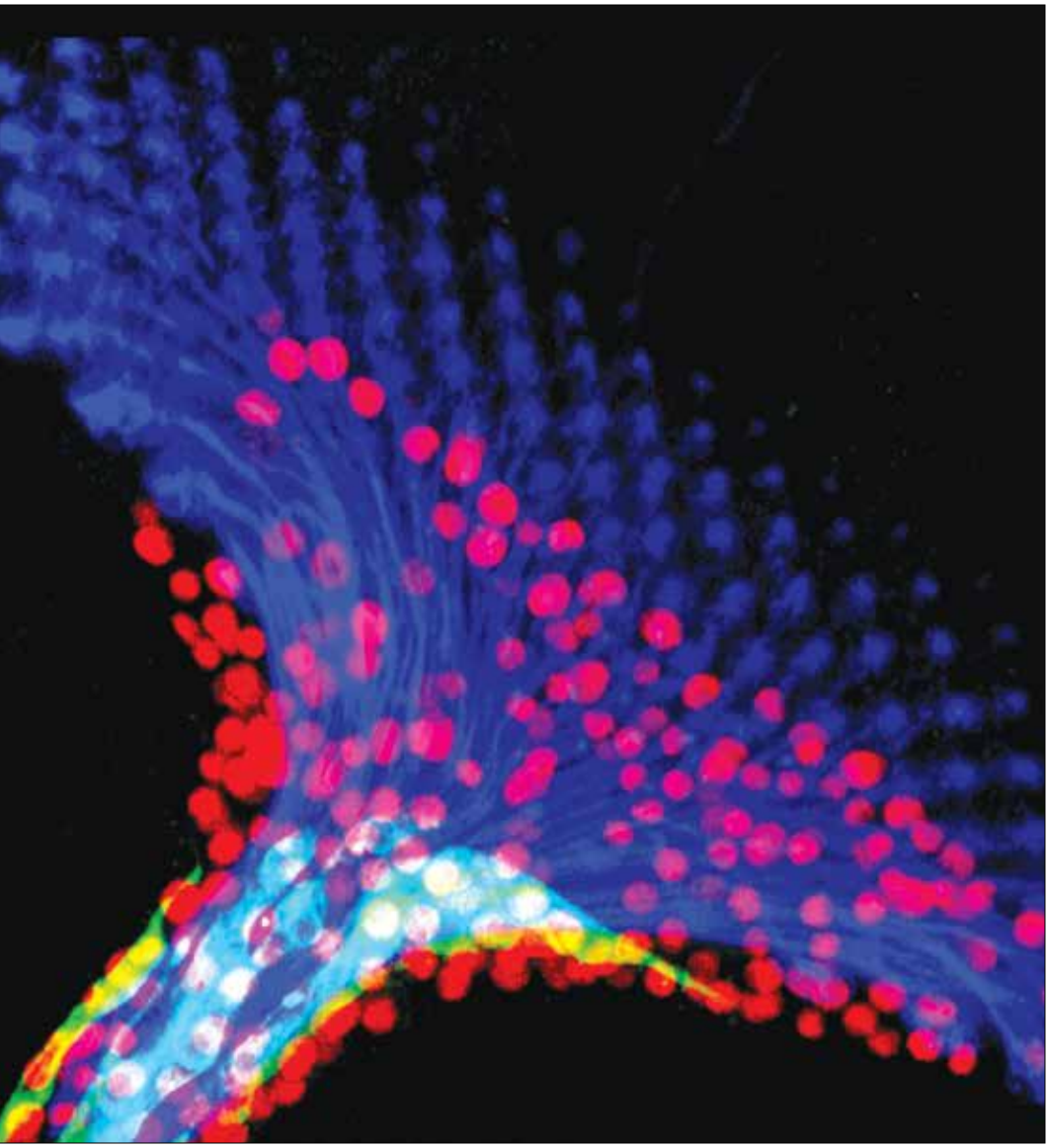
Tuesday

Scientific Session Listings 472–661



NEUROSCIENCE 2014

WASHINGTON, DC | November 15–19

SfN Society for Neuroscience

Information at a Glance

Important Phone Numbers

Annual Meeting Headquarters Office

Logistics & Programming
Walter E. Washington Convention Center:
Room 102
Logistics: (202) 249-4100
Programming: (202) 249-4105

Volunteer Leadership Lounge
Walter E. Washington Convention Center:
Salon F, (202) 249-4096

Annual Meeting Information Booths
Walter E. Washington Convention Center
Grand Lobby, (202) 249-4124
L Street Bridge, (202) 249-4125
L Street Concourse, (202) 249-4126

Press Office

Walter E. Washington Convention Center:
Room 202A, (202) 249-4130

Exhibit Management

Walter E. Washington Convention Center:
Show Office B, (202) 249-4080

First Aid and Hospital Numbers

First Aid Room
Walter E. Washington Convention Center:
Hall A, (202) 249-3108
Hall D, (202) 249-3109

George Washington University Hospital
900 23rd Street, NW
Washington, DC 20037
(202) 715-4000

Medics USA Urgent Care Services
1700 17th Street, NW, Suite A
Washington, DC 20008
(202) 483-4400

Key to Poster Floor by Themes

The poster floor begins with Theme A in Hall C and ends with Theme H in Hall A. Refer to the poster floor map at the end of this booklet.

Theme

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

NOTE: Theme H Posters will be on display in Hall A beginning at 1 p.m. on Saturday, November 15, and will remain posted until 5 p.m., Sunday, November 16. One-hour presentations will occur either Saturday afternoon or Sunday morning.

Cover Image: The image shows a third instar larval eye imaginal disc. Neurons are marked with anti-HRP (blue), and glial nuclei are marked with anti-Repo (red). A MARCM clone is induced in glial cells with the repoFlp transgene.

Marion Silies, Yeliz Yuva, Daniel Engelen, Annukka Aho, Tobias Stork and Christian Klämbt, 2007, *The Journal of Neuroscience*, 28: 27(48): 13130-13139

Tuesday Highlights

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

Special Lecture
Learning and Relearning Movement CME
Amy J. Bastian, PhD
Kennedy Krieger Institute, Johns Hopkins University School of Medicine
8:30–9:40 a.m.
Walter E. Washington Convention Center: Hall D

Symposium
Aerobic Glycolysis in the Brain: Emerging Roles of Lactate in Synaptic Plasticity and Axonal Function CME
Chair: Pierre J. Magistretti, MD, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: 151AB

Symposium
Neural and Immune Mechanisms Regulating Resilience to Stress CME
Chair: Seema Bhatnagar, PhD
Co-chair: Scott Russo, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: Ballroom A

Symposium
Toward Naturalistic Interactive Neuroimaging CME
Chair: Talma Hendler, MD, PhD
Co-chair: Gadi Gilam
8:30-11 a.m.
Walter E. Washington Convention Center: Ballroom C

Minisymposium
Novel RNA Modifications in the Nervous System: Form and Function CME
Chair: John Satterlee, PhD
Co-chair: Jonathan Pollock, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: Ballroom B

Minisymposium
The Role of Mitochondrial Dynamics and Brain Metabolism in Health and Disease CME
Chair: Eugenia Trushina, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: 145B

Minisymposium
Trafficking Dysfunction in Neurodegenerative Diseases CME
Chair: Gopal Thinakaran, PhD
Co-chair: Huaxi Xu, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: 146AB

Special Lecture
Persistent Cocaine-Induced Plasticity and Synaptic Targets for Its Reversal CME
Marina E. Wolf, PhD
Rosalind Franklin University of Medicine and Science
10–11:10 a.m.
Walter E. Washington Convention Center: Hall D

Special Lecture
How Do You Feel? The Role of Mechanically Activated Ion Channels in Touch, Pain, Hearing, and Beyond CME
Ardem Patapoutian, PhD
The Scripps Research Institute,
Howard Hughes Medical Institute
11:30 a.m.–12:40 p.m.
Walter E. Washington Convention Center: Hall D

Animals in Research Panel
Global Ramifications of New Animal Rights Tactics
noon–2 p.m.
Walter E. Washington Convention Center: 103A

Celebration of Women in Neuroscience Luncheon
noon–2 p.m.
Renaissance Washington, DC: Grand Ballroom North

Graduate School Fair
noon–2 p.m.
Walter E. Washington Convention Center: Hall E

Special Lecture
Generating and Shaping Novel Action Repertoires CME
Rui M. Costa, DVM, PhD
Champalimaud Foundation, Portugal
1–2:10 p.m.
Walter E. Washington Convention Center: Hall D

Plan to Attend

Wednesday, Nov. 19

Special Lecture
Exocytosis of Synaptic Vesicles: A Molecular Perspective CME
Reinhard Jahn, PhD
Max Planck Institute for Biophysical Chemistry, Germany
8:30–9:40 a.m.
Walter E. Washington Convention Center: Hall D

Special Lecture
The Sensory Neurons of Touch CME
David D. Ginty, PhD
Harvard Medical School,
Howard Hughes Medical Institute
11:30 a.m.–12:40 p.m.
Walter E. Washington Convention Center: Hall D

Special Lecture
Affective Neuroscience of Reward: Limbic Modules for Liking and Wanting CME
Kent C. Berridge, PhD
University of Michigan, Ann Arbor
1–2:10 p.m.
Walter E. Washington Convention Center: Hall D

Tuesday Highlights

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

Symposium

Auditory Cortical Processing in Real-World Listening CME

Chair: Israel Nelken, PhD
Co-chair: Jennifer Bizley, PhD
1:30–4 p.m.
Walter E. Washington Convention Center: Ballroom C

Symposium

Cellular and Molecular Mechanisms of Neural Regeneration CME

Chair: Zhigang He, PhD
Co-chair: Jeffery Goldberg, MD, PhD
1:30–4 p.m.
Walter E. Washington Convention Center: Ballroom A

Symposium

More Than a Pore: Ion Channel Signaling Complexes CME

Chair: Amy Lee, PhD
1:30–4 p.m.
Walter E. Washington Convention Center: 151AB

Minisymposium

Bath Salts, Spice, and Related Designer Drugs: The Science Behind the Headlines CME

Chair: Michael H. Baumann, PhD
Co-chair: Jenny L. Wiley, PhD
1:30–4 p.m.
Walter E. Washington Convention Center: Ballroom B

Minisymposium

Hypothalamic Control of Autonomic Nervous System Outflow and Obesity: Impact on Multiple Systems CME

Chair: Colleen M. Novak, PhD
Co-chair: Haifei Shi, PhD
1:30–4 p.m.
Walter E. Washington Convention Center: 146AB

Minisymposium

Noradrenergic Function and Dysfunction: New Insight From Selective Genetic Targeting of Locus Coeruleus CME

Chair: Elena M. Vazey, PhD
1:30–4 p.m.
Walter E. Washington Convention Center: 145B

Fred Kavli History of Neuroscience Lecture

The Messengers of the Mind

Floyd E. Bloom, MD
The Scripps Research Institute
2:30–3:40 p.m.
Walter E. Washington Convention Center: Hall D
Support contributed by: The Kavli Foundation

Public Advocacy Forum

Implications for Science Funding in an Era of Global Brain Initiatives

3–5 p.m.
Walter E. Washington Convention Center: 201

Presidential Special Lecture

Stem Cells in the Brain: Glial Identity and Niches CME

Fiona Doetsch, PhD
Columbia University
5:15–6:25 p.m.
Walter E. Washington Convention Center: Hall D
Support contributed by: Janssen Research and Development, LLC

SfN Members' Business Meeting

6:45–7:30 p.m.
Walter E. Washington Convention Center: 202B

SfN-Sponsored Socials

6:45–8:45 p.m.
Renaissance Washington, DC Downtown
Meeting Rooms
See page xiii.

Graduate Student Reception

9 p.m.–midnight.
Renaissance Washington, DC: Grand Ballroom

Chronological List of Tuesday Sessions

Theme Descriptions

A Development

B Neural Excitability, Synapses, and Glia: Cellular Mechanisms

C Disorders of the Nervous System

D Sensory and Motor Systems

E Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

F Cognition and Behavior

G Novel Methods and Technology Development

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

All posters will be presented in the Walter E. Washington Convention Center, Halls A–C. All lecture, symposium, minisymposium, and nanosymposium rooms are in the Walter E. Washington Convention Center.
Note: Theme H Posters will be on display in Hall A beginning at 1 p.m. on Saturday, Nov. 15, and will remain posted until 5 p.m. on Sunday, Nov. 16. One-hour presentation times will occur either Saturday afternoon or Sunday morning.

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
FEATURED PROGRAMS							
472	D	Learning and Relearning Movement	Special Lecture		Hall D	8:30–9:40 a.m.	1.25
473	B	Aerobic Glycolysis in the Brain: Emerging Roles of Lactate in Synaptic Plasticity and Axonal Function	Symposium		Room 151AB	8:30–11 a.m.	2.5
474	E	Neural and Immune Mechanisms Regulating Resilience to Stress	Symposium		Ballroom A	8:30–11 a.m.	2.5
475	F	Toward Naturalistic Interactive Neuroimaging	Symposium		Ballroom C	8:30–11 a.m.	2.5
476	A	Novel RNA Modifications in the Nervous System: Form and Function	Minisymposium		Ballroom B	8:30–11 a.m.	2.5
477	C	The Role of Mitochondrial Dynamics and Brain Metabolism in Health and Disease	Minisymposium		Room 145B	8:30–11 a.m.	2.5
478	C	Trafficking Dysfunction in Neurodegenerative Diseases	Minisymposium		Room 146AB	8:30–11 a.m.	2.5
479	C	Persistent Cocaine-Induced Plasticity and Synaptic Targets for Its Reversal	Special Lecture		Hall D	10–11:10 a.m.	1.25
480	B	How Do You Feel? The Role of Mechanically Activated Ion Channels in Touch, Pain, Hearing, and Beyond	Special Lecture		Hall D	11:30 a.m.–12:40 p.m.	1.25
567	F	Generating and Shaping Novel Action Repertoires	Special Lecture		Hall D	1–2:10 p.m.	1.25
568	D	Auditory Cortical Processing in Real-World Listening	Symposium		Ballroom C	1:30–4 p.m.	2.5
569	A	Cellular and Molecular Mechanisms of Neural Regeneration	Symposium		Ballroom A	1:30–4 p.m.	2.5
570	B	More Than a Pore: Ion Channel Signaling Complexes	Symposium		Room 151AB	1:30–4 p.m.	2.5
571	C	Bath Salts, Spice, and Related Designer Drugs: The Science Behind the Headlines	Minisymposium		Ballroom B	1:30–4 p.m.	2.5
572	E	Hypothalamic Control of Autonomic Nervous System Outflow and Obesity: Impact on Multiple Systems	Minisymposium		Room 146AB	1:30–4 p.m.	2.5
573	F	Noradrenergic Function and Dysfunction: New Insight From Selective Genetic Targeting of Locus Coeruleus	Minisymposium		Room 145B	1:30–4 p.m.	2.5
574		The Messengers of the Mind	Fred Kavli History of Neuroscience Lecture		Hall D	2:30–3:40 p.m.	
575		Stem Cells in the Brain: Glial Identity and Niches	Presidential Special Lecture		Hall D	5:15–6:25 p.m.	1.25

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
NANOSYMPOSIA (8 A.M.–NOON)							
481	B	Oscillations and Synchrony	Nanosymposium		Room 152B	8–10:45 a.m.	
482	C	Aggregation of Amyloid, Tau, and Other Proteins	Nanosymposium		Room 152A	8–11:15 a.m.	
483	C	Modeling APP and Abeta Pathology in Animals	Nanosymposium		Room 147B	8–10:15 a.m.	
484	C	Alpha-Synuclein and LRRK2 Mechanisms in Parkinson's Disease	Nanosymposium		Room 146C	8–10:45 a.m.	
485	C	Epilepsy: Circuits, Mechanisms, and Potential Therapies	Nanosymposium		Room 144A	8–11:15 a.m.	
486	C	Traumatic Brain Injury: Therapeutic Strategies I	Nanosymposium		Room 156	8–11:30 a.m.	
487	C	Biomarkers for Psychosis: EEG and Imaging	Nanosymposium		Room 150B	8–11:15 a.m.	
488	D	Auditory System: Circuits and Perception	Nanosymposium		Room 143A	8–11 a.m.	
489	D	Striate Cortex	Nanosymposium		Room 206	8–11:15 a.m.	
490	E	Psychosocial Stress and the Brain	Nanosymposium		Room 140A	8–11 a.m.	
491	F	Perception and Imagery	Nanosymposium		Room 147A	8–11:30 a.m.	
492	F	Human Reinforcement Learning: Development and Aging	Nanosymposium		Room 150A	8–11:15 a.m.	
POSTERS (8 A.M.–NOON)							
493	A	Patterning of Brain	Poster	A1–A24	Halls A–C	8 a.m.–noon	
494	A	Brain Patterning and Cell Death	Poster	A25–A50	Halls A–C	8 a.m.–noon	
495	A	Proliferation: Self-Renewal and Cell Cycle	Poster	A51–B9	Halls A–C	8 a.m.–noon	
496	A	Proliferation: Molecular Mechanisms	Poster	B10–B29	Halls A–C	8 a.m.–noon	
497	A	Neuron-Glia Interactions During Development	Poster	B30–B51	Halls A–C	8 a.m.–noon	
498	A	Development of Motor, Sensory, and Limbic Systems	Poster	B52–C6	Halls A–C	8 a.m.–noon	
499	A	Evolution of Developmental Mechanisms	Poster	C7–C27	Halls A–C	8 a.m.–noon	
500	B	Structure and Function of Nicotinic Receptors and Asics	Poster	C28–C56	Halls A–C	8 a.m.–noon	
501	B	NMDA Receptor Structure and Function	Poster	C57–D8	Halls A–C	8 a.m.–noon	
502	B	Purine and Other G-Protein Coupled Receptors	Poster	D9–D38	Halls A–C	8 a.m.–noon	
503	B	Serotonin and GABA Transporters	Poster	D39–D50	Halls A–C	8 a.m.–noon	
504	B	Dopamine Transporters	Poster	D51–E4	Halls A–C	8 a.m.–noon	
505	B	LTP: Kinases and Intracellular Signaling	Poster	E5–F10	Halls A–C	8 a.m.–noon	
506	B	Spike Timing Dependent Plasticity	Poster	F11–G10	Halls A–C	8 a.m.–noon	
507	B	Cellular Mechanisms of Modulation of Neuronal Firing Properties	Poster	G11–I12	Halls A–C	8 a.m.–noon	
508	B	Astroglia Function and Reaction to Pathological Processes	Poster	J1–L8	Halls A–C	8 a.m.–noon	
509	B	Microglia Activation Pathways	Poster	L9–N3	Halls A–C	8 a.m.–noon	
510	B	Microglia Functions	Poster	N4–O12	Halls A–C	8 a.m.–noon	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
511	B	Glial Physiology and Glia-Neuronal Physiology	Poster	P1–R9	Halls A–C	8 a.m.–noon	
512	C	Parkinson's Disease: Imaging, Dyskinesia, and Development	Poster	R10–T4	Halls A–C	8 a.m.–noon	
513	C	Parkinson's Disease: Neuroprotection	Poster	T5–U13	Halls A–C	8 a.m.–noon	
514	C	Motor Neuron Disease Therapeutics	Poster	U14–V4	Halls A–C	8 a.m.–noon	
515	C	Rett Syndrome	Poster	V5–V32	Halls A–C	8 a.m.–noon	
516	C	Down Syndrome Anatomical and Behavioral Correlations	Poster	W1–W13	Halls A–C	8 a.m.–noon	
517	C	Developmental Disorders II	Poster	W14–W31	Halls A–C	8 a.m.–noon	
518	C	Developmental Disorders: Animal Models I	Poster	W32–Y1	Halls A–C	8 a.m.–noon	
519	C	Developmental Disorders: Animal Models II	Poster	Y2–Y30	Halls A–C	8 a.m.–noon	
520	C	Animal Models of Epilepsy II	Poster	Y31–Z21	Halls A–C	8 a.m.–noon	
521	C	Anticonvulsant and Antiepileptic Therapies	Poster	Z22–AA4	Halls A–C	8 a.m.–noon	
522	C	Traumatic Brain Injury: Mechanisms and Therapeutics I	Poster	AA5–BB8	Halls A–C	8 a.m.–noon	
523	C	Spinal Cord Injury: Therapeutic Strategies II	Poster	BB9–CC5	Halls A–C	8 a.m.–noon	
524	C	Schizophrenia: Dopamine and Antipsychotic Drugs	Poster	CC6–CC24	Halls A–C	8 a.m.–noon	
525	C	Schizophrenia: Experimental Therapeutics and Preclinical Pharmacology	Poster	CC25–DD10	Halls A–C	8 a.m.–noon	
526	C	Opiate Reinforcement	Poster	DD11–DD22	Halls A–C	8 a.m.–noon	
527	C	Monoamines and Behavior: Serotonin and Histamine	Poster	DD23–EE7	Halls A–C	8 a.m.–noon	
528	C	Drug Discovery and Development: Neurodegenerative Diseases II	Poster	EE8–FF1	Halls A–C	8 a.m.–noon	
529	D	Auditory Processing: Temporal, Frequency, and Spectral Processing-Perception	Poster	FF2–FF13	Halls A–C	8 a.m.–noon	
530	D	Auditory Processing: Neural Coding, Animal Studies, and Computation	Poster	FF14–FF25	Halls A–C	8 a.m.–noon	
531	D	Auditory Processing: Neural Coding, Human Experiment, and Theory	Poster	FF26–GG3	Halls A–C	8 a.m.–noon	
532	D	Striate Cortex: Intracortical Circuitry	Poster	GG4–GG26	Halls A–C	8 a.m.–noon	
533	D	Eye Movements and Perception	Poster	GG27–HH11	Halls A–C	8 a.m.–noon	
534	D	Nociceptors: Molecular and Pharmacological Studies	Poster	HH12–II6	Halls A–C	8 a.m.–noon	
535	D	Somatosensory: Local Cortical Circuits	Poster	II7–JJ4	Halls A–C	8 a.m.–noon	
536	D	Plasticity After Spinal Cord Injury I	Poster	JJ5–JJ26	Halls A–C	8 a.m.–noon	
537	D	Plasticity After Spinal Cord Injury II	Poster	JJ27–KK12	Halls A–C	8 a.m.–noon	
538	D	Circuit Connectivity	Poster	KK13–LL5	Halls A–C	8 a.m.–noon	
539	D	Motor Neurons and Muscle	Poster	LL6–MM7	Halls A–C	8 a.m.–noon	
540	D	Cortex and Nuclei: Anatomy and *In vitro* Studies	Poster	MM8–MM19	Halls A–C	8 a.m.–noon	
541	D	Transmitters and Neuromodulation	Poster	MM20–NN1	Halls A–C	8 a.m.–noon	
542	D	Plasticity of Voluntary Movements	Poster	NN2–NN29	Halls A–C	8 a.m.–noon	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
543	E	Luteinizing Hormone Secretion, Puberty, and Seasonality	Poster	NN30-OO8	Halls A–C	8 a.m.–noon	
544	E	Sexual Differentiation	Poster	OO9-OO21	Halls A–C	8 a.m.–noon	
545	E	Neuroimmunology: Behavioral Effects	Poster	OO22-PP18	Halls A–C	8 a.m.–noon	
546	E	Stress: Cellular Consequences	Poster	PP19-QQ10	Halls A–C	8 a.m.–noon	
547	E	Stress: Neurodevelopmental Aspects	Poster	QQ11-QQ22	Halls A–C	8 a.m.–noon	
548	E	Sleep: Mechanisms and Molecules I	Poster	QQ23-RR15	Halls A–C	8 a.m.–noon	
549	E	Sleep: Mechanisms and Molecules II	Poster	RR16-RR26	Halls A–C	8 a.m.–noon	
550	F	Visual Perception: Neural Mechanisms	Poster	RR27-RR48	Halls A–C	8 a.m.–noon	
551	F	Human Long-Term Memory: Medial Temporal Lobe III	Poster	RR49-SS26	Halls A–C	8 a.m.–noon	
552	F	Language: Neuropsychological Approaches	Poster	SS27-SS44	Halls A–C	8 a.m.–noon	
553	F	Human Emotion: Behavioral and Neural Mechanisms	Poster	SS45-TT3	Halls A–C	8 a.m.–noon	
554	F	Working Memory II	Poster	TT4-TT19	Halls A–C	8 a.m.–noon	
555	F	Human Decision-Making: Cognition and Computation	Poster	TT20-TT44	Halls A–C	8 a.m.–noon	
556	F	Human Cognition: Timing and Temporal Processing	Poster	TT45-TT71	Halls A–C	8 a.m.–noon	
557	F	Executive Function: Models of Disorders I	Poster	TT72-TT88	Halls A–C	8 a.m.–noon	
558	F	Decision Making I	Poster	TT89-UU25	Halls A–C	8 a.m.–noon	
559	F	Memory Consolidation and Reconsolidation: Neural Mechanisms	Poster	UU26-UU47	Halls A–C	8 a.m.–noon	
560	F	Hippocampal and Cortical Circuits II	Poster	UU48-UU68	Halls A–C	8 a.m.–noon	
561	F	Invertebrate Learning and Memory II	Poster	UU69-UU85	Halls A–C	8 a.m.–noon	
562	F	Decision-Making: Neuropharmacology	Poster	UU86-VV6	Halls A–C	8 a.m.–noon	
563	F	Motivation and Emotions: Neurocircuitry	Poster	VV7-VV28	Halls A–C	8 a.m.–noon	
564	F	Social Behavior: Neuropharmacology	Poster	VV29-VV39	Halls A–C	8 a.m.–noon	
565	F	Vocal Communication in Songbirds: Sensory and Motor Mechanisms II	Poster	VV40-VV62	Halls A–C	8 a.m.–noon	
566	G	Optical Methods for Studying Neural Pathways	Poster	VV63-VV83	Halls A–C	8 a.m.–noon	
NANOSYMPOSIA (1–5 P.M.)							
576	A	Synapse Function in Development and Disease	Nanosymposium		Room 147A	1–3:15 p.m.	
577	B	Physiology of Glia-Neuronal Interactions	Nanosymposium		Room 206	1–4:30 p.m.	
578	C	Tauopathy: Molecular Pathogenesis and Experimental Therapy	Nanosymposium		Room 152A	1–3 p.m.	
579	C	Risk Factors for Neurodegenerative Diseases	Nanosymposium		Room 150B	1–3:15 p.m.	
580	C	Parkinson's Disease: Mechanisms and Circuits	Nanosymposium		Room 146C	1–3:45 p.m.	
581	C	Ischemia: Cellular Mechanisms and Neuroprotection II	Nanosymposium		Room 156	1–3 p.m.	
582	D	Visual Processing: Faces	Nanosymposium		Room 143A	1–4:15 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
583	D	Brainstem: Motor and Sensory Systems	Nanosymposium		Room 144A	1–3:15 p.m.	
584	E	Early Exposure to Stress: Environmental Factors	Nanosymposium		Room 147B	1–3:45 p.m.	
585	E	Brain Glucose and Energy-Sensing	Nanosymposium		Room 152B	1–4:15 p.m.	
586	F	Human Long-Term Memory: Encoding-Retrieval Interactions	Nanosymposium		Room 140A	1–4:30 p.m.	
587	F	Human Decision-Making: Neural Mechanisms	Nanosymposium		Room 150A	1–3:45 p.m.	
POSTERS (1–5 P.M.)							
588	A	Neuronal Differentiation: Transcriptional Mechanisms	Poster	A1-A11	Halls A–C	1–5 p.m.	
589	A	Oligodendrocyte and Schwann Cell Biology	Poster	A12-A32	Halls A–C	1–5 p.m.	
590	A	Disease Modeling Using Pluripotent Stem Cells II	Poster	A33-A62	Halls A–C	1–5 p.m.	
591	A	Axon Growth and Guidance: Cytoskeletal Dynamics	Poster	A63-B15	Halls A–C	1–5 p.m.	
592	A	Axon Growth and Guidance: Adhesion Molecules	Poster	B16-B28	Halls A–C	1–5 p.m.	
593	A	Axon Growth and Guidance: Intrinsic Mechanisms	Poster	B29-B58	Halls A–C	1–5 p.m.	
594	A	Axon Growth and Guidance: Extrinsic Mechanisms	Poster	B59-C11	Halls A–C	1–5 p.m.	
595	A	Extrinsic Mechanisms Controlling CNS Regeneration	Poster	C12-C28	Halls A–C	1–5 p.m.	
596	B	Synaptic Signaling: Retrograde Messengers	Poster	C29-C42	Halls A–C	1–5 p.m.	
597	B	Cellular Mechanisms of Neural Excitability: Ion Channels	Poster	C43-C59	Halls A–C	1–5 p.m.	
598	B	Presynaptic Organization and Structure	Poster	C60-D15	Halls A–C	1–5 p.m.	
599	B	Synaptic Transmission: Modulation III	Poster	D16-D42	Halls A–C	1–5 p.m.	
600	B	Synaptic Plasticity: Short-Term Plasticity	Poster	D43-D55	Halls A–C	1–5 p.m.	
601	B	Long-Term Depression	Poster	D56-E3	Halls A–C	1–5 p.m.	
602	C	Autism Behavioral Analysis I	Poster	E4-G3	Halls A–C	1–5 p.m.	
603	C	Autism Genetic Models	Poster	G4-I2	Halls A–C	1–5 p.m.	
604	C	Autism Synaptic and Cellular Mechanisms	Poster	I3-K3	Halls A–C	1–5 p.m.	
605	C	Status Epilepticus-Induced Changes	Poster	K4-L9	Halls A–C	1–5 p.m.	
606	C	Human Studies of Epilepsy	Poster	L10-O1	Halls A–C	1–5 p.m.	
607	C	Traumatic Brain Injury: Cellular Events and Repair	Poster	O2-Q3	Halls A–C	1–5 p.m.	
608	C	Traumatic Brain Injury: Mechanisms and Therapeutics II	Poster	Q4-S12	Halls A–C	1–5 p.m.	
609	C	Spinal Cord Signaling in Trauma	Poster	T1-U11	Halls A–C	1–5 p.m.	
610	C	Neuroprotection in Ischemia, Stress, and Injury	Poster	U12-U30	Halls A–C	1–5 p.m.	
611	C	Ischemia Inflammation: White Cells and Cytokines	Poster	U31-V6	Halls A–C	1–5 p.m.	
612	C	Neuroinflammation: HIV and Infections	Poster	V7-V26	Halls A–C	1–5 p.m.	
613	C	Schizophrenia: Glutamate	Poster	V27-W14	Halls A–C	1–5 p.m.	
614	C	Biomarkers in Serious Mental Illness	Poster	W15-X4	Halls A–C	1–5 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
615	C	Depression Biology	Poster	X5-Y8	Halls A–C	1–5 p.m.	
616	C	Cocaine: Behavioral Studies	Poster	Y9-Y30	Halls A–C	1–5 p.m.	
617	C	Cocaine: Neural Mechanisms III	Poster	Y31-Z16	Halls A–C	1–5 p.m.	
618	C	Cocaine and Amphetamine Reinforcement	Poster	Z17-Z31	Halls A–C	1–5 p.m.	
619	C	Exposure to Addictive Drugs: Genetic and Behavioral Effects	Poster	Z32-AA22	Halls A–C	1–5 p.m.	
620	D	Olfactory Sensory Neurons: Development and Signal Transduction	Poster	AA23-BB13	Halls A–C	1–5 p.m.	
621	D	Taste	Poster	BB14-CC6	Halls A–C	1–5 p.m.	
622	D	Auditory Processing: Human Studies of Perception, Cognition, and Action	Poster	CC7-CC34	Halls A–C	1–5 p.m.	
623	D	Multisensory: Cross-Modal Processing in Humans, Audio-Visual	Poster	CC35-DD11	Halls A–C	1–5 p.m.	
624	D	Visual Cognition: Decision-Making	Poster	DD12-DD27	Halls A–C	1–5 p.m.	
625	D	Multisensory and Motor Interactions	Poster	DD28-EE25	Halls A–C	1–5 p.m.	
626	D	Eye Movement Behavior	Poster	EE26-FF19	Halls A–C	1–5 p.m.	
627	D	Spinal Cord Processing: Anatomy and Physiology	Poster	FF20-GG8	Halls A–C	1–5 p.m.	
628	D	Visceral Pain	Poster	GG9-GG29	Halls A–C	1–5 p.m.	
629	D	Spinal Cord Injury and Plasticity I	Poster	GG30-HH11	Halls A–C	1–5 p.m.	
630	D	Spinal Cord Injury: Repair, Training, and Rehabilitation I	Poster	HH12-II9	Halls A–C	1–5 p.m.	
631	D	Afferent and Descending Control	Poster	II10-JJ3	Halls A–C	1–5 p.m.	
632	D	Cortex and Nuclei: *In Vivo* Studies	Poster	JJ4-JJ23	Halls A–C	1–5 p.m.	
633	D	Systems Physiology and Behavior	Poster	JJ24-KK16	Halls A–C	1–5 p.m.	
634	D	Motor Skill-Learning	Poster	KK17-LL9	Halls A–C	1–5 p.m.	
635	D	Reaching Learning	Poster	LL10-MM7	Halls A–C	1–5 p.m.	
636	D	Rehabilitation	Poster	MM8-NN1	Halls A–C	1–5 p.m.	
637	D	Craniofacial Functions	Poster	NN2-NN23	Halls A–C	1–5 p.m.	
638	D	Brain-Machine Interface: Implanted Electrodes II	Poster	NN24-OO2	Halls A–C	1–5 p.m.	
639	E	Neurosteroids	Poster	OO3-OO15	Halls A–C	1–5 p.m.	
640	E	Steroids and Plasticity	Poster	OO16-PP2	Halls A–C	1–5 p.m.	
641	E	Social Behavior: Drivers and Mechanisms	Poster	PP3-PP21	Halls A–C	1–5 p.m.	
642	E	Hormones and Cognition	Poster	PP22-QQ19	Halls A–C	1–5 p.m.	
643	E	Respiratory Neurobiology	Poster	QQ20-RR12	Halls A–C	1–5 p.m.	
644	E	Stress and Cognition	Poster	RR13-RR34	Halls A–C	1–5 p.m.	
645	E	Circadian Clock	Poster	RR35-RR49	Halls A–C	1–5 p.m.	
646	F	Human Long-Term Memory: Encoding Retrieval Interactions	Poster	RR50-SS15	Halls A–C	1–5 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
647	F	Attentional Networks: Brain-Behavior Relations	Poster	SS16-SS40	Halls A–C	1–5 p.m.	
648	F	Executive Function I	Poster	SS41-SS65	Halls A–C	1–5 p.m.	
649	F	Human Social Cognition II	Poster	SS66-TT14	Halls A–C	1–5 p.m.	
650	F	Appetitive and Incentive Learning and Memory II	Poster	TT15-TT35	Halls A–C	1–5 p.m.	
651	F	Decision Making II	Poster	TT36-TT64	Halls A–C	1–5 p.m.	
652	F	Learning and Memory: Physiology II	Poster	TT65-TT80	Halls A–C	1–5 p.m.	
653	F	Learning and Memory: Aging I	Poster	TT81-UU4	Halls A–C	1–5 p.m.	
654	F	Motivation and Emotions: Fear and Pain	Poster	UU5-UU25	Halls A–C	1–5 p.m.	
655	F	Motivation and Emotions: Rodent Anxiety Models	Poster	UU26-UU45	Halls A–C	1–5 p.m.	
656	F	Reward II	Poster	UU46-UU65	Halls A–C	1–5 p.m.	
657	G	Techniques for Profiling and Manipulating Defined Neuronal Populations	Poster	UU66-VV3	Halls A–C	1–5 p.m.	
658	G	Techniques to Image or Modulate Neural Activity	Poster	VV4-VV20	Halls A–C	1–5 p.m.	
659	G	Optogenetics: Integration With Electrophysiology	Poster	VV21-VV39	Halls A–C	1–5 p.m.	
660	G	Cellular Electrophysiological Methods	Poster	VV40-VV52	Halls A–C	1–5 p.m.	
661	G	Electrophysiology Recording Tools and Techniques	Poster	VV53-VV83	Halls A–C	1–5 p.m.	
MEETINGS AND EVENTS							
ME10		Animals in Research Panel: Global Ramifications of New Animal Rights Tactics	Meetings and Events		Room 103A	noon–2 p.m.	
ME11		Celebration of Women in Neuroscience Luncheon	Meetings and Events		Renaissance Washington, DC: Grand Ballroom North	noon–2 p.m.	
ME12		Graduate School Fair	Meetings and Events		Hall E	noon–2 p.m.	
ME13		Public Advocacy Forum: Implications for Science Funding in an Era of Global Brain Initiatives	Meetings and Events		Room 201	3–5 p.m.	
ME14		SfN Members' Business Meeting	Meetings and Events		Room 202B	6:45–8:30 p.m.	
ME15		Graduate Student Reception	Meetings and Events		Renaissance Washington, DC: Grand Ballroom	9 p.m.–midnight	
SfN–SPONSORED SOCIALS (6:45–8:30 P.M.)							
SOC20		Cognitive Neuroscience Social: Where Brains and Minds Meet	SfN–Sponsored Social		Renaissance Washington, DC: Congressional Ballroom C	6:45–8:45 p.m.	
SOC21		Computational Neuroscience Social	SfN–Sponsored Social		Renaissance Washington, DC: Renaissance Ballroom East	6:45–8:45 p.m.	
SOC22		Epilepsy Social	SfN–Sponsored Social		Renaissance Washington, DC: Congressional Ballroom A & B	6:45–8:45 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
SOC23		Neuroendocrinology Social	SfN–Sponsored Social		Renaissance Washington, DC: Renaissance Ballroom West A	6:45–8:45 p.m.	
SOC24		Neuroethics Social: What Is the Top Ethical Consideration for Your Neuroscience Research?	SfN–Sponsored Social		Renaissance Washington, DC: Renaissance Ballroom West B	6:45–8:45 p.m.	
SOC25		Optogenetics Social	SfN–Sponsored Social		Renaissance Washington, DC: Meeting Rooms 12, 13 & 14	6:45–8:45 p.m.	
SOC26		Sensorimotor Social	SfN–Sponsored Social		Renaissance Washington, DC: Mount Vernon Square B	6:45–8:45 p.m.	
SOC27		Songbird Social	SfN–Sponsored Social		Renaissance Washington, DC: Meeting Room 15	6:45–8:45 p.m.	

Dynamic Posters — Tuesday AM/PM

Tuesday's dynamic poster presentations are listed below. The listing includes the locations of each dynamic poster's corresponding paper poster. All dynamic poster presentations will occur in the Walter E. Washington Convention Center, Halls A-C. Dynamic poster displays are numbered DP1–DP10 and are spread throughout the poster floor. For full dynamic poster abstracts, visit the Neuroscience Meeting Planner or annual meeting mobile app.

THEME	ABSTRACT TITLE	PRESENTER	DYNAMIC POSTER LOCATION	PAPER POSTER LOCATION	PAPER POSTER PRES. NO.
DYNAMIC POSTERS (8 A.M.–NOON)					
Theme A: Development	A developmental approach to long-distance connectivity and interhemispheric collaboration	Benjamin Cipollini	DP1	C24	499.18
Theme A: Development	Are the foundations for embodied activity already embedded in heterogeneous laminar networks?	Elan Ohayon	DP2	C18	499.12
Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms	Transmembrane conformational signaling at NMDA receptors independent of ion flow during synaptic plasticity	Kim Dore	DP3	C65	501.09
Theme C: Disorders of the Nervous System	Stalled capillary flow is a novel mechanism for hypoperfusion in Alzheimer's disease	Nozomi Nishimura	DP4	K2	508.14
Theme C: Disorders of the Nervous System	Analysis of whole–brain X–chromosome inactivation within MeCP2 mutant and wild type mice	Eric Szelenyi	DP5	V23	515.19
Theme D: Sensory and Motor Systems	Predictive in silico reconstruction of neuronal input-output organization in the neocortical microcircuit	Srikanth Ramaswamy	DP6	II15	535.09
Theme D: Sensory and Motor Systems	*In vivo* two–photon imaging of cortico-cerebellar mossy fiber synapses	Daria Rylkova	DP7	MM16	540.09
Theme F: Cognition and Behavior	Anatomical connections subserving the default mode network in monkeys	Sarah Heilbronner	DP8	VV27	563.21
Theme F: Cognition and Behavior	ZEBrA Redux: An improved digital atlas for exploring brain gene expression in the adult male Zebra Finch (www.zebrafinchatlas.org)	Claudio Mello	DP9	VV44	565.05
Theme G: Novel Methods and Technology Development	CLARITY-based whole brain activity mapping with immediate early gene TRAP	Li Ye	DP10	VV73	566.11
DYNAMIC POSTERS (1–5 P.M.)					
Theme A: Development	Fully automated quantification of growth cone dynamics at high resolution reveals differential regimes in RhoGTPase function	Maria Bagonis	DP1	B15	591.21
Theme A: Development	TACC3 is a microtubule plus-end tracking protein that promotes axon elongation and microtubule polymerization in growth cones	Laura Lowery	DP2	D10	591.16
Theme C: Disorders of the Nervous System	Clonal analysis of newborn hippocampal dentate granule cell proliferation and development in temporal lobe epilepsy	Shatrunjai Singh	DP3	L2	605.08
Theme C: Disorders of the Nervous System	Deviations from critical dynamics in inter-ictal epileptiform activity	Oshrit Arviv	DP4	N12	606.27
Theme C: Disorders of the Nervous System	A hypo–status revealed by multi-modal neuroimaging in drug addicted Brain	Ze Wang	DP5	AA3	619.08
Theme D: Sensory and Motor Systems	Optical interrogation of peripheral taste sensation *in vivo*	Myunghwan Choi	DP6	BB31	621.18
Theme D: Sensory and Motor Systems	Whole brain cellular resolution mapping of circuits underlying goal-directed behavior in zebrafish	Christopher Harris	DP7	DD30	625.03
Theme D: Sensory and Motor Systems	Restoration of sensory and motor hand function via two Utah Slanted Electrode Arrays (USEAs) in residual arm nerves after prior hand amputation	David Page	DP8	MM26	636.19
Theme G: Novel Methods and Technology Development	Quantification of protein levels in single cells *in vivo*	Chiu-An Lo	DP9	UU73	657.08
Theme G: Novel Methods and Technology Development	Simultaneous electrophysiology and calcium imaging in hippocampal slices using transparent electrodes	Duygu Kuzum	DP10	VV56	661.04

Tuesday Workshops, Meetings & Events

Professional Development, Advocacy, and Networking Resources

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

Animals in Research Panel

Global Ramifications of New Animal Rights Tactics

Organizer: Michael E. Goldberg, MD
Panelists: Richard Cupp, JD; Patricia Foley, DVM; Wendy Jarrett; Jeff Kordower, PhD
Noon–2 p.m.
Walter E. Washington Convention Center: 103A

Yesterday's terrorism tactics have given way to a new breed of activism with implications for all researchers that work with animal models. Today's tactics include misuse of governmental and regulatory processes. This not only drives up the cost of research but also forces researchers out of the lab to respond to unfounded claims. These tactics undermine the legitimate role of a strong regulatory framework. This panel will explore the global implications for biomedical research and how this new breed of activism impacts scientists.

Celebration of Women in Neuroscience Luncheon

Noon–2 p.m.
Renaissance Washington, DC: Grand Ballroom North and Central

The annual luncheon honors women leaders in neuroscience. Marian Joëls, PhD, Past President of the Federation of European Neuroscience Societies, will deliver a keynote address followed by a roundtable group discussion on a topic related to women in neuroscience. Space is limited. Registration is required. For more information, visit SfN.org/cwinrsvp.

