL25 20.15SA** Binocular stereoscopy in visual areas V-2, V-3 and V-3A of the macaque monkey: A contemporary analysis of Hubel and Wiesel's unpublished recordings of cells sensitive to binocular depth. B. R. CONWAY; E. M. YEAGLE; R. LAFER-SOUSA; T. N. WIESEL; D. H. HUBEL. *Wellesley Col., Wellesley Col., The Rockefeller Univ., Harvard Med. Sch.*
- 4:00 **LLL26 20.16SA** Animal models & clinical neuroscience: Improving or not? S. SNODGRASS. *Harbor UCLA Med. Cntr.*
- 1:00 **LLL27 20.17SA** Overcoming resistance to change in organizations and among consumers: The roles of Lateral prefrontal and Frontopolar Cortices in the initiation of new behaviors. S. CURTIS. *True North, LLC.*

THEME H POSTER

020. History of Neuroscience

Theme H posters remain on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday (presentation number ending in (SA) or Sunday (SU) — San Diego Convention Center, Halls B-H

- 1:00 **LLL11 20.01SA** Left-side bias in depictions of the brain. W. J. WILSON; M. J. BAGUZIS; H. R. PAXTON. *Albion Coll.*
- 2:00 **LLL12 20.02SA** Towards a richer notion of habit in neuroscience. J. BERNACER MARIA; C. BLANCO; J. I. MURILLO. *Inst. for Culture and Society, Univ. of Navarra.*
- 3:00 **LLL13 20.03SA** The eponym: Krause - same name, different people. B. W. BAKKUM. *Illinois Coll Optometry.*
- 4:00 **LLL14 20.04SA** Peter Mark Roget, FRS and the 19th century construction of taxonomies in natural science, 'neuroscience' and literature. L. KRUGER; S. FINGER. *UCLA Geffen Sch. of Med., Washington Univ.*
- 1:00 **LLL15 20.05SA** Alfonso Corti and the discovery of the organ of Corti. N. E. KINNEY. *Southeast Missouri State Univ.*
- 2:00 **LLL16-DP10 20.06SA** The 'protoplasm' as the primary site of general anesthetic action. A contribution to the bicentennial of Claude Bernard's birth. M. PEROUANSKY; V. V. MATVEEV. *Univ. Wisconsin Madison, Inst. of Cytology, Russian Acad. of Sci.*
- 3:00 **LLL17 20.07SA** An anti-Rubin vase effect in an old quilting pattern. E. SECKEL; E. ALTSCHULER. *UCSD Ctr. For Brain and Cognition, New Jersey Sch. of Med. and Dent.*
- 4:00 **LLL18 20.08SA** Louis Pierre Gratiolet and brain folding patterns in primates. A. PARENT. *Univ. Laval.*
- 1:00 **LLL19 20.09SA** ▲ Changing our minds on neurofeedback? history, efficacy, challenges, and ethical concerns in altering affect. A. R. MUÑOZ; E. L. OHAYON; A. LAM. *Green Neurosci. Laboratory, Neurolinx Res. Inst.*
- 2:00 **LLL20 20.10SA** ▲ Toward a Neuroanatomical Model of Hypnosis. S. SINGH; R. CIRIC; S. SINGH; J. SCOTT; J. SINGH. *Mid-America Psychological and Counseling Services, NeuroScience Associates.*
- 3:00 **LLL21 20.11SA** ▲ Understanding creativity through neuroscience: Conceptual concerns, experimental pitfalls, and social implications. P. V. CHU; A. R. MUNOZ; M. MACDONALD; E. L. OHAYON; A. LAM. *The Green Neurosci. Laboratory, Neurolinx Res. Inst., Envrn. Defence.*

THEME H POSTER

021. Neuroscience Courses for Undergraduates, Graduates, and Professional Students

Theme H posters remain on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday (presentation number ending in (SA) or Sunday (SU) — San Diego Convention Center, Halls B-H

- 1:00 **LLL28 21.01SA** Alaska institutional development award (idea) network of biomedical research excellence (inbre): Environmental agents and disease. C. A. FRYE. *Ualaska-Fairbanks.*
- 2:00 **LLL29 21.02SA** The 24th Northeast Under/graduate Research Organization for Neuroscience (NEURON) conference and 41st Hunter College Psychology Convention. A. A. WALF; C. A. FRYE; J. YOUNG. *Rensselaer Polytechnic Institute., UAlbany & UAlaska-Fairbanks, CUNY-Hunter.*
- 3:00 **LLL30 21.03SA** A model for teaching advanced neuroscience methods to graduate students: a student-run seminar to increase practical understanding and confidence. T. HARRISON; C. R. K. CHING; M. C. EINSTEIN; S. L. BONANNO; A. M. ANDREWS; M. LEVINE. *UCLA, UCLA, UCLA.*
- 4:00 **LLL31 21.04SA** Life science education: Updates of the Virtual Physiology series. H. A. BRAUN; A. TCHAPTCHET; H. SCHNEIDER; S. POSTNOVA; J. SCHWABEDAL. *Univ. Marburg, DAQ-Solutions, Univ. of Sydney, Harvard Univ.*
- 1:00 **LLL32 21.05SA** Assays of acetylcholinesterase activity in drugs and disease: An undergraduate opportunity to reproduce established work and produce novel data. V. QUINAN; D. E. BAUER. *Wellesley Col.*

- 2:00 LLL33 **21.06SA** Measuring long term potentiation in acute hippocampal slices: A laboratory module for undergraduates. D. BAUER; E. B. BOURGEOIS; V. C. QUINAN; K. HAWKINS. *Wellesley Col., Brigham and Women's Hospital-Harvard Med. Sch.*
- 3:00 LLL34 **21.07SA** Learning about one's own learning in an undergraduate learning and memory course. M. L. LINDEN. *Brown Univ.*
- 4:00 LLL35 **21.08SA** The "Neurotransmitter Notebook": a tool for educating pharmacy students. A. V. BUHLER; P. A. CAWLEY; L. L. DEVAUD. *Pacific Univ.*
- 1:00 LLL36 **21.09SA** Teaching neurotoxicity using animated illustrations: a demonstration of lead toxicity at the synapse. D. BUSSELBERG; J. TABAN; E. VARGHESE; B. ALOST; S. MORENO; A. FLOREA. *Weill Cornell Med. Col. In Qatar, Univ. of Konstanz, Texas Tech. Univ. Hlth. Sci. Ctr., Univ. Trier.*
- 2:00 LLL37 **21.10SA** Helping medical students think like scientists: Enhancing the journal club experience. B. GRAFSTEIN; T. A. MILNER. *Weill Cornell Med. Coll., Weill Cornell Med. Coll.*
- 3:00 LLL38 **21.11SA** Evaluation of a group of medical students in physiology class at the school of medicine in University of Tamaulipas, México about clinical cases discussion as a teaching technique (clinical reasoning applied to neurophysiology). M. T. CASTANEDA; H. RODRIGUEZ; M. D. DE LEON; E. D. LOPEZ; H. E. RODRIGUEZ; N. E. FERNANDEZ. *Univ. of Tamaulipas, Univ. of Texas at Brownsville, Univ. Autonoma de Nuevo Leon.*
- 4:00 LLL39 **21.12SA** Flexner++: Enhanced basic science education promoting lifelong learning for medical practice. D. GARDNER. *Weill Cornell Med. Col.*
- 1:00 LLL40 **21.13SA** Introduction of bio-behavioral concepts during the first year of medical school within active learning group sessions. B. D. FISCHER; C. C. CAGANDE; A. MOOKERJEE; V. RAJPUT. *Cooper Med. Sch. of Rowan Univ.*
- 2:00 LLL41 **21.14SA** Process evaluation of an extension course in applied neuroeconomics for junior consultants in economics and management. K. R. VIACAVA; L. BIZARRO. *Federal Univ. of Rio Grande Do Sul - UFRGS.*
- 3:00 LLL42 **21.15SA** Using GNU make to teach undergraduates neuroimaging workflow. T. MADHYASTHA; Z. MESTRE; E. COLLINS; T. GRABOWSKI. *Univ. of Washington, Univ. of Washington.*
- 4:00 LLL43 **21.16SA** Inquiry based activities for undergraduate neuroscience. K. K. O'TOOLE. *Tufts Univ. Sch. of Med.*
- 1:00 LLL44 **21.17SA** How the San Jose State University technology enabled 'Incubator Classroom' improved my teaching of vertebrate neurophysiology. K. A. WILKINSON. *San Jose State Univ.*
- 2:00 LLL45 **21.18SA** An interdisciplinary, experiential, one-month course on the neuroscience of meditation. L. E. OLSON. *Univ. of Redlands.*
- 3:00 LLL46 **21.19SA** CrawFly: A laboratory workshop promoting investigative neuroethology education with invertebrate model organisms. W. COLGAN, III; S. R. PULVER; R. A. WYTENBACH; R. R. HOY; B. R. JOHNSON. *ADInstruments, Inc., Howard Hughes Med. Res. Inst., Cornell Univ., Cornell Univ.*
- 4:00 LLL47 **21.20SA** Using published personal accounts of drug therapy to supplement an undergraduate psychopharmacology course. R. E. GRAHN; R. GUNTLI. *Connecticut Col.*
- 1:00 LLL48 **21.21SA** Lessons learned in the development of a primary literature-based undergraduate neuroscience course. E. C. CHURCH; I. RIVERO-COVELO; D. J. BRAUN; M. R. FETTIPLACE; J. J. CONE; P. M. BAKER; M. H. ALPERT. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago.*
- 2:00 LLL49 **21.22SA** Mythbusters: A neuroeconomics course for undecided freshman- The neuroscientist's perspective. C. L. FRANSSEN; G. S. LOWRY; A. FRANSSEN. *Longwood Univ., Randolph-Macon Col., Longwood Univ.*
- 3:00 LLL50 **21.23SA** Mythbusters: A neuroeconomics course for undecided freshman - The behavioral economist's perspective. G. S. LOWRY; C. L. FRANSSEN; A. FRANSSEN. *Randolph-Macon Col., Longwood Univ.*
- 4:00 LLL51 **21.24SA** Teaching research methods and debunking neuromyths: Two birds with one stone. C. A. ERICKSON; B. E. TAYLOR; Z. S. TAYLOR; J. K. WILLIAMSON-JONES; M. WOLF; A. R. ZAVILLA; C. B. WALTERS. *Metropolitan State Univ. of Denver.*
- 1:00 LLL52 **21.25SA** Web-based technology: A dynamic approach to student engagement and learning. M. K. JARVINEN; L. JARVINEN; B. SILVEIRA. *Emmanuel Col., Mount Holyoke Col.*
- 2:00 LLL53 **21.26SA** An inexpensive insect locomotion tracker: Construction and teaching applications. S. A. HAUPTMAN; K. DU BOIS; H. W. HORCH. *Bowdoin Coll.*
- 3:00 LLL54 **21.27SA** ▲ Basic neuron model electrical equivalent circuit: An undergraduate laboratory exercise. K. DABROWSKI; D. CASTAÑO; J. TARTAR. *Nova Southeastern Univ.*
- 4:00 LLL55 **21.28SA** An undergraduate animal behavior course investigating the effects of omega-3 fish oil on memory. R. L. GALLI. *SIMMONS COLLEGE.*
- 1:00 LLL56 **21.29SA** The interdisciplinary research training program CINACS. J. ZHANG. *Univ. of Hamburg.*

THEME H POSTER

022. Undergraduate Neuroscience Programs and Resources

Theme H posters remain on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday (presentation number ending in (SA) or Sunday (SU) — San Diego Convention Center, Halls B-H

- 1:00 LLL57 **22.01SA** Baldwin Wallace University - the Society for Neuroscience's undergraduate neuroscience program of the year (2012). G. A. MICKLEY; M. M. ROGERS; R. ZACHARIAS; C. TURNER. *Baldwin Wallace Univ., Nu Rho Psi.*
- 2:00 LLL58 **22.02SA** ENDURE-Neuroscience research opportunity to increase diversity: A research-with-purpose approach. I. E. VEGA; N. M. ORTIZ-VEGA; G. J. AYALA-SEPULVEDA; J. RODRIGUEZ-ADAMES; M. SANCHEZ-CESARIO. *Univ. of Puerto Rico-Rio Piedras Campus, Univ. of Puerto Rico-Medical Sci. Campus.*
- 3:00 LLL59 **22.03SA** BP-ENDURE Atlanta: Engaging undergraduates in neuroscience research. K. J. FRANTZ; C. T. GOODE; J. L. LARIMORE; E. A. BUFFALO; Y. SMITH; K. BRAKKE; T. MCKLIN. *Georgia State Univ., Georgia State Univ., Agnes Scott Col., Emory Univ., Spelman Col., The Findings Group.*

▲ Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:00 LLL60 **22.04SA** Hunter-nyu bp-endure program. V. QUINONES-JENAB; R. MIRANDA; C. AOKI. *Hunter College, City Univ. of New York, New York Univ.*
- 1:00 LLL61 **22.05SA** BP-ENDURE San Antonio: south texas advanced research training - undergraduate program (start-up). A. FRAZER; D. WEISS; D. MORILAK; B. REID. *UTHSCSA, UTHSCSA.*
- 2:00 LLL62 **22.06SA** Building Research Achievement in Neuroscience (BRAIN): A university partnership for broadening participation in neuroscience in the Rocky Mountain and Rio Grande regions. S. T. BLAND; E. SALCEDO; V. B. KNIGHT; W. PATERSON; D. RAMIREZ-GORDILLO; T. F. WRIGHT; D. RESTREPO; E. E. SERRANO. *Univ. of Colorado, Denver, Univ. of Colorado, Denver, New Mexico State Univ., Univ. of Colorado, Denver.*
- 3:00 LLL63 **22.07SA** Teaching undergraduate students to think like neuroscientists without entering the laboratory. S. F. FRAUSTO; C. N. SUNNEN. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*
- 4:00 LLL64 **22.08SA** ▲ A decade of the journal IMPULSE: Growth and impact. L. S. JONES; C. CARLAY; D. COBB; M. COOK; C. ESTER; A. ROSSI; D. RUSSELL; K. SASSER; D. WOODARD. *Appalachian State Univ.*
- 1:00 MMM1 **22.09SA** ▲ The undergraduate journal of psychology at berkeley - an associated students of the university of california berkeley sponsored journal. F. D. UQUILLAS; A. S. KOHANTEB; K. M. WOOD; L. M. SOUDI. *UC Berkeley, Helen Wills Neurosci. Inst.*
- 2:00 MMM2 **22.10SA** Free online resource for neuroscience educators: Journal of Undergraduate Neuroscience Education (JUNE) <http://www.funjournal.org/>. E. P. WIERTELAK; B. JOHNSON; G. DUNBAR; W. E. GRISHAM. *Macalester Col., Cornell Univ., Central Michigan Univ., UCLA.*
- 3:00 MMM3 **22.11SA** ERIN: Resources to enhance the teaching of neuroscience. R. F. OLIVO; J. R. BURDO; R. CALIN-JAGEMAN; W. E. GRISHAM; M. L. LINDEN; R. L. ROSENBERG; L. L. SYMONDS; J. E. THORNTON. *Smith Col., Boston Col., Dominican Univ., UCLA, Brown Univ., Earlham Col., Michigan State Univ., Oberlin Col.*
- 4:00 MMM4 **22.12SA** Faculty for Undergraduate Neuroscience (FUN): Multiple mechanisms for supporting the development of undergraduate students and faculty in the neurosciences. N. J. SANDSTROM; J. S. SMITH; E. R. REYNOLDS. *Williams Col., Saginaw Valley State Univ., Lafayette Col.*
- 1:00 MMM5 **22.13SA** The 23rd northeast under/graduate research organization for neuroscience (NEURON) held at Quinnipiac University in Hamden, CT. A. J. BETZ; T. AHERN; C. FRYE. *Quinnipiac Univ., Univ. of Alaska INBRE.*
- 2:00 MMM6 **22.14SA** Years of change and progress: The midbrains undergraduate neuroscience conference. E. P. WIERTELAK; J. NEIWORTH; S. DICKINSON; J. DEMAS; J. LOEBACH; S. MEERTS; G. MUIR; C. OHNESORGE; J. STRAND; L. WICHLINSKI; J. WOLFF. *Macalester Col., Carleton Col., St. Olaf Col., St. Olaf Col., Carleton Col.*
- 3:00 MMM7 **22.15SA** Nu rho psi, the national honor society in neuroscience. L. ACHOR; A. MICKLEY; E. P. WIERTELAK. *Baylor Univ., Baldwin Wallace Univ., Macalester.*
- 4:00 MMM8 **22.16SA** ▲ Alaska's Brain Bee: a service learning opportunity for upper division biological science undergraduates. S. M. COSTELLO; C. WILSON. *Univ. of Alaska Anchorage, Univ. of Alaska, Anchorage.*
- 1:00 MMM9 **22.17SA** How to design group projects that successfully foster collaborative learning. L. L. MCGREW. *Belmont Univ.*

THEME H POSTER

023. Professional Skills Development and Neuroscience Outreach

Theme H posters remain on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday (presentation number ending in (SA) or Sunday (SU) — San Diego Convention Center, Halls B-H

- 1:00 MMM10 **23.01SA** Bridging the gap between undergraduate laboratory coursework and independent research: developmental genetics of hindbrain development in *Xenopus tropicalis*. N. HIRSCH; C. M. CONSTANCE; J. MAXSON; C. MARQUES. *Hiram Col., Hiram Col.*
- 2:00 MMM11 **23.02SA** Training data scientists of the future through the Neuroscience Information Framework. J. S. GRETHE; A. BANDROWSKI; J. CACHAT; A. GUPTA; S. LARSON; M. E. MARTONE; N. I. F. CONSORTIUM. *UCSD.*
- 3:00 MMM12 **23.03SA** The three NITRC's: Software, data and cloud computing for neuroscience. D. N. KENNEDY. *U. Massachusetts Med.*
- 4:00 MMM13 **23.04SA** Exploring virtual worlds in behavioural neuroscience education. T. H. GILBERT; T. H. GILBERT. *Athabasca Univ.*
- 1:00 MMM14 **23.05SA** The use of exergames during teaching process and neuroscience outreach activities. A. SHOLL-FRANCO; T. S. ASSIS; T. MAIA; G. ARANHA. *Univ. Fed Rio De Janeiro, Organização Ciências e Cognição, SEEDUC/RJ.*
- 2:00 MMM15 **23.06SA** Art-Science Clubs: Teaching neuroscience through art program. G. ARANHA; T. ASSIS; A. SHOLL-FRANCO. *Organizacao Ciencias e Cognicao, Univ. Federal do Rio de Janeiro, Secretaria de Educação do Estado do Rio de Janeiro, Univ. Federal do Rio de Janeiro.*
- 3:00 MMM16 **23.07SA** Collaborative student-faculty curricular design and teaching: Summer course and bootcamp. P. A. FORCELLI; B. QUEENAN; C. TAYLOR; C. LEONARD; L. ULLRICH. *Georgetown Univ., Georgetown Univ.*
- 4:00 MMM17 **23.08SA** Additional training opportunities for PhD students: Student representation on admissions committee. V. L. DARCEY; C. WINLAND; S. MILES; K. GALE. *Georgetown Univ., Georgetown Univ.*
- 1:00 MMM18 **23.09SA** Emotions and the body's theater: A workshop for neuroscience outreach and teaching. I. L. SILVA; E. DIAS JR.; F. B. CARDOSO; S. B. NASCIMENTO; A. SHOLL-FRANCO. *Univ. Federal Fluminense, Univ. Federal do Rio de Janeiro, Univ. Federal do Rio de Janeiro, Univ. Federal do Rio de Janeiro.*
- 2:00 MMM19 **23.10SA** Preparing for academic careers through the Tufts TEACRS Program. K. O'TOOLE; D. CANTU; C. MOORE; M. MCVEY. *Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med.*
- 3:00 MMM20 **23.11SA** PhD Career-Land, the game: A creative approach to professional development. S. AZMA; V. L. DARCEY; L. J. GAMBLE; H. S. GREENWALD. *Georgetown Univ., Natl. Inst. of Health, Clin. Ctr., The MITRE Corp.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:00 MMM21 **23.12SA** ▲ Neuroscience in the North: Rural outreach and distance education in Alaska using the Backyard Brains platform. A. ELLISON; M. HOFFMAN; B. TAYLOR; M. B. HARRIS. *Univ. Alaska Fairbanks, Univ. Alaska Fairbanks.*
- 1:00 MMM22 **23.13SA** Career training for aspiring neuroscientists. D. P. BALUCH; S. KAVUMA; L. HARRIS; A. GONZALES. *Arizona State Univ.*
- 2:00 MMM23 **23.14SA** Exploring the brain for fun: Teaching activities for teenagers. H. SANCHEZ-CASTILLO; A. RUIZ-GARCIA; I. ROSEMBERG; O. HURTADO LAGUERENN; D. B. PAZ-TREJO; P. ZARATE-GONZALEZ; J. VAZQUEZ-RAMIREZ; D. SOLTERO DE LA ROSA; K. DELGADO SALTIERAL. *Univ. Nacional Autonoma De Mexico. Fac Psicologia, Clave Consultora Para La Ciudadania.*
- 3:00 MMM24 **23.15SA** ▲ Tactile images help students visualize STEM concepts. A. N. GONZALES; L. HARRIS; B. MARTINEZ; E. HASPER; T. HEDGPETH; R. A. WINDHORST; D. P. BALUCH. *Arizona State Univ.*
- 4:00 MMM25 **23.16SA** Portable neuron conduction velocity experiments using earthworms for the university and high school neuroscience teaching lab. K. M. SHANNON; G. GAGE; J. W. WILSON; T. MARZULLO. *Backyard Brains Inc, Backyard Brains Inc, Albion Col.*
- 1:00 MMM26 **23.17SA** Brain Busters: Proposing a training program to debunk neuromyths and build neuroscientific literacy skills in educators. S. F. SASSE; L. N. SCHNOLL; S. E. SMILEY; G. M. ABESAMIS. *Harvard Univ.*
- 2:00 MMM27 **23.18SA** Effects of a neurobiological explanation of sexual orientation on student attitudes towards lesbian, gay and transgender people. K. EDMISTON. *Vanderbilt Univ.*
- 3:00 MMM28 **23.19SA** ▲ Street Workshop for improving executive functions in children's social context in downtown of Guadalajara. C. A. CATANEDA NAVARRETE, SR. *Univ. of Guadalajara.*
- 4:00 MMM29 **23.20SA** Anticipation of learning to relax provokes stress. J. C. NEILL. *Long Island Univ.*
- 1:00 MMM30 **23.21SA** VideoPanels: A new form of scientific communication. A. V. SAMSONOVICH. *George Mason Univ.*
- 2:00 MMM31 **23.22SA** Neuroscience Direct: A user-driven, online guide to Open Access neuroscience. M. P. COLEMAN. *The Babraham Inst.*
- 3:00 MMM32 **23.23SA** ▲ Multiple intelligence theory in a science classroom. A. KODRA; I. SALAME. *The City Col. of New York, The City Col. of New York.*
- 4:00 MMM33 **23.24SA** Children with rare diseases: Social vision (on materials of Association for assistance to Rett syndrome patients). O. V. TIMUTSA, ESQ; L. MURTAZINA, specialist; V. MENDELEVICH, MD. *Assn. For Assistance To Rettsyndrome Patients, Kazan state medical university, Russia.*
- 9:00 MMM35 **24.02SU** The 2013 USA national brain bee. D. SEMINOWICZ; N. MYSLINSKI. *Univ. of Maryland, Baltimore, Univ. of Maryland Sch. of Dent.*
- 10:00 MMM36 **24.03SU** Inspiring students from disadvantaged urban centers through mentoring and tutoring for the Brain Bee competition. A. CHAUDHARI; N. MAKAR; S. W. LEVISON; T. NORMENT; M. SOTO-GREENE; D. PALMERI. *New Jersey Med. School, UMDNJ, Union City High Sch., New Jersey Med. School, UMDNJ, New Jersey Med. School, UMDNJ, New Jersey Med. School, UMDNJ.*
- 11:00 MMM37 **24.04SU** New Hampshire Chapter of the Society for Neuroscience connects local high school students to the field of neuroscience through the Upper Valley Brain Bee. M. A. SAMA; M. M. ONAKOMAIYA; A. C. BENDER; H. H. YEH. *Dartmouth Med. Sch., Neurosci. Ctr. at Dartmouth, Geisel Sch. of Med. at Dartmouth, Geisel Sch. of Med. at Dartmouth, Geisel Sch. of Med. at Dartmouth.*
- 8:00 MMM38 **24.05SU** Neuroscience outreach at local schools: Project brainstorm. M. DESALVO; R. ROMERO-CALDERON; D. ALEXANDER; S. K. MADSEN; A. ATTAR; N. A. SUTHANA; C. A. GHIANI; W. GE; C. E. EVANS; J. B. WATSON; E. M. CARPENTER. *UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA.*
- 9:00 MMM39 **24.06SU** Grow My Brain with Ned the Neuron introduces elementary age children to a range of behaviors promoting brain health and growth. E. WARP; T. MCGINN. *Kizoom.*
- 10:00 MMM40 **24.07SU** Map your own homunculus! An interactive graphical twist to a popular psychophysics experiment. R. J. CORLEW; T. WALKER. *Max Planck Florida Inst.*
- 11:00 MMM41 **24.08SU** Graduate school community outreach programs in neuroscience: Classroom workshops and an annual national science competition. J. MCCALL. *Spinal Cord Injury Ctr.*
- 8:00 MMM42 **24.09SU** Similar brains: An interactive joint program for Jewish and Arab teenagers at the Bloomfield science museum Jerusalem. A. STARK-INBAR; V. GUR BEN SHITRIT. *Univ. of California, Berkeley, Bloomfield Sci. Museum Jerusalem.*
- 9:00 MMM43 **24.10SU** A neuroscience pull-out gifted program in a high school in Hong Kong: Connection of neurodegenerative diseases and traditional Chinese medicine in research-based learning. K. SUEN; M. LI; W. CHAN; R. C. CHANG. *Po Leung Kuk Laws Fndn. Col., The Univ. of Hong Kong.*
- 10:00 MMM44 **24.11SU** From neurons to perception: Using art to elucidate the visual system. A. L. JUAVINETT; A. WOLFE. *The Salk Inst. for Biol. Studies, Grossmont High Sch.*
- 11:00 MMM45 **24.12SU** ▲ Neuroscience education through student-led investigations in an extracurricular setting. M. A. LU; A. PARSEGAN; M. C. FIELDS. *Sidwell Friends Sch., Med. Univ. of South Carolina.*
- 8:00 MMM46 **24.13SU** ▲ Hands on science event focuses on brain awareness. L. HARRIS; A. GONZALES; S. KAVUMA; R. BRUBAKER; J. J. FAUST; D. P. BALUCH. *Arizona State Univ.*
- 9:00 NNN1 **24.14SU** The Northwestern University Brain Awareness Outreach organization takes a multi-faceted approach to bring neuroscience to Chicago area public schools. S. HATTORI; M. SCHROEDER; J. WILSON; D. SCHEENWEIS. *Northwestern Univ.*

THEME H POSTER

024. Neuroscience for K-12

Theme H posters remain on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday (presentation number ending in (SA) or Sunday (SU) — San Diego Convention Center, Halls B-H

- 8:00 MMM34 **24.01SU** The 2013 international brain bee championship. F. WEI; J. MCCALL; N. R. MYSLINSKI. *Univ. Maryland Sch. Dent., Heidelberg Univ.*

▲ Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 10:00 NNN2 **24.15SU** Competitive EMG-based gaming platform as a demonstration of the principles of sensorimotor neural engineering. J. D. WANDER; D. SARMA; V. PARAMASIVAM. *Univ. of Washington, Univ. of Washington.*
- 11:00 NNN3 **24.16SU** Growing neuroscientists: Sparking an interest in elementary students. J. J. QUINN; I. DAMAS-VANNUCCI; K. MARTIN; L. POWERS; S. E. PULLINS; M. RENDA; K. M. RESER; R. RONAU; M. SCHAEFER; R. A. SKIPPER; J. WILBER; B. WILKINS; M. WINFIELD. *Miami Univ.*
- 8:00 NNN4 **24.17SU** Bringing Neuroscience to K-12 students in the higher San Diego area. O. NATERA; S. ALFONSO; T. SPRAGUE; A. PETERS; R. TSUNEMOTO; M. LAU; E. KAESTNER; A. E. GOETZ; S. LEINWAND; J. KIGGINS. *Univ. of California- San Diego.*
- 9:00 NNN5 **24.18SU** The Scientist of the Future Program: integrating neuroscience and education. R. SAVOLDI; R. FUENTES; M. A. L. NICOLELIS; E. MORYA. *Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Duke Univ., Duke Univ., Duke Univ., Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal.*
- 10:00 NNN6 **24.19SU** Moving a university neuropharmacology class into high schools. L. E. MARTIN-MORRIS; H. T. BUCKLAND; A. S. RAINWATER; S. L. CUNNINGHAM; S. L. VAN ALSTYNE. *Univ. of Washington, Univ. of Washington, Bothell High Sch., Puget Sound Educational Service District.*
- 11:00 NNN7 **24.20SU** Teaching brain morphology by immunohistochemical staining methods for high school students. P. F. CAVALCANTI; P. M. I. SCHNEIDER; T. FAGGION VINHOLO; R. SAVOLDI; A. C. B. KUNICKI; E. MORYA; R. FUENTES; M. A. L. NICOLELIS; M. A. FREIRE. *UFRN, Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Maurício de Nassau Fac., Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Duke Univ., Duke Univ., Duke Univ., Duke Univ., Duke Univ.*
- 8:00 NNN8 **24.21SU** A high school laboratory course to investigate the effects of alcohol on *C. elegans*. S. W. LEE; D. A. DEROSA; P. A. LIPTON. *Boston Univ.*
- 9:00 NNN9 **24.22SU** How understanding neuroscience impacts teachers' pedagogical beliefs. S. GUZEY; G. ROEHRIG; J. M. DUBINSKY. *Univ. of Minnesota, Univ. of Minnesota.*
- 10:00 NNN10 **24.23SU** How 'I feel you' depends on how I feel: Influence of affective state and personality on ratings of vocal emotion. M. D. MULLANE; M. DIFLEY; A. CHIBA. *UCSD, Univ. of California San Diego.*
- 11:00 NNN11 **24.24SU** Sensory integration in socio-cultural development and education of children with pervasive developmental disorder. E. DIAS, JR; B. FONSECA; E. FREITAS; G. ARANHA; A. SHOLL-FRANCO. *Univ. Federal Do Rio De Janeiro, Univ. Federal do Rio de Janeiro, APPA, Organização Ciências e Cognição, Univ. Federal do Rio de Janeiro.*
- 8:00 NNN12 **24.25SU** ▲ Making an easier mirror visual feedback setup for rehabilitation of pediatric and other patients with hemiparesis. S. J. PFEIFER; E. L. ALTSCHULER. *East High Sch., New Jersey Med. Sch.*

THEME H POSTER

025. Brain Awareness Week Activities

Theme H posters remain on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday (presentation number ending in (SA) or Sunday (SU) — San Diego Convention Center, Halls B-H

- 8:00 NNN13 **25.01SU** Brain Awareness Week activities expand city-wide across multiple institutions and groups with minimal organization. K. REMOLE; H. MCKELLAR; H. BOWLING; C. CAIN; P. CROXSON; L. FRIEDMAN; A. HILL; A. KALMBACH; C. MELENDEZ-VASQUEZ; J. GARBARINO; W. YU. *Columbia Univ., NYU Sch. of Med., Hunter Col., Icahn Sch. of Med. at Mount Sinai, The Rockefeller Univ.*
- 9:00 NNN14 **25.02SU** A national campaign of Brain Awareness Week in Brazil. M. M. FROES; C. H. BUCK; N. GARCIA-CAIRASCO; J. QUILLFELDT; C. HEDIN-PEREIRA. *Fed Univ. Rio de Janeiro, Federal Univ. of Rio de Janeiro, State Univ. of São Paulo, Federal Univ. of Rio Grande do Sul, Federal Univ. of Rio de Janeiro.*
- 10:00 NNN15 **25.03SU** UCLA's Brain Awareness Week 2013: An analysis of its impact on K-12 students. D. ALEXANDER; M. DESALVO; S. K. MADSEN; A. ATTAR; N. SUTHANA; C. A. GHIANI; W. GE; R. ROMERO-CALDERON; C. E. EVANS; J. B. WATSON; E. M. CARPENTER. *UCLA, UCLA, UCLA Sch. Med.*
- 11:00 NNN16 **25.04SU** From three through ninety three: The Brain Awareness Week experience in Brazil. A. FERNANDES; P. BERTTI; E. H. L. UMEOKA; P. D. PEREIRA; J. TEJADA; M. L. DAL-CÓL; J. A. CORTES DE OLIVEIRA; F. DEL VECCHIO; N. GARCIA-CAIRASCO; J. C. SANTOS. *Univ. of São Paulo, Univ. of São Paulo, Univ. of São Paulo.*
- 8:00 NNN17 **25.05SU** Utah Brain Awareness Week 2013: making waves. J. M. CAHOON; J. T. YARCH; M. BIANZADEH; H. XU; S. N. REDMON; T. DAHL; A. HAACK; B. J. CURTIS; F. FURMANOV; A. DAVIS. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*
- 9:00 NNN18 **25.06SU** Bloomsburg University's Brain Awareness Week: Outreach to preschool, elementary, middle, high school, and university students in central Pennsylvania. J. A. JOHNSON; L. E. GILL; K. M. HANAWAY. *Bloomsburg Univ., Bloomsburg Univ. of PA.*
- 10:00 NNN19 **25.07SU** Art, science, and hockey: Carleton university's Brain Awareness Week. H. A. MACKAY; Z. R. PATTERSON; V. ST-ONGE; A. ABIZAD; R. GABRYS; R. MCQUAID; O. MCINNIS; N. RUSTOM; T. RODRIGUES; S. HANEA; S. HUDSON; S. J. KING; R. COMBA; S. CAHILL; B. C. WARTMAN; T. PARNO; F. AL-YAWER; C. RUDYK; C. SMITH; M. WELLMAN. *Carleton Univ.*
- 11:00 NNN20 **25.08SU** 2013 regional brain awareness program in eastern Kentucky. I. M. WHITE; K. HAURIS; W. WHITE. *Morehead State Univ.*
- 8:00 NNN21 **25.09SU** Brain education day at Yale: A celebration of Brain Awareness Week. C. A. CALARCO; S. R. TAYLOR; N. K. WOODWARD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*
- 9:00 NNN22 **25.10SU** ▲ The Brain Awareness Conference (BAC) to promote the history and future progress of neuroscience research. I. TRANG; A. HU; K. Y. TAHARA; S. TRAN; D. MING-HAI LAN; K. M. BIESZCZAD. *UC Irvine.*
- 10:00 NNN23 **25.11SU** Building the brain: interactive exhibit for Brain Awareness Week and the North Carolina science festival. D. L. ROBINSON; K. K. SULIK; S. K. O'LEARY-MOORE. *Univ. of North Carolina.*

THEME H POSTER

026. Neuroscience Community Outreach

Theme H posters remain on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday (presentation number ending in (SA) or Sunday (SU) — San Diego Convention Center, Halls B-H

- 8:00 NNN24 **26.01SU** Developing return-to-academics protocol after suffering a concussion in student-athletes: A neuroscientific evidence based approach to improve education and awareness. E. HALL; C. KETCHAM; M. BAKER; J. MCCONNELL; K. PATEL; C. CRENSHAW; D. KLOSSNER; B. HAINLINE. *Elon University, Elon University, NCAA.*
- 9:00 NNN25 **26.02SU** Elon BrainCARE: Concussion education and outreach program for high school athletes. C. J. KETCHAM; E. E. HALL; S. E. FOLGER; W. R. BIXBY; P. C. MILLER; S. VALLABHAJOSULA; K. P. BARNES. *Elon Univ., Elon Univ.*
- 10:00 NNN26 **26.03SU** Concussion education as an undergraduate student organization at DePaul University. D. A. KOZLOWSKI; F. BRAND; T. GREIF. *DePaul Univ.*
- 11:00 NNN27 **26.04SU** Cross-institutional collaboration in neuroscience outreach: Undergraduates, graduates, middle and high schoolers get together to learn about the brain. W. GRIESAR; E. SHAW; K. LEHMAN; M. RUDOLPH; J. LEAKE. *Washington State Univ. Vancouver, Portland State Univ., Multnomah Educational Sch. District.*
- 8:00 NNN28 **26.05SU** The BRAIN Network: Establishing connections between educators and neuroscience. J. A. SEGGO; A. ABDELAL. *Bridgewater State Univ., Bridgewater State Univ.*
- 9:00 NNN29 **26.06SU** Avengers assemble! Batman, Iron Man, neuroscience, and the general public. E. ZEHR. *Rehab Neurosci. Lab.*
- 10:00 NNN30 **26.07SU** Young (and old) minds want to know_ educational outreach efforts by the Florida State University (FSU) neuroscience program. C. L. ROBISON; A. M. STATHOPOULOS; S. B. OGDEN; C. LIEBERWIRTH. *Florida State Univ., Florida State Univ., Florida State Univ.*
- 11:00 NNN31 **26.08SU** Nameaneuron.org: An anatomically accurate 3D neuron database for crowdfunding of student neuroscience projects. D. P. MCCLOSKEY; T. DEDITS; M. ZIONS; T. A. SHOHATEE. *Col. Staten Island/ CUNY, Grad. Ctr. at CUNY, Col. of Staten Island/CUNY.*
- 8:00 NNN32 **26.09SU** The Oregon Health and Science University youth engaged in science initiative - YES! M. MATTHEWS; K. AYKES; J. NIGG; D. FAIR. *Oregon Hlth. & Sci. Univ.*
- 9:00 NNN33 **26.10SU** Carry The One Radio: A series of short interviews with scientists. B. SEYBOLD; O. M. AHMED. *Univ. of California - San Francisco.*
- 10:00 NNN34 **26.11SU** Still building the neuroscientific community through the next generation in Jackson, Mississippi. L. N. BELOATE; M. O. BOHLEN; J. W. DUNCAN; L. GOLDEN; W. L. WOOLVERTON. *Univ. of Mississippi Med. Center, Program In Neurosci., Mississippi Chapter, Society for Neurosci., Univ. of Mississippi Med. Center, Dept. of Neurobio. and Anatom. Sci., Univ. of Mississippi Med. Center, Dept. of Psychiatry and Human Behavior.*

11:00 NNN35 **26.12SU** University of New England center for excellence in neuroscience outreach program. A. L. DEAL; K. J. ERICKSON; E. J. BILSKY; M. A. BURMAN. *Univ. of New England, Univ. of New England.*

8:00 NNN36 **26.13SU** Systems neuroscience and architectural design. S. GEPSHTEIN. *The Salk Inst. for Biol. Studies.*

THEME H POSTER

027. Ethics and Policy

Theme H posters remain on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday (presentation number ending in (SA) or Sunday (SU) — San Diego Convention Center, Halls B-H

Sat. 1:00 PM - 5:00 PM — Halls B-H

- 1:00 NNN37 **27.01SA** Neurobioethics and christian anthropology: Ethical framework for contextualizing neuroenhancement. D. C. LARRIVEE; A. GINI. *Roman Catholic Diocese of Charleston Educational Outreach Office, San Camillo Forlanini Med. Ctr.*
- 2:00 NNN38 **27.02SA** The neuroscientist pledge and other ways of opposing the misuse of neuroscience for "National Security". C. C. BELL. *Oregon Hlth. and Sci. Univ.*
- 3:00 NNN39 **27.03SA** Social dimensions and ethical issues in the use of embodied modeling with autonomous agents in neuroscience research. A. K. LEE; A. LAM; E. L. OHAYON. *Green Neurosci. Lab, NeuroInx Res. Inst., Univ. of Toronto Epilepsy Res. Group, Salk Inst. for Biol. Studies.*
- 4:00 NNN40 **27.04SA** ▲ On the practice of replicating an electrophysiology study with the Center for Open Science. M. LEWIS; M. PITTS. *Reed Col.*
- 1:00 NNN41 **27.05SA** Print media coverage of brain imaging studies addressing medically unexplained symptoms. L. BAUDET; R. POTIER; J. KONSAN. *CRPMS EAD 3522 Psychoanalysis, Med. & Society, Univ. Paris Diderot, CNRS UMR 5536 RMSB / Univ. Bordeaux.*
- 2:00 NNN42 **27.06SA** Providing neuroimaging incidental finding reports to all research participants: What's the harm? C. E. COLE; J. P. GLUCK; J. M. SHOEMAKER; M. T. HOLDSWORTH; L. E. PETREE; D. L. HELITZER; R. SCHRADER; J. P. PHILLIPS. *Mind Res. Network, Univ. of New Mexico, Kennedy Inst. of Ethics, Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico Hlth. Sci. Ctr.*
- 3:00 NNN43 **27.07SA** Sad Cyborg. The problem of disembodiment in Andy Clark's approach to human identity. L. E. ECHARTE. *Univ. of Navarra.*
- 4:00 NNN44 **27.08SA** Adverse childhood experiences at the intersection of neuroscience, policy, and children's health. K. SRIPADA. *Norwegian Univ. of Sci. and Technol.*
- 1:00 NNN45 **27.09SA** The great divide: Disparate perspectives among participants, researchers and IRB members regarding incidental finding disclosure. L. E. PETREE; D. L. HELITZER; J. M. SHOEMAKER; J. P. PHILLIPS; C. E. COLE; J. P. GLUCK; R. SCHRADER; M. T. HOLDSWORTH. *Mind Res. Network, Univ. of New Mexico, Mind Res. Network, Univ. of New Mexico, Univ. of New Mexico, Kennedy Inst. of Ethics, Univ. of New Mexico, Univ. of New Mexico.*
- 2:00 NNN46 **27.10SA** Introducing Neuroethics to students in law, health sciences, and the humanities. L. S. SIMO. *Northwestern Univ.*

▲ Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 NNN47 **27.11SA** Ethical challenges of large-scale brain simulations. M. CHRISTEN. *Univ. of Zurich*.
- 4:00 NNN48 **27.12SA** Towards a policy for the collection, storage and use of human embryonic and fetal tissue for neuroscience research. S. LINDSAY; I. BYSTRON; S. WOODS; V. OTTELLIN; T. WIERZBA-BOBROWICZ; P. RAKIC; C. BLAKEMORE. *Inst. of Genet. Med., Newcastle Univ., Univ. of Oxford, PEALS Res. Centre, Newcastle Univ., Inst. of Physiol., Inst. of Psychiatry and Neurol., Yale Univ. Sch. of Med.*
- 1:00 NNN49 **27.13SA** Dementia 2.0: Information-sharing about Alzheimer disease on twitter. J. M. ROBILLARD; T. W. JOHNSON; B. L. BEATTIE; J. ILLES. *Univ. British Columb.*
- 2:00 NNN50 **27.14SA** Mismatch between practice and policy for maintaining confidentiality in the peer review process. W. HAYWARD; L. HEYBURN; R. M. HARRINGTON; K. GALE. *Georgetown Univ.*
- 3:00 NNN51 **27.15SA** Drugs targeting brain hemeoxygenase system in cardiac arrest could be crucial for neuroprotection. A feature that requires new focus for better health care. A. K. PANDEY; A. SHARMA; R. PATNAIK; D. F. MURESANU; L. WIKLUND; H. S. SHARMA. *Senior Res. Fellow, IIT-BHU, Uppsala Univ. Hosp., Indian Inst. of Technology, Banaras Hindu Univ., Univ. of Med. & Pharm.*
- 4:00 NNN52 **27.16SA** Multimodal animal experiments to simulate clinical situation of disease processes for better therapeutic strategies in neurological disease are the need of the hour. R. PATNAIK; A. SHARMA; H. S. SHARMA. *Banaras Hindu University, Inst. Technol., Uppsala Univ. Hosp.*
- 1:00 NNN53 **27.17SA** Targeting drugs to modulate the CNS ubiquitin system : A novel approach to achieving neuroprotection that merits focus in neuroscience research. D. F. MURESANU; A. SHARMA; S. D. SKAPER; H. S. SHARMA. *ROMANIAN SOCIETY FOR THE STUDY OF NEUROPROTECTION AND NEUROPLASTICITY, Uppsala Univ. Hosp., Univ. of Padova.*
- 2:00 NNN54 **27.18SA** Age structure and gender differences of Stroke. T. I. NATHANIEL; M. OKON; A. I. NATHANIEL. *Univ. of South Carolina Sch. of Med. At Greenville, Obafemi Awolowo Univ., North Greenville Univ. Tigerville.*
- 3:00 NNN55 **27.19SA** Environmental interactions in neurological diseases and therapy can't be ignored. L. FENG; A. SHARMA; H. S. SHARMA. *Bethune Intl. Peace Hosp., Uppsala Univ. Hosp.*
- 3:00 A3 **28.03** The polarity protein Par-1 regulates dendritic spine morphogenesis through phosphorylating PSD-95. Q. WU*; V. DIBONA; L. BERNARD; H. ZHANG. *Univ. of Med. and Dentistry, New Jersey.*
- 4:00 A4 **28.04** Role of microRNA-101b in postnatal development of neural networks. G. LIPPI*; C. C. FERNANDES; A. JENESSEN; E. TERENZIANNI; D. K. BERG. *UCSD, UCSD.*
- 1:00 A5 **28.05** Striatal medium spiny neurons exhibit dendritic spine changes in response to ephrin-A deletions. R. WURZMAN*; J. BAIOTTO; S. VICINI; L. F. KROMER. *Georgetown Univ., Georgetown Univ., Georgetown Univ., Georgetown Univ.*
- 2:00 A6 **28.06** Impaired synaptic development with maternal immune activation. G. PENDYALA; P. RAGUNATHAN*; Y. JUNG; A. SURESH; B. MEAYS; E. SPARTZ; A. DUNAEVSKY. *Munroe-Meyer Institute, Univ. of Nebraska Med. Ctr.*
- 3:00 A7 **28.07** The Nedd8 pathway controls synapse maturation and function: A central role of PSD-95 neddylation. M. M. BROCKMANN; A. M. VOGL; G. MACCARRONE; C. TURCK; J. M. DEUSSING; D. REFOJO; V. STEIN*. *Max Planck Inst. of Psychiatry, Univ. Bonn.*
- 4:00 A8 **28.08** SNX26, a GTPase-activating protein for Cdc42, interacts with PSD-95 and is involved in activity-dependent dendritic spine plasticity in mature neurons. Y. KIM*; J. PARK; H. ZHAO; S. CHANG. *Seoul Natl. Univ. Col. of Med.*
- 1:00 A9 **28.09** ACF7, a large linker protein interacting with both microtubules and F-actin, has crucial roles in neuronal development and differentiation. Y. KASHIWAGI*; S. OKABE. *The Univ. of Tokyo.*
- 2:00 A10 **28.10** ▲ The relationship between Shati/Nat8l and NAA in various age stage in mice brain. K. SUMI*; K. UNO; R. IWAMOTO; T. NABESHIMA; Y. FURUKAWA-HIBI; Y. MIYAMOTO; A. NITTA. *Dept. of Pharmaceut. Therapy and Neuropharmacology, Fac. of Pharmaceu, Dept. of Regional Pharmaceut. Care and Science, Meijo Univ., Dept. of Neuropsychopharm. and Hosp. Pharm.*
- 3:00 A11 **28.11** Role of GDNF and its receptor GFRα1 in synapse formation. D. IRALA*; A. BONAFINA; P. A. FONTANET; F. C. ALSINA; G. PARATCHA; F. LEDDA. *Inst. De Biología Celular Y Neurociencia Prof. E. De Robertis UBA-CONICET.*
- 4:00 A12 **28.12** Contribution of connexin hemichannels in the generation of spontaneous electrical activity in the developing cortex. M. B. SINGH*; S. D. ANTIC. *Univ. of Connecticut Hlth. Ctr.*
- 1:00 A13 **28.13** Netrin-1 promotes excitatory synaptogenesis by initiating synapse assembly. J. S. GOLDMAN; M. A. ASHOUR; M. H. MAGDESAN; N. X. TRITSCH; S. N. HARRIS; N. CHRISTOFI; R. CHEMALI; Y. STERN; P. GRUTTER; J. BOUCHARD, Ph.D.; E. S. RUTHAZER; D. STELLWAGEN; T. E. KENNEDY*. *McGill Univ., McGill Univ., McGill Univ., Montreal Neurol Inst.*
- 2:00 A14 **28.14** Development of GABA circuitry of fast-spiking basket interneurons in the prefrontal cortex of erb4-mutant mice. J. ZHANG*; J. YANG; H. GENG; X. CHEN; X. LI. *Neurosci. Res. Center, Sch. of Medicine, Zhejiang Univ.*

POSTER

028. Synapse Formation: CNS I

Theme A: Development

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 A1 **28.01** Calsyntenin-3, an α-neurexin-specific binding partner, promotes excitatory and inhibitory synapse development. L. LUO*; K. L. PETTEM; D. YOKOMAKU; M. W. LINHOFF; T. PRASAD; S. A. CONNOR; T. J. SIDDIQUI; H. KAWABE; F. CHEN; L. ZHANG; G. RUDENKO; Y. WANG; N. BROSE; A. CRAIG. *Univ. of British Columbia, Max Planck Inst. of Exptl. Med., Univ. of Michigan.*
- 2:00 A2 **28.02** Slitrk6 is essential for timely synaptogenesis and emmetropization. J. ARUGA*; Y. MATSUMOTO; K. SAKOORI; M. O. ODAGAWA; Y. S. ODAKA. *RIKEN BSI.*

- 3:00 A15 **28.15** Removal of ErbB4 from fast-spiking interneurons impairs the wiring of specific inhibitory circuits, enhancing cortical excitability and causing behavioral deficits. C. GARCIA-FRIGOLA*; I. DEL PINO; J. R. BROTONS-MAS; N. DEHORTER; E. ALVAREZ; M. MARTINEZ DE LAGRAN; G. CICERI; M. GABALDON; D. MORATAL; M. DIERSSEN; S. CANALS; O. MARIN; B. RICO. *Inst. de Neurociencias, UMH-CSIC, Ctr. for Genomic Regulation, Ctr. for Biomaterials and Tissue Engin., Inst. de Neurociencias, UMH-CSIC.*
- 4:00 A16 **28.16** The schizophrenia risk factor ErbB4 regulates spine and excitatory synapse formation. D. YIN*; Y. CHEN; J. BEAN; T. LIN; A. SATHYAMURTHY; W. XIONG; L. MEI. *Georgia Regents Univ.*
- 1:00 A17 **28.17** Mechanisms regulating synaptic specificity in the developing hippocampus. R. BASU; M. TAYLOR; J. HUNTER; M. E. WILLIAMS*. *Univ. of Utah.*
- 2:00 A18 **28.18** The function of Cortactin-Binding Protein 2 in neuronal morphogenesis. P. SHIH*; Y. CHEN; Y. HSUEH. *Academia Sinica, Inst. of Mol. Biol.*
- 3:00 A19 **28.19** Modeling synaptic pathophysiology in tuberous sclerosis using human pluripotent stem cell-derived neurons. S. AIGNER; V. COSTA; B. ATAMAN; G. BOULTING; M. VUKCEVIC; S. ZOFFMANN; E. SAUTER; F. KNOFLACH; M. T. MILLER; F. BOUKHTOUCHE; C. GOELDNER; M. EBELING; C. PATSCH; C. A. MEYER; M. GRAF; J. BISCHOFBERGER; J. MOSBACHER; S. JESSBERGER; M. E. GREENBERG; A. GHOSH; R. K. JAGASIA*. *F. Hoffmann - La Roche Ltd. Pharma Res. and Early Development, Neurosci., Dept. of Neurobiology, Harvard Med. Sch., Dept. of Biomedicine, Univ. of Basel, F. Hoffmann - La Roche Ltd., Pharma Res. and Early Development, Discovery Technologies, F. Hoffmann - La Roche Ltd., Pharma Res. and Early Development, Translational Technol. and Bioinformatics, Brain Res. Institute, Univ. of Zurich.*
- 4:00 A20 **28.20** Wnt7a and nicotine enhance synaptogenesis and vesicular glutamate transporter heterogeneity in cultured calyceal synapses. L. GUILLAUD*; D. DIMITROV; T. TAKAHASHI. *Okinawa Inst. of Sci. and Technol. Grad. Univ.*
- 1:00 A21 **28.21** Spontaneous vesicular release of glutamate from young neurons acts on distant NMDA receptors to drive dendritic arbor formation. L. C. ANDREA*; J. BURRONE. *King's Col. London.*
- 2:00 A22 **28.22** The early organisation of glutamatergic inputs onto Lpar1+ subplate neurons is predictive of their eventual Layer 6b fate. A. MARQUES SMITH*; A. KAUFMANN; P. ANASTASIADIS; A. HOERDER-SUABEDISSEN; Z. MOLNÁR; S. BUTT. *Univ. of Oxford, Univ. of Oxford.*
- 3:00 A23 **28.23** Development of intracortical layer 4 synapses in the 'barrel field' of the rat somatosensory cortex. A. DUFOUR; A. ROLLENHAGEN*; K. SÄTZLER; D. FELDMEYER; J. H. R. LÜBKE. *Res. Ctr. Juelich, Sch. of Biomed. Sciences, Univ. of Ulster, RWTH/University Hosp. Aachen, JARA Translational Brain Med.*
- 4:00 A24 **28.24** IgSF9b, an inhibitory synaptic adhesion molecule coupled to neuroligin 2 via S-SCAM, forms a distinct subsynaptic domain promoting synaptic development. Y. LEE*; J. WOO; J. NAM; H. TAKAHASHI; D. KRUEGER; J. PARK; S. CHANG; A. CRAIG; E. KIM. *Inst. for Basic Sci., Univ. of British Columbia, Vancouver, 4Max Planck Inst. of Exptl. Med., Seoul Natl. Univ. Col. of Med.*

POSTER

029. Activity-Dependent Changes in Connectivity

Theme A: Development

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 A25 **29.01** Conditional ablation of TrkB signaling in Parvalbumin positive Interneurons confers abnormal phenotypes in neurodevelopment. D. XENOS*; J. A. CARDIN; M. L. SCHWARTZ; F. M. VACCARINO. *Yale Univ., Yale Univ., Yale Univ.*
- 2:00 A26 **29.02** Two neural networks, one GABAergic and one glutamatergic, interact to generate widely propagating waves of activity in early postnatal mouse cortex. C. R. EASTON*; S. P. MOEN; K. WEIR; A. SCOTT; R. F. HEVNER; W. J. MOODY. *Univ. of Washington, Univ. of Washington.*
- 3:00 B1 **29.03** Looping circuit: A novel mechanism for spontaneously raising $[Ca^{2+}]_i$ at rapid and regular intervals in developing embryonic mouse brainstem. H. WATARI; A. J. TOSE; M. M. BOSMA*. *Univ. of Washington, Univ. of Washington.*
- 4:00 B2 **29.04** Activity patterns of single neurons driving population synchrony in developing mouse cortex. H. M. BARNETT*; C. E. COMFORT; A. L. FAIRHALL; W. J. MOODY. *Univ. of Washington.*
- 1:00 B3 **29.05** ▲ Multiple forms of spontaneous activity in migrating GABAergic interneurons of the developing mouse cortex. C. W. DICKEY; C. R. EASTON; R. F. HEVNER; W. J. MOODY*. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*
- 2:00 B4 **29.06** Imaging experience-dependent plasticity in the mouse barrel cortex. S. LO*; D. KOH; J. SNG; G. J. AUGUSTINE. *Physiology, Yong Loo Lin Sch. of Medicine, Natl. Univ. Of Singapore, Grad. Sch. for Integrative Sci. and Engineering, Natl. Univ. of Singapore, Singapore Inst. of Clin. Sci., Duke-NUS Grad. Med. Sch.*
- 3:00 B5 **29.07** In vivo imaging of dendritic refinement of barrel cells in neonatal cortex. H. MIZUNO*; W. LUO; Y. M. SAITO; S. ITOHARA; T. IWASATO. *Natl. Inst. of Genet., The Grad. Univ. for Advanced Studies (SOKENDAI), RIKEN BSI.*
- 4:00 B6 **29.08** Interhemispheric inputs influence circuit development and plasticity in Xenopus optic tectum. R. L. FAULKNER*; A. C. GAMBRILL; H. T. CLINE. *The Scripps Res. Inst.*
- 1:00 B7 **29.09** Structural, functional and behavioral consequences of decreasing excitatory inputs onto optic tectal neurons in Xenopus. H. HE*; W. SHEN; H. T. CLINE. *The Scripps Res. Inst., The Scripps Res. Inst., Hangzhou Normal Univ.*
- 2:00 B8 **29.10** Functional connectivity changes induced by monocular deprivation during the critical period. K. YANG*; J. M. LEDUE; A. W. CHAN; M. H. MOHAJERANI; D. A. MCVEA; T. H. MURPHY; M. CYNADER. *Brain Res. Ctr.*
- 3:00 B9-DP3 **29.11** Structural plasticity underlying retinogeniculate synapse remodeling after eye-opening. S. PARK; Y. HONG; J. MORALES; J. SANES; C. CHEN*. *Children's Hosp, Harvard Med. Sch., Harvard Univ.*
- 4:00 B10 **29.12** Prenatal serotonergic perturbations and the structure of the prefrontal cortex-raphe projection. A. CHEN; P. F. FOROUDI; K. D. HUBBERT; N. KOREIE; C. R. CHUCK; B. A. PEARCE; S. JANUSONIS*. *Univ. of California, Santa Barbara.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 B11 **29.13** Postnatal desynchronization of climbing fiber responses in Purkinje cell populations of the developing cerebellum. J. GOOD*; T. MIYAZAKI; K. KITAMURA; M. WATANABE; K. SAKIMURA; M. KANO. *Univ. of Tokyo, Hokkaido Univ., Niigata Univ.*
- 2:00 B12 **29.14** Spontaneous network activity during development drives the clustering of temporally-related synaptic inputs. J. WINNUST*; C. LOHMANN. *Netherlands Inst. For Neurosci.*
- 3:00 B13 **29.15** Early life experiences provide synaptic basis for adulthood memory performances. K. TAO*; J. ICHIKAWA; N. MATSUKI; R. KOYAMA. *The Univ. of Tokyo, RIKEN Brain Sci. Inst.*
- 4:00 B14 **29.16** Postnatal age influences the impact of a positive allosteric modulator of AMPA receptor function on EPSC amplitude in hippocampal CA1 pyramidal neurons. H. XU*; S. H. ALBANI; E. T. STONEHEM; T. C. DUMAS. *George Mason Univ.*
- 1:00 B15 **29.17** Differential effects of chronic high decibel music and noise on the excitatory and inhibitory components in the developing auditory cortex analogue of chick (*Gallus gallus domesticus*). V. KUMAR; T. C. NAG; U. SHARMA; N. R. JAGANNATHAN; T. ROY; S. WADHWA*. *All India Inst. Med. Sci., All India Inst. Med. Sci., All India Inst. Med. Sci.*
- 2:00 B16 **29.18** Dynamic changes in the connectivity and morphology of Somatostatin expressing interneurons during postnatal development. S. N. TUNCDEMIR*; F. J. STAM; F. OSAKADA; M. GOULDING; E. M. CALLAWAY; G. FISHELL. *New York Univ., Salk Inst. for Biol. Sci.*
- 3:00 B17 **29.19** Input-specific regulation of interneuron integration into the developing brain. N. DE MARCO GARCIA*; R. PRIYA; T. KARAYANNIS; G. FISHELL*. *NYU Langone Med. Ctr.*
- 4:00 B18 **29.20** Activity-dependent changes in numbers of NO-synthesizing neurons change motor behavior. D. DULCIS*; V. RAO; N. C. SPITZER. *Univ. of California San Diego, Kavli Inst. for Brain and Mind.*
- 1:00 B19 **29.21** Iterative Gaussian mixture model splitting of multimodal PSTH for studying activity dependent changes in cultured network connectivity. J. ERICKSON*; A. THOMAS; K. STRICKLAND; A. BARNES. *Washington and Lee Univ., Washington and Lee Univ.*
- 2:00 B20 **29.22** Chronic gestational lead exposure enhances spontaneous and inhibits stimulation-evoked release of glutamate analog, D-2, 3,-3H-aspartic acid from synaptosomes in early cortical and post natal hippocampal development. L. S. NEUWIRTH*; A. WIERASZKO; A. EL IDRISSI; N. P. VOLPE. *The CUNY Grad. Ctr. / The Col. of Staten Island (CUNY), The Col. of Staten Island (CUNY).*
- 2:00 B22 **30.02** Ketamine-induced neurotoxicity and altered N-Methyl-D-Aspartate receptor function in rat primary forebrain culture. F. LIU*; T. A. PATTERSON; N. SADOVOVA; M. G. PAULE; W. SLIKKER, Jr; C. WANG. *Natl. Ctr. For Toxicological Research/FDA, Toxicologic Pathology Associates.*
- 3:00 B23 **30.03** Cell death and regional growth of male and female postnatal mouse forebrain cortex and the anterior hippocampus. T. H. AHERN*; K. A. MORSE; S. A. MILORO; S. KRUG; N. G. FORGER. *Quinnipiac Univ., Univ. of Massachusetts, Georgia State Univ.*
- 4:00 B24 **30.04** Sonic hedgehog signaling critically regulates neural progenitor cell apoptosis in the developing cerebellum. K. K. NOGUCHI*; N. FARBER; B. SWINEY. *Washington Univ. St. Louis, Washington Univ., Washington Univ.*
- 1:00 B25 **30.05** ▲ Effect of DRP1 on mitochondrial dynamics and survival of motoneuron during the period of programmed cell death. C. SO YOEN*. *Col. of Medicine, Korea Univ.*
- 2:00 B26 **30.06** Acute apoptosis of neurons and oligodendrocytes induced in the developing rhesus macaque brain by anti-epileptic drugs. C. E. CREELEY*; J. W. OLNEY; A. BRAMBRINK. *Washington Univ., Oregon Hlth. and Sci. Univ.*
- 3:00 B27 **30.07** The effects of intrauterine endotoxin injection on tryptophan metabolism. M. A. WILLIAMS*; L. WOJCHIECH; A. JYOTI; B. BALAKRISHNAN; K. RANGARMANUJAM; S. KANNAN. *Johns Hopkins Univ.*
- 4:00 B28 **30.08** Cytotoxicity of botulinum neurotoxins reveals a direct role of syntaxin 1 and SNAP-25 in neuron survival. L. PENG*; H. LIU; H. RUAN; W. H. TEPP; R. H. BROWN; E. A. JOHNSON; W. YAO; S. ZHANG; M. DONG. *New England Primate Center, Harvard Med. Sch., Univ. of Wisconsin, Harvard Med. School, NEPRC, Univ. of Wisconsin, Univ. of Massachusetts Med. Sch.*
- 1:00 B29 **30.09** Protective role of Alpha lipoic acid (ALA) on Arsenic induced adverse effects during postnatal development of Wistar rat pups. S. DIXIT*; P. DHAR; R. D. MEHRA. *All India Inst. of Med. Sci., ALL INDIA INSTITUTE OF MEDICAL SCIENCES, ALL INDIA INSTITUTE OF MEDICAL SCIENCES.*
- 2:00 B30 **30.10** Kidins220/ARMS: A potential modulator of neuronal cell death and survival. N. E. SCHMIEG*; C. THOMAS; A. YABE; F. CESCA; G. SCHIAVO. *London Reserach Inst., Inst. Italiano di Tecnologia.*
- 3:00 B31 **30.11** NGF and neuroprotection under acute hypoxia: role of the membrane receptor P-TrkA. S. FISZER DE PLAZAS*; M. E. BOGETTI. *Univ. De Buenos Aires Fac Med. Inst. De Biol. Celular y Neurociencia.*
- 4:00 B32 **30.12** The acquisition of target dependence by developing rat retinal ganglion cells. A. R. HARVEY*; C. MOSES; L. P. G. WHEELER; C. J. LAVAILLANT; A. KRAMER; M. RYAN; M. A. POLLETT; J. RODGER. *Anatomy, Physiol. and Human Biology, The Univ. Of Western Australia, Animal Biology, The Univ. Of Western Australia.*
- 1:00 B33 **30.13** Control of DLK localization and signaling by direct palmitoylation. S. HOLLAND*; K. COLLURA; G. THOMAS. *Temple Univ.*

POSTER

030. Developmental Cell Death

Theme A: Development

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 B21 **30.01** Marker for neurons in the thalamus shows slowed increase after anesthesia exposure in P7 rats. R. MAKARYUS*; H. LEE; T. FENG; M. YU. *Stony Brook Med., Stony Brook Med., Stony Brook Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 B34 **30.14** Hierarchical regulation of programmed cell death in cisplatin treated neuroepithelia *in vivo*. M. LATIF*; Y. CAO; Z. WINTERTON-PERKS; K. K. W. HUI; A. J. ELIA; J. T. HENDERSON. *Univ. of Toronto, The Campbell Family Inst. for Breast Cancer Research, Univ. Hlth. Network, RIKEN Sci. Inst.*
- 3:00 C1 **30.15** ▲ M2 genes in *Drosophila* hemocytes: What are they doing? J. Z. CHAI; J. WATANABE*. *Pomona Col., Pomona Col.*
- 4:00 C2 **30.16** Inhibitory effect of nerve growth factor (NGF) on human carcinoma cell is responsible for innervations and maturation of tumor neovasculature. S. TAKATORI*; P. TANGSUCHARIT, M; N. ONO, M; H. KAWASAKI, M. Matsuyama Univ., Okayama Univ., Okayama Univ., Fukuoka Univ.
- 1:00 C3 **30.17** New Knowledge: Two vitamin D receptor systems can be localized in rat salivary glands that express four neurotrophic factor precursors. J. LAKSHMANAN; K. R. HUFF*; E. M. RUIZ; B. TILLMAN; J. YU; S. ZARAGOZA; M. G. FERRINI; S. W. FRENCH; R. MORIN. *Los Angeles Biomed. Res. Inst. at Harbor-UCLA Med. Ctr., Harbor-UCLA Med. Ctr., Martin Luther King Hospital;*
- POSTER**
- 031. Visual System Development**
- Theme A: Development**
- Sat. 1:00 PM – San Diego Convention Center, Halls B-H
- 1:00 C4 **31.01** The axonal projections of the dorsocentral ipsilateral retinal ganglion cells. C. A. SOARES*; C. MASON. *Columbia Univ., Minho Univ.*
- 2:00 C5 **31.02** Axon-axon interactions in the developing mouse retinogeniculate pathway. A. A. SITKO*; T. KUWAJIMA; E. G. DODD; Q. WANG; A. REBSAM; C. A. MASON. *Columbia Univ., Columbia Univ., Inst. du Fer à Moulin.*
- 3:00 C6 **31.03** Fish oil supplementation restores topographical patterns in retinocollicular projections in omega-3 restricted rats. C. A. SERFATY*; P. C. DE VELASCO; P. C. SANDRE; A. C. F. MELIBEU; J. C. BORBA; B. L. S. A. COSTA; P. C. C. LOPES. *Federal Fluminense University, Inst. De Biologia, Dept. Neurobiologia, Universidade Federal de Pernambuco.*
- 4:00 C7 **31.04** Inhibition of protein phosphatase 1 alters topographic organization in the superior colliculus of lister hooded rats. B. L. MATTOS*; P. TRINDADE; C. A. SERFATY. *Federal Fluminense Univ., Univ. of Maryland Sch. of Med.*
- 1:00 C8 **31.05** Axonal retrograde transport and its role in establishment of a retinotectal neural circuit. T. O. AUER; K. DUROURE; J. WITTBRODT; F. DEL BENE*. *Inst. Curie - Ctr. de Recherche, Ctr. for Organismal Studies.*
- 2:00 C9 **31.06** A lack of experience-dependent plasticity in the ventral visual cortex after 12 years of recovered sight. J. WEBSTER*; E. HUBER; A. BREWER; D. MACLEOD; B. WANDELL; A. WADE; I. FINE. *Univ. of Washington, Univ. of California, Univ. of California, Stanford Univ., Univ. of York.*
- 3:00 C10 **31.07** Down-regulation of cortical inhibition mediates ocular dominance plasticity in mouse visual cortex. H. TAO*; Y. LI; L. IBRAHIM; W. MA. *USC Keck Sch. Med.*
- 4:00 C11 **31.08** Developmental regulation of intrinsic excitability in the optic tectum of *Xenopus laevis* tadpoles. A. S. HAMODI; K. G. PRATT*. *Univ. of Wyoming.*
- 1:00 C12 **31.09** Deletion of neurturin alters dopaminergic innervation of the retina in adult mice but does not affect autonomic innervation of the iris. J. L. HOOVER; D. M. DEFOE; D. B. HOOVER*; C. E. BOND. *East Tennessee State Univ.*
- 2:00 C13 **31.10** Down-regulation of eye specific genes in zebrafish protocadherin-17 morphants. A. SOCHACKA; M. DALMAN; S. BRAHMAMDAM; M. SANGHA; R. L. LONDRAVILLE; Q. LIU*. *Univ. Akron.*
- 3:00 C14 **31.11** A short critical period for the deleterious effects on vision of a brief period of darkness in kittens. D. E. MITCHELL*; K. HOLMAN; K. DUFFY. *Dalhousie Univ.*
- 4:00 C15 **31.12** Identification of ganglion cell fate determinants through comparative single cell transcriptomics. J. GOETZ*; J. M. TRIMARCHI. *Iowa State Univ.*
- 1:00 C16 **31.13** Inhibitory neurons transplanted into visual cortex develop broadly tuned visual responses. E. R. HATHAWAY*; D. X. FIGUEROA; M. C. CARATHEDATHU; S. P. GANDHI. *Univ. of California, Irvine.*
- 2:00 C17 **31.14** Influence of cholinergic retinal waves on ipRGC light-response properties. L. A. KIRKBY*; M. B. FELLER. *UC Berkeley.*
- 3:00 C18 **31.15** Early depolarizing GABA controls critical period plasticity in the rat visual cortex. G. DEIDDA*; M. ALLEGRA; S. NASKAR; C. CERRI; G. BONY; M. CALEO; L. CANCEDDA. *ISTITUTO ITALIANO DI TECNOLOGIA, Scuola Normale Superiore, Consiglio Nazionale delle Ricerche.*
- 4:00 C19 **31.16** Onecut transcription factors play overlapping and distinct roles in the developing and mature retina. J. M. TRIMARCHI*; G. MARTIN. *Iowa State Univ.*
- 1:00 C20 **31.17** Dynamic expression of synaptopodin during murine cortical development. M. ENGELHARDT*; A. SCHLUETER; C. SCHULTZ. *Univ. Heidelberg, Med. Fac. Mannheim.*
- 2:00 C21 **31.18** A molecular mechanism regulating the timing of corticogeniculate innervation. J. M. BROOKS*; J. SU; T. SEABROOK; W. GUIDO; M. A. FOX. *VCU, VTCRI, Univ. of Louisville, Virginia Tech.*
- 3:00 C22 **31.19** Role of Reelin in zebrafish optic tectum development and retino-tectal circuit formation. V. DI DONATO*; T. O. AUER; K. DUROURE; J. P. CONCORDET; F. DEL BENE. *Inst. Curie, Muséum national d'Histoire naturelle.*
- 4:00 C23 **31.20** Teneurin-3 specifies morphological and functional connectivity of retinal ganglion cells in the vertebrate visual system. R. HINDGES*; P. ANTINUCCI; N. NIKOLAOU; M. P. MEYER. *King's Col. London.*
- 1:00 C24 **31.21** Evaluating computational models of retinotopic map formation. J. HJORTH*; D. C. STERRATT; C. S. CUTTS; D. J. WILLSHAW; S. J. EGLEN. *Cambridge Computat. Biol. Inst., Univ. of Edinburgh, Univ. of Cambridge.*
- 2:00 C25 **31.22** Disruption of glutamatergic retinal waves through inhibition blockade perturbs the developmental refinement of ferret geniculate receptive fields. Z. W. DAVIS*; B. CHAPMAN; H. CHENG. *Univ. of California Davis.*
- 3:00 C26 **31.23** Rapid development of feedforward inhibition drives emergence of visual alertness. M. T. COLONNESE*; J. BERZHANSKAYA. *The George Washington Univ. Sch. of Med.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:00 C27 **31.24** NMDA receptor subunit switch is cell-type specific and differentially regulated by Mecp2 in mouse visual cortex. S. MIERAU*; A. PATRIZI; T. K. HENSCH; M. FAGIOLINI. *Boston Children's Hosp. & Harvard Med. Sch., Harvard Univ.*
- 1:00 C28 **31.25** A secreted protein, Asporin, has the ability to induce ectopic eyes in *Xenopus* embryogenesis through regulation of nodal, Wnt and IGF signalling pathways. K. LUHDESS*; W. HU; M. KUROSAWA; S. OHNUMA. *Univ. Col. London, Univ. Col. London, Univ. of Cambridge.*
- 2:00 C29 **31.26** • Comparing development of synaptic proteins in human and rat visual cortex. K. M. MURPHY*; J. G. A. PINTO; D. G. JONES. *McMaster Univ., McMaster Univ., Pairwise Affinity Inc.*
- 3:00 C30 **31.27** Developmental characteristics of dorsal and ventral visual networks as reflected in cortical thickness. K. R. CIESIELSKI*; G. IVANOVA; A. VAN DER KOUWE; S. AHLFORS; C. BOUCHARD; I. SOLIS; B. FISCHL; B. ROSEN. *MGH/MIT/HMS, Mass Gen Hosp, Univ. of New Mexico, Humboldt-Universität zu Berlin, Harvard-MIT Div. of Hlth. Sci. and Technol.*
- 4:00 C31 **31.28** Bmp4 regulates pigmentation in the retinal pigmented epithelium by affecting the expression of *otx2* and *pax6* genes. V. K. KALASKAR*; J. D. LAUDERDALE. *Univ. of Georgia, Univ. of Georgia.*
- 1:00 C32 **31.29** Axon-target specificity in the accessory optic system is mediated by contactin-4. J. A. OSTERHOUT; P. MULTANI; Y. YOSHIHARA; A. D. HUBERMAN*. *UCSD, UCSD, Riken Brain Sci. Inst.*
- 2:00 C33 **31.30** The retinal ganglion cell projectome of the larval zebrafish. E. ROBLES*; E. LAURELL; H. BAIER. *Max-Planck Inst. for Neurobiology.*
- 4:00 D3 **32.04** • Modulation of dopaminergic neuron function through lynx1/ $\alpha 6$ nAChR interactions. R. L. PARKER*; H. C. O'NEILL; S. R. GRADY; A. D. STEELE; R. M. DRENAN; H. A. LESTER; J. M. MIWA. *CALTECH, Univ. of Colorado, Boulder, Purdue Univ., Lehigh Univ.*
- 1:00 D4 **32.05** Characterization of nicotinic receptor-mediated [3H]dopamine release by morphine from mouse synaptosomal preparations. O. S. SALMINEN*; F. AHMETLİ; J. M. MCINTOSH; S. LEINO. *Univ. Helsinki, Depts of Biol. and Psychiatry.*
- 2:00 D5 **32.06** $\alpha 4\beta 2^*$ and $\alpha 7$ nicotinic receptors play a role in L-dopa-induced dyskinesias; Studies using parkinsonian knockout mice. C. CAMPOS*; S. R. GRADY; M. QUIK. *SRI Intl., Univ. of Colorado.*
- 3:00 D6 **32.07** Varenicline markedly decreases antipsychotic-induced tardive dyskinesia in a rodent model. T. BORDIA*; F. I. CARROLL; M. QUIK. *SRI Intl., RTI.*
- 4:00 D7 **32.08** Activation of $\alpha 4\alpha 6\beta 2^*$ nAChRs on VTA DA neurons is sufficient for depolarization and enhanced function of AMPA receptors on the cell surface. S. E. ENGLE*; J. M. MCINTOSH; R. M. DRENAN. *Purdue Univ., Univ. of Utah.*
- 1:00 D8 **32.09** Disruptions in mesolimbic glutamate levels characterize potential mechanisms related to the nicotinic receptor $\alpha 5$ subunit polymorphism (CHRNA5 D398N) and associated increases in nicotine consumption. A. W. ZALUD*; R. S. HELFAND; A. E. TAMMIMAKI; V. NGUYEN; J. A. STITZEL. *Univ. of Colorado / Inst. For Behavioral Genet., Univ. of Colorado Denver, Univ. of Colorado.*
- 2:00 D9 **32.10** Cross tolerance between nicotine and ethanol is accompanied by increased ethanol self-administration. J. MCDAID*; R. A. E. METZ; R. KAMBER; S. L. WOLFMAN; D. S. MCGEEHEE. *Univ. of Chicago, Univ. of Chicago.*

POSTER

032. Cholinergic Modulation of the Dopaminergic System

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 C34 **32.01** Nicotinic acetylcholine receptor regulation of striatal dopamine transmission: The different requirement for diverse subtypes in ventral versus dorsal striatum. R. EXLEY*; J. M. MCINTOSH; M. J. MARKS; U. MASKOS; S. J. CRAGG. *Univ. of Oxford, Univ. of Utah, Univ. of Colorado, Inst. Pasteur.*
- 2:00 D1 **32.02** Increased activity of nicotinic acetylcholine receptors containing $\alpha 6$ subunits promotes dopamine tissue content and enhances dopamine release in nucleus accumbens. Y. WANG; J. LEE; G. OH; J. M. MCINTOSH; D. H. BRUNZELL; J. R. CANNON; R. M. DRENAN*. *Purdue Univ., Purdue Univ., Univ. of Utah, Virginia Commonwealth Univ.*
- 3:00 D2 **32.03** Background cholinergic tone determines the effect of agonists of $\alpha 7$ -type nicotinic acetylcholine receptors on the efflux of dopamine in a circuit model. R. MAEX*; V. GRINEVICH; E. BUDYGIN; M. BENCHERIF; B. GUTKIN. *Ecole Normale Supérieure, Wake Forest Baptist Med. Ctr., Wake Forest Sch. of Med., Targacept Inc.*
- 4:00 D10 **33.01** A novel mechanism for acupuncture-induced analgesia: Orexin 1 receptor-mediated endocannabinoid retrograde disinhibition in the periaqueductal gray. L. CHIOU*; Y. CHEN; H. LEE; Y. WU; M. HUNG; A. ZIMMER. *Natl. Taiwan University, Med. Col., Natl. Taiwan Univ., Natl. Taiwan Univ., China Med. Univ., Natl. Hlth. Res. Inst., Univ. of Bonn.*
- 2:00 D11 **33.02** Regulation of Endothelin Receptor Type B (ET_B) by Jagged1/Notch1 signaling in cortical reactive astrocytes after stroke. M. D. LECOMTE; A. L. BIBEAU; J. L. SPEES*. *Univ. of Vermont.*
- 3:00 D12 **33.03** ▲ Identification of discrete amino acids that responsible for Gi/o selectivity by melanin-concentrating hormone receptor 1. A. HAMAMOTO; Y. KOBAYASHI; Y. SAITO*. *Hiroshima Univ.*
- 4:00 D13 **33.04** Intracellular signaling of peptidergic neuromodulatory input to crab pyloric network neurons is Ca²⁺ and G-protein mediated. M. L. GRAY; D. J. SCHULZ; J. P. GOLOWASCH*. *Rutgers University-Newark, Univ. of Missouri, NJIT.*

POSTER

033. Peptide and Purine Receptors

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 D10 **33.01** A novel mechanism for acupuncture-induced analgesia: Orexin 1 receptor-mediated endocannabinoid retrograde disinhibition in the periaqueductal gray. L. CHIOU*; Y. CHEN; H. LEE; Y. WU; M. HUNG; A. ZIMMER. *Natl. Taiwan University, Med. Col., Natl. Taiwan Univ., Natl. Taiwan Univ., China Med. Univ., Natl. Hlth. Res. Inst., Univ. of Bonn.*
- 2:00 D11 **33.02** Regulation of Endothelin Receptor Type B (ET_B) by Jagged1/Notch1 signaling in cortical reactive astrocytes after stroke. M. D. LECOMTE; A. L. BIBEAU; J. L. SPEES*. *Univ. of Vermont.*
- 3:00 D12 **33.03** ▲ Identification of discrete amino acids that responsible for Gi/o selectivity by melanin-concentrating hormone receptor 1. A. HAMAMOTO; Y. KOBAYASHI; Y. SAITO*. *Hiroshima Univ.*
- 4:00 D13 **33.04** Intracellular signaling of peptidergic neuromodulatory input to crab pyloric network neurons is Ca²⁺ and G-protein mediated. M. L. GRAY; D. J. SCHULZ; J. P. GOLOWASCH*. *Rutgers University-Newark, Univ. of Missouri, NJIT.*

- 1:00 D14 **33.05** Signaling cascades of Humanin and the derivatives through Formyl peptide receptor like-1 (FRL-1). Y. KITA*; T. ARAKAWA; T. NIKURA. *Osaka Prefecture Univ., Alliance Protein Laboratories, Sophia Univ.*
- 2:00 D15 **33.06** Isolated presynaptic structures from the ventral tegmental area co-express CRH-BP and CRH-R2, proteins that are capable of forming a complex. P. G. SLATER*; V. NOCHES; M. E. ANDRÉS; K. GYSLING. *P. Universidad Católica De Chile, Dept. Biología Celular Y Molecular., Millennium Sci. Nucleus in Stress and Addiction.*
- 3:00 D16 **33.07** ▲ Activation of galanin receptor 2 stimulates large conductance Ca^{2+} -dependent K^{+} channels (BK) in human embryonic kidney (HEK293) cells. Y. BAI; N. C. PAN; Z. D. XU*. *Capital Med. Univ., Karolinska Inst.*
- 4:00 D17 **33.08** ▲ Ecto-5'-nucleotidase (CD73)-mediated formation of adenosine is critical for the striatal adenosine A2A receptor functions. E. AUGUSTO*; M. MATOS; J. SÉVIGNY; A. EL-TAYEB; C. E. MÜLLER; R. A. CUNHA; J. CHEN. *Boston University, Neurol., CNC-Centre for Neurosci. and Cell Biology, Univ. of Coimbra, FMUC-Faculty of Medicine, Univ. of Coimbra, Univ. Laval, Faculté de Médecine, Pharma-Zentrum Bonn, Pharmazeutisches Institut, Pharmazeutische Chemie I, Univ. of Bonn.*
- 1:00 D18 **33.09** The A_{2A} adenosine receptor is a dual-coding gene: A novel way of gene usage and signal transduction. Y. CHERN*; C. LEE; C. CHIEN; Y. LEE; H. LAI. *Inst. Biomed Sci.*
- 2:00 D19 **33.10** Role of adenosine receptors in migraine related cortical excitability and vascular changes. I. KESELMAN*; J. ZYUZIN; A. CHARLES. *UCLA, UCLA.*
- 3:00 D20 **33.11** Microglia phagocytic ability is preserved regardless changes in ATP levels and depends upon adenosine A2AR tonic activation. C. GOMES*; G. CRISTÓVÃO; M. VIEGAS; O. VIEIRA; R. CUNHA. *Ctr. For Neurosci. and Cell Biol., Fac. of Medicine, Univ. of Coimbra.*
- 4:00 D21 **33.12** A novel role of adenosine A_{2A} receptor as epigenetic and transcriptional modulator of glucocorticoid receptor. V. BATALHA*; M. HAMDANE; L. BUÉE; D. BLUM; G. SADRI-VAKILI; L. LOPES. *Instituto De Medicina Mol., Inserm, Harvard Med. Sch.*
- 1:00 D22 **33.13** *In vivo* exposure to caffeine changes the expression of A1 and A2A adenosine receptors in the chick embryo retina. R. BRITO*; D. PEREIRA-FIGUEIREDO; R. SOCODATO; R. PAES-DE-CARVALHO; K. D. CALAZA. *Univ. Federal Fluminense.*
- 2:00 D23 **33.14** The adenosine A2AR facilitation of synaptic plasticity in cortico-striatal synapses depends on ATP-derived adenosine and involves a cooperation between presynaptic and astrocytic A2AR. D. RIAL*; N. GONÇALVES; F. QUEIROZ; H. B. SILVA; R. D. S. PREDIGER; J. CHEN; R. A. CUNHA. *Univ. of Coimbra, Univ. of Coimbra, Univ. Federal de Santa Catarina, Boston Univ. Sch. of Med.*
- 3:00 D24 **33.15** Modulation by adenosine A2A receptors of GAT1-mediated gamma-aminobutyric acid (GABA) uptake by rat striatal synaptosomes. R. MÁRQUEZ GÓMEZ*; R. GONZÁLEZ-PANTOJA; J. ESCAMILLA-SÁNCHEZ; J. ARIAS-MONTAÑO. *CINVESTAV, Cinvestav.*
- 4:00 D25 **33.16** Adenosine-induced immobility and anorexia are mediated by cAMP/PKA-dependent activation of caspase-1 via the adenosine A2A receptor. G. S. CHIU*; P. T. DARMODY; J. P. WALSH; M. L. MOON; K. A. KWAKWA; G. G. FREUND. *Univ. of Illinois, Urbana-Champaign, Univ. of Illinois, Urbana Champaign.*
- 1:00 D26 **33.17** P2X7 receptor mediates the activation and paracrine of microglia in radiation-induced brain injury. X. RONG; Y. TANG*; B. HU; J. WANG; X. SHI. *Sun Yat-Sen Mem. Hospital, Sun Yat-Sen Univ.*

POSTER

034. Other GPCRs (G Protein-Coupled Receptor)

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 D27 **34.01** The spatiotemporal regulation of signaling by the bile acid and neurosteroid receptor TGR5. D. D. JENSEN*; C. GODFREY; C. NIKLAS; M. CANALS; D. P. POOLE; F. ALEMI; G. S. COTTRELL; C. KORBMACHER; C. U. CORVERA; N. BUNNETT. *Monash Univ., Univ. of California, San Francisco, Friedrich-Alexander-Universität, Reading Univ.*
- 2:00 D28 **34.02** Pharmacology of the putative estrogen receptor GPR30: Can catecholamines and aldosterone also activate the receptor? P. D. EVANS*; V. REALE; A. BAYLISS; N. J. EVANS. *The Babraham Inst.*
- 3:00 D29 **34.03** Immunohistochemical characterization of GPR151, an orphan receptor specifically expressed in habenula neurons. J. C. BROMS*; A. TINGSTRÖM. *Inst. For Clin. Sciences, Lund Univ., Inst. For Clin. Sciences, Lund Univ.*
- 4:00 D30 **34.04** *In vitro* pharmacology of GPR88 ligands in native and recombinant systems. D. NEPOMUCENO*; C. KUEI; G. LEE; W. VERHEYEN; M. LETAVIC; C. LIU; P. BONAVENTURE. *Janssen Pharmaceut. Res. & Develop., Janssen Pharmaceut. Res. & Develop.*
- 1:00 D31 **34.05** ● GPR 139 mRNA is expressed in the habenular system of the rat and mouse. S. SUTTON*; G. LEE; C. KUEI; D. NEPOMUCENO; C. LIU; P. BONAVENTURE; T. LOVENBERG. *Janssen Res. & Develop.*
- 2:00 D32 **34.06** The putative cannabinoid receptor gpr55: Expression and modulation of plasticity in the hippocampus. K. M. HURST*; S. BELL; C. BADGLEY; J. G. EDWARDS. *BYU, Brigham Young Univ.*
- 3:00 D33 **34.07** ● Investigating the hypothesis of GPCR allosteric compound selectivity through large scale profiling. B. N. ARMBRUSTER*; K. ITALIANO; L. CAVEDINE; S. P. NAUMAN; E. BYRNE; J. BODE. *EMD Millipore.*
- 4:00 D34 **34.08** Lactate receptor in the brain. L. H. BERGERSEN*; K. H. LAURITZEN; C. MORLAND; M. PUCHADES; F. LAURITZEN; J. STORM-MATHISEN; H. ATTRAMADAL; E. HAGELIN; A. GJEDDE. *Univ. of Oslo, Dept. of Neurosci. and Pharmacol., Ctr. for Healthy Aging, Oslo Univ. Hosp.*
- 1:00 D35 **34.09** Regulation of neuronal excitability through primary cilia. S. G. LEWIS; Z. J. WRIGHT; M. L. MENDOZA; S. K. EVANS; J. L. FUCHS*. *Univ. of North Texas.*
- 2:00 D36 **34.10** Lysophosphatidic acid receptor 1(LPA1) activity in rodent and human brain. Relation with the cannabinoid System. E. GONZÁLEZ DE SAN ROMAN*; I. MANUEL; M. T. GIRALT; J. CHUN; F. RODRÍGUEZ DE FONSECA; G. ESTIVILL-TORRÚS; L. J. SANTÍN; R. RODRÍGUEZ-PUERTAS. *Univ. Basque Country, The Scripps Res. Inst., Fundación IMABIS, Hosp. Carlos Haya, Univ. Málaga.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 D37 **34.11** Antidepressants activate LPA, lysophosphatidic acid receptor to induce growth factor receptor transactivation. M. C. OLIANAS*; S. DEDONI; P. ONALI. *Univ. Cagliari*.
- 4:00 D38 **34.12** An endogenous lipid mediator synaptamide promotes neurite growth through GPCR signaling. J. LEE*; G. KHAREBAVA; B. HUANG; K. KEVALA; S. PATNAIK; J. MARUGAN; H. WU; H. KIM. *NIH*.
- 1:00 D39 **34.13** Possible involvement of S1P3 receptor in learning and memory in mouse. D. WETH*; L. ZANGRANDI; M. LANGESLAG; C. SCHWARZER; M. KRESS. *Med. Univ. Innsbruck, Med. Univ. Innsbruck*.
- 2:00 D40 **34.14** Neuronal ZnR/GPR39 signaling is altered by acidic pH. T. GANAY; E. AIZENMAN; M. HERSHFINKEL*. *Physiol. and Cell Biology, Fac. of Hlth. Sciences, Ben-Gurion Univ. O. Univ. of Pittsburgh Sch. of Med.*
- 3:00 D41 **34.15** Neuronal G-protein coupled receptors linked to intracellular calcium signaling regulate flight in *Drosophila*. T. AGRAWAL*; G. HASAN. *Natl. Ctr. For Biol. Sci.*
- 4:00 D42 **34.16** Effects of intrahypothalamic infusion of histamine and related agents on lordosis, the female rodent sexual behavior. A. LÖFBERG*; D. PFAFF; L. KOW. *The Rockefeller Univ.*
- 1:00 E1 **34.17** CB1-dependent G protein signaling in brain mitochondria determines specific effects of cannabinoids. G. MARSICANO*; T. DESPREZ; E. SORIA-GOMEZ; P. VINCENT; M. METNA-LAURENT; L. BELLOCCHIO; J. DUPUY; R. ROSSIGNOL; G. BENARD; E. HEBERT-CHATELAIN. *U862 Neurocentre Magendie INSERM, Complutense Univ., Ctr. de génomique fonctionnelle, Univ. de Bordeaux*.
- POSTER**
- 035. Ion Channels: Calcium Channels**
- Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms**
- Sat. 1:00 PM – San Diego Convention Center, Halls B-H
- 1:00 E2 **35.01** Cannabinoid receptor agonists modulate calcium channels on rat retinal Müller cells. Z. WANG*; W. YANG; H. WU; S. WANG; M. JI; Y. MIAO; X. YANG. *Fudan Univ.*
- 2:00 E3 **35.02** Alterations of T-type calcium current contributes to chronic hyper-excitability of reticular thalamic neurons in rats after an early exposure to general anesthesia. M. R. DIGRUCCIO*; S. M. TODOROVIC. *Univ. of Virginia*.
- 3:00 E4 **35.03** Presynaptic calcium channels regulation by ghrelin receptor (GHSR) activity. J. RAINGO*; E. J. LOPEZ SOTO; F. AGOSTI; A. CABRAL; D. CASTROGIOVANNI; S. S. RODRIGUEZ; V. MARTINEZ DAMONTE; N. DE FRANCESCO; M. PERELLO. *Multidisciplinary Inst. of Cell Biol. (IMBICE)*.
- 4:00 E5 **35.04** Relative contribution of L-type calcium channels to total calcium accumulation observed in CA1 pyramidal neurons using calcium imaging. M. M. OH*; J. F. DISTERHOFT. *Northwestern Univ. Med. Sch.*
- 1:00 E6 **35.05** Physiological role and regulation of rna editing in iq domain of cav1.3 channels. J. ZHAI*; H. HUANG; W. P. YU; T. W. SOONG. *Natl. Univ. of Singapore, Inst. of Mol. and Cell Biol.*
- 2:00 E7 **35.06** The light chain 1 (LC1) of the microtubule associated protein B regulates N-type Ca²⁺ channel cell surface expression via proteasome-mediated degradation. M. A. GANDINI*; D. R. HENRÍQUEZ; A. SANDOVAL; L. GRIMALDO; C. GONZÁLEZ-BILLAULT; R. FELIX. *Cinvestav-IPN, Univ. de Chile, Sch. of Med. FES Iztacala. UNAM*.
- 3:00 E8 **35.07** Cyclin dependent kinase 5 regulation of T-type calcium channels. A. CALDERÓN-RIVERA*; R. GONZÁLEZ-RAMÍREZ; A. SANDOVAL; R. FELIX. *CINVESTAV, Dept. of Mol. Biol. and Histocompatibility, "Dr. Manuel Gea González" Gen. Hospital, Ministry of Hlth., Sch. of Med. FES Iztacala, Natl. Autonomous Univ. of Mexico (UNAM)*.
- 4:00 E9 **35.08** C-terminal alternative splicing of Cav1.3 channels distinctively modulates their dihydropyridine sensitivity. H. HUANG*; T. SOONG. *Natl. Univ. of Singapore, Natl. Univ. of Singapore*.
- 1:00 E10 **35.09** Functional expression of Cav3.1 channels in adult turtle spinal cord motoneurons. M. CANTO-BUSTOS*; E. LOEZA-ALCOCER; M. A. GANDINI; R. GONZÁLEZ-RAMÍREZ; R. DELGADO-LEZAMA; R. FELIX. *CINVESTAV-IPN, CINVESTAV-IPN, Hosp. Gen. "Dr. Manuel Gea González", Ministry of Hlth.*
- 2:00 E11 **35.10** Common toxin binding sites between Sodium and T-type calcium channels. C. BLADEN*; G. W. ZAMPONI. *Univ. of Calgary*.
- 3:00 E12 **35.11** The light chain 1 (LC1) of the microtubule associated protein 1B (MAP1B) promotes ubiquitination of N-type calcium channels. L. GRIMALDO*; M. A. GANDINI; D. R. HENRÍQUEZ; A. SANDOVAL; C. GONZÁLEZ-BILLAULT; R. FELIX. *Cinvestav-IPN, Univ. de Chile, Sch. of Med. FES Iztacala. UNAM*.
- 4:00 E13 **35.12** Different forms of calcium channel CaV1.2 proteins are expressed in brain and heart. K. M. WEBSTER*; D. LIPSCOMBE. *Brown Univ., Brown Univ.*
- 1:00 E14 **35.13** Isoform- and splice-variant-selective modulation of voltage-gated calcium channels by snapin: Implications in synaptic plasticity. Q. LIN*; D. YU; M. LIANG; T. SOONG. *Dept. of Physiology, Yong Loo Lin Sch. of Medicine, Natl. Univ. o.*
- 2:00 E15 **35.14** Coupling between T cell ryanodine receptors and STIM1 proteins regulates Ca²⁺ store leakiness, store-operated Ca²⁺ entry, and inflammatory responses in experimental autoimmune encephalomyelitis mice. A. F. FOMINA; P. THAKUR; M. E. O'DONNELL*; A. SOULIKA. *Univ. of California, Univ. of California*.
- 3:00 E16 **35.15** Quantitative ultrastructural analysis of axonal Cav2.1 calcium channels in hippocampal neurons. A. KULIK*; D. ALTHOF; M. WATANABE; B. FAKLER. *Univ. of Freiburg, BIOSS Ctr. for Biol. Signalling Studies, Hokkaido Univ.*
- 4:00 E17 **35.16** α-actinin and calmodulin synergistically regulate the l-type calcium channel cav1.2. P. TSENG*; J. HELL. *Univ. of California, Davis*.
- 1:00 E18 **35.17** *In vivo* tagging of Cav1.3 L-type calcium channels reveals C-terminal modulation of gating properties in cochlear inner hair cells. A. SCHARINGER; S. KUHN; K. SCHÖNIG; A. SAH; N. SINGEWALD; A. LEE; M. GEBHART; D. BARTSCH; A. KOSCHAK; M. SINNEGER-BRAUNS; J. ENGEL; J. STRIESSNIG*. *Univ. of Innsbruck, Saarland Univ., Central Inst. of Mental Hlth., Univ. of Iowa, Central Inst. of Mental Hlth., Med. Univ. of Vienna*.

- 2:00 E19 **35.18** Altered cognitive and affective behaviors in *cabp1/caldendrin*-null mice. E. S. SCHOLL*; K. Y. KIM; X. LIU; F. HAESELEER; J. K. BRITT; R. J. TAUGHER; J. A. WEMMIE; A. M. RAJADHYAKSHA; A. A. PIEPER; A. LEE. *Univ. of Iowa Carver Col. of Med., Univ. of Washington, Univ. of Iowa Carver Col. of Med., Weill Cornell Med. Col.*
- 3:00 E20 **35.19** Recruitment of $\text{Ca}_v3.2$ channels through GluN2C -containing NMDA receptors in nucleus Reticularis thalami. C. PELLEGRINI; A. LUTHI*; S. ASTORI. *Univ. Lausanne.*
- 4:00 E21 **35.20** Dopamine D1 receptor-mediated upregulation of BKCa channels in retinal Müller cell in a rat chronic ocular hypertension model. H. WU*; Y. MIAO; M. JI; W. YANG; X. YANG; Z. WANG. *Inst. of Brain Science, Inst. of Neurobio. and State Key Laboratory.*
- 1:00 E22 **35.21** Voltage-gated calcium channels in neurons derived from induced pluripotent stem cells. J. KESAVAN*; T. OPITZ; P. KOCH; L. BORGHESE; O. BRÜSTLE. *Inst. of Reconstructive Neurobio., Lab. of Exptl. Epileptology and Cognition Res.*
- 2:00 E23 **35.22** β -Hydroxybutyrate, a ketone body, modulates N-type calcium channels by acting as an agonist for FFA3 (GPR41), a free fatty acid G-protein coupled receptor natively expressed in sympathetic neurons. S. R. IKEDA*; Y. WON; H. L. PUHL, III. *NIH/NIAAA.*
- 3:00 E24 **35.23** Characterization of hyperpolarization-activated cation current in cerebellar stellate cells. K. L. CARZOLI*; S. J. LIU. *Louisiana State Univ. Hlth. Sci. Ctr.*
- 4:00 E25 **35.24** Acidic store-operated calcium entry in primary cultured neurons. L. HUI*; X. CHEN; J. GEIGER. *Univ. of North Dakota.*
- 1:00 E26 **35.25** Characterizing the expression of voltage gated calcium channels in rat superior cervical ganglia. M. SCOTT*; P. J. KAMMERMEIER. *Univ. of Rochester, Univ. of Rochester.*
- 2:00 E27 **35.26** Glutamate induces $[\text{Zn}^{2+}]$ increases by glutamate receptor-mediated intracellular Ca^{2+} overload, reactive oxygen species formation, and mitochondrial depolarization in cultured rat hippocampal neurons. J. S. YANG; S. PERVEEN; S. YOON*. *Catholic Univ. of Korea, catholic university.*
- 3:00 E28 **35.27** Novel wasp venom peptides alter gpcr-mediated calcium mobilization and store-operated calcium entry in cho, hek and ng108 cells. R. ARVIDSON*; H. MOHAMMAD; V. LANDA; E. MOORE; M. E. ADAMS. *UC Riverside, UC Riverside.*
- 4:00 E29 **35.28** Alternatively spliced exons in *Caenorhabditis elegans egl-19*, gene encoding CaV1 -like channels. A. S. ANDRADE*; K. PATEL; A. C. HART; D. LIPSCOMBE. *Brown Univ., Brown Univ., Brown Univ.*
- 1:00 E30 **35.29** Multiple TRP channels mediate the transduction of CCK signals in vagal sensory neurons. N. VASTANI; K. GERS-BARLAG; D. A. ANDERSSON; S. BEVAN*. *King's Col. London.*
- 2:00 E31 **35.30** Regulation of ampa receptors by tarps glycosylation. C. ZHENG*; Y. SUH; K. W. ROCHE. *NIH, Ajou Univ. Sch. of Med.*
- 3:00 E32 **35.31** Characterization of a charged N-type voltage-gated Ca^{2+} channel blocker. S. LEE*; M. PUOPOLO; P. LIU; B. P. BEAN; C. J. WOOLF. *Boston Children's Hosp., Stony Brook Med., Harvard Med. Sch.*

- 4:00 E33 **35.32** Ral, not Rho, mediates the effects of C3 exoenzyme on neuronal membrane recycling and calcium channels in peripheral sympathetic neurons. V. B. LU*; S. R. IKEDA. *NIH/NIAAA.*

POSTER

036. Transporters: Other

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 E34-DP1 **36.01** Intracellular Na^+ levels appear to be elevated in early development: Implications for chloride transporters. C. L. LINDSLY*; P. WENNER. *Emory Univ. Sch. of Med.*
- 2:00 E35 **36.02** Correlation between phosphorylation/dephosphorylation events and KCC2 function in the neonatal rat spinal cord. S. LIABEUF; C. BROCARD; L. R. VINAY*. *CNRS & Aix-Marseille Univ.*
- 3:00 E36 **36.03** Regulation of native-KCC2 function by transmembrane interacting partners. V. MAHADEVAN*; J. C. PRESSEY; B. A. ACTON; M. Y. HUANG; A. PUCHALSKI; E. A. IVAKINE; E. DELPIRE; R. R. MCINNES; M. A. WOODIN. *Univ. of Toronto, Hosp. for Sick Children Res. Inst., Vanderbilt Univ. Sch. of Med., Jewish Gen. Hosp.*
- 4:00 E37 **36.04** Anti-allodynic action of nnc 05-2090, a betaine/gaba transporter inhibitor. A. JINZENJI*; C. SOGAWA; T. MIYAWAKI; K. MORITA; S. KITAYAMA; N. SOGAWA. *Okayama Univ. Grad. Sch., Okayama Univ. Grad. Sch. of Medicine, Dent. and Pharmaceut. Sci., Fac. of Nursing, Hiroshima Bunka Gakuen Univ.*
- 1:00 E38 **36.05** The anion exchanger isoform 3 plays an important role in the CA1 neurons response to metabolic acidosis. A. I. SALAMEH; V. RUFFIN; W. F. BORON*. *Case Western Reserve Univ.*
- 2:00 E39 **36.06** The relative contributions of the individual GABA transporter subtypes to brain GABA uptake. N. C. DANBOLT*; Y. ZHOU; S. HOLMSETH; I. POBLETE-NAREDO. *Univ. of Oslo, Univ. of Oslo, Ctr. de Investigación y de Estudios Avanzados del IPN, Unidad Zacatenco.*
- 3:00 E40 **36.07** ▲ Identifying glycinergic circuits by tracking GlyT1 expression in the Central Nervous System. M. M. PANDO*; S. LAVANIA; M. A. MIRANDA. *Univ. of Texas At El Paso, Univ. of Texas At El Paso.*
- 4:00 E41 **36.08** Identifying mouse glycinergic circuits containing the neuronal transporter GlyT2. S. P. LAVANIA*. *Univ. of Texas At El Paso.*
- 1:00 E42 **36.09** Localization of the Cre activity in the glycine transporter 2-Cre mice. T. KAKIZAKI*; H. SAKAGAMI; H. NISHIMARU; K. SAKIMURA; Y. YANAGAWA. *Gunma Univ., Univ. of Kitasato, Univ. of Tsukuba, Niigata Univ.*
- 2:00 E43 **36.10** Zinc deficiency, taurine concentration, taurine transport and taurine transporter in cells rat retina. A. MARQUEZ; M. URBINA; F. OBREGON; L. LIMA*. *IVIC, CBB.*
- 3:00 E44 **36.11** Glutamine-dependent increase in glucose uptake in cerebellar Bergmann glia cells. A. ORTEGA*; O. MÉNDEZ-FLORES; E. CONCHUCOS; L. HERNÁNDEZ-KELLY; A. RODRIGUEZ. *Investav-IPN, Univ. Autónoma de Querétaro.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:00 E45 **36.12** Sialin mediates vesicular uptake of N-acetylaspartylglutamate. M. ECKHARDT*; J. LODDER-GADACZEK; V. GIESELMANN. *Univ. of Bonn.*
- 1:00 E46 **36.13** Amphetamine action at the serotonin transporter is modulated by calmodulin kinase II. T. STEINKELLNER*; T. MONTGOMERY; J. YANG; M. RICKHAG; U. GETHER; M. FREISSMUTH; O. KUDLACEK; H. H. SITTE. *Inst. of Pharmacology, Med. Univ. of Vienna, Univ. Col. Dublin, Univ. of Copenhagen.*
- 2:00 E47 **36.14** A vesicular aminergic-associated transporter (VAAT) linking the modulatory systems of the brain. M. LARHAMMAR; K. PATRA; L. EMILSSON; C. PEUCKERT; M. BLUNDER; E. ARVIDSSON; J. PREOBRASCHENSKI; R. JAHN; A. MACKENZIE; K. KULLANDER*. *Uppsala Univ., Max Planck Inst. for Biophysical Chem.*
- 3:00 E48 **36.15** Regulation of the high-affinity choline transporter activity and trafficking by its association with cholesterol-rich lipid rafts. L. K. CUDDY*; R. RYLETT. *Robarts Res. Inst., Robarts Res. Institute, Univ. of Western Ontario.*
- 4:00 E49 **36.16** Synaptophysin and gender implications in vesicular neurotransmitter load. S. SEIBERT*; G. AHNERT - HILGER. *Charité - Universitätsmedizin Berlin.*
- 1:00 E50 **36.17** Introduction of a new scaffold for aquaporin 4 inhibitors. V. J. HUBER*; M. TSUJITA; T. NAKADA. *Brain Res. Institute, Univ. of Niigata.*
- 2:00 E51 **36.18** Involvement of *Drosophila* inebriated in recycling photoreceptor histamine. J. BORYCZ*; J. A. BORYCZ; G. UHLENBROCK; B. T. HOVMANN; I. A. MEINERTZHAGEN. *Dalhousie Univ., Ruhr-Universitaet Bochum, Dalhousie Univ.*
- 3:00 E52 **36.19** Adenosine signaling significantly affects differential protein expression of the accumbal-hippocampal neuroproteome in ENT1^{-/-} mice. A. OLIVEROS*; H. W. NAM; G. B. CAMSARI; K. O'CONNOR; C. J. HEPELMANN; D. J. HINTON; D. CHOI. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*
- 4:00 E53 **36.20** Functional roles of monocarboxylate transporters in maintenance of neuronal functions in the cerebellum. M. NAGASE; J. NOGUCHI*; A. M. WATABE; F. KATO. *Jikei Univ., TOKYO GAS CO.,LTD.*
- 4:00 F3 **37.04** An adenylyl cyclase5-cAMP-PKA pathway mediates the norepinephrine-induced increase in synaptic GluR2 expression in cerebellar stellate cells. Q. YANG*; S. J. LIU. *Louisiana State University Hlth. Science Ctr.*
- 1:00 F4 **37.05** Homeostatic regulation of intrinsic excitability in *Drosophila* motor neurons. M. C. GENCO*; E. M. MCNEIL; D. VAN VACTOR; L. C. GRFFITH. *Brandeis Univ., Harvard Med. Sch.*
- 2:00 F5 **37.06** Nuclear CaMKIV modulates synaptic and firing rate homeostasis in cortical neurons. A. JOSEPH*; G. G. TURRIGIANO. *Brandeis Univ., Brandeis Univ.*
- 3:00 F6 **37.07** NMDA receptors control enhanced mini EPSC frequencies in substantia nigra dopamine neurons surviving after 6-hydroxydopamine lesion. A. KREUZER*; A. PRINZ; J. ROEPER. *Neurophysiol.*
- 4:00 F7 **37.08** PKA-GluA1 coupling via AKAP5 controls AMPA receptor phosphorylation and cell-surface targeting during bidirectional homeostatic plasticity. G. H. DIERING*; A. GUSTINA; R. HUGANIR. *Johns Hopkins Univ.*
- 1:00 F8 **37.09** Loss of surface AMPA receptors and homeostatic changes in inhibitory synaptic transmission caused by anti-AMPA receptor antibodies from patients with autoimmune limbic encephalitis. X. PENG*; E. G. HUGHES; E. H. MOSCATO; T. D. PARSONS; J. DALMAU; R. J. BALICE-GORDON. *Perelman Sch. of Med. at the Univ. of Pennsylvania, Univ. of Pennsylvania Sch. of Vet. Med., Perelman Sch. of Med. at the Univ. of Pennsylvania, Hosp. Clin.*
- 2:00 F9 **37.10** Acute estrogen treatment alters inhibitory synaptic transmission in the mouse visual cortex. J. L. WHITT*; H. LEE. *Johns Hopkins Univ.*
- 3:00 F10 **37.11** ▲ Genetic deletion of complement factor C3 results in more functional synapses with lower release probability in hippocampal CA1 area. ; J. DABORG; A. STOKOWSKA; P. WASLING; A. BJÖREFELDT; H. ZETTERBERG; K. CARLSTRÖM; C. EKDAHL; E. HANSE; M. PEKNA. *Univ. of Gothenburg, Inst. of Neurosci. and Physiol., Inst. of Neurosci. and Physiol., Inst. of Neurosci. and Physiol., UCL Inst. of Neurol., Inflammation and Stem Cell Therapy Group.*
- 4:00 F11 **37.12** Super-resolution fluorescence imaging of synaptic glutamate receptors and their reorganization following chronic inactivation. C. XU*; H. LIU; H. BABCOCK; X. ZHUANG; P. LAU; G. BI. *Univ. of Sci. and Technol. of China, Harvard Univ.*
- 1:00 F12 **37.13** Synaptic plasticity in neural networks needs a fast homeostatic mechanism. F. ZENKE*; G. HENNEQUIN; W. GERSTNER. *EPFL, Univ. of Cambridge.*
- 2:00 F13 **37.14** An electrophysiology-based genetic screen reveals new genes required for the bi-directional homeostatic control of synaptic function and links to neuropsychiatric diseases. K. KIKUMA*; D. DICKMAN. *USC.*
- 3:00 F14 **37.15** Rapid action of retinoic acid at inhibitory synaptic transmission. F. SARTI*; Z. ZHANG; J. SCHROEDER; L. CHEN. *Stanford Univ., Stanford Univ.*
- 4:00 F15 **37.16** Calcineurin mediates homeostatic synaptic scaling up by regulating GluA1 trafficking. S. KIM*; E. ZIFF. *NYU Sch. Med.*
- 1:00 F16 **37.17** Compensatory changes in cellular excitability in both motoneurons and interneurons contribute to the homeostatic recovery of spinal network activity in the living embryo. C. E. GONZALEZ-ISLAS*; P. WENNER. *Emory Univ. Sch. Med.*

POSTER

037. Homeostatic Plasticity I

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 E54 **37.01** ● ▲ Distinct homeostatic changes of spontaneous activity arise in dissociated cortical cultures following elevation of network bursting. R. C. LAW*; M. FONG; S. M. POTTER. *Georgia Inst. of Technol., Emory Univ. Sch. of Med.*
- 2:00 F1 **37.02** Endostatin is a trans-synaptic signal for homeostatic plasticity. T. WANG*; M. MUELLER; A. HAUSWIRTH; G. DAVIS. *Univ. of California, San Francisco.*
- 3:00 F2 **37.03** Blood-Brain Barrier dysfunction and albumin induced changes in heterosynaptic plasticity in area CA1 in rat hippocampus. S. SALAR; E. LAPLOVER; K. LIPPMANN; A. FRIEDMAN; U. HEINEMANN*. *Charité Universitätsmedizin Berlin, Ben-Gurion Univ. of the Negev.*
- 1:00 F12 **37.13** Synaptic plasticity in neural networks needs a fast homeostatic mechanism. F. ZENKE*; G. HENNEQUIN; W. GERSTNER. *EPFL, Univ. of Cambridge.*
- 2:00 F13 **37.14** An electrophysiology-based genetic screen reveals new genes required for the bi-directional homeostatic control of synaptic function and links to neuropsychiatric diseases. K. KIKUMA*; D. DICKMAN. *USC.*
- 3:00 F14 **37.15** Rapid action of retinoic acid at inhibitory synaptic transmission. F. SARTI*; Z. ZHANG; J. SCHROEDER; L. CHEN. *Stanford Univ., Stanford Univ.*
- 4:00 F15 **37.16** Calcineurin mediates homeostatic synaptic scaling up by regulating GluA1 trafficking. S. KIM*; E. ZIFF. *NYU Sch. Med.*
- 1:00 F16 **37.17** Compensatory changes in cellular excitability in both motoneurons and interneurons contribute to the homeostatic recovery of spinal network activity in the living embryo. C. E. GONZALEZ-ISLAS*; P. WENNER. *Emory Univ. Sch. Med.*

- 2:00 F17 **37.18** Long-term depression in the insular cortex facilitates conditioned taste aversion extinction: An expression of homeostatic plasticity. L. RODRIGUEZ-SERRANO*; L. F. RODRIGUEZ-DURÁN; M. L. ESCOBAR. *Facultad De Psicología, UNAM.*

POSTER

038. Synaptic Plasticity: Short-Term Plasticity

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 F18 **38.01** ▲ Paired-pulse depression at perforant-path synapses onto CA1 pyramidal cells in the developing hippocampus. R. MA*; M. XIAO; B. GUSTAFSSON. *Gothenburg Univ., Univ. of Gothenburg, Gothenburg Univ.*
- 2:00 F19 **38.02** Modeling frequency dependence of cholinergic neuromodulation at CA1 parvalbumin-positive basket cell synapses: Dynamics of synaptic depression at theta and gamma frequencies. E. STONE; M. REMPE; H. HAARIO; J. J. LAWRENCE*. *Univ. of Montana, Whitworth Univ., Lappeenranta Univ. of Technol., Univ. of Montana.*
- 3:00 F20 **38.03** Increasing extracellular divalent cation concentration prolongs the activity-dependent hyperexcitability in Schaffer collaterals, but CaV or KCa channel blockers have no effect. B. M. OWEN*; F. WOODE; L. M. GROVER. *Marshall Univ. Sch. of Med., Princeton Univ.*
- 4:00 F21 **38.04** Rapid dynamic changes of dendritic feed-forward inhibition in the dentate gyrus during state transitions. C. CHEN*; Y. LIU; C. LIEN. *Inst. of Neuroscience, Natl. Yang-Ming Univ., Interdisciplinary Neuroscience, Taiwan Intl. Grad. Program, Academia Sinica.*
- 1:00 F22 **38.05** Distinct inhibitory inputs onto medium spiny neurons are differentially affected in a Parkinson's disease model. J. BARROSO*; V. G. LÓPEZ-HUERTA; E. GALARRAGA; J. BARGAS*. *Inst. De Fisiología Celular.*
- 2:00 F23 **38.06** Activation of the ghrelin receptor (GHSR1a) enhances the NMDA receptor-mediated synaptic transmission and dendritic spikes in the hippocampus. M. ISOKAWA*. *Univ. Texas-Brownsville.*
- 3:00 F24 **38.07** ▲ Time course of heterosynaptic interaction of the sprouted crossed entorhinal and septal inputs to the hippocampus following unilateral entorhinal cortex lesion in rats. G. R. SMITH; M. A. DE NIEAR; P. G. LAKHMANI; M. K. MOSES-HAMPTON; J. J. RAMIREZ*. *Davidson Col.*
- 4:00 F25 **38.08** Enriched environment drives hippocampal remodeling of synaptic activity in mice lacking Bassoon gene. E. MORELLI*; V. GHIGLIERI; G. DEL PAPA; V. BAGETTA; V. PENDOLINO; P. CALABRESI; B. PICCONI. *Fondazione Santa Lucia, Clinica Neurologica, Univ. of Perugia, Ospedale S. Maria della Misericordia.*
- 1:00 F26 **38.09** Membrane, synaptic, and circuit properties of the mouse claustrum. B. N. MATHUR*. *NIAAA/NIH.*
- 2:00 F27 **38.10** Differential recruitment of distinct vesicle pools mediating inhibition in the cochlear nucleus. H. LU*; L. O. TRUSSELL. *Oregon Hlth. Sci. Univ., Oregon Hlth. & Sci. Univ.*
- 3:00 F28 **38.11** Electrophysiological analysis of short-term and long-term plasticity in a mouse model of familial hemiplegic migraine type 2 with perturbed α_2 Na⁺/K⁺-ATPase function. S. R. ANDREASEN*; U. BØLCHO; P. BØTTGER; H. POULSEN; P. NISSEN; A. NYKJÆR; K. LYKKE-HARTMANN; K. JENSEN; M. M. HOLM. *Aarhus Univ., Aarhus Univ., Aarhus Univ., Aarhus Univ.*
- 4:00 F29 **38.12** Short-term plasticity encoded within voltage-gated potassium channels at a central synapse. Y. YANG*; W. WANG; M. FEDCHYSHYN; Z. ZHOU; J. DING; L. WANG. *The Hosp. For Sick Children, Univ. of Toronto, Huazhong Univ. of Sci. and Technol., Peking Univ.*
- 1:00 F30 **38.13** Short-term plasticity during on-going activity revealed by skipped stimuli. H. YANG*; M. A. XU-FRIEDMAN. *SUNY Buffalo.*
- 2:00 F31 **38.14** Bcl-xL inhibition by ABT-737 in hippocampal neurons alters synaptic plasticity. S. SACCHETTI*; K. N. ALAVIAN; C. RIPOLI; M. J. GERTNER; R. S. ZUKIN; M. D'ASCENZO; E. A. JONAS. *Yale Univ., Catholic Univ. 'S. Cuore', Albert Einstein Col. of Med.*
- 3:00 F32 **38.15** Short-term plasticity of excitatory inputs from subthalamic nucleus to substantia nigra dopamine neurons. A. E. GIRASOLE; Z. M. KHALIQ*. *NIH/NINDS.*
- 4:00 F33 **38.16** Intrinsic vesicular fusogenicity tunes short-term plasticity in hippocampal neurons. R. DUTTA ROY*; J. HELLGREN KOTALESKI; C. ROSENMUND. *Karolinska Institutet, NWFZ, Charité Universitätsmedizin, Computat. Biology, Sch. of Computer Sci. and Communication, KTH Royal Inst. of Technol.*
- 1:00 F34 **38.17** Regulation of BDNF mRNA isoforms in the mouse hippocampus following TMT treatment. J. KIM*; S. LEE; J. KIM; Y. SON; M. YANG; S. KIM; J. KIM; T. SHIN; C. MOON. *Chonnam Natl. Univ., Michigan state Univ.*
- 2:00 F35 **38.18** Interplay between multivesicular release and recruitment of additional release sites support short-term facilitation at mossy fiber to CA3 pyramidal cells. S. CHAMBERLAND*; A. EVSTRATOVA; K. TOTH. *CRULRG.*
- 3:00 F36 **38.19** Effects of dopamine on frequency dependent synaptic transmission in mouse mPFC. J. M. LEYRER; M. P. THOMAS*. *Univ. Northern Colorado.*
- 4:00 F37 **38.20** Short-term plasticity regulates the excitation/inhibition balance and modulates the temporal window for spike integration of multiple inputs in CA1 pyramidal cells. A. F. BARTLEY*; L. E. DOBRUNZ. *Univ. of Alabama At Birmingham.*
- 1:00 F38 **38.21** Unitary mossy fiber inputs to CA3 GABAergic interneurons show robust transient enhancement after short presynaptic bursts. M. NEUBRANDT; J. SZABADICS*. *Inst. of Exptl. Medicine, Hungarian Acad. of Sci.*
- 2:00 F39 **38.22** Both short-term and persistent long-term plasticity are co-expressed at an identified synapse. S. M. SCHACHER*; Y. CHEN; J. HU. *Columbia Univ. & NYSPI, Columbia Univ. & NYSPI.*
- 3:00 F40 **38.23** Optogenetic activation of hippocampal mossy fiber synapses reveals major role for tomosyn in short-term plasticity. Y. BEN SIMON*; K. ALVINA; A. RODENAS-RUANO; P. E. CASTILLO; U. ASHERY. *Tel Aviv Univ., Tel Aviv Univ., Albert Einstein Collage of Med.*
- 4:00 F41 **38.24** Selective deficits in GABA-ergic synaptic transmission in the medial prefrontal cortex of mice deficient in the candidate schizophrenia risk gene PRODH. G. W. CRABTREE*; J. A. GOGOS; M. KARAYIORGOU. *columbia university, Columbia Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

039. Synaptic Plasticity: Structural Plasticity I

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 F42 **39.01** Lasting enhancement of synaptic response induced by stimulation of channelrhodopsin2 in Schaffer collateral axons in area CA1 of mature hippocampal slices. S. WEISBERG*; R. CHITWOOD; B. ZEMELMAN; K. HARRIS. *The Univ. of Texas At Austin*.
- 2:00 F43 **39.02** Coordinated pre- and postsynaptic structural scaling during LTP in mature hippocampus. M. A. CHIRILLO*; K. M. HARRIS; J. N. BOURNE. *The Univ. of Texas at Austin, UT Med. Sch., Univ. of Colorado Denver*.
- 3:00 F44 **39.03** Mitochondrial proximity associated with presynaptic vesicle loss during LTP in developing hippocampal area CA1. S. HEATHER*; D. WATSON; L. OSTROFF; G. CAO, PhD; K. HARRIS. *UT Austin - Inst. For Neurosci., UT-Austin, New York Univ*.
- 4:00 F45 **39.04** ▲ Use of exosomes and endosomes in developing hippocampal dendrites to form spines during LTP. Y. KULIK*; G. CAO; L. E. OSTROFF; K. M. HARRIS; D. J. WATSON. *The Univ. of Texas At Austin, New York Univ*.
- 1:00 F46 **39.05** δ-catenin palmitoylation is essential for activity-dependent enhancements of synapse structure and efficacy. S. BRIGIDI*; Y. SUN; D. BECCANO-KELLY; K. PITMAN; S. L. BORGLAND; A. J. MILNERWOOD; S. X. BAMJLI. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia*.
- 2:00 G1 **39.06** Behavioral flexibility and LTD are impaired following β-catenin stabilization *in vivo*. F. MILLS*; T. BARTLETT; M. B. WISNIEWSKA; J. KUZNIKI; Y. WANG; S. X. BAMJLI. *Univ. of British Columbia, Univ. of British Columbia, Intl. Inst. of Mol. and Cell Biol*.
- 3:00 G2 **39.07** Cadherin adhesion complexes and drug-mediated synapse plasticity. A. K. GLOBAL*; F. MILLS; A. G. PHILLIPS; S. X. BAMJLI. *Univ. of British Columbia, Univ. of British Columbia*.
- 4:00 G3 **39.08** Dendritic reorganization in hippocampus and amygdala by donepezil through the sigma-1 receptor after kainic acid-induced synaptic deficit. A. HIRATA; H. YAMAMOTO; T. YAMAMOTO*. *Yokohama City Univ., Tokyo Metropolitan Inst. of Med. Sci.*
- 1:00 G4 **39.09** The role of miR-708 in the modulation of testosterone on spine plasticity of hippocampal CA1 pyramidal neurons. S. LIM*; Y. F. LEE; T. WANG; J. CHEN. *Natl. Hlth. Res. Inst., Natl. Chung-Hsing Univ., Natl. Taichung Univ. of Sci. and Technol.*
- 2:00 G5 **39.10** Activity-regulated cytoskeleton-associated protein (Arc): An analysis of structure and stability. C. MYRUM*; H. BUSTAD JOHANNESSEN; A. BAUMAN; M. INNSELSET FLYDAL; J. SOULÉ; S. ALVIRA; J. VALPUESTA; A. MARTINEZ; C. R. BRAMHAM. *Univ. of Bergen, K.G. Jebsen Ctr. for Res. on Neuropsychiatric Disorders, Ctr. Nacional de Biotecnología (CNB-CSIC)*.
- 3:00 G6 **39.11** Characterization of a functional RICH2/RhoSAP - ProSAP2/SHANK3 interaction using a novel RICH2 transgenic mouse model. C. M. ECKERT*; S. GRABRUCKER; J. BOCKMANN; T. M. BOECKERS; A. M. GRABRUCKER. *UNIV. ULM, Univ. ULM, Neurocenter Ulm Univ.*
- 4:00 G7 **39.12** Astrocytes mediate synapse elimination and neural circuit refinement through the MEGF10 and MERTK phagocytic pathways. W. CHUNG*; G. X. WANG; B. K. STAFFORD; A. SHER; C. CHAKRABORTY; J. JOUNG; L. C. FOO; S. J. SMITH; B. A. BARRES. *Stanford Univ., Stanford Univ., Univ. of Michigan, UC Santa Cruz, Inst. of Mol. and Cell Biology, A*Star*.
- 1:00 G8 **39.13** Mechanisms of activity-dependent shrinkage of dendritic spines. W. OH*; I. S. STEIN; K. ZITO. *UC Davis*.
- 2:00 G9 **39.14** The Frontotemporal dementia related protein CHMP2B is involved in synaptic plasticity. R. CHASSEFEYRE*; J. MARTINEZ-HERNANDEZ; F. BERTASO; N. BOUQUIER; Y. COUTÉ; B. BLOT; K. PERNET-GALLAY; R. SADOUL; L. FAGNI; Y. GOLDBERG. *Grenoble Inst. Des Neurosciences, Inst. de Génomique Fonctionnelle, Inst. de Recherches en Technologies et Sci. pour le Vivant*.
- 3:00 G10 **39.15** A new model for the role of cofilin in activity dependent structural changes of dendritic spines. B. CALABRESE; J. SAFFIN; S. L. HALPAIN*. *Sanford Consortium For Regenerative Medicine*.
- 4:00 G11 **39.16** Local synthesis of RhoA and LIMK contributes to BDNF-induced actin polymerization in hippocampal slices. V. BRIZ*; M. AVETISYAM; M. BAUDRY. *Western Univ. of Hlth. Sci.*
- 1:00 G12 **39.17** The phospholipid binding protein SESTD1 inhibits dendritic spine formation through disruption of Rac1-Trio8 signaling. C. LEE; A. Y. CHANG*; C. HUANG; K. HSU. *Natl. Cheng Kung Univ., Kaohsiung Chang Gung Mem. Hospital, Ctr. For Translational Res. In Biomed Sci.*
- 2:00 G13 **39.18** Control of dendritic spine maturation and morphology by palmitoylated LIM Kinase-1. J. GEORGE*; G. M. THOMAS. *Temple Univ. Sch. of Med.*
- 3:00 G14 **39.19** Long-term *in vivo* imaging of OLM interneuron pre- and postsynapses in the hippocampus of APP transgenic mice. L. SCHMID; S. KLEIBER; M. FUHRMANN*. *German Ctr. for Neurodegenerative Dis. (DZNE), Bonn*.
- 4:00 G15 **39.20** **Withdrawn.**
- 1:00 G16 **39.21** Activity-dependent phosphorylation of p70 ribosomal S6 Kinase (p70S6K) by Cdk5 is required for dendritic spine maturation. K. LAI*; E. FEI; N. Y. IP. *Hong Kong Univ. of Sci. & Tech.*
- 2:00 G17 **39.22** Activity-dependent structural plasticity of hippocampal axons revealed by STED microscopy. R. CHEREAU; D. CATTART; V. U. NÄGERL*. *Univ. of Bordeaux - CNRS, Univ. of Bordeaux*.
- 3:00 G18 **39.23** Circuit specific roles of activity-dependent bdnf in developing the barrel cortex. Q. SUN*; Z. ZHANG; J. SUN. *Univ. Wyoming, Univ. of Wyoming*.
- 4:00 G19 **39.24** TEA-induced synaptic plasticity results in differential changes in small versus large dendritic spines in mouse organotypic slices. P. HASLEHURST*; J. PAULIN; J. D. JACKSON; R. HUSSAIN; D. M. CUMMINGS; F. A. EDWARDS. *Univ. Col. London, contributed equally*.
- 1:00 G20 **39.25** Group I metabotropic glutamate receptors mediate dendritic spine remodeling via alpha-actinin. M. KALINOWSKA; C. CASTILLO; A. FRANCESCONI*. *Albert Einstein Col. Med.*

POSTER

040. Alzheimer's Disease: APP Biology

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 G21 **40.01** Competitive regulation of the gene promoter of the amyloid- β gene promoter by SP1, a stimulatory transcription factor, and PuF, an antimetastatic inhibitory factor: Alzheimer's risk may be increased by interference with PuF regulation. D. K. LAHIRI*; J. ROGERS; B. MALONEY. *Indiana Univ. Sch. of Med., MGH and Harvard Med. Sch., Indiana Univ. Sch. of Med.*
- 2:00 G22 **40.02** Soluble amyloid precursor protein- α modulates beta-secretase activity and amyloid-beta generation. D. F. OBREGON*; H. HOU; J. DENG; B. GIUNTA; J. TIAN; D. DARLINGTON; M. SHAHADUZZAMAN; Y. ZHU; T. MORI; M. MATTSON; J. TAN. *Morsani Col. of Medicine, Univ. of South Florida, Neuroimmunology Laboratory, Morsani Col. of Medicine, Univ. of South Florida, Saitama Med. Center/Saitama Med. Univ., Natl. Inst. on Aging Intramural Res. Program.*
- 3:00 G23 **40.03** Transgenic *Caenorhabditis elegans* and transfected cultured cells expressing human Abeta resist infection by salmonella typhimurium. D. VIJAYA KUMAR*; K. J. WASHICOSKY; J. GHOFrani; A. D. LEFKOWITZ; S. M. TUCKER; G. MCCOLL; R. E. TANZI; R. D. MOIR. *Massachusetts Gen. Hosp. & Harvard Med. Sch., The Florey Univ. of Melbourne.*
- 4:00 G24 **40.04** Substrate matters: Y-secretase processivity and modulation. J. JUNG*; P. E. CRUZ; Y. RAN; T. B. LADD; A. M. ROSARIO; T. L. KUKAR; E. H. KOO; K. M. FELSENSTEIN; T. E. GOLDE. *Univ. of Florida, Emory Univ., Univ. of California San Diego.*
- 1:00 G25 **40.05** ● Antimicrobial activity of soluble A β oligomers is mediated by the VHHQKL heparin-binding domain. K. J. WASHICOSKY*; D. K. KUMAR; J. J. GHOFrani; A. D. LEFKOWITZ; S. M. TUCKER; R. E. TANZI; R. D. MOIR. *Massachusetts Gen. Hosp.*
- 2:00 G26 **40.06** Acceleration of β -amyloid induced synapse impairment. S. KLAPPER*; A. ANDREYEVA; K. GOTTMANN. *Heinrich-Heine Univ. Duesseldorf.*
- 3:00 G27 **40.07** ▲ Glyceraldehyde-3-phosphate dehydrogenase aggregates acts as a seed of amyloid- β 40 amyloidogenesis and enhances the cell death in PC12 cells. A. KANESHIGE*; T. KUBO; H. NAKAJIMA; A. FUKUHARA; M. ITAKURA; S. HIGASHIDA; Y. AZUMA; T. INUI; T. TAKEUCHI. *Osaka Prefecture Univ., Osaka Prefecture Univ.*
- 4:00 G28 **40.08** ● Oligomer Receptor Antagonists and antibodies directed against specific target receptor epitopes can prevent and competitively displace oligomer binding to mature primary hippocampal neurons. C. REHAK*; N. IZZO; C. SILKY; K. MOZZONI; R. YURKO; H. SAFFERSTEIN; S. CATALANO. *Cognition Therapeut.*
- 1:00 G29 **40.09** Novel monoclonal antibodies demonstrate the early intraneuronal accumulation and increased aggregation of phosphorylated Abeta. S. H. KUMAR*; O. WIRTHS; S. THEIL; J. GERTH; T. A. BAYER; J. WALTER. *Univ. of Bonn, Georg-August-University Göttingen.*
- 2:00 G30 **40.10** Bidirectional link between sulfatides and amyloid precursor protein processing: Consequence for Alzheimer's disease. V. ZIMMER*; J. LEHMANN; J. METT; S. GRÖSGEN; V. HAUPENTHAL; T. ROTHHAAR; B. HUNSDÖRFER; C. STAHLMANN; H. TANILA; U. MÜLLER; H. S. GRIMM; T. HARTMANN; M. O. GRIMM. *Saarland Univ., Univ. of Kuopio, Univ. of Heidelberg.*
- 3:00 G31 **40.11** ▲ Oligomeric beta-amyloid and corticosterone trigger similar morphologic and dynamic changes in microtubules of cultured hippocampal neurons. G. T. WONG*; C. H. L. HUNG; A. C. K. LAW; R. C. C. CHANG. *The Univ. of Hong Kong, The Univ. of Hong Kong, Res. Ctr. of Heart, Brain, Hormone and Healthy Aging, LKS Fac. of Med., State Key Lab. of Brain and Cognitive Sciences, The Univ. of Hong Kong, Pokfulam, Hong Kong SAR, CHINA.*
- 4:00 G32 **40.12** Abeta1-42 oligomers promote adult hippocampal neurogenesis via RAGE/NF-kappaB axis. V. BORTOLOTTI; V. MENEGHINI; M. T. FRANCESE; L. CARRARO; A. DELLAROLE; S. TERZIEVA; M. GRILLI*. *Univ. of Piemonte Orientale Amedeo Avogadro.*
- 1:00 G33 **40.13** Interplay of the ubiquitin-proteasome system and the autophagy-lysosome pathway in cultured neurons stressed by oligomeric β -amyloid peptide. S. CHENG*; C. H. L. HUNG; R. C. C. CHANG. *The Univ. of Hong Kong, The Univ. of Hong Kong, The Univ. of Hong Kong, The Univ. of Hong Kong.*
- 2:00 G34 **40.14** ▲ The effect of A β N-terminal mutations in APP processing and toxicity. Y. LIN*; J. WANG; J. LIAO; I. CHENG. *Natl. Yang-Ming Univ., Taiwan Intl. Grad. Program, Inst. of Brain Science, Natl. Yang-Ming Univ., Brain Res. Center, Natl. Yang-Ming Univ.*
- 3:00 G35 **40.15** Role and regulation of cell division cycle 25A phosphatase in Alzheimer's disease related neurodegeneration. N. CHATTERJEE; P. SANPHUI; L. A. GREENE; S. C. BISWAS*. *CSIR-Indian Inst. of Chem. Biol., Columbia Univ. Col. of Physicians and Surgeons.*
- 4:00 G36 **40.16** Expression of novel function of Alcadein intracellular domain. Y. SOBU*; N. TAKEI; S. HATA; T. SUZUKI. *Lab. of Neuroscience, Grad. Sch. of Pharmaceut. Sciences, Hokkaido.*
- 1:00 G37 **40.17** Changes of absolute cell numbers in demented, but not in asymptomatic Alzheimer's patients: neuronal reduction and glial increase do not relate to plaques and tangles. C. H. ANDRADE-MORAES*; E. CASTRO FONSECA; D. R. PARENTE-BRUNO; D. M. GUIMARÃES; D. SZCZUPAK; B. V. GOMES; C. GOMES DA SILVA; A. V. OLIVEIRA-PINTO; L. R. B. DE CARVALHO; L. M. DE OLIVEIRA; L. POLICHISO; R. E. P. LEITE; R. E. D. FERRETTI-REBUSTIN; W. JACOB-FILHO; C. A. PASQUALUCCI; L. T. GRINBERG; R. LENT. *Univ. Federal do Rio de Janeiro, Faculdade de Medicina da Univ. de São Paulo, Univ. de São Paulo, Univ. of California, Inst. Nacional de Neurociência Translacional.*
- 2:00 G38 **40.18** "Toxic conformer" of amyloid β plays a crucial role in neurotoxicity in Alzheimer's disease. N. IZUO*; K. MURAKAMI; M. SATO; T. SHIMIZU; K. YOKOTE; K. IRIE; Y. IZUMI; A. AKAIKE; T. KUME. *Chiba Univ., Kyoto Univ., Nagoya Univ.*
- 3:00 G39 **40.19** Asynchronous evolutionary origins of A β peptide and beta-secretetase. J. A. LANGE LAND; M. A. GILLEN TINE; N. M. BOTEZATU; K. A. WILSON; A. E. BENSON; D. MOORE*. *Kalamazoo Col.*
- 4:00 G40 **40.20** The MDMX oncoprotein promotes neuronal survival and is degraded in models of amyloid-beta-induced neurotoxicity. D. J. COLACURCIO*; K. JORDAN-SCIUTTO. *Univ. of Pennsylvania.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 G41 **40.21** Role of c-Abl in APP processing and its pathological implication in Niemann-Pick type C disease models. M. YANEZ*; O. BEBLIN; A. LLEO; S. ZANLUNGO; A. R. ALVAREZ. *Pontificia Univ. Catolica De Chile, Pontificia Univ. Catolica De Chile, Pontificia Univ. Catolica De Chile, Hosp. de la Santa Creu i Sant Pau.*
- 2:00 G42 **40.22** Functional role of gamma-synuclein in Alzheimer's disease. L. KIROUAC; D. CHAPUT; S. STEVENS; J. PADMANABHAN*. *Univ. of South Florida, Univ. of South Florida.*
- 3:00 G43 **40.23** β -Amyloid regulates the expression of ATP binding Cassette transporters in cultured astrocytes. B. YE*; X. CHEN; B. R. RANSOM; Z. YE. *Dept. of Neurology, Union Hosp. of Fujian Med. Univ., Univ. Washington, Fujian Med. Univ.*
- 4:00 G44 **40.24** Conformation specific monoclonal antibodies as tools in studying the structural diversity and differences in aggregation kinetics of A β containing FAD mutations. A. HATAMI*; C. GLABE. *Univ. of California, Irvine, UC Irvine.*
- 1:00 G45 **40.25** Intracellular M78 nuclear immunoreactivity is associated with increased histone H3 trimethylation and changes in chromatin structure. R. ALBAY*; III; S. MISRA; A. PENSALFINI; C. G. GLABE. *Univ. of California Irvine, New York Univ. Sch. of Med., Nathan S. Kline Institute.*
- 2:00 G46 **40.26** Size and molecular weight comparison of amyloid- β (1-42) protofibrils and oligomers. M. R. NICHOLS*; G. S. PARANJAPE; E. A. HOOD; S. E. TERRILL. *Univ. of Missouri-St. Louis.*
- 3:00 G47 **40.27** Effects of mutations within the A β sequence on A β synaptotoxicity. I. LING*; H. MARUYAMA; T. E. GOLDE; E. H. KOO. *UCSD, Univ. of Florida Col. of Med.*
- 4:00 G48 **40.28** Amyloid beta induces secretion of pro-apoptotic exosomes enriched in PAR-4 and ceramide from astrocytes. M. B. DINKINS*; G. WANG; Q. HE; G. ZHU; C. POIRIER; A. CAMPBELL; M. MAYER-PRÖSCHEL; E. BIEBERICH. *Georgia Regents Univ., Georgia Regents Univ., Univ. of Rochester.*
- 1:00 G49 **40.29** ● Icelandic mutant Abeta 42 peptide forms less oligomers than wild-type peptide. C. SILKY*; H. LEVINE III; N. IZZO; C. REHAK; K. MOZZONI; R. YURKO; G. RISHTON; H. SAFFERSTEIN; S. CATALANO. *Cognition Therapeut. Inc, Univ. of Kentucky.*
- 2:00 G50 **40.30** Synaptotoxic effects of amyloid- β in human iPSC derived neurons. K. NIEWEG*; P. GARG; A. ANDREYEVA; B. VAN STEGEN; K. GOTTMANN. *Univ. of Duesseldorf.*
- 2:00 G52 **41.02** ● Potent M1 muscarinic acetylcholine receptor positive allosteric modulators as potential therapeutics for Alzheimer's disease. D. BEHER*; A. QUATTROPANI; A. OSEN-SAND; M. NENY; J. HANTSON; S. OUSSON; C. WIESSNER; B. PERMANNE. *Asceneuron SA.*
- 3:00 G53 **41.03** Muscarinic receptor-dependent LTD in the Perirhinal Cortex is impaired in a mouse model of Tauopathy. S. SCULLION*; A. D. RANDALL; J. T. BROWN. *Univ. of Bristol, Univ. of Exeter Med. Sch.*
- 4:00 G54 **41.04** ● Chronic treatment with the tetrahydrofuran derivative ANAVEX2-73, a mixed muscarinic cholinergic and sigma-1 ligand, alleviates pathology in Tg2576 mice, a transgenic Alzheimer's disease model. T. MAURICE*; V. LAHMY; V. VILLARD; A. VAMVAKIDES. *INSERM U.710, AMYLGEN, ANAVEX LIFE SCIENCES.*
- 1:00 G55 **41.05** NMDA receptor-targeted therapeutic strategies to modulate APP pathway: Implications in brain disorders. B. RAY*; Y. BALARAMAN; J. A. BAILEY; C. A. ERICKSON; N. H. GREIG; K. SAMBAMURTI; P. T. NELSON; D. K. LAHIRI. *Indiana Univ., Indiana Univ., Cincinnati Children's Hosp. Med. Ctr., Natl. Inst. on Aging, Med. Univ. of South Carolina, Univ. of Kentucky.*
- 2:00 G56 **41.06** ● Effects of bexarotene on amyloid-beta pathology in APP/PS1 mice expressing apoE3 and apoE4. J. D. ULRICH*; J. M. BURCHETT, III; J. L. RESTIVO; T. E. MAHAN; D. R. SCHULER; H. JIANG; A. Q. BAUER; J. P. CULVER; J. R. CIRRITO; D. M. HOLTZMAN. *Washington Univ. of St Louis, Washington Univ. of St Louis.*
- 3:00 G57 **41.07** Bexarotene reduces intraneuronal amyloid beta and improves cognitive function in 5XFAD mice. M. HOLLEY*; G. LANDRETH. *Case Western Reserve Univ.*
- 4:00 G58 **41.08** Estren treatment attenuates beta amyloid-induced cholinergic and behavioural deficits. A. KWAKOWSKY*; S. KIM; W. P. TATE; I. M. ABRAHAM. *Univ. of Otago.*
- 1:00 G59 **41.09** Aminoguanidine ameliorates inflammatory responses and memory impairment induced by amyloid-beta 25-35 injection in rats. A. D. DIAZ*; B. ESPINOSA; E. ZENTENO; I. MARTINEZ; J. GUEVARA; D. LIMON. *Lab. De Neurofarmacologia. Facultad De Ciencias Quimicas. BUAP, Inst. Nacional de Enfermedades Respiratorias, Univ. Nacional Autónoma de México, Benemérita Univ. Autónoma de Puebla.*
- 2:00 G60 **41.10** Tetrahydrocurcumin increases brain-derived neurotrophic factor in a transgenic mouse model of Alzheimer's disease. X. ZUO*; Q. MA; F. YANG; G. M. COLE; S. A. FRAUTSCHY. *Beijing Geriatric Institute, David Geffen Sch. of Med., David Geffen Sch. of Med., Geriatric Res. Educ. and Clin. Ctr., Geriatric Res. Educ. and Clin. Ctr.*

POSTER

041. Alzheimer's Animal Models: Small Molecule Tx

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 G51 **41.01** ● Characterization of M1 modulators: Potential for the treatment of cognitive deficits. R. MEDAPATI; A. K. SHINDE*; R. SUBRAMANIAN; V. KANDIKERE; N. MUDDANA; S. BALASUBRAMANIAM; A. DESHPANDE; V. REBALLI; R. NIROGI. *Suven Life Sci.*
- 3:00 H1 **41.11** Inhibition of quinone oxidoreductase 2 improves learning in a mouse model of vascular dementia. J. FITZPATRICK; T. VENKATRAMAN; H. DAWSON; H. WANG; D. LASKOWITZ; C. LASCOLA*. *Duke Univ.*
- 4:00 H2 **41.12** Intracerebroventricular infusion of sialidase from *V. cholera* in 5xFAD transgenic mice. T. J. FLANIGAN*; S. KISHAN RAO; Y. XUE; M. P. MCDONALD. *Univ. of Tennessee Hlth. Sci. Ctr.*
- 1:00 H3 **41.13** Zinc supplementation increases soluble amyloid-beta levels in mouse models of Alzheimer's disease. J. M. FLINN*; P. L. BOZZELLI; A. M. RAILEY; P. A. ADLARD. *George Mason Univ., The Florey Inst. of Neurosci. and Mental Hlth.*

- 2:00 H4 **41.14** Potential role of orexin in the pathogenesis of Alzheimer's disease. J. ROH*; A. HEDA; T. MAHAN; H. JIANG; M. LI; M. YANAGISAWA; L. DE LECEA; D. M. HOLTZMAN. *Washington Univ., UT Southwestern Med. Ctr., Stanford Univ.*
- 3:00 H5 **41.15** • SUVN-512: A potent and selective 5-HT₆ antagonist, potential drug for the treatment of Alzheimer's disease. R. V. NIROGI*; R. ABRAHAM; V. KANDIKERE; R. MEDAPATI; G. BHYRAPUNENI; R. CHOWDARY PALACHARLA; R. KAMBHAMPATI; V. KUMAR GOYAL; S. KUMAR PANDEY; A. DESHPANDE; P. KOTHMIRKAR; S. AREPALLI. *Suven Life Sci.*
- 4:00 H6 **41.16** • Anti-inflammatory effects of liraglutide in 14-month old APP/PS1 and wild-type mice. P. MCCLEAN*; K. HUNTER; C. HOLSCHER. *Univ. of Ulster, Biomed. and Life Sciences, Lancaster University, UK.*
- 1:00 H7 **41.17** Chronic brain administration of amylin receptor antagonist, AC253, attenuates spatial memory and learning deficits in A β over-expressing (TgCRND8) mice. A. N. PATEL; D. MACTAVISH; J. YANG; D. WESTAWAY; J. H. JHAMANDAS*. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*
- 2:00 H8 **41.18** The anti-diabetic drug Liraglutide is neuroprotective against Methylglyoxal induced stress by activating MAPK/ERK and Akt. C. HOLSCHER*; J. JALEWA; M. SHARMA. *Lancaster Univ., ulster Univ.*
- 3:00 H9 **41.19** BDNF prevents A β -dependent LTP impairment in the entorhinal cortex by inhibition of p38 MAPK phosphorylation. N. ORIGLIA; C. CRISCUOLO; L. DOMENICI*. *CNR, Uni. L'Aquila.*
- 4:00 H10 **41.20** • The metabolic enhancer piracetam ameliorates mitochondrial dysfunction in a human neuronal cell model of early Alzheimer's disease suggestion a link between mitochondrial function and dynamics. C. SCHILLER*; D. MIANO; K. LEUNER; W. E. MUELLER. *Goethe Univ., Univ. of Erlangen.*
- 1:00 H11 **41.21** • The targeted antioxidant, CAT-SKL, reduces beta-amyloid toxicity in the rat brain. H. NELL*; C. GIORDANO; S. TERLECKY; P. WALTON; D. CECETTO; S. WHITEHEAD. *Univ. of Western Ontario, Wayne State Univ. Sch. of Med.*
- 2:00 H12 **41.22** Treatment with the RD2 peptide improves cognition but not amyloid deposition and inflammation in APP/PS1 mutant mice. T. VAN GROEN*; I. KADISH; A. KUMAR; A. FUNKE; D. WILLBOLD. *Univ. Alabama-Birmingham, Forschungszentrum Juelich.*
- 3:00 H13 **41.23** Novel GIP incretin analogues as a potential treatment for Alzheimer disease. A. DUFFY*; C. HOLSCHER. *Univ. of Ulster, Coleraine, Lancaster Univ.*
- 4:00 H14 **41.24** Prohibitin (PHB) rescues the impairment in synaptic plasticity and spatial memory in transgenic mice overexpressing the amyloid precursor protein (APP). K. KOIZUMI*; P. ZHOU; T. MA; L. PARK; E. KLANN; C. IADECOLA. *Weill Cornell Med. Col., New York Univ.*
- 1:00 H15 **41.25** An investigation into the role of iron, copper, and sex in a transgenic mouse model of Alzheimer's disease. C. M. GROEBER*; P. E. MCKNIGHT; J. M. FLINN. *George Mason Univ.*
- 2:00 H16 **41.26** Low doses of iron or silicon radiation affect spatial memory in APP/PSEN1 double transgenic mice. J. A. BELLONE*; R. VLKOLINSKY; R. E. HARTMAN. *Loma Linda Univ., Loma Linda Univ.*
- 3:00 H17 **41.27** Expression of Ambra1 in mouse brain during physiological and Alzheimer type aging. S. MORENO*; S. SEPE; R. NARDACCI; F. FANELLI; P. ROSSO; L. BARONE; B. D'ORIO; P. G. MASTROBERARDINO; M. PIACENTINI. *Univ. Roma Tre, Erasmus Med. Ctr., IRCCS "L. Spallanzani".*
- 4:00 H18 **41.28** Memantine rescues transient cognitive impairment caused by high molecular weight Abeta oligomers but not the persistent impairment induced by low molecular weight oligomers. J. R. CLARKE*; C. P. FIGUEIREDO; J. LEDO; F. C. RIBEIRO; C. V. COSTA; H. M. DE MELO; A. P. MOTA-SALES; L. M. SARAIVA; W. L. KLEIN; A. SEBOLLELA; F. G. DE FELICE; S. T. FERREIRA. *Federal Univ. of Rio De Janeiro, Federal Univ. of Rio de Janeiro, Federal Univ. of Rio de Janeiro, Northwestern Univ.*
- 1:00 H19 **41.29** Amyloid plaque ligand, K-114, inhibits A-beta aggregation *in vitro* and *in vivo* and displays anti-inflammatory properties in AD/Tg mice. Y. ZHANG*; D. MANN; J. RAYMICK; S. SARKAR; M. G. PAULE; B. RAY; D. K. LAHIRI; M. DUMAS; A. BELL-COHEN; L. C. SCHMUED. *Natl. Ctr. For Toxicological Res. (NCTR)/FDA, Wayne State Univ. Sch. Med., Toxicological Pathology Associates, Dept. Psychiatry, Indiana Univ. Sch. Med., Dept. Psychiatry, & Dept. Med. & Mol. Genetics, Indiana Univ. Sch. Med., Priority One, Dept. Chem, Univ. Arkansas.*
- 2:00 H20 **41.30** Neuregulin-1 improves cognitive deficits and synaptic pathology in an Alzheimer's disease model. J. XU*; F. DE WINTER; C. FARROKHI; E. ROCKENSTEIN; M. MANTE; A. ADAME; E. MASLIAH; K. LEE. *Salk Inst., Netherlands Inst. For Neurosci., Salk Inst., Univ. of California at San Diego.*

POSTER

042. ApoE and Cholesterol

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 H21 **42.01** The impact of plant sterols and cholesterol on the molecular mechanisms of Alzheimer's disease. M. O. GRIMM*; V. BURG; T. L. ROTHHAAR; S. GRÖSGEN; B. HUNDSDÖRFER; V. HAUPENTHAL; V. C. ZIMMER; J. METT; L. M. BROERSEN; H. TANILA; D. LÜTJOHANN; H. S. GRIMM; T. HARTMANN. *Saarland Univ., Saarland Univ., Nutricia Advanced Med. Nutrition, Danone Res., Univ. of Kuopio, Univ. of Bonn.*
- 2:00 H22 **42.02** • Human apolipoprotein E ϵ 4 impairs cerebral vascularization and blood-brain barrier function in mice. W. ALATA*; M. VANDAL; F. CALON. *CHUL, Laval university.*
- 3:00 H23 **42.03** **Unable to Attend.** Significance of APOE genotype to the heterogeneity of Alzheimer's disease. T. A. SUSANTO*; J. ZHOU. *Duke-Nus Grad. Med. Sch.*
- 4:00 H24 **42.04** Multi-omic analysis of ApoE isoform effects in AD-vulnerable brain regions. T. NURIEL*; L. LIU; A. DILLMAN; Q. CHEN; R. CHAN; G. DI PAOLO; M. COOKSON; S. GROSS; K. DUFF. *Columbia Univ. Med. Ctr., Natl. Inst. on Aging, Weill Cornell Med. Col.*
- 1:00 H25 **42.05** Is poorly-lipidated apolipoprotein ϵ 4 a ligand of the amyloid precursor protein? C. PETERS-LIBEU*; V. JOHN; D. BREDESEN. *Buck Inst. For Res. On Aging.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 H26 **42.06** ● Impaired hippocampal reorganization and delayed functional recovery in hAPP-YAC/APOE4 mice with entorhinal lesion. J. BOTT*; K. HERBEAUX; B. COSQUER; C. ZERBINATTI; J. CASSEL; C. MATHIS. *Lab. De Neurosciences Cognitives Et Adaptatives, Merck Sharp & Dohme Corp.*
- 3:00 H27 **42.07** Cerebrospinal fluid biomarkers of blood-brain barrier breakdown in cognitively normal individuals with different apolipoprotein E genotypes. M. HALLIDAY*; N. POMARA; A. P. SAGARE; B. FRANGIONE; B. V. ZLOKOVIC. *USC, New York Univ. Sch. of Med., New York Univ. Sch. of Med.*
- 4:00 H28 **42.08** ● Apolipoprotein E antibody administered after plaque onset reduces amyloid plaque deposition and restores brain function in a mouse model of Alzheimer disease. F. LIAO*; Y. HORI; E. HUDRY; A. Q. BAUER; H. JIANG; T. E. MAHAN; J. KIM; J. P. CULVER; D. F. WOZNIAC; B. T. HYMAN; D. M. HOLTZMAN. *Washington Univ. In St. Louis, MassGeneral Inst. for Neurodegenerative Disease, Massachusetts Gen. Hospital, Harvard Med. Sch., Washington Univ. In St. Louis, Washington Univ. In St. Louis.*
- 1:00 H29 **42.09** Antisense oligonucleotide mediated inhibition of miR-33 in cultured brain cells and *in vivo*: Effects on ABCA1 expression, ApoE lipidation, cellular cholesterol and A β neurotoxicity. A. JAN*; J. KARASINSKA; M. KANG; A. KAUR; P. RUDDLE; S. FRANCIOSI; M. HAYDEN. *Ctr. For Mol. Med. and Therapeutics, Univ. of British Columbia.*
- 2:00 H30 **42.10** The effects of immunotherapy and LXR ligand co-treatment on amyloid neuropathology and cognition in APP23 model mice. N. F. FITZ*; A. A. CRONICAN; E. L. CASTRANIO; F. A. DAVENPORT; I. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh.*
- 3:00 H31 **42.11** Influence of apolipoprotein E on lipoprotein receptor function. B. SHACKLETON*; M. MULLAN; F. CRAWFORD; C. BACHMEIER. *Roskamp Inst.*
- 4:00 H32 **42.12** ● Role of LXR β in regulating CNS lipid homeostasis - implications for Alzheimer's disease. P. CRAMER; J. WONG; I. HAYASHI; Z. LI; K. TUGUSHEVA; J. MARCUS; H. JACOBS; M. CHAMPY; B. PETIT-DEMOULIERE; T. ROSAHL; J. RENGGER; C. V. ZERBINATTI*. *Merck Sharp & Dohme Corp., Inst. Clinique de la Souris, Merck Sharp & Dohme Corp.*
- 1:00 H33 **42.13** Increased neuroinflammation and Alzheimer disease-like biochemical changes in a mouse model of diabetes-accelerated atherosclerosis. N. R. BHAT*; Y. HUANG; T. ZHU; S. MOHANTY. *Med. Univ. South Carolina, Med. Univ. South Carolina.*
- 2:00 H34 **42.14** ApoE4 modulate cognitive functions and amyloid beta oligomer deposition in a gender-specific manner in triple transgenic Alzheimer's disease mice model. X. HOU*; S. O. ADEOSUN; B. ZHENG; X. ZHAO; J. WANG. *Univ. of MS Med. Ctr., Univ. of MS Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*
- 3:00 H35 **42.15** Effect of apolipoprotein E on learning deficits in animal models infused with soluble β -amyloid oligomers. A. Y. CARTER*; A. A. CRONICAN; N. F. FITZ; E. L. CASTRANIO; F. A. DAVENPORT; R. KOLDAMOVA; I. LEFTEROV. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 4:00 H36 **42.16** Amyloid-beta and phospho-tau expression in middle age as a function of ApoE genotype: Diffuse plaques, not tau deposits, separate preclinical Alzheimer disease from normal aging. H. ZIELKE*; K. T. WHITE; B. LI; A. FASHORI; L. LI; R. JOHNSON; R. J. CASTELLANI. *Univ. Maryland Sch. Med., Univ. of Maryland, Office of the Chief Med. Examiner, Univ. of Maryland.*
- 1:00 I1 **42.17** Caffeine blocks LDL-cholesterol induced amyloidogenesis in neurons. X. CHEN*; S. LI; L. HUI; N. H. GEIGER; J. D. GEIGER. *Univ. of North Dakota.*