Graduate School Fair

noon–2 p.m.
Walter E. Washington Convention Center: Hall E

Public Advocacy Forum

Implications for Science Funding in an Era of Global Brain Initiatives

Organizer: Anne Young, MD, PhD
Panelists: Sarah J. Caddick, PhD; Miyoung Chun, PhD; William T. Newsome, PhD; Hideyuki Okano, MD, PhD
3–5 p.m.
Walter E. Washington Convention Center: 201

Neuroscience has been identified as a priority through initiatives in the U.S., Europe, Asia, and other global programs. At a time of flat or declining budgets for biomedical research throughout much of the world, what are the implications of these initiatives for the future of science funding? What are the implications as researchers increasingly turn to alternative sources of funding, including private sector, nonprofit, and crowd funding? What effects may these shifts in funding sources have on individual research projects, primary investigators, universities, businesses, and science as a whole?

SfN Members' Business Meeting

6:45–7:30 p.m.
Walter E. Washington Convention Center: 202B

Participate in a key forum to share your thoughts and suggestions with SfN leadership while learning about your professional society's latest accomplishments. Learn how to get involved in SfN committees. Enjoy camaraderie with other SfN members as you enjoy light refreshments.

Graduate Student Reception

9 p.m.–midnight
Renaissance Washington, DC: Grand Ballroom

A reception will be held for graduate students and postdoctoral trainees. No invitation is required.

Tuesday Socials

Tuesday, Nov. 18, 6:45–8:45 p.m.

Cognitive Neuroscience Social: Where Brains and Minds Meet

Purely Social

Chair: Stephen J. Gotts, PhD

Co-chair: Kevin S. Weiner, PhD

Renaissance Washington, DC: Congressional Ballroom C

This is the most inclusive social! If you are interested in interactions between behavior, cognition, and the brain, we want you. Come have a drink and get your GABA on while we talk shop. Meet up with old friends, indoctrinate new friends, and sort out the intricacies of the biological underpinnings of mental, social, and affective processes.

Computational Neuroscience Social

Purely Social

Chair: Eilif Muller, PhD

Co-chair: Viola Priesemann, PhD

Guests: W. Bialek, K. Blackwell, N. Brunel, E. De Schutter, S. Deneve, G. Einevoll, B. Gutkin, K. Harris, D. Plenz, J. Rinzel, I. Segev, F.T. Sommer, T. Tchumatchenko

Renaissance Washington, DC: Renaissance Ballroom East

Join us for an evening with elegant models, great spirits, networking theories, and quadrillions of action potentials! Reunite with old friends, make new ones, mingle with top researchers and special guests, and learn about upcoming CompNeuro events. Everyone is welcome!

Epilepsy Social

Purely Social

Chair: Mark Beenhakker, PhD

Co-chair: Chris Dulla, PhD

Guests: S. Baraban, A. Brewster, A. Brooks-Kayal, S. Danzer, J. Huguenard, L. Jansen, F. Jensen, J. Kapur, J. Maguire, M. Patel, I. Soltesz, H.S. White

Renaissance Washington, DC: Congressional Ballroom A and B

Epilepsy research is a dynamic and diverse field. Meet and hang out with some of the pioneers in the field of epilepsy, as well as junior faculty who are moving the field in exciting new directions. Representatives from NIH, Citizens United for Research in Epilepsy (CURE), and other funding agencies also will be in attendance. Everyone with an interest in epilepsy is invited. Whether you're an undergraduate or coined the phrase "seizures beget seizures," come enjoy a few hours of fun conversation and networking!

Neuroendocrinology Social

Purely Social

Chair: Debra Bangasser, PhD

Co-chair: Georgia Hodes, PhD

Guests: T. Bale, S.M. Breedlove, M. McCarthy, B. McEwen, A. Murphy, K. Olsen, J. Pfaus, H. Richardson, R. Romeo, C. Sisk, R. Spencer, R. Valentino, L. Young

Renaissance Washington, DC: Renaissance Ballroom West A

This year's social will feature a battle of the sexes quiz show to determine whether men or women know more esoteric neuroendocrine trivia. Come and compare your knowledge with that of our expert contestants and see which team takes home the prize.

Neuroethics: What Is the Top Ethical Consideration for Your Neuroscience Research?

Social with Brief Presentation

Chair: Barbara J. Sahakian, PhD

Co-chair: Verity Brown, PhD

Guests: F.H. Gage, J. Giedd, G. Koob, B. Mason, H. Mayberg, A. Phillips, T. Robbins, C. Tamminga

Renaissance Washington, DC: Renaissance Ballroom West B

In this neuroethics panel, we will have experts defining the top ethical issue in their area of research and why they think it is important. Come and join in the discussion on ethical considerations of neuroscience research and the application of neuroscience research findings.

Optogenetics Social

Purely Social

Chair: Stephan Lammel, PhD

Co-chair: Elizabeth E. Steinberg, PhD

Renaissance Washington, DC: Meeting Rooms 12, 13, and 14

Laser or LED? NpHR or Arch? Wine or beer? Hash out these and other important issues with fellow neuroscientists interested in optogenetic approaches. Catch up with old friends and make new ones at this purely social event. Both neophytes and experienced practitioners are encouraged to attend.

Sensorimotor Social

Purely Social

Chair: Lena H. Ting, PhD

Co-chair: Alaa Ahmed, PhD

Renaissance Washington, DC: Mount Vernon B

This is a social gathering for all members of the sensorimotor research community.

Songbird Social

Purely Social

Chair: Kazuhiro Wada, MD, PhD

Guests: S. Canaria, T. Guttata, L. Striata, S. Vulgaris

Renaissance Washington, DC: Meeting Room 15

This is a purely social gathering to chat, tweet, or sing your song, like a songbird, with new and old friends.

Notes

Complete Session Listing

Tuesday AM

SPECIAL LECTURE *Walter E. Washington Convention Center*

472. Learning and Relearning Movement — CME

Tue. 8:30 AM - 9:40 AM — Hall D

Speaker: A. J. BASTIAN*, Kennedy Krieger Institute, Johns Hopkins Univ. Sch. of Med.*

Human motor learning depends on a suite of brain mechanisms that are driven by different signals and operate on timescales ranging from minutes to years. Understanding these processes requires identifying how new movement patterns are normally acquired, retained, and generalized, as well as the effects of distinct brain lesions. The lecture focuses on normal and abnormal motor learning and how we can use this information to improve rehabilitation for individuals with neurological damage.

SYMPOSIUM *Walter E. Washington Convention Center*

473. Aerobic Glycolysis in the Brain: Emerging Roles of Lactate in Synaptic Plasticity and Axonal Function — CME

Tue. 8:30 AM - 11:00 AM — 151AB

Chair: P. J. MAGISTRETTI

The coupling between neuronal activity and energy metabolism is critical for brain function and is tightly regulated, as best illustrated by functional brain imaging (e.g., PET and fMRI). Recent evidence indicates that CNS glial cells play a key role in this neurometabolic coupling. Specifically, lactate formed by astrocytes and oligodendrocytes under normoxic conditions through aerobic glycolysis is required for long-term memory, axon function maintenance, and survival.

8:30 **473.01** Introduction.

8:35 **473.02** Aerobic glycolysis in the human brain is associated with synaptic plasticity genes. M. E. RAICHLE. *Washington Univ.*

9:10 **473.03** The role of lactate transfer from astrocytes to neurons in long-term memory. C. ALBERINI. *New York Univ.*

9:45 **473.04** Lactate promotes plasticity gene expression by modulating NMDA receptor-mediated signaling. P. J. MAGISTRETTI. *EPFL.*

10:20 **473.05** A novel role of oligodendrocytes in axonal energy metabolism. K. NAVE. *Max-Planck-Institut für Experimentelle Medizin.*

10:55 **473.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

474. Neural and Immune Mechanisms Regulating Resilience to Stress — CME

Tue. 8:30 AM - 11:00 AM — Ballroom A

Chair: S. BHATNAGAR
Co-Chair: S. RUSSO

Despite increasing attention in the last few years toward identifying the neural mechanisms that underlie resilience to stress, our understanding of these mechanisms has been piecemeal and poorly developed. The four presentations in this symposium will focus on well-developed and recent advances in knowledge about these neural mechanisms. They represent the breadth of current understanding but also converge on neuroinflammatory molecules as important substrates of resilience.

8:30 **474.01** Introduction.

8:35 **474.02** Prefrontal cortical control of resilience to stress. S. MAIER. *Univ. Colorado.*

9:10 **474.03** The role of neuroinflammation in susceptibility to a depressive-cardiovascular disease-like phenotype. S. WOOD. *Univ. of South Carolina Sch. of Med.*

9:45 **474.04** Essential role for leukocyte derived IL-6 in susceptibility versus resilience to stress. S. RUSSO. *Mount Sinai Sch. Med.*

10:20 **474.05** Role of the vasculature and of VEGF in mediating resilience to social stress. S. BHATNAGAR. *Univ. of Pennsylvania, Children's Hosp. Philadelphia.*

10:55 **474.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

475. Toward Naturalistic Interactive Neuroimaging — CME

Tue. 8:30 AM - 11:00 AM — Ballroom C

Chair: T. HENDLER
Co-Chair: G. GILAM

Recent conceptual and empirical developments consistently indicate the need for neuroscientific investigations of brain dynamics during real-time interactions and within naturalistic environments. This symposium combines theoretical, methodological, and experimental imaging perspectives, which address and exemplify these advances by revealing the neural underpinnings of hallmark features of human day-to-day life and illuminate our understanding of socially oriented psychiatric disorders.

8:30 **475.01** Introduction.

8:35 **475.02** Second person neuroscience. L. SCHILBACH. *Univ. Hosp. Cologne.*

9:10 **475.03** Imaging interactions by hyperscanning techniques. F. BABILONI. *Univ. of Rome Sapienza.*

9:45 **475.04** Coupled neural systems underlie the production and comprehension of naturalistic narrative speech. U. HASSON. *Princeton Univ.*

10:20 **475.05** The neural mechanism of spontaneous a(effective) regulation during real-life interpersonal conflict. T. HENDLER. *Tel-Aviv Sourasky Med. Ctr.*

10:55 **475.06** Closing Remarks.

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

MINISYMPOSIUM *Walter E. Washington Convention Center*

476. Novel RNA Modifications in the Nervous System: Form and Function — CME

Tue. 8:30 AM - 11:00 AM — Ballroom B

Chair: J. SATTERLEE
Co-Chair: J. POLLOCK

Modified RNA molecules have recently been shown to regulate nervous system functions. This minisymposium provides an overview of the types and known functions of novel modified RNAs in the nervous system, including (1) methylated RNAs in intellectual disability and dopamine neuron function; (2) circular RNAs in microRNA regulation and specification of neuron fate; and (3) the consequences of adenosine-to-inosine RNA editing in neurological diseases and substance abuse.

8:30 **476.01** Introduction.

8:35 **476.02** Aberrant methylation of tRNAs links cellular stress to neuro-developmental disorders. S. BLANCO. *Wellcome Trust – Med. Res. Council.*

8:55 **476.03** mRNA methylation: A pervasive modulator of the neuronal transcriptome. K. MEYER. *Weill Med. College, Cornell Univ.*

9:15 **476.04** Identification of novel modified RNAs during cerebral cortical development. M. BASANTA SANCHEZ. *The RNA Institute, SUNY-Albany.*

9:35 **476.05** Circular RNAs expressed in mouse brain and during neural fate specification. A. RYBAK-WOLF. *Max-Delbrück-Centrum für Molekulare Medizin (MDC).*

9:55 **476.06** Brain-enriched A-to-I RNA editing. J. LI. *Stanford Univ.*

10:15 **476.07** GluA2 RNA editing and reinstatement of cocaine seeking. G. SADRI-VAKILI. *Harvard Med. Sch.*

10:35 **476.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

477. The Role of Mitochondrial Dynamics and Brain Metabolism in Health and Disease — CME

Tue. 8:30 AM - 11:00 AM — 145B

Chair: E. TRUSHINA

Mounting evidence suggests a remarkable relationship between mitochondrial dynamics, function, energy metabolism, and numerous human neurodegenerative diseases. This minisymposium includes the latest findings that will advance the understanding of the molecular mechanisms involved in the regulation of mitochondrial dynamics; the understanding of the relationship between mitochondrial dynamics, brain metabolism, learning, and memory; the development of innovative methods to study dynamic lives of mitochondria; and the development of mitochondria-targeted therapeutic strategies.

8:30 **477.01** Introduction.

8:35 **477.02** Mitochondrial division in the brain. H. SESAKI. *Johns Hopkis Univ. Sch. of Med.*

8:55 **477.03** Brain ketone metabolism in health and disease. J. C. LAMANNA. *Case Western Reserve Univ. Sch. of Med.*

9:15 **477.04** Mitochondrial calcium handling and bioenergetics in Huntington's disease mouse model YAC128. N. BRUSTOVETSKY. *Indiana Univ. Sch. of Med.*

9:35 **477.05** ● Abnormal mitochondrial dynamics contributes to the pathogenesis of Alzheimer's disease. X. ZHU. *Case Western Reserve Univ.*

9:55 **477.06** Regulation of mitochondrial fission in neuronal development and synaptic plasticity. S. STRACK. *Univ. of Iowa Carver Col. of Med.*

10:15 **477.07** Mitochondrial iron-sulfur cluster dysfunction in neurodegenerative disease. G. ISAYA. *Mayo Clin.*

10:35 **477.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

478. Trafficking Dysfunction in Neurodegenerative Diseases — CME

Tue. 8:30 AM - 11:00 AM — 146AB

Chair: G. THINAKARAN
Co-Chair: H. XU

Dynamic transport of proteins between membrane organelles is a fundamental process in a multitude of neuronal functions. Dysfunction of protein transport contributes to pathogenesis of neurodegenerative diseases such as Alzheimer's disease, Huntington's disease, and amyotrophic lateral sclerosis. This minisymposium reviews recent advances in the neuronal protein sorting field, with particular relevance the trafficking of organelles and proteins implicated in neurodegenerative diseases.

8:30 **478.01** Introduction.

8:35 **478.02** Mechanisms of polarized sorting in neurons. J. S. BONIFACINO. *NIH.*

8:55 **478.03** Trafficking alterations in TDP-43 proteinopathy. J. JULIEN. *Laval Univ.*

9:15 **478.04** The role of scaffolding proteins in the regulation of long-distance organelle transport along the axon. E. HOLZBAUR. *Univ. of Pennsylvania.*

9:35 **478.05** Unidirectional dendritic retrograde transport of Alzheimer's disease-associated BACE1. G. THINAKARAN. *Univ. Chicago.*

9:55 **478.06** Endoplasmic reticulum-mitochondria interface in Alzheimer's disease. M. ANKARCRONA. *Karolinska Institutet.*

10:15 **478.07** Sorting nexin 27 deficiency and excitatory synaptic dysfunction in Down's syndrome. H. XU. *The Burnham Inst.*

10:35 **478.08** Closing Remarks.

SPECIAL LECTURE *Walter E. Washington Convention Center*

479. Persistent Cocaine-Induced Plasticity and Synaptic Targets for Its Reversal — CME

Tue. 10:00 AM - 11:10 AM — Hall D

Speaker: M. E. WOLF*, Rosalind Franklin Univ. of Med. and Sci.*

Cocaine addicts remain vulnerable to cue-induced craving and relapse even after long periods of abstinence. In a rat model of this phenomenon, cue-induced cocaine craving increases during withdrawal and remains high for months. This relies on strengthening of glutamate synapses in the nucleus accumbens, a brain region that translates motivation into action. This lecture will focus on mechanisms that maintain this plasticity, as well as strategies for reversing it and thus reducing craving. Potential targets include group I metabotropic glutamate receptors and protein translation.

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

SPECIAL LECTURE *Walter E. Washington Convention Center*

480. How Do You Feel? The Role of Mechanically Activated Ion Channels in Touch, Pain, Hearing, and Beyond — CME

Tue. 11:30 AM - 12:40 PM — Hall D

Speaker: A. PATAPOUTIAN*, The Scripps Res. Institute, Howard Hughes Med. Inst.*

Mechanosensation is perhaps the last sensory modality not understood at the molecular level. Ion channels that sense mechanical force are postulated to play critical roles in sensing touch/pain (somatosensation), sound (hearing), sheer stress (cardiovascular tone), etc. However, the identity of ion channels involved in sensing mechanical force has remained elusive. This lecture focuses on the identification, using functional genomics approaches, and characterization of novel mechanically activated channels including Piezo1 and 2.

NANOSYMPOSIUM

481. Oscillations and Synchrony

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 152B

8:00 **481.01** Functional connectivity arises from a slow rhythmic mechanism. W. J. BENTLEY*; J. LI; A. SNYDER; M. RAICHLE; L. SNYDER. *Washington Univ., Washington Univ.*

8:15 **481.02** Laminar-specific phase amplitude coupling correlates with spontaneous hemodynamic fluctuations, but is a lesser predictor than band limited power of local field potentials. R. C. SOTERO*; A. BORTEL; S. NAAMAN; A. SHMUEL. *McGill Univ.*

8:30 **481.03** Neural activity underlying functional connectivity MRI. J. LI*; W. BENTLEY; L. SNYDER. *Washington Univ. In St Louis, Washington Univ. In St Louis.*

8:45 **481.04** Electrophysiological and behavioral contributions to the resting-state fMRI signal. C. CHANG*; D. A. LEOPOLD; M. L. SCHÖLVINCK; X. LIU; H. MANDELKOW; J. H. DUYN. *NIH (NINDS), NIH (NIMH), Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society.*

9:00 **481.05** Transient inactivation of basal forebrain subregions shapes spontaneous fMRI correlations in the macaque. J. N. TURCHI*; C. CHANG; I. E. MONOSOV; K. SMITH; D. K. YU; F. Q. YE; C. ZHU; C. R. CORTES; M. MISHKIN; J. H. DUYN; D. A. LEOPOLD. *NIMH, NIH, NINDS, NEI, NIMH, NIAA.*

9:15 **481.06** Performances of functional network modeling methods in minimizing false positive and maximizing true positive connections. D. A. DAWSON; J. D. MENDOLA*; A. SHMUEL. *MNI, McGill Univ., McGill Univ.*

9:30 **481.07** Spontaneous fad dynamics reveal functional connectivity patterns in mice. P. W. WRIGHT; A. Q. BAUER; J. P. CULVER*. *Washington Univ., Washington Univ. in St Louis.*

9:45 **481.08** ● Predicting behavioral state from neural dynamics during light sedation and general anesthesia. L. D. LEWIS*; R. A. PETERFREUND; L. S. AGLIO; P. G. HARRELL; E. N. ESKANDAR; L. F. BARRETT; S. S. CASH; E. N. BROWN; P. L. PURDON. *MIT, Massachusetts Gen. Hosp., Brigham and Women's Hosp., Northeastern Univ., Harvard Med. Sch., Harvard-MIT.*

10:00 **481.09** Network structure supports stable functional connectivity of homotopic regions across time and conditions. K. SHEN*; B. MISIC; G. BEZGIN; M. BUSCHKUEHL; P. J. DELDIN; R. HUTCHISON; S. M. JAEGGI; E. KROSS; S. PELTIER; S. EVERLING; J. JONIDES; M. G. BERMAN; A. R. MCINTOSH. *Rotman Res. Inst., Univ. of Toronto, Univ. of California, Irvine, Univ. of Michigan, Harvard Univ., Robarts Res. Inst., Univ. of Western Ontario, Univ. of Chicago.*

10:15 **481.10** Cortex-specific correlation between locally recorded slow oscillations and BOLD fMRI. M. SCHWALM*; F. SCHMID; L. WACHSMUTH; C. FABER; A. STROH. *Johannes Gutenberg Univ., Univ. of Münster.*

10:30 **481.11** ▲ Neocortical beta (15-20hz) events emerge from dendritic integration of synaptic bursts to distinct cortical layers: Converging evidence from humans, modeling, monkey and mouse. M. A. SHERMAN*; S. HAEGENS; S. LEE; C. THORN; C. E. SCHROEDER; C. I. MOORE; S. R. JONES. *Brown Univ., Columbia Univ. Col. of Physicians and Surgeons, Nathan S. Kline Inst. for Psychiatric Res.*

NANOSYMPOSIUM

482. Aggregation of Amyloid, Tau, and Other Proteins

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 152A

8:00 **482.01** ● The response of Aβ oligomers found in non-human primate cerebrospinal fluid following treatment with a gamma secretase inhibitor, MK-0752. M. J. SAVAGE*; M. S. MICHENER; B. E. SMITH; J. KALININA. *Merck & Co., Merck and Co., Merck and Co.*

8:15 **482.02** Autophagic intraneuronal Aβ1-42 clearance requires normal Tau function and modulates extracellular plaque deposition. C. E. MOUSSA*; I. LONSKAYA; M. HEBRON. *Georgetown Univ., Georgetown Univ.*

8:30 **482.03** Alzheimer's disease-like pathology induced by Abeta oligomers in non- human primates. L. FORNY GERMANO*; N. M. LYRA E SILVA; A. F. BATISTA; J. BRITO-MOREIRA; M. GRALLE; S. BOEHNKE; B. C. COE; A. LABLANS; S. A. MARQUES; A. B. MARTINEZ; W. L. KLEIN; J. HOUZEL; S. T. FERREIRA; D. P. MUNOZ; F. G. DE FELICE. *Univ. Federal Do Rio De Janeiro, Univ. Federal do Rio de Janeiro, Queen's Univ., Univ. Federal Fluminense, Univ. Federal do Rio de Janeiro, Northwestern Univ.*

8:45 **482.04** ● Intracerebral injection of preformed synthetic tau fibrils initiates widespread tauopathy as well as neuronal loss in the brains of tau transgenic mice. D. W. MOECHARS*; E. PEERAER; A. BOTTELBERGS; K. BRUNDEN; V. LEE; J. TROJANOWSKI; J. KEMP. *Janssen / Pharmaceut. Companies of Johnson & Johnson, Ctr. for Neurodegenerative Dis. Research, Inst. on Aging, Univ. of Pennsylvania Sch. of Med.*

9:00 **482.05** ● Presence of calbindin-d_{28k} retards the process of tangle formation within basal forebrain cholinergic neurons in Alzheimer's disease. S. S. AHMADIAN; M. PETERSON; S. WEINTRAUB; E. BIGIO; M. MESULAM; C. GEULA*. *Northwestern Univ. Med. Sch.*

9:15 **482.06** Tau oligomers from Alzheimer's disease and Traumatic Brain Injury induce toxicity in Htau mice. J. GERSON*; D. CASTILLO-CARRANZA; U. SENGUPTA; C. LASAGNA-REEVES; R. KAYED. *Univ. of Texas Med. Br., Baylor Col. of Med.*

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9:30 **482.07** ● Inhibitors of glutaminyl cyclase (QC) which is up-regulated early in Alzheimer's disease (AD) block toxic pGlu-Abeta formation and are save in early clinics. H. U. DEMUTH*; S. F. SCHILLING; I. LUES; K. GLUND. *Fraunhofer Inst. for Cell Therapy & Immunolgy, Leipzig, Probiodrug AG.*

9:45 **482.08** Chaperones control microtubule dynamics through tau. S. N. FONTAINE*; S. M. STEVENS, Jr; M. ZWECKSTETTER; E. R. P. ZUIDERWEG; J. E. GESTWICKI; C. A. DICKEY. *Univ. of South Florida, Univ. of South Florida, Max Planck Inst. for Biophysical Chem., The Univ. of Michigan, Univ. of California at San Francisco, Univ. of South Florida.*

10:00 **482.09** Tau oligomeric conformers: Implications for cell specificity and disease phenotypes. R. KAYED*; J. GERSON; U. SENGUPTA; M. GUERRERO-MUNOZ; D. CASTILLO-CARRANZA. *Univ. Texas Med. Br.*

10:15 **482.10** ● Cathepsin B regulation of pGlu-Abeta and full-length Abeta related to memory deficits in an Alzheimer's disease mouse model. V. Y. HOOK*; J. YU; T. TONEFF; S. JACOBSEN; M. KINDY; G. HOOK. *Univ. Calif, San Diego, Med. Univ. of South Carolina, Ralph Johnson VA Med. Ctr., Univ. of Calif., San Diego, AstraZeneca, American Life Sci. Pharmaceuticals.*

10:30 **482.11** Low molecular weight oligomers of Tau repeat domain (TauRD-ΔK280) cause increase in intracellular ROS and calcium levels accompanied by spine loss. S. KANIYAPPAN*; R. CHANDUPATLA; K. TEPPER; J. BIERNAT; E. MANDELKOW; E. MANDELKOW. *Max-planck-Institute For Neurolog. Res., German Ctr. for Neurodegenerative Dis. (DZNE), Caesar Res. Ctr.*

10:45 **482.12** Methionine restriction reduces Amyloid beta protein accumulation in APP-PS1 transgenic mice. K. SAMBAMURTI*; M. A. PAPPOLLA; E. CARLEY (HOLLINGS); R. J. BARANELLO; N. H. GREIG; D. K. LAHIRI; V. PADMARAJU. *MUSC, Univ. of Texas, Med. Univ. of South Carolina, Natl. Inst. of Aging, Indiana University, Sch. of Med.*

11:00 **482.13** PKR-dependent stress signaling underlies memory impairment caused by Alzheimer's disease-linked amyloid-β oligomers. M. V. LOURENÇO*; J. R. CLARKE; R. L. FROZZA; T. R. BOMFIM; L. FORNY-GERMANO; A. F. BATISTA; L. B. SATHLER; J. BRITO-MOREIRA; O. B. AMARAL; C. A. SILVA; L. FREITAS-CORREA; S. ESPÍRITO-SANTO; P. CAMPELLO-COSTA; J. HOUZEL; W. L. KLEIN; C. HOLSCHER; J. B. CARVALHEIRA; A. M. SILVA; L. A. VELLOSO; D. P. MUNOZ; S. T. FERREIRA; F. G. DE FELICE. *Fed Univ. of Rio De Janeiro, Fed Univ. of Rio De Janeiro, Fluminense Fed Univ., Northwestern Univ., Lancaster Univ., State Univ. of Campinas, Federal Univ. of Minas Gerais, Queen's Univ.*

NANOSYMPOSIUM

483. Modeling APP and Abeta Pathology in Animals

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 147B

8:00 **483.01** TOR as a key regulator of brain vascular function in mouse models of Alzheimer's disease. V. GALVAN*; A. LIN; S. HUSSONG; N. SAYRE; J. HALLORAN; R. BURBANK; S. AUSTAD; K. FISCHER; J. D. LECHLEITER; R. ASMIS. *U Texas Hlth. Sci. Ctr. At San Antonio, Univ. of Kentucky, Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Univ. of California, Berkeley, Univ. of New Mexico, Univ. of Alabama at Birmingham, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

8:15 **483.02** The relevance of retromer- vs. GGA-dependent transport of SORLA for amyloidogenic processes *in vivo.* S. B. DUMANIS*; T. BURGERT; S. CAGLAYAN; V. SCHMIDT; T. E. WILLNOW. *Max Delbreuck Ctr. for Mol. Med.*

8:30 **483.03** Proteomic analyses reveal altered hippocampal protein expression in a rat model of Alzheimer's disease. S. DO CARMO*; G. CRYNEN; A. DUCATENZEILER; F. CRAWFORD; A. CUELLO. *McGill Univ., Roskamp Inst.*

8:45 **483.04** Changes in the retinal cholinergic system and retinal cell loss as potential contributors to visual deficits in Tg-SwDI and J20 mouse models of Alzheimer's disease. F. G. OLIVERA SOUZA; T. VAN GROEN; E. D. ROBERSON; K. T. KEYSER; C. E. STRANG*. *Univ. Alabama Birmingham, Univ. Alabama Birmingham, Univ. Alabama Birmingham.*

9:00 **483.05** Conditional CaMKIItTa:APPsi models of Alzheimer's disease have similar APP expression in males and females and highly correlated levels of Aβ dimers and tetramers. A. V. SAVONENKO*; T. MELNIKOVA; L. BECKER; E. CHO; D. LEE; N. SAYYIDA; J. TIAN; K. J. BANDEEN ROCHE; D. BORCHELT. *Johns Hopkins Univ., The Johns Hopkins Univ., Univ. of Florida.*

9:15 **483.06** Entorhinal cortex dysfunction is an early sign of neurodegeneration in Alzheimer's disease mouse model. C. CRISCUOLO; S. S. D. YAN; N. ORIGLIA*. *Univ. of L'Aquila, Univ. of Kansas, CNR- Neurosci. Inst.*

9:30 **483.07** A novel amyloid beta model: Linking long term memory defects to altered signaling in CREB pathways. L. FORD*; M. CROSSLEY; J. R. THORPE; L. C. SERPELL; G. KEMENES. *Univ. of Sussex.*

9:45 **483.08** Conditional APP/APLP2 double knockout mice reveal essential functions in excitatory principal neurons for spine density, synaptic plasticity and cognition. U. MULLER*; M. HICK; U. HERRMANN; D. P. WOLFER; M. KORTE. *Heidelberg Univ., TU Braunschweig, Zurich Univ.*

10:00 **483.09** Therapeutic potential of a novel neuroprotective compound - TH-237A for Alzheimer's disease. D. A. HOTTMAN*; Z. WANG; G. I. GEORG; L. LI. *Univ. of Minnesota, Univ. of Minnesota.*

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NANOSYMPOSIUM

484. Alpha-Synuclein and LRRK2 Mechanisms in Parkinson's Disease

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 146C

8:00 **484.01** 4-Hydroxynonenal triggers proteopathic alterations in alpha-synuclein metabolism: Potential role in Parkinson's disease. S. ZHANG*; E. EITAN; M. P. MATTSON. *NIH.*

8:15 **484.02** Rab protein effects on alpha-synuclein homeostasis and oligomer formation. N. R. MCFARLAND*; T. SAHARA; M. HERRING; H. PARK; D. RYU; R. COULTAS. *Univ. of Florida.*

8:30 **484.03** Retention in endoplasmic reticulum (Rer1) promotes alpha-synuclein degradation. H. PARK*; D. RYU; L. RICCHIUTI; B. GIASSON; N. MCFARLAND. *Univ. of Florida, Univ. of Florida.*

8:45 **484.04** Glycation disrupts proteostasis and promotes neurodegenerative alterations in synucleinopathies. T. F. OUTEIRO*; H. VICENTE-MIRANDA; E. M. SZEGO; W. XIANG; H. LASHUEL; J. KLUCKEN; M. ZWECKSTETTER; L. V. LOPES; F. GIORGINI. *Univ. Med. Ctr. Goettingen, Inst. de Medicina Mol., Friedrich-Alexander-University Erlangen-Nürnberg, EPFL, Univ. Hosp. Erlangen, DZNE, Univ. of Leicester.*

9:00 **484.05** ● Characterization of surface-exposed epitopes of *in vitro* and *in vivo* formed alpha-synuclein aggregates. J. BERGSTROM*; L. ALMANDOZ-GIL; J. SIGVARSSSON; L. LANNFELT; M. INGELSSON. *Uppsala Univ., BioArctic Neurosci.*

9:15 **484.06** Silent pathological oligomeric alpha-synuclein revealed in Parkinson's disease brain. R. ROBERTS*; R. WADE-MARTINS; J. ALEGRE-ABARRATEGUI. *Univ. of Oxford.*

9:30 **484.07** Defining the most efficient α-synuclein conformer for seeding pathologic inclusions. L. A. VOLPICELLI-DALEY*; M. MOEHLE; K. B. FRASER; H. ABDELMOTILIB; J. P. BLACKBURN; D. G. STANDAERT; A. B. WEST. *Univ. of Alabama At Birmingham.*

9:45 **484.08** Alpha-synuclein serine 129 phosphorylation modulates self-assembly and cellular uptake. A. TANDON*; F. SAMUEL; W. FLAVIN; C. PACELLI; L. TRUDEAU; E. M. CAMPBELL; P. E. FRASER. *Univ. of Toronto, Loyola Univ., Univ. of Montreal.*

10:00 **484.09** LRRK2 kinase inhibition reduces endogenous LRRK2 protein levels *in vivo.* E. LOBBESTAEL*; S. DEMAN; T. DE WIT; J. TAYMANS; V. BAEKELANDT. *KU Leuven.*

10:15 **484.10** The importance of LRRK2-RTN interaction in neurodegeneration. J. J. NIXON-ABELL*; D. C. BERWICK; V. A. SPAIN; C. BLACKSTONE; K. HARVEY. *UCL, NIH.*

10:30 **484.11** A functional interplay between Leucine rich repeat kinase 2 and p21 activated kinase 6 in neuronal systems. L. CIVIERO*; M. CIRNARU; A. BEILINA; U. RODELLA; I. RUSSO; E. BELLUZZI; E. LOBBESTAEL; L. REYNIERS; P. LEWIS; C. VAN DEN HAUTE; R. BANDOPADHYAY; V. BAEKELANDT; L. BUBACCO; G. PICCOLI; M. COOKSON; J. TAYMANS; E. GREGGIO. *Univ. of Padova, Inst. of Neuroscience, Natl. Res. Council, Lab. of Neurogenetics, Natl. Inst. on Aging/NIH, Lab. for Neurobio. and Gene Therapy, KU Leuven, Sch. of Pharmacy, Univ. of Reading, Dept. of Mol. Neuroscience, UCL, Leuven Viral Vector Core, KU Leuven, Reta Lila Weston Inst. of Neurolog. Studies, Dept. of Molecular, Neuroscience, UCL.*

NANOSYMPOSIUM

485. Epilepsy: Circuits, Mechanisms, and Potential Therapies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 144A

8:00 **485.01** ● Evidence for use-dependent and presynaptic actions of 2DG on abnormal synaptic network activity in the CA3 region of the hippocampus. Y. PAN; T. SUTULA; P. A. RUTECKI*. *Univ. of Wisconsin, William Middleton Mem. VA Hosp.*

8:15 **485.02** Consequences of seizure propagation to the sleep regulating lateral hypothalamus. K. A. SIMEONE*. *Creighton Univ. Sch. of Med.*

8:30 **485.03** Stereological EM evidence that rapamycin nonspecifically blocks excitatory synaptic reorganization in a mouse model of temporal lobe epilepsy. P. BUCKMASTER*; R. YAMAWAKI; K. THIND. *Stanford Univ.*

8:45 **485.04** Disrupted synaptic E/I balance in a mouse model of human lissencephaly. R. F. HUNT*; M. T. DINDAY; K. M. GIRSKIS; S. C. BARABAN. *Univ. of California, San Francisco.*

9:00 **485.05** ● DREADD-mediated attenuation of focal neocortical seizures. D. KAETZEL; E. NICHOLSON; S. SCHORGE; M. C. WALKER; D. M. KULLMANN*. *UCL, Inst. Neurology, UCL.*

9:15 **485.06** Directly convert NG2 cells into functional GABAergic neurons. Z. GUO*; Y. CHEN; Z. PEI; G. CHEN. *Pennsylvania State Univ.*

9:30 **485.07** GABA(A) receptor trafficking in hippocampal neurons during status epilepticus. R. ECKEL*; J. KITTLER; M. WALKER. *Univ. Col. London, Inst. of Neurol.*

9:45 **485.08** ▲ Effects of a reduced efficacy of the KCC2 co-transporter and its relevance for epilepsy. A. BUCHIN*; B. GUTKIN; G. HUBERFELD; R. MILES; A. CHIZHOV. *Ecole Normale Superieure, St.-Petersburg State Polytechnic Univ., Higher Sch. of Econ., Hôpital Necker Enfants Malades, Inst. du Cerveau et de la Moelle Epiniere, Ioffe Physical Tech. Inst.*

10:00 **485.09** Synergistic effects of impaired electrical excitability of parvalbumin- and somatostatin-expressing interneurons by selective deletion of Nav1.1 channels in a mouse model of Dravet syndrome. M. RUBINSTEIN*; C. TAI; R. E. WESTENBROEK; T. SCHEUER; W. A. CATTERALL. *Univ. of Washingtin.*

10:15 **485.10** Epilepsy associated mutant voltage-gated sodium channels alter resurgent current generation that could be preferentially targeted with cannabidiol. R. PATEL*; C. BARBOSA; T. R. CUMMINS. *IU Sch. of Med., IU Sch. of Med.*

10:30 **485.11** *In vivo* modulation of synaptic noise: A novel model of ictogenesis. W. C. STACEY*; P. STARSKI; H. LUNA-MUNGUIA. *Univ. of Michigan, Mayo Clin.*

10:45 **485.12** Rapid recovery of action potential firing after cessation of human focal seizures. E. H. SMITH*; R. D. CONNORS; L. M. BATEMAN; C. A. SCHEVON. *Columbia Univ., Columbia Univ.*

11:00 **485.13** Unstable periodic orbits of interictal bursts in hippocampal slices from patients with epilepsy. P. YU*; M. HSIAO; D. SONG; C. Y. LIU; C. N. HECK; D. MILLETT; T. W. BERGER. *USC.*

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NANOSYMPOSIUM

486. Traumatic Brain Injury: Therapeutic Strategies I

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 156

8:00 **486.01** TIMP3 activates the Akt-mTORC1 pathway, imparts neuroprotection and attenuates neurocognitive dysfunction following Traumatic Brain Injury. S. L. GIBB*; S. PATI. *BSRI.*

8:15 **486.02** ● Delayed treatment with Anatabine after repetitive mild TBI normalizes spatial memory impairment. S. FERGUSON*; B. MOUZON; L. ABDULLAH; G. CRYNEN; V. MATHURA; M. MULLAN; F. CRAWFORD. *Roskamp Inst., James A Haley Veteran's Hosp.*

8:30 **486.03** Withania somnifera extract protects model neurons from *in vitro* traumatic injury. J. N. CHANG*; H. HATIC; E. SHAW; V. RAVINDRANATH; B. A. CITRON. *Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., Indian Inst. of Sci.*

8:45 **486.04** Microtubule-stabilizing therapeutics improve long term outcome after traumatic brain injury. D. J. CROSS*; M. M. CLINE; G. G. GARWIN; L. HYSA; E. BRIM; S. MINOSHIMA. *Univ. of Washington.*

9:00 **486.05** Ceftriaxone treatment after traumatic brain injury preserves GAD-1 expression in rat cortex after TBI. M. Q. HAMEED*; T. H. HSIEH; G. S. GOODRICH; J. L. MORALES-QUEZADA; P. A. ROSENBERG; A. ROTENBERG. *Boston Children's Hosp.*

9:15 **486.06** Neuroprotective effects of N-acetylcysteine amide on experimental focal penetrating brain injury in rats. M. GÜNTHER*; J. DAVIDSSON; S. PLANTMAN; M. ANGÉRIA; S. NORGREN; T. MATHIESEN; M. RISLING. *Karolinska Institutet, Chalmers Univ. of Technol.*

9:30 **486.07** ▲ Ultrasound promotes neurite outgrowth - Implications for TBI. U. RAMAN; S. PARKER; C. DUFFIELD; S. GHOSH; S. R. HAMEROFF*. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. Arizona Med. Ctr.*

9:45 **486.08** Post-blast treatment with Nociceptin/Orphanin FQ peptide receptor antagonist reduces traumatic brain injury-induced cerebral hypoxia. H. O. AWWAD*; C. SIMPSON-DURAND; L. P. GONZALEZ; P. TOMPKINS; Y. ZHANG; M. LERNER; D. J. BRACKETT; D. M. SHERRY; V. AWASTHI; K. M. STANDIFER. *Univ. of Oklahoma HSC, Oklahoma Ctr. for Neurosci., Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr., Oklahoma City VA Med. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr.*

10:00 **486.09** Cerium oxide nanoparticles improve functional outcomes following mild traumatic brain injury. P. J. VANDEVORD*; V. S. SAJJA; Z. BAILEY; K. S. HOCKEY; C. THORPE; A. S. FREY; J. A. BATES; C. A. SCHOLAR; B. LOCKLER; B. RZIGALINSKI. *Virginia Tech. Univ., Virginia Col. of Osteo. Med.*

10:15 **486.10** Early intervention attenuates cerebral vulnerability in repeated mild blast-induced traumatic brain injury. A. KAMNAKSH; F. AHMED; G. BAIK; S. YANG; E. BARRY; N. E. GRUNBERG; J. B. LONG; D. V. AGOSTON*. *Ctr. for Neurosci. and Regenerative Med. at the Uniformed Services Univ., The Uniformed Services Univ., Ctr. for Neurosci. and Regenerative Med. at the Uniformed Services Univ., The Uniformed Services Univ., Ctr. for Military Psychiatry and Neurosci. at the Walter Reed Army Inst. of Res., USU.*

10:30 **486.11** 20-hydroxyeicosatetraenoic inhibition attenuates cortical lesion, microglia activation and blood-brain barrier damage in pediatric rat model of traumatic brain injury. S. SHU*; Z. ZHANG; X. LIU; M. SARASWATI; C. ROBERTSON; S. KANNAN; R. KOEHLER. *Children's Hospital,Chongqing Med. Univ., Dept. of Anesthesiol. and Critical Care Medicine,Johns Hopkins Univ., Dept. of Anesthesiol. and Critical Care Med., Dept. of Anesthesiol. and Critical Care Medicine,Johns Hopkins Univ., Dept. of Anesthesiol. / Critical Care Med. and Pediatrics, The Johns Hopkins Univ. Sch. of Med.*

10:45 **486.12** Microglia polarization dynamics in a mouse model of single and repetitive mtbi. B. C. MOUZON*; G. AIT-GHEZALA; O. OJO; C. BACHMEIER; S. FERGUSON; M. MULLAN; F. CRAWFORD. *The Roskamp Inst., James A. Haley Veterans Hosp.*

11:00 **486.13** Order from chaos: Return of thalamo-frontal connectivity after severe brain injury. M. M. MONTI*; P. M. VESPA. *UCLA, UCLA.*

11:15 **486.14** Tract-based analysis of white matter disruption in moderate-to-severe pediatric traumatic brain injury. E. L. DENNIS*; Y. JIN; J. VILLALON; C. KERNAN; R. MINK; T. BABIKIAN; C. GIZA; R. ASARNOW; P. THOMPSON. *Imaging Genet. Center, INI, LONI, Keck SoM USC, UCLA, Harbor UCLA Med. Ctr., UCLA.*

NANOSYMPOSIUM

487. Biomarkers for Psychosis: EEG and Imaging

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 150B

8:00 **487.01** Neural synchrony between the DLPFC and ipsilateral and contralateral cortical regions in schizophrenia patients and healthy controls during a working memory task. R. SO*; F. STEFFEN-ALLEN; L. S. KEGELES; J. J. CHROBAK; C. A. CHEN. *Univ. of Connecticut, Univ. of Connecticut, Columbia Univ.*

8:15 **487.02** Neural correlates of aberrant affective and attentional processing in individuals at familial high-risk for schizophrenia. E. H. ANDERSEN*; A. M. CAMPBELL; S. E. SCHIPUL; F. C. L. DONKERS; A. BELGER. *Univ. of North Carolina, Tilburg Univ.*

8:30 **487.03** Application of machine learning to identify features of EEG associated with working memory performance in healthy adults and schizophrenia. C. A. CHEN*; R. JIANG; J. G. KENNEY; J. BI; J. K. JOHANNESEN. *Univ. of Connecticut, Univ. of Connecticut, VA Connecticut Healthcare Syst., Yale Univ.*

8:45 **487.04** Neural connectivity of executive and affective networks in schizophrenia patients and relatives. A. M. CAMPBELL*; S. E. SCHIPUL; A. BELGER. *Univ. of North Carolina - Chapel Hill.*