POSTER

043. Alzheimer's Disease: Neuropharmacology and Neurotransmitters

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 I2 **43.01** ▲ D-cycloserine blocks kynurenine aminotransferase I, II and III activities in rat liver and brain. H. BARAN*; B. KEPPLINGER. *Karl Landsteiner Res. Inst. Mauer, SeneCura Neurorehabilitation Ctr.*
- 2:00 I3 **43.02** Neuroprotective effect of the total flavanones from *Iris Tenuifolia* against oxidative stress-induced cell death through the activation of phosphorylation of mitogen-activated protein kinase. A. JALSRAI*; T. NUMAKAWA; N. ADACHI; H. KUNUGI. *Ctr. of Traditional Med., Natl. Inst. of Neurosci.*
- 3:00 I4 **43.03** ▲ Blockage of $\alpha 7$ cholinergic receptors impairs neuroprotection induced by sustained attention in mice submitted to neurodegeneration. G. C. CIPOLLI; M. TELLES; N. M. SCHOWE; D. MOURELLE; H. S. BUCK; T. A. VIEL*. *Univ. of Sao Paulo, Faculdade de Ciencias Medicas da Santa Casa de Sao Paulo.*
- 4:00 I5 **43.04** ● Interaction between A β and $\alpha 7$ nicotinic receptors releases glutamate from astrocytes and produces extrasynaptic NMDAR-mediated synaptic failure: prevention by NitroMemantine. S. SANZ-BLASCO*; M. TALANTOVA; X. ZHANG; P. XIA; M. AKHTAR; S. OKAMOTO; G. DZIEWCZAPOLSKI; T. NAKAMURA; A. HIRE; D. STOUFFER; E. POWERS; J. KELLY; H. WOLOSKE; Y. WANG; L. PARSONS; S. HEINEMANN; J. PIÑA-CRESPO; S. LIPTON. *SANFORD-BURNHAM MEDICAL RESEARCH INSTITUTE, Salk Inst., Howard Hughes Med. Res. Inst., The Scripps Res. Inst., Technion-Israel Inst. of Technol., Panorama Res. Inc.*
- 1:00 I6 **43.05** Neuronal leptin resistance in Alzheimer disease. H. LEE*; D. J. BONDA; J. STONE; G. CASADESUS. *Case Western Reserve Univ.*
- 2:00 I7 **43.06** The decoctions of two Cameroonian plants: *Crinum jagus* and *Tapinanthus globiferus* may improve memory. E. NGO BUM*; D. KALSINBE. *Univ. Ngaoundere, Cameroon.*
- 3:00 I8 **43.07** Chronic treatment with an adenosine A1 antagonist worsens long-term memory. J. ERIKSEN*; C. VOLLERT; G. S. FORKUO; R. A. BOND. *Univ. of Houston.*
- 4:00 I9 **43.08** Resemblance between "brain diabetes" and human Alzheimer type dementia from viewpoints of behavioural experiments and insulin effects. S. KITO*; A. S. SHINGO; T. MURASE. *Chigasaki Tokushu-Kai Clin., Okinaka Mem. Inst. For Med. Res.*

- 1:00 I10 **43.09** ▲ Optimized protocols for immunocytochemical techniques in postmortem identification of enzymes in the normal human brain and the Alzheimer brain. I. GRITTI*; M. NEBULONI; G. VAGO; M. VERTEMATI; C. MARIANI; A. GRANATO; F. GALLONI; P. FOCIANI; B. COZZI. *State Univ. of Milan, Catholic Sacro Cuore Univ., Univ. of Padua.*
- 2:00 I11 **43.10** ● Glycogen synthase kinase 3 β (GSK-3 β) inhibition as a promising drug target for the treatment of comorbid Alzheimer's disease or schizophrenia, and depression. G. GRIEBEL*; P. PICHAT; S. BEESKÉ; J. STEMMELIN; C. COHEN; G. BOQUET; P. AVENET; O. CURET. *Sanofi, Sanofi, Sanofi, Sanofi.*
- 3:00 I12 **43.11** Regulation of CHT activity by insulin in Alzheimer's disease. K. J. FISHWICK*; R. J. RYLETT. *Univ. of Western Ontario.*
- 4:00 I13 **43.12** Altered LTP-like cortical plasticity in AD patients is restored by dopaminergic administration. G. KOCH*; F. DI LORENZO; S. BONNI; C. CALTAGIRONE; A. MARTORANA. *Fondazione S. Lucia I.R.C.C.S.*
- POSTER**
- 044. Alzheimer's Disease Imaging and Biomarkers I**
- Theme C: Disorders of the Nervous System**
- Sat. 1:00 PM – San Diego Convention Center, Halls B-H
- 1:00 I14 **44.01** Superficial white matter networks in Alzheimer's disease. M. G. KNYAZEVA*; E. FORNARI; R. MEULI; C. CARMELI. *Ctr. Hospitalier Universitaire Vaudois (CHUV).*
- 2:00 I15 **44.02** Early diagnosis of Alzheimer's disease in the brain stem nuclei using MR spectroscopy. F. S. KANEZ*; N. OSMAN; S. AHMAD; Y. AGHAZADEH; B. KRESS. *Univ. Brunei Darussalam, Univ. Brunei Darussalam, 2Chefarzt des Instituts für Neuroradiologie, Krankenhaus Nordwest, Steinbacher Hohl 2-26.*
- 3:00 I16 **44.03** Using biofeedback EEG training to evoke in the Pre-frontal cortex an abstract, amodal signal for intentional control. K. CHOI*; E. B. TORRES. *Rutgers Univ., Rutgers Univ.*
- 4:00 I17 **44.04** Strategic subcortical hyperintensities and lacunes within the cholinergic pathways of Alzheimer's disease and normal elderly: A threshold effect? J. RAMIREZ; A. A. MCNEELY; S. M. NESTOR; C. J. M. SCOTT; F. Q. GAO; J. ZHAO; S. E. BLACK*. *Sunnybrook Res. Inst., Sunnybrook Hlth. Sci. Cntr.*
- 1:00 I18 **44.05** APOE genotype affects neuronal function at rest and during task - A MEG study. V. HEISE*; H. LUCKHOOF; K. P. EBMEIER; M. WOOLRICH; C. E. MACKAY. *Univ. of Oxford, Univ. of Oxford.*
- 2:00 J1 **44.06** Association between metabolic and structural changes of hippocampus and retrosplenial cortex with disruption of functional connectivity in Alzheimer's disease and mild cognitive impairment: A PET/MR study. M. TAHMASIAN*; C. SORG; C. MENG; T. GRIMMER; J. DIEHL-SCHMID; L. PASQUINI; S. MULEJ BRATEC; S. FÖRSTER; I. YAKUSHEV; B. H. YOUSEFI; V. RIEDL; M. SCHWAIGER; A. DRZEZGA. *Klinikum Rechts Der Isar, Technische Univ. München, TUM Grad. Sch., Technische Univ. München, Neuroimaging Ctr. at the Technische Univ. München (TUM-NIC), Technische Univ. München, Technische Univ. München, Univ. Hosp. of Cologne.*
- 3:00 J2 **44.07** Fluorescence microspectroscopy of beta-amyloid. J. PROFT*; S. TSUSUI; R. KLAVER; P. K. R. NILSSON; J. JOSEPH; J. J. GUERTS; P. K. STYS. *Univ. of Calgary, Dept. of Clinical Neurosciences, Univ. of Calgary, Dept. of Clin. Neurosciences, Univ. of Amsterdam, Linköping Univ., Univ. of Calgary.*
- 4:00 J3 **44.08** Sex differences in brain connectivity in normal aging and Alzheimer's disease. M. DAIANU*; E. DENNIS; N. JAHANSHAD; T. M. NIR; A. W. TOGA; C. R. JACK; M. W. WEINER; P. M. THOMPSON. *Univ. of California - Los Angeles, Mayo Clin., Univ. of California San Francisco, Dept. of Veterans Affairs Med. Ctr.*
- 1:00 J4 **44.09** ● Blood transcriptomic biomarker identification for healthy control, MCI, AD and EHT 0202 treated AD patient segregation. P. BEURDELEY*; L. DESIRE; A. JARRIGE; M. P. PANDO. *Diaxonhit.*
- 2:00 J5 **44.10** Use of lipidomics to identify novel blood phospholipid biomarkers that detect Mild Cognitive Impairment and early Alzheimer's disease. L. ABDULLAH*; J. EVANS; H. MONTAGUE; A. GONZALEZ; A. SHAH; B. KIRK; J. M. REED; G. CRYNEN; R. PELOT; C. LUIS; A. P. KEEGAN; M. MULLAN; F. CRAWFORD. *Roskamp Inst.*
- 3:00 J6 **44.11** Evaluation of plasmatic microRNAs in a triple transgenic mouse as possible molecular biomarkers of Alzheimer's disease progression. S. GARZA*; C. ARIAS; G. ACERO; F. BERMUDEZ-RATTONI; L. VACA; A. ZEPEDA. *Inst. de Investigaciones Biomédicas, UNAM, Inst. de Fisiología Celular, UNAM.*
- 4:00 J7 **44.12** Interactions between gsk3 β and amyloid processing genes explain variance in amyloid burden. T. J. HOHMAN*; M. A. KORAN; T. A. THORNTON-WELLS. *Vanderbilt Univ. Med. Ctr.*
- 1:00 J8 **44.13** Hemispheric asymmetries of network centrality in AD patients: A resting state functional MRI study. Z. LIU; R. DAI; Y. YOU; W. WEI; J. TIAN*. *Inst. Automation, CAS.*
- 2:00 J9 **44.14** Longitudinal white matter changes in frontotemporal dementia subtypes. B. Y. K. LAM*; G. M. HALLIDAY; J. R. HODGES; O. PIGUET. *Neurosci. Res. Australia, Univ. of New South Wales.*
- 3:00 J10 **44.15** ● Early loss of serum IGF-I input to the brain as a biomarker of disease onset in Alzheimer mice. Á. TRUEBA-SÁIZ; C. CAVADA; A. FERNÁNDEZ; T. DEL SER; T. LEÓN; D. ALCOLEA GONZÁLEZ; J. FORTEA ORMAECHEA; A. LLEÓ; Á. NÚÑEZ; I. TORRES-ALEMAN*. *Cajal Inst. CSIC, CIBERNED, Dpt. Neurosciences, Univ. Autónoma de Madrid, Noscira, Dpt. Neurology, Hosp. de la Santa Creu i Sant Pau.*
- 4:00 J11 **44.16** Progressively increased intra-hippocampal BOLD synchrony is associated with decreased global connectivity in Alzheimer's disease. L. PASQUINI*; M. TAHMASIAN; A. M. WOHLISCHLÄGER; V. RIEDL; C. ZIMMER; C. SORG. *Klinikum Rechts Der Isar Technische Univ. München, Klinikum Rechts Der Isar Technische Univ. München.*
- 1:00 J12 **44.17** Directed network motifs from mri changes in cortical thickness as markers in Alzheimer's disease. E. FRIEDMAN*; K. YOUNG; G. TREMPER; J. LIANG; A. LANDSBERG; N. SCHUFF. *ICSI, Berkeley, Univ. of California, Univ. of California, Claremont Colleges, VA Med. Ctr.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 J13 **44.18** Shared vulnerability of two synaptically-connected medial temporal lobe areas to age and cognitive decline: A 7t MRI study. G. A. KERCHNER*; J. D. BERNSTEIN; M. SARANATHAN; M. M. ZEINEH; B. K. RUTT. *Stanford Univ., Stanford Univ.*
- 3:00 J14 **44.19** CLU risk variant is associated with cortical thinning of the subiculum in a longitudinal study of cognitively healthy older adults. T. M. HARRISON*; A. BAUTISTA; A. C. BURGGREN; G. COPPOLA; G. W. SMALL; S. Y. BOOKHEIMER. *UCLA, UCLA, UCLA.*
- POSTER**
- 045. Alzheimer's Disease: Imaging and Biomarkers II**
Theme C: Disorders of the Nervous System
Sat. 1:00 PM – San Diego Convention Center, Halls B-H
- 1:00 J15 **45.01** Insulin resistance and gray matter volume in neurodegenerative disease. J. K. MORRIS*; E. D. VIDONI; J. WILSON; R. D. PEREA; R. RADA; K. E. LYONS; R. PAHWA; J. M. BURNS; R. A. HONEA. *Univ. of Kansas Med. Ctr., Univ. of Kansas, Univ. of Kansas Med. Ctr.*
- 2:00 J16 **45.02** Sigma-2 receptor binding is decreased in a mouse model of Alzheimer's disease. K. SAHLHOLM*; F. LIAO; D. M. HOLTZMAN; J. XU; R. H. MACH. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*
- 3:00 J17 **45.03** Label free quantitative comparison of cerebrospinal fluid glycoproteins in subjects with Alzheimer's disease, mild cognitive impairment and healthy individuals. J. WANG*; R. CUNNINGHAM; O. OKONKWO; L. LI. *Neurosci. Training Program, Sch. of Pharmacy, Univ. of Wisconsin Madis, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*
- 4:00 J18 **45.04** A novel f-18 positron emission tomography radioligand for serotonin 5ht4: *in vivo* evaluation of [18f]mni-698 in nonhuman primate. G. D. TAMAGNAN*; A. TAVARES; T. MORLEY; F. CAILLE; D. ALAGILLE; H. LEE; O. BARRET; J. SEIBYL. *IND.*
- 1:00 K1 **45.05** Tensor distribution function measures along tractography-based maximum density paths increase Alzheimer's disease classification accuracy. T. M. NIR*; J. E. VILLALON-REINA; L. ZHAN; G. PRASAD; S. H. JOSHI; N. JAHANSHAD; A. W. TOGA; A. D. LEOW; P. M. THOMPSON. *UCLA Sch. of Med., Univ. of Illinois at Chicago.*
- 2:00 K2 **45.06** White matter tract integrity in mild cognitive impairment: A diffusion tensor study. E. W. CONTINI; J. LAGOPOULOS; N. COCKAYNE; I. HICKIE; M. A. WILLIAMS*; S. L. NAISMITH. *Dept. of Cognitive Sci., Brain and Mind Res. Inst.*
- 3:00 K3 **45.07** Resting state activity in MCI, MCI-AD converted and healthy control. A. MOSCA*; R. ESPOSITO; V. PIERAMICO; F. CIERI; N. CERA; S. L. SENSI. *Inst. of Advanced Biomed. Technologies (ITAB), Univ. of California-Irvine.*
- 4:00 K4 **45.08** Functional adaptation of neural networks during reading in Alzheimer's disease. N. S. DHANJAL*; R. J. S. WISE; J. MORALES; R. LEECH. *Imperial Col. London.*
- 1:00 K5 **45.09** Quantitative EEG abnormalities in elderly persons with Preclinical Alzheimer's disease during incidental verbal learning. Y. NIU*; J. YANG; T. CAMPBELL; I. MOHAMMAD REZAZADEH; D. P. SALMON; R. NOWACKI; L. HANSEN; D. GALASKO; M. KUTAS; V. J. IRAGUI-MADOZ; J. M. OLLICHNEY. *Ctr. For Mind and Brain, UC Davis, Univ. of California, Davis, Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego.*
- 2:00 K6 **45.10** APOE-e4-associated white matter changes in adults with a parental history of Alzheimer's disease: A diffusion tensor imaging study. D. V. MERKITCH; V. T. U. DINH; M. S. FEIGON; G. T. STEBBINS*; R. C. SHAH; T. B. PARRISH; D. A. EVANS; D. A. BENNETT; M. A. TRIVEDI. *Rush Univ. Med. Ctr., Rush Univ. Med. Ctr., Northwestern Univ., Rush Univ. Med. Ctr., Rush Univ. Med. Ctr.*
- 3:00 K7 **45.11** Alterations of regional white matter integrity and whole-brain structural network in individuals with pathologically-confirmed Alzheimer disease. D. LEE*; E. SEO; J. PARK; Y. CHOE; B. SOHN; M. BYUN; D. LEE; J. HAN. *Seoul Natl. Univ. Hosp.*
- 4:00 K8 **45.12** Selective basal forebrain cholinergic deficits reduce glucose metabolism, cholinergic and GABAergic system in the cingulate cortex. J. LEE*; D. JEONG; J. OH; J. LEE; W. CHANG; Z. CHO; J. CHANG. *Dept. of Neurosurg., Brain Korea 21 Project Med. Sci.&Yonsei Univ. Coll. of Med., Neurosci. Res. Institute, Gachon Univ., Dept. of Neurosurg. & Brain institution, Yonsei Univ. Col. of Med.*
- 1:00 K9 **45.13** Pesticide exposure is associated with increased risk of Alzheimer's disease. J. R. RICHARDSON; M. M. HOSSAIN; S. L. SHALAT; B. BUCKLEY; A. I. LEVEY; B. GADAD*; D. C. GERMAN. *Rutgers Univ., Emory Univ., UT Southwestern Med. Ctr.*
- 2:00 K10 **45.14** Characterizing the β -amyloid accumulator phenotype: A preliminary study. S. M. MARKS*; J. W. VOGEL; C. M. MADISON; W. J. JAGUST. *Univ. of California - Berkeley, Lawrence Berkeley Natl. Lab.*
- 3:00 K11 **45.15** APOE-e4-associated increased fMRI during performance of the symbol digit modalities test (SDMT) in adults with a parental history of Alzheimer's disease. M. A. TRIVEDI*; D. V. MERKITCH; V. T. U. DINH; M. S. FEIGON; G. T. STEBBINS; R. C. SHAH; T. B. PARRISH; D. A. EVANS; D. A. BENNETT. *Rush Univ. Med. Cntr, Rush Univ. Med. Ctr., Rush Univ. Med. Ctr., Northwestern Univ., Rush Univ. Med. Ctr., Rush Univ. Med. Ctr.*
- 4:00 K12 **45.16** ● Amyloid plaques in the eye - a translational early marker of Alzheimer's disease. M. IVARSSON*; E. ÅBERG; A. BOGSTEDT. *Astrazeneca.*
- 1:00 L1 **45.17** p3-Alc peptide in the CSF and plasma of sporadic Alzheimer's disease patients. S. HATA*; T. KONNO; K. URAKAMI; T. IKEUCHI; H. AKATSU; T. SUZUKI. *Hokkaido Univ., Tottori Univ., Niigata Univ., Choju Med. Inst.*
- 2:00 L2 **45.18** ● Longitudinal changes in cerebrospinal fluid biomarkers of Alzheimer's disease during middle-age in cognitively normal individuals: Effect of APOE genotype. C. L. SUTPHEN; C. XIONG; M. JASIELEC; S. MA; A. R. SHAH; J. C. MORRIS; D. M. HOLTZMAN*; A. M. FAGAN. *Washington Univ.*

- 3:00 L3 **45.19** Maternal family history of Alzheimer's disease predisposes to decreased resting state functional connectivity. R. HONEA*; R. GRAVES; R. D. PEREA; J. M. BURNS; E. D. VIDONI. *Univ. Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*
- 4:00 L4 **45.20** Aging in elderly individuals is associated with a breakdown in white matter association fibers and processing speed deficits. R. D. PEREA*; E. D. VIDONI; D. K. JOHNSON; A. VAN SCIVER; C. GREER; R. C. RADA; J. M. BURNS; R. A. HONEA. *KU Alzheimer's Dis. Res. Ctr.*
- 1:00 L5 **45.21** Elevated homocysteine is associated with thinner cortical gray matter in 803 elderly subjects. S. K. MADSEN*; P. RAJAGOPALAN; S. H. JOSHI; A. W. TOGA; P. M. THOMPSON. *UCLA, UCLA, UCLA.*
- 2:00 L6 **45.22** How does Alzheimer's disease disrupt local white matter microstructure in the brain? G. K. REYNOLDS*; T. M. NIR; A. W. TOGA; C. R. JACK, JR.; M. W. WEINER; P. M. THOMPSON. *UCLA, Imaging Genet. Center, Lab. of Neuro Imaging, UCLA Sch. of Med., Mayo Clin. and Fndn., UCSF Sch. of Med.*
- 3:00 L7 **45.23** Synthesizing connectivity networks to improve classification of Alzheimer's disease. G. PRASAD*; I. AGANJ; P. M. THOMPSON. *Lab. of Neuro Imaging, Massachusetts Gen. Hosp., Imaging Genet. Ctr. Lab. of Neuro Imaging.*
- 4:00 L8 **45.24** ▲ Cholesterol-associated gene CETP associations with white matter integrity in young and older cohorts. N. M. WARSTADT*; E. L. DENNIS; N. JAHANSHAD; T. M. NIR; D. P. HIBAR; A. W. TOGA; K. L. MCMAHON; G. I. DE ZUBICARAY; G. MONTGOMERY; N. G. MARTIN; J. B. WHITFIELD; M. J. WRIGHT; P. M. THOMPSON. *Imaging Genet. Center, Lab. of Neuro Imaging, Univ. of Queensland, Univ. of Queensland, Queensland Inst. of Med. Res., UCLA Sch. of Med.*
- 1:00 L9 **45.25** Resting state functional MRI improves classification of Alzheimer's disease patients. M.; S. ADASZEWSKI; W. GRADKOWSKI; P. BOGORODZKI. *Nencki Inst. of Exptl. Biol. Polish Acad. of Sci., Univ. of Social Sci. and Humanities, Ctr. Hospitalier Universitaire Vaudois (CHUV), Tech. Univ. of Warsaw.*
- POSTER**
- 046. Parkinson's Disease: Gene and Neurotoxin Studies**
Theme C: Disorders of the Nervous System
Sat. 1:00 PM – San Diego Convention Center, Halls B-H
- 1:00 L10 **46.01** Modulation of gene expression across brain regions in the MPTP-lesioned macaque model of Parkinson's disease. T. H. JOHNSTON; J. KOPRICH; M. P. HILL*; S. H. FOX; P. A. HOWSON; J. M. BROTCHE. *Atuka Inc., Movement Disorders Clinic, Toronto Western Hosp.*
- 2:00 L11 **46.02** *In vivo* and *in vitro* measures of striatal terminal field response to unilateral MPTP treatment. L. TIAN*; M. KARIMI; C. BROWN; L. SUSAN; J. S. PERLMUTTER. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*
- 3:00 L12 **46.03** Postnatal exposure of subthreshold doses of chlorpyrifos induces dopaminergic neuronal injury in young adult animals. L. ZHAO*; J. ZHANG; H. DAI; Y. DENG; G. BING. *Dept. of Pediatric Neurology, The Third Xiangya Hosp. of Central South Univ., Dept. of Neurology, The Second Xiangya Hosp. of Central South Univ., Dept. of Neurobio. and Anat., Univ. of Kentucky, Med. Ctr.*
- 4:00 L13 **46.04** ▲ Striatal TH neurons in human brain and in the MitoPark mouse, a genetic model of Parkinson's disease. S. GELLHAAR; D. GALTER*. *Karolinska Institutet, Dept. of Neurosci.*
- 1:00 L14 **46.05** Pharmacological inhibition of glucocerebrosidase disrupts striatal dopaminergic neurotransmission. S. K. MAK*; N. KO; V. P. CHOU; S. SAMUELSSON; J. VAZQUEZ-DEROSE; A. B. MANNING-BOG. *SRI Intl.*
- 2:00 L15 **46.06** Elevated levels of glia maturation factor correlate with glial activation in Parkinson's disease. S. ZAHEER; R. THANGAVEL; M. M. KHAN; H. JAVED; D. KEMPURAJ; A. ZAHEER*. *Univ. of Iowa, Veterans Affairs Hlth. Care Syst.*
- 3:00 L16 **46.07** Alteration of Kallikrein 6 in aging and Parkinson's disease. Y. CHU*; J. H. KORDOWER. *Rush Univ. Med. Ctr., Rush Univ. Med. Ctr.*
- 4:00 L17 **46.08** High throughput single-cell expression analysis of midbrain dopamine neurons reveals Aldh1a1 as marker of vulnerability in a model of Parkinson's disease. J. POULIN*; J. DROUIN-OUELLET; F. CICCETTI; R. B. AWATRAMANI. *Northwestern Univ., Univ. Laval, Northwestern Univ.*
- 1:00 L18 **46.09** Intranasal delivery of hGDNF nanoparticles results in GDNF expression throughout rat brain. A. ALY*; B. T. HARMON; K. DINES; O. SESENOGLU-LAIRD; L. PADEGIMAS; M. J. COOPER; B. L. WASZCZAK. *Northeastern Univ., Northeastern Univ., Copernicus Therapeutics, Inc.*
- 2:00 M1 **46.10** ● Overexpression of A53T α -synuclein in cynomolgus macaques produces a synucleinopathy and results in reductions in nigral dopamine neurons and levels of striatal dopamine. J. B. KOPRICH*; T. H. JOHNSTON; J. M. BROTCHE. *Atuka Inc.*
- 3:00 M2 **46.11** A battery of motor and non-motor non-human primate behavioural rating scales and tasks for effective translational research in Parkinson's disease. T. JOHNSTON; J. KOPRICH; P. RAVENSCROFT*; S. FOX; M. HILL; J. BROTCHE. *Atuka Ltd, Toronto Western Res. Inst., Movement Disorder Clin.*
- 4:00 M3 **46.12** Assessment of plasma, cerebrospinal fluid and brain L-DOPA levels in the MPTP-lesioned cynomolgus macaque model of Parkinson's disease. T. H. JOHNSTON*; J. B. KOPRICH; P. HUOT; M. P. HILL; S. H. FOX; J. M. BROTCHE. *Atuka Inc., Toronto Western Res. Inst., Toronto Western Hosp.*
- 1:00 M4 **46.13** ● Identification of novel, non-dopaminergic mechanisms activated by JNX11, an orally active neurotrophic factor modulator, in the brain of the MPTP-lesioned macaque. P. A. HOWSON*; T. H. JOHNSTON; J. B. KOPRICH; M. P. HILL; S. H. FOX; J. M. BROTCHE. *Atuka Inc, Junaxo Inc., Movement Disorders Clin., Toronto Western Hosp.*
- 2:00 M5 **46.14** Rotenone mediated suppression of cyclic AMP signaling in a mouse model of Parkinson's disease. M. C. HAVRDA*; A. YOUNG. *Dartmouth Med. Sch.*
- 3:00 M6 **46.15** ● Intranasal delivery of pGDNF nanoparticles provides neuroprotection in the rat 6-hydroxydopamine model of Parkinson's disease. B. T. HARMON*; A. ALY; A. CHRISTODOULOU; M. J. COOPER; K. DINES; L. PADEGIMAS; B. L. WASZCZAK. *Northeastern Univ., Copernicus Therapeutics, Inc.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

047. Huntington's Disease: Other

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 M7 **47.01** The ubiquitin binding domain of Optineurin is indispensable for its function in modulating protein aggregation. W. SHEN*; Y. CHERN; P. TU. *IBMS, Academia Sinica, Taiwan Intl. Grad. Program in Mol. Medicine, Yang Ming Univ. and Academia Sinica.*
- 2:00 M8 **47.02** ▲ Striatal pre-enkephalin overexpression improves Huntington's disease symptoms in the R6/2 mouse model of Huntington's disease. S. BISSONNETTE; M. VAILLANCOURT; M. GANTIER; S. S. HEBERT; G. DROLET; P. SAMADI*. *Univ. Laval, Ctr. De Recherche Du CHU De Québec, CHUL.*
- 3:00 M9 **47.03** Identification of new pharmacological agents for treating Huntington's disease. L. B. VIEIRA*; F. R. SILVA; M. GOMEZ; M. N. CORDEIRO; G. W. ZAMPONI; F. M. RIBEIRO. *Univ. Federal de Minas Gerais (UFMG), Univ. Federal de Minas Gerais (UFMG), Univ. Federal de Minas Gerais (UFMG), Fundacao Ezequiel Dias, Univ. of Calgary.*
- 4:00 M10 **47.04** Dietary restriction and Huntington's disease. C. L. MORENO*; M. EHRLICH; C. MOBBS. *Mount Sinai Sch. of Med., Icahn school of medicine at Mount Sinai.*
- 1:00 M11 **47.05** Protective effect of ganglioside GM1 in a cellular model of Huntington disease: Involvement of the IκB Kinase Complex. D. GALLEGUILLAS*; V. MAGLIONE; S. S. S. PIONE. *Univ. of Alberta, Ctr. for Neurosci. Univ. of Alberta.*
- 2:00 M12 **47.06** A systems biology approach to Huntington's disease. R. B. CHAN*; B. ZHOU; E. R. CORTES; A. YAMAMOTO; J. CRARY; R. LEE; L. BROWN; G. DI PAOLO. *Columbia Univ., Columbia Univ., Columbia Univ., CHDI Fdn., Columbia Univ.*
- 3:00 M13 **47.07** Mouse model of Huntington's disease exhibits abnormal in vivo cortico-striatal plasticity. E. ARTEAGA-BRACHO*; C. H. CHEN; A. E. MOLERO; K. KHODAKHAH; M. F. MEHLER. *Dominick P. Purpura Dept. of Neuroscience, Albert Einstein Col. of Medic, Roslyn and Leslie Goldstein Lab. for Stem Cell Biol. and Regenerative Med., Inst. for Brain Disorders and Neural Regeneration, Rose F. Kennedy Ctr. for Res. on Intellectual and Developmental Disabilities, Saul R. Korey Dept. of Neurol.*
- 4:00 M14 **47.08** ▲ Genetic modification and characterization of mesenchymal stem cells to over express human and mouse brain derived neurotrophic factor. A. C. MOORE*; A. T. CRANE; M. LU; J. ROSSIGNOL; G. L. DUNBAR. *Central Michigan Univ., Field Neurosciences Inst. Lab. for Restorative Neurol., Program in Neurosci., Dept. of Psychology, Col. of Med., Field Neurosciences Inst.*
- 1:00 M15 **47.09** Immortalized human striatal precursors as a cell model of Huntington's disease. S. AKIMOV*; N. ARBEZ; T. RATOVITSKI; M. JIANG; V. B. MATTIS; C. N. SVENDSEN; K. YE; W. DUAN; C. A. ROSS. *Johns Hopkins University, Sch. of Med., RMI, Cedars-Sinai, Emory Univ. Sch. of Med.*
- 2:00 M16 **47.10** Rescue of CAG expansion-dependent cell toxicity in HD iPS cells using TrkB agonists. S. S. AKIMOV; N. ARBEZ; T. RATOVITSKI; B. BEARS; M. JIANG; V. B. MATTIS; C. N. SVENDSEN; L. M. THOMPSON; K. YE; W. DUAN; C. A. ROSS*. *Johns Hopkins Med. Sch., RMI, Cedars-Sinai, UC- Irvine, Emory Univ. Sch. of Med.*
- 3:00 M17 **47.11** Discovery of a new mode of action of RHEDAR™ through modeling and simulation, and its repositioning for Huntington's disease treatment. S. BISCHOFF; R. GREGET; F. PERNOT; S. MOUSSAOUI; F. KELLER; A. LEGENDRE; F. GEORGE; M. FAUPEL; J. BOUTEILLER; J. BOUTEILLER; M. BAUDRY*. *Rhenovia, Pharma, USC, Western Univ. of Hlth. Sci.*
- 4:00 M18 **47.12** In vitro measurement of vibrational spectra of polyglutamine aggregates in tissue culture cells. Y. NAGASHIMA*; A. IWATA. *Dept. of Neurology, The Univ. of Tokyo, Dept. of Neurosci. on Neurodegeneration, The Univ. of Tokyo.*
- 1:00 N1 **47.13** ▲ Adipose derived stem cell transplants reduce behavioral deficits in the r6/2 mouse model of Huntington's disease. P. A. STARSKI*; C. ERNST; M. T. SCHLOOP; A. CADY; D. J. DUES; R. D. WYSE; A. T. CRANE; K. D. FINK; J. ROSSIGNOL; G. DUNBAR. *Central Michigan Univ., Program in Neurosci., Central Michigan Univ., Central Michigan Univ., Col. of Med., Dept. of Psychology, Field Neurosciences Inst.*
- 2:00 N2 **47.14** The beneficial effects of a Sirt1 activator STRAY02 in N171-82Q Huntington's disease mouse model. M. JIANG*; Q. PENG; J. ZHENG; J. JIN; Z. HOU; J. ZHANG; S. MORI; J. L. ELLIS; G. P. VLASUK; V. SURJ; W. DUAN. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med., GSK company.*
- 3:00 N3 **47.15** The role of nucleolar stress in RNA toxicity of polyglutamine disease. E. CHAN*; H. TSOI. *The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong.*
- 4:00 N4 **47.16** Location and examination of neuronal stem cell transplants in awake and freely-moving rats using optogenetics. N. JAYAPRAKASH*; A. WOLFRAM; N. HILL; M. SANDSTROM*. *Central Michigan Univ.*

POSTER

048. Motor Neuron Disease: Therapeutics

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 N5 **48.01** ▲ Long term physical exercise is beneficial for SMA-like mice. F. CHALLI; B. ESTOURNET; C. DESSEILLE; P. LOPES; C. PARISET; F. CHARBONNIER*; O. BIONDI. *Univ. Paris Descartes, Hôpital Raymond Poincaré, AP-HP, Univ. d'Evry-val-d'Essonne, Hôpital Trousseau.*
- 2:00 N6 **48.02** Genome editing strategies for the development of a treatment for SMA. M. RUGGIERI; C. SIMONE; M. NIZZARDO; F. RIZZO; G. RIBOLDI; S. SALANI; C. ZANETTA; I. FARAVELLI; N. BRESOLIN; G. COMI; S. CORTI*. *Univ. of Milan.*
- 3:00 N7-DP2 **48.03** Brain-Machine-Interfaces (BMI) in paralysis. N. BIRBAUMER*; A. RAMOS MURGUIALDAY; G. AYALA GALLEGOS; R. SITARAM; L. COHEN. *Eberhard-Karls-Univ, IRCCS Inst. di Ricovero e Cura a Carattere Scientifico, Eberhard-Karls-Univ, Univ. of Florida, NIH.*
- 4:00 N8 **48.04** Apo-H-ferritin infusion as a therapy for amyotrophic lateral sclerosis. A. M. ILL SNYDER*; E. B. NEELY; O. M. HESS; F. MACCARINELLI; A. PATEL; E. RIZK; P. AROSIO; Z. SIMMONS; J. R. CONNOR. *Penn State Univ. Coll Med., Mechanicsburg Area High Sch., Univ. of Brescia, Penn State Univ. Coll Med.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 N9 **48.05** iPSCs-derived neural stem cells transplantation as therapeutic strategy for amyotrophic lateral sclerosis. F. RIZZO*; M. NIZZARDO; C. SIMONE; M. RUGGIERI; S. SALANI; I. FARAVELLI; C. ZANETTA; N. BRESOLIN; G. COMI; S. CORTI. *Univ. of Milan*.
- 2:00 N10 **48.06** • Identification of potential ALS therapeutics using stem cell derived motor neurons. S.; G. GULATI; Y. YANG; L. RUBIN. *Harvard Univ.*
- 3:00 N11 **48.07** The therapeutic effect of the JGK263 in the amyotrophic lateral sclerosis transgenic mice. S. AHN*; J. SUNG; Y. HONG; S. KIM; D. SHIN; K. JUNG; K. LEE. *Chung-Ang Univ. Hosp., Seoul Natl. Univ. Hosp.*
- 4:00 N12 **48.08** Stabilized neuropeptides in the SOD1 mouse model of ALS. J. OKSMAN*; T. AHTONIEMI; T. HUHTALA; M. CERRADA-GIMENEZ; K. LEHTIMÄKI; A. NURMI; D. MCINTOSH; S. HAQ; M. HAQ. *Charles River Discovery Res. Services Ltd, Daval Intl. Ltd., Maidstone and Tunbridge Wells NHS Trust*.
- 1:00 N13 **48.09** Effect of JGK-263 as a new glycogen synthase kinase-3 β inhibitor on extrinsic apoptosis pathway in motor neuronal cells. G. JEON*; J. SHON; D. KIM; J. SUNG. *Seoul Natl. Univ. Hosp.*
- 2:00 N14 **48.10** Manipulating the agrin/neurotrypsin system improves muscle trophism in SMA. M. M. BOIDO*; E. DE AMICIS; S. HETTERER; R. FARIELLO; A. VERCELLI. *Univ. of Turin, Neurotune AG*.
- 3:00 N15 **48.11** Overexpression of catalase targeted to mitochondria reverts the toxicity of astrocytes expressing ALS-linked mutant SOD1. M. PEHAR; G. BEESON; C. BEESON; J. A. JOHNSON; M. R. VARGAS*. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Univ. of Wisconsin*.
- 4:00 N16 **48.12** Induction of calcium binding protein, calbindin D28k, in motor neurons of spinal cord of West Nile virus infected hamster model. V. SIDDHARTHAN*; M. BRUCE; I. N. BINKS; N. REDMAN; H. WANG; J. D. MORREY. *Utah State Univ.*
- 1:00 N17 **48.13** Induced pluripotent stem cell-derived astrocytes engraft in the SOD1^{G93A} rat model of ALS. K. J. STAGGENBORG*; D. SAREEN; G. GOWING; A. SAHABIAN; R. PARADIS; P. AVALOS; J. LATTER; M. CHEN; C. SVENDSEN. *Cedars-Sinai Med. Ctr.*
- 2:00 N18 **48.14** • The *in vivo* efficacy of small molecule compounds modifying alternative splicing of the SMN2 gene in $\Delta 7$ mice. Z. FENG*; K. LING; H. RATNI; I. GERLACH; O. KHWAJA; F. METZGER; X. ZHAO; M. WEETALL; N. NARYSHKIN; G. KARP; P. TRIFILLIS; E. WELCH; J. COLACINO; J. BABIAK; N. ALMSTEAD; K. MCCARTHY; K. CHEN; S. PAUSHKIN; C. KO. *USC, F. Hoffmann-La Roche Ltd., PTC Therapeut., Spinal Muscular Atrophy Fdn.*
- 3:00 O1 **48.15** Triblock copolymer Poloxamer 188 delays disease onset and increases survival in an ALS mouse model. L. WANG; J. RIEHM; D. PFAFFINGER; G. GHADGE; R. ROOS; M. J. ALLEN*. *Univ. of Chicago, Univ. of Chicago*.
- 4:00 O2 **48.16** Focal irradiation supports myeloid cell engraftment at sites of brain damage. C. -. BOETTCHER*; F. FERNÁNDEZ-KLETT; N. GLADOW; S. ROLFES; J. PRILLER. *Charité-Universitätsmedizin Berlin*.
- 1:00 O3 **48.17** • Development of a minimally invasive spinal injection system; surgical approach, ventral horn targeting and behavioral analysis in mini-pigs. P. AVALOS*; D. DRAZIN; G. GOWING; J. LATTER; M. CHEN; K. STAGGENBORG; R. PARADIS; J. ZELAYA; B. C. SHELLEY; C. N. SVENDSEN. *Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr.*
- 2:00 O4 **48.18** • Expression, purification and characterization of active recombinant TDP-43 suitable for *in vitro* aggregation studies. O. QUINTERO-MONZON*; J. COOMARASWAMY; S. BIXLER; D. HOUE; G. BOU-ASSAF; F. MONTRASIO; J. GRIMM; C. AMBROSE; D. BAKER; S. BERKOWITZ; P. WEINREB. *Biogen Idec, Neurimmune Therapeut. AG*.
- 3:00 O5 **48.19** Translating two gene delivery routes for spinal muscular atrophy. L. BRAUN; K. FOUST; K. MEYER; L. SCHMELZER; L. FERRAIUOLO; S. MCELROY; A. BURGHESE; J. MENDELL; B. K. KASPAR*. *The Res. Inst. at Nationwide Children's Hosp., The Ohio State Univ., RI at Nationwide Children's Hosp.*
- 4:00 O6 **48.20** Therapeutic targeting of expanded C9ORF72 in amyotrophic lateral sclerosis. Z. ZEIER*. *Univ. of Miami*.
- 1:00 O7 **48.21** Guanabenz treatment ameliorates ALS disease by enhancing the unfolded protein response (UPR). L. WANG*; B. POPKO; R. P. ROOS. *Univ. Chicago*.
- 2:00 O8 **48.22** • *In vitro* evaluation of the therapeutic potential of mesenchymal stromal cells in amyotrophic lateral sclerosis. S. PETRI*; K. BERNARDAIS; N. STANSLOWSKY; N. THAU-HABERMANN; P. CLAUS; H. SUN. *Hannover Med. Sch.*
- 3:00 O9 **48.23** Nanobody against sod1 reduces *in vitro* aggregation, rescues sod1 induced axonopathy and extends survival in als models. S. HERNANDEZ; W. ROBBERECHT; P. DUPONT*. *KU LEUVEN, KU LEUVEN*.
- 4:00 O10 **48.24** • Synergistic effects of GDNF and VEGF on disease progression and survival period in a rat model of familial ALS. M. SUZUKI*; D. KRAKORA; M. MEYER; C. LEWIS; K. BERNAU; P. MULCRONE; C. ZIMPRICH; G. GOWING; P. AEBISCHER; C. N. SVENDSEN. *Univ. Wisconsin-Madison, Univ. of Wisconsin-Madison, Promega Corp., Cedars-Sinai Regenerative Med. Inst., Brain & Mind Institute, EPFL*.
- 1:00 O11 **48.25** Fenofibrate extends survival in the SOD1^{G93A} mouse model of Amyotrophic Lateral Sclerosis. S. YADAV*; R. D. HENDRIX; M. A. ESMAEILI; N. Y. CALINGASAN; M. F. BEAL; M. KIAEI. *Univ. of Arkansas For Med. Sci., Univ. of Arkansas For Med. Sci., Weill Med. Col. of Cornell Univ.*

POSTER

049. Human Biomarkers of Autism

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 O12 **49.01** Altered spontaneous gamma-band functional connectivity in adolescents with autism spectrum disorder. A. X. YE*; R. C. LEUNG; C. B. SCHAEFER; M. J. TAYLOR; S. M. DOESBURG. *Hosp. For Sick Children, Univ. of Toronto, Univ. of Toronto, Heidelberg Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 P1 **49.02** Acoustic startle modulation and its relationship to quantitative autistic traits in Japanese children with and without autism spectrum disorders. H. TAKAHASHI*; T. NAKAHACHI; A. MORIWAKI; Y. IIDA; A. ENDO; K. OGINO; R. TAKEI; S. KOMATSU; Y. KAMIO. *Natl. Ctr. of Neurol. and Psychiatry, Natl. Inst. of Mental Hlth.*
- 3:00 P2 **49.03** Abnormalities of the corpus callosum connectivity are related to the severity of core features, but not to motor dysfunction in children with autistic spectrum disorders. R. HANAIE*; I. MOHRI; K. KAGITANI-SHIMONO; M. TACHIBANA; I. HIRATA; J. MATSUZAKI; M. TANIKE. *United Grad. Sch. of Child Development, Osaka Univ., Dept. of Pediatrics, Osaka Univ. Grad. Sch. of Med.*
- 4:00 P3 **49.04** White matter tractography analysis of the corpus callosum following early perinatal brain injury. R. COVARRUBIAS*; R. CARPER; P. MOSES. *San Diego State Univ., UCSD.*
- 1:00 P4 **49.05** Touchscreen learning of transitive inference in B6 mice and the BTBR mouse model of autism. J. L. SILVERMAN*; P. T. GASTRELL; M. C. PRIDE; J. E. HAYES; M. SOLOMON; J. N. CRAWLEY. *UC Davis Sch. of Med., Natl. Inst. of Mental Hlth.*
- 2:00 P5 **49.06** Where did she go? Male mice emit distinct ultrasonic vocalizations when the female is removed from the social interaction environment. M. YANG*; D. LOUREIRO; D. KALIKHMAN; J. N. CRAWLEY. *MIND Inst. and Dept. of Psychiatry, UC Davis, Natl. Inst. of Mental Hlth. Intramural Res. Program.*
- 3:00 P6 **49.07** White matter glial pathology in the cingulate cortex of autism spectrum disorder subjects. J. D. CRAWFORD*; M. J. CHANDLEY; K. SZE BENI; A. SZE BENI; B. L. WATERS; G. A. ORDWAY. *East Tennessee State Univ.*
- 4:00 P7 **49.08** Electrophysiological isolation in regenerative peripheral nerve interfaces. J. V. LARSON; T. A. KUNG*; M. G. URBANCHEK; P. S. CEDERNA; N. B. LANGHALS. *Univ. of Michigan, Michigan State Univ. Col. of Human Med., Univ. of Michigan.*
- 1:00 P8 **49.09** ● Eye movement abnormalities in autism spectrum disorder implicate sensorimotor and cognitive control brain systems. L. M. SCHMITT*; M. W. MOSCONI; J. A. SWEENEY. *UT Southwestern Med. Ctr.*
- 2:00 P9 **49.10** Autistic Spectrum Disorder (ASD) individuals excel in a modified Embedded Figure Task but are worse at integrating two shapes into a single whole shape: Relationship with socially atypical behaviors. J. A. LIEDERMAN*; O. OLU-LAFE; H. TAGER-FLUSBERG. *Boston Univ., Boston Univ., Boston Univ.*
- 3:00 P10 **49.11** Single trial event-related potential analyses in relation to behavioral measures of unisensory processing and multisensory integration in autism spectrum disorders. I. M. REZAZADEH; F. G. VIEIRA; Y. TAKARAE; A. SCHNEIDER; M. SAGGAR; N. H. HUYNH; A. E. COLBY; S. G. HUFFMAN; A. O'NEILL; A. ISAYEVA; S. M. RIVERA; C. D. SARON*. *Univ. of California at Davis, Univ. of Texas Southwestern, Univ. of California at Davis Med. Ctr., Univ. of California at Davis Med. Ctr., Stanford Univ., Univ. of California at Davis, Univ. California Davis.*
- 4:00 P11 **49.12** Theoretical accuracy: An improved performance metric for p300 speller data. K. A. COLWELL; K. D. MORTON; L. COLLINS*; C. S. THROCKMORTON. *Duke Univ., Duke Univ.*
- 1:00 P12 **49.13** Unexpected correlations of urine methylmalonic acid and some of the subgroups of red cell folates, plasma ammonia levels and amino acid profiles in autism. M. GÜLTEPE; Ö. ÖZCAN*; Ö. YORBIK; O. M. İPÇİOĞLU; A. COŞAR; T. MÜFTÜOĞLU; S. HİRA. *GATA Haydarpasa Training Hosp., Uskudar University.*
- 2:00 P13 **49.14** Group differences in ERN and Pe between children with an autism spectrum disorder and healthy children. M. CARRASCO*; G. L. HANNA; C. L. LORDE; W. J. GEHRING. *Univ. of Rochester, Univ. of Michigan, New York-Presbyterian Hospital, Weill Cornell Med. College, and the Columbia Univ. Col. of Physicians and Surgeons, Univ. of Michigan.*
- 3:00 P14 **49.15** Color-dependent change in SSVEP spectrum power and discrimination ratio. T. URANO*; K. SAEKI; K. IKEMOTO; Y. ONO. *Meiji Univ.*
- 4:00 P15 **49.16** Enhancing p300 speller performance using dynamic data collection with a language model: An ALS study. B. MAINSAH*; L. M. COLLINS; K. A. COLWELL; E. W. SELLERS; D. B. RYAN; K. CAVES; C. THROCKMORTON. *Duke Univ., East Tennessee State Univ., Duke Univ.*
- 1:00 P16 **49.17** Improving p300 speller accuracy with error-related potential detection and noisy channel spelling correction model. B. MAINSAH; L. M. COLLINS; K. D. MORTON; K. A. COLWELL; D. R. BERRY; E. W. SELLERS; S. THROCKMORTON*. *Duke Univ., East Tennessee State Univ.*
- 2:00 P17 **49.18** Comparing saccade sequences in typical and autistic children. L. CHUKOSKIE*; C. KANAN; K. ALBRECHT; J. WILES; J. TOWNSEND. *Univ. of California, San Diego (UCSD), UCSD, UCSD, Univ. of Queensland, UCSD.*
- 3:00 P18 **49.19** ● Visuomotor connectivity relates to symptom severity in children with autism. M. NEBEL*; A. ELOYAN; C. NETTLES; K. SWEENEY; A. CHOE; A. BARBER; B. CAFFO; J. PEKAR; S. MOSTOFSKY. *Johns Hopkins Sch. of Med., Kennedy Krieger Inst., Johns Hopkins Bloomberg Sch. of Publ. Hlth.*
- 4:00 Q1 **49.20** Atypical brain function underlying sensorimotor impairments in autism spectrum disorders (ASD). S. MOHANTY*; D. E. VAILLANCOURT; S. P. COOMBES; L. SCHMITT; J. A. SWEENEY; M. W. MOSCONI. *Univ. of Texas Southwestern, Univ. of Texas Southwestern, Univ. of Florida, Univ. of Texas Southwestern.*
- 1:00 Q2 **49.21** Classification of children with FASD from neuroimaging, neuropsychological and natural eye movement data. C. ZHANG; A. PAOLOZZA; P. TSENG; J. REYNOLDS; D. P. MUNOZ; L. ITTI*. *USC, Queen's Univ., USC, Queen's Univ., Univ. So California.*
- 2:00 Q3 **49.22** Neural and physiological responses during play with human and computer partners in children with autism. B. A. CORBETT*; K. EDMISTON; K. L. NELSON; D. ZALD. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*
- 3:00 Q4 **49.23** Premotor and primary somatosensory areas lead primary motor area in the cortical activation during cued finger movements in humans. H. SUN*; J. G. OJEMANN; T. BLAKELY; F. DARVAS; J. WANDER; L. JOHNSON; K. MILLER; K. WEAVER. *Oregon Hlth. & Sci. Univ., Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

4:00 Q5 **49.24** Methodological considerations for processing quantitative EEG data in children with and without a developmental disability. K. A. MCEVOY*; S. JESTE. *UCLA, Ctr. for Autism Res. & Treatment, UCLA.*

1:00 Q6 **49.25** Excessive neural processing of irrelevant sensory stimuli in autistic children. T. P. ZANTO*; T. PADATH; A. GAZZALEY; S. NAGARAJAN; E. MARCO. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco.*

POSTER

050. Mental Retardation and Autism: Animal Models

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

1:00 Q7 **50.01** Therapeutic effects of human adipose-derived stem cells in VPA-induced autism mouse model. S. HA*; S. LEE; Y. SUH; K. CHANG. *Dept. of Pharmacology, Col. of Medicine, Seoul Natl. Univ., Gachon Univ. of Med. and Sci., Boramae Med. Ctr., Korea Brain Res. Inst.*

2:00 Q8 **50.02** Neuropathological and biochemical effects of dietary propionic acid in rats-further development of a rodent model of autism. R. TAYLOR*; L. TICHENOFF; F. BOON; R. THOMAS; S. HOLBROOK; D. F. MACFABE. *Western Univ., Western Univ., Western Univ.*

3:00 Q9 **50.03** Temporal effects of spaced intracerebroventricular infusions of propionic acid on locomotor activity and neuroinflammation in rats: Further development of a rodent model of autism. S. HOLBROOK*; R. TAYLOR; M. KAVALIERS; K. OSSENKOPP; D. MACFABE. *Univ. of Western Ontario, Western Univ., Western Univ.*

4:00 Q10 **50.04** Abnormal cortical circuitry predicts cognitive impairment in the 22q11DS mouse model of autism/schizophrenia. D. W. MEECHAN*; H. L. H. RUTZ; M. FRALISH; T. M. MAYNARD; L. A. ROTHBLAT; A. S. LAMANTIA. *George Washington Univ., George Washington Univ.*

1:00 Q11 **50.05** Unique acyl-carnitine profiles in the propionic acid rat model of autism predict potential biomarkers for mitochondrial dysfunction in autistic patients. D. F. MACFABE*; S. MELNYK; R. E. FRYE. *Western Univ., Arkansas Children Hosp. Res. Inst.*

2:00 Q12 **50.06** Endogenous hyposociability in juvenile macaque monkeys: A novel nonhuman primate model for autism treatment discovery. M. D. BAUMAN*; G. MOADAB; J. BUSER; A. LOPEZ; J. P. CAPITANIO. *Univ. California, Davis, UC Davis.*

3:00 Q13 **50.07** Effects of early postnatal bacterial inflammation on seizure susceptibility in a mouse model of autism. M. L. LEWIS*; J. M. RHO; Q. J. PITTMAN. *Univ. of Calgary, Alberta Children's Hosp. Res. Inst.*

4:00 Q14 **50.08** A mouse model of impaired neuroplasticity: Implications for social behavior. A. BACQ*; J. GROSSE; C. SANDI. *EPFL, SV-BMI-LGC.*

1:00 Q15 **50.09** A novel mouse model for the study of cognitive deficits in human creatine transporter deficiency. K. C. UDOBI*; A. N. KOKENGE; E. R. HAUTMAN; M. R. SKELTON. *Cincinnati Children's Res. Fndn., Univ. of Cincinnati.*

2:00 Q16 **50.10** Ranbp1, deleted in DiGeorge/22q11.2 deletion syndrome, is a microcephaly gene. T. M. MAYNARD*; E. M. PARONETT; D. W. MEECHAN; A. S. LAMANTIA. *George Washington Univ.*

3:00 Q17 **50.11** Behaviour and neuroanatomy in Fragile X mice. J. LAI*; J. ELLEGOOD; K. C. RILETT; R. N. MACKENZIE; M. HENKELMAN; J. P. LERCH; J. A. FOSTER. *McMaster Univ., Sick Kids, McMaster Univ.*

4:00 Q18 **50.12** Cognitive and behavioral deficits in a developmental model of multifactorial environmental exposure. R. M. AMOS-KROOHS*; L. L. DAVENPORT; A. GUTIERREZ; N. ATANSANOVA; C. V. VORHEES; M. T. WILLIAMS. *Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati, Univ. of Cincinnati.*

POSTER

051. Epilepsy: Seizure Induction and Prediction

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

1:00 R1 **51.01** Epileptic signatures in cerebellar activity of the Cacna1a tottering mutant mouse. L. KROS*; O. H. J. EELKMAN ROODA; J. K. SPANKE; M. NEGRELLO; P. ALVA; B. H. J. WINKELMAN; E. A. TOLNER; V. STEUBER; A. M. J. M. VAN DEN MAAGDENBERG; C. I. DE ZEEUW; F. E. HOEBEEK. *Erasmus Med. Ctr., Sci. and Technol. Res. Inst., Netherlands Inst. for Neuroscience, Royal Dutch Acad. for Arts and Sci., Leiden Univ. Med. Ctr., Leiden Univ. Med. Ctr.*

2:00 R2 **51.02** Current source density analysis of spontaneous interictal spikes in vivo. S. P. FLYNN*; P. LENCK-SANTINI; G. L. HOLMES. *Univ. of Vermont, Geisel Sch. of Med. at Dartmouth Col.*

3:00 R3 **51.03** Optogenetic stimulation of somatosensory cortex at a resonant frequency can induce generalized seizures in an animal model of absence epilepsy. F. B. WAGNER*; J. WANG; W. TRUCCOLO; A. NURMIKKO. *Brown Univ., Brown Univ., Brown Univ., Ctr. for Neurorestoration and Neurotechnology, Rehabil. Res. & Develop. Service, Dept. of Veterans Affairs, Brown Univ.*

4:00 R4 **51.04** Hippocampal dentate interneurons inactivate immediately after but not before seizure onset. I. TOYODA*; P. S. BUCKMASTER. *Stanford Univ.*

1:00 R5 **51.05** Subicular neurons activate before spontaneous seizures in epileptic pilocarpine-treated rats. S. FUJITA; I. TOYODA; P. BUCKMASTER*. *Nihon Univ., Stanford Univ., Stanford Univ.*

2:00 R6 **51.06** Hippocampal auditory evoked potentials in conjunction with continuous long-term video-EEG monitoring reveals novel biomarkers for epileptogenesis in the lithium-pilocarpine model of epilepsy in rats. A. M. BENISON*; K. M. RODGERS; F. M. BERCUM; Z. SMITH; D. S. BARTH. *Univ. of Colorado.*

3:00 R7 **51.07** In vivo imaging of spatio-temporal dynamics during interictal events and seizures in the hippocampus of awake epileptic mice. S. E. FELDT MULDOON*; V. VILLETTE; R. COSSART. *INMED - INSERM UMR901.*

4:00 R8 **51.08** Stress history primes for depression and cognitive deficits in experimental TLE. C. BERNARD*; A. GHESTEM; F. BARTOLOMEI; S. SIYOUCEF; E. BOUVIER; C. BECKER; J. BÉNOLIEL. *INSERM U1106, UMRS 975.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 R9 **51.09** A novel, non-invasive, predictive epilepsy biomarker of with clinical potential. C. M. DUBE*; M. CHOY; S. R. S. BARNES; A. B. BLOOD; A. N. HASO; A. OBENAU; T. Z. BARAM. *Univ. of California, Irvine, Loma Linda Univ. Sch. of Med., Loma Linda Univ. Sch. of Med., Univ. of California, Irvine.*
- 2:00 R10 **51.10** Activation of CRCT1 in the hippocampus of pilocarpine chemoconvulsant model of temporal lobe epilepsy. D. DUBEY*; B. E. PORTER. *Sch. of Medicine, Stanford Univ.*
- 3:00 S1 **51.11** ● Expressions of vascular endothelial growth factor-C/vascular endothelial growth factor receptor-3 in the mouse hippocampus after status epilepticus induced by pilocarpine. J. KIM*; K. JEONG; M. LEE; S. KIM*. *The Catholic Univ. of Korea, The Catholic Univ. of Korea, The Catholic Univ. of Korea.*
- 4:00 S2 **51.12** Investigating the role of 5HT receptors modulation in pentylenetetrazole-kindling induced depression, learning and memory deficit. A. MISHRA*; R. K. GOEL. *Punjab Univ., Punjab Univ.*
- 1:00 S3 **51.13** Gender differences in a Zebrafish model of epileptogenesis induced by chronic exposure to pentylenetetrazole (PTZ). L. BELTRAN-PARRAZAL*; P. GONZALEZ-GASPAR; M. LANDA-JIMENEZ; C. PEREZ-ESTUDILLO; M. LOPEZ-MERAZ; C. MORGADO-VALLE. *Univ. Veracruzana.*
- 2:00 S4 **51.14** Abnormal expression of the neuronal Per-Arnt-Sim domain protein 4 (Npas4) in the pilocarpine model of temporal lobe epilepsy. L. F. PACHECO*; J. DURAN-GONZALEZ; L. L. ANTONIO; G. M. ROSAS; J. M. RODRIGUEZ; M. ORTEGA; K. CORREA; E. GARRIDO; L. V. COLOM. *Univ. of Texas At Brownsville, Univ. of Texas At Brownsville.*
- 3:00 S5 **51.15** Behavioral and mortality parameters evaluated in the model of temporal lobe epilepsy induced by intracerebroventricular administration of pilocarpine. L. G. MEDINA-CEJA*; K. PARDO-PEÑA; C. VENTURA-MEJÍA. *Univ. de Guadalajara, Univ. de Guadalajara.*
- 4:00 S6 **51.16** ▲ Pilocarpine-induced seizure and diminishing of body temperature are minimized by reproductive hormones in a rat epilepsy model. J. DAL PAI*; A. A. A. ROCHA; D. AMADO. *UNIFESP.*
- 1:00 S7 **51.17** The effect of the P2X7 receptor antagonist AZ10606120 in rat brain subjected to seizures by pilocarpine. M. G. ARAÚJO*; R. P. AMORIM; M. J. S. FERNANDES. *Federal Univ. of São Paulo.*
- 2:00 S8 **51.18** Cardiac and autonomic risk factors for sudden cardiac death in rats with pilocarpine-induced epilepsy. D. B. COLUGNATI*; A. P. PANSANI; G. SCHOORLEMMER; M. SILVA; S. CRAVO; R. ARIDA; E. CAVALHEIRO; F. SCORZA. *Univ. Federal De Goiás, UNIVERSIDADE FEDERAL DE SÃO PAULO, UNIVERSIDADE FEDERAL DE GOIÁS.*
- 3:00 S9 **51.19** Laforin and malin deficient mice, two animal models of Lafora disease, present enhanced susceptibility to the chemoconvulsant agent pentylenetetrazole. M. P. SANCHEZ*; A. M. GARCIA-CABRERO; G. SANCHEZ-ELEXPURU; J. M. SERRATOSA. *Instituto De Investigacion Sanitaria-Fundacion Jimenez Diaz, Ctr. de Investigacion en Red de Enfermedades Raras (CIBERER).*

POSTER

052. Epilepsy: Animal Models

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 S10 **52.01** Severe hypoglycemia in juvenile diabetic rats: Presence and severity of seizures predictive for mortality. M. MAHEANDIRAN*; S. MYLVAGANAM; C. WU; Y. H. EL-HAYEK; S. SUGUMAR; M. DEL-CAMPO; A. GIACCA; L. ZHANG; P. L. CARLEN. *Toronto Western Res. Inst., Univ. of Toronto, Toronto Western Res. Inst., Toronto Western Hosp.*
- 2:00 S11 **52.02** Odorant and sound can be antagonistic sensory stimuli in an audiogenic model of epilepsy? P. BERTTI*; P. D. PEREIRA; E. H. L. UMEOKA; A. FERNANDES; V. R. SANTOS; S. S. MARRONI; F. DEL VECCHIO; J. A. CORTES DE OLIVEIRA; N. GARCIA-CAIRASCO. *Univ. of São Paulo USP, Univ. of São Paulo USP.*
- 3:00 S12 **52.03** Is there a common mechanism of sudden death in mouse inducible seizure models? Y. KIM*; L. SOWERS; G. F. BUCHANAN; G. B. RICHESON. *Univ. of Iowa, Univ. of Iowa, Yale Univ., Univ. of Iowa.*
- 4:00 S13 **52.04** Increases in recurrent laryngeal nerve activity and altered vocal fold motion during kainic acid induced seizures in rats. K. NAKASE; I. NAGGAR; R. KOLLMAR; M. G. STEWART*. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*
- 1:00 S14 **52.05** Pup-induced conditioned place preference and maternal behavior in a genetic animal model of depression associated with absence epilepsy. K. SARKISOVA*; K. TANAEVA; Y. DOBRYAKOVA. *Inst. of Higher Nervous Activity & Neurophysiol. RAS, Lomonosov Moscow State Univ.*
- 2:00 S15 **52.06** Longitudinal mri and dti study reveals progressive volume-loss and white matter degeneration in cstb-deficient mice. O. H. MANNINEN*; T. LAITINEN; K. K. LEHTIMÄKI; S. TEGELBERG; A. LEHESJOKI; O. GRÖHN; O. KOPRA. *Folkhälsan Inst. of Genet. and Neurosci. Center, Univ. of Helsinki, Univ. of Eastern Finland.*
- 3:00 S16 **52.07** Characterization of a mouse model for familial hemiplegic migraine type 2. P. BØTTGER*; A. HEUCK; K. L. LAMBERTSEN; K. LYKKE-HARTMANN. *Univ. of Southern Denmark, Aarhus Univ., Aarhus Univ.*
- 4:00 S17 **52.08** A mouse model of tuberous sclerosis with spontaneous seizures. G. TANG*; A. A. SOSUNOV; X. WU; S. KUO; E. KANTER; C. BARNARD; G. M. MCKHANN, II; J. E. GOLDMAN; D. SULZER. *Columbia University, Dept of Neurol., Columbia Univ., Columbia Univ., Columbia university, Columbia Univ., Columbia Univ.*
- 1:00 S18 **52.09** Absence seizures show a circadian rhythm in the myelin mutant taiep rat. M. CORTÉS*; J. CORONA; J. R. EGUIBAR. *Benemérita Univ. Autónoma De Puebla, Benemérita Univ. Autónoma de Puebla.*
- 2:00 T1 **52.10** Impaired cognitive function in a mouse model of viral-induced epilepsy. A. D. UMPIERRE*; G. J. REMIGIO; E. J. DAHLE; M. D. SMITH; A. ALEX; P. J. WEST; H. S. WHITE; K. S. WILCOX. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 T2 **52.11** Abnormal steady-state visual responses in a *Drosophila* model of epilepsy. A. R. WADE*; S. A. H. ALAMRI; F. AFSARI; C. J. H. ELLIOTT. *Univ. of York, Univ. of York.*
- 4:00 T3 **52.12** Mechanisms of prickle in zebrafish epilepsy and retinal neurogenesis. X. MEI*; S. WU; A. G. BASSUK; D. C. SLUSARSKI. *The Univ. of Iowa.*
- 1:00 T4 **52.13** Effect of basolateral amygdala kindling as a model of temporal lobe epilepsy on a rat gambling task. M. TREMBLAY*; W. ADAMS; C. A. WINSTANLEY. *Univ. of British Columbia.*
- 2:00 T5 **52.14** Neuronal dynamics in a monkey model of parietal epilepsy. W. ABOUBAKR*; F. BARTOLOMEI; P. CHAUVEL; J. RÉGIS; D. BOUSSAOU. *Inst. De Neurosciences Des Systèmes INSERM UMR 1106.*
- 3:00 T6 **52.15** Longitudinal study of microhemorrhagic chronic epilepsy model induced by nanoscale intracortical iron injection. H. LIM*; A. JO; C. HEO; M. SUH*. *Sungkyunkwan Univ., Inst. for Basic Sci., Sungkyunkwan Univ.*
- 4:00 T7 **52.16** ● Time-dependent reduction in seizure threshold in a mouse model of viral-induced epilepsy. E. J. DAHLE*; H. WHITE; K. S. WILCOX. *Univ. of Utah, ADD Program.*
- 1:00 T8 **52.17** Dynamics of changes in free radicals levels following single epileptic seizure and the effect of melatonin. K. NOHEJLOVA*; J. MARES; P. STOPKA; R. ROKYTA. *Charles Univ. In Prague/ Third Faculty of Med., Inst. of Inorganic Chemistry, Acad. of Sci. of the Czech Republi.*
- 2:00 T9 **52.18** Light and Electron-microscopic sequences of Lafora Bodies Type II formation in a Laforin-deficient rodent model. J. MACHADO-SALAS; M. AVILA-COSTA*; D. BAI; R. M. DURON; J. ESPINOSA-VILLANUEVA; K. YAMAKAWA; A. DELGADO-ESCUETA. *UNAM, Neuromorphology Lab., Sch. of Publ. Health, Natl. Autonomous Univ. of Honduras, Riken Institute, Neurobio.*
- 3:00 T10 **52.19** Genetic determinants of susceptibility to seizure-induced excitotoxic cell death: Functional characterization of Tshz1 as a putative candidate gene. P. E. SCHAUWECKER*. *USC.*
- 4:00 T11 **52.20** Bmal1 controls the diurnal rhythm and set point for electrical seizure threshold in mice. J. R. GERSTNER*; G. G. SMITH; T. N. FERRARO. *Univ. of Pennsylvania, Res. Service, Dept. of Veterans Affairs Med. Ctr., Univ. of Pennsylvania.*
- 3:00 T14 **53.03** ● Transient inhibition of TrkB kinase following status epilepticus prevents development of temporal lobe epilepsy. B. GU; G. LIU; X. HE; R. B. JOSHI; H. D. WACKERLE; R. M. RODRIGUIZ; W. C. WETSEL; J. O. MCNAMARA*. *Dept. of Pharmacol. and Cancer Biology, Duke Univ. Med. Ctr., Dept. of Neurobiology, Duke Univ. Med. Ctr., Dept. of Electrical and Computer Engineering, Duke Univ., Neurosci. Program, Trinity Col. of Arts and Sciences, Duke University, Mouse Behavioral and Neuroendocrine Analysis Core Facility, Duke Univ. Med. Ctr., Dept. of Psychiatry and Behavioral Sciences, Duke Univ. Med. Ctr., Dept. of Cell Biology, Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*
- 4:00 T15 **53.04** ▲ Extract of *Magnolia grandiflora* reduces the expression of proinflammatory molecules (TNF α , IL1 β , Cox2) and development of epilepsy in a model of neonatal seizures. A. VEGA GARCIA*. *Inst. Mexicano Del Seguro Social.*
- 1:00 T16 **53.05** Microglia regulate blood-brain barrier permeability through prostaglandin receptor EP2. M. YANG*; J. JIANG; T. GANESH; R. DINGLEDINE. *Emory Univ.*
- 2:00 T17 **53.06** Entorhinal cortex epileptic activities induced by tau deficiency *in vivo*. M. ZHAO*; X. HU; H. MA; S. M. PAUL; T. H. SCHWARTZ. *Weill Cornell Med. Col., Weill Cornell Med. Col.*
- 3:00 T18 **53.07** ▲ Antiepileptic action of c-Jun-N-terminal kinase (JNK) inhibition. T. Y. TAI; L. N. WARNER; T. D. JONES; S. JUNG; D. W. SKYRUD; N. P. POOLOS*. *Univ. Washington.*
- 4:00 U1 **53.08** Estrogen receptor subtype ER β mediated inhibitory effect of estrogen on the epileptiform burst activities in cultured hippocampal neurons. X. LIU*; G. WANG; Y. WANG; X. WANG. *Zhongshan Hospital, Fudan Univ., Fudan Univ.*
- 1:00 U2 **53.09** Targeting inflammatory prostaglandin signaling: defining a therapeutic window to treat status epilepticus. J. JIANG*; M. YANG; Y. QUAN; T. GANESH; A. ROJAS; N. LELUTIU; R. DINGLEDINE. *Emory Univ. Sch. of Med.*
- 2:00 U3 **53.10** Activation of kappa opioid receptors reduces seizure activity in a mouse model of temporal lobe epilepsy. L. ZANGRANDI*; C. SCHWARZER. *Innsbruck Med. Univ.*
- 3:00 U4 **53.11** Transiently silencing recently born neurons in the adult hippocampus results in increased seizure susceptibility and decreased performance in the Y-maze. L. A. SHAPIRO*; S. MUKHERJEE. *Texas A&M Univ. COM, Texas A&M Univ. COM.*
- 4:00 U5 **53.12** Neuroprotection by glycyrrhizin in the kainic acid-induced epileptogenic animal by suppressing HMGB1 induction and release. J. LEE*; L. LUO; Y. JIN; H. LEE; I. KIM; H. LEE; P. HAN. *Inha Univ. Sch. Med., Nano Sci. and Brain Dis. Res.*
- 1:00 U6 **53.13** Identification of a potential target for the treatment of temporal lobe epilepsy. L. YU*; D. POLYGALOV; T. J. MCHUGH. *RIKEN Brain Sci. Inst.*
- 2:00 U7 **53.14** The neuroprotective role of gap junctions in hypoglycemic and glucose reperfusion seizures. S. R. SUGUMAR*; C. M. FLOREZ; A. TONKIKH; L. ZHANG; P. CARLEN. *TWRI, Univ. of Toronto.*

POSTER

053. Epilepsy: Anticonvulsant Targets and Treatments

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 T12 **53.01** Antagonism of complement C5aR1 activation: A new approach for antiepileptic drugs. M. J. BENSON*; N. K. THOMAS; K. TAN; T. WOODRUFF; K. BORGES. *The Univ. of Queensland.*
- 2:00 T13 **53.02** The Role of Proteolysis in Epileptogenesis. M. I. GONZALEZ*; P. LAM. *Univ. of Colorado, Denver.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 U8 **53.15** Behavioral improvements after ketogenic diet feeding in BTBR mouse model of autism are not due to alleviation of a seizure phenotype. S. A. MASINO*; U. SANDAU; J. M. RHO; M. KAWAMURA, Jr.; D. BOISON; D. N. RUSKIN. *Trinity Col., Legacy Res. Inst., Univ. of Calgary Fac. of Med., Jikei Univ. Sch. of Med.*
- 4:00 U9 **53.16** Ketogenic diets and neuropathic pain. D. N. RUSKIN*; J. A. FORTIN; M. I. MURPHY; S. A. MASINO. *Trinity Col.*
- 1:00 U10 **53.17** Ketogenic diet exerts antiepileptogenic properties in adult mice. K. K. AKULA; P. SINGER; S. Q. COFFMAN; M. R. ZHANG; S. A. MASINO; D. BOISON*. *Legacy Res. Inst., Trinity Col., Legacy Res. Inst.*
- 2:00 U11-DP4 **53.18** Optogenetic activation of superior colliculus attenuates experimental seizures. P. A. FORCELLI*; C. SOPER; K. GALE. *Georgetown Univ.*
- 3:00 U12 **53.19** Optogenetic stimulation of cholinergic mesopontine neurons for preventing cortical dysfunction during seizures. M. FURMAN*; Q. ZHAN; B. A. LERNER; J. MENG; J. E. MOTELow; W. LI; I. B. WITTEN; K. DEISSEROTH; J. A. CARDIN; H. BLUMENFELD. *Yale Univ., Princeton Univ., Stanford Univ.*
- 4:00 U13 **53.20** Persistence and termination of absence epileptic seizures: The role of striatal feedforward inhibition. T. ARAKAKI*; A. LEBLOIS; M. CHIPAUX; S. CHARPIER; D. HANSEL. *Univ. Paris Descartes, Paris Descartes Univ., Res. Ctr. of the Inst. for Brain and Spinal Cord, Lab. de Neurophysique et Physiologie.*
- 1:00 U14 **53.21** Selective expression of channelrhodopsin-2 in brainstem cholinergic neurons in a rat model of complex partial seizures. Q. ZHAN*; M. FURMAN; B. A. LERNER; J. MENG; J. E. MOTELow; W. LI; I. B. WITTEN; K. DEISSEROTH; J. A. CARDIN; H. BLUMENFELD. *Yale Univ., Xiangya Hospital, Central South Univ., Princeton Univ., Stanford Univ.*
- 2:00 U15 **53.22** Temporal rearrangement of pre-ictal spike discharges by low frequency electrical stimulation: Potential application in seizure prediction. D. C. MEDEIROS*; L. B. OLIVEIRA; F. A. G. MOURÃO; C. P. BASTOS; G. S. PEREIRA; E. M. A. M. MENDES; M. F. D. MORAES. *Federal Univ. of Minas Gerais.*
- 3:00 U16 **53.23** Frequency-dependent effects of transcranial magnetic stimulation on penicillin-induced seizures in rats. Y. LEE; K. LI; L. FRANIC; J. GONZALEZ-MARTINEZ; V. LIN; I. NAJM; C. LIN*. *Cleveland Clin., Case Western Reserve Univ., Cleveland Clin., Cleveland Clin.*
- 4:00 U17 **53.24** Stimulating intralaminar thalamus during complex partial seizures to restore normal cortical activity. J. E. MOTELow*; A. GUMMADAVELLI; W. LI; Q. ZHAN; B. G. SANGANAHALLI; M. FURMAN; F. HYDER; H. BLUMENFELD. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med.*
- 1:00 U18 **53.25** Decreased choline in frontal cortex and thalamus in partial limbic seizures: mechanism of depressed consciousness. W. LI; J. MOTELow; G. LIU; A. GUMMADAVELLI; Z. ZAYYAD; H. S. LEE; Q. ZHAN; A. M. MISHRA; R. N. S. SACHDEV; B. G. SANGANAHALLI; M. FURMAN; D. ENGLot; F. HYDER; H. BLUMENFELD*. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med., Univ. of California - San Francisco, Yale Univ. Sch. of Med.*
- 2:00 V1 **53.26** Cytosolic carbonic anhydrases in the control of GABAergic excitation and febrile seizures. E. M. RUUSUVUORI*; A. K. HUEBNER; I. KIRILKIN; A. YUKIN; P. BLAESSE; M. HELMY; M. EL MUAYED; J. C. HENNINGS; P. HOTULAINEN; J. VOPIO; C. HÜBNER; K. KAILA. *Univ. Helsinki, Inst. of Human Genet., Inst. of Physiol., Neurosci. Ctr.*

POSTER

054. Ischemia: Recovery

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 V2 **54.01** Modeling post-stroke dementia in mice: B-lymphocyte dependent cognitive deficits appear weeks after stroke. M. S. BUCKWALTER*; M. SOLE; R. C. AXTELL; T. NGUYEN; G. J. SOLER-LLAVINA; L. N. QUACH; J. HAN; A. T. SHAH; L. STEINMAN; F. M. LONGO; R. MALENKA; K. P. DOYLE. *Stanford Med. Sch., Stanford Med. Sch., Neurosciences Inst., Stanford Med. Sch.*
- 2:00 V3 **54.02** DL-3-n-butylphthalide increases arteriogenesis after focal ischemic stroke. D. CHEN; X. GU; S. YU; L. WEI*. *Emory Univ., Emory Univ.*
- 3:00 V4 **54.03** Tumor necrosis factor (TNF α) and post-stroke plasticity in aged mice. M. LIGUZ-LECZNA*; R. ZAKRZEWSKA; M. KOSSUT. *Nencki Inst. Exp Biol, Univ. of Social Sci. and Humanities.*
- 4:00 V5 **54.04** The expression of pericyte PDGFR β is regulated by basic FGF after ischemic stroke. ; K. NAKAMURA; K. ARIMURA; A. NISHIMURA; N. MAKIHARA; Y. WAKISAKA; J. KURODA; M. KAMOUCHI; T. KITAZONO. *Kyushu Univ.*
- 1:00 V6 **54.05** • Intravenous human mesenchymal precursor stem cells improve functional recovery and neuronal activity in a rat stroke model. T. M. HALLAM*; J. REN; D. K. BARRILE; M. DAVENPORT; R. WU; S. P. FINKLESTEIN; M. NEDELMAN; P. KULKARNI; S. ITESCU; L. GOLDEN. *Mesoblast, Biotrofix, Inc., Ekam Imaging.*
- 2:00 V7 **54.06** Improved methods for longitudinal motor mapping after stroke in mice: Automated movement tracking with accelerometers, and chronic EEG recording in a bilateral cranial window preparation. G. SILASI*; T. HARRISON; J. BOYD; J. LEDUE; T. H. MURPHY. *Univ. of British Columbia.*
- 3:00 V8 **54.07** Choosing the right rehabilitation paradigm: Enhancement and manipulation of forelimb motor function after stroke by combined application of Anti-Nogo immunotherapy and training. A. E. WAHL*; W. OMLOR; S. MUSALL; J. CHEN; H. ZHENG; A. SCHRÖTER; M. GULLO; H. KASPER; B. OMMER; F. HELMCHEN; M. E. SCHWAB. *Brain Res. Institute, Univ. and ETH Zurich, Univ. of Heidelberg, Heidelberg Interdisciplinary Ctr. for Scientific Computing, ETH, Inst. for Biomed. Imaging.*
- 4:00 V9 **54.08** Role of vasopressin receptor antagonist (conivaptan) in prevention and treatment of brain edema after middle cerebral artery occlusion in mice. S. ANSARI*; V. HEDNA; P. CAI; M. WATERS; S. DORE. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*
- 1:00 V10 **54.09** Activity-dependent mechanisms of circuit reorganization during limb-overuse after stroke. E. H. NIE*; S. T. CARMICHAEL. *UCLA, UCLA Sch. of Med.*

- 2:00 V11 **54.10** The exercise at early stage after stroke enhanced the recovery of memory function via BDNF elevation in the hippocampus in stroke model rats. N. HIMI; H. TAKAHASHI; N. OKABE; T. KOGA; E. NAKAMURA; F. LU; T. SHIROMOTO; K. NARITA*; O. MIYAMOTO. *Kawasaki Med. Sch., Kawasaki Univ. Med. Welfare.*
- 3:00 V12 **54.11** Extended treatment window exists for improving sensorimotor recovery using anti-Nogo-A immunotherapy in adult rats with chronic stroke impairments. K. M. PODRAZA*; S. Y. TSAI; Y. MEHTA; V. HUSAK; E. LIPPMANN; A. E. MARINOPOULOS; H. SHEKHANI; G. L. KARTJE. *Neurosci. Program, Loyola Univ. Chicago, Edward J. Hines Veteran Affairs Hosp., Loyola Univ. Chicago Stritch Sch. of Med., Loyola Univ. Chicago Stritch Sch. of Med., Loyola Univ. Chicago, Loyola Univ. Chicago, Loyola Univ. Chicago.*
- 4:00 W1 **54.12** *In vivo* Channelrhodopsin-2 stimulation and voltage-sensitive dye imaging in a mouse model of stroke reveals preserved functional connections posterior to the lesion. D. H. LIM*; J. LEDUE; M. H. MOHAJERANI; T. H. MURPHY. *Univ. of British Columbia.*
- 1:00 W2 **54.13** Reorganization of brain network after capsular infarct in rat model: Longitudinal microPET and behavioral study. D. KIM*; S. JUN; R. KIM; Y. SHIN; P. R. NETO; H. KIM*. *Gwangju Inst. of Sci. and Technol., Gwangju Inst. of Sci. and Technol., Pusan Natl. Univ. Sch. of Med., Douglas Mental Hlth. Univ. Institute, McGill Univ.*
- 2:00 W3 **54.14** ▲ Effects of "good" limb training on long-term rehabilitation of motor function following ischemic stroke in C57BL/6 mice. K. CHEFFER*; A. KERR. *Illinois Wesleyan Univ.*
- 3:00 W4 **54.15** Gender disparities in hemeoxygenase 1 following permanent ischemic brain injury. J. TULSULKAR*; Z. SHAH. *Univ. of Toledo.*
- 4:00 W5 **54.16** Delayed axonal degeneration in the Wlds transgenic mouse does not promote functional recovery following ischemic injury. A. O'BRYANT*; A. M. STOWE; E. J. PLAUTZ; M. P. GOLDBERG. *Univ. of Texas Southwestern, Univ. of Texas Southwestern.*
- 1:00 W6 **54.17** An automated reach task for mouse research in ischemic stroke. A. BECKER*; M. P. GOLDBERG; E. MEYERS. *UT Southwestern, Univ. of Texas at Dallas.*
- 2:00 W7 **54.18** Angiocrine signaling factor thymic stromal lymphopoietin regulates post-stroke neurogenesis. A. J. BRUMM*; M. MACHNICKI; G. COPPOLA; D. GESCHWIND; S. T. CARMICHAEL. *UCLA.*
- 3:00 W8 **54.19** WNT7A in post-stroke neurogenesis and brain repair. T. B. LENGNING*; A. J. BRUMM; S. T. CARMICHAEL. *UCLA Neurol., Univ. Med. Ctr. Hamburg-Eppendorf.*
- 2:00 W10 **55.02** Neural correlates of functional recovery in sub-acute post-stroke rehabilitation. R. OSU*; Y. ISOGAYA; H. KURASHIGE; S. SAKATA; K. HONAGA; K. KONDO; Y. OTAKA. *ATR Computat. Neurosci. Labs, Tokyo Bay Rehabil. Hosp., Keio Univ.*
- 3:00 W11 **55.03** Saccadic adaptation in hemianopia : A new rehabilitation method? D. A. LÉVY-BENCHETON*; D. PÉLISSON; M. PROST; S. COURTOIS; R. SALEMME; L. PISELLA; C. TILIKETE. *CRNL, Hospices Civils de Lyon, Hôpital Neurologique, Lyon, France, Hospices Civils de Lyon, Henry Gabrielle, Lyon, France.*
- 4:00 W12 **55.04** Pharmacological inhibition of VEGFR-2 has differential effects on behavioral recovery and cortical remapping dependent on presence or absence of diabetes during stroke. K. A. TENNANT*; K. THOMPSON; K. LOCKHART; C. E. BROWN. *Univ. of Victoria, Univ. of Victoria.*
- 1:00 W13 **55.05** Histone deacetylase inhibitors prevent loss of axon function due to ischemia and promote recovery across the lifespan. S. P. MURPHY*; R. TEKNIPP; S. BHATTA; R. S. MORRISON; S. BALTAN. *Univ. Washington Schl Med., Cleveland Clin.*
- 2:00 W14 **55.06** Sprouting of brainstem-spinal tracts in response to unilateral motor cortex stroke in mice. L. C. BACHMANN*; N. T. LINDAU; P. FELDER; M. E. SCHWAB. *Hirnforschung Zürich, Brain Res. Institute, Dept. Hlth. Sci. and Technology, ETH Zurich.*
- 3:00 W15 **55.07** The specific matrix metalloproteinase inhibitor batimastat (BB-94) prevents cavitation in a rat model of lacunar infarction. W. WALZ*; K. GOWRIBAI; F. S. CAYABYAB. *Univ. Saskatchewan, Univ. Saskatchewan.*
- 4:00 W16 **55.08** Tubastatin A, a selective histone deacetylase 6 inhibitor, mitigates brain damage and facilitates functional recovery in a rat model of ischemic stroke. Z. WANG*; Y. LENG; J. BERGMAN; F. YU; P. LEEDS; A. KOZIKOWSKI; D. CHUANG. *Mol. Neurobiol. Section, NIH/NIMH, Drug Discovery Program, Univ. of Illinois at Chicago, Dept. of Medicinal Chem. & Pharmacognosy.*
- 1:00 W17 **55.09** ▲ BDA quantification of neuronal sprouting following hydrogel and BDNF treatment post-stroke. R. RAJAI*; J. OVERMAN; H. CHUN; S. T. CARMICHAEL. *UCLA.*
- 2:00 W18 **55.10** L-3-n-butylphalide promotes neurogenesis and neuroplasticity after focal cerebral ischemia in rats. X. WANG*; L. YANG; J. LI; H. LEI; X. RONG; D. LIU; M. ZHANG; L. WANG; Y. PENG. *Inst. Materia Med.*
- 3:00 X1 **55.11** Activated protein C analog promotes neurogenesis and improves neurological outcome after focal ischemic stroke in mice via protease activated receptor 1. Y. WANG*; Z. ZHAO; N. CHOW; T. ALI; J. H. GRIFFIN; B. V. ZLOKOVIC. *Keck Sch. of Medicine, USC, ZZ Biotech L.L.C., The Scripps Res. Inst.*
- 4:00 X2 **55.12** Network predictors of recovery after stroke. S. RIZK*; M. DI PIETRO; C. MAGNIN; N. GILLABERT; J. PIGNAT; A. SCHNIDER; A. G. GUGGISBERG. *Hôpital Beau-Séjour, Univ. Hosp. of Geneva.*
- 1:00 X3 **55.13** Bone marrow stromal cell transplantation ameliorates motor deficit in rat lacunar model. H. SHICHINOHE*; T. YAMAUCHI; H. SAITO; D. SHINBO; M. MIYAMOTO; K. KAZUMATA; N. NAKAYAMA; K. HOUKIN; S. KURODA. *Hokkaido Univ., Univ. of Toyama.*

POSTER

055. Recovery from Stroke: Sprouting, Neurogenesis, and Rehabilitation

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 W9 **55.01** Timing is everything: Rehabilitation is initiated early after stroke, but most motor rehabilitation trials are not. C. M. STINEAR*; S. J. ACKERLEY; W. D. BYBLOW. *Univ. of Auckland, Univ. of Auckland, Univ. of Auckland.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

056. Stroke Recovery: Pharmacologic and Non-Pharmacologic Treatment

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 X4 **56.01** ● Post-ischemic synaptic remodeling is modulated by transplanted human neural stem cells. T. HIU; T. BLISS*; N. MANLEY; E. H. WANG; G. WANG; K. D. MICHEVA; A. OLSON; J. BERRY; G. SUN; S. J. SMITH; G. K. STEINBERG. *Stanford Univ., Stanford Univ., Stanford Univ.*
- 2:00 X5 **56.02** Comparison of transcranial magnetic stimulation and functional magnetic resonance imaging maps in stroke patients. A. S. PERES*; V. O. SOUZA; K. C. MAZZETTO-BETTI; M. C. GARCIA; C. D. VARGAS; O. BAFFA; D. B. DE ARAUJO. *Brain Inst. - UFRN, Univ. of São Paulo, Univ. of São Paulo, Federal Univ. of Rio de Janeiro, Federal Univ. of Rio de Janeiro.*
- 3:00 X6 **56.03** Delayed long-term administration of the caspase inhibitor Q-VD-OPH reduced tissue loss but only transiently ameliorated functional deficits induced by neonatal hypoxia-ischemia. C. ZHU*; W. HAN; Y. SUN; X. WANG; K. BLOMGREN. *Ctr. For Brain Repair & Rehabil., Karolinska Institutet, Zhengzhou Univ., Univ. of Gothenburg.*
- 4:00 X7 **56.04** Stimulation of the dentate nucleus enhances cortical excitability in an endothelin-1 induced stroke rat model. H. TRUONG*; H. PARK; J. COOPERRIDER; J. T. GALE; A. MACHADO. *Cleveland Clin.*
- 1:00 X8 **56.05** Magnetic stimulation of the central nervous system *in vivo* with a microcoil. H. PARK*; J. A. KALTENBACH; N. F. MANZOOR; A. G. MACHADO; G. BONMASSAR; J. T. GALE. *Cleveland Clin., Cleveland Clin., Cleveland Clin., Massachusetts Gen. Hosp.*
- 2:00 X9 **56.06** Intra-arterial delivery of neural progenitor cells after focal ischemia in the adult rat. I. LEI*; G. GOWING; P. RAJPUT; J. A. LAMB; C. N. SVENDSEN; P. D. LYDEN. *Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr.*
- 3:00 X10 **56.07** Intracarotid injection of adipose tissue-derived platelet-derived growth factor receptor β -positive cells in rat and canine model. K. JUNG*. *Seoul Natl. Univ. Hosp.*
- 4:00 X11 **56.08** Bmp-Smad1 signaling regulates neural stem cell homeostasis and injury response to cerebral ischemia-reperfusion. L. CHEN*; R. FRIEDEL; H. ZOU. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*
- 1:00 X12 **56.09** How does training at fast or slow movement speed affect motor learning in individuals affected by stroke? U. HAMMERBECK; D. HOAD; N. YOUSIF; P. HAMMOND; R. GREENWOOD; J. DIEDRICHSEN; J. C. ROTHWELL*. *Inst. of Neurol., Imperial Col. London, Inst. of Cognitive Neurosci., Inst. Neurol.*
- 2:00 X13 **56.10** Compensatory corticospinal projections in the adult rat after unilateral stroke and anti Nogo-A therapy. N. T. LINDAU*; B. J. BAENNINGER; N. A. GOOD; M. GULLO; L. C. BACHMANN; M. L. STARKEY; M. E. SCHWAB. *Brain Res. Inst., Balgrist Univ. Hosp.*
- 3:00 X14 **56.11** ● Effects of CN-NINM intervention on chronic stroke: A case study. Y. P. DANILOV*; K. L. SKINNER; Y. I. VERBNI; A. M. SUBBOTIN; K. A. KACZMAREK; M. E. TYLER. *Univ. of Wisconsin-Madison.*

- 4:00 X15 **56.12** ● Bursting and regular chronic cerebellar stimulation modulate perilesional cortical reorganization as well as expression of synaptophysin and markers of long-term potentiation. A. G. MACHADO*; J. COOPERRIDER; H. FURMAGA; E. PLOW; H. PARK; J. GALE. *Cleveland Clin., Cleveland Clin.*
- 1:00 X16 **56.13** Recovery of spinal inhibition between ankle muscles after botulinum neurotoxin A in stroke patients. V. MARCHAND-PAUVERT*; L. GIBOIN; A. LACKMY-VALLÉE; C. AYMARD. *ER6 UPMC, Fondation hospitalière Ste Marie.*
- 2:00 X17 **56.14** Spike frequency and local field modulation of the rodent deep cerebellar nuclei during a skilled reaching task. J. COOPERRIDER*; J. T. GALE; R. GOPALAKRISHNAN; H. TRUONG; H. PARK; A. G. MACHADO. *Cleveland Clin.*
- 3:00 X18 **56.15** ● Correlating fractional anisotropy in the corticospinal tract with stroke recovery: Preliminary results. L. Y. LIN*; L. RAMSEY; N. METCALF; A. CALLEJAS; A. BALDASSARRE; J. RENGACHARY; G. SHULMAN; J. S. SHIMONY; M. CORBETTA. *Washington Univ. In St. Louis Sch. of Med., Washington Univ. In St. Louis Sch. of Med., Washington Univ. In St. Louis Sch. of Med.*
- 4:00 Y1 **56.16** Nicergoline decreases the function of norepinephrine transporter. H. ITOH*; Y. MATSUSHIMA; Y. TOYOHIRA; S. UENO; S. SAEKI; N. YANAGIHARA; K. HACHISUKA. *Univ. of Envrn. and Occup. Hlth., Univ. of Occup. and Envrn. Hlth., Univ. of Occup. and Envrn. Hlth.*
- 1:00 Y2 **56.17** The role of zolpidem in post-stroke recovery. R. YELAHANKA NAGARAJA*; L. BOOTHAMNBURRELL; K. PARKER; A. N. CLARKSON. *Universtiy of Otago, Univ. of Otago, Univ. of Otago.*

POSTER

057. Excitotoxicity: Mechanisms and Therapeutic Strategies

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 Y3 **57.01** The role of store-operated calcium entry in oxidative stress. A. METHNER*; N. HENKE; P. ALBRECHT; M. RYAZANTSEVA; E. KAZNACHEYEVA; J. LEWERENZ; P. MAHER. *Johannes Gutenberg Univ. Mainz, Heinrich-Heine Univ., Inst. of Cytology, Univ. of Ulm, Salk Inst.*
- 2:00 Y4 **57.02** Role of anion channels in NMDA-induced oxidative stress. P. S. BAXTER*; A. M. BRENNAN-MINNELLA; R. C. REYES; R. A. SWANSON. *Univ. Of California San Francisco.*
- 3:00 Y5 **57.03** Intracellular acidification prevents NMDA - induced neuronal superoxide production and cell death by blocking NOX2 activity. R. A. SWANSON*; T. I. LAM; A. M. BRENNAN-MINNELLA; Y. SHEN; S. WON. *U.C.S.F.*
- 4:00 Y6 **57.04** Neuroprotection elicited by activation of synaptic NMDA receptors involves calpain-mediated degradation of PHLPP1 and Akt and ERK 1/2 activation. Y. WANG*; X. BI; M. BAUDRY. *Western Univ. of Hlth. Sci.*
- 1:00 Y7 **57.05** The role of Bax in Ca^{2+} handling and bioenergetics during NMDA-induced excitotoxicity. B. D'ORSI*; S. M. KILBRIDE; S. PEREZ ALVAREZ; H. DÜSSMANN; J. H. M. PREHN. *Royal Col. of Surgeons In Ireland.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 Y8 **57.06** The NMDA receptor glycine site mediates neuroprotection against traumatic brain injury by xenon, but not argon. K. HARRIS; S. P. ARMSTRONG; R. CAMPOS-PIRES; L. KIRU; N. P. FRANKS; R. DICKINSON*. *Imperial Col. London, Imperial Col. London, Imperial Col. London.*
- 3:00 Y9 **57.07** Cellular and molecular correlates of glutamate-induced excitotoxic injury in mouse stem cell-derived neurons. J. H. MCDONOUGH*, Jr.; I. GUT; P. MCNUTT; P. BESKE; K. HUBBARD; M. LYMAN. *US Army Med. Res. Inst. Chem Def, US Army Med. Res. Inst. Chem Def.*
- 4:00 Y10 **57.08** ▲ Taurine neuroprotection against injury to hippocampal slices. N. SHAH*; K. L. PANIZZON; R. A. WALLIS. *VA Greater Los Angeles Healthcare Syst., VA Greater Los Angeles Healthcare System, UCLA.*
- 1:00 Z1 **57.09** ● Electronically controlled release of nanoparticles rescues neurons from an excitotoxic environment. R. SAIGAL*; A. EDIRIWICKREMA; C. MILLAN; E. WOODARD; C. PREGO RODRIGUEZ; R. LANGER. *UCSF, Yale Univ., ETH, New England Baptist Hosp., Univ. de Santiago de Compostela, MIT.*
- 2:00 Z2 **57.10** Effects of dopamine on PrP^C expression and degradation pathways. K. S. LEE*; M. H. M. DA LUZ; M. A. P. DA SILVA. *Univ. Federal De Sao Paulo, UNIFESP.*

POSTER

058. Interneuron Deficits in Models of Psychiatric Disorders

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 Z3 **58.01** Regional heterogeneity in Parvalbumin expressing interneuron density, GABAergic inhibition and metabolic activity in the cyclin D2 null model of interneuron deficits. A. GILANI*; C. HO; M. O. CHOCHAN; M. ROSS; H. MOORE. *Columbia University, Biol. Sci., SUNY-Downstate Med. Ctr., Barnard Col., New York State Psychiatric Inst., Weill Cornell Med. Col., Columbia Univ.*
- 2:00 Z4 **58.02** Interneuron precursor transplants into the adult hippocampus reverse increased midbrain dopamine cell function associated with dysregulated hippocampal activity in the cyclin D2 null mouse. M. O. CHOCHAN; A. I. GILANI; B. P. INBAR*; J. CASTRILLON; J. P. WISNER; M. E. ROSS; S. A. ANDERSON; H. MOORE. *New York State Psychiatric Inst., Columbia Univ., Columbia Univ., Weill Cornell Med. Col., Children's Hosp. of Philadelphia and Univ. of Pennsylvania Med. Sch.*
- 3:00 Z5 **58.03** Deficient prepulse inhibition and abnormal startle-response in mice deficient in parvalbumin-expressing cortical interneurons: Relevance to schizophrenia. S. P. PASKEWITZ*; A. I. GILANI; B. P. INBAR; M. ROSS; H. MOORE. *New York State Psychiatric Inst., Columbia Univ., Weill Cornell Med. Col., Columbia Univ.*
- 4:00 Z6 **58.04** Deletion of the $\alpha 7$ nicotinic acetylcholine receptor gene leads to synaptic NMDA receptor hypofunction and impairs development of cortical glutamatergic and GABAergic circuits. H. LIN*; F. HSU; B. H. BAUMANN; D. A. COULTER; D. R. LYNCH. *The Children's Hosp. of Philadelphia.*
- 1:00 Z7 **58.05** Impaired parvalbumin interneuron function and schizophrenia-like behavior in Dlx5/6+/- mice. K. K. CHO*; J. L. R. RUBENSTEIN; V. S. SOHAL. *UCSF.*

- 2:00 Z8 **58.06** mPFC inhibitory interneuron function in a DISC1 deletion mouse. K. DELEVICH*; J. TUCCIARONE; J. HUANG; H. JAARO-PELED; A. SAWA; B. LI. *Cold Spring Harbor Lab., Johns Hopkins Univ.*
- 3:00 Z9 **58.07** Differential effects of up-regulating metabotropic glutamate receptor activity on cognition in the offspring of Poly(C)- and saline-treated rats. S. A. BALLENDINE*; Q. GREBA; J. G. HOWLAND. *Univ. of Saskatchewan.*
- 4:00 Z10 **58.08** Behavioral characterization of glutamate decarboxylase 67 (GAD67) heterozygous knockout mice. K. FUJIHARA*; H. MIWA; M. MIKUNI; Y. YANAGAWA. *Gunma Univ. Grad. Sch. of Med., Gunma Univ. Grad. Sch. of Med., Japan Sci. and Technol. Agency.*
- 1:00 Z11 **58.09** Biochemical changes could underlie GABAergic system alterations induced by neonatal X-radiation exposure. L. G. CACERES; G. E. SARACENO; S. L. URAN; F. CAPANI; L. R. GUELMAN*. *Fac Med, UBA-CEFYBO-CONICET, Inst. Inv. Cardiol. Prof. Alberto Taquini, UBA-CONICET.*
- 2:00 Z12 **58.10** Validation of pre-clinical disease models for schizophrenia. J. T. PUOLIVALLI*; R. PUSSINEN; T. HEIKKINEN; J. OKSMAN; K. TASKINEN; A. NURMI. *Charles River Discovery Res. Services.*

POSTER

059. Mood Disorders: Animal Models I

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 Z13 **59.01** Histone arginine methylation in the nucleus accumbens in response to chronic cocaine and chronic stress. D. DAMEZ WERNO*; K. N. SCOBIE; H. SUN; C. DIAS; H. CATES; N. SHAO; A. M. GANCARZ; I. MAZE; R. L. NEVE; D. M. DIETZ; L. SHEN; E. GUCCIONE; D. C. ALLIS; E. J. NESTLER. *Mount Sinai Sch. of Med., Univ. at Buffalo, The Rockefeller Univ., MIT, Inst. of molecular and cellular biology.*
- 2:00 Z14 **59.02** Epigenetic regulation of cocaine action in mouse nucleus accumbens. L. SHEN; J. FENG; M. WILKINSON; D. FERGUSON*; V. VIALOU; X. LIU; I. MAZE; N. SHAO; J. KOO; P. KENNEDY; C. DIAS; Q. LAPLANT; M. CAHILL; E. NESTLER. *Mount Sinai Sch. of Med., Rockefeller Univ.*
- 3:00 Z15 **59.03** β -catenin mediates the development of behavioral resilience. C. M. DIAS*; J. FENG; H. SUN; M. MAZEI-ROBISON; D. DAMEZ-WERNO; K. SCOBIE; N. SHAO; P. KENNEDY; V. VIALOU; R. BAGOT; M. CAHILL; D. FERGUSON; S. GHOSE; C. TAMMINGA; R. NEVE; L. SHEN; E. J. NESTLER. *Mount Sinai Sch. of Med., UT Southwestern, McGovern Brain Inst. at MIT.*
- 4:00 Z16 **59.04** Locus specific epigenetic reprogramming: Bidirectional regulation of the FosB gene using synthetic transcription factors *in vivo*. E. HELLER*; H. CATES; H. SUN; D. FERGUSON; R. NEVE; S. KNIGHT; F. ZHANG; S. ZHANG; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai, MIT, Sigma Aldrich, Sangamo Biosci.*
- 1:00 Z17 **59.05** Phosphorylation of Δ FosB at novel residues induces changes in transcriptional regulation and cocaine-elicited behavior. H. M. CATES*; M. L. PFAU; E. HELLER-MEZNIK; R. BAGOT; A. J. ROBISON; E. J. NESTLER. *Icahn Sch. of Med. At Mt. Sinai, Michigan State Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 Z18 **59.06** Ventral subiculum afferents to the nucleus accumbens regulate the behavioural sequelae of social defeat stress. R. C. BAGOT*; I. S. MAZE; X. LIU; C. J. PEÑA; E. J. HARRIGAN; L. SHEN; E. J. NESTLER. *Mt Sinai Sch. of Med., The Rockefeller Univ., Icahn Sch. of Med. at Mount Sinai.*
- 3:00 AA1 **59.07** Postnatal over-expression of estrogen receptor-alpha in the medial preoptic area of females reverses the effects of low maternal care. C. J. PENNA*; F. A. CHAMPAGNE. *Mount Sinai Sch. of Med., Columbia Univ.*
- 4:00 AA2 **59.08** MGE transplantation limits the rewarding effects of cocaine in mice undergoing cocaine place preference testing. E. A. RIBEIRO*; J. KOO; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai.*
- 1:00 AA3 **59.09** Gadd45g is a critical mediator in the social defeat model of depression. J. KOO*; J. FENG; R. NEVE; M. LOBO; E. NESTLER. *Mount Sinai Sch. of Med., MIT, Univ. of Maryland Sch. of Med.*
- 2:00 AA4 **59.10** Role of chromatin remodeling in the mouse nucleus accumbens in preclinical models of depression and cocaine addiction. H. SUN*; D. DAMEZ-WERNO; K. SCOBIE; N. SHAO; K. WRIGHT; C. DIAS; J. KOO; I. MAZE; P. KENNEDY; E. MOUZON; D. DIETZ; R. NEVE; D. C. ALLIS; G. TURECKI; C. TAMMINGA; M. KABBAJ; P. VARGA-WEISZ; L. SHEN; E. J. NESTLER. *Mount Sinai Sch. of Med., Florida State Univ., The Rockefeller Univ., State Univ. of New York at Buffalo, MIT, McGill Univ., UT Southwestern, Babraham Inst.*
- 3:00 AA5 **59.11** Role of poly(ADP-ribosyl)ation in drug-seeking behavior. K. N. SCOBIE*; D. DAMEZ-WERNO; H. SUN; A. GANCARZ; N. SHAO; C. DIAS; G. L. SCHROEDER; C. H. PANGANIBAN; D. M. DIETZ; J. KOO; L. SHEN; P. CAIAFA; R. L. NEVE; E. J. NESTLER. *Mount Sinai Sch. of Med., Mount Sinai Sch. of Med., SUNY Buffalo, Mount Sinai Sch. of Med., Sapienza Univ. of Rome, MIT.*
- 4:00 AA6 **59.12** GEF-small GTPase interactions in drug-mediated dendritic spine morphogenesis and behavioral reward. M. E. CAHILL*; H. SUN; J. KOO; R. NEVE; A. M. GANCARZ; G. L. SCHROEDER; D. M. DIETZ; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai, McGovern Inst. at Massachusetts Inst. of Technol., Univ. of Buffalo, The State Univ. of New York.*
- 1:00 AA7 **59.13** ● Viral or drug mediated enhancement of glutamate clearance via cortical glial glutamate transport GLT1 induced resiliency to stress: Characterisation of a new class of antidepressants acting through GLT1. M. BANASR; A. LEPACK; J. MALDONADO-AVILES; C. KISELYCZNYK; S. WILBER; R. DILEONE; K. TANAKA; R. DUMAN; G. SANACORA*. *Yale Univ., Tokyo Med. & Dent. Univ.*
- 2:00 AA8 **59.14** Pharmacological and optogenetic characterization of the critical PFC subregions underlying the rapid antidepressant actions of ketamine. M. FUCHIKAMI*; A. M. THOMAS; N. M. FOURNIER; B. B. LAND; R. J. DILEONE; R. LIU; G. K. AGHAJANIAN; R. S. DUMAN. *Yale Univ. Sch. of Med.*
- 3:00 AA9 **59.15** Investigating the antidepressant actions of S6 Kinase signaling and role in the neuronal and behavioral resilience to stress. J. M. DWYER*; J. MALDONADO-AVILES; A. E. LEPACK; R. J. DILEONE; M. BANASR; R. S. DUMAN. *Yale Univ.*
- 4:00 AA10 **59.16** REDD1 is essential for stress-induced synaptic loss and depressive behavior. K. T. OTA*; R. LIU; B. VOLETI; J. G. MALDONADO-AVILES; V. DURIC; M. IWATA; D. A. LEWIS; C. A. STOCKMEIER; R. J. DILEONE; G. K. AGHAJANIAN; R. S. DUMAN. *Yale Univ. Sch. of Med., Des Moines Univ., Univ. of Pittsburgh, Univ. of Mississippi Med. Ctr.*
- 1:00 AA11 **59.17** ● GABAergic anomalies in an animal model of depression: Characterization of GABAergic marker expression in the chronic unpredictable stress model. A. LEPACK; M. BANASR; V. DURIC*; J. MALDONADO-AVILES; R. DILEONE; R. S. DUMAN; G. SANACORA. *Yale Univ., Des Moines Univ.*
- 2:00 AA12 **59.18** ● Interaction of GABA agonists with antidepressant-like effects of ketamine. C. L. KISELYCZNYK*; M. BANASR; G. SANACORA. *Yale Univ.*
- 3:00 AA13 **59.19** Behavioral effects of ketamine require L-type calcium channel activation and BDNF release. A. LEPACK*; M. FUCHIKAMI; J. M. DWYER; M. BANASR; R. S. DUMAN. *Yale.*
- 4:00 AA14 **59.20** Depression and diabetes comorbidity: First steps towards identifying the neural underpinnings in rat models. S. DUTHEIL*; R. TERWILLIGER; K. OTA; R. DUMAN. *Yale Univ.*
- 1:00 AA15 **59.21** ● Psychological stress activates the inflammasome via release of ATP and stimulation of the P2X7 receptor. M. IWATA*; K. T. OTA; X. LI; F. SAKAUE; S. DUTHEIL; M. BANASR; T. YAMAUCHI; K. RASMUSSEN; D. SON; G. SMAGIN; R. S. DUMAN. *Tottori Univ., Yale Univ. Sch. of Med., Lilly Pharmaceut., Lundbeck Res. USA.*
- 2:00 AA16 **59.22** ● Ablation of prefrontal parvalbumin neurons in mouse depression-related behaviors and antidepressant-like response to ketamine. C. KISELYCZNYK; M. BANASR; M. XU; N. FOURNIER; A. LEPACK; S. WILBER; G. SANACORA; C. J. PITTENGER*; R. DUMAN. *Yale Univ.*
- 3:00 AA17 **59.23** Behavioral effects of viral mediated deletion of fibroblast growth factor receptor 1 in medial prefrontal cortex. A. BECKER*; M. BANASR; R. S. DUMAN. *Yale Univ.*
- 4:00 AA18 **59.24** GFAP astrocyte-specific ablation in the mouse prefrontal cortex induces depressive-like and anxiety-like behaviors. M. BANASR*; M. XU; A. LEPACK; J. ZHANG; G. SANACORA; R. DUMAN; R. DUMAN; C. PITTENGER. *Yale Univ.*
- 1:00 BB1 **59.25** Selective loss of vascular endothelial growth factor from forebrain neurons impairs the behavioral and cellular actions of typical antidepressants. N. M. FOURNIER; R. S. DUMAN*. *Yale Univ. Sch. Med.*
- 2:00 BB2 **59.26** Brain circuits and muscarinic receptor subtypes involved in the rapid antidepressant effects of scopolamine. A. M. NAVARRIA*; B. VOLETI; K. OTA; A. LEPACK; S. DUTHEIL; M. FUCHIKAMI; R. S. DUMAN. *Yale Univ., Univ. of Catania - Sch. of Med.*
- 3:00 BB3 **59.27** ▲ Ketamine exerts antidepressant-like effects. H. NAKAMURA*; S. YONEDA; A. MIYAKE; T. KOYAMA; I. MIYAZAKI; M. ASANUMA; Y. KITAMURA; T. SENDO. *Okayama Univ., Dept. Brain Sci. Okayama Univ.*
- 4:00 BB4 **59.28** Involvement of the 5-HT1A receptor function on neurogenesis. Y. KITAMURA*; A. MIYAKE; S. HATTORI; T. KOYAMA; I. MIYAZAKI; M. ASANUMA; T. SENDO. *Okayama Univ. Hosp., Dept. Brain Sci. Okayama Univ.*

- 1:00 BB5 **59.29** • Lifelong neuroplastic and epigenetic effects of prenatal exposure to stress in rats. A. LUONI; A. BERRY; R. MASSART; F. CALABRESE; G. GUIDOTTI; P. GASS; F. CIRULLI; M. SZYF; M. A. RIVA*. *Univ. of Milan, Inst. Superiore di Sanità, McGill Univ. Med. Sch., Central Inst. of Mental Hlth. Mannheim, Med. Fac. Mannheim/Heidelberg Univ.*
- 2:00 BB6 **59.30** • Distinct effects of antidepressant treatment on anhedonia and inflammation in stressed rats. F. MACCHI; R. MOLTENI*; G. RACAGNI; M. PAPP; M. A. RIVA. *Univ. of Milan, Univ. of Catania, Univ. of Milan, Ctr. of Excellence on Neurodegenerative Dis., Inst. of Pharmacol.*

POSTER

060. Alcohol and Nicotine Interactions

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 BB7 **60.01** Brain volumes and neuropsychological measures: Interaction of smoking with alcoholism history. R. B. LUHAR*; Z. GRAVITZ; S. M. M. RUIZ; K. S. SAWYER; M. OSCAR-BERMAN. *Boston Univ. Sch. of Med., VA Boston Healthcare Syst., Athinoula A. Martinos Ctr. for Biomed. Imaging.*
- 2:00 BB8 **60.02** The kappa-opioid receptor prevents reinforcing and anxiolytic effects induced from self-administration of alcohol plus nicotine in adult, but not adolescent, rats. A. LARRAGA*; E. ALMAZ; E. NGUYEN; P. KAUR; J. D. BELLUZZI; F. M. LESLIE. *Univ. Calif, Irvine.*
- 3:00 BB9 **60.03** Cigarette smoke and/or ethanol during pregnancy: Susceptibility to nicotine in adolescent and adult mice. A. N. FREITAS*; A. DUTRA TAVARES; P. LEAL ROCHA; C. CARNEIRO FILGUEIRAS; A. C. MANHÃES; Y. DE ABREU VILLAÇA; A. RIBEIRO CARVALHO. *Univ. do Estado do Rio de Janeiro.*
- 4:00 BB10 **60.04** Nicotine enhances escalation of ethanol self-administration in alcohol dependent rats is associated with neural ensemble activation in different brain areas. R. M. LEÃO*; F. C. CRUZ; L. F. VENDRUSCOLO; C. S. PLANETA; O. GEORGE; B. T. HOPE; G. F. KOOB. *UNESP - Col. of Pharmaceut. Sci., Natl. Inst. on Drug Abuse, The Scripps Res. Inst.*
- 1:00 BB11 **60.05** Nicotine enhances Pavlovian conditioned responding to an ethanol-associated cue in rats. J. N. MADDUX*; F. LACROIX; N. CHAUDHRI. *Ctr. For Studies In Behavioral Neurobiology, Concordia Univ.*
- 2:00 BB12 **60.06** Nicotine decreases ethanol-induced dopamine signaling and increases ethanol self-administration via stress hormones. A. THOMAS*; W. M. DOYON; Y. DONG; A. OSTROUMOV; J. DANI. *Baylor Col. of Med.*
- 3:00 CC1 **60.07** Interactions between nicotine and ethanol in the development of conditioned place preference, a mouse model of reward. N. R. GUBNER*; C. L. CUNNINGHAM; T. J. PHILLIPS. *Oregon Hlth. & Sci. Univ., Portland Alcohol Res. Ctr., Portland VA Med. Ctr.*
- 4:00 CC2 **60.08** Ethanol inhibits GABA neurons in the ventral tegmental area and dopamine release in the nucleus accumbens via presynaptic $\alpha 6$ nicotinic receptors on GABA terminals. S. SHIN*; J. K. MABEY; D. N. WHITE; S. S. SANDOVAL; C. A. NIELSON; N. D. SCHILATY; D. H. TAYLOR; S. N. SUDWEEKS; J. G. EDWARDS; J. M. MCINTOSH; J. WU; S. STEFFENSEN. *Brigham Young Univ., Barrow Neurolog. Inst., Univ. of Utah.*

- 1:00 CC3 **60.09** Nicotinic acetylcholine receptors containing the $\alpha 6$ subunit contribute to ethanol activation of ventral tegmental area dopaminergic neurons. L. LIU*; R. ZHAO-SHEA; J. M. MCINTOSH; A. R. TAPPER. *Univ. of Massachusetts Med. Sch., Univ. of Utah.*
- 2:00 CC4 **60.10** Zebrafish htr7. H. SCHNEIDER*; J. M. ABARR; C. A. O'BRIEN; B. F. KOPECKY; D. R. BRUECK. *Depauw Univ., DePauw Univ.*
- 3:00 CC5 **60.11** The interaction of ethanol and nicotine in zebrafish. M. A. COUSIN*; A. R. WIINAMAKI; D. P. ARGUE; K. J. CLARK; S. C. EKKER; E. W. KLEE. *Mayo Clin.*

POSTER

061. Nicotine: Developmental Effects

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 CC6 **61.01** Inhalation of cigarette smoking-relevant nicotine aerosol reduces uterine artery blood flow and disrupts systemic hemodynamics in pregnant rats. X. M. SHAO; H. E. LÓPEZ-VALDÉS; J. LIANG; J. L. FELDMAN*. *UCLA, UCLA.*
- 2:00 CC7 **61.02** ▲ No effect of prenatal nicotine exposure on apneic frequency or duration in the early post natal period. J. A. MUDERY*; I. J. KIDDER; E. BAILEY. *Univ. of Arizona.*
- 3:00 CC8 **61.03** Nicotine-induced aberrations in the development of neural circuits. A. F. LOZADA*; D. JOHN; D. K. BERG. *Univ. California San Diego.*
- 4:00 CC9 **61.04** Prenatal nicotine exposure modifies sensorimotor-integration behaviors in adult 6-month old mice. S. E. SANTIAGO*; K. J. HUFFMAN. *UC Riverside, UC Riverside.*
- 1:00 CC10 **61.05** Impairment in myelination induced by 3R4F environmental tobacco smoke during postnatal early brain development in mice. L. H. TORRES*; P. L. COLETO; N. T. BALESTRIN; R. C. T. GARCIA; A. C. S. DURÃO; R. ANNONI; M. PACHECO-NETO; T. MAUAD; R. CAMARINI; L. R. G. BRITTO; T. MARCOURAKIS. *Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo.*
- 2:00 CC11 **61.06** Effect of chronic smoking on brain atrophy: assessment in a cohort of 1,184 healthy elderly. B. M. MAZOYER*; Q. DURIÉZ; F. CRIVELLO; N. TZOURIO-MAZOYER. *Umr5296, CNRS, CEA, UMR5296.*
- 3:00 CC12 **61.07** The role of innate anxiety-like Behavior, age and MAPK signaling on one-trial nicotine conditioned place preference. G. M. FERNANDEZ*; H. C. BERGSTROM; C. G. MCDONALD; R. F. SMITH. *George Mason Univ., Uniformed Services Univ. of the Hlth. Sci.*
- 4:00 CC13 **61.08** Effects of maternal undernutrition during lactation on nicotine susceptibility in adolescent mice. A. D. TAVARES*; A. L. N. FREITAS; J. D. SILVA; A. R. CARVALHO; E. P. S. CONCEIÇÃO; C. C. FILGUEIRAS; A. C. MANHAES; E. G. DE MOURA; P. C. LISBOA; Y. D. VILLAÇA. *Univ. Do Estado Do Rio De Janeiro.*
- 1:00 CC14 **61.09** Maternal consumption of a fat-rich diet stimulates central cholinergic activity and nicotine reward in offspring. I. MORGANSTERN*; O. LUKATSKAYA; S. MOON; W. GUO; J. SHAJI; O. KARATAYEV; S. LEIBOWITZ. *Rockefeller Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 DD1 **61.10** Dendritic remodeling in the nucleus accumbens emerges immediately following chronic adolescent nicotine exposure and is D1-dopamine receptor dependent. D. G. EHLINGER*; J. C. BURKE; G. M. FERNANDEZ; C. G. MCDONALD; H. C. BERGSTROM; L. D. CHROSNIK; R. F. SMITH. *George Mason Univ., Uniformed Services Univ. of the Hlth. Sci.*
- 3:00 DD2 **61.11** Long-lasting effects of adolescent nicotine exposure on cognitive function and neuronal development in mice. T. SUENAGA*; Y. OGAWA; H. MENG; Y. ISHIDA; D. NAKAHARA. *Tokyo Univ. and Grad. Sch. of Social Welfare, Hamamatsu Univ. Sch. of Med., Univ. of Miyazaki.*
- 4:00 DD3 **61.12** Early adolescent nicotine exposure has long-lasting effects on cocaine-induced behaviors in mice. M. ALAJAJI*; L. SIM-SELLEY; D. SELLEY; M. DAMAJ. *Virginia Commonwealth Univ.*
- 1:00 DD4 **61.13** Sensitization of D2 and 5-HT1A receptors mediate nicotine- and fluoxetine-induced alterations in adolescent dopaminergic drug responses. M. YUAN*; C. Y. MOJICA; A. J. CABRERA; C. R. SCURRAH; C. DUONG; P. T. TRAN; J. D. BELLUZZI; F. M. LESLIE. *Univ. of California - Irvine.*
- 2:00 DD5 **61.14** ▲ Cognitive and behavioral effects of adolescent exposure to nicotine. R. RHODEN*; S. J. ECKRICH; S. L. CEPEDA; J. S. RODEFER. *Florida State Univ.*
- 3:00 DD6 **61.15** Long-term effects of adolescent nicotine on anxiety measured in light-enhanced startle. R. C. BARNET*; B. ASHRAF; O. PHILLIPS; S. LEE; A. HOGENMILLER. *Col. William & Mary.*
- 1:00 DD11 **62.05** ● The effects of 7,8-dihydroxyflavone and a memory-retrieval extinction procedure on reinstatement following methamphetamine self-administration and place conditioning. L. R. WATTERSON*; S. TOMEK; S. L. YAHN; P. R. KUFAHL; M. F. OLIVE. *Arizona State Univ., Arizona State Univ.*
- 2:00 DD12 **62.06** Stimulation of adenosine receptors alters methamphetamine conditioned place preference, self-administration and reinstatement. R. K. BACHTELL*; K. A. KAVANAGH; S. C. LEVIS; C. E. O'NEILL. *Univ. of Colorado.*
- 3:00 DD13 **62.07** Amphetamine must promote activation of dopamine receptors for 30 to 120 min to produce acute withdrawal. W. WHITE*; I. M. WHITE. *Morehead State Univ.*
- 4:00 DD14 **62.08** Oxytocin differentially affects the motivation to self-administer methamphetamine in isolated and pair housed female rats. C. WESTENBROEK*; A. N. PERRY; L. JAGANNATHAN; J. B. BECKER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*
- 1:00 DD15 **62.09** Repeated amphetamine exposure induces behavioral, neurophysiological and molecular alterations of dopaminergic function in the basolateral amygdala. M. TSE*; S. KAUR; P. J. COCKER; C. A. WINSTANLEY; S. B. FLORESCO. *Univ. British Columbia, Univ. British Columbia.*
- 2:00 DD16 **62.10** Differences in maternal behavior and development of pups depend on the time of prenatal methamphetamine exposure. M. MALINOVA*; I. HREBICKOVA; E. MACUCHOVA; M. FERDOVA; E. NOVA; M. POMETLOVA; R. SLAMBEROVA. *Charles Univ. In Prague, Third Fac. of Med.*
- 3:00 DD17 **62.11** Repeated intracerebroventricular or ventral midbrain injections of neurotensin induce context-dependent sensitization to amphetamine. K. A. ROUBI*; A. DAOUST; C. KLIS; P. ROMPRÉ. *Univ. De Montréal, Concordia Univ., Univ. de Montréal.*
- 4:00 DD18 **62.12** ● Incubation of methamphetamine craving after punishment. I. N. KRASNOVA*; N. MARCHANT; B. LADENHEIM; M. T. MCCOY; Y. SHAHAM; J. CADET. *NIDA, NIH, DHHS, NIDA, NIH, DHHS.*
- 1:00 EE1 **62.13** The microstructure of oral methamphetamine intake in mice selectively bred to consume either high or low amounts of methamphetamine. E. C. EASTWOOD*; T. J. PHILLIPS. *Oregon Hlth. & Sci. Univ., Methamphetamine Abuse Res. Ctr., Veterans Affairs Med. Ctr.*
- 2:00 EE2 **62.14** Medial prefrontal cortex inactivation attenuates diurnal rhythms in amphetamine reward. I. C. WEBB*; R. BALTAZAR; L. M. COOLEN. *Univ. of Mississippi Med. Ctr., Univ. of Western Ontario, Univ. of Mississippi Med. Ctr.*
- 3:00 EE3 **62.15** Rapid devaluation of running wheel activity coincident with the rapid, binge-like acquisition of 3,4-methylenedioxypyrovalerone self-administration. S. M. AARDE*; P. HUANG; T. J. DICKERSON; M. A. TAFTE. *The Scripps Res. Inst., The Scripps Res. Inst.*
- 4:00 EE4 **62.16** Prefrontal cortical Norepinephrine delays extinction of amphetamine-induced conditioned place preference. S. PUGLISI-ALLEGRA*; S. DE FALCO; P. SACCOCCIO; J. PARIS; E. C. LATAGLIATA. *Sapienza Univ. of Rome, Fondazione Santa Lucia IRCCS.*

POSTER

062. Amphetamine and Related Drugs: Reinforcement, Seeking, and Reinstatement

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 DD7 **62.01** Sex dimorphic effect of adult methamphetamine exposure on behavior of adult rats exposed to the same drug throughout the first half of their prenatal period. I. HREBICKOVA*; E. MACUCHOVA; K. NOHEJLOVA-DEYKUN; R. SLAMBEROVA. *Charles University, Third Fac. of Med.*
- 2:00 DD8 **62.02** Unique molecular alterations in Fos-expressing neurons from single rat striatum following context-induced reinstatement of methamphetamine seeking using fluorescence-activated cell sorting (FACS). F. J. RUBIO*; Q. LIU; S. KAMBHAMPATI; F. C. CRUZ; R. M. LEAO; A. W. MAIONE; R. CIMBRO; J. M. BOSSERT; Y. SHAHAM; B. T. HOPE. *Behavioral Neurosci. Res. Branch, NIDA IRP, NIH, Div. of Rheumatology, Johns Hopkins Sch. of Med.*
- 3:00 DD9 **62.03** Role of the serotonin_{1b} receptor in MDMA self-administration. S. SCHENK*; D. ARONSEN; J. WEBSTER. *Victoria Univ. Wellington, Victoria Univ. of Wellington.*
- 4:00 DD10 **62.04** The highly selective 5-HT_{2C} agonist WAY 163909 eliminates methamphetamine self-administration in rhesus monkeys. M. PEREZ DIAZ*; K. S. MURNANE; L. L. HOWELL. *Yerkes Natl. Primate Res. Ctr.*

- 1:00 EE5 **62.17** Voluntary wheel running enhances the locomotor-activating effects of methamphetamine in mice. A. S. RAUHUT*; A. VOUGA; E. GUMA. *Dickinson Col., Dickinson Col.*
- 2:00 EE6 **62.18** Gender differences in the effect of adult amphetamine on cognitive functions of rats prenatally exposed to methamphetamine. E. MACÚCHOVÁ*; I. HREBICKOVA; M. MALINOVA; K. NOHEJLOVA-DEYKUN; R. SLAMBEROVA. *Charles Univ. In Prague/Third Fac. of Med.*
- POSTER**
- 063. Neurodegenerative Diseases (AD, PD, MS, Stroke)**
- Theme C: Disorders of the Nervous System**
- Sat. 1:00 PM – San Diego Convention Center, Halls B-H
- 1:00 EE7 **63.01** Pharmacological characterization of SUVN-G3031: A novel and potent histamine H₃ receptor antagonist. V. KANDIKERE*; N. MUDDANA; V. MEKALA; R. PONNAMBALAM; S. IRAPPANANAVAR; A. MANOHARAN; M. FAHEEM; V. GOYAL; S. PANDEY; A. SHINDE; A. DWARAMPUDI; A. DESHPANDE; R. NIROGI. *Suven Life Sci.*
- 2:00 EE8 **63.02** • Nrf2 and hsf-1 pathway activation by hydroquinone-based pro-electrophilic small molecules associated with electrochemical oxidation potential. T. SATOH*; T. LONG; S. LIPTON; S. MCKERCHER; G. ROTH. *Fac. Engineering, Iwate Univ., Sanford-Burnham Med. Res. Inst., Sanford-Burnham Med. Res. Inst.*
- 3:00 EE9 **63.03** Irreversible modulators of sigma-2 receptor function: Isothiocyanate derivatives of SN-79. H. NICHOLSON; A. COMEAU; C. MESANGEAU; C. R. MCCURDY; W. D. BOWEN*. *Brown Univ., Univ. of Mississippi, Brown Univ.*
- 4:00 EE10 **63.04** SUVN-D4010: Novel 5-HT₄ receptor partial agonist for the treatment of Alzheimer's disease. N. MUDDANA*; R. SUBRAMANIAN; M. CHILLAKUR; R. MEDAPATI; R. ABRAHAM; V. BENADE; R. PALACHARLA; V. KANAMARLAPUDI; V. GOYAL; S. PANDEY; A. MOHAMMED; S. RAVELLA; R. NIROGI. *Suven Life Sci.*
- 1:00 EE11 **63.05** • Tau antibody single chain variable fragments as potential therapy and/or diagnostic marker for Alzheimer's disease and related tauopathies. S. KRISHNASWAMY*; W. J. RAJAMOHAMEDSAIT; Y. LIN; H. B. RAJAMOHAMEDSAIT; P. K. KRISHNAMURTHY; E. M. SIGURDSSON. *NYU Med. Ctr.*
- 2:00 EE12 **63.06** • High content phenotypic assay for identification of potential neuroprotective therapeutics for progressive multiple sclerosis. H. CHEN*; G. LUO; X. GAO; B. ZHENG; Z. ZHONG. *GlaxoSmithKline R&D China.*
- 3:00 EE13 **63.07** Neuroprotective effects of meliae fructus (ID1201) against A beta-induced toxicities in sh-sy5y cells. H. PARK; J. YOO; J. KIM; S. YEON; J. KANG; J. HAN*. *ILDONG Pharmaceut. Co. Ltd., Konkuk Univ.*
- 4:00 EE14 **63.08** Progesterone attenuates delayed tPA treatment-induced hemorrhagic transformation following ischemia by regulating the vascular endothelial growth factor level. S. WON*; I. SAYEED; B. WALI; D. STEIN. *Emory Univ. Emergency Med., Emory Univ. Sch. of Med.*
- 1:00 EE15 **63.09** Protein S attenuates ischemic/reperfusion injury in rhesus monkey. Z. ZHONG*; J. GUO; J. ZHANG. *Sichuan Univ. West China Hosp.*
- 2:00 EE16 **63.10** Nicotine metabolite, cotinine, augments the cognitive effects of donepezil in animal models. A. V. TERRY*; P. M. CALLAHAN; D. BERTRAND. *Georgia Regents Univ., HiQScreen.*
- 3:00 EE17 **63.11** Fructus mume improved memory impairments in 5xFAD transgenic mice. J. MA; W. JEON; S. HAN; H. KIM; J. PARK; C. CHUNG*; J. HAN. *Konkuk Univ., Korea Inst. of Oriental Med., Konkuk Univ. Hosp.*
- 4:00 EE18 **63.12** Memory and amyloid burden in aged APP/PS1 transgenic mice chronically treated with cotinine. C. M. HERNANDEZ*; P. M. CALLAHAN; S. J. WEBSTER; B. J. HALL; A. V. TERRY. *Georgia Regents Univ.*
- 1:00 FF1 **63.13** • Activity of serotonin 5-HT1A receptor biased agonists in rat models of Parkinson's disease: Potential for improved therapeutic management. H. IDERBERG; M. A. CENCI; M. A. VARNEY*; A. NEWMAN-TANCREDI. *Lund Univ., Lund Univ., APHEX Consulting, Neurolix, Inc.*
- 2:00 FF2 **63.14** Bee venom acupuncture decreases the severity of disease in an acute model of multiple sclerosis. J. CHOI*; M. LEE; M. JANG; I. CHO. *Col. of Korean Medicine, Kyung Hee Univ., Col. of Korean Medicine, Kyung Hee Univ.*
- 3:00 FF3 **63.15** ▲ Delineating the pharmacological properties of the Smoothened modulators GSA-10 and SAG on neural progenitors. L. HOCH; H. FAURE; H. ROUDAUT; T. GOROJANKINA; N. GIRARD; A. SCHOENFELDER; F. MANETTI; E. PETRICCI; M. TADDEI; M. RUAT*. *CNRS, Therapeut. Innovation Laboratory, CNRS UMR 7200, Dept. of Biotechnology, Chemistry, and Pharmacy, Univ. of Siena.*
- 4:00 FF4 **63.16** Increased affinity of N-methyl-AG525 stereoisomers for SK2 and SK3 channels. J. LIEGEOIS*; V. SEUTIN; S. DILLY. *Univ. of Liège Drug Res. Center-Medicinal Chem. Lab., Univ. of Liège Pharmacol. and GIGA-Neuroscience, Univ. of Liège Medicinal Chem. Lab-CIRM & Pharmacology-GIGA-Neuroscience.*
- 1:00 FF5 **63.17** Histone deacetylase inhibitor (K-350) promotes neurite outgrowth and cell survival via histone H3 modification in neurons. K. SHIMOKE*; H. MARUOKA; Y. HIRATA; F. DAICHI; S. UESATO; T. IKEUCHI. *Kanasai Univ., KURABO Co.Ltd.*
- 2:00 FF6 **63.18** Allopregnanolone reduces behavioral deficits in a CGG knock-in mouse model of Fragile-X-associated tremor/ataxia syndrome. J. J. SCHWARTZER*; E. T. DOISY; D. GARCIA-AROCENA; A. L. JAMAL; C. C. CHANG; L. C. BROCHARD; A. R. LAMAN-MAHARG; R. F. BERMAN. *Univ. of California, Davis.*
- 3:00 FF7 **63.19** Sodium nitrite prevents glutamate toxicity in HT22 cells. A. B. PETRONE*; W. T. STAUBER; J. W. SIMPKINS. *West Virginia Univ. Hlth. Sci. Ctr.*
- 4:00 FF8 **63.20** • Brain lanthionine compounds offer a framework to develop conceptually novel drugs for neurodegenerative disease. K. HENSLEY*; O. LEVI. *Univ. of Toledo Med. Ctr., XoNovo Inc.*
- 1:00 FF9 **63.21** • The preclinical exposure-receptor occupancy-effect relationship of the novel mGluR5 negative allosteric modulator PF-06297470 for the treatment of levodopa-induced dyskinesia in Parkinson's disease. C. L. SHAFFER*; J. A. CIANFROGNA; E. L. MILLER; G. P. CURRIER; D. L. SMITH; J. T. LAZZARO; M. LI; J. Y. MANCUSO; M. M. ZALESKA; K. ZASADNY; P. TRAPA. *Pfizer Inc.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 FF10 **63.22** • A novel chemical class of DYRK1A inhibitors for the treatment of Alzheimer's disease. L. DESIRE*; S. COUTADEUR; H. BENYAMINE; A. CASAGRANDE; B. LEBLOND; T. BESSON; M. PANDO. *Diaxonhit, Diaxonhit, Univ. de Rouen.*
- 3:00 GG1 **63.23** Novel small molecule inhibitors of endoplasmic reticulum stress showing efficacy in cell-based models of neurodegeneration by restoring calcium homeostasis. S. MUNSHI*; C. KAIHO; G. E. MEREDITH; G. E. STUTZMANN; R. DAHL. *Rosalind Franklin Univ. of Med. and Sci.*
- 4:00 GG2 **63.24** Intracerebroventricular cannulation of Beagle dogs for serial sampling of CSF. J. DOUVILLE*; F. EMOND; C. COPEMAN. *Charles River Labs. Preclinical Services, Montreal.*
- 1:00 GG3 **63.25** Novel ranitidine analog g-ii-19 as a multi-target-directed ligand for the potential treatment of Alzheimer's disease. J. GAO*; J. CHAPMAN; M. MOSS; A. V. TERRY. *Georgia Regents Univ., South Carolina Col. of Pharm., Univ. of South Carolina.*
- 2:00 GG4 **63.26** • Evaluation of multifunctional dopamine agonists in modulation of alpha synuclein induced aggregation and toxicity: Implication in neuroprotective treatment of Parkinson's disease. M. M. SHAH*; G. MODI; C. S. VOSHAVAR; L. XU; A. K. DUTTA. *Eugene Applebaum Col. of Pharm. Wayne State Univ.*
- 3:00 GG5 **63.27** • DSP-8658, a novel selective PPARα/γ agonistic modulator, reverses memory impairment in various rodent models of Alzheimer's disease. T. ISHIKAWA; K. SHIBUYA; M. YAMANAKA*; T. HASHIMOTO; H. KAKUYAMA; A. IKEDA. *Dainippon Sumitomo Pharma Co., Ltd., Sunovion Pharmaceuticals Inc.*
- 4:00 GG6 **63.28** Neural dynamics underlying zebrafish locomotor responses to light. H. R. CHAN*; Y. GAO; G. ZHANG; N. C. MEIJOME; L. ZHANG; C. PANG; M. ZHANG; Y. LEUNG. *City Univ. of Hong Kong, Purdue Univ., Chinese Univ. of Hong Kong, Shantou Univ. & the Chinese Univ. of Hong Kong, Indiana Univ. Sch. of Med. Lafayette.*
- 1:00 GG7 **63.29** Antagonism of N-methyl-D-aspartate Receptor by diaminodiphenyls; a rational design approach. K. R. SCULLY*; J. SHURKO; J. SCHRADER; R. KING; A. KOVOOR; J. CELVER; K. BENSON; D. R. WORTHEN. *Univ. of Rhode Island, Natl. Inst. of Neurolog. Disorders and Stroke.*
- 2:00 GG8 **63.30** Schisandrin B enhanced the visual motor response and protected the rod photoreceptors of the zebrafish pde6c retinal degeneration mutant. Y. LEUNG*; L. ZHANG; L. CHONG; J. CHO; W. ZHONG; K. KO. *Purdue Univ., Indiana Univ. Sch. of Med. Lafayette, Univ. of Illinois at Urbana-Champaign, The Hong Kong Univ. of Sci. & Technol.*
- 2:00 GG10 **64.02** Anatomical localisation of area V5/MT using MRI in humans and monkeys. I. LARGE*; H. BRIDGE; J. KOLASINSKI; S. CLARE; B. AHMED; J. SALLET; A. BELL; W. LAM; K. MILLER; K. KRUG. *Univ. of Oxford, Univ. of Oxford, Univ. of Oxford, Univ. of Oxford.*
- 3:00 GG11 **64.03** Electrographic evidence for near-simultaneous early visual response in V1 and posterior parietal cortex in humans. T. I. REGEV*; E. M. GERBER; V. RANGARAJAN; B. L. FOSTER; J. PARVIZI; R. T. KNIGHT; L. Y. DEOUELL. *Edmond and Lily Safra Ctr. For Brain Sci., The Hebrew Univ., Stanford Sch. of Med., Stanford Sch. of Med., Univ. of California, Univ. of California, The Hebrew Univ.*
- 4:00 GG12 **64.04** Definition of the macaque posterior parietal regions using MRI-based measures of retinotopy, connectivity, myelination, and function. T. JANSSENS; J. T. ARSENAULT; J. R. POLIMENI; W. VANDUFFEL*. *KU Leuven, MGH, Harvard Med. Sch.*
- 1:00 GG13 **64.05** Comparison of Feedback connectivity in autism and wild type mice. Y. LIU*; H. SHAO; M. NEGWER; D. C. LYON. *Univ. of California, Radboud Univ.*
- 2:00 GG14 **64.06** Strength of feedforward inhibition in interareal connections between different areas of the visual cortical hierarchy. R. D'SOUZA*; W. YANG; A. BURKHALTER. *Washington Univ. Sch. of Med., Zoology and Physiol.*
- 3:00 GG15 **64.07** Intrapallial projections of the avian visual entopallial/mesopallial complex. A study in the pigeon. M. FERNANDEZ; P. AHUMADA; E. SENTIS; J. LETELIER; G. MARIN; J. MPODOZIS*. *Univ. of Chile, Facultad de Medicina, Univ. Finis Terrae.*
- 4:00 GG16 **64.08** Using the squirrel as a bridge between mouse and monkey visual cortex organization. D. C. LYON*; M. NEGWER; H. SHAO; Y. LIU. *Univ. of California, Radboud Univ.*
- 1:00 GG17 **64.09** Optogenetic characterization of thalamocortical synaptic targets in the mouse lateral extrastriate cortex. N. ZHOU; S. P. MASTERSON; W. GUIDO; M. E. BICKFORD*. *Univ. Louisville Sch. Med., Univ. Louisville Sch. Med.*
- 2:00 GG18 **64.10** The ventral and dorsal visual stream originate preferably from central and peripheral representation of the visual cortex. L. MAGROU*; A. FALCHIER; P. MISERY; C. LAMY; C. DEHAY; K. KNOBLAUCH; H. KENNEDY. *INSERM U846, SBRI, The Nathan S. Kline Inst. for psychiatric research.*
- 3:00 HH1 **64.11** Defining molecular markers of the interareal cortical hierarchy. N. T. MARKOV*; Z. KRŠNINK; Y. IMAMMURA KAWASAWA; C. DEHAY; N. SESTAN; H. KENNEDY. *Yale Univ. Sch. of Med. / Dept. of Neurobio., Stem Cell and Brain Res. institute Inserm, Univ. de Lyon, Univ. Lyon 1, Yale Univ. Sch. of Med., Univ. of Zagreb.*
- 4:00 HH2 **64.12** Patterns of label within MST following retrograde tracer injection in V5/MT of the rhesus macaque. B. AHMED*; P. M. CORDERY; A. J. PARKER; K. KRUG. *Univ. of Oxford.*

POSTER

064. Extrastriate Cortex: Organization and Circuitry

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 GG9 **64.01** Population receptive field measurements in the visual cortex of macaque monkeys with and without retinal lesions. Y. SHAO*; G. A. KELIRIS; M. C. SCHMID; A. PAPANIKOLAOU; N. K. LOGOTHETIS; S. M. SMIRNAKIS. *Max Planck Inst. For Biol. Cybernetics, Ernst Strüngmann Inst. for Neurosci., Div. of Imaging Sci. and Biomed. Engineering, Univ. of Manchester, Departments of Neurosci. and Neurology, Baylor Col. of Med.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

065. Visual Learning and Categorization

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 HH3 **65.01** Differential brain mechanisms associated with background-orientation specificity and target-location specificity of texture discrimination learning. Y. DING*; Y. WANG; Y. ZHEN; Z. QU. *Sun Yat-Sen Univ.*
- 2:00 HH4 **65.02** ERP C1 changes associated with transfer of perceptual learning at an untrained retinal location. C. YU*; G. ZHANG; Y. SONG. *Peking Univ., Beijing Normal Univ.*
- 3:00 HH5 **65.03** ● Perceptual learning reduces the time required for visual processing. U. POLAT*; M. LEV; O. YEHEZKEL; A. STERKIN. *Tel-Aviv Univ., Ucanis Inc., Sch. of Optometry and Helen Wills Neurosci. Inst.*
- 4:00 HH6 **65.04** The effect of learning in Mooney face perception. J. E. GOOLD*; K. J. KOO; M. MENG. *Dartmouth Col.*
- 1:00 HH7 **65.05** Enhanced task-negative responses following simple visual skill acquisition. M. MESHULAM*; M. HAREL; R. MALACH. *Weizmann Inst. of Sci.*
- 2:00 HH8 **65.06** Choice behavior between channels in alternative forced choice tasks when two stimulus attributes are varied. S. RAPHAEL*; M. J. MORGAN. *Max-Planck-Institute for Neurolog. Res.*
- 3:00 HH9 **65.07** Novel word learning selectively sharpens orthographic representations in the VWFA. L. S. GLEZER*; J. S. KIM; J. RULE; X. JIANG; M. RIESENHUBER. *Georgetown Univ. Med. Ctr.*
- 4:00 HH10 **65.08** Learning strengthens existing visual object representations in object-selective cortex. H. P. OP DE BEECK*; M. BRANTS; J. WAGEMANS. *Univ. Leuven, Univ. of Leuven.*
- 1:00 HH11 **65.09** Neurological measures of sensory habituation in typically developing adults and infants using an event-related potential technique. E. J. BLUMENTHAL*; J. O. GARCIA; D. T. WILLIAMS, Jr; L. J. CARVER; J. T. SERENCES; K. R. DOBKINS. *Univ. of California San Diego, Univ. of California San Diego.*
- 2:00 HH12 **65.10** Neural correlates of optimal Bayesian learning. I. KURKI*; T. PRESTON; M. P. ECKSTEIN. *Univ. of Helsinki, Univ. of California.*
- 3:00 HH13 **65.11** Modeling the neural dynamics during visual perceptual learning. M. J. RASCH*; Y. YAN; M. CHEN; S. WU; W. LI. *Beijing Normal Univ.*
- 4:00 HH14 **65.12** Effects of visual experience on visual responses and delay period activity: Theory vs experiment. S. LIM*; J. L. MCKEE; D. J. FREEDMAN; Y. AMIT; N. BRUNEL. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*
- 1:00 HH15 **65.13** Semi-chronic population recordings from parietal and prefrontal networks during long-term visual category learning. N. Y. MASSE*; D. J. FREEDMAN. *Univ. of Chicago.*
- 2:00 HH16 **65.14** Dynamic neural population coding of visual categories in the fronto-parietal network. W. CHAISANGMONGKON*; S. K. SWAMINATHAN; D. J. FREEDMAN; X. WANG. *Yale Univ., The Univ. of Chicago, New York Univ.*

- 3:00 HH17 **65.15** Direction selectivity in parietal cortex before and after visual categorization training. A. SARMA*; R. KHARKAR; X. WANG; D. J. FREEDMAN. *Univ. of Chicago, New York Univ.*
- 4:00 HH18 **65.16** Neuronal representations of novel and familiar visual stimuli in macaque inferior temporal, perirhinal and prefrontal cortices. J. L. MCKEE*; S. L. THOMAS; D. J. FREEDMAN. *Univ. of Chicago, Univ. of Chicago.*
- 1:00 II1 **65.17** Feature-based attention modulates visual feature selectivity in the lateral intraparietal area. G. IBOS*; D. J. FREEDMAN. *The Univ. of Chicago.*
- 2:00 II2 **65.18** Right ventrolateral prefrontal cortex retrieves category information based on informative visual features. M. VAN DER LINDEN*; J. WEGMAN; G. FERNÁNDEZ. *Radboud Univ. Nijmegen Med. Ctr., Radboud Univ. Nijmegen Med. Ctr., Radboud Univ. Nijmegen, Radboud Univ. Nijmegen.*
- 3:00 II3 **65.19** Inferotemporal neurons respond distinctively to familiar images even at novel locations. T. MEYER*; S. RAMACHANDRAN; C. R. OLSON. *Carnegie Mellon Univ.*
- 4:00 II4 **65.20** Facial expression discrimination ability of monkey face-selective regions. H. ZHANG*; R. NOLAN; S. JAPEE; L. G. UNGERLEIDER. *NIMH.*
- 1:00 II5 **65.21** A behavioral paradigm to investigate the neural basis of category learning in rodents. C. BOSSENS*; E. YTEBROUCK; L. ARCKENS; H. OP DE BEECK; G. VAN DEN BERGH. *KU Leuven.*

POSTER

066. Pain Imaging and Perception I

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 II6 **66.01** Pain processing networks in the brain and spinal cord mapped using functional magnetic resonance imaging. H. S. KHAN*; R. BOSMA; C. DOBEK; M. BEYNON; T. MCIVER; P. STROMAN. *Queen's Univ.*
- 2:00 II7 **66.02** Assessing emotional modulation of pain perception and neural processing in the human cervical spinal cord using fMRI. T. A. MCIVER*; R. L. BOSMA; C. E. DOBEK; M. E. BEYNON; H. S. KHAN; P. W. STROMAN. *Queen's Univ.*
- 3:00 II8 **66.03** Temporal summation of second pain in the human dorsal horn: An fMRI study. R. BOSMA*; M. BEYNON; C. DOBEK; H. KHAN; T. MCIVER; R. STAUD; P. STROMAN. *Queen's Univ., Univ. of Florida.*
- 4:00 II9 **66.04** Network- but not task-related activity differentiates vulvar touch versus pain. M. A. FARMER*; A. T. BARIA; L. HUANG; Y. M. BINIK; P. SCHWEINHARDT; A. V. APKARIAN. *Northwestern Univ., McGill Univ., McGill Univ.*
- 1:00 II10 **66.05** Back pain intensity differentially engages nucleus accumbens core and shell in humans. B. PETRE*; M. BALIKI; A. MANSOUR; S. TORBEY; K. HERRMANN; T. J. SCHNITZER; A. V. APKARIAN. *Northwestern Univ., Northwestern Univ.*
- 2:00 II11 **66.06** Hub reorganization of brain functional networks: A hallmark of the chronic pain state. M. N. BALIKI*; A. MANSOUR; A. T. BARIA; P. CHANG; L. HUANG; A. APKARIAN. *Northwestern Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 II12 **66.07** Amygdala sub-nuclei differentially encode spontaneous pain and their functional connections are related to pain chronification. A. T. BARIA*; B. PETRE; M. N. BALIKI; L. HUANG; A. V. APKARIAN. *Northwestern Univ.*
- 4:00 II13 **66.08** Alterations in salience networks normalize following treatment in pediatric CRPS. S. SAVA; L. BECERRA; L. SIMONS; A. DROSOS; C. BERDE; A. LEBEL; D. BORSOOK*. *Boston Children's Hosp., Boston Children's Hosp., Boston Children's Hosp.*
- 1:00 II14 **66.09** Resting state alterations in a model of headache-like pain in rodents. L. BECERRA*; J. BISHOP; V. KAINZ; G. BARMETTLER; P. CHANG; R. BURSTEIN; D. BORSOOK. *Boston Children's Hosp., Boston Children's Hosp., Massachusetts Gen. Hosp., Harvard Med. Sch., Beth Israel Deaconess Med. Ctr.*
- 2:00 II15 **66.10** Individual differences in glucose depletion are associated with individual differences in spinal nociception. E. L. TERRY*; S. L. MARTIN; J. L. DELVENTURA; L. E. GUDERIAN; J. L. RHUDY. *Univ. of Tulsa.*
- 3:00 II16 **66.11** Are bulimia nervosa traits associated with emotional modulation of pain and spinal nociception? S. PALIT*; K. L. KERR; E. L. TERRY; J. L. DELVENTURA; J. L. RHUDY. *Univ. of Tulsa.*
- 4:00 II17 **66.12** A psychophysiological correlate of dopaminergic activity (prepulse inhibition of startle) predicts expectation of pain relief in a placebo analgesia study. B. KUHN*; Y. M. GÜERECA; S. PALIT; J. L. RHUDY. *The Univ. of Tulsa.*
- 1:00 II18 **66.13** Individual differences in conditioning are associated with individual differences in placebo analgesia as assessed by perceptual and autonomic outcomes: A pilot study. Y. M. GUERECA*; J. L. RHUDY. *The Univ. of Tulsa.*
- 1:00 JJ5 **67.05** ▲ Synergistic antinociceptive effect of palmitoylethanolamide with diclofenac in rat. L. RODRÍGUEZ-CARBAJAL*; M. DÉCIGA-CAMPOS. *Inst. Salciano De Estudios Superiores, Inst. Politécnico Nacional.*
- 2:00 JJ6 **67.06** ▲ Conus venom screening for novel analgesic CB1 receptor agonists. C. PEREZ*; A. JAIN; S. JERGOVA; S. GAJAVELLI; L. IMPERIAL; B. OLIVERA; J. SAGEN. *Univ. of Miami, Univ. of Utah.*
- 3:00 JJ7 **67.07** ● Total intravenous anesthesia with the peripheral analgesic isovaline is safer than with fentanyl. R. WHITEHEAD*; K. ASSERI; E. PUIL; B. MACLEOD. *Univ. of British Columbia.*
- 4:00 JJ8 **67.08** ● Novel endomorphin analogs provide potent and potentially safer antinociception relative to morphine in young, middle-aged, and old rats. J. N. JERNBERG*; J. E. ZADINA. *Tulane Univ., SE LA Veterans HCS, Tulane Univ. Sch. of Med.*
- 1:00 JJ9 **67.09** Analgesic effects and pharmacokinetics of rikkosan. N. HORIE*; T. NAGAO; S. HINO; T. KATO; T. SHIMOYAMA; H. SAKAGAMI; K. ADACHI. *Saitama Med. Univ., Meikai Univ. Sch. of Dent., Nihon Univ. Sch. of Dent., RIKEN.*
- 2:00 JJ10 **67.10** ● Modification of electrical pain threshold by voluntary breathing-controlled electrical stimulation (BreESTim) in healthy subjects. S. LI; J. BERLINER; D. MELTON; S. LI*. *Univ. of Texas Hlth. Sci. Ctr. - Houston.*
- 3:00 JJ11 **67.11** Deciphering the NTS1 receptor signalling pathways leading to analgesia and hypothermia. É. BESSERER-OFFROY*; P. G. TETREALT; M. LAFRANCE; A. MURZA; A. RENÉ; J. LONGPRÉ; F. CAVELIER; J. MARTINEZ; É. MARSAULT; R. LEDUC; P. SARRET. *Univ. de Sherbrooke, Univ. de Sherbrooke, Universités Montpellier I et II.*

POSTER

067. Analgesics

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 JJ1 **67.01** Spinal opioid antinociception is allosterically modulated by the $\alpha 2A$ adrenergic receptor. A. CHABOT-DORE*; M. MILLECAMP; L. NASO; P. TRIEU; D. DEVOST; T. E. HÉBERT; L. S. STONE. *McGill Univ., McGill Univ., McGill Univ.*
- 2:00 JJ2 **67.02** Chronic systemic administration of ultra-low dose alpha2-adrenergic antagonists efaroxan and atipamezole enhance opioid analgesia and attenuate tolerance following nerve injury. P. GRENIER*; B. MILNE; C. M. CAHILL. *Queen's Univ., Queen's Univ., Queen's Univ.*
- 3:00 JJ3 **67.03** Ethanol-induced antinociception in male albino rats: Role of adrenergic blockers. A. K. OKOJIE*; O. M. AKANDE; O. A. OYEKUNLE; G. F. IBIRONKE. *Univ. of Nigeria, Ladoke Akintola Univ. of Technol., Univ. of Ibadan.*
- 4:00 JJ4 **67.04** Site-specific differences in nociception in rats after methamphetamine and morphine co-administration. A. YAMAMOTOVA*; R. ROKYTA; J. FRICOVA; R. SLAMBEROVA. *Charles Univ, 3rd Fac Med., Charles Univ., 1st Fac Med. and Gen. Univ. Hosp. in Prague.*

POSTER

068. Pain Models: Pharmacology I

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 JJ12 **68.01** Involvement of increase in the small intestinal P-glycoprotein expression via activation of ERM proteins in the mechanism by which etoposide treatment attenuates oral morphine analgesia. T. KOBORI*; S. FUJIWARA; S. HARADA; K. NAKAMOTO; S. TOKUYAMA. *Kobe Gakuin Univ.*
- 2:00 JJ13 **68.02** Antinociceptive effects of A1 and A2 type botulinum toxins on carrageenan-induced hyperalgesia in rat. M. SHIN*; T. YUKIHARA; Y. ITO; N. AKAIKE. *Kumamoto Hlth. Sci. Univ., Teikyo Univ., Kumamoto Hlth. Sci. Univ.*
- 3:00 JJ14 **68.03** Evaluation of the spectrum of antinociceptive activity of Agastache mexicana organic extracts. A. E. GONZÁLEZ-RAMÍREZ*; F. LOPEZ-MUNOZ; M. GONZÁLEZ-TRUJANO. *Ctr. De Investigación Y De Estudios Avanzados Del IPN, Inst. Nacional de Psiquiatría Ramon de la Fuente Muniz.*
- 4:00 JJ15 **68.04** Synergistic interaction between hesperidin and ketorolac in arthritic pain. A. L. MARTINEZ-MARTINEZ*; M. GONZÁLEZ-TRUJANO; F. J. LOPEZ-MUÑOZ. *Inst. Nacional De Psiquiatría Ramón De La Fuente Muñiz, Ctr. de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional.*