9:00 **487.05** ● Molecular signature in olfactory neuronal epithelium that is correlated with cognitive impairment in schizophrenia. Y. HORIUCHI*; Y. TAKAYANAGI; T. HO; K. TAJINDA; N. G. CASCELLA; D. SCHRETLEN; J. PEVSNER; A. SAWA. *Tokyo Metropolitan Inst. of Med. Sci., Johns Hopkins Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

9:15 **487.06** Common SNP heritability of brain structures and intracranial volume using MRI. R. SHAFEE*; A. J. HOLMES; G. GENOVESE; P. H. LEE; L. GERMINE; J. L. ROFFMAN; J. W. SMOLLER; R. L. BUCKNER; S. A. MCCARROLL. *Harvard Med. Sch., Broad Inst. of Harvard and MIT, Yale Univ., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Harvard Univ., Massachusetts Gen. Hosp.*

9:30 **487.07** Reality distortion symptoms correlate with source based morphometry patterns in schizophrenia. C. N. GUPTA; V. D. CALHOUN; J. LIU; R. L. GOLLUB; S. R. SPONHEIM; S. EHRLICH; J. A. TURNER*. *Mind Res. Network, MGH/MIT/HMS Athinoula A. Martinos Ctr. for Biomed. Imaging, Univ. of Minnesota, Dresden Univ., Georgia State Univ.*

9:45 **487.08** Processing uncertain dynamic context in schizophrenia and delusions. H. TAN*; C. KAPLAN; W. HOCKEIMER; J. MOLINA; J. APUD; D. R. WEINBERGER. *Lieber Inst. for Brain Develop., Natl. Inst. for Mental Hlth.*

10:00 **487.09** ● Molecular and cellular signature of neuronal cells affected by genetic and environmental factors of major mental illness. E. PASSERI*; A. M. WILSON; R. SRIVASTAVA; S. SENGUPTA; C. BORDON; M. A. KONDO; M. KOGA; A. ANVARI; P. A. GOCHMAN; C. OBI; D. VALLE; K. ISHIZUKA; J. L. RAPOPORT; L. V. JONES-BRANDO; R. H. YOLKEN; S. KANO; A. SAWA. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Hospital, Johns Hopkins Univ. Sch. of Med., NIMH, Natl. Inst. of Mental Hlth., Inst. of Genet. Medicine, Johns Hopkins Univ. Sch. of Med.*

10:15 **487.10** ● Upregulation of miR-124 as a potential molecular signature for schizophrenia and bipolar disorder. H. YUKITAKE*; S. KANO; K. YAMANAKA; F. GOES; N. G. CASCELLA; J. M. COUGHLIN; C. HIGGS; J. A. EDWARDS; P. K. KIM; Y. CHUNG; S. NARAYAN; H. KIMURA; K. HIRAI; K. ISHIZUKA; A. SAWA. *The Johns Hopkins Univ., Takeda Pharmaceut. Co., Sheppard Enoch Pratt Hosp.*

10:30 **487.11** Modulation of distributed neural synchrony across the schizophrenia-bipolar spectrum. M. E. HUDGENS-HANEY*; J. B. KNIGHT; L. E. ETHRIDGE; J. E. MCDOWELL; J. A. SWEENEY; B. A. CLEMENTZ. *Univ. of Georgia, Univ. of Texas-Southwestern.*

10:45 **487.12** GABA, glutamate and intellectual ability in health and schizophrenia: A 7T 1H-MRS study. A. MARSMAN*; R. C. W. MANDL; D. W. J. KLOMP; M. M. BOHLKEN; V. O. BOER; A. ANDREYCHENKO; W. CAHN; R. S. KAHN; P. R. LUIJTEN; H. E. HULSHOFF POL. *Brain Ctr. Rudolf Magnus, Univ. Med. Ctr. Utrecht, Univ. Med. Ctr. Utrecht.*

11:00 **487.13** Altered error-related activation during working memory performance in schizophrenia: An event-related fMRI study. H. ERYILMAZ*; A. S. TANNER; N. HO; N. J. SILVERSTEIN; D. C. GOFF; D. S. MANOACH; J. L. ROFFMAN. *Massachusetts Gen. Hosp., New York Univ.*

NANOSYMPOSIUM

488. Auditory System: Circuits and Perception

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 143A

8:00 **488.01** Encoding of loudness in the auditory brainstem: Responses to a synthetic vowel. B. P. HEFFERNAN*; C. GIGUERE; H. DAJANI. *Univ. of Ottawa, Univ. of Ottawa.*

8:15 **488.02** Ultra-high field functional MRI reveals tonotopic gradients in the human auditory thalamus. M. MOEREL*; E. FORMISANO; R. GOEBEL; K. UGURBIL; E. YACOUB; F. DE MARTINO. *Univ. of Minnesota, Maastricht Univ.*

8:30 **488.03** Novel head-fixed behavior, optogenetic and imaging approaches for studying the function of inhibitory interneurons in the auditory cortex of the mouse. D. L. SOSULSKI*; J. C. H. COTTAM; S. AHILAN; M. HAUSSER. *Univ. Col. London.*

8:45 **488.04** Spike-timing precision encodes sound envelope shape in ventral auditory cortical fields. C. M. LEE*; A. OSMAN; M. A. ESCABI; H. L. READ. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut.*

9:00 **488.05** Separate networks for music processing and auditory scene analysis. A. S. GREENBERG*; R. RANDALL. *Univ. of Wisconsin-Milwaukee, Carnegie Mellon Univ.*

9:15 **488.06** The rhythm network: an exploratory neuroimaging analysis of beat perception and production. D. E. ANDERSON*; J. IVERSEN; D. CALLAN; A. D. PATEL; R. MÜLLER. *SDSU Brain Develop. Imaging Lab., UCSD, ATR Labs., Tufts Univ., SDSU Brain Develop. Imaging Labratory.*

9:30 **488.07** Direct current stimulation disrupts consolidation of auditory pitch discrimination learning. R. MATSUSHITA*; J. ANDOH; R. J. ZATORRE. *Montreal Neurolog. Institute, McGill Univ., Intl. laboratory for Brain, Music, and Sound Res. (BRAMS), Central Inst. of Mental Hlth. Mannheim.*

9:45 **488.08** fMRI pattern analysis of played vs. perceived piano sequences in dorsal and ventral cortical streams. M. E. KLEIN*; A. HOLLINGER; R. J. ZATORRE. *McGill Univ., Montreal Neurolog. Inst., Intl. Lab. for Brain, Music, and Sound Res., McGill Univ., McGill Univ.*

10:00 **488.09** Musical training effects and cortical plasticity: Relationships with performance and training extent. D. CAREY; J. DIEDRICHSEN; A. LUTTI; M. SERENO; N. WEISKOPF; F. DICK*. *Birkbeck/UCL Ctr. For NeuroImaging, UCL, Ctr. Hospitalier Universitaire Vaudois.*

10:15 **488.10** The language system is not required for processing musical structure. E. FEDORENKO*; J. H. MCDERMOTT; R. VARLEY. *MIT, UCL.*

10:30 **488.11** The optimal time scale of statistical summary in human auditory perception. E. A. PIAZZA*; R. N. DENISON; T. SWEENY; J. SHEYNIN; M. A. SILVER; D. WHITNEY. *Univ. of California, Berkeley, New York Univ., Univ. of Denver.*

10:45 **488.12** Multiple neural representations of ambiguous auditory input are simultaneously maintained even when only one appears in perception. E. S. SUSSMAN*; A. S. BREGMAN; W. LEE. *Albert Einstein Col. of Med., McGill Univ., Albert Einstein Col. of Med.*

NANOSYMPOSIUM

489. Striate Cortex

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 206

8:00 **489.01** Correlation of membrane potential between neurons in visual cortex of behaving mice. S. ARROYO; C. BENNETT; S. HESTRIN*. *Stanford Sch. of Med., Stanford Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

8:15 **489.02** The nature of cortical variability. I. LIN*; M. OKUN; M. CARANDINI; K. D. HARRIS. *Univ. Col. London.*

8:30 **489.03** Choristers and soloists in a cortical population. M. OKUN*; L. COSSELL; M. F. IACARUSO; H. KO; P. BARTHO; S. B. HOFER; T. D. MRSIC-FLOGEL; M. CARANDINI; K. D. HARRIS. *UCL, Inst. of Exptl. Medicine, Hungarian Acad. of Sci.*

8:45 **489.04** Effects of locomotion on pre-cortical and cortical neural populations in the mouse visual system. S. ERISKEN*; A. VAICELIUNAITE; O. JURJUT; M. FIORINI; S. KATZNER; L. BUSSE. *Univ. of Tuebingen.*

9:00 **489.05** Cortical inhibition determines the orientation selectivity in different cell types. Y. LI*; B. LIU; L. I. ZHANG; H. W. TAO. *USC, USC.*

9:15 **489.06** An optogenetic and double whole-cell recording analysis of functional connections from GABAergic to pyramidal neurons in layer 2/3 of the mouse visual cortex, *in vivo.* M. SAFARI*; R. KIMURA; T. TSUMOTO. *Lab. For Cortical Circuit Plasticity, RIKEN Brain Sci. Inst.*

9:30 **489.07** Optogenetic stimulation of monkey primary visual cortex. M. M. CHERNOV*; G. CHEN; A. W. ROE. *Vanderbilt Univ.*

9:45 **489.08** Normalization through local excitation and inhibition in macaque primary visual cortex. J. J. NASSI*; M. C. AVERY; A. H. CETIN; A. W. ROE; J. H. REYNOLDS. *Salk Inst. For Biol. Studies, Vanderbilt Univ.*

10:00 **489.09** Sensory stimulation and attentional allocation evoke opposing patterns of columnar activation in primary visual cortex. M. A. COX*; D. A. LEOPOLD; A. V. MAIER. *Dept. of Psychology, Vanderbilt Univ., NIMH.*

10:15 **489.10** Real-time modulation of ocular dominance adults. R. F. HESS*; A. REYNAUD; J. ZHOU. *McGill.*

10:30 **489.11** Short-term monocular deprivation disrupts interocular balance in adult macaque visual cortex. D. Y. TS'O*; M. BEGUM; B. T. BACKUS. *SUNY - Upstate Med. Univ., SUNY Col. of Optometry.*

10:45 **489.12** Temporal dynamics of disparity extraction consistent with a single computation underlying stereopsis. S. HENRIKSEN; B. G. CUMMING*; J. C. A. READ. *Newcastle Univ., Natl. Eye Institute, NIH.*

11:00 **489.13** Using conscious visual perception to quantify the effect of electrical stimulation of human cerebral cortex. J. WINAWER*; J. PARVIZI. *New York Univ., Stanford Univ., Stanford Univ.*

NANOSYMPOSIUM

490. Psychosocial Stress and the Brain

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 140A

8:00 **490.01** Critical role of the locus coeruleus-norepinephrine system in social stress-induced hypertension. C. M. LOMBARD*; C. S. WOOD; L. WILSON; S. K. WOOD. *Univ. of South Carolina Sch. of Med.*

8:15 **490.02** Distinct adaptations of locus coeruleus neurons to repeated social stress in adolescent and adult rats. G. A. ZITNIK*, III; A. L. CURTIS; S. K. WOOD; R. J. VALENTINO. *Children's Hosp. of Philadelphia, Univ. of South Carolina Sch. of Med.*

8:30 **490.03** Brain temperature and heart rate increases are correlated with the activation of neurons within the basolateral amygdala in a model of social stress. R. C. MENEZES*; S. HAIN; D. A. CHIANCA JR; A. R. ABREU. *Federal Univ. of Ouro Preto- UFOP.*

8:45 **490.04** Stress responses, cardiovascular comobidity and functional impairment in schizophrenia. K. L. NUGENT*; J. LIU; B. DAVIS; J. CHIAPPELLI; S. DAUGHTERS; L. E. HONG. *Maryland Psychiatric Res. Ctr., Univ. of North Carolina at Chapel Hill.*

9:00 **490.05** Social stress engages amygdalar corticotropin releasing factor and brainstem enkephalinergic afferents to the rat locus coeruleus. B. A. REYES*; G. A. ZITNIK; C. E. FOSTER; R. J. VALENTINO; E. J. VAN BOCKSTAELE. *Drexel Univ. Col. of Med., Children's Hosp. of Philadelphia.*

9:15 **490.06** Brain serotonin deficiency exacerbates social avoidance behavior and impairs antidepressant-like responses to fluoxetine following psychosocial stress. B. D. SACHS*; J. R. NI; M. G. CARON. *Duke Univ.*

9:30 **490.07** Chronic stress promotes inhibition of medial prefrontal cortex output neurons. J. M. MCKLVEEN*; J. R. SCHEIMANN; R. L. MORANO; S. N. CASSELLA; S. GHOSAL; B. MYERS; M. L. BACCEI; J. P. HERMAN. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati.*

9:45 **490.08** Neuroendocrine response to psychosocial stress. M. D. WHEELOCK*; N. G. HARNETT; K. H. WOOD; S. MRUG; D. C. KNIGHT. *UAB.*

10:00 **490.09** Repeated social stress-induced modification of innate immunity was prevented by glucocorticoid receptor antagonism. S. H. JUNG*; Y. WANG; B. READER; J. F. SHERIDAN. *Wexner Med. Center, Ohio State Univ., Ohio State Univ.*

10:15 **490.10** ● Gene by environment interaction on post-traumatic stress disorder. Role of genetic and epigenetic differences in FKBP5. T. KLENGEL*; S. ROEH; M. REX-HAFFNER; B. BRADLEY; K. J. RESSLER; E. B. BINDER. *Emory Univ., Max Planck Inst. of Psychiatry.*

10:30 **490.11** Molecular markers linking the experience of an adverse childhood with the development of depression in adulthood: Focus on SIRT1. L. LO IACONO*; F. VISCO-COMANDINI; A. VALZANIA; M. COVIELLO; L. ROSCINI; P. SESTILI; A. TROISI; S. PUGLISI-ALLEGRA; V. CAROLA. *Santa Lucia Fndn., Univ. La Sapienza, Univ. Tor Vergata, Univ. La Sapienza, Inst. Superiore di Sanità.*

10:45 **490.12** The impact of transcranial direct current stimulation (tDCS) on resilience, stress, compassion fatigue and empathic response in professional nurses. M. STANTON*; R. HAUSER. *Univ. of Alabama, Univ. of Alabama.*

NANOSYMPOSIUM

491. Perception and Imagery

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 147A

8:00 **491.01** Category cohesion and distinctiveness in human visual cortex favor basic level representations. M. IORDAN*; M. R. GREENE; D. M. BECK; L. FEI-FEI. *Stanford Univ., Univ. of Illinois, Urbana-Champaign.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

8:15 **491.02** Neural discriminability of object features predicts perceptual organization. E. J. WARD*; M. M. CHUN. *Yale Univ., Yale Univ.*

8:30 **491.03** Redefining the metric of visual space: The influence of visual field boundaries and attention on crowding performance. M. A. SILVER*; F. C. FORTENBAUGH; L. C. ROBERTSON. *Univ. of California.*

8:45 **491.04** Neural representation of different boundary cues. K. FERRARA*; S. PARK. *Johns Hopkins Univ.*

9:00 **491.05** Ventral temporal cortex is a locus of visual object perception. K. J. MILLER*; D. HERMES; F. PESTILLI; R. P. N. RAO; J. G. OJEMANN. *Stanford Univ., Stanford Univ., Univ. of Washington.*

9:15 **491.06** The relation between oscillatory EEG activity and the laminar specific BOLD signal. R. SCHEERINGA*; P. J. KOOPMANS; T. VAN MOURIK; O. JENSEN; D. G. NORRIS. *Radboud Univ. Nijmegen, Univ. of Oxford, FMRIB.*

9:30 **491.07** Fronto-temporal cortex encodes the manner of motion during reading. L. C. QUANDT*; E. R. CARDILLO; A. KRANJEC; A. CHATTERJEE. *Univ. of Pennsylvania, Duquesne Univ.*

9:45 **491.08** Inattention opens door for unconscious processing during continuous flash suppression. M. KANG*; K. EO; O. CHA; S. CHONG. *Sungkyunkwan Univ., Inst. for Basic Sci., Yonsei Univ., Yonsei Univ.*

10:00 **491.09** Relationship between mu rhythm oscillations and n400 response to incongruent actions. R. D. SOOHOO*; E. VAN; J. A. PINEDA. *Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego.*

10:15 **491.10** Increased developmental specialization from adolescence to adulthood in the face-processing network when viewing human faces versus animal faces. E. WHYTE*; S. SCHERF. *Penn State Univ., Penn State Univ.*

10:30 **491.11** Hebbian-like mechanism for human amygdala-mPFC network development. L. GABARD-DURNAM*; D. G. GEE; B. GOFF; J. FLANNERY; E. H. TELZER; K. L. HUMPHREYS; D. LUMIAN; D. S. FARERI; C. J. CALDERA; N. TOTTENHAM. *Columbia Univ., UCLA, Univ. of Illinois at Urbana-Champaign.*

10:45 **491.12** Protracted development of brain systems underlying working memory into early adulthood: A longitudinal fMRI study. D. SIMMONDS*; B. LUNA. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

11:00 **491.13** Intrapair difference in childhood cortisol predict coping styles and affective brain function in adolescence. C. A. BURGHY*; M. E. FOX; D. CORNEJO; D. E. STODOLA; C. A. VAN HULLE; P. OJIAKU; R. M. BIRN; H. GOLDSMITH; R. J. DAVIDSON. *Waisman Ctr., Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

11:15 **491.14** Learning words during sleep. S. RUCH*; T. KOENIG; J. MATHIS; C. ROTH; K. HENKE. *Univ. of Bern, Dept. of Psychology, Univ. of Bern, Ctr. for Cognition, Learning and Memory, Univ. of Bern, Univ. Hosp. of Psychiatry, Dept. of Psychiatric Neurophysiol., Univ. of Bern, Inselspital, Univ. Hospital, Dept. of Neurol.*

NANOSYMPOSIUM

492. Human Reinforcement Learning: Development and Aging

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, 150A

8:00 **492.01** Paradoxical neurobehavioral rescue by cues associated with infant trauma: Amygdala serotonin (5-HT) and corticosterone (CORT). M. RINCÓN CORTÉS*; G. A. BARR; A. M. MOULY; K. SHIONOYA; S. NUNEZ; R. M. SULLIVAN. *NYU Sackler Inst. at the NYU Sch. of Med., Emotional Brain Inst. at the Nathan Kline Inst., Child Study Ctr. at the NYU Sch. of Med., Children's Hosp. of Philadelphia, Perelman Sch. of Med., Lyon Neurosci. Res. Center, INSERM U1028, CNRS UMR5292, Univ. Lyon1, Linköping Univ. IKE, Dominican Col.*

8:15 **492.02** The development of hierarchical rule learning and generalization in infancy. D. WERCHAN*; M. J. FRANK; D. AMSO. *Brown Univ.*

8:30 **492.03** Adolescent ventral tegmental area neurons maintain cue-evoked responding after extinction: A mechanism for adolescent behavioral flexibility? N. W. SIMON*; J. WOOD; Y. KIM; B. MOGHADDAM. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:45 **492.04** Normative development of ventral striatal resting-state connectivity in humans. D. S. FARERI*; L. GABARD-DURNAM; B. GOFF; J. FLANNERY; D. G. GEE; D. S. LUMIAN; C. J. CALDERA; N. TOTTENHAM. *UCLA.*

9:00 **492.05** Changes in sensitivity to value magnitude from childhood to adulthood relate to risk-taking behavior. S. M. HELFINSTEIN*; J. A. MUMFORD; M. E. DUNN; J. R. ANTHIS; J. L. LEAKE; K. FROMME; R. A. POLDRACK. *The Univ. of Texas At Austin, The Univ. of Texas At Austin, The Univ. of Texas At Austin, The Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

9:15 **492.06** Multiple learning systems in adolescence. J. Y. DAVIDOW*; K. FOERDE; A. GALVÁN; D. SHOHAMY. *Columbia Univ., New York Univ., Univ. of California – Los Angeles, Columbia Univ.*

9:30 **492.07** Neural reactions to positive and negative feedback change across adolescent development. S. PETERS*; B. R. BRAAMS; A. C. K. VAN DUIJVENVOORDE; P. C. M. P. KOOLSCHIJN; E. A. CRONE. *Leiden Univ., Univ. of Amsterdam.*

9:45 **492.08** Experiential learning outweighs instruction early in development. J. H. DECKER*; F. S. LOURENCO; B. B. DOLL; B. CASEY; C. A. HARTLEY. *Sackler Inst., Weill Cornell Grad. Sch., NYU.*

10:00 **492.09** The developmental emergence of model-based learning. C. A. HARTLEY*; J. H. DECKER; A. R. OTTO; N. D. DAW; B. CASEY. *Weill Cornell Med. Col., New York Univ.*

10:15 **492.10** Prefrontal deficits in older adults implicate a shift from model-based to model-free learning and decision-making strategies. B. EPPINGER*; H. R. HEEKEREN; S. LI. *TU Dresden, Freie Univ. Berlin, Max Planck Inst. for Human Develop.*

10:30 **492.11** State-based versus reward-based decision-making in younger and older adults. D. WORTHY*; W. MADDOX. *Texas A&M Univ., Univ. of Texas at Austin.*

10:45 **492.12** Dopamine contributions to model-free and model-based learning. M. SHARP*; K. FOERDE; N. D. DAW; D. SHOHAMY. *Columbia Univ., New York Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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11:00 **492.13** Age-dependent interaction of novelty-driven exploration and reinforcement learning. A. HOUILLON*; R. LORENZ; T. GLEICH; A. HEINZ; J. GALLINAT; K. OBERMAYER. *TU Berlin, Bernstein Ctr. for Computat. Neurosci., Clin. for Psychiatry and Psychotherapy, Charite Univ. Med., Humboldt-Universitaet zu Berlin, Clin. for Psychiatry and Psychotherapy, Charite Univ. Med.*

POSTER

493. Patterning of Brain

Theme A: Development

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 A1 **493.01** ERBB3-regulation of Bergmann glia proliferation is required for cerebellar lamination. A. SATHYAMURTHY*; D. YIN; A. BARIK; C. SHEN; J. BEAN; W. XIONG; L. MEI. *Georgia Regents Univ.*

9:00 A2 **493.02** The motorized Rho GAP Myosin IXa is important for radial glia function. S. THELEN*; M. BÄHLER. *Westfalian Wilhelms Univ.*

10:00 A3 **493.03** Gap junction channels has different patterns of distributtion and plays specific roles during the chick brain development. V. PASCHON*; G. S. V. HIGA; E. R. KINJO; C. M. FURTADO; N. V. SANTOS; A. H. KIHARA. *Univ. Federal Do ABC.*

11:00 A4 **493.04** RNA Binding Protein Sfpq is required for the expression of schizophrenia-related long neuronal genes. A. TAKEUCHI*; K. IIDA; K. NINOMIYA; M. ITO; K. OHNO; M. HAGIWARA. *Kyoto Univ. Grad. Sch. of Med., Nagoya Univ. Grad. school of Med.*

8:00 A5 **493.05** Fgf signal transduction through frs in the developing telencephalon. N. KAMATKAR*; G. GUTIN; J. HÉBERT. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

9:00 A6 **493.06** Origin and secondary expansion of the transient subplate zone in the developing cerebrum of human and nonhuman primates. A. DUQUE*; Z. KRSNIK; P. RAKIC; I. KOSTOVIC. *Yale Univ. Sch. Med., Univ. of Zagreb, Yale Univ. Sch. Med.*

10:00 A7 **493.07** Implications of pax6 in pituitary gland function and development. K. JOHNSON*; C. BLATCHER; *. LAUDERDALE. *Univ. of Georgia.*

11:00 A8 **493.08** The C-terminal region domain of reelin is required for arrest of cortical neuronal migration and formation of the hippocampal dentate gyrus. S. HA*; D. R. BEIER. *Seattle Children's Res. Inst., Brigham and Women's Hosp.*

8:00 A9 **493.09** Changes in the functional organization of the neocortex following lesions to visual cortex early in development. L. A. KRUBITZER*; J. C. DOOLEY. *UC Davis, UC Davis.*

9:00 A10 **493.10** Suppressor of Fused (SuFu) controls the development of cerebellar granule neurons. T. JIWANI*; J. J. KIM; L. ROTIN; N. D. ROSENBLUM. *Hosp. For Sick Children, Univ. of Toronto, Univ. of Toronto.*

10:00 A11 **493.11** Behavioral examinations of forebrain-specific Ctgf knockout mice. H. CHANG*; K. CHEN; I. YU; L. LEE. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

11:00 A12 **493.12** Role of hypoxic environment during neocortical development. A. HONDA*. *Doshisha Univ.*

8:00 A13 **493.13** Docosahexaenoic acid and its ethanolamide in the brain: Possible role in early development and neuroprotection of the dopaminergic system. S. SONTI*; S. J. GATLEY; R. I. DUCLOS; R. H. LORING; K. QIAN. *Northeastern Univ.*

9:00 A14 **493.14** The transcription factor ebf2 regulates gene expression driven by the murine prepro-orexin promoter. A. SANCHEZ-GARCIA; V. C. ZOMOSA-SIGNORET; C. DEVEZE; R. ORTIZ-LOPEZ; R. VIDALTAMAYO*. *Univ. Autonoma de Nuevo Leon, Univ. of Monterrey.*

10:00 A15 **493.15** Protocadherin 10 expression pattern in the developing mouse cerebellar cortex. S. VIBULYASECK; S. HIRANO; I. SUGIHARA*. *Tokyo Med. & Dent. Univ. Sch. Med., Kansai Med. Univ.*

11:00 A16 **493.16** The role of FGF receptor adaptor proteins during embryonic brain development. C. A. BLACKWOOD*; G. GUTIN; N. KAMATKAR; K. LEE; F. WANG; G. FISHELL; M. GOLDFARB; J. HEBERT. *Albert Einstein Col. of Med., Hunter Col. of City Univ., Inst. of Biosci. and Technol., New York Univ. Langone Med. Ctr.*

8:00 A17 **493.17** ▲ Acupuncture on GB34 activates the precentral gyrus and prefrontal cortex in Parkinson's disease. L. M. GYU*; S. YEO, 30's; S. LIM, 50's; C. ILHWAN, 30's; M. VAN DEN NOORTC; P. BOSCH; G. JAHNG. *Kyung Hee Univ. Med. Ctr., Kyung Hee university, Free Univ. of Brussels, Donders Inst. for Brain, Col. of Med.*

9:00 A18 **493.18** ● Morphometric study of the barrel cortex of forebrain-specific Ctgf knockout mice. K. CHEN*; H. CHEN; H. CHANG; I. YU; L. LEE. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Neurobio. and Cognitive Sci. Ctr.*

10:00 A19 **493.19** Functional analysis of the Reelin-Dab1 signal pathway in the developing zebrafish nervous system. S. KIKKAWA*; T. SUMIMOTO; T. SUMI; Y. SAKIHAMA; T. TERASHIMA. *Kobe Univ. Sch. of Med.*

11:00 A20 **493.20** Distal enhancers and chromatin state in forebrain development. A. S. NORD*; C. ATTANASIO; J. A. AKIYAMA; A. HOLT; R. HOSSEINI; S. PHOUANENAV; I. PLAJZER-FRICK; M. SHOUKRY; V. AFZAL; E. M. RUBIN; L. A. PENNACCHIO; A. VISEL. *LBNL.*

8:00 A21 **493.21** Mixed lineage leukemia 1 (MLL1) chromatin modifying factor maintains neural stem cell regional identity in the developing and postnatal mouse brain. R. N. DELGADO*; R. D. SALINAS; D. A. LIM. *UCSF.*

9:00 A22 **493.22** Emerging cerebellar pathways in humans from newborns to young adults using high angular resolution diffusion MR tractography. T. J. RE; K. IM; M. J. PALDINO; A. RIGHINI; P. E. GRANT; E. TAKAHASHI*. *Div. of Newborn Medicine, Boston Children's Hospital, Harvard Med. Sch., Dept. of Radiology, Univ. of Milan, Boston Childrens Hospital, Harvard Med. Sch., Dept. of Radiology, Boston Children's Hospital, Harvard Med. Sch., Dept. of Radiology, Buzzi Children's Hosp. of Milan.*

10:00 A23 **493.23** Emerging callosal pathways in mice and humans using high angular resolution diffusion MRI (HARDI) tractography. J. W. SONG*; G. DAI; A. C. R. SCOTT; E. TAKAHASHI. *Yale Univ. Sch. of Med., Martinos Ctr. for Biomed. Imaging, Massachusetts Gen. Hospital, Harvard Med. Sch., Div. of Newborn Medicine, Dept. of Medicine, Boston Children's Hospital, Harvard Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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11:00 A24 **493.24** Maternal diabetes alters expression of microRNAs that regulate genes critical for neural tube development. T. DHEEN*; S. SHYAMASUNDAR; S. S. W. TAY; B. BAY. *Natl. Univ. Singapo.*

POSTER

494. Brain Patterning and Cell Death

Theme A: Development

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 A25 **494.01** Calcineurin regulated development of cortical interneurons. R. PRIYA*; I. GRAEF; G. FISHELL. *New York Univ., Stanford Sch. of Med.*

9:00 A26 **494.02** ▲ Neuronal cell death during the pre- to postnatal transition in mice. M. MOSLEY*; C. SHAH; N. FORGER. *Georgia State Univ.*

10:00 A27 **494.03** Glutathione content modulates the effect of reactive oxygen species produced during cerebellar granule neurons development. J. MORAN*; M. OLGUIN. *Natl. Univ. of Mexico.*

11:00 A28 **494.04** Oxygen level-dependent effects of sod2 deficiency on the development of cultured cerebral cortical neurons. D. LU; Y. YANG; M. MATTSON; A. CHENG*. *National Institute On Aging/ National Institutes Of Health.*

8:00 A29 **494.05** Abhydrolase domain-containing protein 4 (ABHD4) controls adherens junction-dependent cell survival in radial glial cells. Z. LELE*; Z. I. LÁSZLÓ; A. J. DORNING; I. KATONA; G. M. SIMON; B. F. CRAVATT; S. S. HU; K. MACKIE. *Inst. of Exptl. Med. Hungarian Acade, The Scripps Res. Inst., Indiana Univ.*

9:00 A30 **494.06** The small GTPase RhoQ is a target of the MLK-JNK-c-Jun pathway in sympathetic neurons. J. HAM*; M. KRISTIANSEN; R. HUGHES. *UCL Inst. of Child Hlth.*

10:00 A31 **494.07** Methylmercury exposure affects cell proliferation and death but not neural progenitor specification in xenopus laevis. R. HUYCK*; M. NAGARKAR; N. OLSEN; S. E. CLAMONS; M. S. SAHA. *Col. of William and Mary, Scripps Inst. of Oceanography, Virginia Commonwealth Univ.*

11:00 A32 **494.08** Spatiotemporal expression atlas of brain development in non-human primate. T. BAKKEN*; J. MILLER; S. DING; S. SUNKIN; K. SMITH; L. NG; A. SZAFER; J. GOLDY; C. LEE; A. EBBERT; R. DALLEY; N. DEE; J. ROYALL; P. D. PARKER; Z. RILEY; Z. MOLNAR; R. HEVNER; D. AMARAL; M. HAWRYLYCZ; A. JONES; J. PHILLIPS; P. WOHNOUTKA; C. DANG; A. BERNARD; J. HOHMANN; E. LEIN. *Allen Inst. For Brain Sci., Univ. of Oxford, Univ. of Washington, UC Davis.*

8:00 A33 **494.09** The regulatory role of Pax6 on cortical progenitor cell proliferation. Y. HUANG*; D. MI; K. RUISU; A. PANTAZI; J. O. MASON; D. J. PRICE. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Tartu, Univ. of Edinburgh.*

9:00 A34 **494.10** A revised view of the regionalization of the ventral secondary prosencephalon based on morphogenetic analysis in zebrafish. K. YAMAMOTO*; P. AFFATICATI; B. RIZZI; C. BUREAU; N. PEYRIÉRAS; C. PASQUALINI; M. DEMARQUE; P. VERNIER. *Neurobio. & Develop. (UPR3294), CNRS-Gif.*

10:00 A35 **494.11** The expression and function of Sonic hedgehog in the human fetal telencephalon. F. MEMI*; N. RADONJIC; J. A. ORTEGA; N. ZECEVIC. *UCHC.*

11:00 A36 **494.12** Maternal hyposerotonemia alters placental physiology and biogenic amine function in fetal brain tissue of the B6.129(Cg)-Slc6a4tm1Kpl/J serotonin transporter knockout (SERT-KO) mouse line. S. M. HEROD*; E. HUGHES; K. FISH; E. EMERY; J. VELASQUEZ; A. BONNIN. *Azusa Pacific Univ., Keck Sch. of Med. at the Univ. of Southern California.*

8:00 A37 **494.13** Morphological features of early born GABA hub neurons: From embryo to adulthood. A. BAUDE*; V. VILLETTE; P. GUIGUE; T. TRESSARD; M. A. PICARDO; R. COSSART. *INMED INSERM, Neurosci. Inst.*

9:00 A38 **494.14** Alterations of the forebrain in the Lhx2 and Lhx2/Lhx9 knockout mice. A. ABELLAN*; Y. ZHAO; E. DESFILIS; H. WESTPHAL; L. MEDINA. *Univ. of Lleida - IRBLLEIDA, NIH/NICHD.*

10:00 A39 **494.15** The regulation of Notch ligands Dll1 and Jag1 by Pax6 during cortical development. E. F. DORA*; I. SIMPSON; J. O. MASON; D. J. PRICE. *Edinburgh Univ., Edinburgh Univ.*

11:00 A40 **494.16** The lateral cortical stream in embryonic and early fetal development of the human insular cortex. G. MEYER*; M. GONZALEZ-GOMEZ; C. MEDINA-BOLIVAR. *Univ. La Laguna.*

8:00 A41 **494.17** Regulation of the patterning and development of the hypothalamus and prethalamus by canonical Wnt signaling. E. NEWMAN*; H. WANG; D. WU; J. ZHANG; M. TAKETO; R. AWATRAMANI; S. BLACKSHAW. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Kyoto Univ., Northwestern Univ.*

9:00 A42 **494.18** Role of differential heparan sulfate sulfation in mouse forebrain Fgf8 signalling. W. CHAN*; J. M. CLEGG; D. J. PRICE; T. PRATT. *Univ. of Edinburgh.*

10:00 A43 **494.19** Fate-labeled Islet1 progenitor cells uniquely contribute to mature interneuron subtypes in mouse neocortex. F. SIDDIQI*; A. L. TRAKIMAS; D. J. JOSEPH; T. T. CLARKE; E. D. MARSH; J. H. WOLFE. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Univ. of Pennsylvania.*

11:00 A44 **494.20** Relationship between malformations of neuronal migration and variation of folia development in the cerebellar vermis of C57BL/6J mice. S. VANDINE*; N. YAN SIU; M. KHAN; J. AHSAN; R. L. RAMOS. *New York Inst. of Technol. Col. of Osteop, New York Inst. of Technol.*

8:00 A45 **494.21** Autism-associated Met tyrosine kinase receptor influences frontal cortical size and neuronal generation. J. M. SMITH*; E. M. POWELL. *Univ. of Maryland, Baltimore.*

9:00 A46 **494.22** Specification of select hypothalamic circuits and innate behaviors by the embryonic patterning gene, Dbx1. K. SOKOLOWSKI*; S. ESUMI; T. HIRATA; Y. KAMAL; T. TRAN; A. LAM; M. ZAGHLULA; S. BRIGHTHAUPT; J. MARTINEZ CRUZ; S. GRIMBOVSKI; S. KNOBLACH; A. PIERANI; K. JONES; N. TAMAMAKI; N. SHAH; J. G. CORBIN. *Children's Natl. Med. Ctr., Kumamoto-University, Ehime Univ., Children's Natl. Med. Ctr., Univ. Paris Diderot, Howard Univ., Univ. of California.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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10:00 A47 **494.23** Concomitant expression of subcerebral- and callosal-specific genes defines a deep layer cell population in the postnatal mouse neocortex. C. ALFANO*; K. HARB; E. MAGRINELLI; N. LUKIANETS; A. ZUBIOLO; C. NICOLAS; E. DEBREUVE; G. SANDOZ; X. DESCOMBES; F. GRAMMONT; M. STUDER. *Inserm U1091, Inst. of Biology, iBV (UMR INSERM1091/CNRS7277/UNS), Inst. Natl. de Recherche en Informatique et Automatique (INRIA), Lab. d'Informatique, Signaux et Systèmes de Sophia Antipolis (I3S), Lab. J.A. Dieudonné (LJAD), UMR CNRS 7351.*

11:00 A48 **494.24** Analysis of heparan sulfate function in the developing mammalian forebrain using systematic gene expression analysis. H. PARKIN*; J. CLEGG; J. MASON; T. PRATT. *Univ. of Edinburgh.*

8:00 A49 **494.25** The molecular mechanism of thalamic pattern formation during development. H. EBISU*; L. IWAI; T. MOMOI; H. KAWASAKI. *Kanazawa Univ., The Univ. of Tokyo, Intl. Univ. of Hlth. and Welfare.*

9:00 A50 **494.26** EphA7 regulates striatal organization and function. C. J. GRIFFEY; L. F. KROMER*. *Georgetown Univ. Med. Ctr.*

POSTER

495. Proliferation: Self-Renewal and Cell Cycle

Theme A: Development

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 A51 **495.01** ▲ Compensation during neural development following Notch signaling perturbation in X. laevis. C. TOCHENY*; B. RABE; M. MCDONOUGH; T. ARALERE; J. HINES; M. SAHA. *Col. of William and Mary, Harvard Univ.*

9:00 A52 **495.02** Independent lineages of cortical progenitor cells established by founder cell seeding. M. MARTÍNEZ-MARTÍNEZ; A. CÁRDENAS; C. DE JUAN ROMERO; M. GÖTZ; V. BORRELL*. *Inst. Neuroci Alicante, CSIC & Univ. Miguel Hernandez, Helmholtz Zentrum München.*

10:00 A53 **495.03** ▲ Characterization of cells derived from adoptive transfer of hemocytes in crayfish brain. J. PLATTO; J. L. BENTON; V. QUINAN*; B. S. BELTZ. *Wellesley Col.*

11:00 A54 **495.04** ▲ The crustacean cytokine astakine 1: A link between the innate immune system and nervous system in crayfish. K. A. RAMOS; J. L. BENTON; J. LI; I. SÖDERHÄLL; D. BAUER*; B. S. BELTZ. *Wellesley Col., Uppsala Univ., Wellesley Col.*

8:00 A55 **495.05** Microglial proliferation in the developing rat neocortex. A. KREUTZ; J. KEITER; S. SAYLOR; V. MARTINEZ-CERDEÑO; S. C. NOCTOR*. *UC Davis, UC Davis, UC Davis.*

9:00 A56 **495.06** Sleep deprivation effects over hippocampal neurogenesis and apoptosis after different recovery times in adult BalB/C male mice. S. SOTO-RODRIGUEZ*; G. LOPEZ-ARMAS; O. GONZALEZ-PEREZ; M. LUQUIN-DE ANDA; R. RAMOS-ZUÑIGA; R. GONZALEZ-CASTANEDA. *Univ. De Guadalajara, Univ. de Guadalajara, Univ. de Colima.*

10:00 A57 **495.07** Zinc-finger protein INSM1 regulates neurogenesis in spiral and vestibular ganglia and is transiently expressed in nascent outer hair cells. S. M. LORENZEN; A. DUGGAN*; A. OSIPOVICH; M. A. MAGNUSON; J. GARCÍA-AÑOVEROS. *Northwestern Univ., Vanderbilt.*

11:00 A58 **495.08** Developmental estrogen treatment selectively increases proliferative activity in the 3rd ventricle stem cell niche of female rats at weaning. Z. HE*; L. CUI; M. G. PAULE; S. A. FERGUSON. *Natl. Ctr. For Toxicology Res., Univ. of Arkansas for Med. Sci.*

8:00 A59 **495.09** The function of Progranulin-a, a microglia-specific growth factor, during vertebrate retinal development. C. WALSH*; P. HITCHCOCK. *The Univ. of Michigan, The Univ. of Michigan.*

9:00 A60 **495.10** The role of direct neurogenesis in the development of the olfactory bulb. A. CÁRDENAS*; M. COGSWELL; C. DE JUAN ROMERO; A. TZIKA; M. MILINKOVITCH; L. MARTÍNEZ; M. TESSIER-LAVIGNE; S. RUSSEK; V. BORRELL. *Inst. De Neurociencias, Boston Univ. Sch. of Med., Univ. de Genève, The Rockefeller Univ.*

10:00 A61 **495.11** Neurogenesis declines in the olfactory bulbs and hippocampi of middle-aged and aged rats. J. MCGUINESS*; R. B. SPEISMAN; A. ASOKAN; A. RANI; A. KUMAR; T. C. FOSTER; B. K. ORMEROD. *Univ. of Florida, Univ. of Florida.*

11:00 A62 **495.12** The role of Lhx2 in cortical neurogenesis. H. CHIA-LING*; L. CHIA-CHENG; N. SEAN; C. SHEN-JU. *Inst. of Cell. and Organismic Biology, Acad.*

8:00 A63 **495.13** The roles of cytokinesis and kinesin Kif20b in regulating cerebral cortex growth. K. M. JANISCH; V. VOCK; A. SHRESTHA; J. DARDICK; M. FLEMING; T. CUPP; C. GRIMSLEY-MYERS; N. DWYER*. *Univ. of Virginia, Univ. Virginia, Univ. Virginia.*

9:00 A64 **495.14** ▲ Krüppel-like factor 5 plays important roles in self-renewal and differentiation of neural stem cells. A. KURODA; S. ISHIDA; T. FUCHIGAMI*; Y. HAYASHI; M. EMA; S. HITOSHI. *Shiga University Of Medical Science, Japan, Shiga University Of Medical Science.*

10:00 A65 **495.15** Cells from the innate immune system generate adult-born neurons in crayfish. J. L. BENTON*; R. KERY; J. LI; C. NOONIN; I. SÖDERHÄLL; B. S. BELTZ. *Wellesley Col., Uppsala Univ.*

11:00 A66 **495.16** ▲ Neuronal precursors in the crayfish Procambarus clarkii are replenished from a non-neuronal source. J. LI; E. COCKEY; J. PLATTO; J. L. BENTON; B. S. BELTZ*. *Wellesley Col.*

8:00 A67 **495.17** Neurogenesis and *in vivo* cell cycle dynamics during the development of the DRG compared to the ENS. D. G. GONSALVEZ*; M. L. Y. FONG; K. N. CANE; L. A. STAMP; H. M. YOUNG; C. R. ANDERSON. *The Univ. of Melbourne.*

9:00 A68 **495.18** Initiation mechanism for apical nuclear migration in radial glial progenitors. A. BAFFET*; D. HU; R. VALLEE. *Columbia Univ.*

10:00 B1 **495.19** Basal radial glia in outer subventricular zone contributes to late-bone neurons in the marmoset cerebral cortex. A. MURAYAMA*; J. OKAHARA; E. SASAKI; H. OKANO. *Keio Univ. Sch. of Med., RIKEN, BSI, Central Institute For Experimental Animal.*

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11:00 B2 **495.20** Coordinated cell cycle regulation by nucleotides and IGF-I in retinal progenitors. I. M. ORNELAS*; M. R. PEREIRA; T. M. SILVA; A. L. M. VENTURA. *Fluminense Federal Univ.*