- 1:00 JJ16 **68.05** Role of peripheral TRPV1 and ASIC3 channels in formalin-induced secondary allodynia and hyperalgesia. V. A. MARTÍNEZ-ROJAS*; P. BARRAGÁN-IGLESIAS; G. GARCÍA; V. GRANADOS-SOTO; H. I. ROCHA-GONZÁLEZ; J. MURBARTIÁN. *Cinvestav Sede Sur, Inst. Politécnico Nacional.*
- 2:00 JJ17 **68.06** Evidence for the participation of peripheral P2Y1/6/11 receptors in formalin-induced inflammatory pain. P. BARRAGÁN-IGLESIAS*; L. MENDOZA-GARCÉS; J. B. PINEDA-FARIAS; V. GRANADOS-SOTO; H. I. ROCHA-GONZÁLEZ. *Cinvestav, Sede Sur, Sección de Estudios de Posgrado e Investigación, Escuela Superior de Medicina, Inst. Politécnico Nacional.*
- 3:00 JJ18 **68.07** Participation of the peripheral gabaa alpha 5 receptors in the formalin induced-nociception. M. BRAVO HERNANDEZ*; L. A. FERIA-MORALES; C. CERVANTES-DURÁN; V. GRANADOS-SOTO; H. I. ROCHA-GONZÁLEZ. *Dept. De Farmacobiología, CINVESTAV, Sede Sur, Univ. Juárez Autónoma de Tabasco, Escuela Superior de Medicina del Inst. Politécnico Nacional.*
- 4:00 KK1 **68.08** Role of 5HT4 and 5HT6 receptors in neuropathic pain. J. B. PINEDA FARIAS*; A. VALDIVIESO SÁNCHEZ; P. BARRAGÁN IGLESIAS; V. GRANADOS SOTO; H. I. ROCHA GONZÁLEZ. *Cinvestav, Sede Sur, Escuela Superior de Medicina, Inst. Politécnico Nacional.*
- 1:00 KK2 **68.09** Epicatechin reduces inflammation, nociception, hyperalgesia and allodynia in rats. G. N. QUINONEZ-BASTIDAS*; J. B. PINEDA-FARIAS; F. J. FLORES-MURRIETA; J. RODRIGUEZ-SILVERIO; J. MURBARTIAN; V. GRANADOS-SOTO; H. I. ROCHA-GONZALEZ. *Dept. De Farmacobiología, Ctr. De Investigación Y De Estudios Avanzados, Escuela superior de Medicina del Instituto Politécnico Nacional.*
- 2:00 KK3 **68.10** Participation of calcium-activated chloride channels in formalin-induced nociception. G. GARCÍA*; V. A. MARTÍNEZ-ROJAS; H. I. ROCHA-GONZÁLEZ; V. GRANADOS-SOTO; J. MURBARTIÁN. *Cinvestav Sede Sur, Inst. Politécnico Nacional.*
- 3:00 KK4 **68.11** Pronociceptive and antinociceptive effects of fluoxetine in rats. C. CERVANTES-DURÁN*; H. I. ROCHA-GONZÁLEZ; V. GRANADOS-SOTO. *Dept. De Farmacobiología, Cinvestav, Sede Sur, Sección de Estudios de Posgrado e Investigación, Escuela Superior de Medicina, Inst. Politécnico Nacional, México.*
- 4:00 KK5 **68.12** Effects of the triple monoamine uptake inhibitor amitifadine on pain-stimulated and pain-depressed behavior in rats. L. L. MILLER*; M. D. LEITL; B. E. BLOUGH; S. S. NEGUS. *Virginia Commonwealth Univ., Res. Triangle Inst. Intl.*
- 1:00 KK6 **68.13** • Systemic effects of Duloxetine and an α_2 adrenergic agonist on spinal and mPFC neurons in neuropathic rats. K. CHU; J. XU*; M. MEYER; S. MCGARAUGHTY. *Abbvie.*
- 2:00 KK7 **68.14** • Antinociception produced by the α_{2B} adrenoceptor agonist A-1262543 involves a supraspinal site of action as evidenced by GTPyS autoradiography functional mapping and immunohistochemical nociceptive signaling studies in rat. T. R. MILLER*; J. B. WETTER; T. NGUYEN; M. PAI; C. D. MILLS; G. C. HSIEH; M. D. MEYER; R. S. BITNER. *AbbVie, Inc.*
- 3:00 KK8 **68.15** • Postoperative pain induces sleep disturbances in rats. L. LEYS*; J. XU; R. RADEK; S. MCGARAUGHTY. *AbbVie, Inc.*
- 4:00 LL1 **68.16** • ERK1/2 phosphorylation in sensory axons following intraplantar administration of nerve growth factor: A downstream biochemical marker of TrkA target engagement in rat. A. L. NIKKEL*; R. M. EDELMAYER; T. NGUYEN; T. R. GARRISON; C. D. MILLS; A. W. BANNON; R. S. BITNER. *AbbVie Inc.*
- 1:00 LL2 **68.17** • Locomotor activity impairment as a non-evoked nociceptive endpoint in CFA-induced sub-chronic inflammatory pain in rats. C. Z. ZHU*; D. M. GAUVIN; C. ZHONG; L. LEWIS; J. P. MIKUSA; A. W. BANNON; S. K. JOSHI. *Abbvie. Inc.*
- 2:00 LL3 **68.18** • Establishment and pharmacological validation of a new rat model of type-II diabetes-induced peripheral neuropathy. K. DANDAPANI*; R. K. NUTAKKI; K. MANOJ; G. SHANKAR; M. DOKANIA; V. SHARMA; E. SARAVANAN; M. SRINIVASAN; V. PRADEEP; C. CONWAY; L. BRISTOW; S. N. PATTIPATI; R. VIKRAMADITHYAN. *Biocon Bristol-Myers Squibb Res. Ctr., Bristol-Myers Squibb Res. Co.*
- 3:00 LL4 **68.19** • What's "mu" got to do with it? Understanding the role of opioids in neuropathic pain. I. Y. CHOI*; J. EVANS; M. A. GUILLON; G. C. KIM; P. QUACH; K. GOGAS. *Nektar Therapeut.*
- 4:00 LL5 **68.20** The mu opioid receptor physiologically regulates TRPM8 activity. P. SCHERER*; M. J. CATERINA; S. H. SNYDER. *Johns Hopkins Med. Inst.*
- 1:00 LL6 **68.21** • Looking beyond efficacy: Modeling concentration-effect relationships in *in vivo* electrophysiology assays using objective end points. J. A. MIRANDA*; P. STANLEY; J. TURNER; R. DIAS; H. REES. *Neusentis (Pfizer Ltd.).*
- 2:00 LL7 **68.22** The kappa agonist, U50-488H, mediates analgesia via an anxiogenic effect. C. J. EVANS*; A. M. W. TAYLOR; K. W. ROBERTS; A. PRADHAN; W. WALWYN; K. LUFTY; F. I. CARROLL; C. M. CAHILL. *UCLA, Univ. of Illinois, Western Univ. of Health Sci., Res. Triangle Inst., Univ. of California, Irvine.*

POSTER

069. Mechanisms of Neuropathic Pain: Glia

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 LL8 **69.01** Fractalkine induced facilitation of synaptic strength at the first pain synapse. A. K. CLARK*; D. GRUBER-SCHOFFNEGGER; R. DRDLA-SCHUTTING; J. SANDKÜHLER. *Med. Univ. of Vienna, King's Col. London.*
- 2:00 LL9 **69.02** Targeting glycogen synthase kinase 3 beta for the treatment of neuropathic pain. D. W. MAIXNER*; M. GAO; H. WENG. *The Univ. of Georgia.*
- 3:00 LL10 **69.03** HSV vector-mediated Interleukin-10 suppressed mechanical allodynic behavior, spinal TNF α , CXCR4 and SDF1 in an HIV gp120 pain model in rats. W. HUANG*; W. ZHENG; S. LIU; R. LEVITT; K. CANDIOTTI; M. MATA; D. FINK; S. HAO. *Univ. of Miami, Dept. of Neurology, Univ. of Michigan Med. School.*
- 4:00 LL11 **69.04** Persistent microglia activation in the spinal cord of neuropathic pain rats and analgesic effects by therapeutical blockade of activated microglia. M. FUJITA*; S. OMACHI; R. TAMANO; N. IMAMOTO; M. KIMURA; S. YONEDA; N. KANEGAWA; K. ABE; G. SAKAGUCHI; S. SHINOHARA. *Shionogi Co.,&Ltd., Shionogi Co.,&Ltd., Osaka Univ. Grad. Sch. of Medicine.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 LL12 **69.05** Novel analgesic mechanism of S-ketamine on the neuropathic pain through the microglial Ca²⁺-activated K⁺ channel. Y. HAYASHI*; H. NAKANISHI. *Fac. of Dent. Sci. Kyushu Univ.*
- 2:00 MM1 **69.06** Inhibition of glycogen synthase kinase 3 β (GSK3 β) activity with lithium prevents and attenuates paclitaxel-induced neuropathic pain. H. WENG*; M. GAO. *Univ. of Georgia Col. of Pharm.*
- 3:00 MM2 **69.07** Attenuation of AMPK activities in the spinal dorsal horn reduces glial glutamate transporter activities in a rat model of neuropathic pain. X. YAN*; D. MAIXNER; M. GAO; H. WENG. *Univ. of Georgia, Col. of Pharm.*
- 4:00 MM3 **69.08** Expression of colony-stimulating factors and their receptors in dorsal root ganglion and spinal cord after peripheral nerve injury. M. OKUBO*; H. YAMANAKA; K. KOBAYASHI; H. KANDA; Y. DAI; K. NOGUCHI. *Hyogo Col. of Med., Hyogo Univ. of Hlth. Sci.*
- 1:00 MM4 **69.09** Neuroglia and delayed onset pain hypersensitivity following neonatal nerve injury. R. MCKELVEY*; M. FITZGERALD; T. BERTA; R. JI. *Univ. Col. London, Duke Univ.*
- 2:00 MM5 **69.10** Up-regulation of connexin-43 hemichannels in spinal cord astrocytes maintains neuropathic pain by releasing chemokines. G. CHEN*; C. PARK; M. NEDERGAARD; R. JI. *Duke Univ. Med. Ctr., Ctr. for Translational Neuromedicine, University of Rochester Med. Ctr.*
- 3:00 MM6 **69.11** Inhibition of spinal glial gap junction attenuated mechanical hypersensitivity in rats after an L5 spinal nerve injury. Q. XU; Y. CHEONG; S. HE; F. YANG; R. SHECHTER; J. LIU; S. N. RAJA; W. LI; Y. GUAN*. *Johns Hopkins Univ., Nanjing Univ., Wonkwang Univ., Nanjing Univ.*
- 4:00 MM7 **69.12** The effects of glutamate transporters on neuropathic pain induced by peripheral nerve injury. Y. KIM*; G. PARK; J. OH; H. CHO; J. KIM; Y. YOON. *Korea University, Col. of Med., Gachon University, Col. of Hlth. Sci., Korea University, Col. of Hlth. Sci.*
- 1:00 MM8 **69.13** Repeated morphine enhances peripheral nerve injury-induced allodynia via TLR4 and P2X7 activation in the lumbar spinal cord. P. M. GRACE*; L. I. GREENE; K. A. STRAND; E. L. GALER; K. C. RICE; S. F. MAIER; L. R. WATKINS. *Univ. of Colorado, Boulder, Natl. Inst. on Drug Abuse and Natl. Inst. on Alcohol Abuse and Alcoholism.*
- 2:00 MM9 **69.14** Development and pharmacological verification of a new mouse model of central post-stroke pain. T. HANADA; T. KURIHARA; H. TOKIMURA; K. ARITA; A. MIYATA*. *Kagoshima Univ. Grad Sch. Med. & Dent. Sci., Kagoshima Univ. Grad Sch. Med. & Dent. Sci., Kagoshima Univ. Grad Sch. Med. & Dent. Sci., Kagoshima Univ. Grad Sch. Med. & Dent. Sci.*
- 3:00 MM10 **69.15** Sigma-1 receptor activates astrocyte via the mediation of intracellular calcium level in rats. H. KIM*; J. CHOI; D. KANG; J. CHOI; H. CHO; J. PARK. *Chungnam Natl. Univ. Med. Sch.*

POSTER

070. Somatosensory Plasticity

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 NN1 **70.01** Genome-wide expression analysis of Ptf1a-and Ascl1-deficient mice reveals new markers for distinct dorsal horn interneuron populations contributing to nociceptive reflex plasticity. H. WILDNER*; R. DAS GUPTA; D. BRÖHL; P. HEPPENSTALL; H. ZEILHOFER; C. BIRCHMEIER. *Univ. of Zurich, Inst. of Pharmaceut. Sciences, ETH Zurich, Max Delbrück Ctr., European Mol. Biol. Lab. (EMBL).*
- 2:00 NN2 **70.02** Cortical plasticity and tactile attention in primate primary somatosensory cortex. N. TRZCINSKI*; S. S. HSIAO. *The Zanvyl Krieger Mind/Brain Institute, Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med.*
- 3:00 NN3 **70.03** Older age and higher stimulation intensity reverses cortical plasticity induced by cathodal transcranial direct current stimulation. E. M. STIKSRUD*; R. F. H. CASH; M. VESIA; U. SAHA; M. A. NITSCHKE; R. CHEN. *Toronto Western Res. Inst., Univ. medical center Goettingen.*
- 4:00 NN4 **70.04** Receptive field formation and erasure in somatosensory cortex. C. KERR*; L. VON KRAUS; J. IORDANOU; S. A. NEYMOTIN; J. FRANCIS; W. LYTTON. *State Univ. of New York, Yale Univ.*
- 1:00 NN5 **70.05** Changes in cortical connectivity of primary somatosensory cortex following early loss of vision in the short-tailed opossum (*Monodelphis domestica*). J. C. DOOLEY*; L. A. KRUBITZER. *UC Davis, Univ. of California, Davis.*
- 2:00 NN6 **70.06** Structural white-matter changes following somatosensory learning in rats. C. SAMPALIO-BAPTISTA*; A. VALLÈS; G. MARTENS; P. DE WEERD; H. JOHANSEN-BERG. *Univ. of Oxford, Radboud Univ. Nijmegen, Maastricht Univ., Radboud Univ. Nijmegen,, Radboud Univ., Univ. of Oxford.*
- 3:00 NN7 **70.07** Neuronal activity patterns of medial prefrontal cortex in active tactile discrimination task. A. C. KUNICKI*; R. FUENTES; M. NICOLELIS; E. MORYA. *Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, IINN-ELS, Duke Univ., Duke Univ., Duke Univ., Duke Univ.*
- 4:00 NN8 **70.08** Temporal alterations in functional connectivity after experimental traumatic brain injury. N. G. HARRIS*; D. R. VERLEY; H. J. YEH. *UCLA, UCLA.*
- 1:00 NN9 **70.09** Physiological role for amyloid precursor protein in the adult brain. S. A. MARIK*; O. OLSEN; M. TESSIER-LAVIGNE; C. D. GILBERT. *The Rockefeller Univ.*
- 2:00 NN10 **70.10** L-NAME and L-arginine treatments interferes with the maternal aggressive pattern toward intruder around the nest. E. PEREZ-TORRERO*; D. JIMENEZ-MENDOZA; C. I. SILVA-BARRON. *Facultad de Ingenieria Univ. Autonoma de Queretaro, Facultad de Ciencias Naturales Univ. Autonoma de Queretaro.*

POSTER

071. Somatosensory Plasticity: Barrel Cortex

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 NN11 **71.01** ARC gene expression in response to whisker stimulation. A. KHODADAD*; P. D. ADELSON; J. LIFSHITZ; T. C. THOMAS. *Univ. of Arizona, Univ. of Strasbourg, Barrow Neurolog. Inst. at Phoenix Children's Hosp., Univ. of Arizona Col. of Med., Arizona State Univ., Arizona State Univ., Barrow Neurolog. Inst. at Phoenix Children's Hosp., Phoenix VA Healthcare Syst.*
- 2:00 NN12 **71.02** Possible involvement of the cannabinoid (CB1) receptors in learning-dependent plasticity of the barrel cortex in adult mouse. E. SIUCINSKA*; T. BERNAS. *Nencki Inst.*
- 3:00 NN13 **71.03** Plasticity of gamma oscillations in barrel cortex following sensory deprivation. S. MOLDAKARIMOV*; M. JADI; T. J. SEJNOWSKI. *Salk Inst., UCSD.*
- 4:00 NN14 **71.04** The effect of whisker row deprivation on the flow of sensory information through rat barrel cortex. A. MITANI*; V. JACOB; T. TOYOIZUMI; K. FOX. *UCSD, RIKEN, Cardiff Univ.*
- 1:00 NN15 **71.05** Experience-dependent Homeostatic plasticity in the barrel cortex. S. GLAZEWSKI*; S. GREENHILL; K. FOX. *Keele Univ., Cardiff Univ.*
- 2:00 NN16 **71.06** Reduction of behavioral asymmetry after unilateral lesion of barrel field in mice is more associated with habituation than functional recovery. D. P. BRANCO*; Y. ABREU-VILLAÇA; A. C. MANHÃES; C. C. FILGUEIRAS. *Univ. do Estado do Rio de Janeiro, UERJ.*
- 3:00 NN17 **71.07** Structural plasticity on the level of dendritic spines underlying classical eyeblink conditioning in mouse barrel cortex. B. JOACHIMSTHALER*; D. BRUGGER; A. SKODRAS; C. SCHWARZ. *Werner Reichardt Ctr. for Integrative Neurosci., Hertie Inst. for Clin. Brain Res., Grad. Sch. of Neural and Behavioural Sci., German Ctr. for Neurodegenerative Dis.*
- 4:00 NN18 **71.08** Cannabinoid receptor mediated spike timing-dependent plasticity at thalamocortical synapses in the developing mouse barrel cortex. C. ITAMI; J. HUANG; H. LU; F. KIMURA*. *Saitama Med. Univ., The Cain Fndn. Lab, Jan and Dan Duncan Neurolog. Res. Inst. Texas Children Hosp, Baylor Col. of Med., Grad. Sch. Med., Osaka Univ.*
- 1:00 OO1 **71.09** Steady-state dynamics and experience-dependent plasticity of dendritic spines of layer 4 pyramidal neurons in somatosensory cortex. A. MIQUELAJAUREGUI*; S. KRIBAKARAN; R. MOSTANY; A. BADALONI; G. CONSALEZ; C. PORTERA-CAILLIAU *. *UCLA, San Raffaele Scientific Inst., UCLA.*
- 2:00 OO2 **71.10** Experience-dependent regulation and the cellular phenotype-specific production of tissue-type plasminogen activator in the mouse barrel cortex. C. CHEN*; P. CHU; J. BRUMBERG. *Univ. of California, Santa Cruz, Grad. Center, City Univ. of New York, Queens College, City Univ. of New York.*
- 3:00 OO3 **71.11** Nonlinear paralemniscal thalamic inputs mediate whisker-evoked heterosynaptic plasticity in the somatosensory cortex. F. GAMBINO; V. KECHAGIAS; S. PAGÈS; A. HOLTMAAT*. *Univ. Geneva, Geneva Neurosci. Ctr., Lemanic Neurosci. Doctoral Sch.*
- 4:00 OO4 **71.12** Effects of GABA_A on learning induced plasticity of the barrel cortex in mice. A. M. POSLUSZNY*; R. ZAKRZEWSKA; M. KOSSUT. *Nencki Inst. of Exptl. Biol., Univ. of Social Sci. and Humanities.*
- 1:00 OO5 **71.13** Encoding of sensory and task-related variables by supragranular neurons in mouse primary somatosensory neocortex during a vibrissa motion detection task. C. A. DEISTER*; J. KLEE; D. L. PRITCHETT; T. C. BROWN; C. I. MOORE. *Brown Univ.*
- 2:00 OO6 **71.14** Task and muscle specific effects of short-latency afferent inhibition. M. J. ASMUSSEN*; C. M. ZAPALLOW; K. G. H. LEE; M. F. JACOBS; P. TSANG; A. J. NELSON. *McMaster Univ.*
- 3:00 OO7 **71.15** Effects of 30Hz continuous theta burst stimulation over primary somatosensory cortex on short latency afferent inhibition. P. TSANG*; M. F. JACOBS; K. G. H. LEE; M. J. ASMUSSEN; C. M. ZAPALLOW; A. J. NELSON. *McMaster Univ., McMaster Univ.*
- 4:00 OO8 **71.16** Entraining neocortical gamma oscillations can enhance the detection of threshold-level stimuli. J. H. SIEGLE*; D. L. PRITCHETT; C. I. MOORE. *MIT, Brown Univ.*
- 1:00 OO9 **71.17** Optogenetically assisted recording and labeling of genetically identified cell types for *in vivo* investigation of structure-to-function relationships. W. J. MUNOZ*; R. TREMBLAY; B. RUDY. *NYU Neurosci. Inst.*
- 2:00 OO10 **71.18** Diverse signals impact apical dendrites in Layer 1 of mouse somatosensory cortex during behavior. C. LACEFIELD*; R. BRUNO. *Columbia Univ., Columbia Univ.*
- 3:00 OO11 **71.19** Reverse-engineering sensory-evoked signal flow in rat barrel cortex. R. EGGER*; A. C. SCHMITT; V. J. DERCKSEN; C. P. J. DE KOCK; J. KERR; M. OBERLAENDER. *Max Planck Inst. For Biol. Cybernetics, Grad. Sch. of Neural Information Processing, Max Planck Inst. For Biol. Cybernetics, Zuse Inst. Berlin, VU Univ. Amsterdam.*
- 4:00 OO12 **71.20** ▲ Inhibition, sensory dynamic range, and criticality in barrel cortex. T. HOANG*; S. GAUTAM; S. GRADY; W. L. SHEW. *Univ. of Arkansas, Univ. of Arkansas.*

POSTER

072. Somatosensory: Thalamocortical Processes

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 OO13 **72.01** Mechanisms and functions of beta rhythms in sensorimotor processing. S. LEE*; M. SHERMAN; C. MOORE; S. JONES. *Brown Univ.*
- 2:00 OO14-DP6 **72.02** Top-down modulation of the thalamocortical loop during active tactile discrimination. M. PAIS-VIEIRA*; M. LEBEDEV; M. NICOLELIS. *Duke Univ. Med. Ctr., Duke Univ., Duke Univ., Duke Univ., Edmond and Lily Safra Intl. Inst. for Neurosci. of Natal.*
- 3:00 OO15 **72.03** Sensory information processing in the thalamus during slow oscillations. M. SHEROZIYA*; I. TIMOFEEV. *Laval Univ.*
- 4:00 OO16 **72.04** Development of a training schedule for tactile operant conditioning of rats. I. DEVECIOGLU*; B. GÜÇLÜ. *Bogazici Univ., Namik Kemal Univ.*
- 1:00 OO17 **72.05** Cholinergic synaptic inputs triggers thalamic network activity. J. D. PITA ALMENAR*; D. YU; H. LU; M. BEIERLEIN. *Univ. of Texas Med. Sch., Baylor Col. of Med.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 OO18 **72.06** Carbachol-induced cholinergic modulation of corticothalamic transmission from layer 6 input to posteromedial thalamic nucleus. S. NERSISYAN; M. BEKISZ; E. KUBLIK; B. GRANSETH; A. WROBEL*. *Nencki Inst. of Exptl. Biol., Linköping Univ.*
- 3:00 PP1 **72.07** Ketamine decreases sensory-evoked corticothalamic-mediated γ oscillations in the rat somatosensory thalamus. P. M. ANDERSON*; S. P. KULIKOVA; T. J. O'BRIEN; N. C. JONES; D. PINAULT. *Univ. of Melbourne, Univ. de Strasbourg.*
- 4:00 PP2 **72.08** Thalamocortical inputs from the orexin-sensitive rhomboid nucleus elicit long-lasting recurrent excitation in parietal cortical circuits. A. H. HAY*. *CNRS/UMR7102.*
- 1:00 PP3 **72.09** The role of the parafascicular nucleus in sensory perception. C. A. THORN*; C. I. MOORE. *Brown Univ.*
- 2:00 PP4 **72.10** Dynamic effects of corticothalamic activity on the excitability of thalamic neurons. S. R. CRANDALL*; S. J. CRUIKSHANK; B. W. CONNORS. *Brown Univ.*
- 3:00 PP5 **72.11** Properties of trigeminothalamic synapses originating in different trigeminal nuclei. B. SWOYER; Z. GUI; M. A. CASTRO-ALAMANCOS*. *Drexel Univ. Col. of Med.*
- 4:00 PP6 **72.12** ● Characterization of connectivity in the thalamocortical network during anesthesia-induced transitions in consciousness. J. KANG*; E. HWANG; J. CHOI; S. KIM. *Korea Univ., Korea Inst. of Sci. and Technol., Pohang Univ. of Sci. and Technol., Univ. of Sci. and Technol., Korea Univ.*
- 1:00 PP7 **72.13** The representation of vibrissa re-afferent input in trigeminal and thalamic nuclei. J. D. MOORE*; M. DESCHENES; D. KLEINFELD. *Univ. California San Diego, UNIVERSITE LAVAL, Univ. of California San Diego.*
- 2:00 PP8 **72.14** The role of reliability and synchrony of population activity in nonlinear neural circuit processing in the thalamocortical circuit of the rodent vibrissa system. D. C. MILLARD*; C. A. GOLLNICK; W. J. HENDRY; G. B. STANLEY. *Georgia Inst. of Technol. and Emory Univ.*
- 3:00 PP9 **72.15** The monogamy of thalamocortical feed-forward inhibition. R. TREMBLAY*; B. RUDY. *NYU Sch. of Med.*
- 4:00 PP10 **72.16** Vibrotactile responses of cortical neurons from the hindpaw representation in the rat SI cortex. B. GUCLU*. *Bogazici Univ.*
- 1:00 PP11 **72.17** The role of kinematic slip events in tactile perception. C. WAIBLINGER*; D. BRUGGER; C. J. SHEPHARD; D. C. MILLARD; G. B. STANLEY; C. SCHWARZ. *Ctr. for Integrative Neurosci., Hertie Inst. for Clin. Brain Res., Georgia Tech. and Emory.*
- 2:00 PP12 **72.18** Neuronal sensitivity in whisker-related somatosensory thalamus (VPM) to detect kinematic features embedded in varying noise contexts. C. SHEPHARD*; D. MILLARD; C. WAIBLINGER; C. SCHWARZ; G. STANLEY. *Georgia Tech/Emory, Univ. of Tübingen.*
- 3:00 PP13 **72.19** Data-driven analysis of resting state BOLD signals reveals global functional connectivity patterns of different thalamic nuclei in humans. L. CHEN*; A. MISHRA; J. C. GORE. *Vanderbilt Univ.*
- 4:00 PP14 **72.20** Quantifying thalamocortical circuits of typically developing children by resting state connectivity. E. JASPERS*; J. H. BALSTERS; N. WENDEROTH. *ETH Zurich.*

POSTER

073. Somatosensory Cortex: Functional Studies

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 PP15 **73.01** Sensory representation of the face region in the postcentral sulcus and its relationship with the sulcal morphology. V. ZLATKINA*; C. AMIEZ; J. NOVEK; M. PETRIDES. *MNI, McGill Univ., INSERM U846 Stem-Cell and Brain Res. Inst.*
- 2:00 PP16 **73.02** Sensory representation of the face region in the intraparietal sulcus and its relationship with the sulcal morphology. M. PETRIDES*; V. ZLATKINA; J. NOVEK; C. AMIEZ. *Montreal Neurolog Inst. McGill Univ., INSERM U846.*
- 3:00 PP17 **73.03** Chronic population imaging of cortical neuronal activity under different anesthetic conditions. T. LISSEK; D. A. W. DITZEL; H. A. OBENHAUS; T. NAGAI; A. MIYAWAKI; M. T. HASAN*. *Max Planck Inst. for Med. Res., Hokkaido Univ., RIKEN, Charité-Universitätsmedizin Berlin.*
- 4:00 PP18 **73.04** Cold hypersensitivity and afferent sensitization in a mouse model of sickle cell disease. K. J. ZAPPIA*; S. R. GARRISON; M. ESCOBAR-KLUMPH; C. L. STUCKY. *Med. Col. of Wisconsin.*
- 1:00 PP19 **73.05** The interaction between ecstasy user status and sense of affective touch. S. A. SMITH*; L. CUNNINGHAM; C. MCKENNA; S. REAVEY; J. SHAW; R. WYNNE; F. MCGLONE. *Liverpool John Moores Univ.*
- 2:00 PP20 **73.06** ▲ Histamine H3 receptor activation inhibits the electrically-induced vasodepressor sensory CGRPergic outflow in pithed rats. G. MANRIQUE-MALDONADO*; A. H. ALTAMIRANO-ESPINOZA; I. RUIZ-SALINAS; B. VILLANUEVA-CASTILLO; C. M. VILLALÓN. *Cinvestav-IPN.*
- 3:00 PP21 **73.07** Modality-specific stratification identifies cutaneous and proprioceptive sensory impairment post-stroke. P. A. MCNULTY*; J. L. BOWDEN; G. G. LIN. *Neurosci. Res. Australia, Univ. of New South Wales.*
- 4:00 PP22 **73.08** Dissecting the contribution ROralpha interneurons make to sensorimotor reflex pathways and locomotion. J. S. BOURANE*; K. GROSSMANN; O. BRITZ; F. STAM; Y. NAKAGAWA; D. O'LEARY; M. GOULDING. *Salk Inst. For Biol. Studies, McGuire Translational Res. Facility.*
- 1:00 PP23 **73.09** Electrophysiological properties of intact Merkel cells in rat whisker hair follicles. R. IKEDA*; M. CHA; Z. JIA; J. LING; J. GU. *The Univ. of Cincinnati Col. of Med.*
- 2:00 PP24 **73.10** ● Investigation of changes in biological skin properties and cutaneous finger sensation associated with ageing. K. J. MILLER; B. B. BILNEY; C. MURPHY; M. P. GALEA*. *Univ. of British Columbia, Univ. of Melbourne, Univ. of Melbourne.*
- 3:00 QQ1 **73.11** Functional connectivity across different body part representations and BAs within human S1. R. MARTUZZI*; M. AKSELROD; W. VAN DER ZWAAG; O. BLANKE. *EPFL, EPFL, EPFL, Geneva Univ. Hosp.*
- 4:00 QQ2 **73.12** Decreased peripheral and central responses to acupuncture stimulation under reduced bodily self-awareness using the rubber hand illusion. Y. CHAE*; I. LEE; W. JUNG; H. PARK; C. WALLRAVEN. *Kyung Hee Univ., Dept. of Brain Computer Engineering, Korea Univ.*

- 1:00 QQ3 **73.13** Effect of isoflurane anesthesia on BOLD, electrophysiology, and oxygen signals in the cortex. D. P. AKSENOV*; L. LI; G. IORDANESCU; M. MILLER; H. M. FABER; P. MAKAR; R. A. LINSSENMEIER; A. M. WYRWICZ. *NorthShore Univ. HealthSystem, Northwestern Univ., Northwestern Univ.*
- 2:00 QQ4 **73.14** A method for automatic identification of peripheral nerve microstimulation thresholds from electroenceurogram signals. L. E. FISHER*; J. A. HOKANSON; R. A. GAUNT; D. J. WEBER. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 3:00 QQ5 **73.15** Sensory skin on the dorsum of the foot and ankle facilitates the control the swing limb trajectory in locomotion. E. E. HOWE*; A. TOTH; L. A. VALLIS; L. R. BENT. *Univ. of Guelph.*
- 4:00 QQ6-DP5 **73.16** Restoring sensation in amputees with nerve cuff electrodes. D. TAN*; M. SCHIEFFER; D. J. TYLER; M. KEITH; R. ANDERSON. *Case Western Reserve Univ., Louis Stokes VA Med. Ctr.*
- 1:00 QQ7 **73.17** Changing the perceived location of touch on the human forearm. J. L. TAYLOR*; T. SEIZOVA-CAJIC. *Neurosci. Res. Australia, The Univ. of Sydney.*
- 2:00 QQ8 **73.18** Sex-related differences in voice-related modulation of laryngeal mechanosensory detection thresholds. M. J. HAMMER*; M. KRUEGER; K. SIMPRAPHONE. *Univ. of Wisconsin.*
- 3:00 QQ9 **73.19** A directional bias in toe identification and 'toe agnosia'. J. F. STEIN*; N. CICMIL. *Oxford Univ.*
- 4:00 QQ10 **73.20** Vibrotactile masking across and through the body. S. D'AMOUR; L. R. HARRIS*. *York Univ.*
- 1:00 QQ15 **74.05** Effect of acute high-intensity locomotor exercise on serum brain-derived neurotrophic factor in humans with incomplete SCI. K. A. LEECH*; T. G. HORNBY. *Rehabil. Inst. of Chicago, Northwestern Univ., Univ. of Illinois at Chicago.*
- 2:00 QQ16 **74.06** Epidural stimulation of the human lumbar spinal cord can elicit characteristic tonic motor outputs. M. R. DIMITRIJEVIC*; U. S. HOFSTOETTER; W. MAYR; K. MINASSIAN; F. RATTAY; S. M. DANNER. *Baylor Col. Med., Med. Univ. of Vienna, Vienna Univ. of Technol.*
- 3:00 QQ17 **74.07** Multisensory feedback enhances locomotor adaptation in individuals with incomplete SCI. S. YEN*; J. LANDRY; M. WU. *Northeastern Univ., Rehabil. Inst. of Chicago.*
- 4:00 QQ18 **74.08** Does paired stimulation of cutaneous and proprioceptive receptors enhance motor performance of a skilled walking task? A. E. CHISHOLM*; T. LAM. *Intl. Collaboration On Repair Discoveries, Univ. of British Columbia.*
- 1:00 QQ19 **74.09** Assessing the threshold to detection of passive movement in persons with incomplete spinal cord injury using a robotic exoskeleton. A. DOMINGO*; A. E. CHISHOLM; J. JEYASURYA; T. LAM. *Univ. of British Columbia, Intl. Collaboration on Repair Discoveries.*
- 2:00 QQ20 **74.10** Neural modules for walking in human lumbar spinal cord. S. SASADA*; K. KATO; S. KADOWAKI; T. KOMIYAMA; Y. UGAWA; Y. NISHIMURA. *Developmental Physiology, Natl. Inst. For Physiological Sci., Life Science, The Grad. Univ. for Advanced Studies, The Japan Society for the Promotion of Sci., Neurology, Fukushima Med. Univ., Education, Chiba Univ., PRESTO, Japan Sci. and Technol. Agency.*
- 3:00 QQ21 **74.11** Modeling locomotor pattern generating networks of the human lumbar spinal cord. S. M. DANNER*; F. RATTAY; U. S. HOFSTOETTER; M. R. DIMITRIJEVIC; K. MINASSIAN. *Med. Univ. of Vienna, Vienna Univ. of Technol., Med. Univ. of Vienna, Baylor Col. of Med.*
- 4:00 QQ22 **74.12** A novel approach to quantifying changes in locomotor emg patterns in incomplete spinal cord injury. B. FARRELL*; W. MCKAY; J. BRUCE; K. TANSEY. *Shepherd Ctr., Emory Univ. Sch. of Med., VA Med. Ctr.*
- 1:00 QQ23 **74.13** Central rhythm and pattern generating capabilities of the human lumbar spinal cord. K. MINASSIAN*; S. M. DANNER; U. S. HOFSTOETTER; F. RATTAY; M. R. DIMITRIJEVIC. *Med. Univ. Vienna, Ctr. for Med. Physics and Biomed. Engin., Vienna Univ. of Technol., Baylor Col. of Med.*
- 2:00 QQ24 **74.14** Motor control changes in incomplete SCI generated by adding tonic transcuteaneous spinal cord stimulation to robotic locomotor training: A test of concept study. K. E. TANSEY*; B. FARRELL; B. MCKAY; J. BRUCE. *Shepherd/Emory U/Atlanta VA, Shepherd Ctr.*
- 3:00 QQ25 **74.15** Measurement of volitional muscle activity initiation and cessation after spinal cord injury. W. B. MCKAY*; J. BRUCE; L. VANHIEL; R. ALEXANDER; K. TANSEY. *Shepherd Ctr., Emory Univ. Sch. of Med., VA Med. Ctr.*
- 4:00 QQ26 **74.16** Evaluation of the effect of a neural modified peptide and hematopoietic stem cells in neural regeneration on rats with chronic spinal cord injury. F. R. ADRIÁN*; ESQ; R. RODRIGUEZ; E. GARCÍA; J. IBARRA. *Pro. Yecto Camina AC.*

POSTER

074. Spinal Cord Injury: Motor Systems I

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 QQ11 **74.01** Real-time optimization of sensory stimulation to improve walking metrics after spinal cord injury. J. M. WHITE*; K. E. TANSEY; S. P. DEWEERTH. *Georgia Inst. of Technol., Emory Univ., Shepherd Ctr., Emory Univ., Atlanta Veterans Admin. Med. Ctr., Emory Univ., Georgia Inst. of Technol., Khalifa Univ.*
- 2:00 QQ12 **74.02** Comparison of movements evoked from the lumbar spinal cord using intraspinal microstimulation versus epidural stimulation. P. J. GRAHN; A. J. BIEBER*; D. A. LOBEL; J. JEONG; J. T. HACHMANN; L. EVERTZ; M. P. MARSH; J. L. ANDERSON; K. BENNET; K. H. LEE; J. LUJAN. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*
- 3:00 QQ13 **74.03** Selectivity of transcutaneous lumbar spinal cord stimulation for eliciting posterior root-muscle reflexes in humans. M. KRENN*; A. TOTH; S. M. DANNER; U. S. HOFSTOETTER; K. MINASSIAN; W. MAYR. *Med. Univ. of Vienna, Vienna Univ. of Technol.*
- 4:00 QQ14 **74.04** Alternating modulations of posterior root-muscle reflexes of the human lumbosacral spinal cord: Inhibitory circuits outside the lumbar locomotor pattern generator. U. HOFSTOETTER*; K. MINASSIAN; S. M. DANNER; F. RATTAY; M. R. DIMITRIJEVIC. *Med. Univ. Vienna, Ctr. of Med. Physics and Biomed. Engin., Vienna Univ. of Technol., Baylor Col. of Med., Fndn. for Movement Recovery.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 RR1 **74.17** Assessment of diaphragm EMG stationarity as an index of motor unit recruitment. Y. B. SEVEN*; C. B. MANTILLA; G. C. SIECK. *Mayo Clin. Mayo Clin.*
- 2:00 RR2 **74.18** Evidence for rhythmic phrenic activity in the decerebrate rat following high cervical transection. M. G. Z. GHALI; V. MARCHENKO*. *Drexel Univ. Col. of Med.*
- 3:00 RR3 **74.19** Recruitment of diaphragm motor units following cervical spinal cord injury. C. B. MANTILLA*; Y. B. SEVEN; W. ZHAN; H. M. GRANSEE; G. C. SIECK. *Mayo Clin., Mayo Clin.*
- 4:00 RR4 **74.20** Bayesian estimation of kinetics and kinematics. C. NGUYEN*; A. DUNNING; M. BERTUCCO; T. D. SANGER. *USC.*
- 2:00 RR14 **75.10** Stretch reflex augmentation by subthreshold TMS is evidence for corticospinal signal integration. A. C. SCHOUTEN*; M. J. L. PERENBOOM; M. VAN DE RUIT; J. H. DE GROOT; C. G. M. MESKERS. *Delft Univ. Tech., Univ. of Twente, Univ. of Birmingham, Leiden Univ. Med. Ctr.*
- 3:00 RR15 **75.11** Is there differential processing of evoked potentials and motor output between the dominant and non-dominant limb in right handed people? T. S. BARSS*; T. KLARNER; E. ZEHR. *Rehabil. Neurosci. Laboratory, Univ. of Victoria, ICORD, Ctr. Biomed. Res.*
- 4:00 RR16 **75.12** • Neuromechanical effects of cutaneous feedback from discrete regions of the foot sole during locomotion. E. ZEHR*; T. NAKAJIMA; T. BARSS; T. KLARNER; S. MIKLOSOVIC; R. MEZZARANE; M. NURSE; T. KOMIYAMA. *Rehab Neurosci. Lab., ICORD, Kyorin Univ. Sch. of Med., Univ. of Brasilia, Nike Sport Res. Lab., Chiba Univ.*

POSTER

075. Reflexes and Reflex Modulation

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 RR5 **75.01** Spinal reflex simulations reveal context specific feedback gating of motor primitives. A. RAMAKRISHNAN*; C. B. HART; S. F. GISZTER. *Drexel Univ., Lockheed Martin Corp.*
- 2:00 RR6 **75.02** Neural mechanisms of swallowing desensitization following continuous superior laryngeal nerve stimulation in anesthetized rats. K. TSUJI*; T. TSUJIMURA; M. INOUE. *Niigata Univ., Niigata Univ.*
- 3:00 RR7 **75.03** • Inter-limb feedback corrections during bimanual control in non-human primates. E. A. HEMING*; S. H. SCOTT. *Queen's Univ.*
- 4:00 RR8 **75.04** Different conditioning effect of contralateral H-reflex during walking and standing. S. SUZUKI*; T. NAKAJIMA; R. A. MEZZARANE; G. FUTATSUBASHI; H. OHTSUKA; T. KOMIYAMA. *The United Grad. Sch. of Education, Tokyo Gakugei Univ., Kyorin Univ., Chiba Univ., Univ. of Brasilia, Hlth. Sci. Univ. of Hokkaido.*
- 1:00 RR9 **75.05** A novel technique to elicit H-reflexes in the human hamstring muscle group. S. S. DUEHOLM; J. H. RASMUSSEN; E. G. SPAICH; N. MRACHACZ-KERSTING*. *Aalborg Univ.*
- 2:00 RR10 **75.06** Gamma band activity of head muscles during yawning in humans. R. TECUANHUEY; M. FLORES; H. VERA; E. MANJARREZ*. *Benemerita Univ. Autonoma de Puebla, Benemerita Univ. Autonoma de Puebla, Benemerita Univ. Autonoma de Puebla.*
- 3:00 RR11 **75.07** Do startle reactions accompany postural responses to whole-body free-fall in standing humans? O. P. SANDERS*, III; R. A. CREATH; D. SAVIN; M. W. ROGERS. *Univ. of Maryland Sch. of Med.*
- 4:00 RR12 **75.08** The effect of muscle fatigue on the stretch reflex and joint stiffness among young subjects using broadband and narrowband perturbations. C. KALRA; P. TAWADROS; J. A. BURNE*. *Univ. of Sydney, Macquarie Univ.*
- 1:00 RR13 **75.09** • Negligible impact of tizanidine on the R2/medium latency reflex of upper and lower limbs. I. KURTZER*; J. BOUFFARD; A. Y. JIN; L. J. BOUYER; S. H. SCOTT. *New York Col. of Osteo. Med., Univ. Laval, Univ. Laval, Queen's Univ., Queen's Univ.*
- 1:00 RR17 **75.13** After stroke common neural regulation of rhythmic arm and leg movement persists across locomotor tasks. T. KLARNER*; P. M. LOADMAN; T. S. BARSS; E. ZEHR. *Rehabil. Neurosci. Laboratory, Univ. Victoria, ICORD, Ctr. Biomed. Res.*
- 2:00 RR18 **75.14** iPhone wireless accelerometer reflex quantification system using an artificial tendon reflex device. R. C. LEMOYNE*; T. MASTROIANNI; W. GRUNDFEST. *Independent, Northern Arizona Univ., Independent, UCLA.*
- 3:00 RR19 **75.15** The impact of an alpha-2 adrenergic agonist on restoration of neuromuscular function in spinal cord injury. M. M. MIRBAGHERI*; M. KINDIG; X. NIU; D. VAROQUI. *Northwestern Univ., Rehabil. Inst. of Chicago.*
- 4:00 RR20 **75.16** Follow-up study of gain modulation of cutaneous reflex in the peroneus longus after ankle sprain. G. FUTATSUBASHI*; S. SASADA; H. OHTSUKA; S. SUZUKI; T. KOMIYAMA. *Tokyo Gakugei Univ., Natl. Inst. for Physiological Sci., Hlth. Sci. Univ. of Hokkaido, Chiba University.*
- 1:00 RR21 **75.17** Tamoxifen recovers locomotion alterations produced by a penetrating injury in hippocampus. J. R. LOPEZ RUIZ*; B. DE LA TORRE; N. E. FRANCO; L. P. OSUNA; I. JIMÉNEZ; M. J. DUENAS; S. H. DUENAS. *Univ. De Guadalajara, CINVESTAV-IPN, Univ. De Guadalajara.*
- 2:00 RR22 **75.18** Abnormal EMG-force relations during reflexive contractions in paretic biceps muscle. N. L. SURESH*; M. K. CHARDON. *Rehabil. of Chicago, Northwestern Univ.*

POSTER

076. Basal Ganglia Physiology: Parkinson's Disease

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 RR23 **76.01** Changes of the striatal MSN activity in patients with advanced Parkinson's disease. S. M. PAPA*; A. SINGH; K. MEWES; R. GROSS; M. DELONG. *Emory Univ.*
- 2:00 RR24 **76.02** Differential effects of NMDA/AMPA glutamate receptor transmission on striatal neuronal activity in parkinsonian monkeys. A. SINGH*; K. BURKE; J. WHITHEAR; B. SHETTY; S. TRAYNELIS; S. PAPA. *Yerkes Natl. Primate Res. Center, Emory University, Emory Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 RR25 **76.03** Targeting opioid receptors to reduce dyskinesia in a non-human primate model of Parkinson's disease. L. F. POTTS*; A. SINGH; A. GREVEN; B. L. DYAVAR SHETTY; J. S. WHITHEAR; S. P. BRAITHWAITE; M. VORONKOV; M. MOURADIAN; S. M. PAPA. *Yerkes Natl. Primate Res. Center, Emory Univ., MentiNova, Inc., UMDNJ-Robert Wood Johnson Med. Sch., Emory Univ.*
- 4:00 RR26 **76.04** Computational modeling of axon terminal activation during subthalamic deep brain stimulation. R. L. ARLOW; C. C. MCINTYRE*. *Case Western Reserve Univ.*
- 1:00 SS1 **76.05** ● Predicting free choices from invasively recorded brain activity in the subthalamic nucleus of Parkinson's patients. M. RUSCONI*; C. ALLEFELD; F. U. HOHLEFELD; R. DEUTSCHLÄNDER; T. B. CHRISTOPHEL; W. NEUMANN; A. A. KÜHN; J. HAYNES. *BCCN, Charité Universitätsmedizin Berlin, Charité Universitätsmedizin Berlin, Berlin Sch. of Mind and Brain, Humboldt Univ., Cluster of Excellence NeuroCure, Charité Universitätsmedizin, Humboldt Univ. zu Berlin, Berlin Ctr. for Advanced Neuroimaging.*
- 2:00 SS2 **76.06** Globus pallidus neurons: Functional classification and effects of dopamine depletion. B. KARAIN; D. XU; J. BELLONE; R. HARTMAN; W. SHI*. *Loma Linda Univ. Sch. of Med., Loma Linda Univ. Sch. of Pharm., Loma Linda Univ. Sch. of Behavioral Hlth., Loma Linda Univ. Sch. of Behavioral Hlth., Loma Linda Univ. Schs of Pharm. and Med.*
- 3:00 SS3 **76.07** The enteric nervous system in Macaca fascicularis: Changes following experimental parkinsonism. J. L. LANCIEGO*; E. RODA; A. J. RICO; I. GONZALEZ-DOPESO; S. SIERRA-SAN NICOLAS; L. A. CHANG-AZANCOT. *FIMA.*
- 4:00 SS4 **76.08** Disruption of both striatal output pathways underlies the behavioral response to dopamine depletion. O. P. JÁIDAR*; L. A. CARRILLO-REID; M. LAZARUS; G. W. ARBUTHNOTT; J. BARGAS; A. HERNÁNDEZ. *Okinawa Inst. of Sci. and Technol. Grad. Univ., Feinberg Sch. of Med., Univ. of Tsukuba, Inst. de Fisiología Celular.*
- 1:00 SS5 **76.09** Impact of unilateral subthalamotomy in fMRI (BOLD signal) in Parkinson's disease during a stop signal task. I. OBESO; F. LOAYZA; R. GONZALEZ; F. VILLAGRA; J. GURIDI; M. C. RODRIGUEZ OROZ; M. JAHANSHAH; J. A. OBESO*; M. A. PASTOR. *Inst. of Cognitive Neuroscience, CNRS, UCL Inst. of Neurol., Neuroimaging Laboratory, CIMA, Univ. of Navarra, Fac. of Mechanical Engineering, Litoral Polytechnic Univ. (ESPOL), Movement Disorders Laboratory, CIMA - Univ. of Navarra, CIBERNED, Inst. Carlos III, BioDonostia Res. Inst., CIMA - Univ. of Navarra.*
- 2:00 SS6 **76.10** Role of C3 and C5 complement components in the AAV-SYN mouse model of PD. H. ALLEN*; A. S. HARMS; D. G. STANDAERT. *Univ. of Alabama at Birmingham.*
- 2:00 SS8 **77.02** Neural correlates of postural control in the substantia nigra. J. W. BARTER*; S. CASTRO; T. SUKHARNIKOVA; M. A. ROSSI; W. EBENSTEIN; H. H. YIN. *Duke Univ.*
- 3:00 SS9 **77.03** Motor function in children exposed to hypoxia-ischemia. S. GEVA*; S. JENTSCHKE; F. VARGHA-KHADEM. *UCL, Freie Univ.*
- 4:00 SS10 **77.04** Learning state-action mapping in a cortico-basal ganglia spiking model with Go/NoGo network connectivity. P. BERTHET*; M. LINDHAL; P. TULLY; J. HELLGREN KOTALESKI; A. LANSNER. *KTH Royal Inst. of Technol., SBI Stockholm Brain Inst., Univ. of Edinburgh, Karolinska Inst., Stockholm Univ.*
- 1:00 SS11 **77.05** Neural substrates of accuracy in motor skills. R. F. OLIVEIRA*; R. M. COSTA. *Champalimaud Ctr. for the Unknown, Champalimaud Ctr. for the Unknown.*
- 2:00 SS12 **77.06** Effect of deep brain stimulation in rats selectively bred for deficient prepulse inhibition, an endophenotype for Tourette's syndrome. S. ANGELOV*; M. ALAM; J. K. KRAUSS; K. SCHWABE. *Med. Univ. Hannover.*
- 3:00 TT1 **77.07** Functional control of specific neural pathways in basal ganglia circuit by HiRet vector-mediated transgene expression. S. KATO*; R. FUKABORI; K. KOBAYASHI; H. YAWO; Y. ISOMURA; K. KOBAYASHI. *Fukushima Med. Univ., NIPS, Tohoku Univ., Tamagawa Univ., CREST/JST.*
- 4:00 TT2 **77.08** Effects of pedunculo-pontine tegmental nucleus lesions on sucrose overconsumption - impaired behavioral control or disrupted salience signaling? D. A. MACLAREN*; D. DANIELS; A. L. RUSSELL; T. MARKOVIC; S. D. CLARK. *Univ. at Buffalo, State Univ. of New York, Univ. at Buffalo, State Univ. of New York.*
- 1:00 TT3 **77.09** Dissecting the mesopontine tegmentum: Investigating the contributions of specific neuronal populations to sensory and motor processing. A. L. RUSSELL*; D. A. A. MACLAREN; T. MARKOVIC; J. SANTINI; S. D. CLARK. *Univ. at Buffalo, SUNY.*
- 2:00 TT4 **77.10** Is the pro-kinetic versus anti-kinetic dichotomy of the direct and indirect pathways of the basal ganglia necessary for accounting dopaminergic modulation of reaction times? O. SHOUNO*. *Honda Res. Inst. Japan Co Ltd.*
- 3:00 TT5 **77.11** Learning time-constrained motor sequences to attain reward: A speed-accuracy trade-off. I. COS-AGUILERA*; P. RUEDA-OROZCO; D. ROBBE; B. GIRARD. *ISIR, Univ. Pierre Et Marie Curie, UMR-7222, Ctr. Natl. de la Recherche Scientifique, Inst. de Neurobiologie de la Méditerranée.*
- 4:00 TT6 **77.12** Prefrontal and sensory cortex co-direct the basal ganglia to optimize perceptual action selection. S. JAHFARI*; L. WALDORP; K. RIDDERINKHOF; H. SCHOLTE. *Univ. of Amsterdam.*

POSTER

077. Basal Ganglia: Systems Behavior

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 SS7 **77.01** A causative link between inner ear defects and striatal dysfunction. M. W. ANTOINE; C. A. HÜBNER; J. C. AREZZO; J. M. HEBERT*. *Albert Einstein Coll Med., Jena Univ. Hospital, Inst. of Human Genet., Albert Einstein Coll Med.*

POSTER

078. Voluntary Motor Control: Motor Learning I

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 TT7 **78.01** Eliciting novel patterns of finger coordination using body-machine interfaces. R. RANGANATHAN*; F. GOTHUEY. *Rehabil. Inst. of Chicago.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 TT8 **78.02** Learning to predict through challenging haptic interaction. M. CASADIO*; V. SQUERI; P. G. MORASSO. *Univ. of Genova, Italian Inst. of Technol. (IIT)*.
- 3:00 TT9 **78.03** The role of modularity in the learning and generalization of reaching. L. PATANE*; A. SCIUTTI; B. BERRET; V. SQUERI; L. MASIA; G. SANDINI; F. NORI. *Italian Inst. of Technol. (IIT), Univ. Paris Sud, Unité de Recherche CIAMS*.
- 4:00 TT10 **78.04** Designing practice schedules to optimize motor learning in body-machine interfaces. M. LEE*; A. FARSHCHIANSADEGH; R. RANGANATHAN. *Rehabil. Inst. of Chicago*.
- 1:00 TT11 **78.05** Motor learning in a customized body-machine interface for persons with paralysis. I. SEANEZ*; F. MUSSA-IVALDI. *Northwestern Univ., Northwestern Univ.*
- 2:00 TT12 **78.06** Custom designed sensory conflicts. M. FISHER*; J. PATTON. *Rehabil. Inst. of Chicago, Univ. of Illinois at Chicago*.
- 3:00 UU1 **78.07** Adaptation to visual feedback delay in a redundant motor task. A. FARSHCHIANSADEGH*; R. RANGANATHAN; M. CASADIO; F. MUSSA-IVALDI. *Rehabil. Inst. of Chicago, Univ. of Genova, Northwestern Univ.*
- 4:00 UU2 **78.08** Effect of assistive forces on speed-accuracy trade-off in reaching movements: Model and experiments. S. SUMMA; M. CASADIO; V. SANGUINETI*. *Univ. of Genoa*.
- 1:00 UU3 **78.09** Extraction of commanded trajectory from disturbed reaching movements reveals structure of movement and online correction. J. R. HOROWITZ*; J. PATTON. *Rehab Inst. of Chicago, Univ. of Illinois - Chicago*.
- 2:00 UU4 **78.10** ● Hand and joint kinematics during motor learning with a redundant arm exoskeleton in healthy adults: Significance for the assessment of recovery post-stroke. N. SCHWEIGHOFER*; D. MOTTET; C. WANG; K. BAKTHI; D. J. REINKENSMEYER; O. REMY-NERIS; I. LAFFONT. *Univ. So California, Univ. of Montpellier I, University of Southern California, Univ. of California, Irvine, Univ. de Bretagne Occidentale*.
- 3:00 UU5 **78.11** Dissociating the roles of sensory prediction error and reward prediction error on the formation of motor memory during visuomotor adaptation. Y. OH*; J. IZAWA; N. SCHWEIGHOFER. *USC, NTT, USC*.
- 4:00 UU6 **78.12** Relative timing of sensory- and reward-prediction errors affects motor learning. S. N. BRUDNER*; J. S. BERLINER; R. B. IVRY; J. A. TAYLOR. *Princeton Univ., Univ. of California, Berkeley*.
- 1:00 UU7 **78.13** Left-hand adaptation at the cost of right-hand adaptation. J. S. BERLINER*; S. N. BRUDNER; J. A. TAYLOR. *Princeton Univ.*
- 2:00 UU8 **78.14** 2D force profiles of human motor adaptation to simple and complex viscous force fields. E. N. MARONGELLI*; K. A. THOROUGHMAN. *Washington Univ.*
- 3:00 UU9 **78.15** The actor-critic reinforcement learning model predicts human reward expectations as they learn a novel motor task. R. P. KHAN*; K. A. THOROUGHMAN. *Washington Univ. In St Louis, Washington Univ. in St Louis*.
- 4:00 UU10 **78.16** Motor learning by observing on a trial-by-trial basis. V. V. HUH*; K. A. THOROUGHMAN. *Washington Univ. in St. Louis, Washington Univ. in St. Louis*.
- 1:00 UU11 **78.17** The role of error-based and reward-based mechanisms in a motor learning task. S. HILLENBRAND*; R. B. IVRY. *Univ. of California--Berkeley*.
- 2:00 UU12 **78.18** Good (and bad) learners: Behavioral and neuroimaging evaluation of individual differences in motor learning. A. STARK-INBAR*; O. J. BERKOWITZ; R. B. IVRY. *UC Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley*.
- 3:00 UU13 **78.19** Analysis of individual differences in motor adaptation suggests one homogenous two-state population. Y. R. MIYAMOTO*; M. SMITH. *Harvard Univ.*
- 4:00 UU14 **78.20** Inhibition of posterior parietal cortex with 1hz rTMS alters the spatial frame of motor learning. D. PRESS*; J. BRAYANOV; S. TUNOVIC; M. SMITH. *Beth Israel Deaconess Med. Ctr., Harvard Sch. of Engin. and Applied Sci., Beth Israel Deaconess Med. Ctr.*
- 1:00 UU15 **78.21** The motor system implements smart safety margins based on estimates of environmental variability for both grip force control and obstacle avoidance. A. M. HADJIOSIF; M. A. SMITH*. *Harvard Univ., Harvard Univ.*
- 2:00 UU16 **78.22** The identification and characterization of a rapidly-decaying, high-precision proprioceptive sensory memory & its effects on motor planning. A. E. BRENNAN*; H. G. WU; M. A. SMITH. *Harvard Univ.*
- 3:00 UU17 **78.23** Generalization of the temporally-labile and temporally-stable components of motor memory. A. M. HADJIOSIF*; M. A. SMITH. *Harvard Univ.*
- 4:00 UU18 **78.24** ● Identifying the constituents of motor sequence skill learning: Local spatial facilitation, local temporal inhibition and subsequence learning. J. M. BRETON*; D. PRESS; M. SMITH. *Beth Israel Deaconess Med. Ctr., Harvard Univ.*
- 1:00 UU19 **78.25** Generalization of motor learning between distinct functional upper extremity tasks. B. E. LINDAUER*; E. B. FAUTH; S. Y. SCHAEFER. *Utah State Univ., Utah State Univ., Univ. of Utah, Univ. of Utah*.
- 2:00 UU20 **78.26** Changes in cardiovascular load associated with motor learning during upper extremity task-specific training. J. P. HOOVER*; L. E. DIBBLE; S. Y. SCHAEFER. *Utah State Univ., Univ. of Utah, Univ. of Utah*.
- 3:00 UU21 **78.27** Clamping errors selectively accentuated a cost-driven update of motor memory. J. IZAWA*; T. YOSHIOKA; R. OSU; H. GOMI. *NTT Communication Sci. Labs., Natl. Inst. of Information and Communications Technol., ATR Computat. Neurosci. Labs.*
- 4:00 UU22 **78.28** Brain structure constraints a cost for optimization in muscle force distribution problem. K. KITA*; J. IZAWA; C. HOSODA; M. HONDA; T. HANAKAWA; R. OSU. *ATR Computat. Neurosci. Labs., NTT Communication Sci. Labs., Natl. Ctr. for Neurol. and Psychiatry*.
- 1:00 UU23 **78.29** Model-free reinforcement of learned movements is invariant to exposure duration. D. M. HUBERDEAU*; A. M. HAITH; J. W. KRAKAUER. *Johns Hopkins Univ.*
- 2:00 UU24 **78.30** A motor learning framework that enables optimal feedback control in object manipulation tasks. A. SYLAIDI*; A. A. FAISAL. *Imperial Col. London, Imperial Col. London*.

POSTER

079. Brain-Machine Interface I

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 UU25 **79.01** Simple neuro-physiological predictor for motor imagery performance. M. AHN; H. CHO; S. AHN; S. C. JUN*. *GIST*.
- 2:00 UU26 **79.02** Decoding of multi-classes of movement execution and motor imagery using spatially-filtered neuromagnetic M1 signals. H. SUGATA*; M. HIRATA; T. YANAGISAWA; S. YORIFUJI; T. YOSHIMINE. *Osaka Univ., Osaka Univ.*
- 3:00 VV1 **79.03** Novel spatial tactile and bone-conduction auditory brain computer interface. T. M. RUTKOWSKI*; H. MORI; S. MAKINO; K. MORI. *Univ. of Tsukuba, RIKEN, Res. Inst. of Natl. Rehabil. Ctr. for Persons with Disabilities.*
- 4:00 VV2 **79.04** • Development of multifunctional flexible neural probe integrated optical fiber. J. KIM*; B. LEE; T. KIM. *Korea Inst. of Sci. and Technol.*
- 1:00 VV3 **79.05** Response to microstimulation is slower than to tactile or visual cues presented mid-movement. J. M. GODLOVE*; E. O'BRIEN; A. BATISTA. *Univ. Pittsburgh.*
- 2:00 VV4 **79.06** Potentiating functional connectivity between distant cortical locations with activity dependent stimulation in the anesthetized rat. G. M. VAN ACKER*, III; D. GUGGENMOS; A. PACK; C. DUNHAM; R. J. NUDO. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*
- 3:00 VV5 **79.07** A comparison of single unit activity in spared motor areas following lesion to primary motor cortex. A. PACK*; D. GUGGENMOS; C. DUNHAM; S. BARBAY; R. J. NUDO. *Univ. of Kansas Med. Ctr.*
- 4:00 VV6 **79.08** Using neurofeedback from real-time fMRI connectivity patterns to enhance skilled motor performance. S. LIEW*; J. GONZALEZ-CASTILLO; S. HOROVITZ; V. ROOPCHANSINGH; S. TINAZ; M. HALLETT; L. G. COHEN. *NIH, NIH.*
- 1:00 VV7 **79.09** Volitional activation of hippocampal synapses. D. ISHIKAWA*; N. MATSUKI; Y. IKEGAYA. *The Univ. of Tokyo.*
- 2:00 VV8 **79.10** Electrical stimulation via micro-ECOG devices for therapeutic and rejuvenation purposes. A. SCHENDEL*; R. LYCKE; T. J. RICHNER; S. K. BRODNICK; K. J. OTTO; J. C. WILLIAMS. *Univ. of Wisconsin, Purdue Univ., Univ. of Wisconsin - Madison, Purdue Univ.*
- 3:00 VV9 **79.11** Development of an intracortical eye movement-based brain-computer interface. S. L. BRINCAT*; A. F. SALAZAR-GÓMEZ; N. JIA; M. PANKO; E. K. MILLER; F. H. GUENTHER. *MIT, Boston Univ., Boston Univ., Boston Univ.*
- 4:00 VV10 **79.12** Neuroelectrophysiological effects of activity-dependent stimulation following a controlled cortical impact to primary motor cortex of the rat. D. J. GUGGENMOS*; C. DUNHAM; M. AZIN; S. BARBAY; J. D. MAHNKEN; P. MOHSENI; R. J. NUDO. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Case Western Reserve University, Univ. of Kansas Med. Ctr.*
- 1:00 VV11 **79.13** Patient-specific modeling of the volume of tissue activated in deep brain stimulation for essential tremor. L. HOUSHMAND; A. CHATURVEDI; C. C. MCINTYRE; P. G. PATIL*. *Univ. of Michigan, Case Western Univ., Univ. Michigan.*
- 2:00 VV12 **79.14** A 2x2 microfabricated three dimensional Parylene sheath multisite electrode probe array with bioactive coatings. S. A. HARA*; J. T. W. KUO; B. J. KIM; C. D. LEE; C. A. GUTIERREZ; T. HOANG; V. PIKOV; E. MENG. *USC, Independent Contractor, Huntington Med. Res. Inst.*
- 3:00 VV13 **79.15** An analysis of intracortical microelectrode impedances compared with SEM images measured across months and years from felines and behaving macaques. T. DAVIS*; T. GILBERT; P. HOUSE; B. GREGER. *Univ. Utah, Arizona State Univ.*
- 4:00 VV14 **79.16** • Noninvasive EMG-based augmented communication system for aphasic patients. D. J. DILORENZO; P. R. KENNEDY; R. BAKAY*. *Rush Univ. Med. Ctr., Neural Signals Inc.*
- 1:00 VV15 **79.17** • The influence of tone frequency in an auditory brain-computer interface. N. YAMAWAKI*; M. KUNIHIO; T. HAYASHI; S. SEKI; S. KOFUKATA; Y. SEGAWA. *Kinki Univ.*
- 2:00 VV16 **79.18** Spinal cord activity-dependent modulation of cortically evoked motor potentials. G. GARCIA-ALIAS*; J. CHOE; P. K. SHAH; H. ZHONG; R. R. ROY; V. R. EDGERTON. *UCLA.*
- 3:00 VV17 **79.19** Brain-machine interface featuring cooperation and social interaction. A. RAMAKRISHNAN*; P. J. IFFT; Z. LI; S. SHOKUR; M. A. LEBEDEV; M. A. L. NICOLELIS. *Duke Univ., Duke Ctr. for Neuroengineering, Duke Univ., Beijing Normal Univ., École Polytechnique Fédérale de Lausanne, Duke Univ., Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal.*
- 4:00 VV18 **79.20** Decoding rhythmic versus discrete movements from cortical ensembles. K. Z. ZHUANG*; M. A. LEBEDEV; M. A. L. NICOLELIS. *Duke Univ., Ctr. for Neuroengineering, Duke Univ., Duke Univ., Duke Univ.*
- 1:00 VV19 **79.21** Subject independent pattern classification of overt and covert movements from fNIRS signals. A. D. ZAIDI*; N. ROBINSON; M. RANA; R. SITARAM. *Max Planck Inst. For Biol. Cybernetics, Inst. for Med. Psychology and Behavioral Neurobiology, Univ. of Tuebingen, Sch. of Computer Engineering, Nanyang Technological Univ., Dept. of Biomed. Engineering, Univ. of Florida, Sri Chitra Tirunal Inst. of Med. Sci. and Technol.*
- 2:00 VV20 **79.22** Sparse subspace clustering for automated spike sorting. V. A. SUBRAMANIAN*; H. M. GHADYALI; Y. C. XIE; D. SCHWARZ; P. J. IFFT; M. A. LEBEDEV; M. A. L. NICOLELIS. *Duke Univ., Duke Univ., Duke Univ., Duke Univ., Duke Univ., Edmond and Lily Safra Intl. Inst. of Neurosci.*
- 3:00 VV21 **79.23** Local field potentials and multi-unit spikes display stable movement representations during extended brain machine interface use. M. R. SCHEID*; R. D. FLINT; Z. WRIGHT; M. W. SLUTZKY. *Northwestern Univ., Northwestern Univ.*
- 4:00 VV22 **79.24** Navigation through space enabled by a brain-machine interface. R. SANKARANARAYANI*; A. LIN; D. SCHWARZ; G. LEHEW; M. LEBEDEV; M. A. L. NICOLELIS. *Duke Univ., Duke Univ., Duke Univ., Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Ecole Polytechnique Federale De Lausanne, Duke Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 WW1 **79.25** Multichannel wireless recordings of freely moving rhesus monkey behaviors. D. SCHWARZ*; S. RAJANGAM; V. SUBRAMANIAN; H. POWELL; T. L. HANSON; D. F. DIMITROV; G. LEHEW; J. MELLOY; M. LEBEDEV; M. A. L. NICOLELIS. *Duke Univ. Med. Ctr., Duke Univ., North Carolina Sch. of Sci. and Mathematics, Univ. of California San Francisco, Monterey Spine, Duke Univ., Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal.*
- 2:00 WW2 **79.26** Correlation dynamics of large-scale cortical ensemble activity during upper-limb reaching tasks. P. IFFT*; M. A. LEBEDEV; M. A. L. NICOLELIS. *Duke Univ., Duke Univ. Ctr. for Neuroengineering, Duke Univ., Duke Univ., Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal.*
- 3:00 WW3 **79.27** BCI-based sensorimotor rhythm training can affect motor performance. D. J. MCFARLAND*; W. A. SARNACKI; J. R. WOLPAW. *Wadsworth Ctr.*
- 4:00 WW4 **79.28** Increasing items in the matrix: Effect on the p300 response of brain-computer interface (bci) home users with amyotrophic lateral sclerosis (als). L. MCCANE*; S. M. HECKMAN; D. J. MCFARLAND; C. S. CARMACK; S. WINDEN; D. E. CORDA; T. M. VAUGHAN; H. SHI; R. J. RINGER; R. J. RUFF; J. R. WOLPAW. *Wadsworth Center, NYS Dep. Hlth., Helen Hayes Hosp., Dept. of Veterans Affairs Cooperative Studies Program Coordinating Ctr., The Veterans Affairs Cooperative Studies Program Clin. Res. Pharm. Coordinating Ctr., Univ. of New Mexico, Louis B. Stokes V.A. Med. Ctr., Case Western Reserve Univ. Sch. of Med.*
- 1:00 WW5 **79.29** A clinical demonstration of EEG-based brain-computer interface (BCI): Long-term independent use of a P300-based BCI. J. R. WOLPAW; R. S. BEDLACK; R. J. RINGER; D. J. REDA; K. J. HILL; P. G. BANKS; T. M. VAUGHAN*; H. SHI; S. M. HECKMAN; C. S. CARMACK; S. WINDEN; L. M. MCCANE; R. J. RUFF. *Wadsworth Ctr, NYS Dept Hlth. & SUNY, Helen Hayes Hosp., Durham Veterans Admin. Med. Ctr., Duke Univ. Sch. of Med., The Veterans Affairs Cooperative Studies Program Clin. Res. Pharm. Coordinating Ctr., Univ. of New Mexico, Dept. of Veterans Affairs Cooperative Studies Program Coordinating Ctr., Univ. of Pittsburgh, Louis B. Stokes V.A. Med. Ctr., Case Western Reserve Univ. Sch. of Med.*
- 2:00 WW6 **79.30** Simultaneous brain-computer interfacing and overt motor control of a virtual object. D. SARMA*; M. WRONKIEWICZ; W. CHEUNG; R. P. N. RAO. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

POSTER

080. Brain-Machine Interface II

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 WW7 **80.01** Decoding of target proximity improves estimation of attempted movement in people with tetraplegia. M. L. HOMER*; M. T. HARRISON; J. A. PERGE; J. D. SIMERAL; L. R. HOCHBERG. *Brown Univ., Brown Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Massachusetts Gen. Hosp., Harvard Med. Sch.*
- 2:00 WW8 **80.02** Evolution of the BrainGate real-time Brain-Computer Interface (BCI) platform for individuals with tetraplegia or limb loss. J. D. SIMERAL*; D. BACHER; A. A. SARMA; N. J. SCHMANSKY; S. D. STAVISKY; B. JAROSIEWICZ; T. MILEKOVIC; D. M. ROSLER; V. GILJA; C. PANDARINATH; A. S. CORNWELL; J. M. HENDERSON; K. V. SHENOY; R. F. KIRSCH; J. P. DONOGHUE; L. R. HOCHBERG. *VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Stanford Univ., Brown Univ., Stanford Univ., Stanford Univ., Case Western Reserve Univ., Louis Stokes VA Med. Ctr., Stanford Univ., Stanford Univ., Stanford Univ., Case Western Reserve Univ., Harvard Med. Sch.*
- 3:00 WW9 **80.03** Overlapping neural representations of upper extremity movements in human primary motor cortex during volitional, imagined, observed, and passive movements. C. PANDARINATH*; V. GILJA; C. H. BLABE; L. R. HOCHBERG; K. V. SHENOY; J. M. HENDERSON. *Stanford Univ., Stanford Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*
- 4:00 WW10 **80.04** Decoding high-dimensional hybrid signals: feature and trial selection for use of an intracortical brain-computer interface by people with tetraplegia. A. A. SARMA*; D. BACHER; B. JAROSIEWICZ; J. PERGE; T. MILEKOVIC; J. D. SIMERAL; L. R. HOCHBERG; J. P. DONOGHUE. *Brown Univ., Brown Univ., Dept. of Neurosci., Dept. of Veterans Affairs Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ.*
- 1:00 WW11 **80.05** Selecting data for unsupervised decoder calibration during practical BCI use. B. JAROSIEWICZ*; T. MILEKOVIC; A. A. SARMA; L. R. HOCHBERG; J. P. DONOGHUE. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch.*
- 2:00 WW12 **80.06** Design and application of a high performance intracortical brain computer interface for a person with amyotrophic lateral sclerosis. V. GILJA*; C. PANDARINATH; C. H. BLABE; L. R. HOCHBERG; K. V. SHENOY; J. M. HENDERSON. *Stanford Univ., Stanford Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ., Stanford Univ., Stanford Univ., Stanford Univ.*
- 3:00 WW13 **80.07** Real-time simulation of broadband neural signals and closed-loop effector control for brain-computer interface development, validation, and investigation. D. BACHER*; A. A. SARMA; N. J. SCHMANSKY; J. D. SIMERAL; J. P. DONOGHUE; L. R. HOCHBERG. *Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Dept. of VA Med. Ctr., Brown Univ., Harvard Med. Sch.*
- 4:00 WW14 **80.08** A compact head-mounted broadband wireless neural interface for mobile non-human primates. M. YIN; D. BORTON; H. LI; C. BULL; J. KOMAR; C. HEELAN; N. AGHA; D. ROSLER; L. LARSON; E. BEZARD; G. COURTINE; A. V. NURMIKKO*. *Brown Univ., Swiss Federal Inst. of Technol. (EPFL), Univ. Victor Segalen-Bordeaux 2, Ctr. Natl. de la Recherche Scientifique, Bordeaux Inst. of Neuroscience, UMR 5293, Brown Univ.*
- 1:00 WW15 **80.09** Narrow intracortical LFP bands encode target position during an operant conditioning BCI task. B. YVERT*; T. MILEKOVIC; A. A. SARMA; D. BACHER; L. R. HOCHBERG; J. P. DONOGHUE. *Brown Univ., Brown Univ., CNRS and Univ. Bordeaux, Brown Univ., Dept. of VA Med. Ctr., Massachusetts Gen. Hosp., Harvard Med. Sch.*

- 2:00 WW16 **80.10** Volitional control of high gamma local field potentials (LFPs) recorded by a single microelectrode by an individual with tetraplegia. T. MILEKOVIC*; D. BACHER; B. YVERT; L. R. HOCHBERG; E. N. ESKANDAR; S. S. CASH; J. P. DONOGHUE. *Brown Univ., Brown Univ., Brown Univ., CNRS and Univ. of Bordeaux, Dept. of VA Med. Ctr., Massachusetts Gen. Hosp., Harvard Med. Sch., Harvard Med. Sch., Massachusetts Gen. Hosp.*
- 3:00 WW17 **80.11** Comparison of human and macaque motor cortical field potentials during attempted and executed movement. J. A. PERGE*; M. ST. LOUIS; J. P. DONOGHUE; L. R. HOCHBERG. *Brown Univ., Ctr. for Neurorestoration and Neurotech., Rehab. R&D Service, Brown Univ., Brown Univ., Brown Univ., Mass. Gen. Hosp., Harvard Med. Sch.*
- 4:00 WW18 **80.12** Performance evaluation of long-term recording from microelectrode arrays through analysis of LFP signals. S. ZHANG*; J. D. SIMERAL; J. A. PERGE; Y. S. PARK; L. R. HOCHBERG; J. P. DONOGHUE. *Zhejiang Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Massachusetts Gen. Hosp., Brown Univ., Harvard Med. Sch., Brown Univ.*
- 1:00 WW19 **80.13** ▲ Comparison of spike sorting and thresholding of voltage waveforms for brain machine interfaces. B. P. CHRISTIE*; D. E. THOMPSON; Z. IRWIN; V. GILJA; P. NUYUJUKIAN; S. I. RYU; K. V. SHENOY; C. A. CHESTEK. *Univ. of Michigan, Stanford Univ., Stanford Univ., Stanford Univ., Palo Alto Med. Fndn., Stanford Univ., Stanford Univ., Univ. of Michigan, Univ. of Michigan.*
- 2:00 WW20 **80.14** Decoding finger information from macaque motor cortex. Z. IRWIN*; K. E. SCHROEDER; D. E. THOMPSON; A. J. SACHS; P. G. PATIL; C. A. CHESTEK. *Univ. of Michigan, Univ. of Ottawa, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*
- 3:00 WW21 **80.15** Somatosensory responses in finger area of macaque motor cortex. K. E. SCHROEDER*; Z. IRWIN; D. E. THOMPSON; A. J. SACHS; P. G. PATIL; C. A. CHESTEK. *Univ. of Michigan, Univ. of Ottawa, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*
- 4:00 WW22 **80.16** Using virtual reality environments to train high-dimensional control of a virtual upper limb prosthetic. D. PUTRINO*; Y. T. WONG; A. WEISS; J. SEIDEMAN; B. PESARAN. *New York Univ., New York Univ.*
- 1:00 XX1 **80.17** Exploiting movement coordination in a Brain Machine Interface to control an upper limb prosthetic. Y. T. WONG*; D. PUTRINO; A. WEISS; B. PESARAN. *New York Univ.*
- 2:00 XX2 **80.18** Rediscovering the "Critical Tracking Task" for evaluating motor control. K. M. QUICK*; S. M. WHAITE; A. P. BATISTA. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 3:00 XX3 **80.19** The effect of depressed mood on the dynamic modulation of motor-control in a simulated driving task. H. HUANG*; K. HARLE; J. MOVELLAN; M. PAULUS. *UCSD, UCSD, UCSD, UCSD.*
- 4:00 XX4 **80.20** Critical flicker frequency and a high-frequency SSVEP-based brain-computer interface. T. SAKURADA*; T. KAWASE; T. KOMATSU; K. KANSAKU. *Res. Inst. of Natl. Rehabil. Ctr.*
- 1:00 XX5 **80.21** Designing closed-loop brain-machine interfaces using charge balanced biphasic stimulating currents. G. KUMAR*; M. H. SCHIEBER; N. V. THAKOR; M. V. KOTHARE. *Lehigh Univ., Univ. of Rochester Med. Ctr., Johns Hopkins Univ.*
- 2:00 XX6 **80.22** Single hemisphere neural tuning during bilateral brain-computer interface arm and hand movement. J. E. DOWNEY*; B. WODLINGER; E. C. TYLER-KABARA; A. SCHWARTZ; M. BONINGER; J. L. COLLINGER. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