8:00 B3 **495.21** An intracellular mechanism integrating inputs from extracellular signals to activate hippocampal stem cells. J. ANDERSEN*; N. URBÁN; A. ITO; A. ACHIMASTOU; B. MARTYNOGA; M. LEBEL; C. GÖRITZ; J. FRISÉN; F. GUILLEMOT. *Natl. Inst. For Med. Res., Karolinska Inst.*

9:00 B4 **495.22** Down-regulated necdin expression triggers the proliferation of postmitotic neurons of the rat cortex. S. LIU*; R. LIU; H. QUE; J. YANG; Q. LIN; Y. LIU; S. YANG; S. JING. *Beijing Inst. of Basic Med. Sci.*

10:00 B5 **495.23** Retinal progenitors are stem cells and Hmga2 facilitates their self-renewal. I. AHMAD*; S. PARAMESWARAN; X. XIA. *Univ. Nebraska Med. Ctr.*

11:00 B6 **495.24** Genomic DNA methylation program of a neural stem cells differentiation. F. C. ZHOU*; C. LO; A. LOSSIE. *Indiana Univ. Sch. Med., Indiana Univ. Sch. of Med., NIH.*

8:00 B7 **495.25** Neural differentiation of human adipose tissue-derived stem cells involves activation of the Wnt signalling. S. JANG*; J. PARK; H. JEONG. *Chonnam Natl. Univ. Med. Sch.*

9:00 B8 **495.26** Global gene expression profiling of mesenchymal stem cells preconditioned with the neuroprotective agents lithium and valproic acid reveals involvement of novel genes and signaling pathways. G. R. LINARES*; D. CHUANG. *NIH, NIH.*

10:00 B9 **495.27** HDAC3 controls G2/M progression in adult neural stem/progenitor cells by regulating CDK1 levels. Y. JIANG; J. HSIEH*. *UT Southwestern Med. Ctr.*

POSTER

496. Proliferation: Molecular Mechanisms

Theme A: Development

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 B10 **496.01** A multi-resource data integration approach: Identification of candidate genes regulating cell proliferation during CNS development. R. S. NOWAKOWSKI*; F. FREUDENBERG; C. M. VIED; A. A. S. F. RAPOSO; Y. WANG; D. FENG. *FSU Col. of Med., Univ. of Würzburg, Inst. Gulbenkian de Ciência, Natl. Univ. of Singapore, Allen Inst. for Brain Sci.*

9:00 B11 **496.02** Lipopolysaccharide-induced maternal cytokine changes and the effects on dopaminergic and serotonergic neuronal development. S. WANG*; K. FAN; C. LIN. *Natl. Yang-Ming Univ., Taipei City Hosp.*

10:00 B12 **496.03** Identification of small cell lung cancer (SCLC)-specific miRNAs in blood as a tumor marker for the detection of SCLC. M. SHIMOJO*; Y. SHUDO; S. ITO. *Kansai Med. Univ., Kansai Med. Univ.*

11:00 B13 **496.04** An axon enriched microRNA with a neurodevelopmental role within the rodent cortex. A. KOS; N. OLDE LOOHUIS; H. VAN BOKHOVEN; G. MARTENS; S. KOLK; A. ASCHRAFI*. *Donders Inst. For Brain, Cognition, and Behaviour.*

8:00 B14 **496.05** Using RNA interference to examine junctional communication within the adult neurogenic niche. M. SORRELL*; D. LINZ; Y. TOMOYASU; K. KILLIAN. *Miami Univ., Miami Univ.*

9:00 B15 **496.06** Function analysis of centrosomes in the developing neocortex. W. SHAO*; R. INSOLERA; H. BAZZI; K. ANDERSON; S. SHI. *Weill Cornell Med. Col., Weill Cornell Med. Col., Mem. Sloan Kettering Cancer Ctr.*

10:00 B16 **496.07** Differential roles of Nde1 and Ndel1 in rat cortical development. D. DOOBIN*; S. KEMAL; R. VALLEE. *Columbia Univ.*

11:00 B17 **496.08** The role of rab18 in cerebellar development. L. KAO*; P. WU; H. WU; C. HONG. *Natl. Yang-Ming Univ., Brain Res. Ctr., Natl. Yang-Ming Univ.*

8:00 B18 **496.09** ● Promise of resveratrol for relieving cognitive and mood dysfunction, hippocampus oxidative stress and inflammation in gulf war illness. B. HATTIANGADY*; B. SHUAI; G. A. SHETTY; V. MISHRA; M. KODALI; X. RAO; A. K. SHETTY. *Inst. For Regenerative Medicine,Texas A&M HSC, Olin E. Teague Veterans' Med. Center, CTVHCS, Texas A&M Hlth. Sci. Ctr. Col. of Med.*

9:00 B19 **496.10** Choline deficiency decreases proliferation of embryonic neural progenitor cells through inhibiting epidermal growth factor pathway. Y. WANG*; N. SURZENKO; M. MEHEDINT; K. CORBIN; S. ORENA; W. FRIDAY; S. ZEISEL. *Nutr. Res. Inst. UNC Chapel Hill.*

10:00 B20 **496.11** miR-7 promotes cell proliferation and migration by targeting KLF4. K. F. MEZA-SOSA; E. I. PÉREZ-GARCÍA; N. CAMACHO-CONCHA; O. LÓPEZ-GUTIÉRREZ; G. PEDRAZA-ALVA; L. PEREZ-MARTINEZ*. *IBt-Universidad Nacional Autonoma De Mexico, Ibt-Universidad Nacional Autonoma De Mexico.*

11:00 B21 **496.12** Hedgehog signaling is required for and amplifies FGF2-induced formation of Muller Glia derived Progenitor cells in the avian retina. L. J. TODD*; A. J. FISCHER. *The Ohio State Univ.*

8:00 B22 **496.13** Temporal dynamics of human cerebrospinal fluid vesicles. D. M. FELICIANO*; A. TIETJE; K. L. MARON; Y. WEI. *Clemson Univ.*

9:00 B23 **496.14** Laser-induced ATP dependent cortical calcium waves in E13-E15 mouse embryos ex utero. M. YURYEV*; C. PELLEGRINO; V. JOKINEN; S. KHIRUG; S. FRANSSILA; L. KHIROUG; C. RIVERA. *Univ. of Helsinki, Aix-Marseille Univ., Aalto university.*

10:00 B24 **496.15** Functional interaction between neural progenitors and the vasculature regulates neocortical interneuron production. X. TAN*; W. SHI; Z. LI; S. SHI. *Mem. Sloan Kettering Inst.*

11:00 B25 **496.16** Sirt1 positively regulates the regenerative response of glial progenitors to neonatal brain injury. B. JABLONSKA*; M. GIERDALSKI; A. LIACHAUCO; J. CABRERA-LUQUE; T. HAWLEY; V. GALLO. *Children's Natl. Med. Ctr., Children's Natl. Med. Ctr., George Washington Univ.*

8:00 B26 **496.17** Long-standing effects of exposure to gulf war illness related chemicals and mild stress on the expression of genes encoding oxidative stress and inflammation in the hippocampus. G. SHETTY*; B. HATTIANGADY; B. SHUAI; A. K. SHETTY. *Inst. for Regenerative Medicine, TAMHSC Col. of Med. at Scott & White, Olin E. Teague Veterans' Med. Center, CTVHCS, Texas A&M Hlth. Sci. Ctr. Col. of Med.*

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9:00 B27 **496.18** Altered cellular responses in the juvenile and adult subventricular zone induced by epidermal growth factor. G. KUHN*; O. R. LINDBERG; A. BREDERLAU. *Univ. of Gothenburg.*

10:00 B28 **496.19** Thyroid hormone acts locally to increases the rate of neurogenesis and dendritic arborization in the tadpole visual system. C. K. THOMPSON*; H. T. CLINE. *The Scripps Res. Inst.*

11:00 B29 **496.20** Fate choice in the cranial neural crest. R. CARR*; A. GRAHAM. *King's Col. London.*

POSTER

497. Neuron–Glia Interactions During Development

Theme A: Development

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 B30 **497.01** The role of serotonin in running-induced neuronal activity. C. HAINER*; F. KLEMPIN; A. MACMAHON; M. BADER; N. ALENINA. *MDC Berlin, Columbia Univ.*

9:00 B31 **497.02** VGluT1+ neuronal glutamatergic signaling regulates postnatal developmental maturation of cortical protoplasmic astroglia. M. TOLMAN*; L. MOREL; H. HIGASHIMORI; Y. YANG. *Tufts Univ.*

10:00 B32 **497.03** New mouse strains for manipulating genetically defined subpopulations of central norepinephrine neurons. N. PLUMMER*; J. DE MARCHENA; D. D'AGOSTIN; S. D. ROBERTSON; C. J. TUCKER; P. JENSEN. *NIH/NIEHS, NIH/NIEHS.*

11:00 B33 **497.04** Sox17 promotes hedgehog-mediated oligodendroglial lineage survival in the subcortical white matter. B. MCELLIN*; M. CATRON; E. HONG; L. CHEW; X. MING; V. GALLO. *Children's Natl. Med. Ctr.*

8:00 B34 **497.05** Glial cells and neurons express fibroblast growth factor receptor 1 (FGFR1) in the cortex and hippocampus in the developing mouse brain. L. CHOUBEY; J. COLLETTE; K. M. SMITH*. *Univ. of Louisiana At Lafayette, Univ. of Louisiana at Lafayette, Univ. of Louisiana At Lafayette.*

9:00 B35 **497.06** Patch-clamp study of Schwann cells in mouse sciatic nerve slice: Electrophysiological properties and neurotransmitter receptor expression. N. FRÖHLICH*; D. EISSLER; M. KUKLEY. *Ctr. for Integrative Neurosci. (CIN).*

10:00 B36 **497.07** How does glia-secreted sparc block synaptic development? H. DINGSDALE*; A. PAMUKCU; S. SINGH; C. EROGLU. *Duke Univ.*

11:00 B37 **497.08** ▲ Cortical neuronal damage stimulates a microRNA and epigenetic-associated transition in activated microglia that enhances neuronal differentiation and survival. A. K. JOHNSON; N. W. MATHY; M. TAPPATA; A. SHIBATA*. *Creighton Univ., Creighton Univ.*

8:00 B38 **497.09** Bidirectional signaling between neurons and astrocytes via neuroligin-1 and hevin. J. A. STOGSDILL*; S. K. SINGH; L. PILAZ; D. L. SILVER; C. EROGLU. *Duke Univ., Duke Univ.*

9:00 B39 **497.10** PACAP induces differentiation of neural progenitor cells into glial lineage in cerebral cortex development. J. WATANABE*; H. OHTAKI; T. NAKAMACHI; Z. XU; K. SUGIYAMA; S. SASAKI; S. ARATA; S. SHIODA. *Showa Univ., Showa Univ., Univ. of Toyama.*

10:00 B40 **497.11** Astrocyte-secreted hevin promotes synapse formation and maturation by trans-synapticallybridging neurexin 1-alpha and neuroligins. S. SINGH*; J. A. STOGSDILL; L. PILAZ; H. DINGSDALE; A. PAMUKCU; D. L. SILVER; C. EROGLU. *Duke Univ., Duke Univ.*

11:00 B41 **497.12** ▲ Perinatal protein malnutrition during the 10 first lactation days alters the vimentin and cell proliferation pattern of the dentate gyrus. A. C. B. BARBOSA*; P. L. GUEDES; M. L. M. ROCHA; P. BARRADAS; F. TENORIO. *Uerj.*

8:00 B42 **497.13** Sustained learning and memory programmes modulate OPC proliferation and differentiation. J. BOULANGER*; C. MESSIER. *Univ. of Ottawa, Univ. of Ottawa.*

9:00 B43 **497.14** HMGN family proteins promote astrocyte differentiation of neural precursor cells. M. NAGAO*; D. LANJAKORNSIRIPAN; Y. ITOH; Y. KISHI; Y. GOTOH; T. OGATA. *Res. Institute, Natl. Rehabil. Ctr. For Persons With Disabilities, The Univ. of Tokyo.*

10:00 B44 **497.15** D-Serine influences the maturation of glutamatergic synapses and axonal refinement in the developing visual system of the Xenopus tadpole. M. VAN HORN*; L. POLLEGIONI; E. RUTHAZER. *McGill Univ., Univ. of Insubria.*

11:00 B45 **497.16** Unitary synaptic connections between GABAergic interneurons and NG2 cells in the developing somatosensory cortex. D. ORDUZ; P. P. MALDONADO; M. BALIA; M. VÉLEZ-FORT; V. DE SAARS; Y. YANAGAWA; V. EMILIANI; M. C. ANGULO*. *INSERM U1128, CNRS UMR 8250, Dept. of Genet. and Behavioral Neurosci.*

8:00 B46 **497.17** Hoxb1 is required for the development of a subset of pontine norepinephrine neurons. S. D. ROBERTSON*; P. JENSEN. *Natl. Inst. of Envrn. Hlth. Sci.*

9:00 B47 **497.18** Tridimensional *in situ* description of axonal branches contacting multi and uni-ciliated cells lying on the lateral wall of lateral ventricle, in adult Long-Evans rats. C. S. HAEMMERLE*; M. I. NOGUEIRA; I. WATANABE. *Univ. of Sao Paulo; Inst. of Biomed. S.*

10:00 B48 **497.19** Constitutive expression of cannabinoid CB2 receptors in cultures of microglial and astroglial cells: Immunocytochemical, biochemcial and pharmacological evidence. A. C. SHIVACHAR*; D. N. JACKSON; J. JOSEPH. *Texas Southern Univ.*

11:00 B49 **497.20** Ultrastructural distribution of glycogen in hippocampal astrocytic processes. C. CALI*; J. BAGHABRA; H. LEHVASLAIHO; G. KNOTT; I. ALLAMAN; P. J. MAGISTRETTI. *KAUST, EPFL, EPFL.*

8:00 B50 **497.21** Neuron-astrocyte interplay: role of astrocytic DISC1 in neurodevelopment. M. XIA*; A. SHEVELKIN; C. YANG; M. V. PLETNIKOV. *The Johns Hopkins Univ. Sch. of Med., Guangxi Univ. of Traditional Chinese Med.*

9:00 B51 **497.22** Myelination compensates for visual deprivation and diminished neurotransmission as a form of functional plasticity. A. ETXEBERRIA*; X. CHOU; K. HOKANSON; S. R. MAYORAL; L. I. ZHANG; E. M. ULLIAN; H. W. TAO; J. R. CHAN. *UCSF, USC, Univ. of California, San Francisco.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

498. Development of Motor, Sensory, and Limbic Systems

Theme A: Development

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 B52 **498.01** Short and long term consequences of maternal presence on *in vivo* physiology of the developing amygdala. D. A. WILSON*; E. C. SARRO; R. M. SULLIVAN. *NYU Sch. of Med., Emotional Brain Inst.*

9:00 B53 **498.02** Neurobehavioral development of fear and aggression following early life abuse. R. E. PERRY*; R. M. SULLIVAN. *Nathan Kline Inst., NYU Sch. of Med., NYU Langone Med. Ctr., NYU Sackler Inst. for Grad. Biomed. Sci.*

10:00 B54 **498.03** Developmental disruption of rat social behavior following early life abuse is mediated by the amygdala and rescued by environmental enrichment. M. RINCÓN CORTÉS; R. M. SULLIVAN*. *NKI & NYU Sch. of Med., Child Study Ctr. at the NYU Langone Med. Ctr., NYU Sackler Inst. at the NYU Sch. of Med., NYU Ctr. for Neural Sci.*

11:00 B55 **498.04** Reorganization of the axon terminations of accumbens neurons projecting to the ventral tegmental area between adolescence and adulthood. L. YETNIKOFF*; K. P. PARSELY; D. S. ZAHM. *St. Louis Univ. Sch. of Med.*

8:00 B56 **498.05** Gestational stress produces hyperlocomotion and attenuated weight gain in adult male offspring. H. BAUERLE; D. J. TOUFEXIS*. *Univ. of Vermont, Univ. of Vermont.*

9:00 B57 **498.06** Volumetry of the human memory circuit: Differential effect of age on hippocampal subfields and associated white matter volumes. R. S. AMARAL*, JR; M. T. M. PARK; J. PRUESSNER; J. PIPITONE; J. WINTERBURN; S. CHAVEZ; M. SCHIRA; N. LOBAUGH; J. P. LERCH; A. VOINESKOS; M. CHAKRAVARTY. *CAMH, McGill Univ., Univ. of Toronto, Univ. of Toronto, Univ. of Wollongong, Univ. of Toronto, Hosp. for Sick Children, Univ. of Toronto.*

10:00 B58 **498.07** Environmental enrichment differentially affects the perinatal and adult mouse brain. R. ALLEMANG-GRAND*; J. SCHOLZ; E. LANGILLE; D. FERNANDES; J. P. LERCH. *Mouse Imaging Ctr., Dept. of Med. Biophysics, Univ. of Toronto.*

11:00 B59 **498.08** Maternal programming of mice offspring by prenatal exposure to predator odor. S. ST-CYR*; P. O. MCGOWAN. *Univ. of Toronto.*

8:00 B60 **498.09** Interactions of kinins and TRPV1 in a model of neonatal mouse spinal cord inflammation. S. MANDADI*; P. HONG; H. LEDUC-PESSAH; J. EJDRYGIEWICZ; T. TRANG; P. J. WHELAN. *Univ. of Calgary, Univ. of Alberta, Univ. of Calgary.*

9:00 C1 **498.10** Molecular architecture of the developing and adult human hippocampal formation. S. DING*; J. J. ROYALL; A. BONGAARTS; R. DALLEY; P. D. PARKER; M. HAWRYLYCZ; A. R. JONES; E. S. LEIN; J. G. HOHMANN. *Allen Inst. For Brain Sci.*

10:00 C2 **498.11** Dbx1 links embryonic development of the medial amygdala to innate behavior. S. ESUMI; K. SOKOLOWSKI; Y. KAMAL; J. LISCHINSKY; D. FELDMAN; P. LI; A. PIERANI; N. TAMAMAKI; N. SHAH; M. HUNTSMAN; J. CORBIN*. *Kumamoto-University, Children's Natl. Med. Ctr., Children's Natl. Med. Ctr., Childrens Natl. Med. Ctr., Univ. Paris Diderot, Univ. of California-San Francisco, Univ. of Colorado Anschutz Med. Campus.*

11:00 C3 **498.12** Identification of the central extended amygdala of chicken based on gene expression patterns and fate mapping analysis. A. VICARIO; A. ABELLÁN; L. MEDINA*. *Univ. Lleida-IRBLLEIDA.*

8:00 C4 **498.13** ▲ Developmental differences in psychophysiological responses to music. J. ANCELLE; R. TIETZE; S. WEINBERGER-LITMAN; D. A. HUNTER*. *Marymount Manhattan Col.*

9:00 C5 **498.14** Peptide-signalling and miRNA regulation of transmitter specification affecting kinship recognition. D. DULCIS*; G. LIPPI; L. H. DO; D. K. BERG; N. C. SPITZER. *Univ. of California San Diego, Kavli Inst. for Brain and Mind.*

10:00 C6 **498.15** Neurotransmitter switching in single neurons in the adult rat brain. D. MENG*; D. DULCIS; S. LEUTGEB; K. DEISSEROTH; N. C. SPITZER. *UC San Diego, Kavli Inst. for Brain and Mind, UC San Diego, Stanford Univ.*

POSTER

499. Evolution of Developmental Mechanisms

Theme A: Development

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 C7 **499.01** Convergent evolution of pallial basal progenitors in amniotes. T. NOMURA*; W. YAMASHITA; F. CALEGARI; Y. MURAKAMI; H. GOTOH; K. ONO. *Kyoto Prefectural Univ. of Med., JST.PRESTO, Kyoto Univ., CRTD, Ehime Univ.*

9:00 C8 **499.02** Comparative neuronal morphology of the cerebellar cortex in afrotherians, carnivores, cetartiodactyls, and primates. B. G. JACOBS*; N. L. JOHNSON; D. WAHL; C. B. JOHNSON; D. MOHR; B. KOPEC; M. SCHALL; B. C. MASEKO; A. H. LEWANDOWSKI; M. A. RAGHANTI; B. WICINSKI; C. BUTTI; W. D. HOPKINS; M. F. BERTELSEN; T. WALSH; J. R. ROBERTS; R. L. REEP; P. R. HOF; C. C. SHERWOOD; P. R. MANGER. *The Colorado Col., Univ. of Witwatersrand, Cleveland Metroparks Zoo, Kent State Univ., Icahn Sch. of Med. at Mount Sinai, Yerkes Natl. Primate Res. Ctr., Copenhagen Zoo, Smithsonian Natl. Zoological Park, Univ. of Florida, The George Washington Univ.*

10:00 C9 **499.03** Evo-devo and the cortical connectome highlights systematic changes in frontal connections across primates. C. J. CHARVET*; A. VAN DER KOUWE; W. D. HOPKINS; P. R. HOF; C. C. SHERWOOD; E. TAKAHASHI. *Boston Children's Hospital/Harvard Med. Sch., Martinos Ctr. for Biomed. Imaging, MGH, Harvard Med. Sch., Yerkes Natl. Primate Res. Ctr., Icahn Sch. of Med. at Mount Sinai, The George Washington Univ.*

11:00 C10 **499.04** Uncovering the genetic differences of hemispheric lateralization in humans. G. MUNTANÉ*; G. SANTPERE; A. VERENDEEV; A. BAUERNFEIND; A. NAVARRO; W. D. HOPKINS; C. C. SHERWOOD. *PRBB, The George Washington Univ., Washington Univ. Sch. of Med., Georgia State Univ.*

8:00 C11 **499.05** Asymmetry in the inferior parietal lobe in chimpanzees and its relationship with handedness. L. D. REYES*; C. C. SHERWOOD; W. D. HOPKINS. *The George Washington Univ., The George Washington Univ., The George Washington Univ., Georgia State Univ., Yerkes Natl. Primate Res. Ctr.*

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9:00 C12 **499.06** High spatial resolution proteomic comparison of the brain in humans and chimpanzees. A. L. BAUERNFEIND*; M. L. REYZER; R. M. CAPRIOLI; J. J. ELY; C. C. BABBITT; G. A. WRAY; P. R. HOF; C. C. SHERWOOD. *George Washington Univ., Vanderbilt Univ. Med. Ctr., Holloman Air Force Base, Univ. of Massachusetts Amherst, Duke Univ., Icahn Sch. of Med. at Mount Sinai.*

10:00 C13 **499.07** Differences in serotonin transporter expression in the amygdala of bonobos (Pan paniscus) and chimpanzees (Pan troglodytes): Implications for behavior. C. D. STIMPSON*; W. D. HOPKINS; J. P. TAGLIALATELA; N. BARGER; P. R. HOF; C. C. SHERWOOD. *George Washington Univ., Georgia State Univ., Yerkes Natl. Primate Res. Ctr., Kennesaw State Univ., Univ. of California, Davis, Icahn Sch. of Med. at Mount Sinai, The George Washington Univ.*

11:00 C14 **499.08** ▲ Age-related neural changes in the chimpanzee hippocampus. E. L. MUNGER*; M. K. EDLER; P. R. HOF; W. D. HOPKINS; J. M. ERWIN; C. C. SHERWOOD; M. A. RAGHANTI. *Kent State Univ., Kent State Univ., Mount Sinai, Yerkes Natl. Primate Res. Ctr., The George Washington Univ.*

8:00 C15 **499.09** Heritable anatomical variation in chimpanzee brains. Implications for human evolution. A. GOMEZ-ROBLES*; W. D. HOPKINS; C. C. SHERWOOD. *The George Washington Univ., Georgia State Univ., Yerkes Natl. Primate Res. Ctr.*

9:00 C16 **499.10** Evo-devo of cortical association pathways: Allometric and systematic variation across primates. C. SHERWOOD*; E. TAKAHASHI; A. VAN DER KOUWE; W. D. HOPKINS; P. R. HOF; C. J. CHARVET. *George Washington Univ., Boston Children's Hospital, Harvard Med. Sch., Massachusetts Gen. Hospital, Harvard Med. Sch., Georgia State Univ., Icahn Sch. of Med. at Mount Sinai.*

10:00 C17 **499.11** Statistical model of evolution of brain regions. D. D. FERRANTE*; Y. WEI; A. KOULAKOV. *Cold Spring Harbor Labs.*

11:00 C18 **499.12** Are the foundations for embodied activity already embedded in heterogeneous laminar networks? E. L. OHAYON*; A. K. LEE; A. LAM. *The Green Neurosci. Lab.*

8:00 C19 **499.13** Decoupled schedules of neural and somatic development during embryogenesis across species. A. HALLEY*. *Univ. of California, Berkeley.*

9:00 C20 **499.14** FGF2-induced gyrification in the mouse brain: An evolutionary perspective from mice to humans. S. TOMASI*; G. COPPOLA; F. M. VACCARINO. *Yale Univ., Yale Univ., Yale Univ.*

10:00 C21 **499.15** A new dimension of neurobiology in a novel cell type. P. H. FREDERIKSE*; A. NANDANOOR; C. KASINATHAN. *Rutgers SDM BHS.*

11:00 C22 **499.16** • ▲ [Unable to Attend] Social isolation and brain development in the eusocial ant species camponotus floridanus. E. JUNGE*; M. A. SEID. *The Univ. of Scranton, The Univ. of Scranton.*

8:00 C23 **499.17** The rod photoreceptors originate from S-opsin expressing cone precursor cells in the mammalian retina. J. KIM*; H. YANG; M. J. BROOKS; A. SWAROOP. *NIH, Natl. Eye Inst. (NEI).*

9:00 C24 **499.18** A developmental approach to long-distance connectivity and interhemispheric collaboration. B. N. CIPOLLINI*; G. COTTRELL. *UC San Diego.*

10:00 C25 **499.19** Comparing human and macaque cortical development through differential gene coexpression analysis. M. C. OLDHAM*. *UCSF.*

11:00 C26 **499.20** • Positive selection and signaling switch of the axon guidance receptor Robo3 during vertebrate evolution. F. FRIOCOURT; P. ZELINA; H. BLOCKUS; Y. ZAGAR; A. PÉRES; Z. WU; N. RAMA; C. FOUQUET; E. HOHENESTER; J. SCHWEITZER; M. TESSIER-LAVIGNE; H. ROEST CROLLIUS; A. C. CHEDOTAL*. *Inst. de la Vision, Inst. de Biologie de l'ENS, The Rockefeller Univ., CNRS UMR 7102, Imperial Col. London, Univ. of Freiburg, Vision Institute, INSERM U968.*

8:00 C27 **499.21** A human accelerated enhancer of FZD8 regulates corticogenesis. D. L. SILVER*; G. WRAY; S. SKOVE; L. BOYD. *Duke Univ. Med. Ctr., Duke Univ.*

POSTER

500. Structure and Function of Nicotinic Receptors and Asics

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 C28 **500.01** Differing residues in the highly conserved transmembrane domain of β2 and β4 nAChR subunits contribute to differences in function and agonist efficacy of α4β2 and α4β4 receptors. M. NEWHOFF*; C. LI; J. B. EATON; R. J. LUKAS; A. P. KOZIKOWSKI; Y. CHANG. *Barrow Neurolog. Inst., Xinxiang Med. Univ., Univ. of Illinois at Chicago.*

9:00 C29 **500.02** MTS modification of substituted cysteines in the β2 nachr subunit reduces dFBr potentiation of α4β2 receptors. Y. HUANG*; R. M. CERCHIO, Jr; R. A. GLENNON; M. K. SCHULTE. *Univ. of Sci., Virginia Commonwealth Univ.*

10:00 C30 **500.03** • Properties of extracellular domain α3β2 nicotinic acetylcholine receptors with a protease site inserted upstream of M1. G. B. WELLS*; V. L. FRANKOVICH; A. M. PERSON. *Texas A&M Univ. Hlth. Sci. Ctr.*

11:00 C31 **500.04** Biophysical and pharmacological properties of native human α6β4 nicotinic acetylcholine receptors. A. J. HONE*; J. MCINTOSH; J. PASSAS; A. ALBILLOS. *Univ. Autonoma De Madrid, Univ. of Utah, George E. Wahlen Veterans Affairs Med. Ctr., Hosp. Doce de Octubre, Univ. Autonoma De Madrid.*

8:00 C32 **500.05** Roles for N-terminal domains of nicotinic acetylcholine receptor (nAChR) β3 subunits in enhanced functional expression of mouse α6β2β3- and α6β4β3-nAChRs. B. DASH*; R. J. LUKAS; M. D. LI. *Univ. of Virginia, Barrow Neurolog. Inst.*

9:00 C33 **500.06** Molecular interaction of α-conotoxin RgIA with α9α10 nAChR. L. AZAM*; J. MCINTOSH. *Univ. of Utah, Veterans Affairs Med. Ctr. & Univ. of Utah.*

10:00 C34 **500.07** What non-natural conotoxin can tell us about α7 nAChRs. F. MARGER*; T. SCHAER; C. HEINIS; D. BERTRAND. *Hiqscreen, HiQscreen, EPFL, hiQscreen.*

11:00 C35 **500.08** Allosteric modulation of α7 nicotinic acetylcholine receptors is altered by transmembrane mutations. A. CHATZIDAKI*; J. M. D'OYLEY; T. D. SHEPPARD; N. S. MILLAR. *Univ. Col. London, Univ. Col. London.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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8:00 C36 **500.09** Chimeric acetylcholine binding proteins provide insight to the structure and function of human nicotinic receptors. T. T. TALLEY*; J. LINDSTROM; J. LUO; J. BOBANGO; M. WILSON; K. GALLEGOS; P. TAYLOR. *Idaho State Univ. Col. of Pharm., Skaggs Sch. of Pharm. & Pharmaceut. Sciences, Univ. of California, San Diego, Univ. of Pennsylvania.*

9:00 C37 **500.10** Active when closed? Coupling to heterotrimeric G proteins enable α7 nAChR mediated calcium store release. J. KING*; J. NORDMAN; S. P. BRIDGES; M. LIN; N. KABBANI. *George Mason Univ.*

10:00 C38 **500.11** AChBP/insect chimeras as tools for the analysis and development of safer insecticides. J. BOBANGO*; M. WILSON; K. GALLEGOS; P. TAYLOR; T. TALLEY. *Idaho State Univ., Univ. of California.*

11:00 C39 **500.12** ● Development and validation of a population patch clamp-based assay for subtype-selective profiling of nicotinic acetylcholine receptors. G. KIRSCH; Y. KURYSHEV; Z. LIU; L. ARMSTRONG; C. MATHES*; A. M. BROWN. *Chantest Corp.*

8:00 C40 **500.13** [125I]-iodo-ASEM: A New radioligand for measuring α7 nicotinic receptors. T. T. OLSON*; C. ONONGAYA; Y. XIAO; Y. GAO; R. MEASE; M. POMPER; A. G. HORTI; K. J. KELLAR. *Georgetown Univ. Sch. of Med., John Hopkins Univ. Sch. of Med.*

9:00 C41 **500.14** ● Comparative pharmacology of human α4β2β4 nicotinic acetylcholine receptor subtypes expressed in HEK293 cells using sazetidine-A and AT-1001. K. DEDOMINICIS*; H. HWANG; M. UDDIN; S. LEE; T. T. OLSON; N. SAHIBZADA; Y. XIAO; B. B. WOLFE; K. J. KELLAR; R. P. YASUDA. *Dept. of Pharmacology/ Georgetown Univ.*

10:00 C42 **500.15** Mass spectrometric investigation of human α7-nicotinic acetylcholine receptor interacting proteins in SH-SY5Y cells. M. J. MULCAHY; E. HAWROT*. *Brown Univ.*

11:00 C43 **500.16** Arylguanidines as potential alpha7 negative allosteric modulators. S. N. KHATRI*; O. ALWASSIL; Z. BAZARSKY; M. DUKAT; M. SCHULTE. *Univ. of Sci., Sch. of Pharmacy, Virginia Commonwealth Univ., Philadelphia Col. of Pharmacy, Univ. of Sci.*

8:00 C44 **500.17** Monitoring pentameric ligand-gated ion channel functionality along the affinity purification process. A. V. PANDHARE*; N. MNATSAKANYAN; S. RIELA; M. P. BLANTON; M. JANSEN. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*

9:00 C45 **500.18** Differential functional contributions of α4(+)/(-)β2 agonist binding sites in α4β2-nicotinic receptor isoforms. P. WHITEAKER*; J. EATON; Y. CHANG; J. F. COOPER; J. M. LINDSTROM; R. J. LUKAS; L. M. LUCERO. *St. Joseph's Hosp, Med. Sch. of the Univ. of Pennsylvania.*

10:00 C46 **500.19** Single-channel kinetic analyses of the mouse neuronal nicotinic acetylcholine receptor channels containing α3 and β4 subunits in hek293 cells. P. G. PUROHIT*. *SUNY At Buffalo.*

11:00 C47 **500.20** Identification of bupropion binding sites in GLIC with the photoaffinity probe [^{125}I]-SADU-3-72. N. MNATSAKANYAN*; A. PANDHARE; J. R. LEVER; D. J. LAPINSKY; H. WILMS; M. P. BLANTON; M. JANSEN. *Texas Tech. Univ. Hlth. Sci. Ctr., Univ. of Missouri, Duquesne Univ., Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*

8:00 C48 **500.21** Atomistic views of positive allosteric modulators acting on the α7 nAChR. V. BONDARENKO; D. D. MOWREY; T. S. TILLMAN; E. SEYOUM; Y. XU; P. TANG*. *Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh.*

9:00 C49 **500.22** Effects of α-conotoxins from the venom of Conus purpurascens on the *Drosophila* α7 nicotinic acetylcholine receptor. A. M. RODRIGUEZ*; M. HEGHINIAN; T. A. GODENSCHWEGE; F. MARÍ. *Florida Atlantic Univ.*

10:00 C50 **500.23** The modular character of nicotinic agonists: Minimal pharmacophores and transposable motifs for selectivity and silent agonism. N. HORENSTEIN*; K. CHOJNACKA; R. PAPKE. *Univ. Florida, Univ. Florida.*

11:00 C51 **500.24** Acid-sensing ion channel proton sensitivity is modulated by a guanidine containing dietary supplement. A. AGHARKAR*; R. N. SMITH; E. B. GONZALES. *UNT Hlth. Sci. Ctr., Inst. for Aging and Alzheimer's Dis. Res., Cardiovasc. Res. Inst.*

8:00 C52 **500.25** Acid-sensing ion channel modulation by nonproton ligands: the influence of divalent cations. R. N. SMITH*; E. B. GONZALES. *UNT Hlth. Sci. Ctr.*

9:00 C53 **500.26** Tobramycin inhibits acid sensing ion channel (ASIC) homomers 1a, 1b and 2a expressed in CHO cells. A. M. ORTEGA*; K. PÉREZ-TIERRA; M. A. GANDINI; R. FELIX; R. VEGA; E. SOTO. *Insituto De Fisiología, Benémerita Univ. Autónoma De Puebla, Dept. of Cell Biology, Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst. (Cinvestav-IPN).*

10:00 C54 **500.27** ASIC1a in the nucleus accumbens regulates cocaine-associated behaviors. A. L. SCHWAGER*; C. KREPLE; C. COSME; Y. LU; J. WEMMIE; R. LALUMIERE. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

11:00 C55 **500.28** *Caenorhabditis elegans*: A small, but mighty, tool in understanding addiction. S. A. WESCOTT*; M. RAUTHAN; E. A. RONAN; X. Z. S. XU. *Univ. of Michigan, Univ. of Michigan, Univ. of Gothenburg.*

8:00 C56 **500.29** The acid-sensing ion channel (ASIC). D. C. BERTRAND*; S. BERTRAND; Y. GAUTSCHI; L. SCHILD. *Hiqscreen, Univ.*

POSTER

501. NMDA Receptor Structure and Function

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 C57 **501.01** Synaptic availability of GluN2A subunit of NMDA receptors: The role of Rabphilin 3A. F. GARDONI*; J. STANIC; M. CARTA; A. A. GENAZZANI; C. MULLE; M. DI LUCA. *Univ. Milan, Univ. of Bordeaux, Univ. del Piemonte Orientale.*

9:00 C58 **501.02** Structural and functional study of N-Methyl-D-Aspartate Receptor-specific antagonistic peptides from Conus species of marine snails: ConPr1, 2, 3, and ConRIB. S. KUNDA*; T. SNOW; J. CHERIYAN; M. HUR; R. BALSARA; F. J. CASTELLINO. *Univ. of Notre Dame, W.M. Keck Ctr. for Transgene Res.*

10:00 C59 **501.03** ● Rapid antidepressant stimulates decoupling of GABAB receptors from GIRK/KIR channels through 14-3-3η. E. WORKMAN*; P. C. G. HADDICK; G. DILLY; B. ZEMELMAN; K. RAAB-GRAHAM. *The Univ. of Texas At Austin, Genentech.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 C60 **501.04** Investigating the role of NMDA receptor expression in the developmental integration of hippocampal neurogliaform cells. E. S. BARKSDALE*; R. CHITTAJALLU; X. YUAN; D. COLLINS; K. PELKEY; C. MCBAIN. *NICHD/NIH.*

8:00 C61 **501.05** Regulation of NMDA receptors functions in the hippocampus: D-serine of glycine? M. LE BAIL*; S. SACCHI; K. AIT OUARES; N. A. MOHAMAD NOR HAZALIN; L. POLLEGIONI; H. WOLOSKER; J. BILLARD; J. MOTHET. *CRN2M UMR7286-CNRS, Ctr. Interuniversitario di Biotecnologie Proteiche, Politecnico di Milano and Univ. degli Studi dell'Insubria, The Rappaport Fac. of Med. and Res. Institute, Technion-Israel Inst. of Technol., Ctr. de Psychiatrie et Neurosciences, Univ. Paris Descartes.*

9:00 C62 **501.06** ● Using fMRI in awake rats to differentiate NMDA receptor antagonists. K. MOORE*; P. KULKARNI; M. NEDELMAN; C. F. FERRIS. *Northeastern Univ., Ekam Imaging.*

10:00 C63 **501.07** A GRIN2A de novo mutation associated with epilepsy and intellectual disability reduces NMDA receptor currents and Mg^{2+} block in cultured primary cortical neurons. K. MARWICK*; P. A. SKEHEL; G. E. HARDINGHAM; D. J. A. WYLLIE. *Univ. of Edinburgh.*

11:00 C64 **501.08** Voltage dependence of NMDA receptor inhibition by memantine and by ketamine depend on duration of glutamate application and on receptor subtype. N. G. GLASGOW*; J. W. JOHNSON. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 C65 **501.09** Transmembrane conformational signaling at NMDA receptors independent of ion flow during synaptic plasticity. K. B. DORE*; J. AOW; R. MALINOW. *UCSD.*

9:00 C66 **501.10** Classification of neuronal cell types in the mouse brainstem through cell specific constellations. S. RAGHURAMAN*; A. GARCIA; K. J. CURTICE; R. TEICHERT; J. RAMIREZ; B. OLIVERA. *Univ. of Utah, Seattle Children's Res. Inst.*

10:00 C67 **501.11** PSD-95 differentially regulates trafficking of NMDA receptors based on their subunit composition. S. H. STANDLEY*; M. AVETISYAN; M. RONILO. *Western Univ. of Hlth. Sci., California State University, Fullerton.*

11:00 C68 **501.12** Autocrine boost of NMDAR current in hippocampal CA1 pyramidal neurons by a PMCA-dependent pH shift. H. CHEN*; M. CHESLER. *NYU SCHOOL OF MEDICINE, NYU SCHOOL OF MEDICINE.*

8:00 C69 **501.13** Ischemia-induced excitoxicity is attenuated by GluN2B-specific conantokin-G in a rat model of focal brain ischemia. T. SNOW*; R. BALSARA; A. DANG; D. DONAHUE; F. J. CASTELLINO. *Univ. of Notre Dame, W.M. Keck Ctr. for Transgene Res.*

9:00 C70 **501.14** Activity-induced synaptic delivery of GluN2A-containing NMDA receptors is mediated by endoplasmic reticulum chaperone Bip and participates in fear memory. B. ZHANG*; X. ZHANG; X. YAN; M. YE; Q. YANG; W. CAO; W. QIANG; L. ZHU; X. XU; J. WANG; J. LUO. *Inst. of Neurosci. of Zhejiang Univ., Inst. of neuroscience, Inst. of neuroscience.*

10:00 C71 **501.15** ● Novel reagents for cell biological and biochemical assessment of ketamine targets. C. M. EMNETT*; H. LI; A. BENZ; X. JIANG; J. BOGGIANO; C. ZORUMSKI; D. WOZNIAK; D. REICHERT; S. MENNERICK. *Washington Univ., Washington Univ., Washington Univ.*

11:00 C72 **501.16** CaMKII-α is necessary for normal development of NMDA receptors on zebrafish Mauthner cells. B. ROY*; D. W. ALI. *Univ. of Alberta.*

8:00 D1 **501.17** Differential localization of NMDA receptors in cerebellar stellate cells. C. DUBOIS*; L. SUN; M. MISHINA; S. J. LIU. *LSUHSC, The Res. Organization of Sci. and Technology, Ritsumeikan university.*

9:00 D2 **501.18** GluN3A expression restricts the localization of NMDA receptors to synapses via modulation of surface dynamics. I. M. GONZÁLEZ-GONZÁLEZ; J. A. GRAY; R. A. NICOLL; L. GROC; I. PEREZ-OTANO*. *Ctr. For Applied Med. Res. (CIMA) and Univ. of Navarra., Univ. of California, Interdisciplinary Inst. for Neuroscience, Univ. de Bordeaux.*

10:00 D3 **501.19** Peculiarities of homocysteine as an agonist of NMDA receptors. D. A. SIBAROV*; P. A. ABUSHIK; R. GINIATULLIN; S. M. ANTONOV. *Sechenov Inst. of Evolutionary Physiol. and Biochem., A. I. Virtanen Inst. for Mol. Sciences, Univ. of Eastern Finland.*

11:00 D4 **501.20** ▲ D-Cycloserine selectively alters kinetics of evoked NMDA responses in the rat entorhinal cortex. A. M. LENCH; P. V. MASSEY; R. S. JONES*. *Univ. of Bath.*

8:00 D5 **501.21** Chronic GluN2B inhibition reduced axon length and sphere of axonal arborization in dentate/hilar border interneurons, but did not affect GABAergic synapses onto dentate granule cells. S. B. BAUSCH*; Y. WANG; D. LAPIDES; K. QUINN. *Uniformed Services Univ. Sch. of Med.*

9:00 D6 **501.22** ● Combined effect of genetic variants in GRIN2B on prefrontal function during working memory performance. G. PERGOLA*; P. DI CARLO; L. FAZIO; A. RAIO; R. MASELLIS; B. GELAO; A. RAMPINO; G. BLASI; A. BERTOLINO. *Univ. of Bari 'Aldo Moro', Bari Univ. Hosp.*

10:00 D7 **501.23** Synthesis, mechanism of action, and structural determinants for a novel class of GluN2C/D-selective NMDA receptor antagonists. S. A. SWANGER*; S. S. ZIMMERMAN; T. M. ACKER; K. M. VANCE; C. A. MOSLEY; D. C. LIOTTA; S. F. TRAYNELIS. *Emory Univ., Emory Univ.*

11:00 D8 **501.24** ● Distributed kinetic effects of oxysterol positive modulators on NMDA channels. A. J. LINSENBARDT*; S. M. PAUL; J. J. DOHERTY; C. F. ZORUMSKI; S. MENNERICK. *Washington Univ., Weill Cornell Med. Col. of Cornell Univ., Sage Therapeut., Washington Univ.*

POSTER

502. Purine and Other G-Protein Coupled Receptors

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 D9 **502.01** Adenosine A2A receptor blockade therapeutically reverts synaptic dysfunction and altered mood and memory performance in mice subjected to chronic unpredictable stress. R. A. CUNHA*; M. P. KASTER; N. J. MACHADO; H. B. SILVA; A. NUNES; A. ARDAIS; M. M. SANTANA; Y. BAQI; C. E. MULLER; A. S. RODRIGUES; L. O. PORCIÚNCULA; J. CHEN; A. R. TOMÉ; P. AGOSTINHO; P. M. CANAS. *CNC -Center For Neurosci. and Cell Biol., Fac. Medicine, Univ. Coimbra, Fed. Univ. Santa Catarina, Fed. Univ. Rio Grande do Sul, Pharm. Inst., Univ. Bonn, Sultan Qaboos Univ., Boston Univ., Dept.Life Sciences, Univ. Coimbra.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 D10 **502.02** Hypoxia/reoxygenation increase caspase-1 activity via the A2A adenosine receptor. G. S. CHIU*; J. K. BRAY; J. P. WALSH; M. J. MCCARTHY; G. G. FREUND. *MD Anderson, Univ. of Illinois, Urbana-Champaign.*

10:00 D11 **502.03** Intracellular control of A2A receptor signaling and behavior as revealed by optoA2AR approach. X. HOU; M. P. SURPRIS; P. LI; J. ZHENG; J. CHEN*. *Boston Univ. Sch. Med., Xinqiao Hospital/3rd Med. Univ.*

11:00 D12 **502.04** Adenosine A2A receptors control impulsivity and synaptic plasticity in the prelimbic medial prefrontal cortex - interaction with dopamine D2-like receptors. S. G. FERREIRA*; D. LEFFA; G. NÉLIO; S. CAROLINA; M. J. NUNO; P. PANDOLFO; R. A. CUNHA. *Univ. of Coimbra, Inst. de Ciências Básicas da Saúde, Dept. de Bioquímica, Univ. Federal Rio Grande do Sul, Dept. de Fisiologia e Farmacologia, Faculdade de Medicina, Univ. Federal do Ceará, Dept. de Neurobiologia, Univ. Federal Fluminense, Fac. of Medicine, Univ. of Coimbra.*

8:00 D13 **502.05** Caffeine potentiates D-aspartate-mediated GABA release in the developing chick retina. D. D. FERREIRA*; B. STUTZ; R. A. M. REIS; F. G. DE MELLO; R. C. C. KUBRUSLY. *Federal Fluminense Univ., Federal Univ. of Rio de Janeiro.*

9:00 D14 **502.06** Modulation of ERK phosphorylation by A1 adenosine receptor in cultures of avian retinal glial cells: Involvement of PKC and Src kinase. A. DOS SANTOS-RODRIGUES*; M. R. PEREIRA; I. L. A. DA SILVA; S. A. RODRIGUES; L. R. LEÃO-FERREIRA; R. PAES-DE-CARVALHO. *Fluminense Federal Univ., Fluminense Federal Univ.*

10:00 D15 **502.07** Adenosine-based anticonvulsant mechanisms underlying ketogenic diet. M. KAWAMURA*; D. N. RUSKIN; S. A. MASINO. *Jikei Univ. Sch. Med., Trinity Col.*

11:00 D16 **502.08** A novel role of adenosine A2B receptors in mediating calcium-activated small conductance potassium (SK) channel function at the synapse. A. K. GARSKE*; L. B. WEITZEL; R. J. TRAYSTMAN; P. S. HERSON. *Univ. of Colorado, Anschutz Med. Campus, Univ. of Colorado, Anschutz Med. Campus.*

8:00 D17 **502.09** WITHDRAWN.