POSTER

081. Hormonal Modulation of Cognition

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 XX7 **81.01** Effect of prenatal and/or postnatal bisphenol-A exposure on performance of a maze task in Suffolk sheep. E. M. PECKHAM*; H. GUSS; C. UPTON. *Univ. Michigan, Univ. of Michigan.*
- 2:00 XX8 **81.02** The effects of long-term high-fat diet and binge-like eating behavior on cognitive function and affective behavior in C57BL/6 mice. P. TELENSKY; N. K. BARKER; A. N. POLITO; P. A. SMITH; T. M. TANG; Y. E. GEDA; T. A. CZYZYK*. *Mayo Clin. Arizona.*
- 3:00 XX9 **81.03** Altered glutamate receptor expression and partial rescue of PCP-disrupted PPI in oxytocin knockout mice. M. E. RICH*; H. K. CALDWELL. *Kent State Univ.*
- 4:00 XX10 **81.04** Assessment of attention in vasopressin-deficient rats using a five-choice serial reaction time task. M. BERQUIST*, JR; S. M. MOONEY-LEBER; C. R. BROWN; D. FEIFEL; A. J. PRUS. *Northern Michigan Univ., UCSD.*
- 1:00 XX11 **81.05** Role of oxytocin and arginine vasopressin in expectancy-induced analgesia. L. COLLOCA; M. ERNST; D. SHURTLEFF*; K. LEE; K. SIMMONS; T. LIANG; A. HORIN; D. PINE; C. GRILLON. *NCCAM/NIMH, NIMH, NIDA/NIH.*
- 2:00 XX12 **81.06** Androgen modulation of Foxp1 and Foxp2 in developing rat brain: Impact on sex specific vocalization. M. BOWERS*; M. R. PÉREZ-POUCHOULÉN; C. ROBY; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*
- 3:00 YY1 **81.07** Anabolic-androgenic steroids impair visual discrimination learning without affecting cognitive flexibility. K. G. WALLIN*; R. I. WOOD. *Keck Sch. of Med., USC.*
- 4:00 YY2 **81.08** Effects of testosterone on cognition, emotion and motor function in young and aged male rhesus monkeys. A. LACREUSE*; B. J. KELLY; V. MAGUIRE-HERRING; C. M. ROSE; H. E. GORE; M. A. NOVAK. *Univ. Massachusetts, Fitchburg State Univ., Harvard Med. Sch.*
- 1:00 YY3 **81.09** Chronic high-dose testosterone increases risk tolerance but not impulsivity in male rats. S. P. GOINGS*; S. E. COOPER; J. Y. KIM; R. I. WOOD. *USC, Keck Sch. Med. USC.*
- 2:00 YY4 **81.10** Synthetic glucocorticoids cause prolonged activation of GR in discrete brain regions altering memory and learning processes. R. C. DEMSKI-ALLEN*; E. C. WARBURTON; E. J. WAITE; G. R. I. BARKER; B. P. FLYNN; S. L. LIGHTMAN; B. L. CONWAY-CAMPBELL. *Univ. of Bristol.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 YY5 **81.11** Gonadectomy in adult male rats shifts the balance of tonic NMDA receptor-mediated regulation of prefrontal dopamine levels: the use of dual reverse dialysis drug challenge to investigate cell substrates. M. N. LOCKLEAR*; R. M. BEYDA; M. F. KRITZER. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*
- 4:00 YY6 **81.12** Effects of sexual interactions on neurogenesis in the dentate gyrus of adult male rats. M. D. SPRITZER*; K. T. GRAFMILLER; S. M. ENGELMAN. *Middlebury Col., Middlebury Col.*
- 1:00 YY7 **81.13** The combined effects of prenatal and adolescent stress on recognition of novel spatial locations in adulthood. M. B. BURKE*; K. FRAZIER; C. DRAKE-FRAZIER; I. RAMOS; K. DAVIS; K. M. SCHULZ. *VA Med. Ctr., Univ. of Colorado Denver-AMC, Univ. of Denver, Univ. of Colorado Denver.*
- 2:00 YY8 **81.14** Allopregnanolone in the bed nucleus of the stria terminalis impairs expression of conditioned fear in male rats. G. M. ACCA*; S. MAREN; N. NAGAYA. *Texas A&M Univ., Texas A&M Univ.*
- 3:00 YY9 **81.15** Bisphenol A-induced fetal programming of cognitive (dys)function. M. KUNDAKOVIC*; B. FRANKS; K. GUDSNUK; F. A. CHAMPAGNE. *Columbia Univ.*
- 4:00 YY10 **81.16** Exposure to 17 α -hydroxyprogesterone caproate (17P) during development impairs cognitive flexibility in adulthood in rats. J. WILLING*; C. K. WAGNER. *SUNY Albany.*
- 1:00 YY11 **81.17** Luteinizing hormone receptor activation in the central nervous system. J. A. BLAIR*; R. PALM; X. WANG; J. CREGG; J. SILVER; G. CASADESUS. *Case Western Reserve Univ.*
- 2:00 YY12 **81.18** Progressive transformation of hormonal and physiological responses over cumulative stress exposure. K. A. GOOSENS*; R. M. MEYER. *MIT, McGovern Inst. for Brain Res.*
- 3:00 ZZ1 **81.19** Altered anxiety-like behavior in heterozygote BDNF Val66Met mice during perimenopause. E. M. WATERS*; J. GORECKA; T. A. VAN KEMPEN. *Rockefeller Univ., Weill Cornell Med. Col.*

POSTER

082. Neurosteroid Regulation

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 ZZ2 **82.01** Proteome-wide mapping of neurosteroid-binding proteins in brain. Z. CHEN*; D. F. COVEY; K. KATHIRESAN; M. QIAN; S. MENNERICK; A. TAYLOR; R. R. TOWNSEND; W. Z. XU; A. S. EVERS. *Washington Univ. In St Louis, Washington Univ. In St Louis, Washington Univ. In St Louis.*
- 2:00 ZZ3 **82.02** Assessment of neuroactive steroid levels in plasma, cerebrospinal fluid, central and peripheral nervous system of male and female rats. R. C. MELCANGI*; M. PESARESI; F. ABBATI; D. CALABRESE; S. GIATTI; L. GARCIA-SEGURA; D. CARUSO. *Disfeb, Univ. Degli Studi Di Milano, Rotman Res. Inst., Inst. Cajal, CSIC.*

- 3:00 ZZ4 **82.03** Does receptor of activated c kinase facilitate mineralocorticoid receptor-mediated transcription in the brain? L. N. BELOATE*; C. VELARDE MIRANDA; C. GOMEZ-SANCHEZ; E. GOMEZ-SANCHEZ. *Univ. of Mississippi Med. Center, Program In Neurosci., G.V. Montgomery VA Med. Ctr., Univ. of Mississippi Med. Center, Dept. of Psychiatry and Human Behavior.*
- 4:00 ZZ5 **82.04** Polyamines elevate steroid 5 α -reductase mRNA levels by suppressing mRNA degradation in C6 glioma cells. K. MORITA*; M. LEE; S. HER; N. NISHIBORI. *Shikoku Univ. Sch. Hlth. Sci., Korea Basic Sci. Inst., Shikoku Junior Col.*
- 1:00 ZZ6 **82.05** Effect of glucocorticoids and ovarian steroids on cell viability of neuron lines SH-SY5Y and CAD. Z. DUENAS*; J. CAICEDO-MERA. *Univ. Nacional De Colombia, Univ. Nacional de Colombia.*
- 2:00 ZZ7 **82.06** Neuroprogesterone-induced luteinizing hormone surge is mediated by AVPV kisspeptin neurons. L. K. PAASKE*; P. E. MICEVYCH; K. SINCHAK. *California State University, Long Beach, UCLA.*
- 3:00 ZZ8 **82.07** Acute forced swim stress differentially alters allopregnanolone immunohistochemical staining across limbic structures in mouse brain. A. M. MALDONADO-DEVINCCI*; D. H. MORROW; R. E. MCKINLEY; T. K. O'BUCKLEY; A. L. MORROW. *Univ. of North Carolina Sch. of Med., Univ. of North Carolina Sch. of Med., North Carolina Agr. and Tech. State Univ., Univ. of North Carolina Sch. of Med., Univ. of North Carolina Sch. of Med.*
- 4:00 ZZ9 **82.08** The role of microRNA Let-7f in regulating progesterone signaling in the brain. C. SU*; M. SINGH. *UNTHSC at Fort Worth.*
- 1:00 ZZ10 **82.09** Control of inositol 1,4,5-trisphosphate receptor mediated neuronal calcium signaling by steroid hormones. P. KOULEN*. *Univ. of MO - Kansas City.*

POSTER

083. Sexual Behavior and Partner Preference

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 ZZ11 **83.01** Methamphetamine suppresses ultrasonic vocalizations following male exposure in female rats. J. R. BROWNING*; J. A. MONG. *Univ. of Maryland Med. Ctr., Univ. of Maryland Med. Ctr.*
- 2:00 ZZ12 **83.02** Neonatal treatment of two phytoestrogens on female rat estrous cycle and sexual preference in a multiple partner preference arena. J. OLAYO-LORTIA*; A. FERREIRA - NUÑO; A. CRUZ - BENITES; M. TARRAGÓ - CASTELLANOS; A. MORALES - OTAL. *Univ. Autónoma Metropolitana - Iztapalapa.*
- 3:00 ZZ13 **83.03** Effects of quinpirole and E+P on the development of conditioned same-sex partner preference in ovariectomized female rats. M. TECAMACHALTZI-SILVARÁN*; JR; T. CIBRIAN-LLANDERL; R. TRIANA-DEL RIO; V. DIAZ-ESTRADA; J. MANZO; L. I. GARCÍA; G. A. CORIA-AVILA*. *Ctr. De Investigaciones Cerebrales.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:00 ZZ14 **83.04** Anxiogenic effects of abrupt suppression of progesterone in Wistar and Wistar-Kyoto female rats: Strain specific differences in benzodiazepine receptor binding. M. I. SOLLOZO DUPONT*; C. LÓPEZ RUBALCAVA; E. GONZÁLEZ TRUJANO; M. SAAVEDRA; E. ESTRADA CAMARENA. *Ctr. de Investigación y de Estudios Avanzados del IPN (CINVESTAV-IPN), Ctr. de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional (CINVESTAV-IPN), Inst. Nacional de Psiquiatría Ramón de la Fuente Muñiz, Univ. Veracruzana, Inst. Nacional de Psiquiatría Ramón de la Fuente Muñiz.*
- 1:00 ZZ15 **83.05** Brain mechanisms of conditioned social or sexual partner preference induced by cohabitation and quinpirole. I. T. CIBRIÁN-LLANDERL*; C. THISSAW; L. ZUKRAN; G. A. CORIA-AVILA; J. G. PFAUS. *Inst. De Neuroetología, Concordia Univ., Univesrsidad Veracruzana.*
- 2:00 ZZ16 **83.06** Long-term retention of female sexual receptivity in ovariectomized B6D2F1 hybrid female mice. J. S. TEMPLIN*; P. BHARADWAJ; J. PARK. *Univ. of Massachusetts: Boston.*
- 3:00 ZZ17 **83.07** No role for ultrasonic vocalizations in female rat partner choice. E. M. SNOEREN*; A. ÁGMO. *Univ. of Tromsø, Inst. of Psychology.*
- 4:00 ZZ18 **83.08** Effects of mating history on behavioral and neuronal stress responsiveness: Role of androgen receptors in the medial preoptic area of male rats. J. A. MCHENRY*; C. L. ROBISON; E. M. VITALE; E. M. HULL. *Florida State Univ.*
- 1:00 ZZ19 **83.09** Disruption of conditioned sexual inhibition in male rats by d-amphetamine. K. GERMÉ*; D. PERSAD; J. PETIT-ROBINSON; J. G. PFAUS. *Concordia Univ., Concordia Univ.*
- 2:00 ZZ20 **83.10** Global, but not neural, overexpression of androgen receptors interfere with olfactory preference in mice. A. B. SWIFT-GALLANT*; S. SRININASAN; M. M. HOLMES; D. A. MONKS. *Univ. of Toronto Mississauga, Univ. of Toronto.*
- POSTER**
- 084. Early Life Stress: Neural, Neurochemical, and Physiologic Effects**
- Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge**
- Sat. 1:00 PM – San Diego Convention Center, Halls B-H
- 1:00 ZZ21 **84.01** The importance of matching variability between maternal and non-maternal aspects of the neonatal environment. S. M. DINCES*; J. F. L. PINNER; R. D. ROMEO; B. S. MCEWEN; A. C. TANG. *Univ. of New Mexico, Univ. of New Mexico, Barnard Col., Rockefeller Univ., Univ. of New Mexico.*
- 2:00 ZZ22 **84.02** Context-dependent maternal care modulates early experience effect on offspring stress regulation. J. F. PINNER*; S. M. DINCES; R. D. ROMEO; B. S. MCEWEN; A. C. TANG. *Univ. of New Mexico, Univ. of New Mexico, Barnard Col., Rockefeller Univ., Univ. of New Mexico.*
- 3:00 ZZ23 **84.03** Trajectory of alterations to cortical dopamine activity in a model of teenage bullying. M. J. WATT*; L. C. MILLER; J. L. SCHOLL; K. J. RENNER; A. M. NOVICK; G. L. FORSTER. *Univ. of South Dakota, Univ. of South Dakota.*
- 4:00 ZZ24 **84.04** Comparison of monoaminergic neurotransmitters in rats in isolation or group breeding environments. K. SUZUKI*; C. NINOMIYA; T. MATSUMURA; H. NAKAGAWA; S. YANAGITA; H. HASEGAWA. *Rikkyo Univ., Rikkyo Univ., Tokyo Univ. of Sci., Hiroshima Univ.*
- 1:00 ZZ25 **84.05** Effects of early life stress on brain activity: Implications from maternal separation in rodents. T. SASAGAWA*; N. HORII-HAYASHI; T. HASHIMOTO; M. NISHI. *Nara Med. Univ.*
- 2:00 ZZ26 **84.06** Developmental abnormalities of the brain exposed to childhood maltreatment detected by diffusion tensor imaging. K. YAMADA*; Y. SUZUKI; M. OKUYAMA; T. NAKADA. *Ctr. for Integrated Human Brain Science, Brain Res. Inst., Univ. of Niigata, Natl. Ctr. for Child Hlth. and Develop., Univ. of California.*
- 3:00 AAA1 **84.07** Early handling modifies attentional set shifting and increases Na⁺K⁺-ATPase activity, and synaptophysin and tyrosine hydroxylase content in the adult rat prefrontal cortex. C. LAZZARETTI; G. C. KINCHESKI; P. PANDOLFO; R. KROLOW; A. P. TONIAZZO; R. L. BREUNIG; J. KOLLING; A. FERREIRA; A. WYSE; T. M. SOUZA*; C. DALMAZ. *Univ. Federal Do Rio Grande Do Sul, Univ. Federal do Rio de Janeiro, Univ. Federal Fluminense, Univ. Federal Do Rio Grande Do Sul.*
- 4:00 AAA2 **84.08** NR3C1 and IL-1 β polymorphisms interact with early adverse life events in influencing gray matter variations in women with and without chronic abdominal pain. A. GUPTA*; E. A. MAYER; M. BONYADI; J. LABUS; C. ASHE-MCNALLEY; N. HEENDENIYA; J. STAINS; S. SMITH; L. CHANG; L. A. KILPATRICK. *Oppenheimer Family Ctr. For Neurobio. of Stress, UCLA, Oppenheimer Ctr. for Neurobio. of Stress at UCLA.*
- 1:00 AAA3 **84.09** Vitamin B12 deficiency in early life leads to neural and behavioral changes in mice during adulthood. S. GHOSH*; J. K. SINHA; W. D. RAJAN; P. K. KUMAR; S. CHAKRAVARTY; A. KUMAR; M. RAGHUNATH. *NATIONAL INSTITUTE OF NUTRITION, CSIR - CENTRE FOR CELLULAR AND MOLECULAR BIOLOGY, CSIR-INDIAN INSTITUTE OF CHEMICAL TECHNOLOGY.*
- 2:00 AAA4 **84.10** Effects of maternal separation on the response of the HPT axis to cold exposure or voluntary exercise in adult male rats. C. ESPINOZA-AYALA; L. JAIMES-HOY; A. COTE-VÉLEZ; J. CHARLI; P. I. JOSEPH-BRAVO*. *Inst. De Biotecnología, Univ. Nacional Autonoma De Mexico (UNAM).*
- 3:00 AAA5 **84.11** Developmental effects of early violent environment: Weight, anxiety, cognition and gestational parameters in rats. A. B. LUCION*; C. K. DA ROCHA; B. C. ARANDA; W. P. NUNES. *Univ. Federal do Rio Grande Sul UFRGS.*
- 4:00 AAA6 **84.12** Eeg activity of preterm infants is increased by family nurture intervention in a randomized controlled trial in the nicu. M. G. WELCH*; R. I. STARK; W. P. FIFER; M. A. HOFER; R. SAHNI; J. R. ISLER; P. G. GRIEVE; J. AUSTIN; R. J. LUDWIG; M. M. MYERS. *Columbia Univ. Col. of Physicians & Surgeons, Columbia Univ. Col. of Physicians and Surgeons, Columbia Univ. Col. of Physicians and Surgeons, New York State Psychiatric Inst.*
- 1:00 AAA7 **84.13** Preemptive morphine analgesia prevents the impairing effects of neonatal inflammatory pain on adult hippocampal dependent memory and produces memory deficits in non-injured rats. M. B. PARENT*; Y. O. HENDERSON; N. C. VICTORIA; A. Z. MURPHY. *Georgia State Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 AAA8 **84.14** Anatomical characterization for intra- and extra-hypothalamic kisspeptin projections in neonatal maternal-separated rats: A comparison between genders at different ages. A. T. NAVA KOPP*; C. IRLES; L. ZHANG. *Dept. of Physiology, Fac. of Medicine, Natl. Autonomous Univ. of.*
- 3:00 AAA9 **84.15** Experimental delay of puberty causes structural brain alterations in female rhesus macaques. J. GODFREY*; B. R. HOWELL; Y. SHI; M. STYNER; M. SANCHEZ; M. WILSON. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Emory Univ. Sch. Med., Univ. of North Carolina.*
- 4:00 AAA10 **84.16** The impact of early life adversity on diurnal HPA axis function across development. J. E. FLANNERY*; L. GABARD-DURNAM; D. GEE; K. HUMPHREYS; B. GOFF; D. LUMIAN; N. TOTTENHAM. *UCLA.*
- 1:00 AAA11 **84.17** Maternal care is associated with differences in the development of extracellular matrix and parvalbumin-positive interneurons in prefrontal subregions of rat offspring. S. Y. KIM*; K. TARAVOSH-LAHN; D. FRANCIS; D. KAUFER. *Univ. of Berkeley, Univ. of California Berkeley.*
- 2:00 AAA12 **84.18** Role of adrenal phenylethanolamine N-methyltransferase in glucocorticoid-mediated fetal programming of hypertension. S. KHURANA; P. NGUYEN; J. GRANDBOIS; H. PELTSCH; K. VENKATARAMAN; T. TAI*. *Northern Ontario Sch. Med., Laurentian Univ., Laurentian Univ.*
- 3:00 AAA13 **84.19** Estrogen promotes hypothalamic vasopressinergic system homeostasis in neonatal maternal separated rats. E. VAZQUEZ-JUAREZ*; A. T. NAVA-KOPP; L. ZHANG. *Univ. Nacional Autonoma De Mexico.*
- 4:00 AAA14 **84.20** • Anxiety, depression and early life stress correlate with higher amygdala, insula, and anterior cingulate activity across MDD and PTSD. Y. I. SHELIN*; S. E. BRUCE; C. R. CONWAY; D. BARCH; M. P. MCAVOY; G. M. D'ANGELO; Z. YAN; T. DURBIN. *Washington Univ. Sch. of Med., Univ. of Missouri, St. Louis, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*
- 4:00 AAA18 **85.04** The role of brain lipid metabolism in the modulation of chronic stress effects. T. G. OLIVEIRA; F. V. BRAVO; A. MIRANDA; F. MARQUES; R. B. CHAN; J. J. CERQUEIRA; G. DI PAOLO; N. SOUSA*. *Life and Hlth. Sci. Res. Inst. (ICVS), Univ. of Minho, Columbia Univ.*
- 1:00 AAA19 **85.05** Reduced hippocampal size in old age after being a victim of violent crime. E. ZSOLDOS*; C. E. SEXTON; N. FILIPPINI; A. MAHMOOD; A. SINGH-MANOUX; M. KIVIMAKI; C. MACKAY; K. P. EBMEIER. *Univ. of Oxford, Univ. of Oxford, Univ. Col. London.*
- 2:00 AAA20 **85.06** Synaptic rescue by corticosteroid inhibition in db/db mice occurs independently of leptin receptor activation and involves reinstatement of hippocampal BDNF. A. M. STRANAHAN*; M. WOSISKI-KUHN; J. R. ERION; S. P. WILSON. *Med. Col. of Georgia, Univ. of South Carolina.*
- 3:00 AAA21 **85.07** Melanocortin-5 receptor role of individual differences in novel emotional adaptations to repeated stress in female mice. C. MORGAN*; J. L. SHANNONHOUSE. *Texas A&M Univ.*
- 4:00 AAA22 **85.08** Increased stress responsiveness associated with altered serotonergic and glucocorticoid function in the limbic system during amphetamine withdrawal. J. L. SCHOLL*; H. LI; W. TU; J. HASSELL; M. J. WATT; K. J. RENNER; G. L. FORSTER. *Univ. of South Dakota, Univ. of South Dakota.*
- 1:00 AAA23 **85.09** • Regulation of bdnf within the prefrontal cortex in a social subordination stress paradigm. R. A. MAKINSON*; M. SMELTZER; K. LUNDGREN; K. SEROOGY; J. HERMAN; R. SAKAI. *Univ. of Cincinnati.*
- 2:00 AAA24 **85.10** Stress differentially alters mu opioid receptor density and trafficking in parvalbumin-containing interneurons in the female and male rat hippocampus. T. A. MILNER*; S. R. BURSTEIN; G. F. MARRONE; S. KHALID; A. D. GONZALEZ; T. J. WILLIAMS; K. C. SCHIERBERL; A. TORRES-REVERON; K. L. GONZALES; B. S. MCEWEN; E. M. WATERS. *Weill Cornell Med. Col., The Rockefeller Univ., Weill Cornell/Rockefeller/Sloan-Kettering Tri-Institutional MD-PhD Program, Ponce Sch. of Med. and Hlth. Sci.*
- 3:00 AAA25 **85.11** Living in a disrupted social hierarchy reduces adult neurogenesis and increases oxytocin receptors in the hippocampus. M. OPENDAK*; T. KEYES; A. T. BROCKETT; G. KANE; E. GOULD. *Princeton Univ., Princeton Univ.*
- 4:00 AAA26 **85.12** A single methamphetamine injection produces long-lasting activation in the endocrine stress system in the nucleus accumbens. S. JAYANTHI*; F. SAINT-PREUX; B. KATZ; M. POUDEL; J. NEWMAN; M. T. MCCOY; B. LADENHEIM; I. N. KRASNOVA; C. BRANNOCK; E. LEHRMANN; K. G. BECKER; J. L. CADET. *NIDA, NIH/NIA Intramural Res. Program.*
- 1:00 BBB1 **85.13** Olfactory cues increase avoidance behavior and induce Fos expression in the amygdala, hippocampus and prefrontal cortex of socially defeated mice. A. BOURNE*; G. MOHAN; M. PHAM; M. STONE; C. SCHULTZ; J. MEYERHOFF; L. LUMLEY. *United States Army Med. Res. Inst. of Chem. Def., Georgetown Univ.*
- 2:00 BBB2 **85.14** Selective vulnerability of dendritic spine subtypes in an HPA-inhibitory prefrontal circuit following chronic variable stress. R. M. ANDERSON*; J. J. RADLEY. *Univ. of Iowa.*

POSTER

085. Stress-Modulated Pathways: Cortex, Hippocampus, and Striatum

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 AAA15 **85.01** Restoration of hippocampal growth hormone reverses stress-induced hippocampal impairment. C. M. VANDER WEELE*; C. SAENZ; J. YAO; S. S. CORREIA; K. A. GOOSENS. *MIT, MIT, MIT.*
- 2:00 AAA16 **85.02** Ghrelin receptor antagonism after chronic stress reverses some stress-induced alterations in fear memory. H. F. IACCARINO*; K. A. GOOSENS. *MIT.*
- 3:00 AAA17 **85.03** The basolateral amygdala and prelimbic cortex show persistently elevated neuronal activity after chronic stress: Implications for stress-induced vulnerability to enhanced fear learning. A. BURGOS-ROBLES*; K. A. GOOSENS. *MIT.*

- 3:00 **BBB3 85.15** Mindfulness-based training attenuates insula activation during an aversive interoceptive breathing load task in infantry marines. L. B. HAASE*; A. SHUKLA; N. J. THOM; A. N. SIMMONS; P. W. DAVENPORT; M. P. PAULUS; D. C. JOHNSON. *Univ. of California San Diego, Navel Hlth. Res. Ctr., VA San Diego Healthcare Syst., Univ. of Florida.*
- 4:00 **BBB4 85.16** BAG-1 interacts with NFkB in hippocampus to alter stress-induced gene expression. T. G. RUBIN*; A. C. LINDH; R. E. SAADO; C. NASCA; B. S. MCEWEN; J. D. GRAY. *Rockefeller Univ., Linköping Univ.*
- 1:00 **BBB5 85.17** • Homer1/mGluR5 signaling moderates resilience to chronic social stress. K. V. WAGNER*; J. HARTMANN; A. S. HÄUSL; M. L. PÖHLMANN; G. ZHAO; C. LABERMAIER; L. LINDEMANN; G. JAESCHKE; J. G. WETTSTEIN; M. B. MÜLLER; M. V. SCHMIDT. *Max-Planck-Institute of Psychiatry, F. Hoffmann-La Roche AG, F. Hoffmann-La Roche AG.*
- 2:00 **BBB6 85.18** Chronic social stress accelerates the maturation of newly generated neurons in the adult brain. C. CHEN; C. YANG; C. K. LIN*; C. HUANG; K. HSU. *Inst. of Basic Med. Sciences, Col. of Medicine, Natl. Cheng Kung Univ., Dept. of Pharmacology, Col. of Medicine, Taipei Med. Univ., Natl. Cheng-Kung Univ. Hosp.*
- 3:00 **BBB7 85.19** FKBP5 critically impacts antidepressant action and recovery from chronic stress. J. HARTMANN*; N. DEDIC; K. V. WAGNER; L. HOEIJMAKERS; N. C. GASSEN; X. WANG; J. M. DEUSSING; F. HOLSBOER; M. B. MÜLLER; T. REIN; M. V. SCHMIDT. *Max Planck Inst. of Psychiatry, Inst. of Mental Health, Peking Univ.*
- 4:00 **BBB8 85.20** The role of dentate gyrus neuroprotection in ghrelin's anti-depressant behavioral effects. A. K. WALKER*; Q. WANG; J. CHUANG; S. TRAN; S. OSBORNE-LAWRENCE; L. MORLOCK; N. S. WILLIAMS; J. NAIDOO; A. J. EISCH; A. A. PIEPER; J. M. ZIGMAN. *Univ. of Texas Southwestern, Univ. of Texas Southwestern, Univ. of Texas Southwestern, Univ. of Iowa Carver Col. of Med.*
- 1:00 **BBB9 85.21** Acetyl-L-carnitine prevents the stress-induced chromatin remodeling within the glutamatergic synapse. C. NASCA*; T. R. RUBIN; J. D. GRAY; B. BIGIO; B. S. MCEWEN. *Rockefeller Univ., Univ. of Rome, Sapienza, Rockefeller Univ.*
- 2:00 **BBB10 85.22** Effects of repeated maternal restraint stress and exercise on psd-95 and spar in the hippocampus of the rat pups. P. SURAKUL*; N. CHUTABHAKDIKUL. *The Fac. of Allied Hlth. Sciences, Burapha Univ., Inst. of Mol. Biosci.*
- 3:00 **BBB11 85.23** Sex differences observed in the effects of acute and repeated restraint stress on limbic endocannabinoid function. H. A. VECCHIARELLI*; T. T. Y. LEE; J. M. GRAY; M. N. HILL. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of British Columbia.*
- 4:00 **BBB12 85.24** Different effects of two stressors on striatal-dopamine system and corticosterone levels in female and male rats. M. R. GONZALEZ LOPEZ*; N. L. GARCÍA SADÍVAR; S. E. CRUZ MORALES; R. DOMÍNGUEZ. *UNAM FES-Iztacala, UNAM FES-Iztacala, UNAM FES-Zaragoza.*
- 1:00 **BBB13 85.25** Effect of natural materials (valerian, lemon balm) on physical- and psychological stress. H. JUNG*; D. YOO; W. KIM; S. NAM; J. KIM; S. YI; S. KANG; W. KIM; Y. YOON; I. HWANG. *Col. of Vet. Medicine, Seoul Natl. Univ., Col. of Vet. Medicine, Kyungpook Natl. Univ., Natural F&P Co. Ltd.*
- 2:00 **BBB14 85.26** Dorsal medial prefrontal cortex participates in stress relief by 'comfort' foods. A. E. EGAN*; S. GHOSAL; B. MYERS; A. KIRK; Y. M. ULRICH-LAI. *Univ. of Cincinnati.*
- 3:00 **BBB15 85.27** Epigenetic alterations in methamphetamine self-administration and reinstatement with or without prior traumatic stress exposure. C. L. FERLAND*; S. M. GHEE; J. F. MCGINTY. *Med. Univ. of South Carolina.*
- 4:00 **BBB16 85.28** Reduced hippocampal grey matter volume mediates relationship between early life adversity and trait anxiety in young adulthood. A. X. GORKA*; A. R. HARIRI. *Duke Univ.*
- 1:00 **BBB17 85.29** Interoceptive response to a non-hypercapnic inspiratory breathing load in healthy individuals. A. SHUKLA*; L. HAASE; M. PAULUS. *Univ. of California San Diego.*
- 2:00 **BBB18 85.30** Mu opioid receptors in ventral tegmental area control stress-induced inhibition of dopamine release in the nucleus accumbens through prefrontal cortical dopamine. E. LATAGLIATA*; A. VALZANIA; T. PASCUCCI; P. CAMPUS; S. CABIB; S. PUGLISI-ALLEGRA. *sapienza university, Fondazione Santa Lucia IRCCS, "Sapienza" Univ. Dept. di Psicologia and Ctr. "Daniel Bovet".*

POSTER

086. Energy Metabolism, Blood Flow, and Homeostasis

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

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 **BBB19 86.01** Chronic mitochondrial dna-deletion induces changes in hsp 70 and 90 expression and mitochondrial dynamics in drg neurons. A. NETI; V. IDIKUDA; A. BALARAJU; A. BHUSHAN; G. CHOWDHURY; K. L. BEHAR*; J. LAI. *Idaho State Univ., Idaho state Univ., Yale Univ., Yale Univ. Sch. Med.*
- 2:00 **BBB20 86.02** The impact of metabolic syndrome on spinal cord plasticity. Z. YING*; Y. ZHUANG; R. AGRAWAL; F. GOMEZ-PINILLA. *UCLA, UCLA.*
- 3:00 **BBB21 86.03** Effects of methylglyoxal and advanced glycation end products in mitochondrial dynamics and physiology in astroglia cells. V. GLASER*; F. J. DE MATOS; A. P. REMOR; L. V. SOSA; F. JÉSICA; A. DE PAUL; S. GENTI-RAIMONDI; A. LATINI. *UFSC, UFSC, UNC.*
- 4:00 **BBB22 86.04** Enhanced neuron metabolism and neuromuscular physiology by teneurin C-terminal associated peptide (TCAP)-1 in mice. Y. CHEN*; L. SONG; M. XU; R. CROSIER; A. OTCHENGCO; D. A. LOVEJOY. *Univ. of Toronto.*
- 1:00 **BBB23 86.05** Calcium-regulation of mitochondrial respiration maintains ATP homeostasis and requires aralar/ AGC1-malate aspartate shuttle in intact cortical neurons. J. SATRUSTEGUI*; I. LLORENTE-FOLCH; C. B. RUEDA; I. AMIGO; T. SAHEKI; A. DEL ARCO; B. PARDO. *Univ. Autonoma Madrid Ctr. Biol Mol Severo Ochoa (CBMSO), CIBER de Enfermedades Raras CIBERER, Kumamoto Univ., Univ. of Castilla-La Mancha.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 **BBB24 86.06** Chronic hyperglycemia elicits severe mitochondrial bioenergetics impairments: Metabolic re-adaptation by increasing creatine kinase (CK) activity. A. P. REMOR*; F. J. MATOS; V. GLASER; A. J. H. VIEIRA; P. M. P. FERREIRA; A. HOHL; M. F. RONSONI; C. M. D. WANNMACHER; A. LATINI. *Univ. Federal De Santa Catarina, Hosp. Universitário, Univ. Federal do Rio Grande do Sul.*
- 3:00 **BBB25 86.07** DHA Preconditioning during early life recruits metabolic signals to influence adult plasticity. R. AGRAWAL*; F. GOMEZ-PINILLA. *Univ. of California Los Angeles (UCLA), UCLA brain injury research center.*
- 4:00 **BBB26 86.08** An investigation of the relationship between brain PCR and Lactate during ischemia. J. M. TAYLOR*; X. ZHU; Y. ZHANG; W. CHEN. *Univ. of Minnesota.*
- 1:00 **CCC1 86.09** Monocarboxylates are not required to support synaptic activity in Huntington's disease. F. BELTRÁN; M. SOLÍS; A. I. ACUÑA; A. PARRA; C. CEPEDA; I. I. CONCHA; M. S. LEVINE; M. A. CASTRO GALLASTEGUI*. *Univ. Austral De Chile, Univ. of California.*
- 2:00 **CCC2 86.10** Regulation of cellular metabolism by variation in O₂ availability: 2-photon imaging of NADH in cerebral cortex *in vivo*. H. UHLIROVA*; S. SAKADŽIĆ; K. NIZAR; M. A. YASEEN; P. A. SAISAN; Q. CHENG; K. WELDY; L. REZNICHENKO; M. A. YUCELI; G. A. SILVA; Y. YANAGAWA; K. A. KASISCHKE; A. M. DALE; E. MASLIAH; D. A. BOAS; A. DEVOR. *Univ. of California San Diego, Martinos Ctr. for Biomed. Imaging, MGH, Harvard Med. Sch., Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego, Gunma Univ., Univ. of Ulm Med. Ctr.*
- 3:00 **CCC3 86.11** *In vivo* two-photon imaging of neuronal and astrocytic glucose concentration: Brain state dependence. B. WEBER*; M. ZÜND; P. MÄCHLER; R. GUTIERREZ; J. MAYRHOFER; S. LENGACHER; B. SCHNEIDER; P. MAGISTRETTI; F. BARROS; M. T. WYSS. *Inst. of Pharmacol. and Toxicology, Univ. of Zurich and Swiss Federal Inst. of Technol. (ETH) Zurich, Univ. of Zurich, CECS, Ecole Polytechnique Federale de Lausanne (EPFL).*
- 4:00 **CCC4 86.12** Mitochondrial respiratory chain defect induces a pseudostarvation response in brain and skeletal muscle. S. FORSSTRÖM*; L. EURO; P. MARJAMÄKI; I. PAETAU; H. LILJENBÄCK; A. ROIVAINEN; A. SUOMALAINEN. *Univ. of Helsinki, Univ. of Turku.*
- 1:00 **CCC5 86.13** Leptin receptor expressing neurons in the dorsomedial hypothalamus regulate energy expenditure and body weight. K. P. REZAI-ZADEH*; Y. JIANG; S. YU; A. LAQUE; C. MORRISON; A. DERBENEV; A. ZSOMBOK; H. MUNZBERG. *Pennington Biomed. Res. Ctr., Tulane Univ., Pennington Biomed. Res. Ctr.*
- 2:00 **CCC6 86.14** A high-fat (enriched in linoleic fatty acids) feeding during pregnancy and lactation in rats causes metabolic programming and anxiety-like behavior in offspring. G. D. GONZALEZ*; A. S. SANTOS; S. S. ALVES; K. P. ALBUQUERQUE; M. C. FRAGA; C. C. A. N. SABA; P. C. BARRADAS. *UERJ, UERJ, UERJ.*
- 3:00 **CCC7 86.15** Ventromedial hypothalamic melanocortin receptor activation and the regulation of physical activity energy expenditure. C. K. GAVINI*; C. M. NOVAK. *Kent State Univ., Kent State Univ.*
- 4:00 **CCC8 86.16** Glucose and lactate metabolism are coupled differently to neural activity in the visual cortex. B. LI*; R. D. FREEMAN. *Univ. of CA-Berkeley.*
- 1:00 **CCC9 86.17** Depth-dependent BOLD hemodynamic response function in the human visual cortex. R. K. KHAN*; J. KIM; D. RESS. *The Univ. of Texas At Austin.*
- 2:00 **CCC10-DP7 86.18** A novel mechanism for fast neurovascular coupling. E. M. HILLMAN*; B. R. CHEN; M. G. KOZBERG; M. B. BOUCHARD. *Columbia Univ., Columbia Univ.*
- 3:00 **CCC11 86.19** Neurovascular function in health and disease. J. BERWICK*; L. BOORMAN; S. HARRIS; P. SHARP; Y. ZHENG; C. MARTIN; M. JONES. *Univ. Sheffield.*
- 4:00 **CCC12 86.20** Modeling of the BOLD response by prompt arterial dilation in cerebral cortex. J. KIM*; D. RESS. *The Univ. of Texas At Austin.*
- 1:00 **DDD1 86.21** Laminar neurovascular coupling in the rat somatosensory cortex. V. J. SRINIVASAN*; H. RADHAKRISHNAN. *Univ. of California, Davis.*
- 2:00 **DDD2 86.22** Assessment of the accuracy of cmr02 calculations from blood oxygenation data. A. VAZQUEZ*; M. FUKUDA; S. KIM. *Univ. Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 3:00 **DDD3 86.23** Investigating the surround negative hemodynamic response using single impulse stimulation. L. W. BOORMAN*; S. HARRIS; P. SHARP; M. BRUYNHAYLETT; A. KENNERLEY; M. JONES; J. BERWICK. *Univ. Sheffield.*
- 4:00 **DDD4 86.24** Functional hyperemia in the rat inner retina. H. RADHAKRISHNAN*; V. J. SRINIVASAN. *UC Davis.*
- 1:00 **DDD5 86.25** Alzheimer-like global brain impairment in newly diagnosed lung cancer. R. S. MILETICH*; D. S. WACK. *105 Parker Hall, SUNY at Buffalo.*

POSTER

087. Human Long-Term Memory: Encoding

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 **DDD6 87.01** Replay during on- and offline periods supports formation of relational memory networks. M. L. SCHLICHTING*; A. R. PRESTON. *Univ. Texas Austin.*
- 2:00 **DDD7 87.02** The necessity of the medial temporal lobe for statistical learning. A. C. SCHAPIRO*; E. GREGORY; B. LANDAU; M. MCCLOSKEY; N. B. TURK-BROWNE. *Princeton Univ., Johns Hopkins Univ.*
- 3:00 **DDD8 87.03** Encoding, retrieval, and integration of visual memories: Distributed representations of mnemonic state and content. F. R. RICHTER*; A. J. H. CHANALES; B. A. KUHL. *New York Univ.*
- 4:00 **DDD9 87.04** Reactivation modulates memory updating through hippocampus and ventromedial prefrontal cortex. D. ZEITHAMOVA*; A. M. WATTENBERGER; A. R. PRESTON. *Univ. Texas, Austin.*
- 1:00 **DDD10 87.05** Action-based binding of object states in human medial temporal lobe. N. C. HINDY*; N. B. TURK-BROWNE. *Princeton Univ., Princeton Univ., Princeton Univ.*
- 2:00 **DDD11 87.06** Partial memory retrieval leads to inhibition of cortical memory representations. J. POPPENK*; K. A. NORMAN. *Princeton Univ.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 **DDD12 87.07** Effects of generated emotions on activations during encoding of neutral pictures. T. KANEDA*; Y. SHIGEMUNE; T. TSUKIURA. *Grad. Sch. of Human and Envrn. Studies, Kyoto Univ.*
- 4:00 **EEE1 87.08** Tracking the emergence of landmark knowledge using virtual reality and fMRI. S. D. AUGER*; P. ZEIDMAN; E. A. MAGUIRE. *UCL Inst. of Neurol.*
- 1:00 **EEE2 87.09** Test date expectancy affects memory performance. R. E. LOIOTILE*; R. A. ADCOCK; S. M. COURTNEY. *Johns Hopkins Univ., Duke Univ., Duke Univ., Johns Hopkins Univ., Kennedy Krieger Inst.*
- 2:00 **EEE3 87.10** Neural correlates of the encoding of temporal order for events within a study episode. J. X. WONG*; M. D. RUGG. *Univ. of Texas At Dallas.*
- 3:00 **EEE4 87.11** Modulation of face-name associative memory through multiple encoding runs: An fMRI study. C. J. MOLLOY; E. G. KEHOE; A. FAGAN; G. BOYLE; J. MEANEY; A. L. BOKDE*. *Trinity Col. Dublin, Ctr. for Advanced Med. Imaging, St James's Hosp. and Trinity Col. Dublin.*
- 4:00 **EEE5 87.12** Changes in functional network connectivity mediate episodic memory consolidation. J. KUKOLJA*; Y. D. GÖRECI; V. RIEDL; G. R. FINK; Ö. A. ONUR. *Univ. Hosp. Cologne, Res. Ctr. Juelich, Tech. Univ. Munich.*
- 1:00 **EEE6 87.13** Enhanced functional connectivity associated with strategic enhancement of encoding for valuable items. M. S. COHEN*; J. RISSMAN; A. D. CASTEL; B. J. KNOWLTON. *UCLA.*
- 2:00 **EEE7 87.14** Human electrocorticography of paired associate learning. J. A. GREENBERG; L. J. LOHNAS*; J. F. BURKE; M. J. KAHANA. *Univ. of Pennsylvania, Univ. of Pennsylvania.*
- 3:00 **EEE8 87.15** Reacting to novelty: The role of expectations and attention. M. MEETER*; J. SCHOMAKER; M. RANGEL-GOMEZ. *VU Univ. Amsterdam.*
- 4:00 **EEE9 87.16** The act of choosing influences declarative memory encoding: A behavioral and fMRI investigation. V. P. MURTY*; S. DUBROW; L. DAVACHI. *NYU, New York Univ., New York Univ.*
- 1:00 **EEE10 87.17** The impact of perceptual event boundaries on memory-related neural oscillations. A. C. HEUSSER*; Y. EZZYAT; I. SHIFF; L. DAVACHI. *New York Univ., New York Univ.*
- 2:00 **EEE11 87.18** Linking theta oscillatory activity and medial temporal BOLD signal during mnemonic encoding strategies. M. FELLNER*; G. VOLBERG; M. WIMBER; M. GOLDHACKER; M. W. GREENLEE; S. HANSLMAYR. *Univ. of Konstanz, Univ. of Regensburg, MRC Cognition and Brain Sci. Unit.*
- 3:00 **EEE12 87.19** Dissociable functional networks engaged in gist memory and visual detail memory during episodic encoding. H. OH*; J. ELMAN; C. MADISON; S. BAKER; J. VOGEL; S. CROWLEY; W. J. JAGUST. *Univ. of California-Berkeley, Lawrence Berkeley Natl. Lab.*
- 4:00 **EEE13 87.20** Distractors modulate different neural correlates for item versus source recognition. C. ABELLANOZA*; F. LEAL; K. GANDY; H. PARK. *Univ. of Texas At Arlington.*
- 1:00 **EEE14 87.21** Predicting learning when learned predictions are violated. A. GREVE*; E. COOPER; R. HENSON. *MRC Cognition and Brain Sci. Unit.*
- 2:00 **EEE15 87.22** Model-based multivariate fMRI reveals influence of selective attention on neural representations of categories. M. L. MACK*; A. R. PRESTON; B. C. LOVE. *The Univ. of Texas At Austin, Univ. Col. London.*
- 3:00 **EEE16 87.23** Deactivation of regions in the default mode network predicts individual differences in long-term memory performance. S. M. NELSON*; N. K. SAVALIA; A. K. FISHELL; F. ZOU; K. B. MCDERMOTT. *Washington Univ. in St. Louis.*
- 4:00 **EEE17 87.24** Dissociable roles of default-mode network regions during episodic encoding. D. MAILLET*; M. N. RAJAH. *Douglas Mental Hlth. Univ. Inst., McGill Univ., McGill Univ.*
- 1:00 **EEE18 87.25** Music, memory and Near-Infrared Spectroscopy: How a musical background can modulate PFC activity during the encoding of verbal material. L. FERRERI*; J. AUCOUTURIER; M. MUTHALIB; E. BIGAND; A. BUGAJSKA. *LEAD, Inst. de Recherche et Coordination Acoustique / Musique (INSERM, UMR STMS), Movement To Hlth. (M2H), EUROMOV, Movement Neurosci. Program, IHLI.*
- 2:00 **EEE19 87.26** Sleep enables abstraction to new exemplars in infant learners. R. GOMEZ*; S. CHAVEZ; L. NADEL; R. R. BOOTZIN. *The Univ. of Arizona.*
- 3:00 **EEE20 87.27** Neural correlates of depth-of-processing and memory trace formation. P. A. PACKARD*; A. RODRÍGUEZ-FORNELLS; R. DE DIEGO-BALAGUER; L. FUENTEMILLA. *Bellvitge Biomed. Res. Inst., Bellvitge Biomed. Res. Inst., Institutió Catalana de Recerca i Estudis Avançats (ICREA), Dept. of Basic Psychology (University of Barcelona).*

POSTER

088. Cognitive Enhancing Effects of Exercise and Practice

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 **EEE21 88.01** Acute mild exercise improves cognitive performance associated with arousal-related prefrontal activation: An fNIRS study. K. BYUN*; I. DAN; K. HYODO; K. SUWABE; G. OCHI; H. SOYA. *Univ. of Tsukuba, Chuo Univ.*
- 2:00 **EEE22 88.02** Facilitatory role of playing music during exercise in executive function: A neuroimaging study with functional near-infrared spectroscopy. K. SUWABE*; I. DAN; K. HYODO; K. BYUN; G. OCHI. *Univ. of Tsukuba, Chuo Univ.*
- 3:00 **EEE23 88.03 ▲** The effect of physical and mental exercise on executive functioning. K. DABROWSKI*; L. BOUCHER. *Nova Southeastern Univ.*
- 4:00 **EEE24 88.04** Effect of aerobic exercise on memory encoding in older adults with a history of depression: An fMRI pilot study. S. M. SZYMKOWICZ*; J. W. KIRTON; C. N. SOZDA; W. M. PERLSTEIN; V. M. DOTSON. *Univ. of Florida.*
- 1:00 **EEE25 88.05** Movement and Cognition. M. A. RACK-WILDNER*; L. BOUCHER. *Nova Southeastern Univ.*
- 2:00 **EEE26 88.06 ●** Optimizing cognitive training task designs to improve learning rates in a large online population. A. KALUSZKA*; J. L. HARDY; M. SCANLON. *Lumos Labs, Inc.*
- 3:00 **FFF1 88.07** Transcranial random noise stimulation enhances consistency of strategies used in an arithmetic learning task. T. POPESCU*; B. KRAUSE; D. TERHUNE; O. TWOSE; T. PAGE; R. COHEN KADOSH. *Univ. of Oxford.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:00 FFF2 **88.08** Brain stimulation during learning can reduce cognitive disparity and induce transfer and support long-term cognitive enhancement. C. Y. LOOI*; M. DUTA; S. HUBER; H. NUERK; R. COHEN KADOSH. *Univ. of Oxford, Knowledge Media Res. Ctr., Univ. Tübingen.*
- 1:00 FFF3 **88.09** Short term meditation practice improves cognitive flexibility and stability of cognitive functioning. G. B. PATRUDU*; R. PARVATHI; T. M. C. RAO. *Andhra Med. Col. & King George Hosp.*
- 2:00 FFF4 **88.10** Change in brainstem gray matter concentration following a mindfulness-based intervention is correlated with improvement in psychological well-being. B. HOELZEL; O. SINGLETON*; N. BRACH; J. CARMODY; S. W. LAZAR. *Charite Universitaetsmedizin, Massachusetts Gen. Hosp., Palo Alto Univ., Univ. of Massachusetts Med. Sch.*
- 3:00 FFF5 **88.11** Real-time neuro-feedback training of executive functions in healthy adults: A functional NIRS study. H. HOSSEINI*; S. R. KESLER. *Stanford Univ., Stanford Cancer Inst.*
- 4:00 FFF6 **88.12** • Measuring training-related changes in cognitive performance with a repeatable online assessment battery. D. A. STERNBERG*; J. L. HARDY; K. BALLARD; M. SCANLON. *Lumos Labs.*
- 1:00 FFF7 **88.13** Disrupting human prefrontal cortex prevents performance gains from sensory-motor training. H. L. FILMER*; J. B. MATTINGLEY; R. MAROIS; P. E. DUX. *Univ. of Queensland, Univ. of Queensland, Vanderbilt Univ.*
- 2:00 FFF8 **88.14** Correlated changes in brain activity in cognitive control and default mode network induced by practice. J. M. JANSMA*; T. R. VAN RAALTEN; J. H. CALLICOTT; N. F. RAMSEY. *UMC Utrecht, Rudolf Magnus Inst. of Neurosci., UMC Utrecht, NIMH.*
- 3:00 FFF9 **88.15** Development and assessment of a cognitive training program based on problem solving in order to improve capabilities. G. ANDEOL*; M. FERRER; C. CHAMBON; E. ORAL; V. PABAN; B. ALESCIO-LAUTIER. *Inst. De Recherche Biomédicale Des Armées, Aix-Marseille Univ., CNRS - Aix-Marseille Univ.*
- 4:00 FFF10 **88.16** Distinct cognitive training benefits at different levels of information-processing. K. GARNER*; N. MATTHEWS; R. REMINGTON; P. E. DUX. *Univ. of Queensland.*
- 1:00 FFF11 **88.17** Left parietal transcranial alternating current stimulation enhances digit span performance in healthy individuals. G. GALLI*; M. FEURRA; E. F. PAVONE; S. ROSSI. *Azienda Ospedaliera Universitaria Senese, Fondazione Santa Lucia IRCCS.*
- 2:00 FFF13 **89.02** The association between physical activity and changes in serum precursor and mature Brain-derived neurotrophic factor levels. B. M. BROWN*; S. RAINEY-SMITH; Y. LIM; S. LAWS; V. GUPTA; J. PEIFFER; D. AMES; K. ELLIS; K. TADDEI; S. MACAULAY; C. MASTERS; C. ROWE; X. ZHOU; R. MARTINS. *McCusker Alzheimer's Res. Fndn., Edith Cowan Univ., Flinders Univ., Murdoch Univ., Univ. of Melbourne, Edith Cowan Univ., CSIRO, Austin Hlth.*
- 3:00 FFF14 **89.03** Increased resting-state EEG in healthy women is associated with the low activity catecholamine-O-methyltransferase allele. M. SOLIS-ORTIZ*; E. PEREZ-LUQUE; M. GUTIERREZ-MUÑOZ. *Inst. Invest Med, Univ. Guanajuato, Univ. of Guanajuato.*
- 4:00 FFF15 **89.04** Affect, executive function and sensorimotor skill in the elderly: An intervention study. Z. GALLANT*; D. S. TARMEY; R. I. NICOLSON; P. R. HEATH. *Univ. of Sheffield, Univ. of Nottingham.*
- 1:00 FFF16 **89.05** Pattern completion deficits in the elderly. P. VIEWEG; L. R. HOWARD; M. STANGL; T. WOLBERS*. *German Ctr. For Neurodegenerative Dis.*
- 2:00 FFF17 **89.06** Implicit sequence learning in Parkinson's disease. K. R. GAMBLE*; S. E. LO; T. J. CUMMINGS, JR; J. H. HOWARD, JR; D. V. HOWARD. *Georgetown Univ., Medstar Georgetown Univ. Hosp., The Catholic Univ. of America, Georgetown Univ. Med. Ctr.*
- 3:00 FFF18 **89.07** fMRI subsequent source memory effects across the adult lifespan. S. CANSINO*; C. ESTRADA-MANILLA; P. TREJO-MORALES; E. H. PASAYE-ALCARAZ; E. AGUILAR-CASTAÑEDA; P. SALGADO-LUJAMBIO; A. L. SOSA-ORTIZ. *Nat Autonomous Univ. of Mexico, Nat Autonomous Univ. of Mexico, Natl. Inst. of Neurol. and Neurosurg., Natl. Inst. of Neurol. and Neurosurg., Natl. Inst. of Neurol. and Neurosurg.*
- 4:00 FFF19 **89.08** Apolipoprotein E genotypes and dynamic neural communication in healthy brains. A. C. LEUTHOLD; M. Y. MAHAN; J. J. STANWYCK; A. GEORGOPOULOS; A. P. GEORGOPOULOS*. *Univ. of Minnesota, Univ. of Minnesota, Univ. Minnesota, Univ. Minnesota, Univ. Minnesota.*
- 1:00 FFF20 **89.09** Brain activation patterns during semantic verbal fluency in active and educated healthy seniors: A covert fMRI study. C. RODRIGUEZ-ARANDA*; R. ESPENES; M. HOLTHE; K. WATERLOO; T. VANGBERG. *Dept. of Psychology, Univ. of Tromsø, Dept. of Neurology, Univ. Hosp. North Norway, Dept. of Radiology, Univ. Hosp. North Norway.*
- 2:00 FFF21 **89.10** Is the association between white matter hyperintensities and gait speed mediated by cognitive function? N. BOLANDZADEH*; T. LIU-AMBROSE; H. AIZENSTEIN; T. HARRIS; L. LAUNER; K. YAFFE; S. KRITCHEVSKY; A. NEWMAN; C. ROSANO. *UCB, Univ. of Pittsburgh, Natl. Inst. on Aging, Univ. of California San Francisco, Wake Forest Univ.*
- 3:00 FFF22 **89.11** Combined cognitive and physical training vs. single cognitive training in healthy elderly: Differences in long-term effects. J. RAHE*; A. PETRELLI; S. KAESBERG; G. BALLER; J. KESSLER; E. KALBE. *Univ. of Vechta, Univ. Hosp. Cologne.*
- 4:00 FFF23 **89.12** Changes in functional brain network organization after executive control training in older adults. C. L. GALLEN*; G. R. TURNER; C. GRATTON; T. NOVAKOVIC-AGOPIAN; A. J. W. CHEN; M. D'ESPOSITO. *UC Berkeley, Sunnybrook Hlth. Sci. Ctr., VA Northern California Hlth. Care Syst., UC San Francisco.*

POSTER

089. Human Cognition: Cognitive Aging I

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 FFF12 **89.01** Dietary patterns and their association with cognitive decline: Data from the Australian imaging, biomarkers and lifestyle study of ageing. S. L. GARDENER; S. R. RAINEY-SMITH; J. KEOGH; K. TADDEI; K. A. ELLIS; C. MASTERS; D. AMES; S. L. MACAULAY; C. C. ROWE; R. N. MARTINS*; . THE AIBL RESEARCH GROUP. *Edith Cowan Univ., Univ. of South Australia, Univ. of Melbourne, CSIRO, Austin Hosp., Hollywood Med. Ctr.*

- 1:00 FFF24-DP8 **89.13** ● Working memory performance is related to increased functional connectivity in middle-aged adults and decreased functional connectivity in older adults. H. MACPHERSON*; A. PIPINGAS; C. STOUGH; D. CAMFIELD. *Swinburne Univ.*
- 2:00 FFF25 **89.14** Hormone therapy continuity affects post-menopausal hippocampal volumes and memory decline. B. B. BRADEN*; K. B. DASSEL; D. J. CONNER; H. P. O'ROURKE; M. N. SABBAGH; R. J. CASELLI; H. A. BIMONTE-NELSON; L. C. BAXTER. *Barrow Neurolog. Inst., Sun Hlth. Res. Inst., Arizona State Univ., Mayo Clin. Arizona.*
- 3:00 FFF26 **89.15** Functional connectivity changes within and between multiple resting-state networks in cognitively normal elderly subjects with amyloid burden. J. A. ELMAN*; C. M. MADISON; S. L. BAKER; J. W. VOGEL; S. J. CROWLEY; W. J. JAGUST. *Lawrence Berkeley Natl. Lab., Univ. of California at Berkeley, Lawrence Berkeley Natl. Lab.*
- 4:00 GGG1 **89.16** Longitudinal assessment of virtual Morris Water Maze performance and associations with regional brain volumes in older adults. L. E. KORTHAUER*; N. T. NOWAK; S. D. MOFFAT; Y. AN; L. FERRUCCI; S. M. RESNICK; I. DRISCOLL. *Univ. of Wisconsin-Milwaukee, Georgia Inst. of Technol., Natl. Inst. on Aging.*
- 1:00 GGG2 **89.17** Relationships between age, sex, virtual water maze performance, and regional brain volumes. N. T. NOWAK*; E. AWE; I. DRISCOLL. *Univ. of Wisconsin - Milwaukee.*
- 2:00 GGG3 **89.18** Fronto-striatal activity underlies heterogeneous older adult value-based decisions. Y. SU*; A. TERESHCHENKO; W. ELKINS; S. M. RESNICK; J. O. S. GOH. *Natl. Taiwan Univ. Col. of Med., Natl. Inst. on Aging.*
- 3:00 GGG4 **89.19** Analysis of effects of singing on cognitive and emotional factors in assisted-living patients with and without Alzheimer's disease. L. E. MAGUIRE*; P. WANSCHURA; M. BATTAGLIA; S. HOWELL; J. FLINN. *George Mason Univ.*
- 4:00 GGG5 **89.20** Differences in systolic blood pressure between the arms are associated with poorer memory function. M. P. PASE*; K. SAVAGE; K. NOLIDIN; C. STOUGH. *Swinburne Univ., Swinburne Univ. of Technol.*
- 1:00 GGG6 **89.21** Clinical, physical and lifestyle indicators and relationship with cognition and mood in ageing: A cross-sectional analysis of distinct educational groups. N. CORREIA SANTOS; P. S. COSTA; P. CUNHA; C. PORTUGAL-NUNES; J. COTTER; J. J. CERQUEIRA*; J. A. PALHA; N. SOUSA. *Life and Hlth. Sci. Res. Inst. (ICVS), Sch. of Hlth. Sciences, Univ. of Minho, Life and Hlth. Sci. Res. Inst. (ICVS), Univ. of Minho.*
- 2:00 GGG7 **89.22** Neural processing during mental rotation in older and young subjects: An EEG study. M. THOMAS*; O. BOCK. *German Sport Univ. Cologn.*
- 3:00 GGG8 **89.23** Resting state MRI functional connectivity differences in healthy middle-aged to elderly adults. J. TOTENHAGEN*; J. W. LINES; K. L. BERGFELD; G. A. TORRE; W. L. GILLESPIE; K. A. HAWS; M. C. FITZHUGH; B. A. REID; L. A. NGUYEN; G. A. HISHAW; T. P. TROUARD; G. E. ALEXANDER. *Univ. of Arizona, Evelyn F. McKnight Brain Inst., Arizona Alzheimer's Consortium, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*
- 4:00 GGG9 **89.24** Relation of MRI white matter hyperintensity severity to nocturnal blood pressure variation and hypertension in healthy cognitive aging. K. HAWS*; G. A. HISHAW; J. W. TOTENHAGEN; G. A. TORRE; W. L. GILLESPIE; B. A. REID; L. A. NGUYEN; M. C. FITZHUGH; J. W. LINES; G. E. ALEXANDER. *Univ. of Arizona, Evelyn F. McKnight Brain Inst., Arizona Alzheimer's Consortium, Dept. of Neurol., Dept. of Physiological Sci. Grad. Interdisciplinary Program.*
- 1:00 GGG10 **89.25** ▲ Multivariate regional network of gray matter volume associated with healthy cognitive aging. J. W. LINES*; J. W. TOTENHAGEN; K. A. HAWS; M. C. FITZHUGH; G. A. HISHAW; G. A. TORRE; W. L. GILLESPIE; K. CHEN; E. M. REIMAN; T. P. TROUARD; J. R. MOELLER; G. E. ALEXANDER. *Univ. of Arizona, Evelyn F. McKnight Brain Inst., Arizona Alzheimer's Consortium, Univ. of Arizona, Univ. of Arizona, Banner Alzheimer's Inst., Univ. of Arizona, Columbia Univ.*
- 2:00 GGG11 **89.26** Effects of memory complaints and hypertension status on cognitive performance in the elderly. L. A. NGUYEN*; K. A. HAWS; J. W. TOTENHAGEN; G. A. TORRE; W. L. GILLESPIE; M. C. FITZHUGH; G. A. HISHAW; G. E. ALEXANDER. *Univ. of Arizona, Evelyn F. McKnight Brain Inst., Arizona Alzheimer's Consortium, Univ. of Arizona, Univ. of Arizona.*
- 3:00 GGG12 **89.27** Effects of self-reported sleep quality on cognitive functioning in healthy older adults. B. A. REID*; K. A. HAWS; J. W. TOTENHAGEN; G. A. TORRE; W. L. GILLESPIE; M. C. FITZHUGH; J. W. LINES; G. A. HISHAW; G. E. ALEXANDER. *Univ. of Arizona, Evelyn F. McKnight Brain Inst., Arizona Alzheimer's Consortium, Univ. of Arizona, Univ. of Arizona.*
- 4:00 GGG13 **89.28** Sex differences in motor fatigue for old adults in response to increased cognitive demand. H. M. PEREIRA*; V. C. SPEARS; B. SCHLINDER-DELAPE; T. YOON; K. A. NIELSON; S. K. HUNTER. *Marquette Univ., Marquette Univ.*

POSTER

090. Timing and Temporal Processing

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 GGG14 **90.01** Isochronous sounds for isochronous movements: The multiplex control of timing in human subjects. R. BRAVI; E. QUARTA; C. DEL TONGO; A. TOGNETTI; G. DALLE MURA; D. MINCIACCHI*. *Univ. of Florence, Univ. of Florence, Univ. of Pisa, Univ. of Florence.*
- 2:00 GGG15 **90.02** ▲ Learning of periodic and aperiodic motor patterns in humans suggests different timing mechanisms. K. CHENG; R. LAJE; D. V. BUONOMANO*. *UCLA, Univ. of Quilmes and CONICET (Consejo Nacional de Investigaciones Científicas y Técnicas).*
- 3:00 GGG16 **90.03** Temporal resolution of sensory memory. M. NISHIHARA*; K. INUI; T. USHIDA; R. KAKIGI. *Aichi Med. Univ., Natl. Inst. for Physiological Sci., Aichi Med. Univ.*
- 4:00 GGG17 **90.04** Spatiotemporal structure of neural dynamics during natural audition. G. J. STEPHENS*; C. J. HONEY; U. HASSON. *Vrije Univ. Amsterdam, Princeton Univ.*
- 1:00 GGG18 **90.05** How the visual brain encodes and keeps track of time. D. BUETI*; P. SALVIONI; M. MURRAY; L. KALMBACH. *Dept. of Clin. Neurosciences, Univ. Hosp., Univ. Hosp. of Lausanne.*

● Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 GGG19 **90.06** Working memory for time interval structure. S. TEKİ*; T. D. GRIFFITHS. *Univ. Col. London, Newcastle Univ., Univ. Col. London.*
- 3:00 GGG20 **90.07** ▲ Multi-timing task: Attentional load modulation of time perception, and movement condition implications on a time reproduction task. M. ESPINOZA*; O. ZAMORA-AREVALO. *Univ. Nacional Autonoma de Mexico.*
- 4:00 GGG21 **90.08** Brain dynamics in infants: Event-related oscillations during perception of tone-pairs and consonant-vowel contrasts. S. C. ORTIZ-MANTILLA*; J. A. HÄMÄLÄINEN; A. A. BENASICH. *Rutgers The State Univ. of New Jersey, Univ. of Jyväskylä, Rutgers, The State Univ. of New Jersey.*
- 1:00 GGG22 **90.09** Spontaneous brain oscillations in 4- and 7-month old infants. S. PETERS*; G. MUSACCHIA; S. ORTIZ-MANTILLA; N. CHOUDHURY; A. BENASICH. *Rutgers Univ. - Newark, Ramapo Col.*
- 2:00 GGG23 **90.10** Electrophysiological markers of perceived duration in an auditory oddball paradigm. E. KIM; K. B. JONES; T. P. MORAN; J. S. MOSER; J. MCAULEY*. *Dept. of Psychology.*
- 3:00 GGG24 **90.11** Neural indices of carryover effects for duration. M. WIENER*; J. THOMPSON. *George Mason Univ., George Mason Univ.*
- 4:00 GGG25 **90.12** Preserved implicit timing and altered preparation strategy during sleep deprivation. M. W. CHEE*; A. LING; C. L. ASPLUND. *Duke-NUS Grad. Med. Sch., Yale-NUS Col.*
- 1:00 GGG26 **90.13** Superiority of exogenous over memory-based temporal expectations depends on explicit response preparation. A. BRESKA; L. Y. DEOUELL*. *The Hebrew Univ. of Jerusalem.*
- 2:00 GGG27 **90.14** ▲ Passive listening to preferred motor tempo modulates corticospinal excitability. K. MICHAELIS*; M. WIENER; J. C. THOMPSON. *George Mason Univ.*
- 3:00 GGG28 **90.15** Visual cortex GABA predicts time perception. D. B. TERHUNE*; R. COHEN KADOSH. *Univ. of Oxford.*
- 4:00 GGG29 **90.16** Perceived event timing on different skin sites contribute to perceived skin distance. N. HAGURA*; N. SIDDIQUI; P. HAGGARD. *Univ. Col. London.*
- 1:00 GGG30 **90.17** ● Visual, as opposed to auditory, timing interventions targeting magnocellular functioning in children with dyslexia significantly improved reading, attention, and working memory skills. T. A. LAWTON*; J. CONWAY; K. LAWTON; S. D. EDLAND. *Univ. of California San Diego, Univ. of California San Diego.*
- 2:00 GGG31 **90.18** Neuromagnetic beta-band oscillation indexes hierarchical timing induced by subjectively accented meteric structure. T. FUJIOKA*; K. TROCHIDIS; B. ROSS; L. J. TRAINOR. *Stanford Univ., Rotman Res. Inst., McMaster Univ.*
- 3:00 GGG32 **90.19** Stimulus expectancy influences auditory detection by selective cross-modal phase reset of theta oscillations: Evidence from EEG and behavior. S. TEN OEVER*; N. VAN ATTEVELDT; A. SACK. *Maastricht Univ., Netherlands Inst. for Neurosci.*
- 4:00 GGG33 **90.20** The hazards of dopamine: Dopamine depletion impairs precision of temporal expectation but not precision of action. A. TOMASSINI*; D. RUGE; J. GALEA; S. BESTMANN. *UCL, Inst. of Neurol., Univ. of Birmingham.*
- 1:00 GGG34 **90.21** Probing the neural bases of beat perception using transcranial magnetic stimulation. P. RAJARAJAN*; C. COX; F. KAGERER; J. MCAULEY. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*
- 2:00 GGG35 **90.22** Preferred motor tempo 'speeds up' in Parkinson's disease. N. S. MILLER*; K. L. CHOU; N. I. BOHNEN; M. L. T. M. MÜLLER; D. T. BURKE; R. D. SEIDLER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*
- 3:00 GGG36 **90.23** The control of oscillatory upper-limb movement: A study of vibrato movement in stringed instrument players. G. P. MOORE*; J. CHEN. *USC, New York Univ. Sch. of Med.*
- 4:00 GGG37 **90.24** ● Decoupling interval timing and climbing neural activity. A dissociation between CNV and N1P2 amplitudes. T. W. KONONOWICZ*; H. VAN RIJN. *Univ. of Groningen.*
- 1:00 GGG38 **90.25** Dynamics based neural coding in the subjectivity context. K. MOGI*. *Sony Comp Sci. Lab.*
- 2:00 GGG39 **90.26** ▲ Cognitive impairment in alcohol-cocaine consumers using a temporal bisection procedure. D. RAMOS-MASTACHE*; H. SANCHEZ-CASTILLO; D. B. PAZ-TREJO. *Facultad De Psicologia. UNAM.*
- 3:00 GGG40 **90.27** Timing as a tool for understanding cognitive impairment in polydrug users. H. SANCHEZ-CASTILLO*; D. RAMOS-MASTACHE; D. B. PAZ-TREJO. *Univ. Nacional Autonoma De Mexico. Fac Psicologia.*

POSTER

091. Executive Functioning in Animals: Aging and Disorders

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 GGG41 **91.01** Modelling the cognitive symptoms of schizophrenia: Effects of strain, housing and prefrontal cortical lesions on a novel continuous detection task. K. M. TURNER*; T. H. J. BURNE. *Queensland Brain Inst., Queensland Ctr. for Mental Hlth. Res.*
- 2:00 GGG42 **91.02** Age-related changes in GABA-B receptor mediated inhibitory tone in the medial prefrontal cortex. H. E. CARPENTER*; K. B. KELLY; J. L. BIZON; C. J. FRAZIER. *Univ. of Florida, Univ. of Florida.*
- 3:00 GGG43 **91.03** Mechanisms of enduring cognitive / memory vulnerability provoked by chronic early-life stress. J. MOLET*; P. M. MARAS; A. S. IVY; T. Z. BARAM. *Univ. of California, Irvine, Univ. of California, Irvine.*
- 4:00 GGG44 **91.04** GABAergic signaling alterations contribute to impaired working memory in aged F344 rats. C. BANUELOS*; B. BEAS; J. A. MCQUAIL; R. J. GILBERT; B. SETLOW; J. L. BIZON. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*
- 1:00 GGG45 **91.05** GABA(B) receptor signaling and behavioral flexibility in aging. B. S. BEAS*; C. BANUELOS; R. J. GILBERT; B. SETLOW; J. L. BIZON. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*
- 2:00 GGG46 **91.06** Contribution of $\alpha 4\beta 2^*$ nAChRs to chronic nicotine-induced alterations in cognitive flexibility. R. COLE*; R. L. POOLE; D. GUZMAN; D. C. BRAAK; T. J. GOULD; V. PARIKH. *Temple Univ.*

- 3:00 GGG47 **91.07** Deficits in motivation impair recruitment of attention to reward-salient cues. R. D. WARD*; K. K. HIGA; J. B. KAHN; V. WINIGER; E. R. KANDEL; P. D. BALSAM; E. H. SIMPSON. *Columbia Univ., UCSD, Univ. of Pennsylvania, Columbia Univ., Columbia University, Barnard Col., Columbia University, New York State Psychiatric Inst.*
- 4:00 GGG48 **91.08** ▲ Impact of withdrawal from chronic nicotine on strategy set-shifting in C57BL/6J mice. P. J. PATEL; S. X. NAUGHTON; R. L. POOLE; T. J. GOULD; V. V. PARIKH*. *Temple Univ.*
- 1:00 HHH1 **91.09** Behavioral Alterations associated with prenatal cocaine exposure. D. M. MC CARTHY*; N. E. CANNON; P. COSHATT; G. SADRI-VAKILI; P. G. BHIDE. *Florida State University, College of Med., Massachusetts Gen. Hosp.*
- 2:00 HHH2 **91.10** Administration of an agonist selective for $\alpha 2$ GABA-A receptors blocks MK-801-induced cognitive flexibility deficits in a rat model of schizophrenia. M. R. STEFANI*; G. K. HARROLD; J. K. GEHRMANN. *Middlebury Col., Middlebury Col.*
- 3:00 HHH3 **91.11** Mindlock: A novel behavioral syndrome induced by deep brain stimulation in the intact non-human primate. J. L. BAKER*; X. F. WEI; J. RYOU; C. R. BUTSON; N. D. SCHIFF; K. P. PURPURA. *Weill Cornell Med. Col., Med. Col. of Wisconsin.*
- 4:00 HHH4 **91.12** Infusions of HIV envelope glycoprotein gp120 induces cognitive decline. C. GUTOSKEY; J. S. SHUMSKY*; M. THOMAS; V. PIRRONE; B. WIGDAHL; B. D. WATERHOUSE. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*
- 3:00 HHH11 **92.07** Hippocampal theta-contingent trace eyeblink conditioning and extinction. M. S. NOKIA*; K. MYLLYS; J. WIKGREN. *Univ. of Jyväskylä, Univ. of Jyväskylä.*
- 4:00 HHH12 **92.08** Neocortical synaptic proliferation following trace-associative learning. L. S. CHAU*; A. PRAKAPENKA; L. ZENDELI; R. GALVEZ. *Univ. of Illinois, Univ. of Illinois at Urbana-Champaign.*
- 1:00 HHH13 **92.09** Sex differences in motivated learning have consequences for neurogenesis. G. DIFEO*; D. M. CURLIK, II; T. J. SHORS. *Rutgers Univ.*
- 2:00 HHH14 **92.10** Cerebellar secretin affects acquisition and extinction of eyeblink conditioning. J. R. FUCHS*; G. ROBINSON; J. T. GREEN. *Univ. of Vermont.*
- 3:00 HHH15 **92.11** Activation of trkb receptors facilitates goal-directed decision-making. K. S. ZIMMERMANN*; E. G. PITTS; S. L. GOURLEY. *Emory Univ., Emory Univ., Emory Univ.*
- 4:00 HHH16 **92.12** Role for the striatal mammalian target of rapamycin (mTOR) proteins in the learning of a skilled motor task in mice. Y. BERGERON*; G. BUREAU; M. CYR. *Univ. Du Quebec A Trois-Rivieres.*

POSTER

093. Fear and Aversive Learning and Memory: Extinction I

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

POSTER

092. Associative, Non-Associative, and Skill Learning

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 HHH5 **92.01** Cholinergic interneurons differentially affect spiking in direct and indirect striatal pathways through M1 acetylcholine receptor and CalDAG-GEFI signaling. J. R. CRITTENDEN*; C. J. LACEY; G. FENG; A. M. GRAYBIEL. *MIT.*
- 2:00 HHH6 **92.02** Dynamics of "reward" activity in the sensorimotor striatum during learning and habit formation. K. S. SMITH*; A. M. GRAYBIEL. *M.I.T., MIT.*
- 3:00 HHH7 **92.03** Primate dorsolateral prefrontal and anterior cingulate neurons are differentially recruited during decision-making under approach-avoidance conflict. K. AMEMORI*; S. AMEMORI; A. M. GRAYBIEL. *MIT.*
- 4:00 HHH8 **92.04** Effect of single prolonged stress on spatial task reversals and procedural learning. L. URPA*; W. VANDERHEYDEN; S. GEORGE; I. LIBERZON; G. POE. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*
- 1:00 HHH9 **92.05** Voluntary exercise or manipulation of HIF-1 α expression increases hippocampal capillary density and promotes behavioral flexibility in adult rats. K. L. BERGGREN*; J. J. M. KAY; B. R. POCHINSKI; A. R. HOELL; R. A. SWAIN. *Univ. of Wisconsin - Milwaukee.*
- 2:00 HHH10 **92.06** Open field activity in rabbits: Relation to hippocampal theta and learning. J. WIKGREN*; K. MYLLYS; M. S. NOKIA. *Univ. Jyväskylä.*
- 1:00 HHH17 **93.01** Predictability and heritability of individual differences in fear conditioning and extinction. J. D. SHUMAKE*; S. FURGESON-MOREIRA; M. H. MONFILS. *The Univ. of Texas at Austin.*
- 2:00 HHH18 **93.02** Reconsolidation-based intervention reduces fear after P17 and P25 fear conditioning: Interactions between early life experience and adult fear learning in rats. M. H. MONFILS*; C. E. JONES. *Univ. of Texas At Austin.*
- 3:00 HHH19 **93.03** Fear conditioning in early life: The effects of fluoxetine on retention and re-conditioning in adulthood. R. ROQUET*; E. A. BAUER; M. H. MONFILS. *The Univ. of Texas At Austin, New York Univ.*
- 4:00 HHH20 **93.04** Reconsolidation-extinction interactions in fear memory attenuation: Examining the role of inter-trial interval variability. A. AUCHTER*; L. K. CORMACK; Y. NIV; M. H. MONFILS. *Univ. of Texas At Austin, Princeton Univ.*
- 1:00 HHH21 **93.05** Dominance status in male rats influences acquisition of social fear from a related cage-mate. C. E. JONES*; M. H. MONFILS. *The Univ. of Texas.*
- 2:00 HHH22 **93.06** Sign-tracking phenotypes during appetitive learning influence open field behavior and maintenance of conditioned fear. M. E. OLSHAVSKY*; C. E. JONES; H. J. LEE; M. H. MONFILS. *The Univ. of Texas At Austin, The Univ. of Texas At Austin.*
- 3:00 HHH23 **93.07** Optogenetic silencing of prelimbic inputs to paraventricular thalamus impairs long-term fear retrieval. F. H. DO MONTE*; G. J. QUIRK. *Univ. of Puerto Rico.*
- 4:00 HHH24 **93.08** The infralimbic cortex is critical for avoidance extinction, but not avoidance expression. C. BRAVO-RIVERA*; C. ROMAN-ORTIZ; E. BRIGNONI-PEREZ; H. BRAVO-RIVERA; G. J. QUIRK. *Univ. Puerto Rico Sch. Med.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 HHH25 **93.09** Deep brain stimulation of the ventral striatum increases BDNF in the fear extinction circuit. L. E. ROSAS-VIDAL*; F. H. DO MONTE; J. RODRÍGUEZ-ROMAGUERA; G. J. QUIRK. *Univ. of Puerto Rico*.
- 2:00 HHH26 **93.10** ▲ Extinguishing fear: Revisiting the infralimbic cortex with an optogenetic approach. G. MANZANO-NIEVES*; F. H. DO MONTE; G. J. QUIRK. *Univ. of Puerto Rico*.
- 3:00 HHH27 **93.11** Activation of the infralimbic prefrontal cortex enhances later fear inhibition by suppression of fear expression. B. M. THOMPSON*; L. WATKINS; S. MAIER. *Univ. of Colorado*.
- 4:00 HHH28 **93.12** Effect of trace fear conditioning and extinction on mPFC-amygdala projection neurons. C. SONG*; V. L. EHLERS; J. C. AITKEN; T. BULA; J. R. MOYER, Jr. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee*.
- 1:00 HHH29 **93.13** Vagus nerve stimulation facilitates extinction and reduces reinstatement in rats. A. ALVAREZ-DIEPPA*; S. M. WILLETT; C. K. MCINTYRE. *Univ. of Texas At Dallas*.
- 2:00 HHH30 **93.14** Sex-specific individual differences in fear behavior in large cohorts of rats: Neuroanatomical markers of vulnerability and resilience. T. GRUENE; E. ROBERTS; R. SHANSKY*. *Northeastern Univ., Northeastern Univ.*
- 3:00 HHH31 **93.15** Synaptic encoding of fear extinction in mPFC-amygdala circuits. J. CHO*; K. DEISSEROTH; V. BOLSHAKOV. *McLean Hosp, Harvard Med. Sch., Stanford Univ.*
- 4:00 HHH32 **93.16** Female ovariectomized rats are protected from the effects of chronic morphine treatment on fear conditioning and extinction. K. D. MARTINEZ CASIANO*; D. L. RAMOS-ORTOLAZA; E. M. PEREZ-TORRES; A. TORO BAHAMONDE; Y. ALONSO; E. SANTINI; A. TORRES-REVERÓN. *Ponce Sch. of Med. and Hlth. Sci., Nova Southeastern Univ., Univ. of Puerto Rico*.
- 1:00 HHH33 **93.17** Safety learning in an animal model of schizophrenia. S. SANGHA*; S. A. BALLENDINE; P. D. ROBINSON; J. G. HOWLAND. *Univ. of Saskatchewan*.
- 2:00 HHH34 **93.18** Sex differences in fear extinction and associated medial prefrontal cortex function. G. E. FENTON*; A. K. POLLARD; R. MASON; D. M. HALLIDAY; T. W. BREDY; C. W. STEVENSON. *Univ. of Nottingham, Univ. of York, Univ. of Queensland*.
- 3:00 HHH35 **93.19** The retrosplenial cortex is involved in the consolidation, retrieval, and extinction of trace, but not delay fear conditioning. J. L. KWAPIS*; T. J. JAROME; J. L. LEE; F. J. HELMSTETTER. *Univ. Wisconsin- Milwaukee*.
- 4:00 HHH36 **93.20** The role of metals in nutrition: Factors to consider in creating a mildly copper deficient diet for rodents. S. L. LIPPI*; P. L. BOZZELLI; S. N. HOWELL; J. M. FLINN. *George Mason Univ.*
- 1:00 HHH37 **93.21** Chronic unpredictable threat without harm enhances acoustic startle response: Failure to habituate and its implications for PTSD vulnerability. D. J. KIM*; M. L. JACOBSON; P. PEDULLA; Y. MANGAL; D. AWALT; B. J. ANDERSON. *Stony Brook Univ., Stony Brook Univ.*
- 2:00 HHH38 **93.22** ▲ Stimulation of the dorsal periaqueductal gray enhances spontaneous recovery of a conditioned taste aversion. M. M. ROGERS*; K. D. KETCHESIN; L. RAMOS; J. R. LUCHSINGER; N. R. WILES; N. HOXHA; G. A. MICKLEY*. *Baldwin Wallace Univ.*
- 3:00 HHH39 **93.23** Effects of the degree of training on the context-specificity of extinguished conditioned taste aversions. T. SCHACHTMAN*; D. KLAKOTSKAIA; R. RICHARDSON. *Univ. of Missouri*.
- 4:00 HHH40 **93.24** Unlearning learned fear: testing the prediction error hypothesis. A. M. SCHNEIDER*; P. E. SIMSON; E. H. PARK; P. MONARI; D. KALAMARIDES; J. WALSH; C. SOMMI; R. TENG; G. PRETTYMAN; N. GETTINO; L. G. KIRBY. *Swarthmore Coll, Miami Univ., Temple Univ. Sch. of Med.*
- 1:00 HHH41 **93.25** Sex differences in effect of consecutive fear extinction on spontaneous recovery. S. MATSUDA*; D. MATSUZAWA; D. ISHII; H. TOMIZAWA; C. SUTOH; E. SHIMIZU. *Chiba Univ. Grad. Sch. of Med., JSPS, Chiba University, Grad. Sch. of Med.*
- 2:00 HHH42 **93.26** Differential control mechanisms in the acquisition and consolidation of cued fear extinction. T. N. HUYNH*; E. SANTINI; E. KLANN. *New York Univ.*
- 3:00 HHH43 **93.27** Optogenetic dissection of prefrontal-amygdala circuits underlying fear extinction. O. BUKALO*; C. PINARD; M. REGER; G. COLACICCO; E. BUSCH; E. SAGALYN; S. FLYNN; A. HOLMES. *NIH/NIAAA*.
- 4:00 HHH44 **93.28** ● Effect of testosterone on retention of extinction memory after conditioned taste aversion during the sexually immature period in mice. E. SUZUKI*; H. EDA-FUJIWARA; R. SAITO; R. SATOH; T. MIYAMOTO. *Japan Women's Univ., JSPS, Univ. of Human Arts and Sci., Kitasato Univ.*
- 1:00 HHH45 **93.29** Noradrenergic receptor modulation of the immediate extinction deficit in rats. J. R. SEEMANN; P. J. FITZGERALD*; S. MAREN. *Texas A&M Univ., Texas A&M Univ.*
- 2:00 HHH46 **93.30** Relapse of extinguished fear after exposure to a dangerous context in rats. T. D. GOODE*; J. J. KIM; S. MAREN. *Texas A&M Univ., Texas A&M Univ.*

POSTER

094. Animal Learning and Memory: Cortical and Hippocampal Circuits I

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 III1 **94.01** Activity of dorsal CA1 hippocampal neurons during acquisition and retrieval of consolidated trace eyeblink conditioning. S. HATTORI*; L. CHEN; C. WEISS; J. F. DISTERHOFT. *Northwestern Univ.*
- 2:00 III2 **94.02** Decoding techniques predict conditioned blink responses, revealing dynamics of associative learning. P. N. LAWLOR*; S. HATTORI; C. WEISS; J. F. DISTERHOFT; K. KORDING. *Rehabil. Inst. of Chicago, Northwestern Univ., Northwestern Univ.*
- 3:00 III3 **94.03** Persistent responses in neurons of perirhinal and lateral entorhinal cortices: A mechanism for long-term recall of trace conditioning. E. E. SUTER*; C. WEISS; J. F. DISTERHOFT. *Northwestern Univ.*
- 4:00 III4 **94.04** 1D grid fields are slices of a 2D hexagonal lattice. S. J. LEWALLEN*; K. YOON; A. A. KINKHABWALA; C. DOMNISORU; D. W. TANK; I. FIETE. *Princeton Univ., Ctr. for Learning and Memory, The Univ. of Texas at Austin, Princeton Univ., Princeton Univ., Ctr. for Learning and Memory, The university of texas at austin.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 III5 **94.05** Grid cell responses in 1D environments are consistent with 2D continuous attractor dynamics. K. YOON*; S. LEWALLEN*; A. A. KINKHABWALA; D. W. TANK; I. FIETE. *The Univ. of Texas At Austin, Princeton Univ., Princeton Univ.*
- 2:00 III6 **94.06** Interactions between the hippocampus and neocortex during memory retrieval. K. K. TAYLER*; B. J. WILTGEN. *Univ. of Virginia, UC Davis, UC Davis.*
- 3:00 III7 **94.07** Selective silencing of previously activated hippocampal neurons. K. Z. TANAKA*; B. J. WILTGEN. *Ctr. for Neuroscience, UC Davis.*
- 4:00 III8 **94.08** Stable reactivation of memory traces in the hippocampus and neocortex. Y. NAKAZAWA*; A. PEVZNER; B. J. WILTGEN. *Ctr. For Neuroscience, UC Davis.*
- 1:00 III9 **94.09** Loss of temporal structure in the hippocampal neuronal activities accompanied by deterioration of episode fields and episodic memory. Y. WANG*; B. LUSTIG; E. PASTALKOVA. *Janelia Farm Res. Campus, HHMI.*
- 2:00 III10 **94.10** Endogenously generated hippocampal sequences: The short-term plasticity model. S. ROMANI*; M. TSODYKS; L. F. ABBOTT; Y. WANG; E. PASTALKOVA. *Columbia Univ., Radboud Univ., Weizmann Inst. of Sci., Janelia Farm Res. Campus.*
- 3:00 III11 **94.11** A computational model for pre-play in the hippocampus. A. AZIZI*; S. CHENG. *RUB, RUB.*
- 4:00 III12 **94.12** Simple anatomical principles between cortex and hippocampus are enough to enable learning of temporally separated patterns. M. PYKA*; S. CHENG. *Univ. of Bochum, Mercator Res. Group "Structure of Memory" and Fac. of Psychology, Ruhr Univ. Bochum.*
- 1:00 III13 **94.13** Formation and reverberation of new spiking patterns is facilitated in desynchronized brain state. E. J. BERMUDEZ CONTRERAS*; A. GOMEZ-PALACIO SCHJETNAN; A. MUHAMMAD; P. BARTHO; B. L. MCNAUGHTON; B. KOLB; A. GRUBER; A. LUCZAK. *CCBN / Univ. of Lethbridge, Inst. of Exptl. Medicine, Hungarian Acad. of Sci., CMBN, Rutgers Univ.*
- 2:00 III14 **94.14** How the hippocampus allocates cells to places: Random draw with replacement? W. K. WITHARANA; J. Y. XIE; J. CARDIFF; C. ALME; V. LAPOINTE; A. DEMCHUK; R. J. SUTHERLAND; B. L. MCNAUGHTON*. *The Univ. of Lethbridge.*
- 3:00 III15 **94.15** Functional connectivity of three-dimensional object coding in perirhinal-entorhinal circuitry. B. J. CLARK*; A. A. WILBER; W. K. WITHARANA; B. L. MCNAUGHTON. *Univ. of Lethbridge.*
- 4:00 III16 **94.16** Testing the Fourier hypothesis of hippocampal place field generation from grid cell inputs. J. O. ORMOND*; B. L. MCNAUGHTON. *Univ. of Lethbridge.*
- 1:00 III17 **94.17** Discrete classes of egocentric x allocentric conjunctive cells in rat posterior parietal cortex establish or update spatial trajectories. A. A. WILBER*; B. J. CLARK; T. C. FORSTER; M. TATSUNO; B. L. MCNAUGHTON. *The Univ. of Lethbridge, Canadian Ctr. for Behavioural Neurosci.*
- 2:00 III18 **94.18** Estimating local connectivity with extracellular recordings. C. D. SCHWINDEL*; K. ALI; B. L. MCNAUGHTON; M. TATSUNO. *Univ. of Lethbridge.*
- 3:00 III19 **94.19** K-complex not spindle sleep component is strongly influenced by acute circadian shift: A study by continuous local field potential recordings in a freely behaving rat. R. Y. ROTA*; H. W. STEENLAND; K. ALI; B. L. MCNAUGHTON; R. J. MCDONALD; M. TATSUNO. *Univ. of Lethbridge.*
- 4:00 III20 **94.20** Integrated intensity of immediate-early gene (Homer1a) transcription within segmented neuronal nuclei indicate differential coding properties between CA1 and CA3. W. K. WITHARANA*; B. J. CLARK; B. L. MCNAUGHTON. *CCBN Univ. of Lethbridge.*
- 1:00 III21 **94.21** Hippocampome.Org: An open-access knowledge base of neuronal properties for the rodent hippocampus. D. W. WHEELER*; C. WHITE; A. O. KOMENDANTOV; C. L. REES; D. J. HAMILTON; S. T. MACKESEY; M. BERGAMINO; P. S. DALAL; G. A. ASCOLI. *George Mason Univ.*
- 2:00 III22 **94.22** Electrophysiological phenotyping of hippocampal neurons. A. O. KOMENDANTOV*; D. W. WHEELER; C. L. REES; D. J. HAMILTON; C. M. WHITE; S. T. MACKESEY; G. A. ASCOLI. *George Mason Univ.*
- 3:00 III23 **94.23** Machine-readable representations of hippocampal neuron properties to facilitate investigative analytics. D. J. HAMILTON*; D. W. WHEELER; C. WHITE; A. O. KOMENDANTOV; C. L. REES; S. T. MACKESEY; M. BERGAMINO; P. S. DALAL; G. A. ASCOLI. *George Mason Univ.*
- 4:00 III24 **94.24** Hippocampome.Org: A neuron type-based approach to parsing the functional circuitry of the hippocampal connectome. C. L. REES*; D. W. WHEELER; C. WHITE; A. O. KOMENDANTOV; D. J. HAMILTON; S. T. MACKESEY; G. A. ASCOLI. *George Mason Univ.*
- 1:00 III25 **94.25** Origin of remote memory trace formation: Early increase in presynaptic markers precedes structural remodelling of ACC neurons. G. VETERE*; M. ACETI; L. RESTIVO; M. GIUSTIZIERI; A. BORRECA; S. MARINELLI; M. AMMASSARI-TEULE. *CNR, IRCCS S. Lucia Fdn., The Scripps Res. Inst., Hosp. for Sick Children, European Brain Res. Inst. (EBRI).*
- 2:00 III26 **94.26** Intra-laminar thalamic deep brain stimulation enhances spatial memory and cortical plasticity. S. TSAI; S. CHEN; B. S. HUANG*; G. TSENG. *Tzu Chi Gen. Hosp., Tzu Chi Gen. Hosp., Harvard Med. Sch., Tzu Chi Univ.*
- 3:00 III27 **94.27** The effects of radiation on behaviorally induced neurogenesis. M. FINLAY*; R. HARTMAN; M. CAMPBELL-BEACHLER; T. JONES; G. NELSON. *Loma Linda Univ.*

POSTER

095. Learning and Memory: Physiology I

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 III28 **95.01** The effects of stress on hippocampal place field activity and memory replay. P. W. GERMAN*; D. SOLEIMANI-MEIGOONI; A. LOBACK; L. M. FRANK. *Univ. California, San Francisco, Washington Univ. Sch. of Med., Princeton Neurosci. Inst.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 III29 **95.02** Gamma oscillations in the BLA and mPFC are associated with fear suppression. J. M. STUJENSKE*; E. LIKHTIK; M. A. TOPIWALA; J. A. GORDON. *Neurobio. and Behavior, Columbia Univ., Columbia Univ., RFMH.*
- 3:00 III30 **95.03** Passive transport disrupts grid cell firing patterns in the entorhinal cortex. S. S. WINTER*; J. S. TAUBE. *Dartmouth Col.*
- 4:00 III31 **95.04** Identification of statistical regularities across multiple memories over time. B. A. RICHARDS*; S. A. JOSSELYN; P. W. FRANKLAND. *The Hosp. For Sick Children, The Univ. of Toronto, The Univ. of Toronto, The Univ. of Toronto.*
- 1:00 III32 **95.05** Adult neurogenesis protects against proactive interference. J. R. EPP*; R. SILVA MERA; L. C. P. BOTLY; A. C. GIANLORENCO; S. KÖHLER; S. A. JOSSELYN; P. W. FRANKLAND. *Hosp. For Sick Children, Federal Univ. of Sao Carlos, Univ. of Western Ontario.*
- 2:00 III33 **95.06** The role of parvalbumin-positive interneurons in memory consolidation. F. XIA*; B. A. RICHARDS; A. SANTORO; S. A. JOSSELYN; P. W. FRANKLAND. *Hosp. For Sick Children.*
- 3:00 III34 **95.07** Manipulating the fear memory trace in mice. D. TALIAZ*; A. RASHID; A. YIU; B. ROTH; P. FRANKLAND; S. JOSSELYN. *The Hosp. for Sick Children, Univ. of Toronto, Univ. of North Carolina At Chapel Hill.*
- 4:00 III35 **95.08** • Direct hippocampal-prefrontal input supports spatial working memory. T. SPELLMAN*; J. GOGOS; J. GORDON. *Columbia Univ., Columbia Univ., Columbia Univ.*
- 1:00 III36 **95.09** Manipulating a cocaine-cue memory in mice. H. HSIANG*; C. YEN; A. RASHID; M. VAN DEN OEVER; S. PATEL; P. W. FRANKLAND; S. A. JOSSELYN. *Hosp. for Sick Children, Univ. of Toronto, Univ. of Toronto, Univ. of Toronto, VU Univ.*
- 2:00 III37 **95.10** Multiple modes of hippocampal-prefrontal interactions during learning. S. P. JADHAV*; L. M. FRANK. *Univ. of California San Francisco (UCSF).*
- 3:00 III38 **95.11** The role of adult-born hippocampal neurons in learning and memory. H. LIN*; G. LAI. *Natl. Chengchi Univ., Natl. Chengchi Univ., Natl. Chengchi Univ.*
- 4:00 III39 **95.12** A role for the mPFC and CA1 in schematic learning in the water maze. A. SANTORO*; B. A. RICHARDS; F. XIA; S. A. JOSSELYN; P. W. FRANKLAND. *Univ. of Toronto, Univ. of Toronto, The Hosp. for Sick Children, Univ. of Toronto.*
- 1:00 III40 **95.13** Relative increases in intrinsic excitability at the time of training are sufficient for preferential recruitment of amygdala neurons into a fear memory trace. A. P. YIU*; V. MERCALDO; C. YAN; B. RICHARDS; M. TRAN; S. A. KUSHNER; M. A. WOODIN; B. L. ROTH; P. W. FRANKLAND; S. A. JOSSELYN. *Hosp. For Sick Children, Univ. of Toronto, Erasmus MC, Univ. of North Carolina.*
- 2:00 III41 **95.14** Lesions of the postrhinal cortex moderately impair visual landmark control of head direction cells. J. R. PECK*; J. S. TAUBE. *Dartmouth Col.*
- 3:00 III42 **95.15** A genetic encoded activity sensor revealed the formation of memory traces. H. XIE*; J. GUAN. *Tsinghua Univ.*

POSTER

096. Drug Seeking and Taking

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 III43 **96.01** VTA microinjections of urotensin II modulate effects of addictive drugs. L. E. MUELLER; M. A. KAUSCH; D. M. DIETZ; S. CLARK*. *SUNY at Buffalo.*
- 2:00 III44 **96.02** Lesion of the medial prefrontal cortex potentiates reinforcement omission effects in rats. D. M. JUDICE DAHER*; T. F. TAVARES; J. L. O. BUENO. *Univ. de Sao Paulo.*
- 3:00 III45 **96.03** Reward and effort modulation of response choices in humans. V. BONNELLE*; K. VEROMANN; S. MANOHAR; M. HUSAIN. *Oxford Univ.*
- 4:00 III46 **96.04** Silent synapse-based reorganization in cocaine craving. Y. Y. MA*; B. R. LEE; Y. H. HUANG; X. WANG; M. OTAKA; M. ISHIKAWA; P. NEUMANN; N. GRAZIENE; T. BROWN; A. SUSKA; M. K. LOBO; M. E. WOLF; E. J. NESTLER; Y. SHAHAM; O. M. SCHLÜTER; Y. DONG. *Univ. of Pittsburgh, The Scripps Res. Inst., Washington State Univ., European Neurosci. Inst., Mount Sinai Sch. of Med., Rosalind Franklin Univ. of Med., NIH.*
- 1:00 JJJ1 **96.05** Morphine self-administration enhances locomotor activity and 50-kHz FM ultrasonic vocalizations. N. THAKORE*; J. RENO; J. KRIEGER; T. YEE; E. KUSEY; A. GONZALEZ; C. L. DUVAUCHELLE. *Col. of Pharm., Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas at Austin.*
- 2:00 JJJ2 **96.06** Dopamine modulates memory encoding in the dentate gyrus of the hippocampus. W. DENG*; Y. MU; J. B. AIMONE; F. H. GAGE. *The Salk Inst., Chinese Acad. of Sci., Sandia Natl. Labs.*
- 3:00 JJJ3 **96.07** An occasion-setter exerts much greater control over conditioned responding in goal-trackers than in sign-trackers. A. M. AHRENS*; T. E. ROBINSON. *Univ. of Michigan.*
- 4:00 JJJ4 **96.08** Longitudinal characterization of behaviorally evoked dopamine release in a transgenic rat model of Huntington's disease. A. FITOUSSI*; R. CACHOPE; I. GILDISH; N. LOPATINA; E. B. OLESON; J. F. CHEER. *Univ. of Maryland Sch. of Medicine, Dept. of Anat. and Neurobiol.*
- 1:00 JJJ5 **96.09** Drug self-administration history alters cue and drug-elicited dopamine release. L. BURGENDO*; I. WILLUHN; P. E. M. PHILLIPS. *Univ. of Washington, Sch. of Med., Univ. of Washington, Sch. of Med., Univ. of Washington, Sch. of Med.*
- 2:00 JJJ6 **96.10** The relationship between pre frontal cortex (PFC), rostralateral periaqueductal gray (rlPAG) and orexin neurons in lateral hypothalamic area (LHA) in drug seeking behavior. W. F. OLIVEIRA*; B. VALBÃO; M. H. SUKIKARA; L. F. FELÍCIO; N. S. CANTERAS; S. R. MOTA-ORTIZ. *Univ. De São Paulo, Univ. Cidade de São Paulo, Univ. De São Paulo.*
- 3:00 JJJ7 **96.11** The functional role of orexin/hypocretin neuropeptides in context induced reinstatement of drug seeking. A. A. PRASAD*; G. MCNALLY. *Univ. of New South Wales.*
- 4:00 JJJ8 **96.12** A novel UCS-retrieval extinction procedure to inhibit relapse to heroin and cocaine seeking. Y. LUO*; M. JIAN; Y. HAN; Y. XUE; J. LIU; Y. SHAHAM; L. LU. *Natl. Inst. On Drug Dependence, Peking Univ., Natl. Inst. on Drug Abuse, Natl. Inst. of Hlth.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 1:00 JJJ9 **96.13** ● Yohimbine-induced reinstatement of food seeking is associated with neuronal activation in lateral hypothalamus, amygdala, ventral subiculum, and bed nucleus of stria terminalis. Y. CHEN*; A. B. KAWA; C. L. PICKENS; N. J. MARCHANT; J. M. BOSSERT; Y. SHAHAM; D. J. CALU. *Natl. Inst. on Drug Abuse*.

POSTER

097. Cocaine

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 JJJ10 **97.01** OX1R-initiated endocannabinoid retrograde disinhibition of dopaminergic neurons in the ventral tegmental area -A novel mechanism for stress-induced relapse of cocaine seeking. L. TUNG*; L. CHANG; G. LU; L. YU; S. TENG; M. HUNG; K. MACKIE; A. ZIMMER; L. CHIOU. *Grad. Inst. of Pharmacology, Col. of Medicine, Natl. Taiwan Univ., Inst. of Behavioral Medicine, Col. of Medicine, Natl. Cheng Kung Univ., Institute of Biotech. and Pharmaceut. Research, Natl. Hlth. Res. Inst., Gill Ctr. and the Dept. of Psychological and Brain Sciences, Indiana Univ., Inst. for Mol. Psychiatry, Univ. of Bonn, Dept. of Pharmacology, college of medicine, Natl. Taiwan Univ., Grad. Inst. of Brain and Mind Sciences, Col. of Medicine, Natl. Taiwan Univ., Neurobio. and Cognitive Sci. Center, Natl. Taiwan Univ.*
- 2:00 JJJ11 **97.02** Involvement of the dorsal hippocampus in cocaine conditioned place preference. L. N. HITCHCOCK*; K. M. LATTAL. *Oregon Hlth. and Sci. Univ.*
- 3:00 JJJ12 **97.03** Involvement of astrocyte-derived lactate in the formation and maintenance of cocaine-seeking behavior. B. BOURY-JAMOT; O. HALFON; P. J. MAGISTRETTI; B. BOUTREL*. *Ctr. for Psychiatric Neurosci., Lausanne Inst. of Technol., Div. of Child and Adolescent Psychiatry, Ctr. for Psych. Neurosci.*
- 4:00 JJJ13 **97.04** Modulation of cocaine reinforcement in the rat using novel beta- alanine analogs. K. M. BREBNER*; C. CHILDERS; S. CHARANIA; J. MORGEN; M. RAJORA; D. F. WEAVER. *St. Francis Xavier Univ., Carleton Univ., Univ. of Toronto, Dalhousie Univ.*
- 1:00 JJJ14 **97.05** Disrupted hypocretin signaling reduces baseline dopamine signaling and attenuates dopamine responses to cocaine in the nucleus accumbens core. R. A. ESPAÑA*; J. K. SHAW. *Drexel Univ. Col. of Med.*
- 2:00 JJJ15 **97.06** Abuse liability and potential of 3-substituted phenyltropane dopamine uptake inhibitors as medications for cocaine abuse. J. L. KATZ*; M. ZOU; T. A. KOPAJTIC; P. L. SOTO; C. R. LUPICA; A. H. NEWMAN; T. HIRANITA. *DHHS/NIH/NIDA IRP, Biomed. Res. Ctr., NIDA Intramural Res. Program, NIDA Intramural Res. Program, Johns Hopkins Univ. Med. Sch., NIDA Intramural Res. Program.*
- 3:00 JJJ16 **97.07** Opioid dependence disrupts cocaine reward by disrupting GABAergic chloride homeostasis mediated by activated microglia. C. M. CAHILL*; A. M. W. TAYLOR; A. CASTONGUAY; A. GHOGHA; P. VAYSSIERE; A. A. A. PRADHAN; Y. DE KONINCK; C. J. EVANS. *Univ. of California Irvine, UCLA, Univ. Laval, Univ. of Illinois.*
- 4:00 JJJ17 **97.08** Single-prolonged stress alters dopamine function and cocaine-reward. N. ENMAN*; K. ARTHUR; Y. ZHANG; S. A. PERRINE; S. J. WARD; E. M. UNTERWALD. *Temple Univ. Sch. of Med., The Rockefeller Univ., Wayne State Univ. Sch. of Med.*

- 1:00 JJJ18 **97.09** Repeated cocaine exposure enhances incentive motivation through exaggerated phasic mesolimbic dopamine signaling. S. B. OSTLUND*; K. H. LEBLANC; A. R. KOSHELEFF; K. M. WASSUM; N. T. MAIDMENT. *UCLA Semel Inst., Brain Res. Inst., UCLA*.
- 2:00 JJJ19 **97.10** ● Dopamine D2 auto-receptor versus heteroreceptor dependent control of the motor and rewarding properties of cocaine. B. HALBOUT*; G. KHARKWAL; E. BORRELLI. *Univ. of California, Irvine.*

POSTER

098. Behavioral Pharmacology of Social Stress and Drugs

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 JJJ20 **98.01** ▲ unctinal consequences of methylphenidate exposure during postnatal days 11-20 on oxycodone reward in male and female adolescent rats. M. A. ESQUEDA*; K. S. OJALA; R. M. LANGA; A. R. ZAVALA. *California State University, Long Beach.*
- 2:00 JJJ21 **98.02** ▲ Behavioral effects of a high fat diet on the sensitizing response to nicotine in adolescent rats. C. TSCHUMI; M. BOWMAN; E. SANFORD; F. SANABRIA; G. J. PRIVITERA; C. A. CRAWFORD; A. R. ZAVALA*. *California State Univ., Arizona State Univ., St. Bonaventure, California State University, San Bernardino.*
- 3:00 JJJ22 **98.03** ▲ Exposure to prozac during adolescence increases sensitivity to the rewarding effects of cocaine in adulthood. S. J. NIETO*; L. M. RIGGS; G. DAYRIT; N. N. ZAMORA; S. D. INIGUEZ. *California State University, San Bernardino.*
- 4:00 JJJ23 **98.04** ▲ Methamphetamine-induced conditioned place preference during adolescence in male and female rats pretreated with methylphenidate (Ritalin) during postnatal days 11-20. R. J. FLORES GARCIA*; J. GIANG; D. COLLIN; M. BOWMAN; A. R. ZAVALA. *California State University, Long Beach.*
- 1:00 JJJ24 **98.05** ▲ Social defeat stress induces depression-like behaviors in adolescent c57BL/6 mice. L. M. RIGGS; G. DAYRIT; V. CAO; R. RODRIGUEZ; M. J. STONE; S. J. NIETO; S. D. INIGUEZ*. *California State Univ. San Bernardino.*
- 2:00 JJJ25 **98.06** Repeated exposure to ketamine during adolescence increases sensitivity to ketamine in adulthood. E. M. PARISE*; L. L. ALCANTARA; B. L. WARREN; N. GONZALEZ; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ.*
- 3:00 JJJ26 **98.07** Systemic injection of the DAD1 antagonist SCH 23390 reduces saccharin seeking in rats. K. AOYAMA*; J. BARNES; J. KOERBER; E. GLUECK; K. DORSEY; L. EATON; J. W. GRIMM. *Doshisha Univ., Western Washington Univ.*
- 4:00 JJJ27 **98.08** Examination of a role for corticosterone in the anti-craving effect of environmental enrichment in rats. J. W. GRIMM*; J. BARNES; J. KOERBER; E. GLUECK; L. DEUSE; K. DORSEY; L. EATON; D. GINDER; J. HYDE; M. WALTHER. *Western Washington Univ.*
- 1:00 JJJ28 **98.09** Pro-inflammatory cytokines and motivational dysfunctions related to depression: Interleukin 1β alters effort-related choice behavior in rats. E. J. NUNES*; E. E. HART; A. ESTRADA; B. EPLING; P. A. RANDALL; C. A. LEE; Y. BAQI; C. E. MÜLLER; M. CORREA; J. D. SALAMONE. *Univ. of Connecticut, Univ. of Bonn, Univ. Jaume I.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 2:00 JJJ29 **98.10** Proinflammatory pharmacological manipulations associated with depression: Effects of peripheral Lipopolysaccharide administration on effort-related decision making in operant choice procedures. C. A. LEE*; P. A. RANDALL; B. EPLING; E. J. NUNES; Y. BAQI; C. E. MÜLLER; M. CORREA; J. D. SALAMONE. *Univ. of Connecticut, Univ. of Bonn, Univ. Jaume I.*
- 3:00 JJJ30 **98.11** Development of rodent models of the motivational symptoms of depression: The vesicular monamine transport (VMAT-2) inhibitor tetrabenazine affects effort-related decision making in rats. J. D. SALAMONE*; E. J. NUNES; P. A. RANDALL; E. E. HART; C. FREELAND; S. E. YOHAN; C. A. LEE; V. NOWAK; Y. BAQI; C. E. MÜLLER; L. LOPEZ CRUZ; M. CORREA. *Univ. Connecticut, Univ. Bonn, Univ. of Jaume I, Univ. of Connecticut.*
- 4:00 JJJ31 **98.12** Dopamine/adenosine interactions regulate work output on a progressive ratio/chow feeding choice task: Relevance for the motivational symptoms of depression. P. A. RANDALL*; S. PANDIT; E. J. NUNES; C. A. LEE; Y. BAQI; C. E. MÜLLER; M. CORREA; J. D. SALAMONE. *Univ. of Connecticut, Univ. of Bonn, Univ. Jaume I.*
- 1:00 JJJ32 **98.13** Selection of sucrose concentration after dopamine depletion and antagonism depends on the effort required by the instrumental response: Studies using tetrabenazine and D1, D2 and D3 antagonists. M. CORREA*; M. PARDO; L. LOPEZ-CRUZ; N. SAN MIGUEL; P. BAYARRI; J. D. SALAMONE. *Psicobiologia. Univ. Jaume I, Univ. of Connecticut.*
- 2:00 JJJ33 **98.14** ● Effort-related decision making is affected by antagonism of dopamine D1 family receptors: Studies with the t-maze barrier choice task. S. E. YOHAN*; E. J. NUNES; J. L. SANTERRE; R. KOZAK; M. CORREA; J. D. SALAMONE. *Univ. of Connecticut, Pfizer, Univ. Jaume I.*
- 3:00 JJJ34 **98.15** ▲ Contextual memory in rats exposed to chronic stress. I. J. ROSEMBERG GARCIA*; P. TORRES-CARRILLO; A. RUIZ-GARCIA; D. PAZ-TREJO; H. SANCHEZ-CASTILLO. *Univ. Nacional Autonoma De Mexico.*
- 4:00 JJJ38 **99.04** Manipulating model-based and model-free reinforcement learning through transcranial stimulation of dorsolateral prefrontal cortex. P. SMITTENAR*; T. H. B. FITZGERALD; G. PRICHARD; V. ROMEL; N. D. WRIGHT; J. DIEDRICHSEN; R. J. DOLAN. *Univ. Col. London, Univ. Col. London.*
- 1:00 JJJ39 **99.05** Assessing the neural representations of self and other using repetition suppression. M. GARVERT*; M. MOUTOUSSIS; Z. KURTH-NELSON; T. E. J. BEHRENS; R. J. DOLAN. *Univ. Col. London, Univ. Col. London, Univ. of Oxford.*
- 2:00 JJJ40 **99.06** Gradual extinction prevents the return of fear. S. J. GERSHMAN; C. E. JONES; K. A. NORMAN; M. H. MONFILS; Y. NIV*. *MIT, The Univ. of Texas at Austin, Princeton Univ.*
- 3:00 JJJ41 **99.07** Gradual extinction prevents the return of fear in humans. J. W. KANEN*; S. J. GERSHMAN; M. H. MONFILS; E. A. PHELPS; Y. NIV. *New York Univ., MIT, Univ. of Texas, New York Univ., Nathan S. Kline Inst. for Psychiatric Res., Princeton Univ.*
- 4:00 JJJ42 **99.08** Delay discounting without decision-making: Medial prefrontal cortex and amygdala activations encode immediacy and are modulated by impulsivity and anxious-depressive traits. V. U. LUDWIG; C. NÜSSER; T. GOSCHKE; D. WITTFOTH-SCHARDT; C. E. WIERS; S. ERK; B. H. SCHOTT; H. WALTER*. *Charité Universitätsmedizin Berlin, Charité Universitätsmedizin Berlin, Humboldt-Universität zu Berlin, Humboldt-Universität zu Berlin, Univ. Bonn, Technische Univ. Dresden, Inst. of Neuroradiology, Hannover Med. Sch., NICA - Neuroimaging and Clin. Applications, Leibniz-Institute for Neurobio.*
- 1:00 JJJ43 **99.09** Dissociating the neural correlates for wanting and liking in non-consumable rewards. S. C. WEBER*; T. KAHNT; B. B. QUEDNOW; P. N. TOBLER. *Dept. of Economics, UZH, Exptl. and Clin. Pharmacopsychology, Univ. Hosp. of Psychiatry.*
- 2:00 JJJ44 **99.10** Neuroimaging attentional control in adolescents: effects of emotional distracters and reinforcement. M. W. SCHLUND*; C. D. LADOUCEUR; A. ANTICEVIC; D. M. BARCH; S. MAGEE; M. F. CATALDO. *Kennedy Krieger Inst., Univ. of North Texas, Johns Hopkins Univ. Sch. of Med., Univ. of Pittsburgh, Sch. of Med., Univ. of Pittsburgh Sch. of Med., Yale Univ. Sch. of Med., Washington Univ., Kennedy Krieger Inst.*

POSTER

099. Human Neuroscience: Rewards, Learning, Decisions, and High-Level Processes

Theme F: Cognition and Behavior

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 JJJ35 **99.01** No man is an island: Happiness in a social context. A. O. DE BERKER*; R. B. RUTLEDGE; R. J. DOLAN. *UCL, UCL.*
- 2:00 JJJ36 **99.02** Decoding future state representations during planning. Z. KURTH-NELSON*; W. PENNY; Q. HUYS; M. GUITART-MASIP; A. JAFARPOUR; D. HASSABIS; G. BARNES; R. J. DOLAN; P. DAYAN. *Univ. Col. London, ETH Zürich, Karolinska Institutet, Univ. Col. London, Univ. Col. London.*
- 3:00 JJJ37 **99.03** Acting for reward consolidates memories through hippocampal-midbrain co-activation. R. KOSTER*; M. GUITART-MASIP; R. DOLAN; E. DUZEL. *Univ. Col. London, Univ. Col. London, Karolinska Inst., Otto von Guericke Univ. Magdeburg, German Ctr. for Neurodegenerative Dis.*
- 3:00 JJJ45 **99.11** Personality traits and underlying neural circuits for reward processing: An fMRI investigation. M. TSCHERNEGG*; M. KRONBICHLER. *Fac. of Natural Sci. Salzburg - Inst. For Psychology, Univ. of Salzburg, Christian-Doppler-Klinik, Paracelsus Med. Univ.*
- 4:00 JJJ46 **99.12** Dissociable striatal responses to affective and informative feedback. D. V. SMITH*; A. E. RIGNEY; M. R. DELGADO. *Rutgers Univ.*
- 1:00 JJJ47 **99.13** A computational and neural model of momentary subjective wellbeing. R. B. RUTLEDGE*; N. SKANDALI; P. DAYAN; R. J. DOLAN. *Univ. Col. London.*
- 2:00 JJJ48 **99.14** Rewarding and reinforcing effects of nicotine in adolescent and adult rats: Difference in response to prior nicotine exposure. J. I. DE LA PEÑA*; A. MUHAMMAD; I. DELA PEÑA; H. KIM; G. YU; K. KIM; J. CHEONG. *Uimyung Res. Inst. For Neurosci., Dept. of Chemistry, Sahmyook Univ., Pharmacol. Laboratory, Col. of Pharmacy, Chonnam Natl. Univ.*

- 3:00 JJJ49 **99.15** The effect of propranolol on loss aversion and decision-making. P. SOKOL-HESSNER*; S. F. LACKOVIC; R. H. TOBE; B. L. LEVENTHAL; E. A. PHELPS. *New York Univ., Nathan Kline Inst., New York Univ., Nathan Kline Inst.*
- 4:00 JJJ50 **99.16** Neural representations of visual-sensory and reward information in the human globus pallidus pars interna. N. A. HOWELL*; V. VOON; I. A. PRESCOTT; A. LOZANO; M. HODAEI; W. D. HUTCHISON. *Toronto Western Res. Inst., Univ. of Toronto, Univ. of Cambridge, Cambridgeshire and Peterborough NHS Fndn. Trust, Univ. of Cambridge, Univ. of Toronto, Univ. of Toronto.*
- 1:00 JJJ51 **99.17** Emotional processing in amygdala: A high resolution functional magnetic resonance imaging study. S. HRYBOUSKI; A. SHAFFER; T. ROLHEISER; C. MADAN; F. OLSEN; C. BARON; C. BEAULIEU; P. SERES; N. V. MALYKHIN*. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*
- 2:00 JJJ52 **99.18** Individual differences in attentional control, emotion regulation, and behavioral performance in adolescents with mental health disorders are represented in convergent brain regions during target and distracter processing. A. T. SHAFER; V. CHAN; J. VAN VLIET; S. VOHRA; L. WANG; F. DOLCOS; A. SINGHAL*. *Univ. of Alberta, Duke Univ., Univ. of Illinois at Urbana Champaign.*
- 3:00 JJJ53 **99.19** Parasympathetic activation supports resilience of resting state cortico-limbic connectivity following affective stimulation. D. G. GHAREMANI*; A. C. DEAN; E. D. LONDON. *UCLA, UCLA, UCLA.*
- 4:00 JJJ54 **99.20** Decisions in the absence of new information. A. J. CALHOUN*; S. CHALASANI; T. O. SHARPEE. *Salk Inst., Salk Inst., Salk Inst.*
- 2:00 JJJ60 **100.06** The neuroinvasive profile of 4 novel herpes simplex virus 1 - H129 recombinants: Implications for their application as anatomical tracers. G. J. WOJACZYNSKI*; E. ENGEL; L. W. ENQUIST; J. P. CARD. *Univ. of Pittsburgh, Princeton Univ., Princeton Univ., Univ. of Pittsburgh.*
- 3:00 JJJ61 **100.07** Automated tracing of neurites using front evolution. R. GALA*; J. JITESH; J. CHAPETON; A. STEPANYANTS. *Northeastern Univ., Northeastern Univ.*
- 4:00 JJJ62 **100.08** Functional imaging of the olfactory bulb in monkeys by CBV fMRI. F. ZHAO*; M. HOLAHAN; D. S. WILLIAMS. *Merck & Co.*
- 1:00 JJJ63 **100.09** Differential longitudinal CNS degeneration *in vivo* between traumatic and genetic ablation models of optic neuropathy. G. MUNGUBA*; D. LAM; S. GALEB; S. SAMAD; A. CAMP; M. TAPIA; R. LEE. *Univ. of Miami Miller Sch. of Med.*
- 2:00 JJJ64 **100.10** Ultrawide-field two photon laser scanning microscope. P. S. TSAI*; M. ANDERSON; J. FIELD; C. MATEO; D. KLEINFELD. *UCSD, San Diego State Univ.*
- 3:00 JJJ65 **100.11** A toolbox for automatically segmenting cortical vessels from MRI. K. WHITTINGSTALL*; N. VIGNEAU-ROY; M. BERNIER; M. DESCOTEAUX. *Univ. de Sherbrooke.*
- 4:00 JJJ66 **100.12** Evaluation of voltage-sensitive fluorescence dyes for monitoring neuronal activity in the embryonic CNS. S. H. E. R. MULLAH; R. KOMURO; P. YAN; M. INAJI; J. URM; Y. MOMOSE-SATO; L. M. LOEW; K. SATO*. *Dept. Hlth. & Nutr. Sci., Komazawa Women's Univ., Kanto Gakuin Univ., Coll. Human Environ. Studies, R. D. Berlin Ctr. for Cell Analysis & Modeling, Univ. Connecticut Hlth. Ctr., Dept. Neurosurg., Tokyo Med. & Dent. Univ. Grad. Sch. & Fac. Med.*
- 1:00 JJJ67 **100.13** What is penumbra? P. BUTTE*; P. LAPCHAK. *Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr.*
- 2:00 JJJ68 **100.14** Techniques to create visible electrophysiological recording pipettes under 2-photon microscopic illumination. B. K. ANDRASZALVY*; K. SUSUMU; J. DELEHANTY; A. HUSTON; I. MEDINTZ; G. GALIÑANES; D. HUBER; M. BARBIC; K. VERVAEKE; J. MACKLIN; R. PATEL; T. HARRIS. *IES-HAS, Global Strategies Group, U.S. Naval Res. Lab., Univ. of Geneva, Janelia Farm Res. Campus, HHMI.*
- 3:00 JJJ69 **100.15** 3D directional microfluidic platform for *in vitro* neuronal circuit model. S. BANG*; M. KANG; B. LEE; N. JEON; J. KIM. *Seoul Natl. Univ., Ctr. of Functional Connectomics, Korea Inst. of Sci. and Technol.*
- 4:00 JJJ70 **100.16** An enhanced protocol for high-throughput quantitative analysis of 3D neuron morphology. M. C. WU*; R. ON; J. HO; D. QUACH; S. SPIGA; M. DIANA; G. C. MULAS. *Neurodigitech, Univ. of Sassari, Univ. of Cagliari.*
- 1:00 KKK1 **100.17** Fiber tractography based on curvature and torsion for fibers crossing area. U. YAMAMOTO*; T. HIROYASU. *Doshisha Univ.*
- 2:00 KKK2 **100.18** Simultaneous imaging of pre- and postsynaptic activity. C. D. WILMS*; M. COLLOT; J. MALLET; M. HÄUSSER. *Univ. Col. London, Ecole Normale Supérieure.*
- 3:00 KKK3 **100.19** Pain-related functional MRI brain changes in a rat model of chronic neuropathic pain. C. S. HUBBARD*; S. A. KHAN; M. CHA; R. MASRI; D. A. SEMINOWICZ. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore.*

POSTER

100. Staining, Tracing, and Imaging Techniques II

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 JJJ55 **100.01** Combining high resolution mri and dti with dense whole-brain histology for mouse. V. PINSKIY*; A. MUKHERJEE; A. TOLPYGO; A. BADEA; A. G. JOHNSON; P. P. MITRA. *Cold Spring Harbor Lab., Duke Univ. Med. Ctr.*
- 2:00 JJJ56 **100.02** Quantitative modeling of tracer injections into brain tissue. S. SOROOSHYARI*; V. PINSKIY; A. TOLPYGO; P. MITRA. *Bell Labs - Alcatel-Lucent, Cold Spring Harbor Lab.*
- 3:00 JJJ57 **100.03** Automated analysis of the density of monosynaptic inputs to VTA dopamine neurons. P. GRANGE*; A. MUKHERJEE; V. PINSKIY; A. TOLPYGO; L. ZHENG; N. UCHIDA; M. WATABE-UCHIDA; P. MITRA. *Cold Spring Harbor Lab., Harvard University, Ctr. for Brain Sci.*
- 4:00 JJJ58 **100.04** Software tools for reconstruction of 3D projection patterns for injection-based tractography. A. MUKHERJEE; F. MECHLER*; V. PINSKIY; A. TOLPYGO; P. GRANGE; P. MITRA. *Cold Spring Harbor Labs.*
- 1:00 JJJ59 **100.05** Whole-brain mapping of direct inputs to serotonergic neurons of the dorsal and median raphe nucleus. K. MELETIS*; I. POLLAK DOROCIC; D. FÜRTH; V. SALANDER; Y. XUAN; M. CARLÉN. *Karolinska Inst.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 4:00 KKK4 **100.20** The test-retest reliability of absolute cerebral blood flow measurements during rest and task-induced activation using a novel multi-T1 pCASL fMRI approach. A. R. SEGERDAHL; A. R. SEGERDAHL*; M. MEZUE; T. OKELL; M. CHAPPELL; M. KELLY; I. TRACEY. *Univ. of Oxford, Andy Segerdahl.*
- 1:00 KKK5 **100.21** Nerve-highlighting peptides for fluorescence guided surgery. H. GLASGOW*; M. WHITNEY; S. ADAMS; J. CRISP; B. FRIEDMAN; L. GROSS; Q. NGUYEN; R. TSIEH. *UCSD.*
- 2:00 KKK6 **100.22** Targeting Enhanced Horseradish Peroxidase to neuronal cell organelles. D. CRUZ-LOPEZ; D. RAMOS; T. A. SCHIKORSKI*. *Univ. Central Del Caribe.*
- 3:00 KKK7 **100.23** A fluorescent protein voltage sensor derived from chicken voltage sensitive phosphatase exhibits fast kinetics. Z. HAN*; L. JIN; J. PLATISA; L. B. COHEN; V. A. PIERIBONE. *Yale Univ., The John B. Pierce Laboratory, Inc., Korea Inst. of Sci. and Technol.*
- 4:00 KKK8 **100.24** Zebrafish as a model for *in vivo* and real time tracking of transplanted induced pluripotent stem cell-derived human neural precursor cells. J. STRNADEL*; H. WANG; K. FUJIMURA; T. WRIGHT; B. MARSICK; S. CHOI; T. RENO; A. HOZOURI; C. CARROMEU; R. KLEMKE. *UCSD, The Sanford Consortium for Regenerative Med.*
- 1:00 KKK9 **100.25** Neuronal architecture mapping in human cortex layer 5 using novel three-dimensional LM/EM quantitative methodologies. I. V. KRAEV*; P. GABBOTT; F. COLYER; H. DAVIES; J. DUNHAM; E. DEL VALLE SUAREZ; P. REZAIE; M. STEWART. *The Open Univ., Univ. of Oviedo.*
- 2:00 KKK10 **100.26** Two-color mapping of inputs to midbrain dopamine neurons using Introvert pseudorabies virus. M. I. EKSTRAND*; K. N. LATCHA; L. E. POMERANZ; A. R. NECTOW; J. M. FRIEDMAN. *Rockefeller Univ., Howard Hughes Med. Inst.*
- 3:00 KKK11-DP9 **100.27** Single neuron morphology in mouse primary visual cortex. S. A. SORENSEN*; A. CHANG; J. BERG; L. LI; N. ORLOVA; E. MOUNT; H. PENG; C. KOCH; H. ZENG. *Allen Inst., Allen Inst., Allen Inst.*
- 4:00 KKK12 **100.28** ● Mining reliable landmarks for automated understanding of brain structure in MRI. A. J. WORTH*; J. A. TOURVILLE. *Neuromorphometrics, Inc., Boston Univ.*
- 1:00 KKK13 **100.29** ▲ Using confocal microscopy to count synapses: A novel approach. M. BOUDREAU; Y. HENDERSON; A. STILLAR; M. J. SAARI; A. C. WEEKS*. *Nipissing Univ., Nipissing Univ.*
- 2:00 KKK14 **100.30** OPTO-microPET study of metabolic patterns elicited by continuous or intermittent stimulation. H. KIM*; D. KIM; E. CHUNG; M. SONG; P. R. NETO; H. KIM*. *GIST, GIST, GIST, Douglas Mental Hlth. Univ. Institute, McGill Univ.*
- 2:00 KKK16 **101.02** ● The NeuroLex Neuron curation project: Experience gathering and integrating structured information about neurons. S. D. LARSON*; M. E. MARTONE; G. A. ASCOLI; G. M. SHEPHERD. *UC San Diego, CRBS 0446, George Mason Univ., Yale Univ.*
- 3:00 KKK17 **101.03** An open resource for data analytics in the neurosciences: The Neuroscience Information Framework's (NIF) tools for access to and analysis of biomedical data and resources. J. S. GRETHE*; V. ASTAKHOV; A. BANDROWSKI; D. E. BANKS; J. CHEN; C. CONDIT; A. GUPTA; F. IMAM; B. I. OZYURT; L. MARENCO; P. MILLER; R. WANG; G. M. SHEPHERD; M. E. MARTONE. *UCSD, Yale Univ.*
- 4:00 KKK18 **101.04** ModelView for ModelDB: Exploring model properties in a web browser. R. A. MCDUGAL*; T. M. MORSE; L. MARENCO; R. WANG; N. T. CARNEVALE; M. L. HINES; G. M. SHEPHERD. *Yale Univ., Yale Univ., Yale Univ.*
- 1:00 KKK19 **101.05** Looking back and to the future of the INCF Digital Atlas Program. J. K. BOLINE*; M. HAWRYLYCZ; I. ZASLAVSKY; . DIGITAL ATLASING STANDARDS TF; . WAXHOLM SPACE TF; . DIGITAL ATLASING INFRASTRUCTURE TF. *Informed Minds Inc, Allen Inst. for Brain Res., San Diego Supercomputer Ctr., INCF.*
- 2:00 KKK20 **101.06** Using full text, context, and attributes to mine neuroscience models. T. M. MORSE*; R. A. MCDUGAL; R. WANG; M. L. HINES; L. MARENCO; N. T. CARNEVALE; G. M. SHEPHERD. *Yale Univ. Sch. Med., Ctr. for Med. Informatics.*
- 3:00 KKK21 **101.07** Enabling federated data: Speed, concurrency and big data support for the neuroscience information framework. L. MARENCO*; R. WANG; P. L. MILLER; G. M. SHEPHERD; L. LUI; A. BANDROWSKI; J. S. GRETHE; A. GUPTA; M. E. MARTONE. *Yale Univ. Ssch MED, Yale Univ. Ssch MED, UCSD, Supercomputer Ctr.*
- 4:00 KKK22 **101.08** A portal for aging-related data: A customized portal created using the Neuroscience Information Framework. M. E. MARTONE*; A. BANDROWSKI; D. E. BANKS; J. S. GRETHE. *UCSD, UCSD.*
- 1:00 KKK23 **101.09** Ontology for Experimental Neurophysiology: semantic annotations of neurophysiology data and metadata. A. E. BANDROWSKI*; P. PETR BRÜHA; V. PAPEŽ; J. GREWE; R. MOUČEK; S. TRIPATHY; T. WACHTLER; Y. LE FRANC. *UCSD, Univ. of West Bohemia, Ludwig - Maximilians Univ., Carnegie Mellon Univ., Univ. of Antwerp.*
- 2:00 KKK24 **101.10** TALENSeek: A validated program for identifying genomic engineering sites. J. L. STEIN*; J. S. GRIMLEY; V. MENON; D. H. GESCHWIND; A. KAYKAS. *UCLA, Allen Inst. for Brain Sci.*
- 3:00 KKK25 **101.11** Web services and software for management and sharing of neurophysiological data. T. WACHTLER*; A. STOEWER; A. SOBOLEV; P. L. RAUTENBERG; A. P. LEONHARDT; C. KELLNER; C. GARBERS; A. V. HERZ. *Ludwig-Maximilians-Univ Munich.*
- 4:00 KKK26 **101.12** Mining branching patterns of neuronal classes using sequence analysis. T. A. GILLETTE*; P. HOSSEINI; S. POLAVARAM; G. A. ASCOLI. *George Mason Univ.*
- 1:00 KKK27 **101.13** A cre tool resource for conditional mutagenesis in the mouse, www.creportal.org. R. BABIUK; C. L. SMITH*; M. SASNER; M. RINGWALD; S. A. MURRAY; J. T. EPPIG. *The Jackson Lab., The Jackson Lab.*

POSTER

101. Bioinformatics

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 KKK15 **101.01** BAMS2: An online platform for handling connectome data. M. BOTA*; S. TALPALARU. *USC, Od-eon Consulting Group.*

- 2:00 KKK28 **101.14** Gene expression specialization during mouse brain development. G. CHECHIK*; N. LISCOVITCH. *Bar Ilan Univ.*
- 3:00 KKK29 **101.15** ▲ Interactive vascular network explorer: 2-photon measurements of stimulus-induced single-vessel dilation in the rat primary somatosensory cortex. V. B. SRIDHAR; P. TIAN; A. M. DALE; A. DEVOR*; P. A. SAISAN. *Univ. of California San Diego, Univ. of California San Diego, John Carroll Univ., Univ. of California San Diego.*

POSTER

102. Computation, Modeling, and Simulation I

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 KKK30 **102.01** Emergence of chaotic itinerancy for recalling reliable and precisely timed patterns in recurrent neural networks: A FORCE-learning approach. H. SUETANI*. *Kagoshima Univ., PRESTO, JST.*
- 2:00 KKK31 **102.02** Correlation properties of clustered networks. M. STERN*; H. SOMPOLINSKY; L. F. ABBOTT. *Hebrew Univ., Columbia Univ., Harvard Univ.*
- 3:00 KKK32 **102.03** Formation of and maintenance of multistability with plasticity in balanced networks. A. L. KUMAR*; B. DOIRON. *Carnegie Mellon Univ., Univ. of Pittsburgh.*
- 4:00 KKK33 **102.04** ● Comparison between simulations of *in vitro* 2D MEA experiments with frontal cortex tissue of embryonic mice and of neuronal cell network derived from hPSCs cells. K. LENK*; B. PRIWITZER; S. NARKILAHTI; O. H. SCHROEDER; J. A. K. HYTTINEN. *Tampere Univ. of Technol., Lausitz Univ. of Applied Sci., Univ. of Tampere, NeuroProof GmbH.*
- 1:00 KKK34 **102.05** Resonance and synchrony in coupled populations of adaptive neurons. M. AUGUSTIN*; J. LADENBAUER; K. OBERMAYER. *Berlin Inst. of Technol., Bernstein Ctr. for Computat. Neurosci. Berlin.*
- 2:00 KKK35 **102.06** Modeling multiple plasticity rules in dendritic branches. G. I. KASTELLAKIS*; P. POIRAZI. *IMBB/FORTH.*
- 3:00 KKK36 **102.07** Balanced networks in space. R. ROSENBAUM*; G. B. ERMENROUT; B. DOIRON. *Univ. of Pittsburgh.*
- 4:00 KKK37 **102.08** Role of the learning threshold in development of fine-scale structure of multimaps in visual cortex. R. JAIN*; B. W. MEL. *USC, USC.*
- 1:00 KKK38 **102.09** ● Simulated learning and memory effects in RELR. D. M. RICE*. *Rice Analytics.*
- 2:00 KKK39 **102.10** Propose a conceptual model for the architecture of neuronal networks engaged in thought processes; this model is used to explore the linkage between conscious and subconscious minds. A. CHOU*. *ADAM CHOU PHD.*
- 3:00 KKK40 **102.11** ● Generalized inverse Gaussian models for energy-efficient neurons. J. XING*; T. BERGER. *Univ. of Virginia.*
- 4:00 KKK41 **102.12** A minimal spiking neuron model of explore/exploit choice behavior. Y. LIU*; D. LAI; V. GUPTA; V. CHAN; M. CAMPOS. *Qualcomm Res.*

- 1:00 KKK42 **102.13** Associative memory encoding in bump attractor networks. C. CURTO; V. ITSKOV*. *Univ. of Nebraska.*
- 2:00 KKK43 **102.14** Dynamic changes in direction and frequency range of inter-areal cortical interactions revealed by non-parametric Granger causality. P. H. TIESINGA*. *Radboud Univ. Nijmegen.*
- 3:00 KKK44 **102.15** Differentiating and localizing axonal signals in the corticospinal tract using independent component analysis. E. DANESHI KOHAN; C. J. SPARREY*. *Simon Fraser Univ.*
- 4:00 KKK45 **102.16** Neural mass modeling of sensory networks using pUECoG data. R. A. PIZARRO*; T. RICHNER; S. BRODNICK; S. THONGPANG; B. VAN VEEN; M. E. MEYERAND; J. WILLIAMS. *Uw-Madison, UW-Madison, UW-Madison.*
- 1:00 KKK46 **102.17** Dynamics of coupled theta-gamma neural oscillators. L. FONTOLAN*; M. KRUPA; A. HYAFIL; A. GIRAUD; B. GUTKIN. *Univ. of Geneva, INRIA Paris-Rocquencourt Res. Ctr., Ecole Normale Supérieure.*
- 2:00 KKK47 **102.18** The geometry of phase resetting. S. OPRISAN*. *Col. of Charleston.*
- 3:00 KKK48 **102.19** Model degeneracy in faithful copy neurons. A. R. CASTI*; E. KAPLAN. *Fairleigh Dickinson Univ., The Mount Sinai Sch. of Med.*
- 4:00 KKK49 **102.20** Spiking neuron model made easy. T. J. ZHENG*; B. BEHABADI; Y. YOON; J. HUNZINGER. *Qualcomm Res.*
- 1:00 KKK50 **102.21** Large-scale spiking neural network model of visual motion processing. M. BEYELER*; M. RICHERT; J. M. NAGESWARAN; N. D. DUTT; J. L. KRICHMAR. *Univ. of California, Irvine, Univ. of California, Irvine, Brain Corp.*
- 2:00 KKK51 **102.22** Mechanisms for multiple activity modes of midbrain DA neurons. A. M. OSTER*; P. FAURE; B. S. GUTKIN. *Case Western Reserve Univ., Univ. Pierre et Marie Curie, INSERM UMR5 952, CNRS UMR 7224, Ecole Normale Supérieure.*
- 3:00 KKK52 **102.23** A computational study of the effect of pilocarpine-induced morphologically altered newborn hippocampal granule cells in dentate gyrus hyperexcitability. J. TEJADA*; N. GARCIA-CAIRASCO; A. C. ROQUE. *Dept. of Physics, Sch. of Philosophy, Sci. and Letters of Ribeirão Preto, Sch. of Med. of Ribeirão Preto, Univ. of São Paulo.*

POSTER

103. Computation, Modeling, and Simulation II

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 KKK53 **103.01** Analysis of drug-induced changes in synaptic and neuronal responses with parametric and nonparametric modeling. E. Y. HU*; J. C. BOUTEILLER; S. L. ALLAM; N. AMBERT; S. BISCHOFF; D. SONG; M. BAUDRY; T. W. BERGER. *USC, Rhénova Pharma, Western Univ.*
- 2:00 KKK54 **103.02** Feed-forward and feedback inhibition in the hippocampal network: A large-scale modeling study. P. HENDRICKSON*; G. YU; B. ROBINSON; D. SONG; T. W. BERGER. *USC, USC.*

* Indicated a real or perceived conflict of interest, see page 79 for details.

▲ Indicates a high school or undergraduate student presenter.

- 3:00 KKK55 **103.03** Parallel stochastic simulation of neuronal reaction-diffusion equations. C. TROPPER; M. N. I. PATOARY; R. A. MCDUGAL; M. L. HINES; W. W. LYTTON*. *McGill Univ., Yale Univ., SUNY Downstate, Kings County Hosp.*
- 4:00 KKK56 **103.04** Trace amines as a model system for the development and validation of Molecular Dynamics simulations of membrane permeability. B. HOLLAND; M. D. BERRY*; T. STELIGA; D. SOUZA FIORE; B. TOMBERLI. *Univ. of Calgary, Univ. of Guelph, Brandon Univ.*
- 1:00 KKK57 **103.05** Calcium wave propagation varies with changes in endoplasmic reticulum parameters: A computer model. M. A. SHERIF*; R. MCDUGAL; S. NEYMOTIN; M. HINES; W. W. LYTTON. *SUNY Downstate Med. Ctr. - Dept. of Psychiatry, Yale Sch. of Med., SUNY Downstate Med. Ctr., Kings County Hosp.*
- 2:00 KKK58 **103.06** Psychological dependence of tetrahydrocannabinol and synthetic cannabinoids JWH-073, JWH-081 and JWH-210. H. CHA*; K. LEE; M. SONG; Y. HYEON; H. JEONG; S. HAN; H. KANG. *NIFDS.*
- 3:00 KKK59 **103.07** Optimization of a computational model of a CA1 pyramidal neuron, from biomolecular synaptic mechanisms to synaptic and neuronal ultrastructure. M. HUANG*; J. C. BOUTEILLER; S. ALLAM; E. HU; S. QADRI; A. ONOPA; M. BAUDRY; T. W. BERGER. *USC, USC, USC, Western Univ. of Hlth. Sci.*
- 4:00 KKK60 **103.08** Image, sound, and odor classification with gnostic fields. C. KANAN*. *Univ. of California San Diego.*
- 1:00 KKK61 **103.09** Effects of topography on spatio-temporal network activity in the entorhinal-dentate-CA3 hippocampal circuit: A large-scale modeling study. G. J. YU*; P. J. HENDRICKSON; B. S. ROBINSON; D. SONG; T. W. BERGER. *USC.*
- 2:00 KKK62 **103.10** The added value of neuron reconstructions shared via NeuroMorpho.Org. R. PAREKH*; G. A. ASCOLI. *George Mason Univ.*
- 3:00 KKK63 **103.11** ● Joint pharmacophore space mining for central nervous system drug discovery. C. A. LANG; S. FEINSTEIN*; G. M. RISHTON; A. K. SINGH. *Acelot, Inc., Neurosci. Res. Inst., Cognition Therapeutics, Inc.*
- 4:00 KKK64 **103.12** Interfaces in multiscale reaction-diffusion models in the NEURON simulator. M. L. HINES*; R. MCDUGAL; S. A. NEYMOTIN; C. TROPPER; W. W. LYTTON. *Yale Univ., SUNY Downstate Med. Ctr., McGill Univ., Kings County Hosp.*
- 1:00 KKK65 **103.13** ▲ Hybridization of multi-objective evolutionary algorithms and fuzzy logic for analysis of function recovery after neuromodulator deprivation in lobster stomatogastric neuron models. A. MALIK; P. PATEL; M. JOHNSON-GRAY; E. FORREN; A. PRINZ; T. G. SMOLINSKI*. *Delaware State Univ., Emory Univ.*
- 2:00 KKK66 **103.14** Modeling BOLD-fMRI on real vascular stacks measured with two-photon microscopy during functional activation. L. GAGNON; S. SAKADZIC; F. LESAGE; J. LEFEBVRE; A. DEVOR; Q. FANG; A. YASEEN; S. VINOGRADOV; R. BUXTON; A. DALE; D. A. BOAS*. *MIT, MGH/Harvard Med. Sch., Ecole Polytechnique, Ecole Polytechnique Montreal, UCSD, Univ. of Pennsylvania, MGH, Harvard Med. Sch.*

POSTER

104. Data Analysis and Statistics I

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – San Diego Convention Center, Halls B-H

- 1:00 KKK67 **104.01** Detection of coinfection of herpes simplex hsv1 and hsv2 in cerebrospinal fluid of patients with neurological disorder. A. TAJ; N. JAMIL*. *Univ. of Karachi, Dept. of Microbiology, Univ. of Karachi, Pakistan.*
- 2:00 KKK68 **104.02** Brain scaling relationships across mammalian evolutionary time series. J. OGAWA*; H. YE; G. PAO; E. KE; S. SRINIVASAN; C. F. STEVENS; G. SUGIHARA; I. M. VERMA. *The Salk Inst. For Biol. Studies, Scripps Inst. of Oceanography UCSD, The Salk Inst. For Biol. Studies.*
- 3:00 KKK69 **104.03** Robust learning of low dimensional neural dynamics. D. PFAU*; E. A. PNEVMATIKAKIS; L. PANINSKI. *Columbia Univ.*
- 4:00 KKK70 **104.04** Wavelet decomposition for EMGLab: The UBC plugin. M. E. SHEPHERD*; M. HÉROUX; K. VAN DEN DOEL; K. MCGILL; J. BLOUIN. *Univ. of British Columbia, Neurosci. Res. Australia, Rehabil. R&D Ctr.*
- 1:00 LLL1 **104.05** Delineation of functional areas from high gamma fluctuations in the resting state electrocorticogram via cluster analysis. D. GROPEPE*; P. MÉGEVAND; S. BICKEL; C. J. KELLER; A. MEHTA. *Feinstein Inst. For Med. Res., Hofstra North Shore LIJ Sch. of Med. and Feinstein Inst. for Med. Res., Albert Einstein Col. of Med., Albert Einstein Col. of Medicine.*
- 2:00 LLL2 **104.06** Diving into “big data” without drowning. S. PAJEVIC*. *NIH.*
- 3:00 LLL3 **104.07** Assessing the test-retest reliability of resting state functional connectivity measures obtained with MEG. M. NAKUBULWA; C. WITTON; S. SERI; J. B. TALCOTT*. *Aston Univ., Aston Univ.*
- 4:00 LLL4 **104.08** Whole-animal connectomes for understanding behavior: Reconstruction of the nematode *Caenorhabditis Elegans* nervous system. C. BRITTIN*; S. J. COOK; T. A. JARRELL; Y. WANG; A. E. BLONIAZ; D. H. HALL; S. W. EMMONS. *Albert Einstein Col. of Med., Univ. of California, Berkeley, Albert Einstein Col. of Med., Albert Einstein Col. of Med.*
- 1:00 LLL5 **104.09** Synaptic inhibition and excitation estimated via the time constant of membrane potential fluctuations. R. W. BERG*; S. DITLEVSEN. *Univ. of Copenhagen, INF, Univ. of Copenhagen.*
- 2:00 LLL6 **104.10** Nonlinear modeling of foveal V1 neurons using model-based eye-tracking. J. M. MCFARLAND*; A. G. BONDY; B. G. CUMMING; D. A. BUTTS. *Univ. of Maryland, Natl. Eye Inst., Brown Univ.*
- 3:00 LLL7 **104.11** ▲ Brain dynamics of sleep measured with magnetoencephalography. A. B. STEVNER*; G. PIANTONI; Y. D. VAN DER WERF; H. MOHSENI; M. W. WOOLRICH; F. ROSENDAL; V. ESKESEN; G. DECO; E. VAN SOMEREN; M. L. KRINGELBACH. *Univ. of Oxford, Aarhus Univ., Univ. of Copenhagen, Aarhus Univ. Hosp., Netherlands Inst. for Neurosci., Univ. of Oxford, Univ. Pompeu Fabra, Univ. of Oxford.*
- 4:00 LLL8 **104.12** Allen Brain Atlas pie chart visualization: A web-based gene energy expression analysis tool. A. ZALDIVAR*; J. L. KRICHMAR. *Univ. of California, Irvine*

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	ABSTRACT NUMBER	STATEMENT
7.06	D. Holtzman: 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.; Eli Lilly, AstraZeneca, C2N Diagnostics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); C2N Diagnostics. F. Consulting Fees (e.g., advisory boards); AstrZeneca, Bristol Myers Squibb, Genentech, C2N Diagnostics.	16.01	D.T. Bundy: F. Consulting Fees (e.g., advisory boards); Neurolutions. E.C. Leuthardt: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurolutions.
10.01	K. Venderova: A. Employment/Salary (full or part-time); University of the Pacific.	16.03	F. Solzbacher: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Blackrock Microsystems. S. Negi: 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.; Blackrock Microsystems.
10.02	P. Kallunki: A. Employment/Salary (full or part-time); Lundbeck A/S.	16.08	P.R. Kennedy: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 98% of Neural Signals Inc.
12.09	S.A. Busch: A. Employment/Salary (full or part-time); Athersys, Inc. M. Palmer: A. Employment/Salary (full or part-time); Athersys, Inc. J.A. Hamilton: A. Employment/Salary (full or part-time); Athersys, Inc. R. Cutrone: A. Employment/Salary (full or part-time); Athersys, Inc. A.E. Ting: A. Employment/Salary (full or part-time); Athersys, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Athersys, Inc. R.J. Deans: A. Employment/Salary (full or part-time); Athersys, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Athersys, Inc. R.W. Mays: A. Employment/Salary (full or part-time); Athersys, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Athersys, Inc.	20.12SA	S. Zhao: A. Employment/Salary (full or part-time); Lawrence Hall of Science. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); UC Berkeley - College of Chemistry - Saykally Group.
13.08	M. Pilhatsch: 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.; German Ministry of Education and Research (Grant 01EV0711). N.C. Vetter: 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.; German Ministry of Education and Research (Grant 01EV0711). T. Hübner: 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.; German Ministry of Education and Research (Grant 01EV0711). M.N. Smolka: 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.; German Ministry of Education and Research (Grant 01EV0711).	21.04SA	H.A. Braun: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-owner of the company BM&T GbR which is producing parts of the Virtual Physiology series. H. Schneider: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Owner of the company DAQ-Solutions which is producing SimPatch.
		21.17SA	K.A. Wilkinson: A. Employment/Salary (full or part-time); San Jose State University.
		21.19SA	W. Colgan: A. Employment/Salary (full or part-time); ADInstruments, Inc.
		22.11SA	R.F. Olivo: F. Consulting Fees (e.g., advisory boards); Society for Neuroscience.
		23.16SA	K.M. Shannon: A. Employment/Salary (full or part-time); Kyle is a full time employee at Backyard Brains. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Products used in this research (the SpikerBox) is developed, produced and sold by Backyard Brains, for which Kyle is a full time employee. G. Gage: A. Employment/Salary (full or part-time); Gregory is a full time employee of Backyard Brains. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Gregory is a cofounder and owner of Backyard Brains Inc. He is also a co inventor of the SpikerBox, used in this research. J.W. Wilson: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Jeff Wilson occasionally receives products, including our SpikerBox, from us to test and use in both an academic and research setting. T. Marzullo: A. Employment/Salary (full or part-time); Timothy is a full time employee of Backyard Brains. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Timothy is a cofounder and owner of Backyard Brains Inc. He is also a co inventor of the SpikerBox, used in this research.

- 23.24SA **O.V. Timutsa:** A. Employment/Salary (full or part-time); full. **L. Murtazina:** Other; translator. **V. Mendelevich:** F. Consulting Fees (e.g., advisory boards); scientific consultant.
- 24.06SU **E. Warp:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Kizoom, Inc. **T. McGinn:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Kizoom, Inc.
- 31.26 **K.M. Murphy:** F. Consulting Fees (e.g., advisory boards); Allergan Inc. **D.G. Jones:** F. Consulting Fees (e.g., advisory boards); Allergan Inc.
- 32.04 **J.M. Miwa:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ophidion, Inc. F. Consulting Fees (e.g., advisory boards); Ophidion, Inc.
- 34.05 **S. Sutton:** A. Employment/Salary (full or part-time); Janssen Pharmaceutical Research & Development, LLC, San Diego, CA, USA. **G. Lee:** A. Employment/Salary (full or part-time); Janssen Pharmaceutical Research & Development, LLC, San Diego, CA, USA. **C. Kuei:** A. Employment/Salary (full or part-time); Janssen Pharmaceutical Research & Development, LLC, San Diego, CA, USA. **D. Nepomuceno:** A. Employment/Salary (full or part-time); Janssen Pharmaceutical Research & Development, LLC, San Diego, CA, USA. **C. Liu:** A. Employment/Salary (full or part-time); Janssen Pharmaceutical Research & Development, LLC, San Diego, CA, USA. **P. Bonaventure:** A. Employment/Salary (full or part-time); Janssen Pharmaceutical Research & Development, LLC, San Diego, CA, USA. **T. Lovenberg:** A. Employment/Salary (full or part-time); Janssen Pharmaceutical Research & Development, LLC, San Diego, CA, USA.
- 34.07 **B.N. Armbruster:** A. Employment/Salary (full or part-time); EMD Millipore. **K. Italiano:** A. Employment/Salary (full or part-time); EMD Millipore. **L. Cavatine:** A. Employment/Salary (full or part-time); EMD Millipore. **S.P. Nauman:** A. Employment/Salary (full or part-time); EMD Millipore. **E. Byrne:** A. Employment/Salary (full or part-time); EMD Millipore. **J. Bode:** A. Employment/Salary (full or part-time); EMD Millipore.
- 37.01 **R.C. Law:** 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 Grant R01NS079757.
- 40.05 **R.E. Tanzi:** F. Consulting Fees (e.g., advisory boards); Prana Biotechnology.
- 40.08 **C. Rehak:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **N. Izzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **C. Silky:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **K. Mozzoni:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **R. Yurko:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **H. Safferstein:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **S. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics.

- 40.29 **N. Izzo:** A. Employment/Salary (full or part-time); Full time employee at Cognition Therapeutics Inc. **C. Rehak:** A. Employment/Salary (full or part-time); Full time employee at Cognition Therapeutics Inc. **K. Mozzoni:** A. Employment/Salary (full or part-time); Full time employee at Cognition Therapeutics Inc. **R. Yurko:** A. Employment/Salary (full or part-time); Part time employee at Cognition Therapeutics Inc. **G. Rishton:** A. Employment/Salary (full or part-time); Employee at Cognition Therapeutics Inc. **H. Safferstein:** A. Employment/Salary (full or part-time); Full time employee at Cognition Therapeutics Inc. **S. Catalano:** A. Employment/Salary (full or part-time); Full time employee at Cognition Therapeutics Inc.
- 41.01 **R. Medapati:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **A.K. Shinde:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **R. Subramanian:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Kandikere:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **N. Muddana:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **S. Balasubramaniam:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **A. Deshpande:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Reballi:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD.
- 41.02 **D. Beher:** A. Employment/Salary (full or part-time); Asceneuron SA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asceneuron SA. **A. Quattropani:** A. Employment/Salary (full or part-time); Asceneuron SA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asceneuron SA. **A. Osen-Sand:** A. Employment/Salary (full or part-time); Asceneuron SA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asceneuron SA. **J. Hantson:** A. Employment/Salary (full or part-time); Asceneuron SA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asceneuron SA. **S. Ousson:** A. Employment/Salary (full or part-time); Asceneuron SA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asceneuron SA. **C. Wiessner:** A. Employment/Salary (full or part-time); Asceneuron SA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asceneuron SA. **B. Permanne:** A. Employment/Salary (full or part-time); Asceneuron SA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asceneuron SA.

ABSTRACT NUMBER	STATEMENT
41.04	T. Maurice: 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.; ANAVEX LIFE SCIENCES. F. Consulting Fees (e.g., advisory boards); AMYLGEN. V. Lahmy: A. Employment/Salary (full or part-time); CIFRE funding AMYLGEN. V. Villard: A. Employment/Salary (full or part-time); AMYLGEN. A. Vamvakides: A. Employment/Salary (full or part-time); ANAVEX LIFE SCIENCES.
41.06	D.M. Holtzman: F. Consulting Fees (e.g., advisory boards); C2N.
41.15	R.V. Nirogi: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. R. Abraham: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. V. Kandikere: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. R. Medapati: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. G. Bhyrapuneni: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. R. Chowdary Palacharla: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. R. Kambhampati: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. V. Kumar Goyal: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. S. Kumar Pandey: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. A. Deshpande: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. P. Kothmirkar: A. Employment/Salary (full or part-time); Suven Life Sciences LTD. S. Arepalli: A. Employment/Salary (full or part-time); Suven Life Sciences LTD.
41.16	C. Holscher: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); This author is named on patents relating to the use of liraglutide in neurodegenerative disease.
41.20	K. Leuner: 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.; UCB, Schwabe. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); UCB, Schwabe. W.E. Mueller: 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.; UCB, Schwabe. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); UCB, Schwabe, Lundbeck.
41.21	S. Terlecky: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CAT-SKL Patent. P. Walton: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CAT-SKL Patent.

ABSTRACT NUMBER	STATEMENT
42.02	W. Alata: A. Employment/Salary (full or part-time); NSERC. 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.; CIHR. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); INAF. F. Calon: 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.; CIHR. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); INAF.
42.06	C. Zerbinatti: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp.
42.08	F. Liao: 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 support for this study was from a grant from AstraZeneca to Washington University.
42.12	P. Cramer: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rextceptor Inc. J. Wong: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp. I. Hayashi: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp. Z. Li: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp. K. Tugusheva: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp. J. Marcus: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp. T. Rosahl: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp. J. Renger: A. Employment/Salary (full or part-time); Merck Sharp & Dohme. C.V. Zerbinatti: A. Employment/Salary (full or part-time); Merck Sharp & Dohme Corp.
43.04	Y. Wang: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent-related rights to NitroMemantine. S. Lipton: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent-related rights to memantine and NitroMemantine.
43.10	G. Griebel: A. Employment/Salary (full or part-time); Sanofi. P. Pichat: A. Employment/Salary (full or part-time); Sanofi. S. Beeské: A. Employment/Salary (full or part-time); Sanofi. J. Stemmelin: A. Employment/Salary (full or part-time); Sanofi. C. Cohen: A. Employment/Salary (full or part-time); Sanofi. G. Boquet: A. Employment/Salary (full or part-time); Sanofi. P. Avenet: A. Employment/Salary (full or part-time); Sanofi. O. Curet: A. Employment/Salary (full or part-time); Sanofi.
44.09	P. Beurdeley: A. Employment/Salary (full or part-time); Diaxonhit. L. Desire: A. Employment/Salary (full or part-time); Diaxonhit. A. Jarrige: A. Employment/Salary (full or part-time); Diaxonhit. M.P. Pando: A. Employment/Salary (full or part-time); Diaxonhit.

- 44.15 **Á. Trueba-Sáiz:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed for Alzheimer's diagnosis. **C. Cavada:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed for Alzheimer's diagnosis. **Á. Núñez:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed for Alzheimer's diagnosis. **I. Torres-Aleman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed for Alzheimer's diagnosis.
- 45.16 **M. Ivarsson:** A. Employment/Salary (full or part-time); AstraZeneca. **E. Åberg:** A. Employment/Salary (full or part-time); AstraZeneca. **A. Bogstedt:** A. Employment/Salary (full or part-time); AstraZeneca.
- 45.18 **J.C. Morris:** Other; Dr. Morris has served as a consultant for or has received speaking honoraria from Eisai, Janssen Alzheimer Immunotherapy Program/Elan, Glaxo-Smith-Kline, Novartis, Otsuka Pharmaceuticals and Pfizer/Wy. **D.M. Holtzman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Holtzman reports he is on the scientific advisory board of C2N Diagnostics. No conflict of interest exists. **F. Consulting Fees** (e.g., advisory boards); Dr. Holtzman reports consulting for Bristol-Myers-Squibb, Genentech, and AstraZeneca. No conflict of interest exists. **A.M. Fagan:** F. Consulting Fees (e.g., advisory boards); Dr. Fagan reports consulting for Roche and Eli Lilly. No conflict of interest exists.
- 46.10 **J.B. Koprach:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Atuka Inc. **T.H. Johnston:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Atuka Inc. **J.M. Brochie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Atuka Inc.
- 46.13 **P.A. Howson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Junaxo Inc.
- 46.15 **M.J. Cooper:** A. Employment/Salary (full or part-time); Copernicus Therapeutics, Inc. **K. Dines:** A. Employment/Salary (full or part-time); Copernicus Therapeutics, Inc. **L. Padegimas:** A. Employment/Salary (full or part-time); Copernicus Therapeutics, Inc.
- 48.06 **S. Gupta:** A. Employment/Salary (full or part-time); Harvard University.