9:00 D18 **502.10** The GAIN domain of the adhesion GPCR BAI1 regulates the constitutive activity of the receptor. R. H. PURCELL*; R. A. HALL. *Emory Univ.*

10:00 D19 **502.11** The subcellular localization and local function of Gs-linked receptor GPR3 in neuronal cells. T. MIYAGI*; S. TANAKA; I. HIDE; T. SHIRAFUJI; N. SAKAI. *Pharmacol Neurosci, Grad Sch. of Biomed & Hlth. Sc, Pharmacol Neurosci, Inst. of Biomed & Hlth. Sci.*

11:00 D20 **502.12** Pharmacological implications of A2AR-D2R heteromerization; significance for Parkinson's disease. C. N. HATCHER-SOLIS*; D. E. LOGOTHETIS. *Virginia Commonwealth Univ., Virginia Commonwealth Univ.*

8:00 D21 **502.13** Design and synthesis of N-substituted indoles as selective hMT2 melatonin receptor ligands. M. L. DUBOCOVICH*; E. B. NARANJO-RODRIGUEZ; A. LIRA-ROCHA; O. ESPEJO-GONZALEZ; R. V. RAJNARAYANAN. *Sch. of Med. and Biomed. Sciences, Univ. at Buffalo, Univ. Nacional Autónoma de México.*

9:00 D22 **502.14** ● ▲ Differential expression of cannabinoid receptors, monoacylglycerol lipase and fatty acid amide hydrolase in neurons and glia cells. M. ENGELSKIRCHEN; N. PASQUARELLI; H. BAYER; J. HANSELMANN; P. WEYDT*; B. FERGER; A. WITTING. *Ulm Univ., Boehringer Ingelheim Pharma GmbH & Co. KG.*

10:00 D23 **502.15** Activating the histamine H1 receptor induces gamma oscillations in the rat hippocampus. R. H. ANDERSSON*; D. PAPADIA; D. GALTER; A. FISAHN. *Karolinska Institute, Dept. of Neurosci., Karolinska Inst.*

11:00 D24 **502.16** Molecular recognition of ketamine by discrete olfactory G-protein coupled receptors. J. HO*; L. GAO; J. M. PEREZ-AGUILAR; J. G. SAVEN; R. ECKENHOFF; H. MATSUNAMI. *Duke Univ. Med. Ctr., Univ. of Pennsylvania, Weill Cornell Med. Col., Perelman Sch. of Medicine, Univ. of Pennsylvania, Duke Univ. Med. Ctr.*

8:00 D25 **502.17** When entourage gets in the way: The curious case of 2-og and 2-lg. N. MURATAEVA*; K. MACKIE; A. STRAIKER. *Indiana Univ.*

9:00 D26 **502.18** Functional G-protein coupled receptor 35 (GPR35) in rat hippocampal CA1 stratum radiatum interneurons. M. ALKONDON*; E. F. R. PEREIRA; S. W. TODD; M. LANE; E. X. ALBUQUERQUE. *Univ. Maryland Sch. Med.*

10:00 D27 **502.19** The role of CB2 cannabinoid receptors in regulating synaptic transmission. J. KIM*. *Georgia Regents Univ.*

11:00 D28 **502.20** Subcellular mobility of the trans-Golgi-associated PDZ protein PIST in endocrine cells. W. ALSHAFIE; Y. PAN; H. J. KREIENKAMP; T. STROH*. *Montreal Neurolog. Institute, McGill Univ., Universitaetsklinikum Hamburg-Eppendorf.*

8:00 D29 **502.21** Contribution of adenosine A1 and A2A receptors to hypoxia-reperfusion synaptic potentiation in rat hippocampus. J. STOCKWELL*; Z. MING; Z. CHEN; F. S. CAYABYAB. *Univ. of Saskatchewan.*

9:00 D30 **502.22** Astrocyte-derived MMP-1 as an effector of PAR1-dependent neuronal excitability. M. ALLEN*; A. SMART; X. CHEN; G. P. AHERN; R. DZAKPASU; K. MAGUIRE-ZEISS; K. CONANT. *Georgetown Univ., Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

10:00 D31 **502.23** Design, synthesis and characterization of high affinity fluorescent agonist and antagonist ligands of G protein-coupled P2Y receptors. K. A. JACOBSON*; E. KISELEV; P. JAYASEKARA; M. O. BARRETT; V. KATRITCH; S. PAOLETTA; C. WEITZER; E. HAMMES; R. BALASUBRAMANIAN; Z. GAO; Q. ZHAO; R. C. STEVENS; T. K. HARDEN. *NIDDK-NIH, Univ. of North Carolina, Sch. of Med., The Scripps Res. Inst., Shanghai Inst. of Materia Medica.*

11:00 D32 **502.24** Novel insights on the allosteric mechanism of alfaxolone interaction with rP2X4 receptor opening, lessons from structural biology analysis. J. T. GARCÍA-HUIDOBRO*; N. ALVEAL; C. H. NAVARRETE; N. P. BARRERA. *Facultad Ciencias Biológicas, Pontificia Univ. Católica De Chile, Univ. de Santiago de Chile, Pontificia Univ. Catolica de Chile.*

8:00 D33 **502.25** When BigLEN met GPR171: A tale of a recently deorphanized neuropeptide/receptor system. E. N. BOBECK*; J. WARDMAN; I. GOMES; L. DEVI. *Icahn Sch. of Med. at Mount Sinai.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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9:00 D34 **502.26** Potential association between a mutation in the brain-expressed receptor GPR37L1 and a novel inherited neurological disorder. M. M. GIDDENS*; E. G. FARROW; S. E. SODEN; R. A. HALL. *Emory Univ. Sch. of Med., Children's Mercy Hosp. and Clinics.*

10:00 D35 **502.27** GPR37 promotes oligodendroglial survival. B. COLEMAN*; R. HALL. *Emory Univ. Sch. of Med.*

11:00 D36 **502.28** ● Guanyl nucleotide modulation of the dopamine D3 receptor in rat brain cerebellum lobule 9&10. N. C. STRATMAN*; C. J. SCHMIDT. *Pfizer Inc.*

8:00 D37 **502.29** GPCR-Gs-NCS/Rapgef2 coupling: A novel pathway to ERK activation in neuroendocrine cells. M. V. EIDEN; A. C. EMERY; L. E. EIDEN*. *NIH, NIMH-IRP, NIH, NIMH-IRP.*

9:00 D38 **502.30** Tricyclic and tetracyclic antidepressants activate LPA_1 lysophosphatidic acid receptor signaling in glial cells. P. ONALI*; S. DEDONI; M. C. OLIANAS. *Univ. of Cagliari.*

POSTER

503. Serotonin and GABA Transporters

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 D39 **503.01** Dopamine and serotonin transporter release activity of phenmetrazine analogs. A. M. DECKER*; A. LANDAVAZO; J. S. PARTILLA; B. E. BLOUGH; M. H. BAUMANN; R. B. ROTHMAN. *RTI Intl., Natl. Inst. on Drug Abuse.*

9:00 D40 **503.02** ● ▲ Gat1 expression in human brain: alternate transcript validation and expression analysis of novel RNAs in patients with schizophrenia. H. MITCHELL*; M. I. MIGHDOLL; G. URSINI; J. SHIN; A. JAFFE; R. TAO; D. R. WEINBERGER; J. E. KLEINMAN; T. M. HYDE. *Lieber Inst. For Brain Develop.*

10:00 D41 **503.03** Revised ion/substrate coupling stoichiometry of GABA transporters. S. L. WILLFORD; C. M. ANDERSON; S. R. SPENCER; S. ESKANDARI*. *California State Polytechnic Univ. Pomona.*

11:00 D42 **503.04** Reduction of GAT-3 expression is responsible of tonic inhibition in globus pallidus neurons in experimental parkinsonism. M. CHAZALON*; C. MIGUELEZ; S. MORIN; S. CRISTÓVÃO-FERREIRA; S. H. VAZ; A. M. SEBASTIAO; J. BAUFRETON. *Inst. Des Maladies Neurodegeneratives, Fac. of Pharmacy, Dept. of Pharmacol., Inst. of Pharmacol. and Neurosciences, Inst. of Mol. Med.*

8:00 D43 **503.05** CB1 and GPR55 receptors regulate GABA uptake in gliosomes and synaptosomes respectively in the rat globus pallidus. M. MUNOZ ARENAS*; R. SANCHEZ-ZAVALETA; A. BAEZ-CORDERO; F. PAZ-BERMUDEZ; D. LIMON; B. FLORAN. *Lab. De Neurofarmacologia, CINVESTAV-IPN, BUAP.*

9:00 D44 **503.06** The astrocytic transporter Slc7a10 (Asc-1) is required for glycinergic inhibitory function. J. T. EHMSEN*; Y. LIU; Y. WANG; J. D. ROTHSTEIN; S. H. SNYDER; M. P. MATTSON; A. HOKE. *Johns Hopkins, Natl. Inst. of Aging.*

10:00 D45 **503.07** Outer-gate residues determine species-specific differences in recognition of MDMA as a substrate by the serotonin transporter. B. FELTS*; E. L. BARKER; L. K. HENRY. *Univ. of North Dakota Sch. of Med. & He, Purdue Univ.*

11:00 D46 **503.08** Dissecting the role of integrins in the modulation of the serotonin synapse. M. MAZALOUSKAS*; A. M. CARNEIRO. *Vanderbilt Univ.*

8:00 D47 **503.09** Regulation of serotonin transporters by focal adhesion proteins. M. DOHN*; A. CARNEIRO. *Vanderbilt Univ.*

9:00 D48 **503.10** Cellular and ultrastructural localization of organic cation transporter 3 suggest a dendritic and glial monoamine clearance mechanism. P. J. GASSER*; J. CHAN; J. E. HILL; M. HURLEY; V. M. PICKEL. *Marquette Univ., Weill Cornell Med. Col.*

10:00 D49 **503.11** Mechanisms contributing to lack of antidepressant efficacy in juveniles and adolescents. N. MITCHELL*; R. FRASER; W. OWENS; R. HORTON; M. VITELA; G. GOULD; W. KOEK; L. DAWS. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Univ. of Texas Hlth. Sci. Ctr. At San Antonio.*

11:00 D50 **503.12** Contributions of interleukin-1β signaling to the enduring effects of early-life stress: A serotonin connection? N. L. BAGANZ*; J. T. SMITH; L. J. HARBOM; M. J. ROBSON; R. D. BLAKELY. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr.*

POSTER

504. Dopamine Transporters

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 D51 **504.01** Molecular basis for interactions of the dopamine transporter with G protein βγ subunits. J. GARCIA-OLIVARES*; D. TORRES-SALAZAR; S. G. AMARA; G. E. TORRES. *Natl. Inst. of Mental Health/NIH, Univ. of Pittsburgh.*

9:00 D52 **504.02** Chronic methamphetamine exposure leads to diminished short-term memory. A. NORTH*; S. GOODWIN; H. KHOSHBOUEI. *Meharry Med. Col., Meharry Med. Col., Univ. of Florida.*

10:00 D53 **504.03** Dopamine transporter endocytic braking requires the non-receptor tyrosine kinase Ack downstream of cdc42 activation. S. WU*; H. E. MELIKIAN. *Univ. of Massachusetts Med. Sch., Univ. of Massachusetts Med. Sch.*

11:00 D54 **504.04** Pharmacological chaperone activity of bupropion on monoamine transporters. P. BEEREPOOT*; A. SALAHPOUR. *Univ. of Toronto.*

8:00 D55 **504.05** Dopamine transporter deregulation impacts retinal physiology. H. DAI*; C. JACKSON; G. DAVIS; R. BLAKELY; D. MCMAHON. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

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9:00 D56 **504.06** Anomalous response to psychostimulants in a construct_valid mouse model of adhd dopamine dysfunction. G. L. DAVIS*; M. MERGY; R. GOWRISHANKAR; P. GRESCH; G. STANWOOD; M. HAHN; R. BLAKELY. *Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med.*

10:00 D57 **504.07** Five in a million: Analysis of changes in dopamine transporter function in dat-1 coding variants derived from the *C. elegans* million mutation project. P. FREEMAN*; S. M. WHITAKER; S. B. ROBINSON; R. D. BLAKELY. *Vanderbilt Univ., Fisk Univ., Vanderbilt Univ.*

11:00 D58 **504.08** Discovery of a novel, conserved MAP kinase required for dopamine neuron function in *C. elegans*. D. BERMINGHAM*; J. A. HARDAWAY; S. WHITAKER; S. SNIDER; R. BLAKELY. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

8:00 D59 **504.09** Abnormal dopaminergic signaling in mice expressing the ADHD-associated dopamine transporter variant DAT Val559. R. GOWRISHANKAR*; M. A. MERGY; S. C. GANTZ; P. J. GRESCH; G. L. DAVIS; J. T. WILLIAMS; M. K. HAHN; R. D. BLAKELY. *Vanderbilt Univ., Oregon Hlth. Sci. Univ.*

9:00 D60 **504.10** An autism-derived de novo mutation in the dopamine transporter displays anomalous function that can be improved upon exposure to zinc. P. J. HAMILTON*; F. HERBORG HANSEN; N. G. CAMPBELL; C. SAUNDERS; A. N. BELOVICH; J. S. SUTCLIFFE; U. GETHER; H. J. G. MATTHIES; K. ERREGER; A. GALLI. *Vanderbilt Univ., Univ. of Copenhagen, Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

10:00 D61 **504.11** Maybe not a story about the dopamine transporter: A novel role of PICK1 in regulating dopamine D1 receptor signaling in response to cocaine? M. RICKHAG; M. RATHJE; G. SØRENSEN; A. H. R. THOMSEN; D. DENKCER; I. AMMENDRUP-JOHNSEN; K. ERREGER; A. GALLI; A. FINK-JENSEN; G. WÖRTHWEIN; K. L. MADSEN; U. GETHER*. *Univ. Copenhagen, Copenhagen Univ. Hosp., Vanderbilt Univ., Univ. of Copenhagen.*

11:00 D62 **504.12** A novel dopamine transporter (DAT) variant (ΔN336) associated with autism ablates dopamine transport function. N. CAMPBELL*; A. N. BELOVICH; P. J. HAMILTON; A. SHEKAR; K. ERREGER; A. GALLI; J. S. SUTCLIFFE. *Vanderbilt Univ.*

8:00 D63 **504.13** SLC6A3 coding variant Ala559Val found in two autism probands alters dopamine transporter function and trafficking. E. BOWTON; C. SAUNDERS; I. A. REDDY; N. G. CAMPBELL; P. J. HAMILTON; L. K. HENRY; H. COON; D. SAKRIKAR; J. M. VEENSTRA-VANDERWEELE; R. D. BLAKELY; J. S. SUTCLIFFE; H. J. MATTHIES; K. ERREGER*; A. GALLI. *Vanderbilt Univ., Vanderbilt Univ., Univ. of North Dakota, Univ. of Utah, Vanderbilt Univ.*

9:00 D64 **504.14** An autism-associated variant at position 346 of the dopamine transporter impairs dopamine uptake while increasing transporter membrane expression. I. REDDY*; N. G. CAMPBELL; J. S. SUTCLIFFE; A. GALLI. *Vanderbilt Univ. Sch. of Med. - VBI, Vanderbilt Univ. Sch. of Med.*

10:00 D65 **504.15** Dopamine transporter variant associated with autism spectrum disorder displays impaired interaction with plasma membrane phospholipids. A. N. BELOVICH*; N. G. CAMPBELL; P. J. HAMILTON; A. M. POE; K. ERREGER; H. J. G. MATTHIES; J. S. SUTCLIFFE; A. GALLI. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr.*

11:00 D66 **504.16** P38 mitogen-activated protein kinase mediated norepinephrine transporter regulation modulates cocaine sensitization and conditioned place preference. P. MANNANGATTI*; K. NARASIMHA NAIDU; M. I. DAMAJ; S. RAMAMOORTHY; L. D. JAYANTHI. *Virginia Commonwealth Univ., Virginia Commonwealth Univ.*

8:00 D67 **504.17** Modulation of serotonin transporter function by kappa opioid receptor ligands. S. SUNDARAMURTHY*; S. RAMAMOORTHY; L. JAYANTHI. *Virginia Commonwealth Univ., virginia commonwealth university.*

9:00 D68 **504.18** Role of neurokinin 1 signaling in amphetamine mediated norepinephrine transporter regulation. L. D. JAYANTHI*; P. MANNANGATTI; S. RAMAMOORTHY. *Virginia Commonwealth Univ.*

10:00 D69 **504.19** Akt mediated regulation of the serotonin transporter function, expression and phosphorylation. J. RAJAMANICKAM*; B. ANNAMALAI; L. D. JAYANTHI; S. RAMAMOORTHY. *Virginia Commonwealth Univ., Med. Univ. of South Carolina, Virginia Commonwealth Univ.*

11:00 D70 **504.20** Mechanism of internalization of the dopamine transporter by amphetamine. S. M. UNDERHILL*; D. S. WHEELER; R. L. COLLIER; E. THIELS; S. G. AMARA. *NIH/NIMH, Univ. of Pittsburgh, NIH/NIMH.*

8:00 D71 **504.21** The sigma-1 receptor interacts with the dopamine transporter and regulates its activity. D. O. SAMBO*; M. LIN; D. ANGOLI; B. RICHARDSON; E. CARTIER; M. SCHWENDT; B. BLOUGH; J. KATZ; H. KHOSHBOUEI. *Univ. of Florida, RTI Intl., Natl. Inst. on Drug Abuse.*

9:00 D72 **504.22** Imaging the cholesterol-dependent dopamine transporter nanodomains in the plasma-membrane. T. RAHBEK-CLEMMENSEN*; S. ERLENDSSON; J. ERIKSEN; F. VILHARDT; T. NYGAARD JØRGENSEN; U. GETHER. *Univ. of Copenhagen.*

10:00 E1 **504.23** Phosphorylation of PKC residues on the N-terminal of the dopamine transporter regulates amphetamine-stimulated dopamine efflux. Q. WANG*; N. BUBULA; P. VEZINA. *Univ. of Chicago.*

11:00 E2 **504.24** Characterization of human like dopaminergic neurons containing physiologically and pathologically relevant alpha-synuclein levels. B. R. BUTLER*; D. ANGOLI; H. KHOSHBOUEI. *Univ. Of Florida.*

8:00 E3 **504.25** Indole based structural analogs of modafinil inhibit the dopamine transporter. C. EARLES OCHSNER*; J. RUSSEL. *St Norbert Col.*

9:00 E4 **504.26** The interaction between the dopamine transporter (DAT) and the SNARE protein syntaxin 1A is regulated by N-terminal phosphorylation of DAT. K. L. MADSEN*; T. FAURSCHOU ANDREASSEN; U. GETHER. *Univ. of Copenhagen.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

505. LTP: Kinases and Intracellular Signaling

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 E5 **505.01** Role of CaMKII in the persistence of *in vivo* hippocampal mossy fiber synaptic plasticity. L. RAMOS-LANGUREN*; Y. JUÁREZ; A. RIVERA-OLVERA; M. L. ESCOBAR. *Fac Psicol,UNAM.*

9:00 E6 **505.02** Ca^{2+}-permeable AMPA receptors mediate functional compensation of cyclic GMP-dependent protein kinase II knockout in the hippocampus. S. KIM*; R. TITCOMBE; L. KHATRI; F. HOFMANN; E. B. ZIFF. *NYU Sch. Med., NYU Med. Ctr., Tech. Univ. of Munich, NYU Sch. of Med.*

10:00 E7 **505.03** Post-translational regulation of Arc/Arg3.1 by Erk2. O. NIKOLAIENKO; M. S. ERIKSEN; C. R. BRAMHAM*. *Univ. of Bergen.*

11:00 E8 **505.04** A critical time window for dopamine actions on the structural plasticity of dendritic spines. S. YAGISHITA*; A. HAYASHI-TAKAGI; G. C. R. ELLIS-DAVIES; H. URAKUBO; S. ISHII; H. KASAI. *The Univ. of Tokyo, Mount Sinai Sch. of Med., Kyoto Univ.*

8:00 E9 **505.05** CaMKIIα is necessary and sufficient for NMDA receptor-mediated long-term potentiation at the hippocampal mossy fiber-to-CA3 pyramidal cell synapse. P. A. HAEGER*; T. J. YOUNTS; R. LUJAN; S. J. TAVALIN; J. W. HELL; P. E. CASTILLO. *Univ. Católica del Norte, Albert Einstein Col. of Med., Univ. Castilla-La Mancha, Campus Biosanitario, Facultad de Medicina, Univ. of Tennessee Hlth. Sci. Ctr., Univ. of California at Davis.*

9:00 E10 **505.06** Intracellular membrane association of *Aplysia* phosphodiesterase long- and short-form via different targeting mechanisms. Y. JUN; J. LEE; B. KAANG; D. JANG*. *Kyungpook Natl. Univ., Hannam Univ., Seoul Natl. Univ., Kyungpook Natl. Univ.*

10:00 E11 **505.07** Phosphorylation and degradation of the CREB repressor ATF4 during long-lasting long-term potentiation. K. A. HAYNES*; W. XU; A. N. HEGDE. *Wake Forest Univ. Hlth. Sci., Wake Forest Univ.*

11:00 E12 **505.08** CaM Kinases are critical for activity-dependent gene expression in parvalbumin positive inhibitory interneurons. S. M. COHEN*; R. W. TSIEN. *NYU Sch. of Med.*

8:00 E13 **505.09** Palmitoylation of AKAP79/150 by the palmitoyl acyltransferase DHHC2 controls synaptic potentiation. K. WOOLFREY*; J. L. SANDERSON; M. L. DELL'ACQUA. *Univ. of Colorado Denver.*

9:00 E14 **505.10** WITHDRAWN.

10:00 E15 **505.11** Activated CaMKII immobilized in spines both at the PSD and away from the PSD as resolved by single-molecule tracking PALM. H. LU*; H. D. MACGILLAVRY; N. A. FROST; T. BLANPIED. *Univ. Maryland, Baltimore, Univ. of Maryland, Baltimore, Utrecht Univ., UCSF.*

11:00 F1 **505.12** Constitutive and conditional PKMζ KO mice display distinct spatial long-memory deficits. P. TSOKAS*; C. HSIEH; E. J. C. WALLACE; Y. YAO; A. A. FENTON; T. C. SACKTOR. *SUNY Downstate Med. Center, Brooklyn, NY, SUNY Downstate Med. Center, Brooklyn, NY, New York Univ., SUNY Downstate Med. Center, Brooklyn, NY.*

8:00 F2 **505.13** A presynaptic role for PKA in synaptic tagging and memory. A. J. PARK*; R. HAVEKES; J. CHOI; V. LUCZAK; T. NIE; T. HUANG; T. ABEL. *Univ. of Pennsylvania.*

9:00 F3 **505.14** GDPβs unsilences silent synapses in CA1 pyramidal cells by disinhibiting the protein kinase A activating pathway. M. OUARDOUZ*. *Neurosci. Res. Advisory Co.*

10:00 F4 **505.15** Simulations suggest pharmacological methods for rescuing long-term potentiation. P. D. SMOLEN*; D. A. BAXTER; J. H. BYRNE. *The Univ. of Texas Med. Sch.*

11:00 F5 **505.16** Mindbomb homolog 2 is involved in hippocampal synaptic plasticity. T. KIM*; S. KIM; H. LEE; Y. KONG; B. KAANG. *Seoul Natl. Univ.*

8:00 F6 **505.17** The integrin-regulated Abl2/Arg kinase modulates NMDA receptor activity and NMDAR-dependent plasticity. X. XIAO*; A. LEVY; S. WARREN; A. KOLESKE. *Yale Univ.*

9:00 F7 **505.18** miRNA-mediated regulation of Eph/ephrin signaling plays a role in synaptic plasticity control in aged mouse hippocampus. K. KIM*; C. P. D. MOHAMMED; H. LEE; H. LEE; B. PHEE; J. PARK; S. PARK; H. NAM. *DGIST, DGIST, POSTECH, Macrogen.*

10:00 F8 **505.19** miR-26a and miR-384-5p are required for LTP maintenance and spine enlargement. Q. GU*; H. SHEN. *NIH.*

11:00 F9 **505.20** Marked developmental changes in actin dynamics accompany the termination of growth and precede the emergence of adult forms of plasticity in hippocampus. J. D. RICE*; E. KRAMAR; J. LIU; C. KARSTEN; C. M. GALL; G. S. LYNCH. *Univ. of California, Irvine, Univ. of California, Irvine.*

8:00 F10 **505.21** Melanocortin-4 receptor regulates hippocampal synaptic plasticity through a PKA-dependent mechanism. Y. SHEN*; W. FU; E. Y. L. CHENG; M. TIAN; A. K. Y. FU; N. Y. IP. *The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol.*

POSTER

506. Spike Timing Dependent Plasticity

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 F11 **506.01** STDP induced phase tuning in an oscillatory feed forward network. Y. LUZ*; M. SHAMIR. *Ben-Gurion Univ.*

9:00 F12 **506.02** Spike-timing-dependent plasticity shapes interval selectivity of electrosensory midbrain neurons. C. A. BAKER*; X. MA; B. A. CARLSON. *Washington Univ. In St. Louis.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 G1 **506.03** Interneuron effects on cholinergically-induced STDP in hippocampal CA1 network. E. SUGISAKI*; Y. FUKUSHIMA; T. AIHARA. *Tamagawa Univ. Grad. Sch. of Engin., Tamagawa Univ. Brain Sci. Inst., Kawasaki Univ. of Med. Welfare.*

11:00 G2 **506.04** Presynaptic calcium entry into proximal boutons and 1st Ranvier node shapes backpropagating action potentials in L5 pyramidal neurons of visual cortex. E. S. NIKITIN*; P. M. BALABAN; M. ROSHCHIN. *Inst. Higher Nervous Activity.*

8:00 G3 **506.05** LTP induced by pairing subthreshold basal dendritic excitation with backpropagating apical dendritic evoked spike *in vivo.* C. LAW; T. FUNG; L. LEUNG*. *Univ. of Western Ontario, Univ. Western Ontario.*

9:00 G4 **506.06** Timing-dependent LTP can be induced by six repetitions of single pre- and postsynaptic spikes at CA3-CA1 synapses in acute hippocampal slices. E. CEPEDA-PRADO; V. LESSMANN; E. EDELMANN*. *Otto-von-Guericke Univ., Ctr. of Behavioral Brain Sci. (CBBS).*

10:00 G5 **506.07** Stable reinforcement learning via temporal competition between LTP and LTD traces. M. A. HUERTAS; S. SCHWETTMANN; H. Z. SHOUVAL*. *Univ. Tex Medl Schl Houston, Rice Univesity.*

11:00 G6 **506.08** Non-genomic action of estradiol on a spinal cord neuromuscular reflex in female rat. O. D. LARA GARCIA*; M. LARA GARCÍA; Y. CRUZ; E. CUEVAS; M. MARTÍNEZ-GÓMEZ; P. PACHECO. *Univ. Veracruzana, Univ. Autónoma de Tlaxcala, Univ. Nacional Autónoma de México.*

8:00 G7 **506.09** Eligibility traces in cortical synapses. K. HE*; A. KIRKWOOD. *The Johns Hopkins Univ., The Johns Hopkins Univ.*

9:00 G8 **506.10** Highly precise hippocampal synaptic plasticity. C. BROMER*; T. M. BARTOL; J. KINNEY; K. HARRIS; T. SEJNOWSKI. *Salk Inst. For Biol. Studies, MIT, The Univ. of Texas at Austin.*

10:00 G9 **506.11** E-S potentiation in CA1 rat hippocampal neurons is selectively induced during the lifespan and is dependent on L-type calcium channels. E. CARPENTER-HYLAND; E. BICHLER; M. BENVENISTE*. *Morehouse Sch. of Med., Emory Univ. Sch. of Med.*

11:00 G10 **506.12** Coordinated distinct Ca^{2+} sources and mGluRs encode spike timing-dependent plasticity at mature hippocampal Schaffer collateral synapses. C. M. TIGARET*; J. H. L. SADOWSKI; T. J. O. GRIFFITH; K. TSANEVA-ATANASOVA; J. R. MELLOR. *Univ. of Bristol, Univ. of Bristol, Univ. of Exeter.*

POSTER

507. Cellular Mechanisms of Modulation of Neuronal Firing Properties

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 G11 **507.01** History-dependent changes in spiking patterns of cholinergic neurons in the medial septum. E. D. MELONAKOS*; J. A. WHITE; F. R. FERNANDEZ. *Univ. of Utah.*

9:00 G12 **507.02** ● Perineuronal nets modulate neuronal physiology in the mouse barrel cortex. P. CHU*; K. BUDHU; J. C. BRUMBERG. *Queens College, City Univ. of New York, Queens College, City Univ. of New York, City Univ. of New York, The Grad. Ctr., Queens College, CUNY.*

10:00 H1 **507.03** Intracellular fibroblast growth factor 14 in the regulation and dysregulation of purkinje neuron excitability. J. L. RANSDELL*; M. XIAO; D. M. ORNITZ; J. M. NERBONNE. *Washington Univ.*

11:00 H2 **507.04** Kv2 and BK channels in substantia nigra dopamine neurons differentially regulate spontaneous and burst-like firing. C. KIMM*; B. P. BEAN. *Harvard Med. Sch.*

8:00 H3 **507.05** Localization and characterization of the axon initial segment of *in vivo* labeled individual substantia nigra dopaminergic neurons in the mouse. R. MEZA*; A. OÑATE; N. M. DOIG; M. FAUNES; P. HENNY. *Pontificia Univ. Católica De Chile, Pontificia Univ. Católica De Chile.*

9:00 H4 **507.06** Burst-pause-burst pattern in striatal cholinergic interneurons: Can they pause without bursting? A. ZUCCA*; S. AOKI; A. LIU; S. ZUCCA; J. WICKENS. *Okinawa Inst. of Sci. and Technol.*

10:00 H5 **507.07** Coupling compartmental models to live neurons to investigate action potential mechanisms. M. A. NAVARRO*; S. L. DEBS; L. S. MILESCU. *Univ. of Missouri-Columbia, Whitman Col.*

11:00 H6 **507.08** Toad venoms resibufogenin and cinobufagin activate central neurons through a ouabain-like action. Z. WANG; L. SUN; T. HEINBOCKEL*. *Howard Univ. Coll Med, Anat.*

8:00 H7 **507.09** Propylparaben decreases the neuronal excitability of Hippocampal CA1 pyramidal cells *in vitro.* L. LARA*; L. ROCHA; E. J. GALVÁN. *CINVESTAV SUR.*

9:00 H8 **507.10** Impact of background synaptic activity on the excitability and integrative properties of somatosensory cortex neurons *in vivo.* T. ALTWEGG-BOUSSAC*; M. CHAVEZ; S. DEMERET; V. NGUYEN MICHEL; V. NAVARRO; S. MAHON; S. CHARPIER. *UPMC Univ. Paris 06, UMR S 1127, Inserm U1127, ICM, Neurolog. Intensive Care Unit, AP-PH, Pitié-Salpêtriere Hôpital, Epilepsy Unit, AP-PH, Pitié-Salpêtriere Hôpital.*

10:00 H9 **507.11** Calbindin-D28K restores the intrinsic excitability properties of aged CA1 pyramidal neurons to young-like state. D. SIMKIN*; A. HOFFMAN; M. M. OH; J. F. DISTERHOFT. *Northwestern Univ.*

11:00 H10 **507.12** Effects of oxytocin on intrinsic properties of pyramidal neurons in rat insular cortex. J. A. VARELA*; J. CHRISTIANSON. *Boston Col.*

8:00 H11 **507.13** ▲ Functionally distinct populations within anatomically similar CCK-expressing hippocampal interneurons due to different availability of potassium conductances. V. J. OLAH; J. SZABADICS*. *Inst. of Exptl. Medicine, Hungarian Acad. of Sci.*

9:00 H12 **507.14** Effect of maternal bisphenol A exposure on network excitability in mouse hippocampal slices assessed by voltage-sensitive dye imaging. Y. TOMINAGA*; K. IGARASHI; M. I. OTSUKA; Y. FURUKAWA; J. KANNO; K. TANEMURA; T. TOMINAGA. *Tokushima Bunri Univ., L-StaR, Hoshi Univ. Sch. Pharm Pharmaceut Sci., Div. Cell. & Mol. Toxicol, NIHS, Lab. Animal Reproduction, Grad Sch. Agr. Sci, Tohoku Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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10:00 I1 **507.15** Switching between cholinergic-dependent mnemonic and epileptiform responses in individual hippocampal CA1 pyramidal neurons in acute rat brain slice preparations. B. KNAUER*; M. YOSHIDA. *Ruhr-University Bochum, Intl. Grad. Sch. of Neurosci., Fac. of Psychology.*

11:00 I2 **507.16** Ketamine differentially affects neuronal activity in primary and high order sensory cortex in mice. C. M. FUNK*; S. HONJOH; A. V. RODRIGUEZ; C. CIRELLI; G. TONONI. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

8:00 I3 **507.17** Effects of ambient neuromodulators in cerebrospinal fluid on neuronal activity in the hippocampus. A. BJOREFELDT*; U. ANDREASSON; J. DABORG; I. RIEBE; P. WASLING; H. ZETTERBERG; E. HANSE. *Inst. for Neurosci. and Physiol.*

9:00 I4 **507.18** Amyloid β-protein induces hippocampal neuron hyperexcitability through A-type K+ current inhibition mediated by caspases and GSK-3 activation. F. SCALA; S. FUSCO; C. RIPOLI; R. PIACENTINI; D. D. LI PUMA; M. SPINELLI; F. LAEZZA; C. GRASSI; M. D'ASCENZO*. *Catholic Univ., Univ. of Texas Med. Br.*

10:00 I5 **507.19** Overexpression of tau augments afterhyperpolarizations in rat CA1 hippocampal neurons. T. W. CHURCH*; J. T. BROWN; N. V. MARRION. *Univ. of Bristol, Univ. of Exeter, Univ. of Bristol.*

11:00 I6 **507.20** Activation of muscarinic receptors underlies cholinergic modulation of serotonergic neurons in the brainstem of ePet-EYFP mice. Y. DAI*; L. M. JORDAN. *East China Normal Univ., Univ. of Manitoba.*

8:00 I7 **507.21** Hodgkin-Huxley model with fractional differentiation displays spike time adaptation. W. W. TEKA*; T. M. MARINOV; F. SANTAMARIA. *Univ. of Texas at San Antonio.*

9:00 I8 **507.22** Functional roles and noradrenergic modulation of calcium-dependent potassium conductances in identified subtypes of layer 5 pyramidal neurons from mouse somatosensory cortex. R. C. FOEHRING*; D. GUAN. *Univ. Tennessee Hlth. Sci.*

10:00 I9 **507.23** Small conductance calcium-activated potassium channels mediate nitric oxide effects on neuronal excitability via S-nitrosylation. L. R. ARTINIAN*; S. MCLEISH; J. EIDELMAN; V. REHDER. *Georgia State Univ.*

11:00 I10 **507.24** Contributions of calcium influx and calcium-induced calcium release (CICR) to the orexin-enhanced afterhyperpolarization (oeAHP) in dorsal raphe neurons. M. ISHIBASHI; E. LYNN; C. S. LEONARD*. *New York Med. Coll.*

8:00 I11 **507.25** Spikelets in cortical pyramidal neurons: Origin and functional consequences. M. MICHALIKOVA*; M. REMME; R. KEMPTER. *Humboldt-Universitaet Zu Berlin, Bernstein Ctr. for Computat. Neurosci.*

9:00 I12 **507.26** Cyclic AMP increases excitability at warm temperatures and decreases excitability at cold temperatures through activation of the hyperpolarization-activated current (Ih) in neurons from the bullfrog. J. SANTIN*; L. HARTZLER. *Wright State Univ., Wright State Univ.*

POSTER

508. Astroglia Function and Reaction to Pathological Processes

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 J1 **508.01** Common changes in the expression of extracellular matrix-related genes via astrocytic TGFb signaling in different epileptogenesis models. S. KIM*; K. LIPPMANN; Y. MA; I. PRADA; D. A. PRINCE; U. HEINEMANN; A. FRIEDMAN; D. KAUFER. *Univ. of California Berkeley, Charité Universitätsmedizin, Stanford Univ. Sch. of Med., Ben-Gurion Univ. of the Negev, Univ. of California Berkeley.*

9:00 J2 **508.02** Expression of insulin-like growth factors I and II and their receptors in iron-deficient murine astrocytes. E. MORALES-GONZÁLEZ; I. CONTRERAS*; J. A. ESTRADA. *Univ. Autonoma del Estado De México.*

10:00 J3 **508.03** Albumin-induced reactive astrocytosis following blood-brain barrier disruption: A model for age-related seizure susceptibility. V. SENATOROV*, JR; G. CHIN; N. JAHAN; D. KAUFER. *UC Berkeley.*

11:00 J4 **508.04** Glioma-induced astrocyte apoptosis: A new mechanism promoting glioma growth. Z. YE*; B. R. RANSOM; Y. ZHOU; R. LIN; W. WANG. *Univ. Washington, Fujian Med. Univ.*

8:00 J5 **508.05** Insulin signaling influences morphology and proteostasis in the aging of healthy and diseased neurons. H. N. CURREY; S. C. HUNTER; M. DRISCOLL; J. PARKER; C. NERI; B. E. TAYLOR*. *Univ. of Alaska Fairbanks, Rutgers, Univ. of Montreal, Sorbonnes Universites.*

9:00 J6 **508.06** Purinergic modulation of spinal neuroglial maladaptive plasticity following peripheral nerve injury. M. PAPA*; G. CIRILLO; C. DE LUCA; L. SAVARESE; L. ALBERGHINA; A. COLANGELO. *Anatomia Umana Normale Seconda Universita' Di Napoli, Lab. of Neuronal Network Morphology, SYSBIO Ctr. of Systems Biol., Univ. of Milano Bicocca.*

10:00 J7 **508.07** Effects of cortical freeze injury on primary cilia of glial cell populations. M. CORONEL; S. R. BHATTARAI; S. LEWIS; H. D. SCHWARK*; J. L. FUCHS. *Univ. of North Texas.*

11:00 J8 **508.08** A plasma membrane redox enzyme, cytochrome b5 reductase, can protect cells from insults through maintaining redox homeostasis. D. HYUN*; H. KIM; S. KIM; M. P. MATTSON. *Ewha Womans Univ., Natl. Inst. on Aging.*

8:00 J9 **508.09** The role of Sonic hedgehog signaling in reactive gliosis. R. ALLAHYARI*; A. D. R. GARCIA. *Drexel Univ.*

9:00 J10 **508.10** Upregulation of astrocytic metabotropic glutamate receptor (mGluR) expression in a murine model of virus-induced epilepsy. M. TAHERI*; J. M. GEE; R. S. FUJINAMI; K. S. WILCOX; J. A. WHITE. *Univ. of Utah.*

10:00 J11 **508.11** Glutamine synthetase inhibition and epileptic seizures. E. PEREZ; H. ZAVERI; H. WANG; E. DAMISAH; R. DHAHER; T. EID*. *Yale Univ., Yale Univ.*

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11:00 J12 **508.12** ● Aryl hydrocarbon receptor differentially regulates curcumin-induces proinflammatory and neuroprotective factor expressions in astrocytes. C. LIN*; M. LIN; P. HSU; Y. HUANG; Y. LEE. *Kang-Ning Junior Col. of Med. Care and Mgmt., Taipei City Hospital, Zhong xiao Br., Natl. Yang-Ming Univ.*

8:00 K1 **508.13** Effects of 6-hydroxydopamine on striatal and cortical mouse astrocyte cultures. S. CARADONNA*; B. WACHTER; J. ETSCHMANN; E. KÜPPERS. *Inst. of Neuroanatomy, Univ. of Tuebingen, Inst. of Clin. Neurobiology, Univ. Hosp. Würzburg.*