- 48.14 **H. Ratni:** A. Employment/Salary (full or part-time); Hoffmann-La Roche Ltd. **I. Gerlach:** A. Employment/Salary (full or part-time); Hoffmann-La Roche Ltd. **O. Khwaja:** A. Employment/Salary (full or part-time); Hoffmann-La Roche Ltd. **F. Metzger:** A. Employment/Salary (full or part-time); Hoffmann-La Roche Ltd. **X. Zhao:** A. Employment/Salary (full or part-time); PTC Therapeutics. **M. Weetall:** A. Employment/Salary (full or part-time); PTC Therapeutics. **N. Naryshkin:** A. Employment/Salary (full or part-time); PTC Therapeutics. **G. Karp:** A. Employment/Salary (full or part-time); PTC Therapeutics. **P. Trifillis:** A. Employment/Salary (full or part-time); PTC Therapeutics. **E. Welch:** A. Employment/Salary (full or part-time); PTC Therapeutics. **J. Colacino:** A. Employment/Salary (full or part-time); PTC Therapeutics. **J. Babiak:** A. Employment/Salary (full or part-time); PTC Therapeutics. **N. Almstead:** A. Employment/Salary (full or part-time); PTC Therapeutics. **C. Ko:** 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.; Hoffmann-La Roche Ltd.
- 48.17 **P. Avalos:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual Property Rights. **D. Drazin:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual Property Rights. **C.N. Svendsen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual Property Rights.
- 48.18 **O. Quintero-Monzon:** A. Employment/Salary (full or part-time); Full time employed at Biogen Idec. **J. Coomaraswamy:** A. Employment/Salary (full or part-time); full time employed at Biogen Idec.
- 48.22 **S. Petri:** 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.; Cytokinetics, Inc., Glaxo Smith Kline.
- 48.24 **C. Zimprich:** A. Employment/Salary (full or part-time); Promega Corporation.
- 49.09 **J.A. Sweeney:** F. Consulting Fees (e.g., advisory boards); Eli Lilly, Bristol-Myers Squibb, Roche.
- 49.19 **J. Pekar:** F. Consulting Fees (e.g., advisory boards); Philips Healthcare.
- 51.11 **J. Kim:** 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.; Mid-Career Researcher Program through the National Research Foundation of Korea (NRF) grant funded by the MEST (2011-0028319).
- 52.16 **H. White:** 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.; RO1 NS065434 and HHSN2712011000029C. **K.S. Wilcox:** 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.; RO1 NS065434.

ABSTRACT NUMBER	STATEMENT
53.03	J.O. McNamara: 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.; This work was supported by NINDS grants NS56217 and NS060728.
54.05	T.M. Hallam: A. Employment/Salary (full or part-time); Mesoblast. J. Ren: 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.; Mesoblast. D.K. Barrile: 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.; Mesoblast. M. Davenport: 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.; Mesoblast. R. Wu: 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.; Mesoblast. S.P. Finklestein: 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.; Mesoblast. M. Nedelman: 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.; Mesoblast. P. Kulkarni: 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.; Mesoblast. S. Itescu: A. Employment/Salary (full or part-time); Mesoblast. L. Golden: A. Employment/Salary (full or part-time); Mesoblast.
56.01	K.D. Micheva: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 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.
56.11	Y.P. Danilov: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Danilov, Kaczmarek, and Tyler have a financial interest in Advanced NeuroRehabilitation LLC and NeuroHabilitation Corp., which have intellectual property rights in the field of use in this Abstract. K.A. Kaczmarek: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); has a financial interest in Advanced NeuroRehabilitation LLC and NeuroHabilitation Corp., which have intellectual property rights in the field of use in this Abstract. M.E. Tyler: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); has a financial interest in Advanced NeuroRehabilitation LLC and NeuroHabilitation Corp., which have intellectual property rights in the field of use in this Abstract.

ABSTRACT NUMBER	STATEMENT
56.12	A.G. Machado: A. Employment/Salary (full or part-time); Cleveland Clinic. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATI, Cardionomics, IntElect. F. Consulting Fees (e.g., advisory boards); Functional Neuromodulation.
56.15	L.Y. Lin: A. Employment/Salary (full or part-time); Washington University in St. Louis School of Medicine. 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.; Dorris Duke Fellow.
57.09	E. Woodard: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); In Vivo Therapeutics. R. Langer: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); In Vivo Therapeutics.
59.13	G. Sanacora: 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.; consulting fees from AstraZeneca, Avanier Pharmaceuticals, Bristol-Myers Squibb, Evotec, Eli Lilly & Co., Hoffman La-Roche, Novartis, and (Noven Pharmaceuticals >\$10,000) over the last 24 months. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); additional grant support from AstraZeneca, Bristol-Myers Squibb, Hoffman La-Roche, and Merck & Co. over the last 24 months. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); co-inventor on filed patent application by Yale University (PCTWO06108055A1).
59.17	G. Sanacora: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); received additional grant support from AstraZeneca, Bristol-Myers Squibb, Hoffman La-Roche, and Merck & Co. over the last 24 months. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); In addition he is a co-inventor on filed patent application by Yale University (PCTWO06108055A1). F. Consulting Fees (e.g., advisory boards); AstraZeneca, Avanier Pharmaceuticals, Bristol-Myers Squibb, Evotec, Eli Lilly & Co., Hoffman La-Roche, Novartis, and (Noven Pharmaceuticals >\$10,000) over the last 24 months.
59.18	G. Sanacora: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent PCTWO06108055A1.
59.21	K. Rasmussen: A. Employment/Salary (full or part-time); Lilly pharmaceutical. D. Son: A. Employment/Salary (full or part-time); Lundbeck Research USA. G. Smagin: A. Employment/Salary (full or part-time); Lundbeck Research USA.
59.22	C.J. Pittenger: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NIH; The Allison Family Foundation; The Taylor Foundation for Chronic Disease; The Tourette Syndrome Association; The Massachusetts General Hospital Research Fund; F. Hoffman la Roche, Ltd. F. Consulting Fees (e.g., advisory boards); State of Connecticut.

- 59.29 **M.A. Riva:** 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.; Sunovion/DSP. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Sunovion/DSP, Eli Lilly, Bristol-Myers Squibb.
- 59.30 **G. Racagni:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Servier, Eli Lilly, InnovaPharma. **M.A. Riva:** 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.; Sunovion/DSP. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Sunovion/DSP, Eli Lilly, Bristol-Myers Squibb.
- 62.05 **M.F. Olive:** 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.; DA025606 and DA024355.
- 62.12 **I.N. Krasnova:** A. Employment/Salary (full or part-time); National Institute on Drug Abuse, NIH, DHHS. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); National Institute on Drug Abuse, NIH, DHHS.
- 63.02 **T. Satoh:** A. Employment/Salary (full or part-time); Iwate University, Sanford-Burnham Medical Research Institute.
- 63.05 **E.M. Sigurdsson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on NYU patents for immunotherapy and related diagnostics.
- 63.06 **H. Chen:** A. Employment/Salary (full or part-time); GlaxoSmithKline R&D China. **G. Luo:** A. Employment/Salary (full or part-time); GlaxoSmithKline R&D China. **X. Gao:** A. Employment/Salary (full or part-time); GlaxoSmithKline R&D China. **B. Zheng:** A. Employment/Salary (full or part-time); GlaxoSmithKline R&D China. **Z. Zhong:** A. Employment/Salary (full or part-time); GlaxoSmithKline R&D China.
- 63.13 **H. Iderberg:** A. Employment/Salary (full or part-time); Lund 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.; MJFF Target Validation Grant 2011. **M.A. Cenci:** A. Employment/Salary (full or part-time); Lund 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.; MJFF Target Validation Grant 2011. **M.A. Varney:** A. Employment/Salary (full or part-time); Lund University, Neurolix. 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.; MJFF Target Validation Grant 2011. **A. Newman-Tancredi:** 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.; MJFF Target Validation Grant 2011.

- 63.20 **K. Hensley:** 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.; XoNovo Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); XoNovo Inc. **O. Levi:** A. Employment/Salary (full or part-time); XoNovo Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); XoNovo Inc.
- 63.21 **C.L. Shaffer:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **J.A. Cianfrogna:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **G.P. Currier:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **D.L. Smith:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **J.T. Lazzaro:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **M. Li:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **J.Y. Mancuso:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **M.M. Zaleska:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **K. Zasadny:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **P. Trapa:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc.
- 63.22 **L. Desire:** A. Employment/Salary (full or part-time); Diaxonhit. **S. Coutadeur:** A. Employment/Salary (full or part-time); Diaxonhit. **H. Benyamine:** A. Employment/Salary (full or part-time); Diaxonhit. **A. Casagrande:** A. Employment/Salary (full or part-time); Diaxonhit. **B. Leblond:** A. Employment/Salary (full or part-time); Diaxonhit. **T. Besson:** 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.; Diaxonhit. **M. Pando:** A. Employment/Salary (full or part-time); Diaxonhit.

- 63.26 **M.M. Shah:** A. Employment/Salary (full or part-time); Wayne State University. **G. Modi:** A. Employment/Salary (full or part-time); Wayne State University. **C.S. Voshavar:** A. Employment/Salary (full or part-time); Wayne State University. **L. Xu:** A. Employment/Salary (full or part-time); Wayne State University. **A.K. Dutta:** A. Employment/Salary (full or part-time); Wayne State University.
- 63.27 **T. Ishikawa:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma CO., LTD. **K. Shibuya:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma CO., LTD. **M. Yamanaka:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma CO., LTD. **T. Hashimoto:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma CO., LTD. **H. Kakuyama:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma CO., LTD. **A. Ikeda:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma CO., LTD.
- 65.03 **U. Polat:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ucansi Inc. **O. Yehezkel:** A. Employment/Salary (full or part-time); Ucansi Inc. **A. Sterkin:** A. Employment/Salary (full or part-time); Ucansi Inc.
- 67.07 **E. Puil:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TherExcell Pharma Ltd. **B. MacLeod:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TherExcell Pharma Ltd.
- 67.08 **J.E. Zadina:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); JEZ has patents filed on the subject compounds.
- 67.10 **S. Li:** Other; Sheng Li. U.S. Provisional Application No. 61/776,391 "Methods for treatment of Neuropathic pain with electrical stimulation", filed on March 11, 2013 by University of Texas Health Sci Center Houston.
- 68.13 **K. Chu:** A. Employment/Salary (full or part-time); Abbvie. **J. Xu:** A. Employment/Salary (full or part-time); Abbvie. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie. **M. Meyer:** A. Employment/Salary (full or part-time); Abbvie. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie. **S. McGaraughty:** A. Employment/Salary (full or part-time); Abbvie. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie.
- 68.14 **T.R. Miller:** A. Employment/Salary (full or part-time); AbbVie, Inc. **J.B. Wetter:** A. Employment/Salary (full or part-time); AbbVie, Inc. **T. Nguyen:** A. Employment/Salary (full or part-time); AbbVie, Inc. **M. Pai:** A. Employment/Salary (full or part-time); AbbVie, Inc. **C.D. Mills:** A. Employment/Salary (full or part-time); AbbVie, Inc. **G.C. Hsieh:** A. Employment/Salary (full or part-time); AbbVie, Inc. **M.D. Meyer:** A. Employment/Salary (full or part-time); AbbVie, Inc. **R.S. Bitner:** A. Employment/Salary (full or part-time); AbbVie, Inc.
- 68.15 **L. Leys:** A. Employment/Salary (full or part-time); AbbVie Inc. **J. Xu:** A. Employment/Salary (full or part-time); AbbVie, Inc. **R. Radek:** A. Employment/Salary (full or part-time); AbbVie, Inc. **S. McGaraughty:** A. Employment/Salary (full or part-time); AbbVie, Inc.

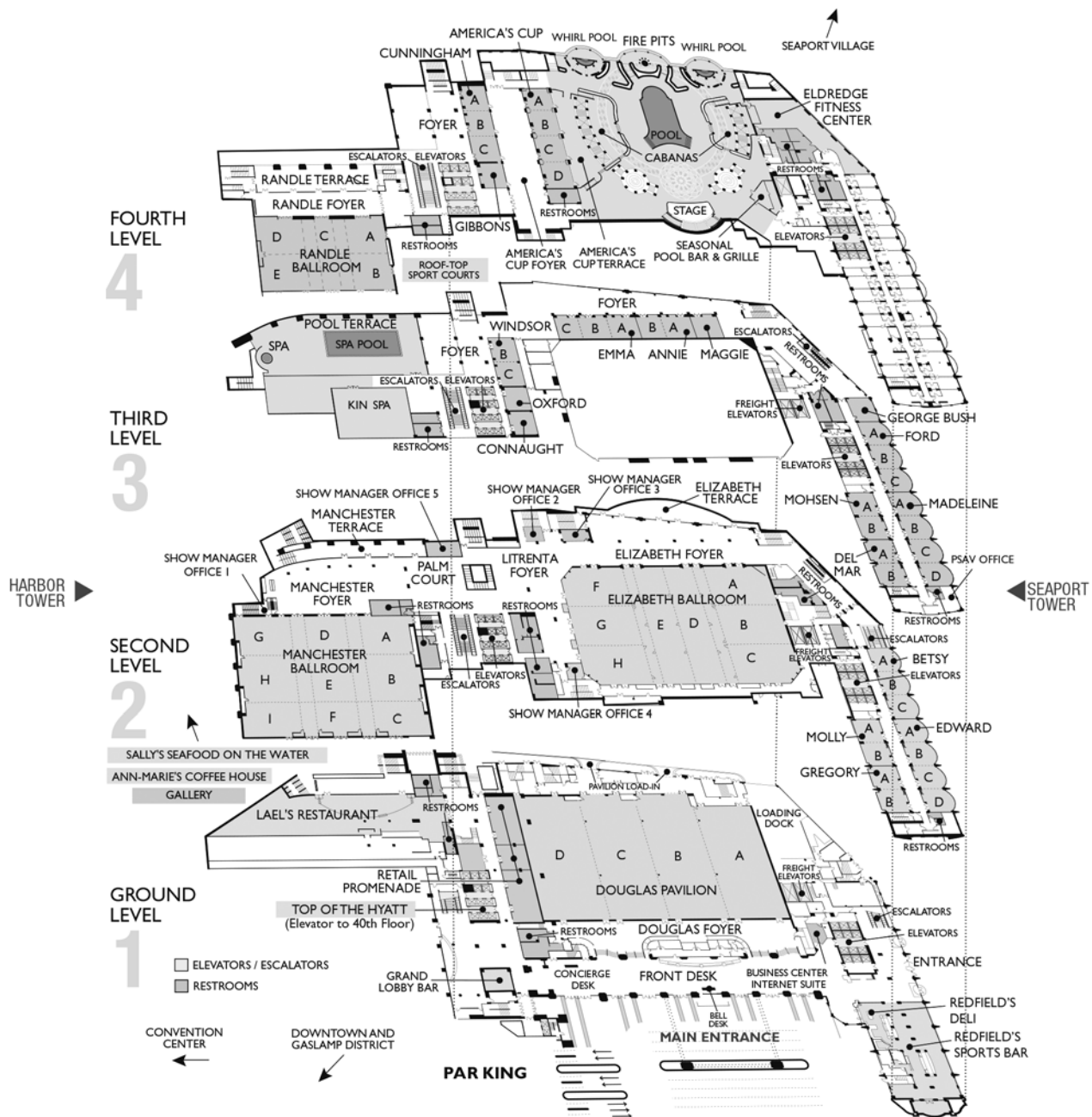
- 68.16 **A.L. Nikkel:** A. Employment/Salary (full or part-time); AbbVie, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AbbVie, Inc. **R.M. Edelmayer:** A. Employment/Salary (full or part-time); AbbVie, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AbbVie, Inc. **T. Nguyen:** A. Employment/Salary (full or part-time); AbbVie, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AbbVie, Inc. **T.R. Garrison:** A. Employment/Salary (full or part-time); AbbVie, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AbbVie, Inc. **C.D. Mills:** A. Employment/Salary (full or part-time); AbbVie, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AbbVie, Inc. **A.W. Bannon:** A. Employment/Salary (full or part-time); AbbVie, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AbbVie, Inc. **R.S. Bitner:** A. Employment/Salary (full or part-time); AbbVie, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AbbVie, Inc.
- 68.17 **C.Z. Zhu:** A. Employment/Salary (full or part-time); AbbVie Inc.
- 68.18 **K. Dandapani:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **R.K. Nutakki:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **K. Manoj:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **G. Shankar:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **M. Dokania:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **V. Sharma:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **E. Saravanan:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **M. Srinivasan:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **V. Pradeep:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **C. Conway:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **L. Bristow:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **S.N. Pattipati:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **R. Vikramadithyan:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb.
- 68.19 **I.Y. Choi:** A. Employment/Salary (full or part-time); Nektar Therapeutics. **J. Evans:** A. Employment/Salary (full or part-time); Nektar Therapeutics. **M.A. Guillon:** A. Employment/Salary (full or part-time); Nektar Therapeutics. **G.C. Kim:** A. Employment/Salary (full or part-time); Nektar Therapeutics. **P. Quach:** A. Employment/Salary (full or part-time); Nektar Therapeutics. **K. Gogas:** A. Employment/Salary (full or part-time); Nektar Therapeutics.
- 68.21 **J.A. Miranda:** A. Employment/Salary (full or part-time); Pfizer, LTD. **P. Stanley:** A. Employment/Salary (full or part-time); Pfizer, LTD. **J. Turner:** A. Employment/Salary (full or part-time); Pfizer, LTD. **R. Dias:** A. Employment/Salary (full or part-time); Pfizer, LTD. **H. Rees:** A. Employment/Salary (full or part-time); Pfizer, LTD.
- 72.12 **J. Kang:** A. Employment/Salary (full or part-time); Korea 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.; NRF, Korea, MI, Korea.

- 73.10 **K.J. Miller:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AsTex trademarked (No. 1147933). **M.P. Galea:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AsTex trademarked (No. 1147933) by Miller, Goodwin, Wheat & Galea.
- 75.03 **S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BKIN Technologies.
- 75.09 **S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BKIN Technologies.
- 75.12 **E. Zehr:** 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.; NIKE Inc.
- 76.05 **A.A. Kühn:** Other; Support for travel to conferences from Ipsen Pharma, Honoraria for lectures from Medtronic, St. Jude Medical, Boston Scientific, Novartis and Bayer AG.
- 78.10 **D.J. Reinkensmeyer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DJR has an equity interest in Hocoma A.G., the company that manufactures ArmeoSpring, and in Flint Rehabilitation Devices, a company that develops rehabilitation devices. The terms of these arrangements.
- 78.24 **J.M. Breton:** A. Employment/Salary (full or part-time); Beth Israel Deaconess Medical Center. **D. Press:** A. Employment/Salary (full or part-time); Beth Israel Deaconess Medical Center. **M. Smith:** A. Employment/Salary (full or part-time); Harvard University.
- 79.04 **J. Kim:** A. Employment/Salary (full or part-time); Korea Institute of Science and Technology. **B. Lee:** A. Employment/Salary (full or part-time); Korea Institute of Science and Technology. **T. Kim:** A. Employment/Salary (full or part-time); Korea Institute of Science and Technology.
- 79.16 **P.R. Kennedy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Owner of Neural Signals, Inc.
- 79.17 **N. Yamawaki:** A. Employment/Salary (full or part-time); Kinki University.
- 84.20 **Y.I. Sheline:** 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.; NeoSync, Inc. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Eli Lilly, Inc. F. Consulting Fees (e.g., advisory boards); Bristol-Myers Squibb; Imaging Forum for Schizophrenia and Depression. **C.R. Conway:** 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.; Bristol-Myers Squibb, AstraZeneca. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Otsuka Pharmaceuticals. **D. Barch:** F. Consulting Fees (e.g., advisory boards); Pfizer, Amgen.
- 85.09 **R.A. Makinson:** A. Employment/Salary (full or part-time); University of Cincinnati.

- 85.17 **L. Lindemann:** A. Employment/Salary (full or part-time); Full-time employee of F. Hoffmann-La Roche Ltd. **G. Jaeschke:** A. Employment/Salary (full or part-time); Full-time employee of F. Hoffmann-La Roche Ltd. **J.G. Wettstein:** A. Employment/Salary (full or part-time); Full-time employee of F. Hoffmann-La Roche Ltd.
- 88.06 **A. Kaluszka:** A. Employment/Salary (full or part-time); Lumos Labs, Inc. **J.L. Hardy:** A. Employment/Salary (full or part-time); Lumos Labs, Inc. **M. Scanlon:** A. Employment/Salary (full or part-time); Lumos Labs, Inc.
- 88.12 **D.A. Sternberg:** A. Employment/Salary (full or part-time); Lumos Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs. **J.L. Hardy:** A. Employment/Salary (full or part-time); Lumos Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs. **K. Ballard:** A. Employment/Salary (full or part-time); Lumos Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs. **M. Scanlon:** A. Employment/Salary (full or part-time); Lumos Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs.
- 89.13 **H. Macpherson:** A. Employment/Salary (full or part-time); Postdoctoral Fellowship is Sponsored by Swisse Vitamins. **A. Pipingas:** F. Consulting Fees (e.g., advisory boards); Member of Swisse Vitamins advisory board (unpaid).
- 90.17 **T.A. Lawton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr Teri Lawton is the only author with a possible conflict of interest. She had no part in collecting or analyzing the data.
- 90.24 **T.W. Kononowicz:** A. Employment/Salary (full or part-time); University of Groningen. **H. Van Rijn:** A. Employment/Salary (full or part-time); University of Groningen.
- 93.28 **E. Suzuki:** A. Employment/Salary (full or part-time); JSPS.
- 95.08 **T. Spellman:** A. Employment/Salary (full or part-time); Columbia University. **J. Gogos:** A. Employment/Salary (full or part-time); Columbia University. **J. Gordon:** A. Employment/Salary (full or part-time); Columbia University.
- 96.13 **Y. Chen:** A. Employment/Salary (full or part-time); National Institutes of Health. **A.B. Kawa:** A. Employment/Salary (full or part-time); National Institute of Health. **C.L. Pickens:** A. Employment/Salary (full or part-time); National Institute of Health. **N.J. Marchant:** A. Employment/Salary (full or part-time); National Institute of Health. **J.M. Bossert:** A. Employment/Salary (full or part-time); National Institutes of Health. **Y. Shaham:** A. Employment/Salary (full or part-time); National Institutes of Health. **D.J. Calu:** A. Employment/Salary (full or part-time); National Institute of Health.
- 97.10 **B. Halbout:** A. Employment/Salary (full or part-time); University of California, Irvine. **G. Kharkwal:** A. Employment/Salary (full or part-time); University of California, Irvine. **E. Borrelli:** A. Employment/Salary (full or part-time); University of California, Irvine.
- 98.14 **S.E. Yohn:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Pfizer. **J.D. Salamone:** 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.; Pfizer.

ABSTRACT NUMBER	STATEMENT	ABSTRACT NUMBER	STATEMENT
100.28	A.J. Worth: A. Employment/Salary (full or part-time);; Neuromorphometrics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuromorphometrics, Inc. J.A. Tourville: F. Consulting Fees (e.g., advisory boards); Neuromorphometrics, Inc.		
101.02	S.D. Larson: 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.; MetaCell, LLC.		
102.04	K. Lenk: 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.; This research has been supported by the 3DNeuroN project in the European Union's Seventh Framework Programme, Future and Emerging Technologies, grant agreement n°296590. S. Narkilahti: 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.; This research has been supported by the 3DNeuroN project in the European Union's Seventh Framework Programme, Future and Emerging Technologies, grant agreement n°296590. J.A.K. Hyttinen: 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.; This research has been supported by the 3DNeuroN project in the European Union's Seventh Framework Programme, Future and Emerging Technologies, grant agreement n°296590.		
102.09	D.M. Rice: A. Employment/Salary (full or part-time);; Rice Analytics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rice Analytics.		
102.11	J. Xing: Other; US National Science Foundation Grant CCF-1162449. T. Berger: Other; US National Science Foundation Grant CCF-1162449.		
103.11	C.A. Lang: A. Employment/Salary (full or part-time);; Acelot, Inc. S. Feinstein: 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.; Acelot, Inc. G.M. Rishton: 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.; Acelot, Inc. A.K. Singh: A. Employment/Salary (full or part-time);; Acelot, Inc.		

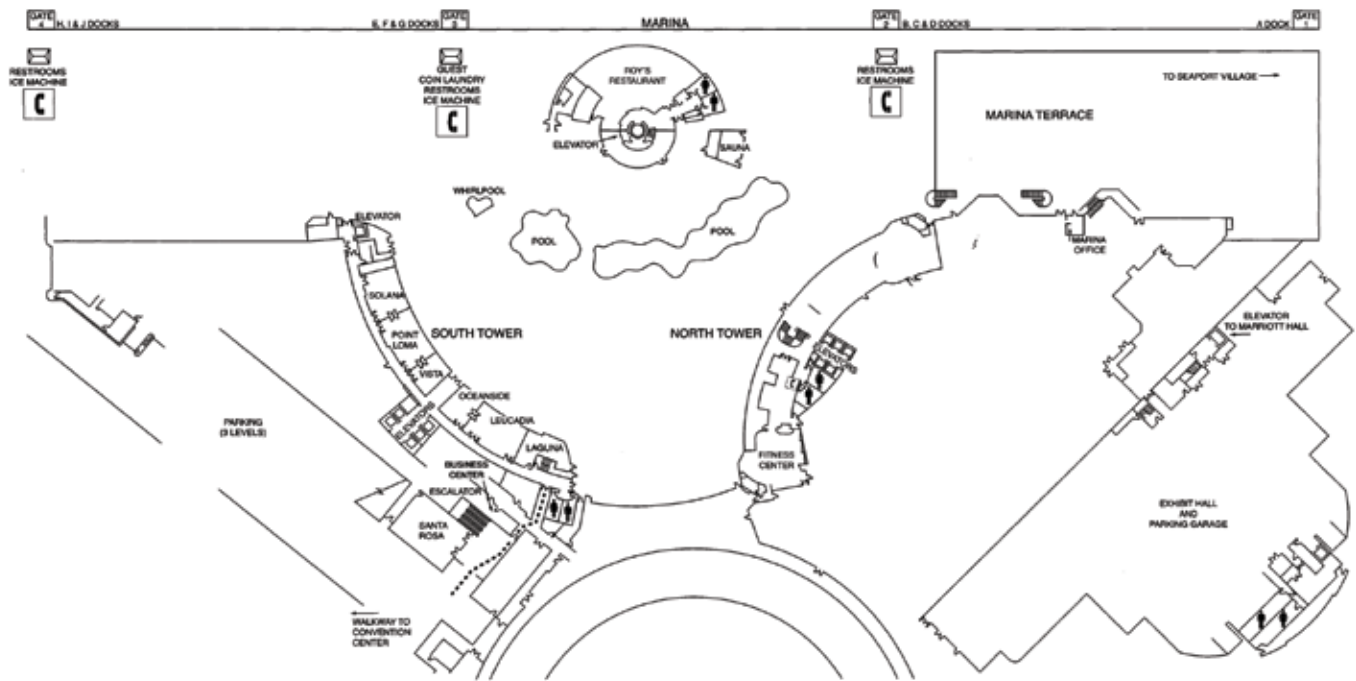
Manchester Grand Hyatt



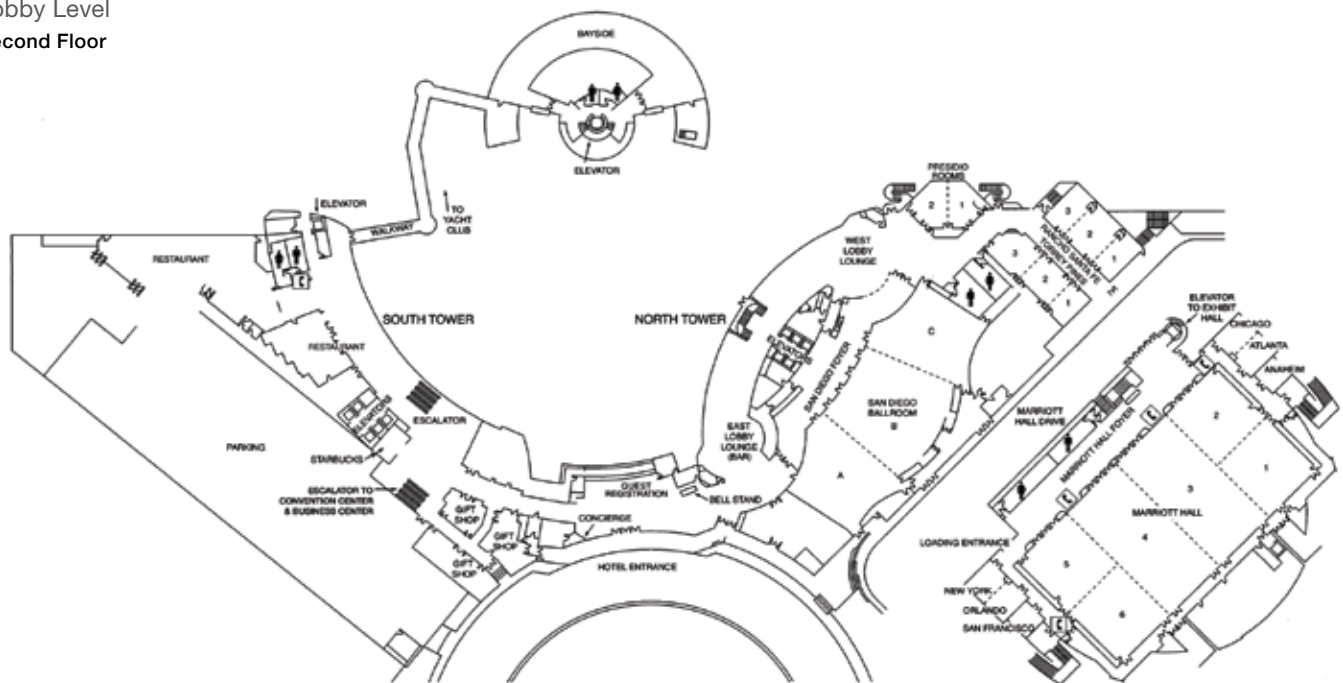
Marriott Marquis & Marina

South Tower
Level 1

North Tower



Lobby Level
Second Floor



Hotel Floor Plans

Marriott Marquis & Marina (continued)

South Tower

Level 3

1st Floor

Laguna
Leucadia
Oceanside
Point Loma
Santa Rosa
Solana
Vista

2nd Floor

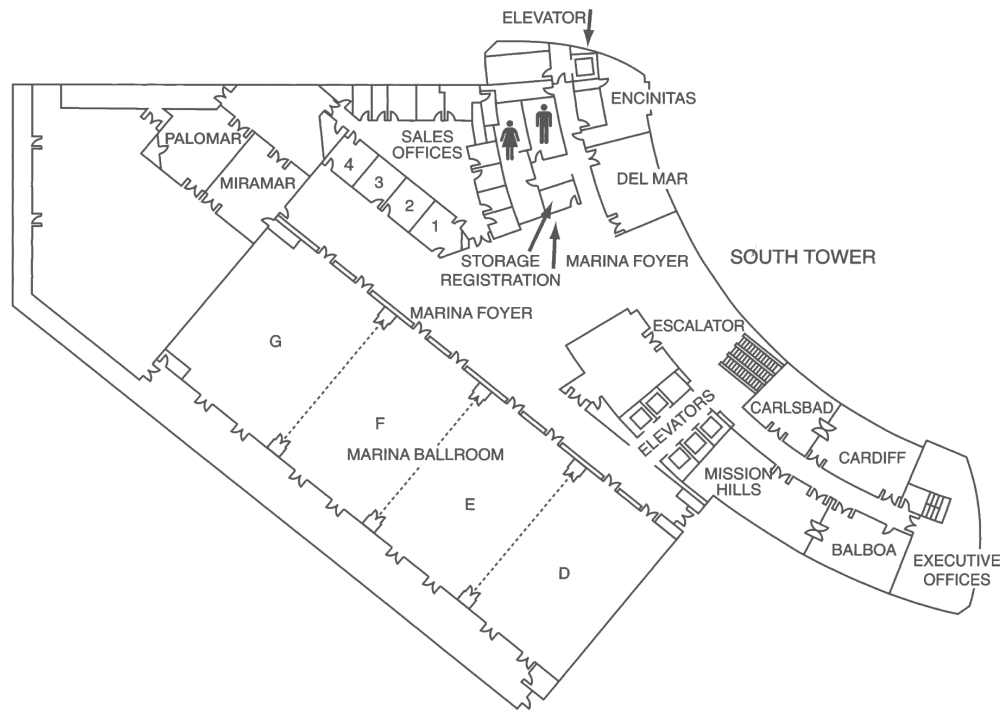
Bayside

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



Level 4

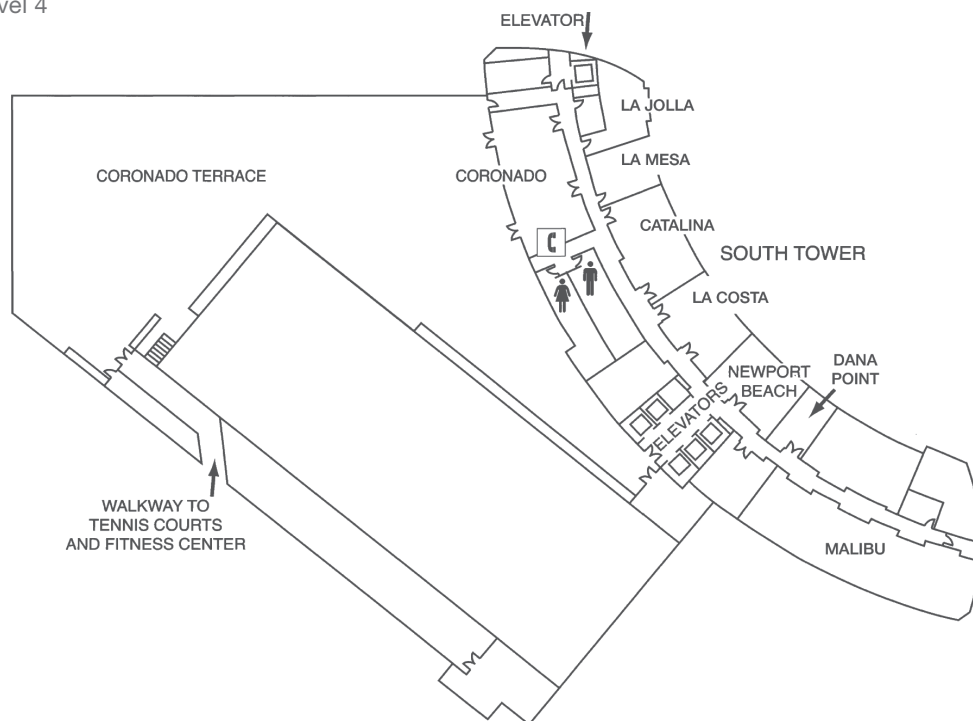
North Tower

Lobby Level

Presidio 1-2
Rancho Santa Fe 1-3
San Diego Ballrooms A-C
Torrey Pines 1-3

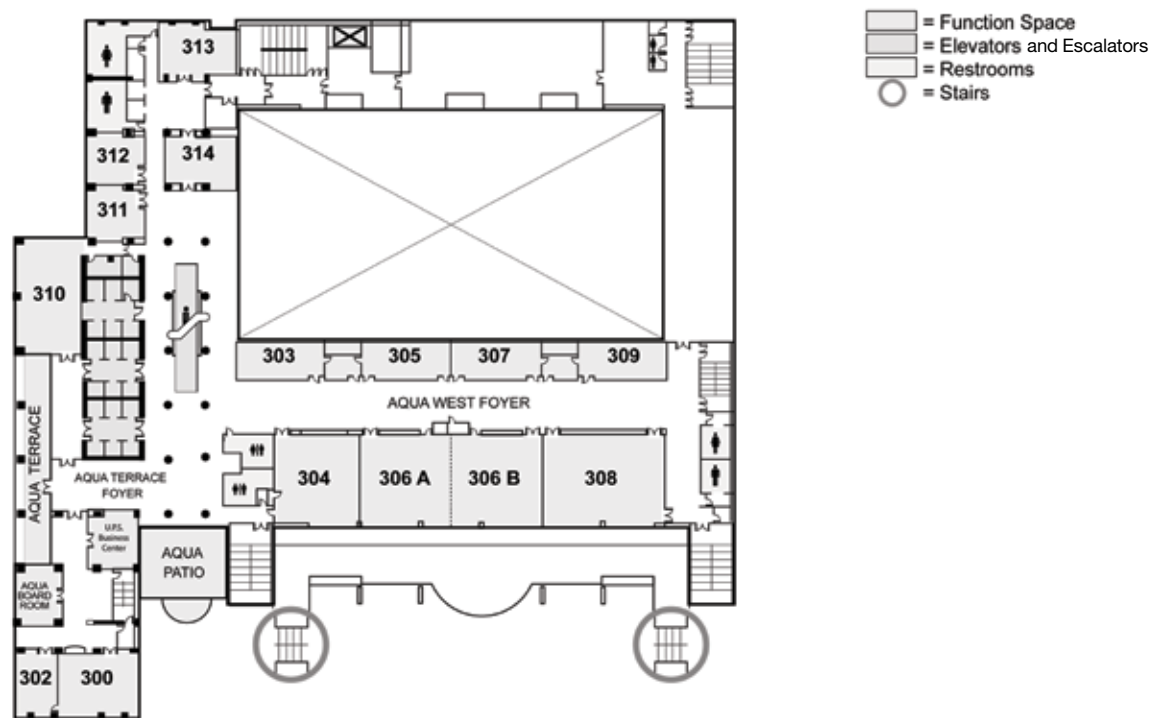
Marriott Hall

Anaheim
Atlanta
Chicago
Marriott Hall 1-6
New York
Orlando
San Francisco

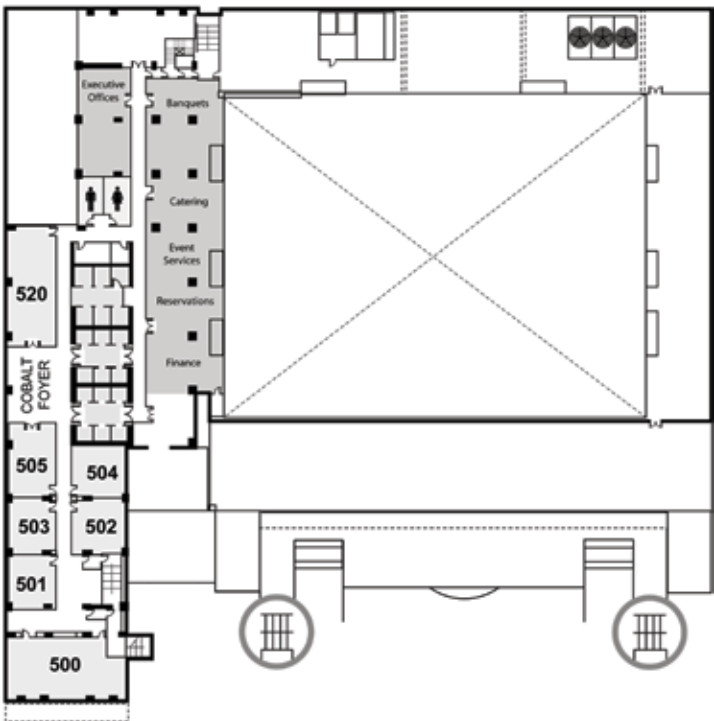


Hilton San Diego Bayfront

Aqua Level



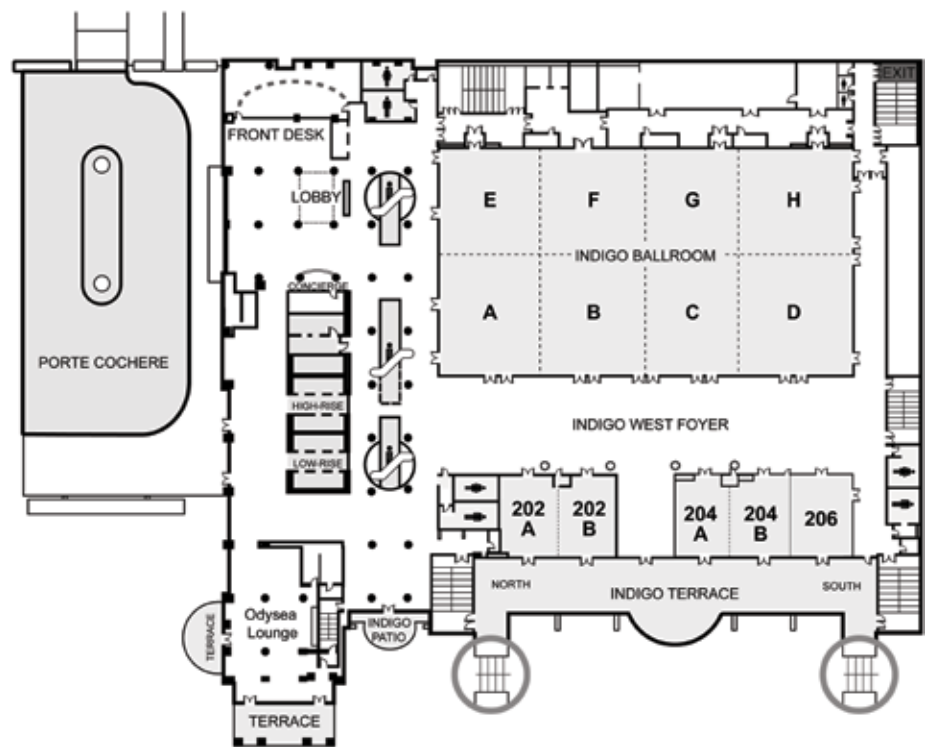
Cobalt Level



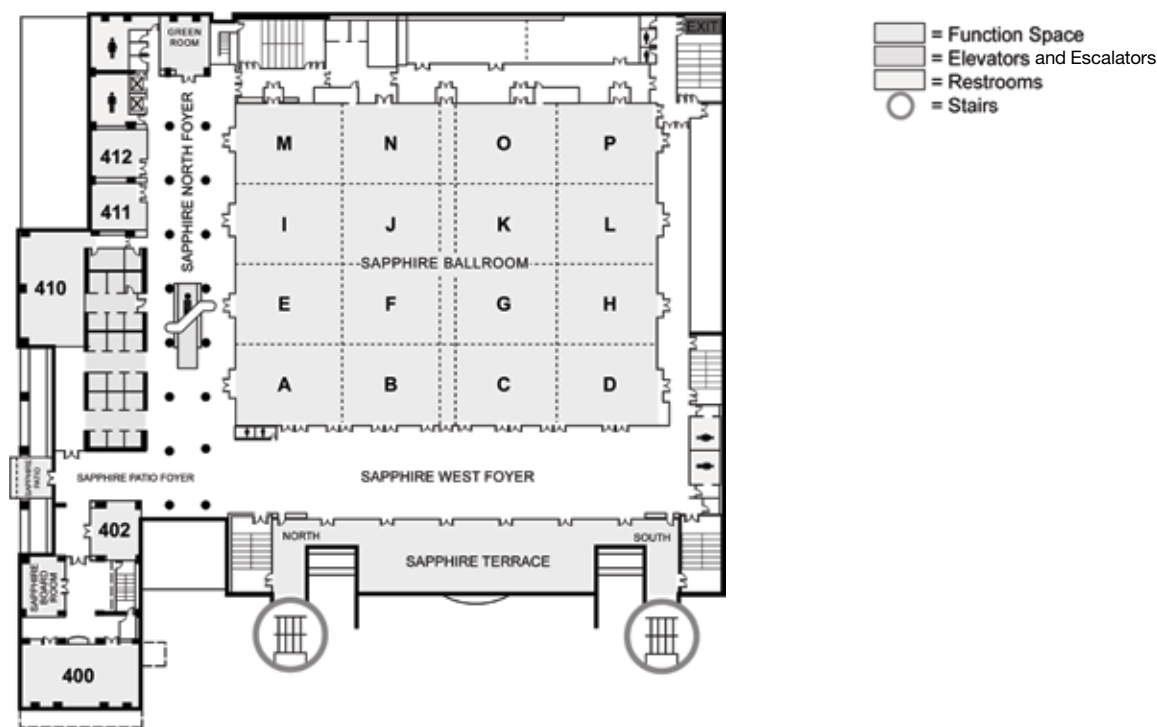
Hotel Floor Plans

Hilton Dan Diego Bayfront

Indigo Level



Sapphire Level



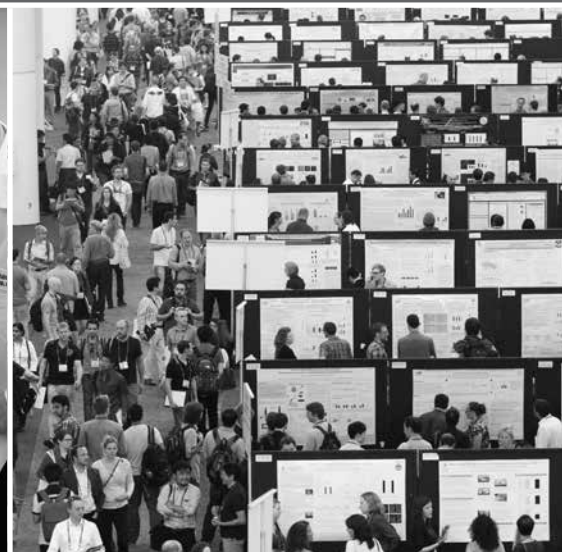
Automatic Membership Renewal Now Available



Sign Up for Automatic Membership Renewal

- **Save time** — Lessen your to do list
- **Go green** — Eliminate paper invoices and their impact on the environment
- **Uninterrupted membership** — Never miss an issue of *The Journal of Neuroscience* or any of your valuable member benefits
- **Bonus Day** — Ensure access to your choice of prime housing for the annual meeting before the opening of advance member registration
- **Support the field** — Know your dues enhance professional development initiatives, public outreach, advocacy, and more

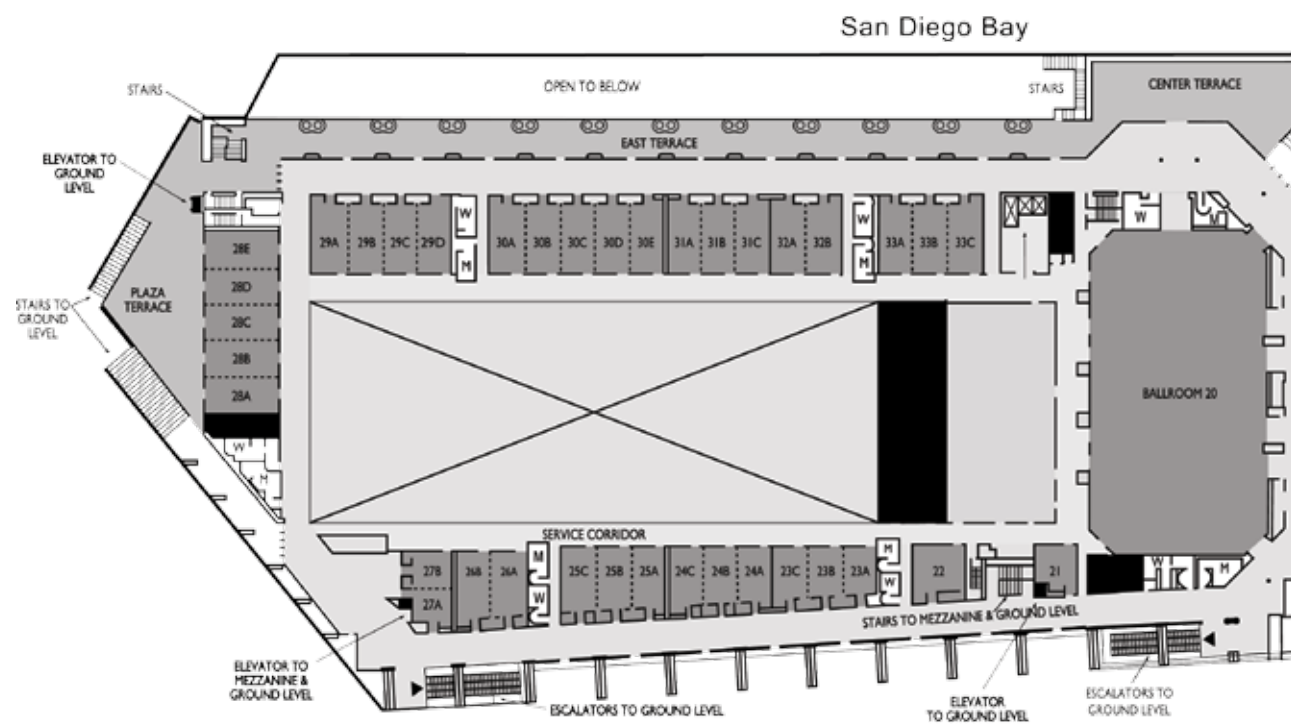
Sign up today and
you are entered for
multiple chances
to win a **\$250**
Amazon® gift card!



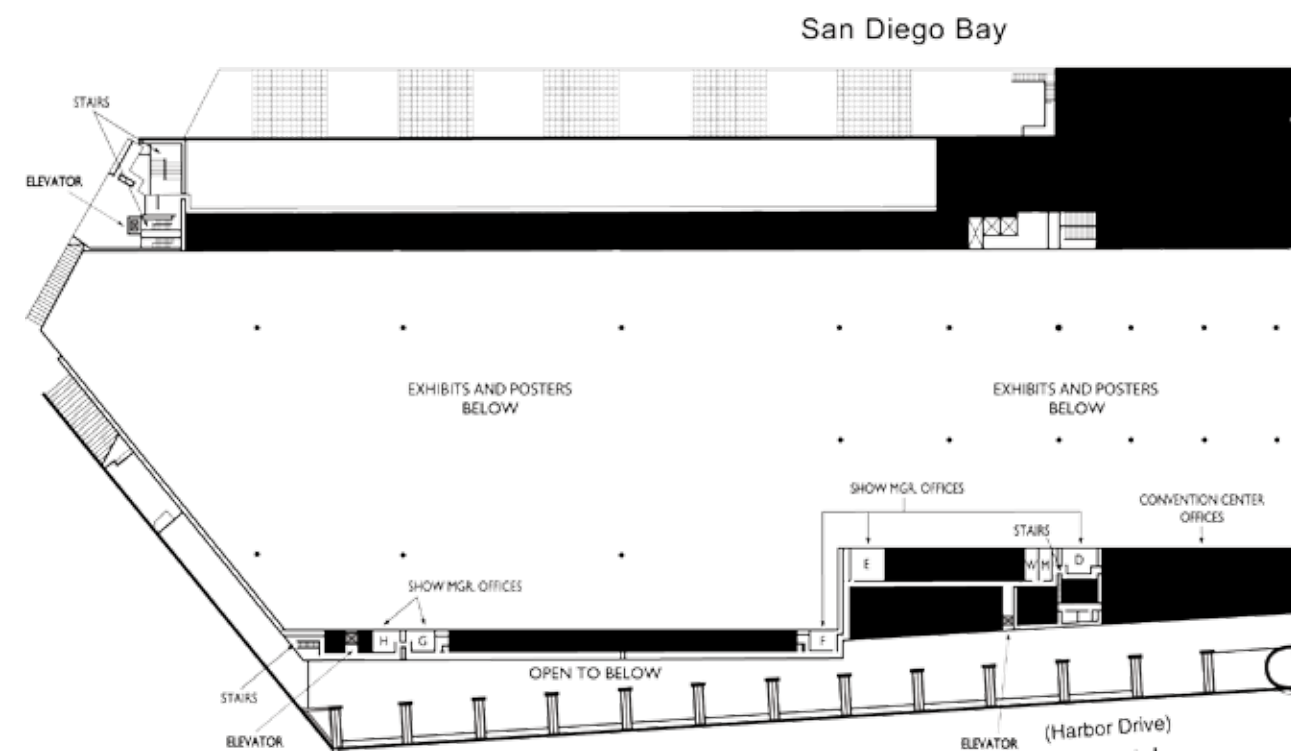
Visit the SfN Booth #2013 in the Exhibit Hall —
first 50 to renew their membership for 2014 receive a free gift

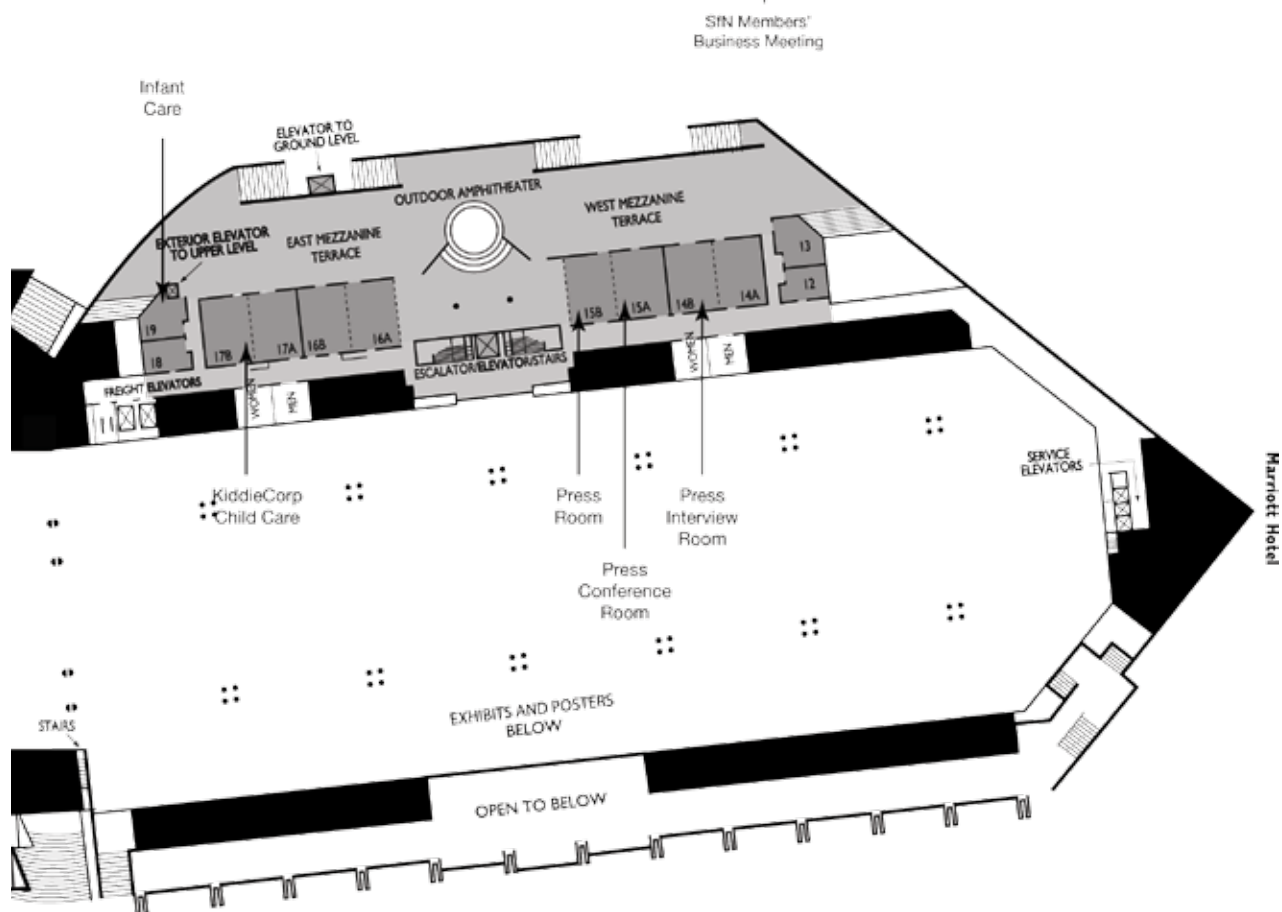
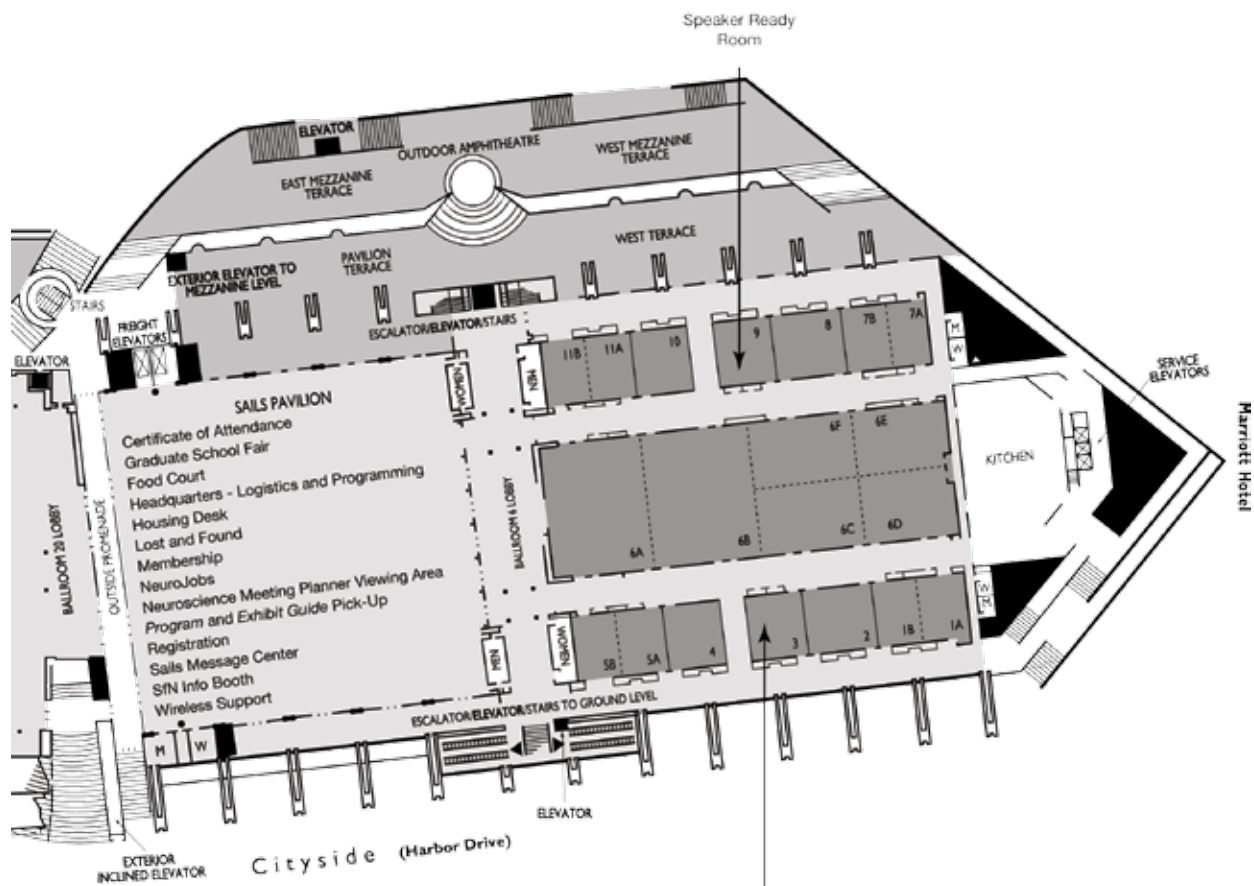
Convention Center Floor Plans

San Diego Convention Center Floor Plan, Upper Level



San Diego Convention Center Floor Plan, Mezzanine Level





Convention Center Floor Plans

San Diego Convention Center Floor Plan, Exhibit Halls

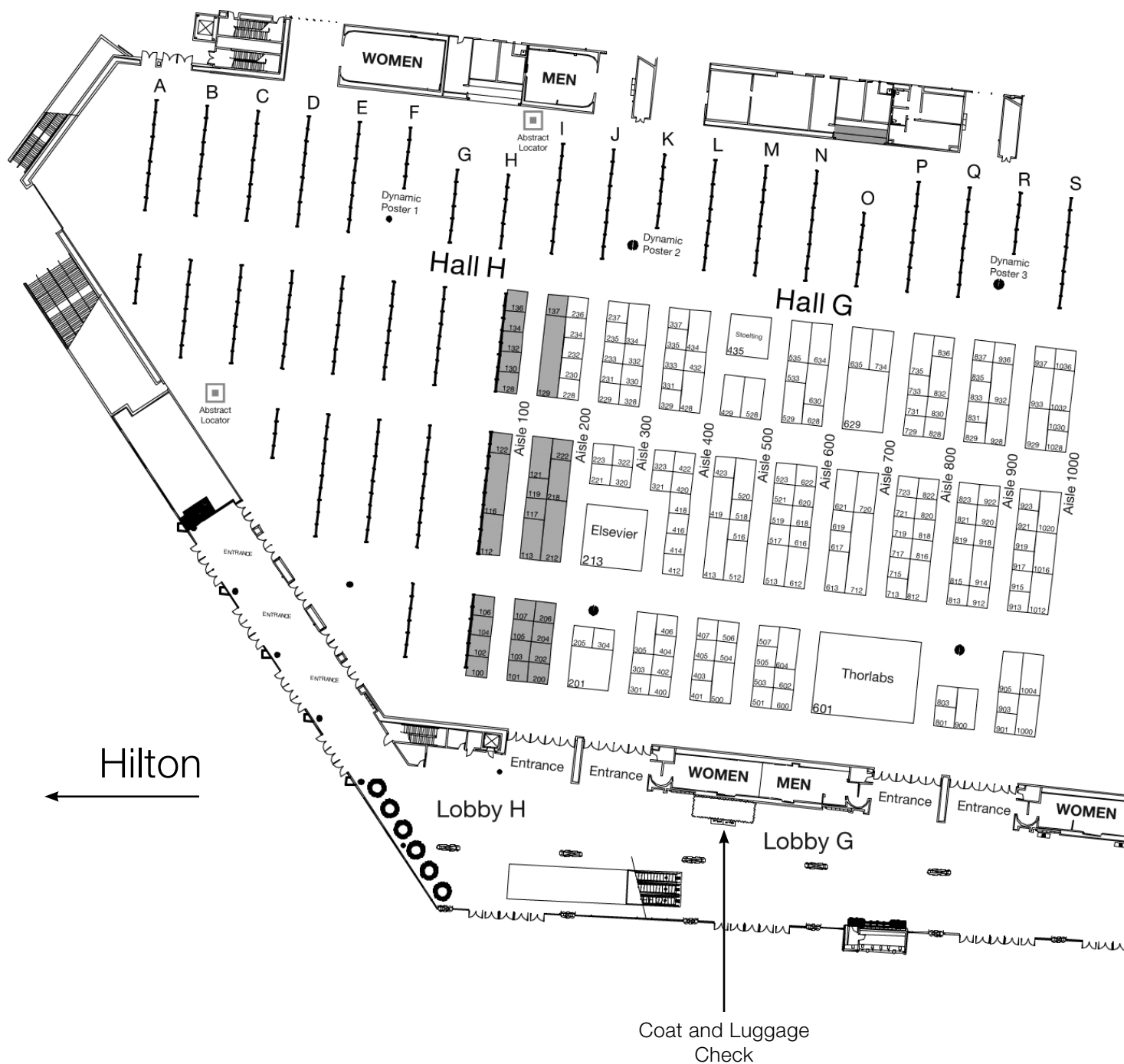
San Diego Convention Center: Halls B-H

Meeting Dates: Nov. 9–13

Exhibit Dates: Nov. 10–13

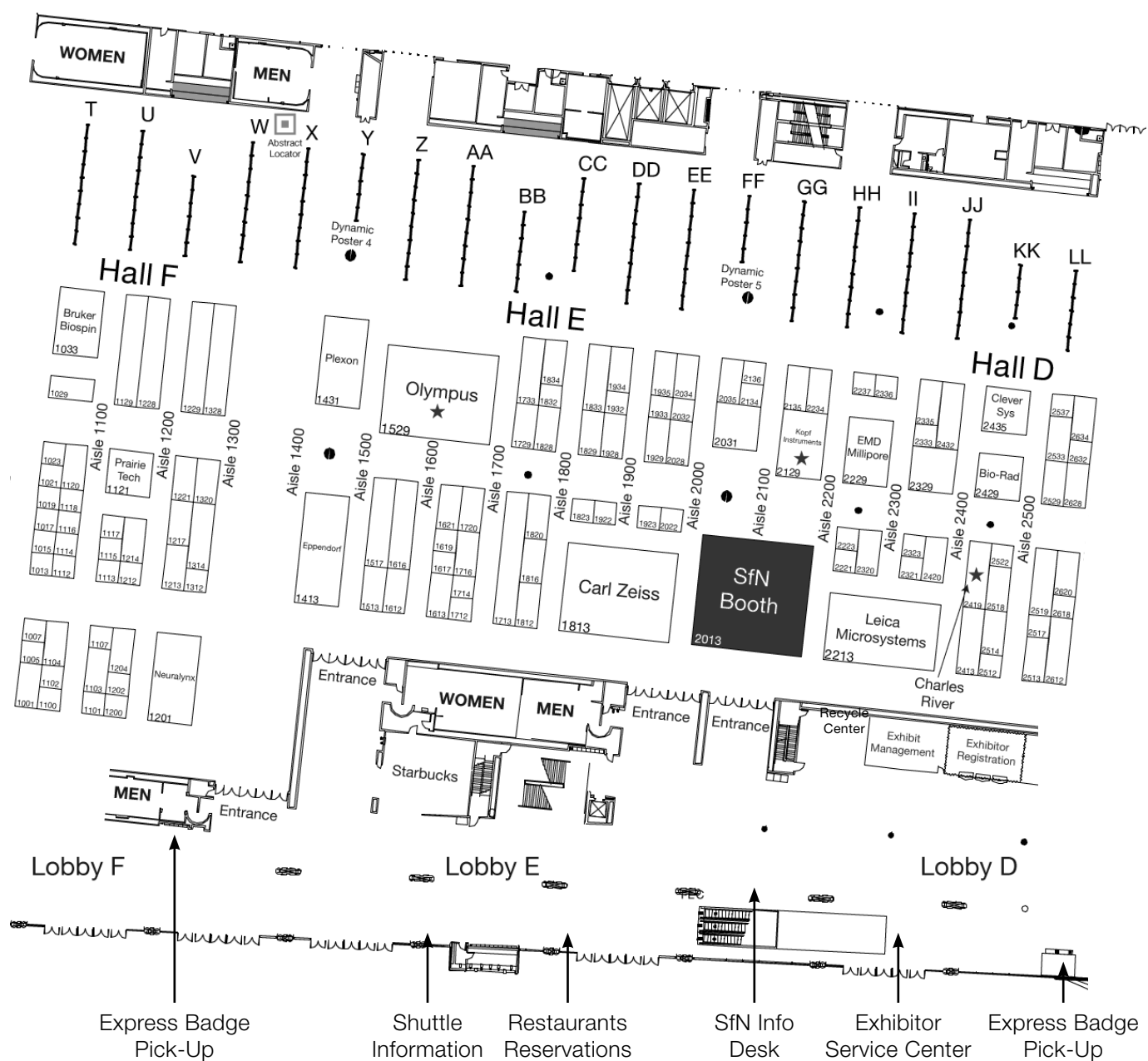
Hall entrances open at noon on Saturday, Nov. 9 and at 7 a.m. on Sunday, Nov. 10 to Wednesday, Nov. 13 for poster presenter setup. Poster sessions are open for all attendees at 1 p.m. on Saturday, Nov. 9 and 8 a.m. Sunday, Nov. 10 to Wednesday, Nov. 13.

NOTE: Floor plans subject to change. For current floor plan, visit SfN.org/exhibits.



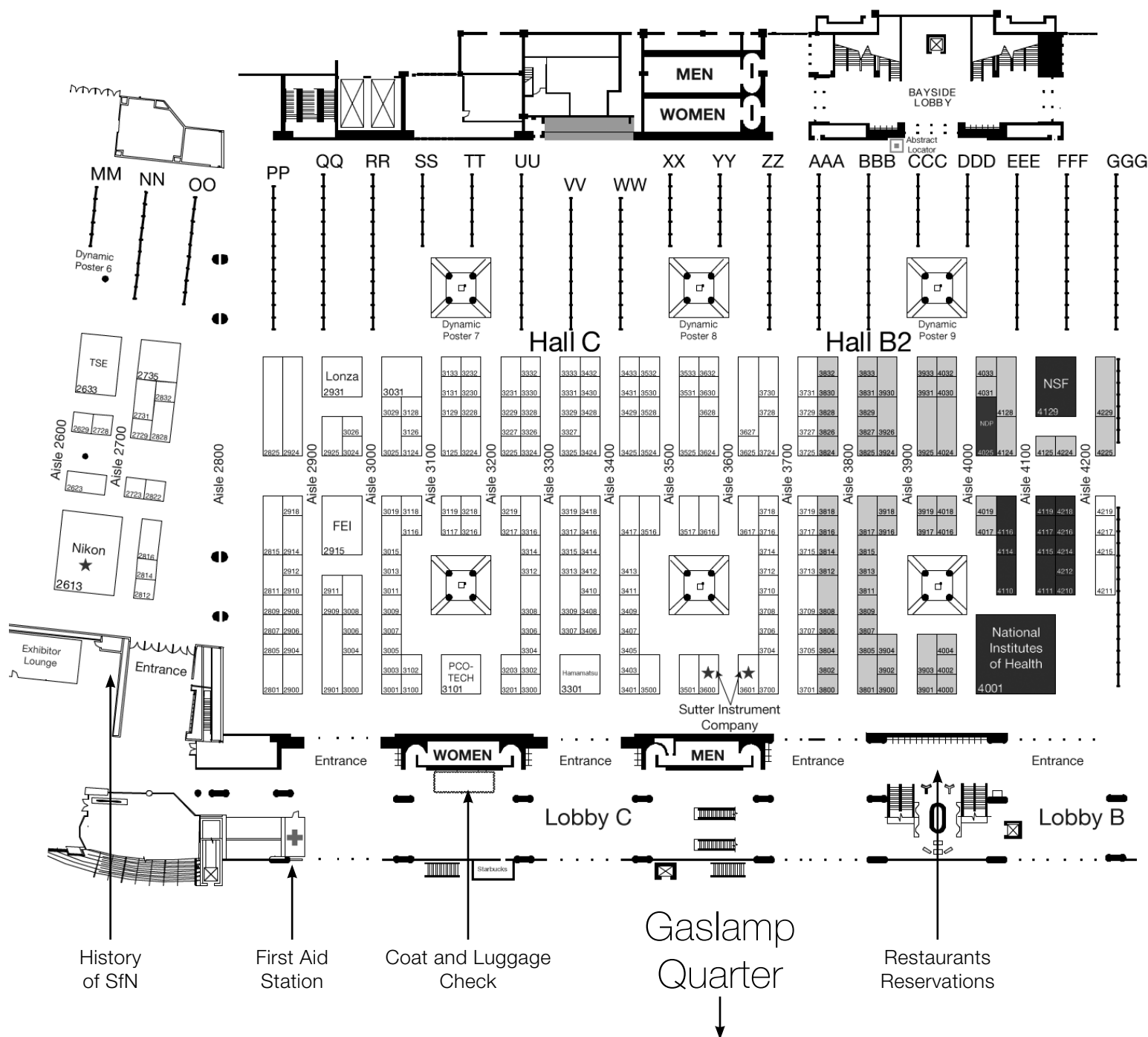
KEY

- Abstract Locators
- Publishers
- Concession Areas
- Nonprofits
- Institutions
- Sustaining Associate Members



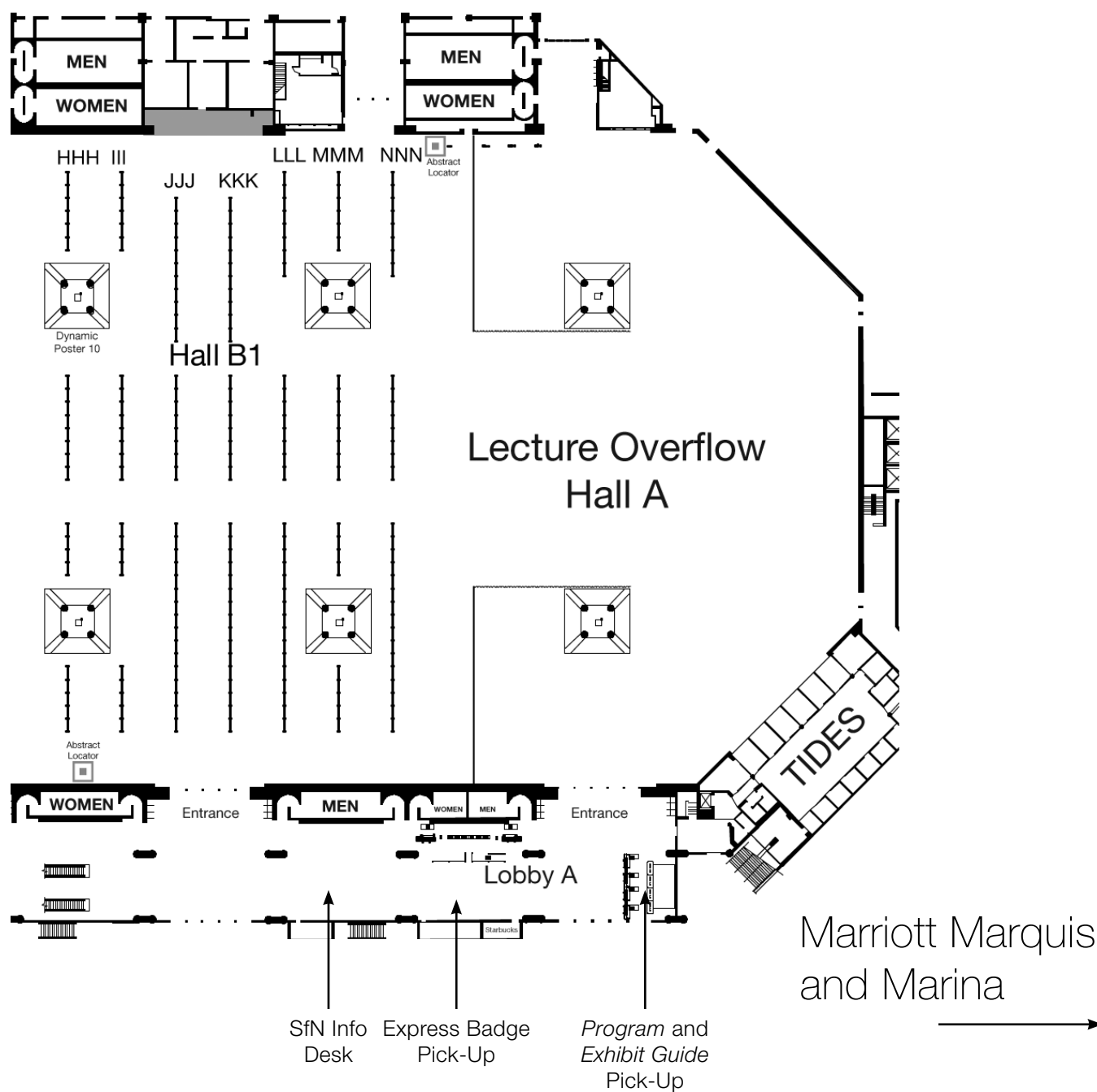
Convention Center Floor Plans

San Diego Convention Center Floor Plan, Exhibit Halls



KEY

- | | |
|---------------------|--------------------------------|
| ■ Abstract Locators | ■ Publishers |
| ■ Concession Areas | ■ Nonprofits |
| ■ Institutions | ★ Sustaining Associate Members |



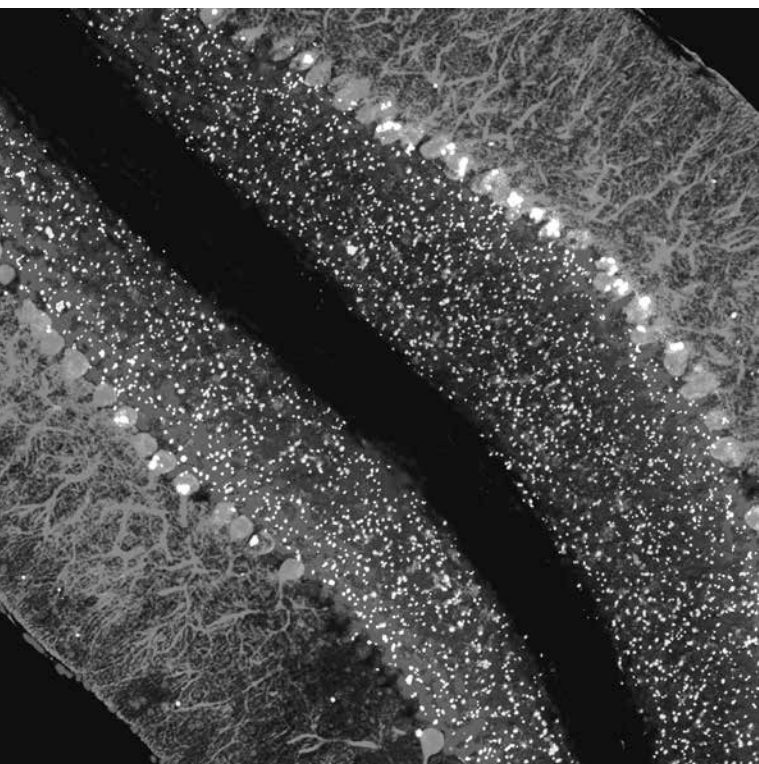


NEUROSCIENCE
2014

SEE YOU IN

WASHINGTON DC

November 15–19



SOCIETY *for*
NEUROSCIENCE