9:00 K2 **508.14** Stalled capillary flow is a novel mechanism for hypoperfusion in Alzheimer's disease. N. NISHIMURA*; C. KERSBERGEN; J. CRUZ HERNANDEZ; I. IVASYK; Y. KANG; S. GHERKING; V. MUSE; J. ZHOU; J. D. BEVERLY; G. OTTE; T. P. SANTISAKULTARM; E. SLACK; C. IADECOLA; C. B. SCHAFFER. *Cornell Univ., Weill Cornell Med. Col.*

10:00 K3 **508.15** Early life exposure to noise permanently reduces mpfc astrocyte numbers and t-maze alternation/ discrimination task performance in male rats. Y. RUVALCABA DELGADILLO*; T. MORALES SALCEDO; G. YAÑEZ DELGADILLO; P. HERNANDEZ CARRILLO; G. CHIPRES TINAJERO; R. RAMOS ZUÑIGA; A. FERIA VELASCO; J. GARCIA ESTRADA; S. LUQUIN; F. JAUREGUI-HUERTA. *Univ. De Guadalajara, Univ. de Guadalajara, Univ. de Guadalajara, Inst. Mexicano del Seguro Social.*

11:00 K4 **508.16** Tolerance of hippocampal CA1 and CA3 interneurons to oxygen glucose deprivation. G. BARRIONUEVO*; N. V. POVYSHEVA; S. G. WEBER. *Univ. Pittsburgh, Univ. Pittsburgh.*

8:00 K5 **508.17** The multiple roles of lysophosphatidic acid receptor-1 in the regulation of lipopolysaccharide-induced immune responses in reactive astrocytes. F. SHIE*; J. LIANG; C. LU. *Ctr. For Neuropsychiatric Research, Natl. Hlth. Res. Inst.*

9:00 K6 **508.18** Glia limitans alterations in lipopolysaccharide induced parenchymal neuroinflammation. I. TATAR*; S. LULE; M. YEMISCI; M. HAYRAN; E. ERDEMLI; Y. OZDEMIR-GURSOY; T. DALKARA. *Hacettepe Univ. Fac. of Med., Hacettepe University, Inst. of Neurolog. Sci. and Phychiatry, Ankara, Turkey, Ankara University, Fac. of Medicine, Dept. of Histology-Embryology, Ankara, Turkey, Hacettepe University, Fac. of Medicine, Dept. of Neurology, Ankara, Turkey.*

10:00 K7 **508.19** Local GABAergic regulation of cerebellar NG2 cell development is altered in perinatal diffuse white matter injury. M. ZONOUZI*; J. SCAFIDI; P. LI; L. HARVEY; D. SUN; S. CULL-CANDY; M. FARRANT; V. GALLO. *Univ. Col. London, Children's Natl. Med. Ctr., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. Col. London, C.*

11:00 K8 **508.20** The role of sodium channel on ethanol-induced aquaporin-4 expression. R. KATADA*; K. SUGIMOTO; M. YOSHIDA; H. MATSUMOTO. *Osaka Univ. Fac. of Med.*

8:00 K9 **508.21** Systemic administration of ultra-low dose alpha2-adrenergic antagonist atipamezole attenuates morphine-induced gliosis associated with the development of tolerance. P. GRENIER*; B. MILNE; M. C. OLMSTEAD; C. M. CAHILL. *Queen's Univ., Queen's Univ., Queen's Univ., Univ. of California, Irvine.*

9:00 L1 **508.22** Valproic acid and other HDAC inhibitors regulate fibroblast growth factor 21 gene expression in astroglia. J. WANG; Y. LENG*; Z. WANG; H. LIAO; P. LEEDS; D. CHUANG. *Natl. Inst. Mental Health/NIH.*

10:00 L2 **508.23** PKC activation is necessary and sufficient for astrocytic group I mGluR potentiation of astrocyte glutamate uptake. I. M. HOLMAN*; P. DEVARAJU; T. FIACCO. *UC Riverside, St. Jude's Chidlren's Res. Hosp., UC Riverside.*

11:00 L3 **508.24** AMPA receptors modulate changes in Bergmann glia morphology through calpain activation. Y. BASTIAN*; R. ROSAS-HERNÁNDEZ; J. MENDEZ. *Univ. Autonoma De San Luis Potosí, Univ. Autónoma de San Luis Potosí.*

8:00 L4 **508.25** Ca^{2+} responses in astrocytes of unanesthetized mouse visual cortex. R. GARCIA*; M. GOARD; J. PETRAVICZ; M. SUR. *MIT.*

9:00 L5 **508.26** A quantitative evaluation of optogenetically-induced calcium signaling in astrocytes. L. BALACHANDAR*; A. RAYMOND; M. NAIR; J. RIERA DIAZ. *Florida Intl. Univ.*

10:00 L6 **508.27** Cortical spreading depression induced optogenetically in awake mice. S. M. BACA*; A. BARTH; R. T. JONES; I. MODY; A. C. CHARLES. *UCLA.*

11:00 L7 **508.28** Off targeted effects of aquaporin 4 RNA interference on connexin 43 expression via changes of microRNA expression. A. JULLIENNE; A. M. FUKUDA; N. NISHIYAMA; J. BADAUT*. *Loma Linda Univ., Loma Linda Univ., CNRS- Bordeaux Univ., Loma Linda Univ.*

8:00 L8 **508.29** An RNA-Seq transcriptome and splicing database of glia, neurons, and vascular cells of mouse and human cerebral cortex. Y. ZHANG*; K. CHEN; S. SLOAN; M. BENNETT; A. SCHOLZE; S. O'KEEFFE; H. PHATNANI; P. GUARNIERI; C. CANEDA; N. RUDERISCH; S. DENG; S. LIDDELOW; C. ZHANG; R. DANEMAN; T. MANIATIS; J. WU; B. BARRES. *Stanford Univ., Univ. of Texas, Columbia Univ., Univ. of California.*

POSTER

509. Microglia Activation Pathways

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 L9 **509.01** SUMO-1 is an upstream regulator of NFκB-mediated inflammatory response of activated microglia. P. RANGARAJAN*; A. KARTHIKEYAN; B. TAN; E. A. LING; S. T. DHEEN. *Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

9:00 L10 **509.02** A potential role of TSPO in inflammasome activation. H. WANG; Q. YANG; J. YANG; W. WANG; S. CHAI; L. CUI; Y. HU; H. CHEN; W. HE; J. ZHANG*. *Inst. of Basic Med. Sciences, Neurosci. Center, Chinese Acad. of Med. Sci., Sch. of Basic Medicine, Peking Union Med. Col., Inst. of Basic Med. Sciences, Chinese Acad. of Med. Sci., Peking Union Med. Col. Hosp., Inst. For Cell Engineering, Johns Hopkins Univ.*

10:00 L11 **509.03** The Angiotensin II receptor blockers reduce LPS-mediated microglial activation via AT1 independent pathways. K. O. AFFRAM*; S. VILLAPOL; J. P. SHAH; K. MITCHELL; A. J. SYMES. *Uniformed Services Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 L12 **509.04** Multiple separable mechanisms of statin treatment on primary cultured microglia. M. A. CHURCHWARD*; K. G. TODD. *Univ. of Alberta, Univ. of Alberta.*

8:00 M1 **509.05** Soluble oligomeric Abeta42 affects microglia activation and mitochondrial respiration. C. TAN*; S. SARKAR; J. SIMPKINS. *West Virginia Univ. Hlth. Sci. Ctr.*

9:00 M2 **509.06** Fosb gene products contribute to excitotoxic microglial activation by regulating the expression of complement C5a receptors in microglia. H. NOMARU*; K. SAKUMI; A. KATOGI; Y. N. OHNISHI; D. TSUCHIMOTO; E. J. NESTLER; Y. NAKABEPPU. *Div. Neurofunc. Genomics, MIB, Kyushu Univ., Res. Ctr. for Nucleotide Pool, Kyushu Univ., Fishberg Dept. of Neurosci., and Friedman Brain Inst., Icahn Sch. of Med. at Mount Sinai.*

10:00 M3 **509.07** NFATc2 regulates microglial proinflammatory phenotype both *in vitro* and *in vivo.* A. GHATAK*; K. L. PUIG; C. K. COMBS. *Univ. of North Dakota.*

11:00 M4 **509.08** EP4 receptor-associated protein (EPRAP) in microglia promotes inflammation in the brain. R. FUJIKAWA*; M. MINAMI; S. HIGUCHI; M. YASUI; T. IKEDO; M. NAGATA; M. YOKODE. *Kyoto Univ., Res. Fellow of Japan Society for the Promotion of Sci.*

8:00 M5 **509.09** Elderberry and its active polyphenol components on oxidative and anti-oxidative signaling pathways in microglial cells. G. Y. SUN*; Z. CHEN; D. AJIT; M. HANNINK; K. L. FRITSCHE; A. SIMONYI; A. L. THOMAS; Z. GU; D. L. LUBAHN. *Univ. Missouri, Univ. Missouri, Sch. of Medicine,Univ Missouri.*

9:00 M6 **509.10** ● Investigating the effect of microglial α7 nicotinic receptor activation on lipopolysaccharide mediated tumor necrosis factor-α secretion. H. PATEL*; A. DUNAH; R. LORING. *Biogen Idec, Northeastern Univ.*

10:00 M7 **509.11** Changes of microglial characters in response to extracellular stimulation. T. TANAKA; K. MURAKAMI; Y. BANDO; S. YOSHIDA*. *Asahikawa Med. Univ.*

11:00 M8 **509.12** A potential role of TSPO in inflammasome activation. J. ZHANG; Q. YANG; J. YANG; W. WANG; S. CHAI; L. CUI; Y. HU; H. CHEN; W. HE; H. WANG*. *Inst. of Basic Med. Sciences, CAMS, Sch. of Basic Medicine, Peking Union Med. Col., Inst. for Cell Engineering, Johns Hopkins Univ. Sch. of Med., Peking Union Med. Col. Hosp.*

8:00 M9 **509.13** Analysis of MAP kinase cascade in M-CSF-dependent microglial proliferation. S. YAMAMOTO*; S. KOHSAKA; K. NAKAJIMA. *Dept. of Bioinformatics, Fac. of Engineering, Soka Univ., Dept. of Neurochemistry, Natl. Inst. of Neurosci.*

9:00 M10 **509.14** A new tracer [11C]DPA713 tops a conventional tracer [11C]PK11195 in visualizing activated microglia in the living human brain. M. YOKOKURA*; Y. OUCHI; K. TAKEBAYASHI; E. YOSHIKAWA; M. FUTATSUBASHI; Y. IWATA; T. TERADA; K. NAKAIZUMI; N. MORI. *Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med., Hamamatsu Photonics KK.*

10:00 M11 **509.15** Mechanism of TLR4-mediated survival of microglia: Roles of GM-CSF self-production and the activation of JAK2/STAT5 signaling pathways. M. KAMIGAKI*; I. HIDE; Y. YANASE; S. TANAKA; T. SHIRAFUJI; M. HIDE; N. SAKAI. *Hiroshima Univ., Hiroshima Univ., Hiroshima Univ.*

11:00 M12 **509.16** LRRK2 and the MAPK pathway: Friend or foe during neuroinflammation? J. M. PUCCINI*; D. F. MARKER; J. BARBIERI; V. S. GOODFELLOW; S. LU; H. A. GELBARD. *Univ. of Rochester Med. Ctr., Univ. of Rochester Med. Ctr., Califia Bio Inc.*

8:00 N1 **509.17** NFκb pathway mediates down regulation of Transforming Growth Factor β receptor 1 expression and inhibition of canonical TGF-β signaling in activated microglia. K. O. AFFRAM; K. MITCHELL*; J. P. SHAH; A. J. SYMES. *USUHS.*

9:00 N2 **509.18** c-Maf is a p53-dependent anti-inflammatory factor that regulates adult microglia behavior in response to neuroinflammation. W. SU*; B. SOPHER; D. J. KANG; M. S. ALOI; S. HOPKINS; G. A. GARDEN. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

10:00 N3 **509.19** Microglia expression of activation markers in iron-deficient conditions. J. A. ESTRADA*; M. A. LEÓN-DÁVILA; I. CONTRERAS. *Univ. Autonoma Del Estado De Mexico.*

POSTER

510. Microglia Functions

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 N4 **510.01** ● Global PBR/TSPO-knockout reduces energy efficiency but not steroidogenesis. R. BANATI*; R. J. MIDDLETON; R. CHAN; C. R. HATTY; W. KAM; C. QUIN; M. B. GRAEBER; A. PARMAR; S. FOK; N. R. HOWELL; M. GREGOIRE; A. SZABO; T. PHAM; E. DAVIS; G. LIU. *Brain and Mind Res. Inst., Life Sciences, Australian Nuclear Sci. and Technol. Organisation, Med. Imaging & Radiation Sciences, Fac. of Hlth. Science, Univ. of Sydney, Ctr. for Translational Neuroscience, Univ. of Wollongong.*

9:00 N5 **510.02** Microglia: Synaptic scavengers in the healthy and diseased juvenile brain. D. P. SCHAFER*; C. T. HELLER; C. GORDON; L. LITVINA; C. CHEN; B. STEVENS. *Boston Children's Hospital/Harvard Med. Sch.*

10:00 N6 **510.03** Polarization of microglia through functionally distinct cannabinoid compounds. C. PRESLEY*; B. M. MOORE, II. *Univ. of Tennessee Hlth. Sci. Ctr.*

11:00 N7 **510.04** Characterization of kynurenine pathway metabolite production in rat primary microglia. M. E. HAMBY*; D. P. BUDAC; E. CHARYCH; T. MÖLLER; B. M. CAMPBELL. *Lundbeck Res. USA, Lundbeck Res. USA.*

8:00 N8 **510.05** Opposite effects of BDNF and proBDNF on NO release from activated rodent microglial cells. Y. MIZOGUCHI*; H. NABETA; Y. IMAMURA; Y. HARAGUCHI; A. MONJI. *Dept. Psychiatry, Fac. Medicine, Saga Univ.*

9:00 N9 **510.06** Role of microglia in the hippocampus of chronic stressed mice. A. M. CARNEIRO*; B. BASSETT; S. VARNEY; C. CHUNG. *Vanderbilt Univ.*

10:00 N10 **510.07** Hv1 proton channels in spinal microglia contribute to astrocyte activation and neuropathic pain in mice. J. PENG*; H. JEONG; P. SWIATKOWSKI; U. B. EYO; N. GU; S. GANATRA; Y. HUANG; C. F. DREYFUS; Y. REN; S. OH; L. WU. *Rutgers Universiey, The Col. of Dentistry, Seoul Natl. Univ., Rutgers Universiey, Rutgers Universiey.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 N11 **510.08** Single-cell analysis reveals neuropathic pain-specific gene-expression signature in spinal microglia following peripheral nerve injury. H. JEONG*; Y. KIM; Y. NA; G. CHUNG; M. KANG; J. KIM; S. OH. *Seoul Natl. Univ., Univ. of Pennsylvania, Korea Res. Inst. of Biosci. & Biotech.*

8:00 N12 **510.09** Radiation-induced fatigue linked with microglial activation not with skeletal muscle alterations. G. HOLDER; Z. YU; L. N. SALIGAN; K. FUKUHARA*. *NIH, NIH.*

9:00 O1 **510.10** Increases in microglial Iba1 immunoreactivity in the frontal cortex and hippocampus in response to chronic sleep restriction in rats. S. HALL*; S. DEURVEILHER; J. BURNS; K. SEMBA. *Dalhousie Univ., Dalhousie Univ., Dalhousie Univ.*

10:00 O2 **510.11** ▲ NOX2 inhibition modulates microglial polarization, improves functional recovery and reduces chronic neurodegeneration following experimental TBI. A. KUMAR*; B. A. STOICA; F. TCHANTCHOU; A. I. FADEN. *Univ. of Maryland.*

11:00 O3 **510.12** Microglial responses to cortical cell death during a two-day alcohol exposure in neonatal mice. K. AHLERS*; F. OOI; K. MAH; J. KERSIGO; B. FRITZSCH; S. H. GREEN; M. E. DAILEY. *Univ. of Iowa.*

8:00 O4 **510.13** Microglia inhibition is a potential mechanism underlying neuropathic pain prevention by Botulinum Toxin A. W. XIE*; X. FENG; Z. ZHOU; Y. QIU; L. XIAO. *Res. Ctr. For Neural Engin., Shenzhen Inst. of Advanced Technology(SIAT), Chinese Acad. of Sci., Nanshan Hosp.*

9:00 O5 **510.14** Modeling of the glial scar through 3D hydrogel cultures. A. F. JEFFERY; M. A. CHURCHWARD; A. L. ELIAS; K. G. TODD*. *Univ. of Alberta, Univ. of Alberta, Univ. Alberta.*

10:00 O6 **510.15** Microglia accelerate the maturation of barrier function of blood brain barrier. K. SATO*; Y. SHIGEMOTO-MOGAMI; K. HOSHIKAWA; Y. SEKINO. *Natl. Inst. Hlth. Sci.*

11:00 O7 **510.16** Inflammation increases axonal structural remodeling in a developing neural circuit. N. FAROOQI*; E. S. RUTHAZER. *Montreal Neurolog. Inst., McGill Univ.*

8:00 O8 **510.17** Microglia rapidly change their morphological and dynamic properties during metabolic stress. L. BERNIER*; L. DISSING-OLESEN; B. MACVICAR. *Univ. of British Columbia.*

9:00 O9 **510.18** The metabolic profile of primary microglia and BV-2 microglial cell line. L. TRETTER*; A. M. NAGY; R. FEKETE; Z. KORNYEI; V. ADAM-VIZI. *Semmelweis Univ., MTA-SE Lab. for Neurobiochemistry, Inst. of Exptl. Med. of the Hungarian Acad. of Sci.*

10:00 O10 **510.19** Inhibition of microglial tyrosine kinases, Hck and Syk, impairs phagocytic activation and exacerbates Alzheimer's disease-like neuropathology. S. LIM*; C. J. RODRIGUEZ-ORTIZ; M. KITAZAWA. *Univ. of California, Merced.*

11:00 O11 **510.20** Sex differences in developmental gene expression patterns in hippocampal microglia of mice: Relevance for neurodevelopmental disorders. R. HANAMSAGAR*; J. BOLTON; M. ALTER; S. BILBO. *Duke Univ. Med. Ctr., Univ. of Pennsylvania.*

8:00 O12 **510.21** ▲ ATP stimulation induces plasma membrane budding and shedding of the human microglia cell line CHME-5: A good model for studying microvesicles biology. F. COLOMBO*; A. FINARDI; G. RACCHETTI; J. MELDOLESI*; R. FURLAN. *Inst. Scientifico San Raffaele.*

POSTER

511. Glial Physiology and Glia-Neuronal Physiology

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 P1 **511.01** GABAergic signaling evokes calcium oscillations and glutamate release in cortical astrocytes. L. MARIOTTI; G. LOSI*; M. SESSOLO; I. MARCON; S. BOVETTI; T. FELLIN; G. CARMIGNOTO. *Neurosci. Institute-Cnr and Univ. of Padova, Dept. of Neurosci. and Brain Technologies, Inst. Italiano di Tecnologia.*

9:00 P2 **511.02** Nerve Growth Factor regulates astrocyte and microglia physiology *in vitro* and *in vivo.* N. M. CARUCCI; C. RIZZI; L. GALLI-RESTA; S. CAPSONI; A. CATTANEO*. *Scuola Normale Superiore, Inst. of Neuroscience, CNR.*

10:00 P3 **511.03** Release of lactate via connexin hemichannels. A. KARAGIANNIS*; S. SYLANTYEV; S. KASPAROV; A. V. GOURINE. *UCL, UCL, Inst. of neurology, Univ. of Bristol.*

11:00 P4 **511.04** Imaging intracellular Calcium Waves in astrocytes of FGFR1 knockout mice. D. J. ROGERS*; P. ACHI; J. COLLETTE; G. WATSON; K. M. SMITH. *Univ. of Louisiana at Lafayette.*

8:00 P5 **511.05** Extracellular potassium tunes astrocytic glutamate clearance efficiency. T. S. RIMMELE; A. ROCHER; J. CHATTON*. *Univ. Lausanne.*

9:00 P6 **511.06** CREB regulates calcium excitability in astrocytes via mitochondria. A. ERASO; E. VICARIO; R. VILLALONGA; L. PARDO; E. GALEA*; R. MASGRAU. *Univ. Autònoma de Barcelona, Univ. of California.*

10:00 P7 **511.07** Purines released from astrocytes inhibit excitatory synaptic transmission in the ventral horn of the spinal cord. E. M. M. CARLSEN; J. PERRIER*. *Univ. of Copenhagen, Univ. Copenhagen.*

11:00 P8 **511.08** Astrocyte-neuron communication properties during aging. M. MARTIN-FERNADEZ*; M. GOMEZ-GONZALO; G. PEREA; A. ARAQUE. *Univ. of Minnesota, Inst. Cajal.*

8:00 P9 **511.09** Potential role of NF-κB p50 in astrocyte-neural progenitor cell communication within the neurogenic niche. V. BORTOLOTTO*; S. CVIJETIC; S. LOVECCHIO; P. L. CANONICO; M. GRILLI. *Dept. of Pharmaceut. Sciences-Unipmn.*

9:00 P10 **511.10** Excitatory synaptic depolarizations induce Ca^{2+} elevations in NG2 cells. W. SUN*; D. DIETRICH. *Univ. Clin. Bonn.*

10:00 P11 **511.11** Lactate stimulates NMDA receptor-mediated Erk signaling cascade to regulate plasticity-related gene expression. I. ALLAMAN*; E. RUCHTI; P. JOURDAIN; J. YANG; G. GRENNINGLOH; J. PETIT; P. J. MAGISTRETTI. *EPFL/Brain Mind Inst., KAUST/Division of Biol. and Envrn. Sci. and Engin., CHUV-Département de Psychiatrie/Centre de Neurosciences Psychiatriques.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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11:00 P12 **511.12** Brain extracellular glucose and lactate levels in the mouse motor cortex: Effects of running and peripheral injections of glucose and insulin. C. MESSIER*; J. LARCHER. *Univ. of Ottawa.*

8:00 Q1 **511.13** Proteolytic regulation of synaptic plasticity in the mouse primary visual cortex- analysis of mmp-9 deficient mice. E. A. KELLY*; A. MAJEWSKA. *Univ. Rochester, Univ. of Rochester.*

9:00 Q2 **511.14** ATP-mediated signalling plays a key role in generation of BOLD fMRI responses. I. N. CHRISTIE; J. A. WELLS; P. S. HOSFORD; M. F. FIGUEIREDO; A. G. TESCHEMACHER; P. VIHKO; M. F. LYTHGOE; A. V. GOURINE; S. KASPAROV*. *Univ. Colledge London, Univ. of Bristol, Univ. of Helsinki, Univ. Colledge London, Univ. Bristol.*

10:00 Q3 **511.15** Regulation of astrocytic glutamate transporter expression by peroxisome proliferator-activated receptor alpha. Y. HSIEH; W. CHIU; J. C. HSU*; S. TZENG. *Dept. of Life Sciences, Col. of Biol. Sci. and Biotechnology, Natl. Cheng Kung Univ., Dept. of Biomed. Engineering, Natl. Cheng Kung Univ., Natl. Cheng-Kung Univ. Col. of Med.*

11:00 Q4 **511.16** Role of astrocytes in the development of synchronized bursting behavior in neuronal networks. K. R. SANCHEZ; N. AGBAZUE; M. HARRINGTON; M. TEMBURNI*. *Delaware State Univ.*

8:00 Q5 **511.17** Epidural glutamate produces long-lasting allodynia in rats: Role of glutamate actions in nearby dorsal root ganglia or intervertebral disc nerve endings. R. WHITEHEAD*; N. LAM; M. SUN; K. TUFFLI; W. ORNATOWSKI; F. HARRINGTON; H. MARTIN; E. MILLIGAN. *Univ. of New Mexico.*

9:00 Q6 **511.18** Aldolase C is secreted by forebrain astrocytes in an exosome fraction. A. LUARTE; C. GOMEZ-MOLINA; C. VERGARA*; U. WYNEKEN. *Univ. de los Andes, Univ. of Chile.*

10:00 Q7 **511.19** Astrocytic calciium signaling plays an important role for generation of retroaxonal barrage firing in hippocampalNPY interneurons. T. DEEMYAD*; N. SPRUSTON. *Howard Hughes Med. Institute/Janelia Farm.*

11:00 Q8 **511.20** Heterogeneous astrocyte dynamics: Diurnal morphological changes in the dentate gyrus and suprachiasmatic nucleus. S. J. IRVING; H. J. ROSENBERG; J. W. MITCHELL*; G. NASERI KOUZEHGARANI; J. L. CHU; J. S. RHODES; M. U. GILLETTE. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

8:00 Q9 **511.21** Transcriptional regulation of human transforming growth factor-α by NF-κB, Sp1 and YY1. P. KARKI; K. SMITH; J. JOHNSON JR; D. SON; E. Y. LEE*. *Meharry Med. Col., Meharry Med. Col.*

9:00 R1 **511.22** Anatomical arrangement of astrocytes in ferret visual cortex. M. LOPEZ-HIDALGO*; W. HOOVER; J. SCHUMMERS. *Max Planck Florida Inst. For Neurosci.*

10:00 R2 **511.23** Astrocytic gq-gpcr signaling contributes to classical conditioning. A. MADAYAG*; K. BOYT; R. LADD; K. D. MCCARTHY. *UNC Chapel Hill.*

11:00 R3 **511.24** TAMRA-conjugated spermine is selectively taken up by astrocytes in the rodent hippocampus. J. BENEDIKT; A. ZAYAS-SANTIAGO; Y. RIVERA; M. INYUSHIN; Y. V. KUCHERYAVYKH; L. Y. KUCHERYAVYKH; L. A. CUBANO; M. J. EATON; R. W. VEH; S. N. SKATCHKOV*. *Univ. Central Del Caribe, Charite, Inst. of Integrative Anat., Univ. Central Del Caribe.*

8:00 R4 **511.25** Astrocyte mediated synapse model for spike timing-dependent depression. Y. NISHIMURA; Y. KAKIMOTO; O. ARAKI*. *Tokyo Univ. of Sci., Tokyo Univ. of Sci.*

9:00 R5 **511.26** Endocannabinoid signaling induces lateral long-term potentiation of transmitter release through stimulation of astrocytes. A. COVELO*; M. GOMEZ-GONZALO; M. NAVARRETE; G. PEREA; A. ARAQUE. *Univ. of Minnesota, Inst. Cajal (CSIC).*

10:00 R6 **511.27** Column- and layer-specific heterosynaptic depression mediated by astrocytes in neocortex. A. DIEZ; A. ARAQUE*. *Dept. Neuroscience, Univ. of Minnesota.*

11:00 R7 **511.28** Regulation of glial Ca^{2+} signaling in *Drosophila* and its impact on neuronal activity and function. S. WEISS*; J. E. MELOM; T. J. LITTLETON. *The Picower Inst. For Learning and Memory, MIT, The Picower Inst. fot Learning and Memory, MIT.*

8:00 R8 **511.29** Remodeling of Bergmann glia actin cytoskeleton during glutamatergic neurotransmission in the cerebellum. R. R. HERNANDEZ*; Y. BASTIÁN; J. MENDEZ. *Univ. Autónoma De San Luis Potosí.*

9:00 R9 **511.30** Local astrocyte influences on axonal properties and transmitter synchrony of hippocampal pyramidal neurons. C. A. SOBIESKI*; X. JIANG; S. MENNERICK. *Washington Univ. In St Louis.*

POSTER

512. Parkinson's Disease: Imaging, Dyskinesia, and Development

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 R10 **512.01** Neuroimaging analysis of the dopamine basis for apathetic behaviors in an MPTP-lesioned primate model. L. TIAN*; Y. XIA; H. FLORES; M. CAMPBELL; S. MOERLEIN; J. PERLMUTTER. *Washington Univ. Sch. of Med.*

9:00 R11 **512.02** ● *In vivo* MRI reveals early structural changes in a mouse model of α-synucleinopathy. K. DEDUCK*; M. DESCOTEAUX; K. C. LUK; B. J. BEDELL. *Montreal Neurolog. Institute/McGill Univ., Sherbrooke Univ., Univ. of Pennsylvania Perelman Sch. of Med.*

10:00 R12 **512.03** Voxel-based morphometry, resting-state functional connectivity MRI and histological analysis for evaluating structural and functional changes in a rat model of Parkinson's disease. R. WESTPHAL*; C. SIMMONS; T. C. WOOD; M. B. MESQUITA; R. JOULES; S. C. R. WILLIAMS; A. VERNON; D. CASH. *Inst. of Psychiatry, Inst. of Psychiatry.*

11:00 S1 **512.04** Information theoretic metrics as biomarkers of parkinsonian symptom severity. C. ANDERSON*; A. DORVAL. *Univ. of Utah.*

8:00 S2 **512.05** Cineradiographic analysis of respiratory function in a murine model mimicking the initial stages of Parkinson's disease. P. S. DE CAMPOS; K. HASEGAWA; Y. KUMEI; J. L. ZEREDO*. *Univ. of Brasilia, JAXA, Tokyo Med. and Dent. Univ.*

9:00 S3 **512.06** Transient potencial, kinin and purinergic receptors in Parkinson's disease. L. M. DATI*; A. S. ALVES; A. H. ULRICH; L. R. G. BRITTO. *Univ. of Sao Paulo.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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10:00 S4 **512.07** ▲ A pathophysiological role of aquaporin-9 in Parkinson's disease. K. STAHL; A. PRYDZ; T. B. LEERGAARD; O. OTTERSEN*; M. AMIRY-MOGHADDAM. *Inst. Basic Med. Sci. Univ. Oslo.*

11:00 S5 **512.08** Impaired dopaminergic neurotransmission and vesicular recycling in human LRRK2-R1441G transgenic mice. L. LI; S. CHOI; P. ROY; J. J. BALCITA-PEDICINO; Y. HUANG; C. LI; S. R. SESACK; H. ZHANG*. *Thomas Jefferson Univ., Columbia Univ., Univ. of Pittsburgh, Mount Sinai Sch. of Med.*

8:00 S6 **512.09** The biguanide metformin alters phosphoproteomic profiling in mouse brain. R. KHANG*; C. PARK; J. SHIN. *Sungkyunkwan Univ., Sungkyunkwan Univ.*

9:00 S7 **512.10** ● Early changes in the endocannabinoid system after 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) treatment in mice. N. PASQUARELLI*; C. PORAZIK; P. WEYDT; A. WITTING; B. FERGER. *Ulm Univ., Boehringer Ingelheim Pharma GmbH & Co. KG.*

10:00 S8 **512.11** Dihydrotetrabenazine for the assessment of dopaminergic innervation in animal models of Parkinson's disease. P. VERGARA-ARAGON*; G. VALVERDE-AGUILAR; R. GONZÁLEZ-RIVERA; I. E. LÓPEZ-MARTÍNEZ; I. SANCHEZ-CERVANTES; B. HERNÁNDEZ-TELLEZ. *Facultad De Medicina, UNAM, CICATA-Legaría IPN, UNAM, UNAM.*

11:00 S9 **512.12** Ultrastructural localization of Myr-Akt in the nigro-striatal pathway, *in vivo,* following AAV transduction of neurons of the substantia nigra (SN). A. ROLLAND*; A. TAGLIAFERRO; T. KAREVA; N. KHOLODILOV; R. E. BURKE. *Columbia Univ.*

8:00 S10 **512.13** ● ▲ Different involvement of opioid receptors in motor control and levodopa induced dyskinesia. S. SGROI*; C. CAPPER-LOUP; A. KAELIN-LANG. *Inselspital Univ. Hosp., Univ. of Bern, Neurocentre of Southern Switzerland, Inselspital Univ. Hosp. and Univ. of Bern.*

9:00 S11 **512.14** rAAV-Mediated Nurr1 overexpression in striatal neurons results in enhanced levodopa-induced dyskinesias in the 6-OHDA rat model of Parkinson's disease. R. C. SELLNOW; K. STEECE-COLLIER; N. M. KANAAN; C. E. SORTWELL; T. J. COLLIER; A. COLE-STRAUSS; J. W. LIPTON; F. P. MANFREDSSON*. *Michigan State Univ., Michigan State Univ.*

10:00 S12 **512.15** Striatal cholinergic cell ablation attenuates l-dopa induced dyskinesia in parkinsonian mice. U. J. KANG*; L. WON; Y. DING; P. SINGH. *Columbia Univ., Univ. of Chicago.*

11:00 T1 **512.16** Role of nitrergic system in L-DOPA-induced dyskinesia in a mouse model of Parkinson's disease. O. SOLIS; I. ESPADAS; Y. TIZABI; E. DEL-BEL; R. MORATALLA*. *Cajal Institute, CSIC, CIBERNED, ISCIII, Howard Univ. Col. of Med., Med. School, Univ. of São Paulo.*

8:00 T2 **512.17** Trans-differentiation of mesenchymal stem cells into dopaminergic neurons via adenoviral transfection. R. WELCHKO*; G. SHALL; S. PARKER; W. HUO; J. WATTERS; M. JEAKLE; L. SIEGEL; N. JONES-CAMP; D. DUES; D. DAI; X. LEVEQUE; J. ROSSIGNOL; M. LU; G. DUNBAR. *Field Neurosciences Inst. Lab. For Restorative Neurol., Program in Neurosci., Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst.*

9:00 T3 **512.18** Evaluation of a possible role for the GTPase Rap1B in the induction of new axon growth in the adult nigrostriatal dopaminergic system. S. PADMANABHAN*; T. KAREVA; O. YARYGINA; T. F. OO; N. KHOLODILOV; R. E. BURKE. *Columbia Univ., Columbia Univ.*

10:00 T4 **512.19** Generation of dopaminergic neurons from rat bone marrow derived mesenchymal stem cells. G. P. SHALL*; R. WELCHKO; K. BAKER; S. DECKER; M. MENOSKY; J. ROSSIGNOL; X. LEVEQUE; G. DUNBAR. *Field Neurosciences Inst. Lab. For Restorative Neurology, Neurosci., Program in Neurosci., Dept. of Psychology, Central Michigan Univ., Field Neurosciences Institute, 4677 Towne Ctr. Rd. Suite 101.*

POSTER

513. Parkinson's Disease: Neuroprotection

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 T5 **513.01** Characterization of a novel PPAR-γ agonist as a neuroprotective agent in Parkinson's disease. A. R. CARTA*; D. K. NEVIN; D. LECCA; G. SACCHETTI; D. FAYNE. *Univ. of Cagliari, Trinity Col., Univ. of Ferrara.*

9:00 T6 **513.02** Evaluation of isradipine for neuroprotection in the MPTP/p mouse model of Parkinson's disease. C. J. PRICE*; M. L. SUTHERLAND; J. M. MATHEWS; T. R. FENNELL; S. R. BLACK; S. L. WATSON; R. W. SNYDER; R. C. SWITZER, III; S. O. AHMAD. *RTI Intl., NIH NINDS, Neurosci. Associates, St. Louis Univ.*

10:00 T7 **513.03** HDAC inhibition protects dopaminergic neurons in a transgenic mouse model of multiple system atrophy. E. STURM*; P. HOCKL; W. POEWE; G. K. WENNING; N. STEFANOVA. *Innsbruck Med. University, Dept. Neurol.*

11:00 T8 **513.04** ● ▲ Lovastatin activates SREBP nuclear translocation and modulates dopamine transport system in SH-SY5Y cells. M. SCHMITT; B. DEHAY; E. BEZARD; F. GARCIA-LADONA*. *UCB Biopharma Sprl, Inst. des Maladies Neurodégénératives UMR5293, Univ. of Bordeaux.*

8:00 T9 **513.05** Inhibition of the microglial response is essential for the neuroprotective effects of Rho-Kinase inhibitors on MPTP-induced dopaminergic cell death. A. I. ANA I. RODRIGUEZ-PEREZ; A. BORRAJO; B. VILLAR-CHEDA; R. VALENZUELA; M. J. GUERRA; J. L. LABANDEIRA-GARCIA*. *CIBERNED, Fac Med.*

9:00 T10 **513.06** Neuronal nitric oxide synthase inhibitor modifies glial reaction trigged by L-DOPA treatment in rat model of Parkinson's disease. M. BORTOLANZA*; R. CAVALCANTI-KIWIATKOSKI; F. E. PADOVAN-NETO; C. A. DA-SILVA; M. MITKOVISKI; R. RAISMAN-VOZARI; E. DEL BEL. *Univ. of São Paulo, Max-Planck-Institute of Exptl. Med., Inst. de Cerveau et de la Moelle Epinière.*

10:00 T11 **513.07** Neuroprotection and neurorestoration by inducible Akt in Parkinson's disease. S. PARK*; O. LEVY; A. TAGLIAFERRO; T. KAREVA; T. FRANKE; R. BURKE; L. GREENE. *Columbia Univ., NYU Langone Med. Ctr.*

11:00 T12 **513.08** Fibroblast-derived neurospheres as a therapeutic option to restore dopaminergic neuronal loss in a mouse model of Parkinson's disease. C. D. GUOYNES*; J. CHO; K. LUTFY; Y. HONG. *Western Univ. of Hlth. Sci., Western Univ. of Hlth. Sci., Western Univ. of Hlth. Sci.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 U1 **513.09** Exercise confers neuroprotection and improved behavior in a sex-dependent manner to the LRRK2^{R1441G} mouse model of Parkinson's disease. J. JANG*; H. NOH; T. KIM; M. JEONG; J. JEON; H. SEO. *Hanyang Univ.*

9:00 U2 **513.10** Acute theta-burst stimulation exerts distinct therapeutic effects in early and late experimental parkinsonism. V. GHIGLIERI*; F. CACACE; V. PENDOLINO; A. VANNELLI; M. MANCINI; B. PICCONI; P. CALABRESI. *Fondazione Santa Lucia, Univ. di Perugia.*

10:00 U3 **513.11** Zonisamide prevents neurodegeneration in nigrostriatal dopaminergic neurons in a mouse genetic model of Parkinson's disease through brain-derived neurotrophic factor signaling pathway. H. SANO*; M. MURATA; A. NAMBU. *Nat Inst. for Physiol Sci., Natl. Ctr. Hospital, Natl. Ctr. of Neurol. and Psychiatry.*

11:00 U4 **513.12** The deleterious effects of High Mobility Group Box 1 in the MPTP model and Parkinson's disease can be attenuated by glycyrrhizin. P. TEISMANN*; K. SATHE; P. STATHAKOS; H. L. MARTIN; M. A. HOBERT; T. W. RATTAY; T. GASSER; D. BERG; K. J. TRACEY; W. MAETZLER. *Univ. of Aberdeen, Univ. of Tuebingen, Feinstein Inst. For Med. Res.*

8:00 U5 **513.13** Therapeutic potentials of human adipose-derived stem cells in mouse model of Parkinson's disease. H. KIM*; H. CHOI; Y. SUH. *Korea Brain Res. Inst. (KBRI), Korea Brain Res. Inst.*

9:00 U6 **513.14** ▲ Neuroprotective effects of spinal cord stimulation on Parkinson's disease model of rats. A. SHINKO*; T. AGARI; T. YASUHARA; M. KAMEDA; A. KONDO; K. SATO; T. SASAKI; S. SASADA; A. TOYOSHIMA; H. TAKEUCHI; I. DATE. *Okayama Univ. Grad. Sch. of Med.*

10:00 U7 **513.15** Lymphocytes improve clinical outcome in the 6-OHDA parkinson mouse model. C. IP*; S. BECK; J. VOLKMANN. *Univ. of Wuerzburg.*

11:00 U8 **513.16** Nanoparticles as a therapeutic tool to restore lysosomal acidification impairments: implications for Parkinson's disease. B. DEHAY*; M. BOURDENX; J. DANIEL; E. GENIN; M. THIOLAT; M. BLANCHARD-DESCE; E. BEZARD. *Inst. of Neurodegenerative Dis., Inst. of Mol. Sci.*

8:00 U9 **513.17** Enhancement of lysosomal biogenesis reverse A53T mutant α-synuclein induced toxicity. M. BOURDENX*; S. DOVÉRO; M. BASTIDE; G. PORRAS; Q. LI; A. BALLABIO; E. BEZARD; M. VILA; B. DEHAY. *Inst. of Neurodegenerative Dis., Motac Neurosci. Ltd., Telethon Inst. of Genet. and Med., Vall d'Hebron Res. Inst.*

9:00 U10 **513.18** Beta-estradiol protects against 1-methyl-4-phenylpyridinium induced-Parkinsonism in rat by activation of endogenous antioxidant system. Y. AGUIRRE-VIDAL; N. L. CHÁVEZ-GARCÍA; A. MONROY-NOYOLA; S. MONTES*. *Facultad de Farmacia Univ. Autónoma del Estado de Morelos, Natl. Inst. Neurol. Neurosurg.*

10:00 U11 **513.19** Botulinum neurotoxin A subtype 2 reduces pathological behaviors more effectively and confers greater safety than subtype 1 in a rat Parkinson's disease model. M. ITAKURA*; H. NAKAJIMA; T. KOHDA; T. KUBO; Y. SEMI; K. NISHIYAMA; Y. AZUMA; S. KOZAKI; T. TKEUCHI. *Osaka Prefecture Univ., Osaka Prefecture Univ.*

11:00 U12 **513.20** Mithramycin A blocks the induction of the pro-apoptotic gene Trib3 and protects from cell death induced by the Parkinson's disease mimetics 6-OHDA and MPP+. P. AIME*; O. LEVY; A. V. RAO; L. A. GREENE. *Columbia Univ., Columbia Univ.*

8:00 U13 **513.21** ● Widespread expression of GDNF throughout rat brain after intranasal delivery of hGDNF plasmid nanoparticles. A. E. ALY*; B. T. HARMON; O. SESENOGLU-LAIRD; L. PADEGIMAS; M. J. COOPER; B. L. WASZCZAK. *Northeastern Univ., Copernicus Therapeut. Inc.*

POSTER

514. Motor Neuron Disease Therapeutics

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 U14 **514.01** Neural restoration via loop-based reinforcement: A mechanism of therapeutic high frequency stimulation in Parkinson's disease. S. SANTANIELLO*; M. M. MCCARTHY; E. B. MONTGOMERY, Jr; J. T. GALE; N. KOPELL; S. V. SARMA. *JOHNS HOPKINS UNIVERSITY, Boston Univ., Greenville Neuromodulation Ctr., Cleveland Clin.*

9:00 U15 **514.02** Effect of molecular tweezers treatment in a transgenic mouse model of amyotrophic lateral sclerosis. C. V. FONTANILLA*; B. CHAN; R. ROSALES; M. CHATTOPADHYAY; T. T. VU; A. ATTAR; J. S. VALENTINE; M. H. WIEDAU-PAZOS; G. BITAN. *UCLA.*

10:00 U16 **514.03** Pur alpha: A potential therapy for ALS due to the C9ORF72 expanded repeat. E. W. GODFREY*; J. ORIANS; E. M. JOHNSON; D. C. DANIEL. *Eastern Virginia Med. Sch., Eastern Virginia Med. Sch., Eastern Virginia Med. Sch.*

11:00 U17 **514.04** ● Role of the ALS spinal cord environment on human astrocyte engraftment and differentiation. A. M. HAIDET-PHILLIPS*; A. DORESWAMY; X. P. TANG; S. K. GROSS; J. T. CAMPANELLI; N. J. MARAGAKIS. *Johns Hopkins Univ., Q Therapeutics, Inc.*

8:00 U18 **514.05** Amyotrophic lateral sclerosis affects the extracellular matrix: detection of its components could serve as a disease marker. S. FOROSTYAK*; J. C. F. KWOK; P. JENDELOVA; A. HOMOLA, PhD; J. FAWCETT; E. SYKOVA. *Inst. of Exptl. Med. ASCR, Charles Univ. in Prague, 2nd Fac. of Med., John van Geest Ctr. for Brain Repair (BRC), Univ. of Cambridge.*

9:00 U19 **514.06** ● Preservation of forelimb function by UPF1 gene therapy: Potential regulation of UPF1 in TDP-43 toxicity. K. L. JACKSON; R. D. DAYTON; S. E. LOPEZ; E. A. ORCHARD; L. E. MAQUAT; S. JU; D. RINGE; G. A. PETSKO; R. L. KLEIN*. *LSUHSC, Univ. of Rochester Sch. of Med. and Dent., Wright State Univ., Brandeis Univ., Weill Cornell Med. Sch.*

10:00 U20 **514.07** Cell therapy in a murine model of amiotrophic lateral sclerosis: Functional and histological approach. I. B. PEREIRA*; F. GUBERT; A. DECOTELLI; M. SANTIAGO; R. MENDEZ-OTERO. *Univ. Federal Do Rio De Janeiro.*

11:00 U21 **514.08** iPSC-derived neural stem cells act via kinase inhibition to exert neuroprotective effects in SMARD1. C. SIMONE; M. NIZZARDO; F. RIZZO; M. RUGGIERI; G. RIBOLDI; S. SALANI; M. BUCCHIA; P. RINCHETTI; F. PORRO; N. BRESOLIN; G. P. COMI; S. CORTI*. *Univ. of Milan, Univ. of Milan.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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8:00 U22 **514.09** Restoring function to paralysed muscles by transplanting optogenetically-active embryonic stem cell-derived motor neurons in mice. J. BRYSON*; C. BARCELLOS MACHADO; I. LIEBERAM; L. GREENSMITH. *UCL, Inst. of Neurol., King's Col. London, UCL, Inst. of Neurol.*

9:00 U23 **514.10** ● Therapeutic application of the monoacylglycerol lipase inhibitor KML29 in the SOD1G93A mouse model of amyotrophic lateral sclerosis. A. WITTING*; N. PASQUARELLI; J. HANSELMANN; D. WIESNER; C. PORAZIK; C. VOLANI; M. KARSAK; P. WEYDT; B. FERGER. *Univ. Ulm, Boehringer Ingelheim Pharma GmbH & Co. KG, Ulm Univ.*

10:00 U24 **514.11** Methyl pyruvate rescues mitochondrial degeneration by sigma-1 receptor mutation in amyotrophic lateral sclerosis. K. FUKUNAGA*; H. TAGASHIRA; Y. SHINODA. *Tohoku Univ. Grad Sch. Pharm Sci.*

11:00 U25 **514.12** Microglia migration and interactions with dendrimer in brain in the presence of neuroinflammation. F. ZHANG*; E. NANCE; Y. ALNASSER; K. RANGARAMANUJAM; S. KANNAN. *The Johns Hopkins Univ., Johns Hopkins Med. Institutions, Johns Hopkins Med. Institutions.*

8:00 U26 **514.13** AAV-based GLT1 overexpression in the SOD1G93A mouse cervical spinal cord does not protect respiratory phrenic motor neurons, preserve histological or functional diaphragm innervation, or extend disease phenotype. M. URBAN*; K. LI; T. J. HALA; D. J. POULSEN; M. C. WRIGHT; A. LEPORE. *Thomas Jefferson University, Farber Inst. For, Univ. of Montana, Arcadia Univ.*

9:00 U27 **514.14** Liposome-encapsulated H-ferritin improves survival in a SOD1 mutant mouse model of amyotrophic lateral sclerosis. A. M. SNYDER*; A. B. MADHANKUMAR; E. B. NEELY; E. RIZK; O. M. HESS; Z. SIMMONS; J. R. CONNOR. *Penn State Univ. Coll Med., Mechanicsburg Area High Sch., Penn State Univ. Coll Med.*

10:00 U28 **514.15** ▲ Post-mortem assessment of potential ALS biological predictors: An analysis of 51 patient autopsies. G. COAN*; J. GLASS; C. S. MITCHELL. *Georgia Inst. of Technol., Emory Univ.*

11:00 U29 **514.16** Dose-dependent neurotoxicity in mice expressing wild type or ALS-linked mutants of FUS/TLS is mediated by disruption in protein and RNA homeostasis. S. LING*; S. DA CRUZ; S. DASTIDAR; S. TOKUNAGA; P. PARONE; H. ILIEVA; O. PLATOSHYN; D. SWING; L. TESSAROLLO; M. MARSALA; A. LA SPADA; C. SHAW; C. LAGIER-TOURENNE; D. CLEVELAND. *Natl. Univ. of Singapore, UCSD, UCSD, NCI, UCSD, King's Col. London.*

8:00 U30 **514.17** H63D HFE modifies disease pathophysiology in animal models of amyotrophic lateral sclerosis. W. NANDAR*; E. B. NEELY; Z. SIMMONS; J. R. CONNOR. *The Pennsylvania State University, M. S. Hershey Med. Ctr., The Pennsylvania State University, M. S. Hershey Med. Ctr.*

9:00 U31 **514.18** ▲ A meta-analysis of rotarod experimental protocols in the G93A SOD1 transgenic ALS mouse. S. PFOHL*; M. HALICEK; C. S. MITCHELL. *Georiga Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol.*

10:00 U32 **514.19** HMG-CoA reductase inhibitors negatively impact amyotrophic lateral sclerosis via mitochondrial mechanisms. X. W. SU*; W. NANDAR; E. B. NEELY; Z. SIMMONS; J. R. CONNOR. *Penn State Col. of Med., Penn State Col. of Med.*

11:00 U33 **514.20** Mechanism-based gene therapy for ALS using sporadic ALS model mice. T. YAMASHITA*; H. CHAI; S. TERAMOTO; S. TSUJI; K. SHIMAZAKI; S. MURAMATSU; S. KWAK. *Ctr. For Dis. Biol. and Integrative Medicine, Univ. of Tokyo Grad Sch. Med., Dept. Neurol., Grad. Schl. Med., Univ. Tokyo, Dept. Physiol., Jichi Med. Univ., Dept. Neurol., Jichi Med. Univ., Clin. Res. Cent. Med., Intnatl. Univ. Hlth. Welfare.*

8:00 U34 **514.21** ▲ Effect of exercise training on skeletal muscle GDNF content and neuromuscular physiology in a mouse model of amyotrophic lateral sclerosis. N. C. CARPP*; A. M. GYORKOS; M. J. MCCULLOUGH; L. R. ROSARIO; J. M. SPITSBERGEN. *Western Michigan Univ., Adrian Col., Univ. of Puerto Rico.*

9:00 U35 **514.22** Age-dependent and mutant-enhanced synaptic deficit caused by als-ftd-linked fus/tls. S. TYAN*; Q. WU; D. W. CLEVELAND; E. H. KOO; S. LING. *Natl. Univ. of Singapore, UCSD, Natl. Univ. of Singapore, UCSD, UCSD.*

10:00 U36 **514.23** Kit is important for ALS mouse survival independent of mast cells. K. A. STAATS*; S. SCHONEFELDT; M. VAN RILLAER; L. VAN HELLEPUTTE; Y. LAMPI; W. ROBBERECHT; L. VAN DEN BOSCH; A. LISTON. *UCLA, VIB, Univ. of Leuven, VIB, Univ. of Leuven.*

11:00 V1 **514.24** ▲ Specific transduction of corticospinal motor neurons by AAV2 upon direct motor cortex injection. M. J. STANFORD*; J. H. JARA; M. W. TU; Y. ZHU; M. C. BOHN; S. H. DEVRIES; P. H. OZDINLER. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Children's Mem. Res. Ctr., Northwestern Univ., Northwestern Univ., Northwestern University, Feinberg Sch. of Med.*

8:00 V2 **514.25** A high-throughput genome-wide RNAi screen for novel modifiers of survival of motor neuron (SMN) protein levels. E. S. ARNOLD*; R. M. GIBBS; D. Y. KWON; S. E. MARTIN; E. BUEHLER; R. HUANG; B. REDAN; K. H. FISCHBECK; B. G. BURNETT. *NIH, NIH, Uniformed Services Univ. of the Hlth. Sci.*

9:00 V3 **514.26** Regulation of SMN and other key pathogenetic events in Spinal Muscular Atrophy (SMA): Moving to RNA-Based treatment strategies. M. BUCCHIA*; M. NIZZARDO; C. SIMONE; F. RIZZO; G. ULZI; S. DAMETTI; A. RAMIREZ; E. FRATTINI; S. PAGLIARANI; N. BRESOLIN; F. PAGANI; G. P. COMI; S. CORTI. *Univ. of Milan, Intl. Ctr. for Genet. Engin. and Biotech.*

10:00 V4 **514.27** Single chain antibodies against TDP-43 for treatment of ALS. S. POZZI*; K. DUTTA; C. GRAVEL; J. KRIZ; J. JULIEN. *CRIUSMQ.*

POSTER

515. Rett Syndrome

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 V5 **515.01** Mecp2: A novel regulator of tissue-resident macrophage function and survival. J. CRONK*; N. C. DERECKI; I. SMIRNOV; E. JI; G. T. NORRIS; N. CODDINGTON; S. UPADHYAY; Y. WOLF; T. H. HARRIS; S. JUNG; J. KIPNIS. *Univ. of Virginia, Univ. of Virginia, Weizmann Inst. of Sci.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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9:00 V6 **515.02** Chronic ketamine treatment ameliorates cortical function in Rett Syndrome mouse model. N. PICARD*; A. PATRIZI; A. J. SIMON; G. GUNNER; N. A. ANDREWS; M. FAGIOLINI. *Boston Children's Hospital-Harvard Med. Sch., Boston Children's Hospital-Neurodevelopmental Behavior Core.*

10:00 V7 **515.03** An isogenic human induced pluripotent stem cell model of Rett Syndrome reveals early alterations in microRNA expression patterns and downstream neuronal maturation. D. A. FELDMAN*; N. MELLIOS; S. D. SHERIDAN; S. KWOK; B. ROSEN; B. CRAWFORD; S. HAGGARTY; M. SUR. *MIT, MGH, Harvard Med. Sch.*

11:00 V8 **515.04** Gabaergic contributions to neural deficits in a genetic model of rett syndrome. J. M. MOSSNER; R. BATISTA-BRITO; J. A. CARDIN*. *Yale Univ.*

8:00 V9 **515.05** A mass spectrometry based analysis of NMDAR regulation in Rett Syndrome. A. J. SIMON*; W. MAIR; H. CHEN; J. STEEN; M. FAGIOLINI. *Harvard Univ., Harvard Univ.*

9:00 V10 **515.06** ● Remacemide eliminates apneic breathing in a mouse model of Rett syndrome. R. J. MATHER; I. ADAMS; M. LANG; J. DUNLOP*; E. ABERG; M. C. QUIRK; D. M. KATZ. *Astrazeneca - Neurosci. Innovative Med. Unit, Case Western Reserve Univ. Sch. of Med., Astrazeneca - Innovative Med. Unit.*

10:00 V11 **515.07** Reversibility of symptoms in a mouse model of MECP2 duplication syndrome. E. SZTAINBERG*; H. CHEN; J. W. SWANN; H. Y. ZOGHBI. *Baylor Col., Jan and Dan Duncan Neurolog. Res. Inst. at Texas Children's Hosp., The Cain Fndn. Laboratories, Jan and Dan Duncan Neurolog. Res. Inst. at Texas Children's Hosp., Departments of Neurosci. and Pediatrics, Baylor Col. of Med., Howard Hughes Med. Inst.*

11:00 V12 **515.08** Funcitonal analyses of the CDKL5, a causative gene for neurodevelopemental disorders. T. TANAKA*; A. WATANABE; M. HAGIWARA; T. MURAKAMI; M. MIZUGUCHI; K. TAKAO; T. MIYAKAWA; S. KOBAYASHI; T. MANABE; M. FUKAYA; H. SAKAGAMI; K. OKUDA. *The Univ. of Tokyo, Natl. Inst. for Physiological Sci., IMSUT, Kitasato Univ. Sch. of Med.*

8:00 V13 **515.09** Altered nicotinic receptor expression and nicotinic receptor mediated changes in open field locomotor behaviour in a mouse model of Rett syndrome. D. MCPHEE; A. RENDA; J. LEUNG; K. R. DELANEY*; R. NAHSMI. *Univ. of Victoria.*

9:00 V14 **515.10** Unstable dendritic spines in a mouse model of CDKL5 disorder. G. DELLA SALA; E. PUTIGNANO; G. CHELINI; E. CALCAGNO; G. RATTO; E. AMENDOLA; C. GROSS; M. GIUSTETTO*; T. PIZZORUSSO. *Univ. of Florence, Natl. Res. Council (CNR), Univ. of Torino, NEST, Scuola Normale Superiore, Nanoscience Institute-CNR, Mouse Biol. Unit, European Mol. Biol. Lab. (EMBL).*

10:00 V15 **515.11** ● Abnormal arousal to auditory stimulation in Mecp2 mutant mice is reversed by treatment with LM22A-4, a small molecule partial TrkB agonist. D. M. KATZ*; M. LANG; I. ADAMS; F. M. LONGO. *Case Western Reserve Univ., Stanford Univ. Sch. of Med.*

11:00 V16 **515.12** Loss of MeCP2 in forebrain GABAergic neurons modulates striatal dopamine synthesis in a region-specific and non-cell autonomous manner. W. LIAO*; F. KAO; Y. HUANG. *Natl. Cheng-Chi Univ.*

8:00 V17 **515.13** Identification of a novel pathway involved in MECP2 disease-relevant cellular phenotypes using *Drosophila.* A. WILLIAMS*; C. DUCH. *Arizona State Univ., Johannes Gutenberg-Universität.*

9:00 V18 **515.14** MeCP2 isoforms and neurological disorders. M. RASTEGAR*. *Univ. of Manitoba.*

10:00 V19 **515.15** Development of an *in vitro* assay using cerebellar granule neurons for therapeutic screens in Rett syndrome. S. RANGASAMY*; S. OLFERS; H. YIN; V. NARAYANAN. *Translational Genomics Res. Inst., Barrow Neurolog. Inst., Translational Genomics Res. Inst., Translational Genomics Res. Inst.*

11:00 V20 **515.16** Alterations in astrocytic gene expression in pre-symptomatic MeCP2-deficient mice. N. L. PACHECO*; M. L. OLSEN. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

8:00 V21 **515.17** Aberrant redox homeostasis in RETT syndrome affects cytosol and mitochondria. K. CAN; J. TOLÖ; S. KÜGLER; M. MUELLER*. *Univ. Goettingen, Univ. Goettingen.*

9:00 V22 **515.18** Loss of MeCP2 affects normal development of hippocampal glutamatergic neurons by altering axonal and dendritic outgrowths. C. SAMPATHKUMAR*; T. TRIMBUCH; C. ROSENMUND. *Charité - Universitätsmedizin Berlin.*

10:00 V23 **515.19** Analysis of whole-brain X-chromosome inactivation within MeCP2 mutant and wild type mice. E. SZELENYI*; Y. KIM; K. U. VENKATARAJU; P. OSTEN. *Cold Spring Harbor Lab.*

11:00 V24 **515.20** The BDNF val-66-met polymorphism impairs dendritic complexity and dendritic spine density and form in hippocampal neurons of Mecp2 knockout mice. X. XU*; J. GARCIA; R. EWALT; L. POZZO-MILLER. *Univ. of Alabama At Birmingham, The Univ. of Alabama at Birmingham.*

8:00 V25 **515.21** Phenotypic improvement in Mecp2-deficient mice after i.v. injection of a self-complementary AAV9 construct expressing a codon-optimized Mecp2 transgene. V. MATAGNE*; L. VILLARD; J. ROUX. *Aix Marseille Universite, UMRS 910.*

9:00 V26 **515.22** ● Mechanisms of prefrontal cortical dysfunction in mecp2 null mice. M. P. SCENIAK*; M. LANG; A. C. ENOMOTO; C. J. HOWELL; D. M. KATZ. *Case Western Reserve Univ., Case Western Reserve Univ.*

10:00 V27 **515.23** Forniceal deep brain stimulation rescues the impairment of contextual fear memory in a mouse model of Rett syndrome. S. HAO*; Z. WU; B. TANG; Y. SUN; Y. GAO; R. C. SAMACO; H. Y. ZOGHBI; J. TANG. *Dept. of Pediatrics, Baylor Col. of Medici, Jan and Dan Duncan Neurolog. Res. Institute, Texas Children's Hosp., Dept. of Mol. and Human Genetics, Baylor Col. of Med., Dept. of Neuroscience, Baylor Col. of Med., Howard Hughes Med. Inst.*

11:00 V28 **515.24** Astrocyte dysfunction in a mouse model of Rett syndrome. M. L. OLSEN*; V. A. CUDDAPAH; N. PACHECO; S. NWAOBI. *Univ. of Alabama At Birmingham.*

8:00 V29 **515.25** A splicing-regulatory pathway controls neuronal excitation in Rett syndrome. L. CHEN*; P. YU; W. WANG; C. SHAW; H. Y. ZOGHBI. *Baylor Col. of Med., Jan and Dan Duncan Neurolog. Res. Inst., Howard Hughes Med. Inst.*

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9:00 V30 **515.26** Bioenergetic dysregulation in MeCP2-null microglia secondary to glutamine transporter SNAT1 overexpression. I. MAEZAWA*; M. HORIUCHI; H. WULFF; G. CORTOPASSI; J. D. ERICKSON; L. JIN. *M.I.N.D. Inst, UC Davis, UC Davis, UC Davis, Louisiana State Univ.*

10:00 V31 **515.27** Alterations of h-currents and voltage-gated Na+ currents in mesencephalic trigeminal propriosensory neurons increase excitability in a mouse model for Rett Syndrome. M. F. OGINSKY*; N. CUI; W. ZHONG; C. JIANG. *Georgia State Univ.*

11:00 V32 **515.28** Defective GABAergic neurotransmission in the nucleus tractus solitarius in Mecp2-null mice. L. JIN*; Y. LIN; M. A. ROGAWSKI; C. LIEN; I. MAEZAWA; C. CHEN. *M.I.N.D. Inst. UC Davis, UC Davis, Natl. Yang-Ming Univ., UC Davis.*

POSTER

516. Down Syndrome Anatomical and Behavioral Correlations

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 W1 **516.01** Age-related changes and gender differences in the Down syndrome Dp(10)1Yey mouse brain. K. X. LE*; B. LIU; S. J. CHOWDHURY; J. L. FROST; J. FOK; A. BLOCK; M. M. AHMED; K. J. GARDINER; C. A. LEMERE. *Brigham and Women's Hosp., Harvard Med. Sch., Linda Crnic Inst. for Down Syndrome, Univ. of Colorado Sch. of Med.*

9:00 W2 **516.02** Fluency semantic measures in young Down syndrome adults correlate with amyloidosis plasma biomarkers. L. XICOTA; L. DEL HOYO; G. SÁNCHEZ-BENAVIDES; S. DE SOLA; A. CUENCA; J. RODRÍGUEZ; M. FARRÉ; M. DIERSSEN; R. DE LA TORRE*. *IMIM (Hospital del Mar Res. Institute), CRG, Univ. Pompeu Fabra, Univ. Autònoma de Barcelona, Imim-Hospital Del Mar Med. Res. Inst.*

10:00 W3 **516.03** Physical exercise rescues adult neurogenesis, synaptic plasticity and memory in Down syndrome mice. M. PARRINI*; D. GHEZZI; G. DEIDDA; L. MEDRIHAN; F. BENFENATI; P. BALDELLI; L. CANCEDDA; A. CONTESTABILE. *Fondazione Istituto Italiano Di Tecnologia, Fondazione Istituto Italiano Di Tecnologia.*

11:00 W4 **516.04** Wiring the Brain of Down Syndrome. J. R. KORENBERG*; L. DAI; C. VACHET; E. JEONG; J. S. ANDERSON; G. GERIG. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

8:00 W5 **516.05** Diffusion MRI signature of Down syndrome brain abnormal trajectories. E. D. HAMLETT*; X. NIE; A. GRANHOLM; H. A. BOGER; M. F. FALANGOLA. *MUSC, MUSC, MUSC.*

9:00 W6 **516.06** Peripheral biomarkers in Down syndrome follow the same pattern as in Alzheimer 's disease. V. VASILEVKO; N. MOVSESYAN; E. DORAN; I. T. LOTT*. *Univ. of California, Irvine, UC Irvine Med. Ctr., UC Irvine.*

10:00 W7 **516.07** Delayed development of visual acuity in the mouse model of Down syndrome Ts65Dn. M. R. STASKO; D. HERRERO; J. J. SCOTT-MCKEAN; A. C. COSTA*. *Case Western Reserve Reserve Univ., Univ. of São Paulo Sch. Publ. Hlth., Case Western Reserve Univ., Case Western Reserve Univ.*

11:00 W8 **516.08** Effects of epigallocatechin-3-gallate treatment on cognitive deficits in an adolescent Down Syndrome mouse model. M. E. STRINGER; I. S. ABEYSEKERA; R. J. ROPER; C. R. GOODLETT*. *IUPUI, IUPUI, IUPUI.*

8:00 W9 **516.09** Aging brain in Down syndrome mouse models: Lessons from the cerebellum? N. CREAU*; S. BENNAI; B. SOUCHET; E. CABET; A. DUCHON; J. DELABAR; Y. HERAULT; F. DAUBIGNEY. *CNRS UMR8251, Inst. de Génétique Biologie Moléculaire et Cellulaire.*

9:00 W10 **516.10** Cognitive flexibility and receptive vocabulary in Down syndrome. B. CASTILLO-IGNACIO; N. ARIAS-TREJO; O. GARCIA*; M. MAYORAL-RAMÍREZ. *UNAM, Facultad de Psicologia, UNAM, Integración Down, I. A. P.*

10:00 W11 **516.11** Behavioral, physiological and morphological studies in the Dp(16)1Yey mouse model of Down syndrome. P. V. BELICHENKO*; A. M. KLESCHEVNIKOV; V. A. AKULININ; E. G. WAGNER; A. BECKER; L. V. LYSENKO; S. S. STEPANOV; M. MICHALKO; I. MAHAPARN; M. A. PITTMAN; N. Y. KLESCHEVNIKOVA; E. MASLIAH; E. Y. YU; W. C. MOBLEY. *UCSD, Omsk State Med. Acad., Roswell Park Cancer Inst.*

11:00 W12 **516.12** The cortical landscape of the Down's syndrome brain with and without Alzheimer's disease neuropathology. T. ANNUS*; L. R. WILSON; J. ACOSTA-CABRONERO; A. CARDENAS-BLANCO; S. ZAMAN; A. J. HOLLAND; P. J. NESTOR. *Univ. of Cambridge, DZNE Magdeburg.*

8:00 W13 **516.13** Nicotine treatment improves neural and cognitive measures of memory in adults with down syndrome: An open-label pilot study. A. R. KAMKWALALA*; A. KEY; E. DYKENS; D. JONES; V. C. GAU; A. POTTER; P. A. NEWHOUSE. *Vanderbilt Univ. Sch. of Med., Vanderbilt Univ., Univ. of Vermont Col. of Med.*

POSTER

517. Developmental Disorders II

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 W14 **517.01** Neural correlates of reading comprehension pre- and post-intervention in struggling readers. M. A. ROE*; J. E. MARTINEZ; J. A. MUMFORD; J. J. JURANEK; L. A. OLMEDO; R. A. POLDRACK; S. R. VAUGHN; J. M. FLETCHER; J. A. CHURCH. *Univ. of Texas At Austin, Univ. of Texas Med. Sch. at Houston, Univ. of Texas At Austin, Univ. of Texas at Houston.*

9:00 W15 **517.02** Manipulation of cue switching variables in children and adults. J. BAUER*; J. E. MARTINEZ; M. A. ROE; J. A. CHURCH. *Univ. of Texas at Austin.*

10:00 W16 **517.03** Support vector machine classification of pediatric Tourette syndrome using resting state functional connectivity. D. J. GREENE*; J. A. CHURCH; B. ADEYEMO; B. NARDOS; K. J. BLACK; B. L. SCHLAGGAR. *Washington Univ. Sch. of Med., The Univ. of Texas at Austin, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 W17 **517.04** ● Altered synaptic plasticity in Tourette's syndrome and its relationship to motor skill learning. V. C. BRANDT*; E. NIESSEN; C. GANOS; T. BÄUMER; A. MÜNCHAU. *Univ. Clin. Schleswig-Holstein, Lübeck, Inst. of Neurosci. and Medicine, Res. Ctr. Jülich, Univ. Col. London.*

8:00 W18 **517.05** Treatment-related changes in EEG activation in Tourette's syndrome. M. MIYAKOSHI*; S. MAKEIG; J. PIACENTINI; P. WALSHAW; S. CHANG; J. MCCRACKEN; S. K. LOO. *Swartz Ctr. For Computat. Neuroscience, INC, UCSD, Univ. of California Los Angeles.*

9:00 W19 **517.06** Distinct cortical and subcortical networks drive myoclonic and vocal tics in the nonhuman primate model of Tourette syndrome: A PET and electrophysiological study. K. W. MCCAIRN*; Y. NAGAI; Y. HORI; A. IRIKI; M. TAKADA; T. MINAMIMOTO; M. ISODA; M. MATSUMOTO. *Kyoto University, Primate Res. Inst., Natl. Inst. of Radiological Sci., RIKEN Brain Sci. Inst., Kansai Med. Univ., Tsukuba Univ.*

10:00 W20 **517.07** Integrative analysis of gene expression and rare single nucleotide variations in RNAseq data of the striatum in Tourette syndrome. G. COPPOLA*; J. B. LENNINGTON; Y. KATAOKA-SASAKI; T. FERNANDEZ; D. PALEJEV; Y. LI; A. HUTTNER; M. PLETIKOS; N. ŠESTAN; J. F. LECKMAN; F. M. VACCARINO. *Yale Univ., Yale Univ., Yale Univ.*

11:00 W21 **517.08** Oscillations and plasticity in Tourette Syndrome. R. HASHEMIYOON*. *Univ. of Miami.*

8:00 W22 **517.09** ● Individual differences in implicit learning abilities in young children: Implications for autism treatment predictors. R. M. JONES*; C. LORD. *Rebecca Jones, Weill Cornell Med. Col.*

9:00 W23 **517.10** Cognitive Profiles in adults with autism spectrum disorder and attention deficit hyperactivity disorder in Japan. C. KANAI*; M. TANI; R. HASHIMOTO; T. YAMADA; H. OTA; A. IWANAMI; N. KATO. *Sagami Women's Univ., Showa Univ.*

10:00 W24 **517.11** Functional connectivity of the visual cortex in children with neurofibromatosis type 1 and reading disability during single word reading. L. A. BARQUERO*; K. SWETT; S. K. BAILEY; S. S. BURNS; L. E. CUTTING. *Vanderbilt Univ.*

11:00 W25 **517.12** ▲ Rhythm in music: Improving auditory processing in an animal model of developmental dyslexia. A. D. GRIFFIN; K. A. MCGINNIS; A. H. BRADY*. *St. Mary's Col. of Maryland.*

8:00 W26 **517.13** What is the role of dyslexia susceptibility candidate gene KIAA0319-Like in mouse cortical development? M. BAILEY*; L. GUIDI; I. MARTINEZ GARAY; Z. HOLLOWAY; A. VELAYOS-BAEZA; A. P. MONACO; Z. MOLNÁR. *Univ. of Oxford, Wellcome Trust Ctr. for Human Genet., Tufts Univ.*

9:00 W27 **517.14** Phenotyping the dihydropyrimidine dehydrogenase knockout mouse. S. SPRING*; L. NUTTER; A. M. FLENNIKEN; I. VUKOBRADOVIC; C. MCKERLIE; J. P. LERCH. *Hosp. For Sick Children, Hosp. for Sick Children, Mount Sinai Hosp.*

10:00 W28 **517.15** ● Monoaminergic interactions between lisdexamfetamine and duloxetine determined by dual-probe intracerebral microdialysis in freely-moving rats. D. J. HEAL*; H. L. ROWLEY; R. S. KULKARNI; P. H. HUTSON. *RenaSci Ltd, Shire Develop. Inc.*

11:00 W29 **517.16** The effect of maternal separation on striatal protein levels is strain dependent: A proteomic study. J. S. WOMERSLEY*; L. A. KELLAWAY; D. J. STEIN; M. VLOK; V. A. RUSSELL. *Univ. of Cape Town, Univ. of Cape Town, Univ. of Cape Town, Univ. of Cape Town.*

8:00 W30 **517.17** Modulation of cognitive performance in dyslexic children and adolescents with transcranial direct current stimulation. D. MENGHINI*; F. COSTANZO; S. ROSSI; C. VARUZZA; S. SDOIA; M. OLIVERI; G. KOCH; S. VICARI. *Children Hosp. Bambino Gesù, Santa Lucia Fndn.*

9:00 W31 **517.18** Activity in putamen an indicator of dysfluent state in stuttering. E. L. CONNALLY*; D. WARD; C. PLIATSIKAS; K. E. WATKINS. *Univ. of Oxford, Univ. of Reading, Univ. of Reading.*

POSTER

518. Developmental Disorders: Animal Models I

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 W32 **518.01** Effect of physical exercise on attentional function and social behavior: Comparison with psychostimulants and implications for ADHD. D. J. BUCCI*; A. M. ROBINSON. *Dartmouth Col.*

9:00 W33 **518.02** S-Nitrosylation of NDEL1 mediates activity-dependent dendritic development in the prefrontal cortex. A. SAITO*; Y. TANIGUCHI; S. KIM; B. SELVAKUMAR; M. D. BALLINGER; J. SABRA; M. JALLOW; P. YAN; K. ITO; S. HIROTSUNE; A. WYNSHAW-BORIS; S. H. SNYDER; A. SAWA; A. KAMIYA. *Johns Hopkins Univ. Sch. of Med., Dokkyo Med. Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Osaka City Univ. Grad. Sch. of Med., Case Western Reserve Univ.*

10:00 W34 **518.03** Targeted ablation of cholinergic interneurons in the dorsolateral striatum produces behavioral manifestations of Tourette syndrome. M. XU*; A. KOBETS; J. DU; J. LENNINGTON; L. LI; M. BANASR; R. DUMAN; F. VACCARINO; R. DILEONE; C. PITTENGER. *Dept. of Psychiatry/ Yale, Montefiore Hosp., Natl. Yang-Ming Univ., Child study center/Yale, Pharmacol., Interdepartmental Neurosci. Program, Neurobio., Psychology.*

11:00 W35 **518.04** Deficiency of glutamate transporter in astrocyte increases brain excitability and induces Tourette's Syndrome-like excessive repetitive behaviours in mice. T. AIDA; J. YOSHIDA; M. NOMURA; A. TANIMURA; Y. IINO; M. SOMA; N. BAI; Y. ITO; W. CUI; H. AIZAWA; T. NAGAI; N. TAKATA; R. TAKAYANAGI; M. KANO; M. GÖTZ; H. HIRASE; K. TANAKA*. *Tokyo Med. and Dent. Univ., Kyushu Univ., Univ. of Tokyo, BSI, RIKEN, Ludwig-Maximilian Univ., JST, CREST.*

8:00 W36 **518.05** Identifying novel biomarkers of naturally occurring social impairments in male rhesus monkeys. O. OZTAN*; J. P. GARNER; K. CHUN; S. A. HYDE; E. H. SHERR; J. P. CAPITANIO; K. J. PARKER. *Stanford Univ., Univ. of California, Davis, Univ. of California, San Francisco.*

9:00 X1 **518.06** Changes in hippocampal proteins involved in glutamate and GABA transmission following early life stress in a rat model of ADHD, the spontaneously hypertensive rat. V. A. RUSSELL*; T. STERLEY; F. M. HOWELLS. *Univ. Cape Town, Univ. Cape Town, Univ. Cape Town.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 X2 **518.07** Functional analysis of FAM107B, a newly identified stress hormone responsive molecule. K. KOIZUMI*; M. ITO; K. NAKAO; H. NAKAJIMA. *Kanazawa Univ., Saitama Med. Univ., Kumamoto Univ., Ageo Central Gen. Hosp.*

11:00 X3 **518.08** The microbiota modulates transcription in brain areas necessary for social behaviour. R. M. STILLING*; F. RYAN; A. E. HOBAN; M. CLAESSON; T. G. DINAN; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork.*

8:00 X4 **518.09** Brain MR relaxation times in an animal model recapitulating features of autism spectrum disorders. L. M. COLON-PEREZ*; M. KHARITON; L. VON ZABERN; P. CHAKRABARTY; M. FEBO. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

9:00 X5 **518.10** The role of Promoter IV-driven BDNF expression in fear extinction. J. L. HILL*; D. V. JIMENEZ; K. R. MAYNARD; R. J. SCHLOESSER; K. MARTINOWICH. *Lieber Inst. For Brain Develop., Univ. of Marlyand Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

10:00 X6 **518.11** Prenatal exposure to a 'double-dose' of valproic acid alters lifelong behavior and global methylation patterns: Modeling differing severities of autism spectrum disorder. S. RAZA*; A. HARKER; C. NIEHAUS; B. KOLB; R. GIBB. *Univ. of Lethbridge.*

11:00 X7 **518.12** Cognitive disability in the Cntnap2 mouse model of ASD. H. L. H. RUTZ; L. A. ROTHBLAT*. *George Washington Univ.*

8:00 X8 **518.13** Noradrenergic mechanisms mediate the effects of physical exercise on attentional function in a rat model of ADHD. A. M. ROBINSON*; J. T. GREEN; T. R. BUTTOLPH; D. J. BUCCI. *Dartmouth Col., Univ. of Vermont, Univ. of Vermont.*

9:00 X9 **518.14** The schizophrenia and autism associated gene, transcription factor 4 (TCF4), regulates the intrinsic excitability of prefrontal cortical neurons. M. D. RANNALS; S. CERCEO-PAGE; M. N. CAMPBELL; A. BRILEY; A. E. JAFFE; R. TAO; T. M. HYDE; J. E. KLEINMAN; D. R. WEINBERGER; B. J. MAHER*. *Lieber Inst. For Brain Develop.*

10:00 X10 **518.15** Effect of docosahexaenoic acid (DHA) on a gene/prenatal stress autistic mouse model. F. MATSUI*; P. HECHT; E. JASAREVIC; K. FRITSCHE; D. BEVERSDORF. *Univ. of Missouri.*

11:00 X11 **518.16** Maternal immune activation and juvenile social motivation in mice. J. J. SCHWARTZER*; K. O. SUEN; K. A. GILL; P. NANDA; L. A. ALTOMARE; R. D. SANCHEZ. *Mount Holyoke Col.*

8:00 X12 **518.17** Loss of neuronal 3D chromatin organization causes transcriptional and behavioral deficits related to serotonergic dysfunction. A. BARCO*; S. ITO; A. MAGALSKA; M. ALCARAZ-IBORRA; J. P. LOPEZ-ATALAYA; V. ROVIRA; M. LIPINSKI; R. LUJAN; E. GEIJO-BARRIENTOS; G. WILCZYNSKI. *Inst. De Neurociencias (UMH-CSIC), Nencki Inst. of Exptl. Biol., Inst. de Investigación en Discapacidades Neurológicas (IDINE).*

9:00 X13 **518.18** Decreased protein synthesis in a mouse model of Tuberous Sclerosis Complex: unexpected consequences of mTORC1 activation. R. M. REITH*; T. HUANG; M. QIN; C. BEEBE SMITH. *Natl. Inst. of Mental Hlth.*

10:00 X14 **518.19** Transient changes in the number of parvalbumin-immunoreactive neurons in the prefrontal cortex of malnourished rats. R. J. CRUZ-RIZZOLO*; L. L. LIMIERI; I. R. PAIVA; J. O. BARBOSA-RIBEIRO; E. ERVOLINO; L. PINATO; E. A. LIBERTI. *São Paulo State Univ., São Paulo State Univ., São Paulo Univ.*

11:00 X15 **518.20** The schizophrenia and autism associated gene, Transcription Factor 4 (TCF4), regulates cortical column formation in the prefrontal cortex. S. C. PAGE*; M. D. RANNALS; M. N. CAMPBELL; A. BRILEY; R. A. GALLO; B. MAYFIELD; B. N. PHAN; A. E. JAFFE; R. TAO; J. SHIN; T. M. HYDE; J. KLEINMAN; D. R. WEINBERGER; B. J. MAHER. *Lieber Inst. For Brain Develop.*

8:00 X16 **518.21** Analysis of a novel 17p13 duplication locus causing human cerebellar malformation. V. V. CHIZHIKOV*; E. STESHINA. *Univ. of Tennessee Hlth. Sci. Ctr.*

9:00 X17 **518.22** Disruption of Brain-Derived Neurotrophic Factor (BDNF) from promoters I and II, but not IV and VI, leads to increased aggression and altered serotonin signaling in male mice. K. R. MAYNARD*; B. LU; L. TESSAROLLO; R. J. SCHLOESSER; K. MARTINOWICH. *Lieber Inst., Tsingua Univ., Natl. Cancer Inst., Univ. of Maryland, Johns Hopkins Univ. Sch. of Med.*

10:00 X18 **518.23** Postnatal $GABA_A$ receptor signaling is mediated by DISC1 to allow proper prefrontal cortex development and regulation of adult behavior. Y. TANIGUCHI; A. SAITO; M. D. RANNALS; M. D. BALLINGER; M. KOGA; Y. OHTANI; T. W. SEDLAK; A. CROSS; S. J. MOSS; N. J. BRANDON; B. J. MAHER; A. KAMIYA*. *Johns Hopkins Univ. Sch. Med., Cornell Univ., Dokkyo Med. Univ. Sch. Med., Lieber Inst., AstraZeneca Pharmaceuticals, Tufts Univ. Sch. Med., Uni. Col. London.*

11:00 X19 **518.24** Differences in responsiveness between methamphetamine, nisoxetine and methylphenidate may reflect specific developmental characteristics in juvenile DAT KO mice. Y. KUBO*; Y. KASAHARA; Y. ARIME; F. S. HALL; Y. TAKAMATSU; K. IKEDA; G. R. UHL; I. SORA; H. TOMITA. *Irides, Tohoku Univ., Tohoku University, Grad. Sch. of Med., Dokkyo Med. Univ. Sch. of Med., NIDA-IRP, NIH/DHSS, Tokyo Metropolitan Inst. of Med. Sci., Kobe University, Grad. Sch. of Med.*

8:00 X20 **518.25** Striatal Gad67 knockout induces spatial learning and social behavior deficits. K. ZHANG; S. LABAK; K. HILL; G. BLATT; J. SOGHOMONIAN*. *Boston Univ. Sch. of Med., Hussman Insitute for Autism.*

9:00 X21 **518.26** Ketogenic diet attenuates behavioral abnormalities and alters brain mitochondrial respiration in the BTBR mouse model of autism. Y. AHN*; N. CHENG; R. MYCHASIUK; J. SMITH; R. TOBIAS; J. M. RHO. *Alberta Children'S Hosp. Res. Inst.*

10:00 X22 **518.27** *In utero* hypoxia-ischemia and inflammation results in complex white matter abnormalities and gait deficits in young adult rats. L. L. JANTZIE*; S. ROBINSON. *Dept. of Pediatrics, UNM, Boston Children's Hosp. and Harvard Med. Sch.*

11:00 X23 **518.28** Targeting the PI3K/Akt/mTOR pathway in an *in vitro* model of cortical dysplasia. G. D'ARCANGELO*; I. NIKOLAEVA; B. CROWELL; T. KAZDOBA. *Rutgers, The State Univ. of New Jersey.*

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8:00 X24 **518.29** Delayed post-treatment with bone marrow-derived mesenchymal stem cells is neurorestorative of striatal medium-spiny projection neurons and improves motor function after neonatal rat hypoxia-ischemia. D. E. OORSCHOT*; A. J. ALWAKEEL; L. GODDARD; C. E. HOBBS; E. K. GOWING; E. R. BARNETT; S. E. KOHE; R. J. SIZEMORE; S. H. CAMERON. *Univ. Otago Sch. Med. Sci.*

9:00 Y1 **518.30** Combined effects of prenatal stress and maternal genotype on interneuron development. P. HECHT*; E. JASAREVIC; F. MATSUI; L. WELBY; J. MINK; M. WILL; D. BEVERSDORF. *Univ. of Missouri, Univ. of Pennsylvania.*

POSTER

519. Developmental Disorders: Animal Models II

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 Y2 **519.01** Learning and memory deficits in a novel mouse model of non-syndromic intellectual disability and autism spectrum disorder. A. W. OAKS; S. DI COSTANZO; D. E. TAMBUNAN; H. L. POND; D. GONZALEZ; C. A. WALSH; M. MANZINI*. *The George Washington Univ., Boston Children's Hosp.*

9:00 Y3 **519.02** Absence of H3K4 demethylase rbr-2 in *C. elegans* results in defective GABAergic network morphology and function. A. J. RODRIGUES; C. BESSA; F. MARQUES; A. AMORIM; F. LOPES; P. E. MACIEL*. *Life and Hlth. Sci. Res. Inst. (ICVS), ICVS/3B's - PT Government Associate Lab.*

10:00 Y4 **519.03** ● Shank2 mutation in a rat model decreases social interaction and increases hyperactivity and motivated behavior. M. E. MODI*; M. SCHMEISSER; D. REIM; T. BOECKERS; T. KISS; D. L. BUHL. *Pfizer Inc., Univ. of Ulm.*

11:00 Y5 **519.04** Maternal exposure to sleep apnea-featured intermittent hypoxia leads to oxidative stress and perinatal white matter deficits in mouse brains. X. LI; R. WU; C. TUONG; D. GOZAL; J. CAI*. *Univ. Louisville, Qilu Children's Hospital, Shandong Univ., Comer Children's Hospital, Univ. of Chicago, Univ. Louisville.*

8:00 Y6 **519.05** The role of lysophosphatidic acid signaling in initiating premature infantile post-hemorrhagic hydrocephalus. N. C. STODDARD*. *The Scripps Res. Inst., UCSD.*

9:00 Y7 **519.06** Cognitive flexibility and frontal cortical BDNF-TRKB signaling following prenatal cocaine exposure. D. M. MCCARTHY*; M. N. HUIZENGA; G. BELL; E. N. CANNON; K. P. LEE; J. ZHU; D. A. FADOOL; G. SADRI-VAKILI; P. G. BHIDE. *Florida State University,College of Med., Massachusetts Gen. Hosp., Florida State Univ.*

10:00 Y8 **519.07** Perinatal high fat diet leads to DNMT1 deficits in the offspring prefrontal cortex: mRNA overexpression, reduced activity and cytoplasmic sequestration. S. MCKEE*; N. M. GRISSOM; N. BOWMAN; T. M. REYES. *Univ. of Pennsylvania.*

11:00 Y9 **519.08** Developmental HCN/h-channel deficiency in the murine forebrain models structural and functional brain disorders. A. SCHLUSCHE*; A. MERSEBURG; A. NEU; S. SANDKE; D. ISBRANDT. *DZNE Bonn, Ctr. for Mol. Neurobio.*

8:00 Y10 **519.09** Developmental exposure to dexamethasone induces alterations in circadian rhythms which precede depression-like behaviour. S. SPULBER*; M. CONTI; C. DUPONT; N. ONISHCHENKO; S. CECCATELLI. *Karolinska Institutet, Dept. of Neurosci., Karolinska Institutet.*

9:00 Y11 **519.10** Brain pathology in a nonhuman primate model of maternal immune activation. R. K. WEIR*; R. FORGHANY; A. K. MCALLISTER; P. H. PATTERSON; C. M. SCHUMANN; M. D. BAUMAN. *Univ. of California, Davis, Univ. of California, Davis, California Inst. of Technol., Univ. California, Davis.*

10:00 Y12 **519.11** Characterization of mice bearing humanized androgen receptor genes (h/mar) varying in q tract polymorphism length. Z. BUCHWALD*; J. ELLEGOOD; C. BURTON; D. ROBINS; A. RAZNAHAN; P. ARNOLD; J. LERCH. *Mouse Imaging Ctr., Hosp. for Sick Children, Mouse Imaging Center, Hosp. for Sick Children, Univ. of Michigan Med. Sch., Natl. Inst. of Mental Hlth.*

11:00 Y13 **519.12** Pharmacological and behavioral assessment of a selectively bred hyperactive mouse line to model ADHD. P. MAJDAK*; J. R. OSSYRA; J. M. OSSYRA; A. J. COBERT; T. K. BHATTACHARYA; J. S. RHODES. *UIUC.*

8:00 Y14 **519.13** Metabolic effects of creatine transporter deficiency in mice. A. N. KOKENGE; K. N. MILES; G. J. PYNE-GEITHMAN; Z. KHUCHUA; J. F. CLARK; M. R. SKELTON*. *Cincinnati Childrens Res. Fndn., Cincinnati Childrens Res. Fndn., Cincinnati Childrens Res. Fndn., Univ. of Cincinnati.*

9:00 Y15 **519.14** Glucocorticoid programming of neural development involves a Tet3-dependent regulation of Wnt signaling and DNA methylation. R. K. BOSE*; S. SPULBER; P. KILIAN; N. HELDRING; P. LÖNNERBERG; A. JOHNSSON; O. HERMANSON; S. CECCATELLI. *Karolinska Institutet, Karolinska Institutet.*

10:00 Y16 **519.15** Prenatal viral immune challenge to mimic autism-like behavioral and electrophysiological phenotypes in mice. S. M. LANDINO; Y. LI; B. C. FINGER*; V. Y. BOLSHAKOV; C. J. MCDOUGLE; W. A. CARLEZON, Jr. *Harvard Med. School, McLean Hosp., Lurie Ctr. for Autism, Massachusetts Gen. Hosp.*

11:00 Y17 **519.16** Complex neurological phenotype in mutant mice lacking Tsc2 in excitatory neurons of the developing forebrain. V. DAL POZZO*; B. CROWELL; G. LEE; G. D'ARCANGELO. *Rutgers, the State Univ. of New Jersey.*

8:00 Y18 **519.17** Pharmacological reversal of autism spectrum disorder social deficits in the SERT Ala56 mouse via p38α MAPK blockade. M. J. ROBSON*; D. M. WATTERSON; J. VEENSTRA-VANDERWEELE; A. M. POCH; R. D. BLAKELY. *Vanderbilt Univ. Sch. of Med., Northwestern Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med.*

9:00 Y19 **519.18** Electroencephalographic activity and social interaction in adult rats a model of autism spectrum disorder. A. VALDÉS-CRUZ*; M. E. BRINGAS; G. FLORES; J. V. NEGRETE-DÍAZ; V. M. MAGDALENO-MADRIGAL; D. MARTÍNEZ-VARGAS; O. SIMÓN-GARCÍA; G. L. LICEA-HAQUET; M. ATZORI. *Inst. Nacional De Psiquiatría RFM, Inst. de Fisiología, Univ. Autónoma de Puebla, Inst. de Física, Universidad. Autónoma de San Luis Potosí.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 Y20 **519.19** Cellular and axonal constituents of neocortical molecular layer heterotopia. R. L. RAMOS*; N. SIU; W. J. BRUNKEN; K. T. YEE; L. A. GABEL; S. E. VAN DINE; B. J. HOPLIGHT. *NYIT NYCOM, SUNY Upstate, Univ. of Mississippi Med. Ctr., Lafayette Col., NY Inst. of Technol.*

11:00 Y21 **519.20** Mode of delivery at birth and behavioural outcomes: Rewiring of the brain-gut-microbiome axis? Y. E. BORRE*; L. HECKE MORAIS; A. V. GOLUBEVA; E. PATTERSON; F. CRISPIE; R. D. MOLONEY; K. A. SCOTT; R. STILLING; N. P. HYLAND; G. CLARKE; C. STANTON; P. D. COTTER; T. G. DINAN; J. F. CRYAN. *Univ. Col. Cork, Teagasc Food Res. Ctr., Univ. Col. Cork.*

8:00 Y22 **519.21** Npas4 contributes to stress-induced changes in the prefrontal cortex of mice. L. COUTELLIER*; R. SHEPARD. *Ohio State Univ., Ohio State Univ.*

9:00 Y23 **519.22** Hypoxic-ischemic injury alters auditory cortex function in neonatal rats. A. SHEIKH*; J. LIU; A. ISAIAH; P. KANOLD. *Univ. of Maryland, Univ. of Maryland Baltimore.*

10:00 Y24 **519.23** Effects of Foxp2 disruption in selected brain regions and in adulthood. C. A. FRENCH*; A. GOMEZ-MARIN; M. CORREIA; C. FELICIANO; V. B. PAIXÃO; X. JIN; S. E. FISHER; R. M. COSTA. *Champalimaud Ctr. For the Unknown, The Salk Inst. for Biol. Studies, Max Planck Inst. for Psycholinguistics.*

11:00 Y25 **519.24** Group B streptococcus infection during gestation leads to gender specific neurodevelopmental and behavioural impairments. M. ALLARD*; J. BERGERON; L. FORTIER; C. POYART; G. SÉBIRE. *Univ. de Sherbrooke, Univ. René Descartes, McGill Univ.*

8:00 Y26 **519.25** ● Systemic endotoxin exposure exacerbates longterm neurobehavioral deficits after neonatal cerebral ischemia. M. SHABANINIA; M. PORAMBO; J. MARX; M. BUELOW; J. CRAWFORD; M. PLETNIKOV; M. V. JOHNSTON; A. FATEMI*. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

9:00 Y27 **519.26** An N-terminal domain essential for PKG- and p38 MAPK-mediated regulation of the serotonin transporter revealed by studies of inbred mouse strain variation in transporter structure. M. A. QUINLAN*; R. YE; Z. JIN; R. D. BLAKELY. *Vanderbilt, Vanderbilt, Vanderbilt.*

10:00 Y28 **519.27** ▲ Effects of oxytocin on serotonin 1B agonist-induced social interaction deficits in mice. S. K. LAWSON; N. S. WOEHRLE*. *Wittenberg Univ.*

11:00 Y29 **519.28** Postnatal role for histone deacetylase 1 and 2 in behavioral and neuronal homeostasis. M. MAHGOUB*; M. ADACHI; L. M. MONTEGGIA. *UTSW Med. Ctr. At Dallas.*

8:00 Y30 **519.29** Engrailed 2 mutant mice exhibit abnormal hippocampal inhibitory circuits at cellular and synaptic levels. M. GENESTINE SCHMITT*; G. VAIL; S. HU; Z. PANG; M. PLUMMER; J. H. MILLONIG; E. DICICCO-BLOOM. *Rwjms-Rutgers, Rutgers Univ., Rutgers Univ., Rutgers Univ.*

POSTER

520. Animal Models of Epilepsy II

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 Y31 **520.01** ▲ Characterization of the seizure phenotypes for the D1866Y Scn1a mouse model of genetic epilepsy with febrile seizures plus (GEFS+). N. BROWDER; S. DUTTON; A. ESCAYG*. *Agnes Scott Col., Emory Univ.*

9:00 Y32 **520.02** Behavioral characterization of a zebrafish model of febrile seizures. J. F. ULLMANN*; G. LEANAGE; F. SEPEHRBAND; D. REUTENS. *The Univ. of Queensland, Univ. of Queensland, The Univ. of Queensland.*

10:00 Z1 **520.03** Mouse model of tetramethylenedisulfotetramine (TETS)-induced status epilepticus. D. ZOLKOWSKA*; H. WULFF; B. D. HAMMOCK; P. J. LEIN; M. A. ROGAWSKI. *Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis.*

11:00 Z2 **520.04** ▲ Characterization of a novel model of neonatal hypoxia-induced seizures in mice. N. RODRIGUEZ*; E. JIMENEZ-MATEOS; D. HENSHALL. *Royal Col. of Surgeons In Ireland.*

8:00 Z3 **520.05** Epileptiform activity and psychiatric comorbidity in a mouse model of atypical absence epilepsy. S. JUNG*; D. JEON. *Korea Advanced Inst. of Sci. and Technol.*

9:00 Z4 **520.06** A mouse model of Xq22.1 deletion syndrome displays epilepsy and cortical circuit dysfunction. E. M. GOLDBERG*; J. ZHOU; C. YUE; P. J. WANG; D. A. COULTER. *Children's Hosp. of Philadelphia, The Perelman Sch. of Med. at The Univ. of Pennsylvania, The Univ. of Pennsylvania Sch. of Vet. Med.*

10:00 Z5 **520.07** Alternations in hippocampal and cortical transcriptome during post traumatic epileptogenesis. A. LIPPONEN*; N. HUUSKO; K. DęBSKI; A. KASPI; H. KAIPANANICKAL; I. KHURANA; M. ZIEMANN; J. PAANANEN; M. HILTUNEN; A. EL-OSTA; K. LUKASIUK; A. PITKÄNEN. *Univ. of Eastern Finland, Polish Acad. of Sci., The Alfred Med. Res. and Educ. Precinct, Univ. of Eastern Finland, Univ. of Eastern Finland, Kuopio Univ. Hosp.*

11:00 Z6 **520.08** Long-lasting alterations in DNA methylome during post-traumatic epileptogenesis. N. E. HUUSKO*; A. LIPPONEN; K. DęBSKI; A. KASPI; H. KAIPANANICKAL; I. KHURANA; M. ZIEMANN; J. PAANANEN; M. HILTUNEN; A. EL-OSTA; K. LUKASIUK; A. PITKÄNEN. *Univ. of Eastern Finland, Polish Acad. of Sci., The Alfred Med. Res. and Educ. Precinct, Univ. of Eastern Finland, Univ. of Eastern Finland.*

8:00 Z7 **520.09** State-dependent respiratory effects of seizures contribute to death in a mouse model of SUDEP. K. I. CLAYCOMB; M. A. HAJEK; D. A. RAPPOPORT; G. F. BUCHANAN*. *Yale Univ.*

9:00 Z8 **520.10** Postictal hypoventilation is a common cause of death in multiple mouse models for SUDEP. Y. KIM*; L. P. SOWERS; G. F. BUCHANAN; G. B. RICHERSON. *Univ. of Iowa, Univ. of Iowa, Yale Univ., Univ. of Iowa.*

10:00 Z9 **520.11** Infantile spasms: Rescue of an animal model. K. JOSHI*; L. SHEN; M. A. CORTEZ; J. H. EUBANKS; O. C. SNEAD 3RD. *The Hosp. For Sick Children, The Hosp. for Sick Children, Univ. Hlth. Network, Toronto Western Hospital, Krembil Discovery Tower.*

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11:00 Z10 **520.12** Methyl-CpG-binding domain protein 3 (MBD3) in normal brain and in the rat model of temporal lobe epilepsy. J. BEDNARCZYK*; K. LUKASIUK. *Nencki Inst. of Exptl. Biol.*

8:00 Z11 **520.13** The mutant Γ2(Q390x) subunit protein was produced in the GABRG2(Q390X) knockin epilepsy mouse model. J. KANG*; W. SHEN; C. ZHOU; X. HUANG; D. XU; R. L. MACDONALD. *Vanderbilt Univ., Vanderbilt Univ., Univ. of Missouri.*

9:00 Z12 **520.14** Seizure susceptibility in developing rats prenatally exposed to valproic acid. A. A. PUIG LAGUNES*; J. MEDEL-MATUS; R. TOLEDO; J. MANZO; M. LÓPEZ-MERAZ. *Ctr. De Investigaciones Cerebrales, Univ.*

10:00 Z13 **520.15** Development of epilepsy after spatially restricted viral vector-mediated silencing of parvalbumin-expressing GABAergic interneurons in the mouse. M. DREXEL*; S. WEGER; R. HEILBRONN; P. WULFF; R. O. TASAN; G. SPERK. *Innsbruck Med. Univ., Charité – Universitätsmedizin Berlin, Christian-Albrechts-Universität zu Kiel.*

11:00 Z14 **520.16** Scn1a mutation in parvalbumin-positive interneurons causes autistic-like social deficits in a mouse model of Dravet syndrome. S. HAN*; M. H. RUBINSTEIN; J. BAE; W. A. CATTERALL. *Univ. of Washington.*

8:00 Z15 **520.17** A model of epilepsy based on optogenetic kindling. E. CELA*; A. J. CHUNG; P. J. SJÖSTRÖM. *Montreal Gen. Hosp., Integrated Program in Neuroscience, McGill Univ., The Res. Inst. of the McGill Univ. Hlth. Ctr.*

9:00 Z16 **520.18** Progressive remodeling of hippocampal mossy fibres and dentate gyrus granule neuron dendritic arbors in the brain-derived neurotrophic factor overexpressing mice. C. ISGOR*; P. COOMBS; K. GUTHRIE. *Florida Atlantic Univ.*

10:00 Z17 **520.19** ● Mice lacking the xCT subunit of system x_c^- display delayed epileptogenesis in the self-sustained status epilepticus model. R. KAMINSKI*; M. NEVEUX; B. DARDENNE; K. KOSHIBU; I. JACQUES; K. LECLERCQ. *UCB Pharma S.A.*

11:00 Z18 **520.20** The effects of 1400W and diapocynin on the hippocampus in rat models of acute organophosphate toxicity: Electographic and immunohistochemical analyses. S. SHARMA*; S. PUTTACHARY; A. VELLAREDDY; B. KALYANARAMAN; A. G. KANTHASAMY; T. THIPPESWAMY. *Iowa State Univ., Iowa State Univ., Med. Col. of Wisconsin.*

8:00 Z19 **520.21** Dysfunction of hyperexcitable networks: Altered sensory processing accompanied by long-term biochemical and anatomical changes in neocortical epilepsy. L. RESTANI*; E. VANNINI; M. PIETRASANTA; O. ROSSETTO; S. MIDDEI; M. CALEO. *CNR Neurosci. Inst., Scuola Normale Superiore, Univ. of Padua, CNR.*

9:00 Z20 **520.22** Increased expression of growth associated protein 43 after seizures in rodent model of irradiation-induced cortical dysplasia. A. NEMES*; Z. YING; K. AYASOUFI; W. GUO; I. NAJM. *Cleveland Clin., Kent State Univ., Cleveland Clin.*

10:00 Z21 **520.23** ▲ The regulation and function of the ATP-gated P2X7 receptor in epilepsy. A. JIMENEZ PACHECO*; A. SANZ; M. DIAZ-HERNANDEZ; T. ENGEL; D. C. HENSHALL. *Royal Col. of Surgeons In Ireland, Univ. Complutense.*

POSTER

521. Anticonvulsant and Antiepileptic Therapies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 Z22 **521.01** Refractoriness of convulsive status epilepticus induced by soman, DFP and paraoxon to diazepam treatment. T. L. DAO*; J. A. LEUSCHNER; S. W. KASKI; L. J. SHUMWAY; L. J. SHUMWAY; C. R. BRAUE; R. K. KAN. *USAMRICD.*

9:00 Z23 **521.02** The case against diazepam as a treatment for nerve agent-induced seizures and neuropathology; comparison with UBP302. S. L. MILLER*; J. P. APLAND; V. ARONIADOU-ANDERJASKA; T. H. FIGUEIREDO; F. ROSSETTI; M. F. BRAGA. *Uniformed Services Univ. of the Hlth. Scienc, United States Army Med. Res. Inst. of Chem. Def., Uniformed Services Univ. of the Hlth. Scienc, Walter Reed Army Inst. of Res.*

10:00 Z24 **521.03** LY293558 prevents soman-induced pathophysiological alterations in the basolateral amygdala and the development of anxiety. T. H. FIGUEIREDO*; E. M. PRAGER; R. P. LONG II; V. ARONIADOU-ANDERJASKA; J. P. APLAND; M. F. M. BRAGA. *Uniformed Services Univ., USAMRICD.*

11:00 Z25 **521.04** The anticonvulsant, anti-epileptic and protective effects of midazolam and ketamine combination treatment after soman-induced seizures in rats. F. ROSSETTI; M. K. SCHULTZ; M. DE ARAUJO FURTADO; A. R. FURMAN; M. F. STONE; C. R. SCHULTZ; J. E. SCHWARTZ; A. R. BOURNE; M. C. MOFFETT; T. TURNER; L. K. WRIGHT; C. G. WASTERLAIN; L. A. LUMLEY*. *Walter Reed Army Inst. of Res., USAMRICD, West Los Angeles VA Med. Center, UCLA.*

8:00 Z26 **521.05** Modulation of NKCC1 and KCC2 co-transporters for control of catastrophic drug-resistant seizures. V. I. DZHALA*; Y. SAPONJIAN; Y. DE KONINCK; K. STALEY. *Massachusetts Gen. Hospital, Harvard Med. Sch., Massachusetts Gen. Hosp., Laval University, IUSMQ.*

9:00 Z27 **521.06** Time course of the neuronal sodium concentration in post-traumatic epileptogenesis *in vitro.* T. BALENA*; K. J. STALEY. *Massachusetts Gen. Hosp.*

10:00 Z28 **521.07** An *in vitro* screen for antiepileptogenic compounds utilizing organotypic hippocampal slice cultures. Y. SAPONJIAN*; Y. BERDICHEVSKY; W. SWIERCZ; K. STALEY. *Massachusetts Gen. Hosp., Lehigh Univ.*

11:00 Z29 **521.08** ▲ Carisbamate modifies the proteomic profile of the hippocampus in a model of temporal lobe epilepsy. E. MARQUES-CARNEIRO*; D. S. PERSIKE; J. CASSEL; A. NEHLIG; M. J. S. FERNANDES. *Unifesp, Lab. de Neurosciences Cognitives et Adaptative - UMR 7364 – IFR 37, Hôpital Necker - Univ. Paris Descartes, INSERM U1129.*

8:00 Z30 **521.09** Pharmacological screening of the anticonvulsant activity of the (o-phenyl)-1,3-isoindolindione, a thalidomide analogue. C. CAMPOS*; S. ZAMUDIO; S. GUZMAN-VELAZQUEZ; J. TRUJILLO-FERRARA; E. RAMIREZ-SAN JUAN. *Escuela Nacional de Ciencias Biologicas-IPN, Escuela Nacional de Ciencias Biológicas-IPN, Escuela Superior de Medicina-IPN.*

9:00 Z31 **521.10** ● Stiripentol and comorbidities in Dravet syndrome: Experimental approaches in animal models. V. RIBAN*; W. DEFFAINS; I. HEULARD; M. VERLEYE. *Biocodex.*

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10:00 Z32 **521.11** The anti-seizure drugs vinpocetine and carbamazepine, but not valproic acid, reduce inflammatoryIL-1β and TNF-α expression in rat hippocampus. C. D. GÓMEZ MARTÍNEZ*; R. M. BUIJS; M. SITGES. *Inst. De Investigaciones Biomédicas. UNAM.*

11:00 Z33 **521.12** ● Effects of Lacosamide and Eslicarbazepine acetate metabolites on voltage-gated sodium channel expressed in a neuroblastoma cell line. P. GHISDAL*; N. NOEL; Y. QUESNEL; I. NIESPODZIANY; C. WOLFF. *UCB BioPharma SPRL.*

8:00 Z34 **521.13** Anticonvulsant effect of three artificial sweeteners on Pentylenetetrazole-induced seizures in mice. B. I. ALDANA*; A. ENRIQUE; A. TALEVI; L. BRUNO-BLANCH; L. ROCHA. *Ctr. de Investigación y de Estudios Avanzados, Fac. of Exact Sciences, Natl. Univ. of La Plata.*

9:00 Z35 **521.14** Fish oil supplementation decreased inflammatory markers in animal model of epilepsy. F. SCORZA*; M. NEJM; A. HAIDAR; M. MARQUES; A. HIRATA; M. NAFFAH-MAZACORATTI; R. CYSNEIROS; E. CAVALHEIRO. *Sao Paulo Federal Univ., Mackenzie Presbyterian Univ.*

10:00 Z36 **521.15** Oxidative stress in animal model of epilepsy induced by pilocarpine: Effect fish oil supplementation. M. B. NEJM*; A. HAIDAR; A. HIRATA; R. CYSNEIROS; E. CAVALHEIRO; F. SCORZA. *Federal Univ. of Sao Paulo, Mackenzie Presbyterian Univ.*

11:00 AA1 **521.16** Effect of the most commonly-used antiepileptic drugs on the MTLE mouse model of human temporal lobe epilepsy: An EEG study. C. ROUCARD*; B. POUYATOS; C. BOUYSSIÈRES; C. DUMONT; A. DEPAULIS; V. DUVEAU. *SYNAPCELL, INSERM U836 Grenoble Inst. of neurosciences.*

8:00 AA2 **521.17** Celecoxib reduced seizure activity and mRNA expression of hmgb1 and tlr-4, in a model of recurrent seizures induced with kainic acid in developing rats. M. MORALES*; I. A. FERIA; A. VEGA; S. A. OROZCO. *IMSS, IMSS.*

9:00 AA3 **521.18** Metabolic control of intractable epilepsy by LDH enzyme. N. YOSHIDA; T. INOUE*. *Okayama Univ.*

10:00 AA4 **521.19** Targeting GSK-3 in the 6-Hz corneal kindling model. I. J. SMOLDERS*; N. AOURZ; L. WALRAVE; A. MASSIE; A. VAN EECKHAUT; C. V. ESGUERRA; P. A. M. DE WITTE; Y. MICHOTTE; A. D. CRAWFORD; F. VAN LEUVEN. *Vrije Univ. Brussel, KULeuven, Univ. of Luxemburg.*

POSTER

522. Traumatic Brain Injury: Mechanisms and Therapeutics I

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 AA5 **522.01** Real-time *in vivo* imaging of blast-induced mild traumatic brain injury reveals focal microglial activation, associated blood-brain barrier permeability and elevated cytokine responses. B. R. HUBER*; J. S. MEABON; K. MEEKER; B. KRAEMER; E. C. PETRIE; E. R. PESKIND; D. G. COOK. *VA Puget Sound Hlth. Care Syst., Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

9:00 AA6 **522.02** ▲ Potential neuroprotective benefits of coffee nano-particles in a mouse model of closed head traumatic brain injury: A morphometric analysis of dendritic parameters. M. Y. MCGEE*; S. K. FOLEY; J. N. CHANG; S. BHASKAR; G. WALHA; P. SOLANKI; S. DIGIACOMO; D. TRAN; A. MISIR; M. MARESCO; C. CAO; B. A. CITRON; R. F. MERVIS. *Univ. of South Florida, Univ. of South Florida, Neurostructural Res. Labs, Lab. of Mol. Biology, Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., The Grad. School, Univ. of South Florida Morsani Col. of Med., Univ. of South Floida, Univ. of South Florida Hlth. Byrd Alzheimer's Inst., Univ. of South Florida Morsani Sch. of Medicine, Ctr. of Excellence for Aging and Brain Repair.*

10:00 AA7 **522.03** Developmental changes in adult-born neurons following controlled cortical impact injury. L. E. VILLASANA*; K. N. KIM; R. MCCALLUM; G. L. WESTBROOK; E. SCHNELL. *Oregon Hlth. & Sci. Univ., Portland VA Med. Ctr., Sch. of Medicine, OHSU, The Vollum Institute, OHSU.*

11:00 AA8 **522.04** Modulation of neuroprotective signaling and morphological changes in neurons after mild traumatic brain injury and treatment in mice. B. A. CITRON*; R. F. MERVIS; S. K. FOLEY; L. RACHMANY; V. RUBOVITCH; C. G. PICK; J. N. CHANG. *Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., NeuroStructural Res. Laboratories, Inc., Univ. of South Florida Morsani Col. of Med., Sackler Sch. of Medicine, Tel Aviv Univ.*

8:00 AA9 **522.05** Identification of microstructural subdomains by diffusion MRI microscopy in the perilesional cortex following controlled cortical impact in the mouse. E. B. HUTCHINSON*; S. SCHWERIN; E. SHINDELL; M. KOMLOSH; A. AVRAM; S. JULIANO; C. PIERPAOLI. *NICHD, Natl. Inst. of Hlth., USUHS.*

9:00 AA10 **522.06** Multi-channel neurophysiology of the hippocampus in awake behaving swine after diffuse brain injury. P. KOCH*; A. V. ULYANOVA; M. R. GROVOLA; D. K. CULLEN; J. A. WOLF. *Univ. of Pennsylvania, Philadelphia Veterans Affairs Med. Ctr.*

10:00 AA11 **522.07** Neuropathology and behavioral changes of inflicted traumatic brain injury in developing mice. G. WANG*; Y. ZHANG; X. YANG; F. LI; M. CURRIE; T. MORIARTY; Z. GAO; R. WU; C. B. SHIELDS; J. CAI. *China-Japan Union Hosp. of JILIN UNIVERSITY, Univ. of Louisville, Norton Neurosci. Institute, Norton Healthcare, China-Japan Friendship Hosp., The First Hosp. of JILIN UNIVERSITY.*

11:00 AA12 **522.08** ● Pairing vagus nerve stimulation with rehabilitative training enhances functional recovery after traumatic brain injury. D. PRUITT*; A. SCHMID; C. CHOUA; L. KIM; J. TRIEU; C. ABE; K. FLANAGAN; M. KILGARD; R. L. RENNAKER, II. *The Univ. of Texas At Dallas.*

8:00 AA13 **522.09** Mitochondrial gene expression profiles and metabolic pathways in the amygdala associated with exaggerated fear in an animal model of PTSD. H. LI*; X. LI; S. SMERIN; L. ZHANG; M. JIA; G. XING; J. WEN; Y. SU; D. BENEDEK; R. URSANO. *Psychiatry/USUHS, Georgetown Univ. Med. Ctr., GenProMarkers.*

9:00 AA14 **522.10** Effects of a blueberry-enhanced diet on pre-pulse inhibition and beta amyloid after traumatic brain injury in rats. C. J. GIBSON*. *Washington Col.*

10:00 AA15 **522.11** Neuropathological and biochemical assessment of chimera: A novel closed-head impact model of engineered rotational acceleration. D. R. NAMJOSHI*; W. CHENG; K. MCINNES; J. FAN; A. WILKINSON; P. CRIPTON; C. WELLINGTON. *The Univ. of British Columbia.*

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11:00 AA16 **522.12** Repetitive mild traumatic brain injury in mice with a vulnerable cholinergic system: Severe and lasting cholinergic-attentional impairments CHT+/- mice. A. KOSHY CHERIAN*; V. PARIKH; R. D. BLAKELY; M. SARTER. *Univ. of Michigan, Temple Univ., Vanderbilt Univ. Sch. of Med.*

8:00 AA17 **522.13** Dysfunctional CA1 hippocampal networks in mice after repetitive closed-head injury. O. C. LOGUE*; N. P. CRAMER; X. XU; Z. GALDZICKI. *Uniformed Services Univ., Uniformed Services Univ.*

9:00 AA18 **522.14** Traumatic brain injury increases chronic Tau phosphorylation in 3xTgAD mice. A. NOEL; I. POITRAS; C. N. WINSTON; M. P. BURNS; E. PLANEL*. *Univ. Laval, Georgetown Univ. Med. Ctr.*

10:00 AA19 **522.15** Acute neuronal plasmalemmal disruptions in peri-vascular domains are exacerbated following repetitive closed head rotational acceleration traumatic brain injury in swine. E. KUO; C. J. MIETUS; K. D. BROWNE; J. P. HARRIS; L. A. STRUZYNA; J. A. WOLF; J. E. DUDA; D. CULLEN*. *Univ. of Pennsylvania, Philadelphia Veterans Affairs Med. Ctr.*

11:00 AA20 **522.16** STAT3 signaling in perilesional nestin-expressing reactive astrocyte is required for cortical recovery after closed-head injury. M. MORITA*; A. WATANABE. *Kobe Univ., Kobe Univ.*

8:00 AA21 **522.17** Long-term cognitive impairments and pathological alterations in a rat model of mild traumatic brain injury. J. SHI*; Y. LI; S. G. MASSA. *Dept. of Veterans Affairs Med. Ctr. and Univ. of California.*

9:00 AA22 **522.18** Impaired synaptic vesicle docking is a novel contributor to reduced neurotransmission in a rat model of traumatic brain injury. S. W. CARLSON*; H. Q. YAN; C. E. DIXON. *Univ. of Pittsburgh.*

10:00 AA23 **522.19** ▲ Nicotinamide treatment in a bilateral frontal model of traumatic brain injury: Effects on fear conditioning and memory. S. F. BENNETT*; B. E. ELMORE; M. R. HOANE. *Southern Illinois Univ.*

11:00 AA24 **522.20** Effect of age on amount and distribution of diffuse axonal injury after rotational trauma. J. DAVIDSSON; M. ANGERIA; M. G. RISLING*. *Chalmers Univ. of Technol., Karolinska Inst.*

8:00 BB1 **522.21** Mild blast-related traumatic brain injury disrupts cortical and hippocampal dendritic circuitry in a mouse model: Implications for military personnel. S. K. FOLEY*; A. YAZBACK; P. MULLEN; J. LE; J. HERNANDEZ; D. PHAM; K. GREENE; S. KHALIL; N. KHALIL; A. GOSWAMI; V. RUBOVITCH; C. G. PICK; R. F. MERVIS. *Neurostructural Res. Labs, Univ. of South Florida, Univ. of South Florida, Sackler Sch. of Medicine, Tel Aviv Univ., Univ. of South Florida Morsani Sch. of Medicine, Ctr. of Excellence for Aging and Brain Repair.*

9:00 BB2 **522.22** The effect of focal brain injury on beta–amyloid plaque deposition, inflammation and synapses in the APP/PS1 mouse model of Alzheimer's disease. J. COLLINS*; A. E. KING; A. WOODHOUSE; M. T. K. KIRKCALDIE; J. C. VICKERS. *Univ. of Tasmania.*

10:00 BB3 **522.23** Expansion of peripheral lymphocytes following a fluid percussion traumatic brain injury in mice. L. A. SHAPIRO*; R. TOBIN; S. MUKHERJEE; J. KAIN; M. NEWELL-ROGERS. *Texas A&M Univ. COM, Central Texas Veterans Hlth. Care Syst., Baylor Scott & White Hosp.*

11:00 BB4 **522.24** Shock waves of a single blast can cause longstanding impairments in pattern separation and other cognitive function, mood and hippocampus neurogenesis, and white matter injury. A. K. SHETTY*; V. MISHRA; B. HATTIANGADY; A. B. ROBBINS; M. R. MORENO; D. J. PROCKOP; R. JONES; A. OBENAUS; B. SHUAI; M. KODALI; X. RAO. *Inst. For Regenerative Med., Olin E. Teague Veterans' Med. Center, CTVHCS, Texas A&M Univ., Loma Linda Univ., Loma Linda Univ.*

8:00 BB5 **522.25** Machine learning classifiers discriminate concussed athletes from non-concussed subjects based on diffusion tensor imaging metrics of the uncinate fasciculus. P. DUFORT; R. GOSWAMI; M. C. TARTAGLIA; R. GREEN; A. P. CRAWLEY; C. H. TATOR; R. WENNBERG; M. KEIGHTLEY; K. D. DAVIS*. *Univ. Hlth. Network, Canadian Sports Concussion Project at the Toronto Western Hosp., Univ. Hlth. Network, Univ. of Toronto, Univ. of Toronto, Univ. of Toronto, Univ. Hlth. Network, Univ. of Toronto, Univ. of Toronto, Bloorview Res. Institute, Holland Bloorview Kids Rehabil. Hosp., Univ. of Toronto.*

9:00 BB6 **522.26** The study of correlation between TBI severity and neurofilament level in CSF. K. SUMIYOSHI*; Y. TAKASATO. *Natl. Disaster Med. Ctr.*

10:00 BB7 **522.27** Neural mechanisms of recovery after mild traumatic brain injury: an fMRI study. G. R. WYLIE*; H. AZMI; C. OGEDEGBE; E. DOBRYAKOVA; G. VOELBEL; P. DAVE; J. FELDMAN. *Kessler Fndn. Res. Ctr., Rutgers Univ., The Dept. of Veteran's Affairs, Hackensack Univ. Med. Ctr., Kessler Fndn. Res. Ctr., New York Univ.*

11:00 BB8 **522.28** Age related atrophy of white matter tracts in Veterans with TBI and PTSD. M. M. ADAMSON*; K. L. MAIN; S. SOMAN; J. L. KONG; A. NODA; B. HERNANDEZ; L. C. LAZZERONI; L. L. KINOSHITA; J. K. FAIRCHILD; A. J. FURST; J. YESAVAGE; J. L. TAYLOR; J. W. ASHFORD; P. J. BAYLEY. *VA Palo Alto\Stanford Med. Sch., VA Palo Alto\Stanford Med. Sch., Stanford Med. Sch., VA Palo Alto, VA Palo Alto\Stanford Med. Sch.*

POSTER

523. Spinal Cord Injury: Therapeutic Strategies II

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 BB9 **523.01** Transplantation of adult subventricular zone-derived neural stem/progenitor cells to immune competent rats improves locomotor function after spinal cord injury. S. SANKAVARAM*; A. FROSTELL; J. GRIPENLAND; M. SVENSSON; L. BRUNDIN. *Karolinska Institutet.*

9:00 BB10 **523.02** Activation of lysophosphatidic acid receptor 1 (LPA1) contributes to pathophysiology of spinal cord injury. E. S. NOGUEIRA*; A. M. ASTUDILLO; J. BALSINDE; G. ESTIVILL-TORRUS; F. R. DE FONSECA; J. CHUN; S. DAVID; R. LOPEZ-VALES. *Dep Bio Cel, Fisio Immuno, Inst. Neuroc, CIBERNED, Univ. Autonoma Barcelona, Consejo Superior de Investigaciones Científicas (CSIC), Hospitales Universitarios Regional de Málaga y Virgen de la Victoria, Inst. de Investigación Biomédica de Málaga (IBIMA), Hospitales Universitarios Regional de Málaga y Virgen de la Victoria, Inst. de Investigación Biomédica de Málaga (IBIMA), Dorris Neurosci. Center, The Scripps Res. Inst., The Res. Inst. of the McGill Univ. Hlth. Ctr.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 BB11 **523.03** Overexpression of the astrocyte glutamate transporter, GLT1, using AAV exacerbates phrenic motor neuron degeneration and diaphragm dysfunction following cervical contusion spinal cord injury. A. C. LEPORE*; K. LI; C. NICAISE; D. SANNIE; T. J. HALA; E. JAVED; J. L. PARKER; R. PUTATUNDA; K. A. REGAN; V. SUAIN; J. BRION; F. RHODERICK; M. C. WRIGHT; D. J. POULSEN. *Thomas Jefferson Univ. Med. Col., Univ. Libre de Bruxelles, Univ. of Montana, Arcadia Univ.*

11:00 BB12 **523.04** Transplantation of human iPS cell-derived astrocytes can be used as a therapeutic approach for delivering the glutamate transporter, GLT1, to injured cervical spinal cord. A. FALNIKAR*; K. LI; E. JAVED; T. J. HALA; J. RICHARD; N. J. MARAGAKIS; A. C. LEPORE. *Thomas Jefferson Univ. Med. Col., Johns Hopkins Univ. Sch. of Med.*

8:00 BB13 **523.05** Transplantation of glial progenitor-derived astrocytes engineered to overexpress the glutamate transporter, GLT1, preserves functional diaphragm innervation following cervical contusion spinal cord injury. M. C. WRIGHT*; K. LI; E. JAVED; T. J. HALA; D. SANNIE; K. A. REGAN; N. J. MARAGAKIS; D. J. POULSEN; A. C. LEPORE. *Arcadia Univ., Thomas Jefferson Univ. Med. Col., Johns Hopkins Univ. Sch. of Med., Univ. of Montana.*

9:00 BB14 **523.06** K+ channel blocker 4-aminopyridine-3-methanol restores motor function and alleviates neuropathic pain following spinal cord injury. J. PAGE*; R. YAN; J. PARK; R. SHI. *Purdue Univ., Purdue Univ., Purdue Univ., Purdue Univ.*

10:00 BB15 **523.07** Intercostal nerve-lumbar dorsal root anastomosis promotes axonal regeneration beyond a spinal cord injury. X. LIN; T. ZHAO; W. XIONG; S. LIN; C. WALKER; X. JIN; X. M. XU*; S. LIU. *Beijing Inst. of Basic Med. Sciences; State Key Lab. of Proteomics, Indiana Univ., Gen. Hosp. Jinan Military, Indiana Univ.*

11:00 BB16 **523.08** ● Microtubule stabilization therapy promotes breathing outcomes after cervical spinal cord injury. K. C. HOY*; F. BRADKE; W. ALILAIN. *Metrohealth Med. Ctr., DZNE.*

8:00 BB17 **523.09** Modulation of the pten/mtor pathway rescues respiratory motor function after cervical contusion injury. D. V. GUTIERREZ*; W. J. ALILAIN. *METROHEALTH MEDICAL CENTER.*

9:00 BB18 **523.10** Extensive recovery of respiratory motor function at chronic and super-chronic time points following cervical spinal cord injury. P. M. WARREN*; P. M. MACFARLANE; J. SILVER; W. J. ALILAIN. *Metrohealth Med. Centre, Case Western Reserve Univ. Sch. of Med., Case Western Reserve Univ., Case Western Reserve Univ.*

10:00 BB19 **523.11** The neuroprotective effects of co-ultraPEALut in a mouse model of spinal cord injury. I. PATERNITI; D. IMPELLIZZERI; R. CRUPI; G. BRUSCHETTA; E. ESPOSITO; S. CUZZOCREA; J. V. PRIESTLEY*. *Univ. of Messina, Queen Mary Univ. of London.*

11:00 BB20 **523.12** Development of combinatorial, biomaterial-mediated gene therapies for spinal cord tissue regeneration. S. SEIDLITS*; R. BOEHLER; A. THOMAS; D. SMITH; D. MARGUL; T. KUKUSHLIEV; T. HE; D. MCCREEDY; A. GOODMAN; D. HASSANI; B. CUMMINGS; A. ANDERSON; L. SHEA. *UCLA, Northwestern Univ., Univ. of California, Irvine.*

8:00 BB21 **523.13** ● Agmatine modulates the phenotype of macrophage after spinal cord injury. J. KIM*; J. PARK; K. PARK; W. LEE; J. LEE. *Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med.*

9:00 BB22 **523.14** Promoting human induced pluripotent stem cell-derived oligodendrocyte precursor cell survival after transplantation into the injured spinal cord with hydrogels. T. FUEHRMANN; B. BALLARIN; I. E. DONAGHUE; R. TAM; B. COLES; D. VAN DER KOOY; C. MORSHEAD; A. NAGY; C. TATOR; M. S. SHOICHET*. *Univ. of Toronto, Mount Sinai Hosp., Toronto Western Hosp., Univ. of Toronto.*

10:00 BB23 **523.15** The effects of the combination treatment of keratan sulfate digestion and rehabilitation in rat spinal cord injury. Y. ISHIKAWA*; S. IMAGAMA; Z. ITO; K. ANDO; N. ISHIGURO; K. KADOMATSU. *Nagoya Univ. Sch. of Med., Nagoya Univ. Sch. of Med.*

11:00 BB24 **523.16** Enhanced axon regeneration with combined exercise and peripheral nerve grafts after acute and chronic spinal cord injury. C. C. THEISEN*; V. NINAN; C. SZE; S. AUSTIN; J. D. HOULE. *Drexel Univ. Col. of Med.*

8:00 BB25 **523.17** Poly(phosphazene) hydrogel can bridge cystic cavities in contusive spinal cord injury model by inducing extracellular matrix remodeling. A. H. LE; D. H. HWANG; S. C. SONG; B. G. KIM*. *Ajou Univ. Sch. Med., Ajou Univ. Sch. Med., Korea Inst. of Sci. and Technol. (KIST), Ajou Univ. Sch. Med.*

9:00 BB26 **523.18** Enbrel treatment promotes transplanted donor human mesenchymal precursor cell survival following spinal cord injury. S. J. LOVETT; A. R. HARVEY; G. W. PLANT; S. I. HODGETTS*. *Univ. Western Australia, Stanford Univ.*

10:00 BB27 **523.19** Treatment with ketone bodies preserves mitochondrial function and reduces oxidative stress following contusion spinal cord injury. S. P. PATEL*; J. L. VANROOYEN; N. P. VISAVADIYA; T. L. SMITH; P. G. SULLIVAN; A. G. RABCHEVSKY. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

11:00 BB28 **523.20** ● Intravenous multipotent adult progenitor cell treatment for acute spinal cord injury: promoting recovery through immune modulation. M. A. DEPAUL*; S. A. BUSCH; M. PALMER; J. A. HAMILTON; R. CUTRONE2; B. LANG; A. E. TING; R. J. DEANS; R. W. MAYS; J. SILVER. *Case Western Reserve Univ., Athersys Inc.*

8:00 BB29 **523.21** Promoting neuroplasticity after spinal cord injury by over-expressing polysialic acid. L. ADAMS*; Y. ZHANG; P. K. YIP; A. T. MICHAEL-TITUS; J. V. PRIESTLEY; X. BO. *Ctr. For Neurosci. and Trauma.*

9:00 BB30 **523.22** Local and sustained delivery of growth factor mediates spinal learning after injury. Z. Z. KHAING*; J. H. PARK; J. W. GRAU; K. H. LEE; A. NIEMERSKI; C. E. SCHMIDT. *The Univ. of Florida, The Univ. of Florida, Texas A&M Univ.*

10:00 BB31 **523.23** The feasibility of using human induced pluripotent stem cells derived oligodendrocyte progenitors in treatment of spinal cord injury. P. MOHAMMAD GHARIBANI*; A. ALL; C. KERR. *Johns Hopkins Sch. of Med., Univ. of Maryland.*

11:00 BB32 **523.24** Intracranial xenograft model as a validation system to assess tumorigenicity of NS/PCs for transplantation therapy. K. HORI*; J. KOHYAMA; K. MATSUBAYASHI; A. IWANAMI; H. OKANO; Y. TOYAMA; M. NAKAMURA. *Dept. of Orthopaedic Surgery, Keio University, Sch. of Med., Dept. of Physiology, Keio University, Sch. of Med.*

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8:00 BB33 **523.25** Gabapentin management of autonomic dysreflexia: Effects on systemic inflammation. A. G. RABCHEVSKY*; K. C. ELDAHAN; J. L. VANROOYEN; C. Y. WANG; T. L. SMITH; D. H. COX; S. P. PATEL. *Univ. of Kentucky, Univ. of Kentucky.*

9:00 CC1 **523.26** Using transcription factors to promote the survival of transplanted cells for spinal cord injury repair. K. A. SCORPIO*; J. L. BROWN; B. T. DAVID; R. R. RATAN; C. E. HILL. *Burke-Cornell Med. Res. Inst.*

10:00 CC2 **523.27** Chronic L1 overexpression causes widespread changes in expression of molecules engaged in neuronal plasticity Adcy1, GAP-43 and synaptophysin, but not in ADAM10 - L1 shedding metalloprotease in rats with complete spinal cord transection. R. K. PLATEK*; A. WIECKOWSKA; K. GRYCZ; J. CZARKOWSKA-BAUCH; S. KÜGLER; M. SKUP. *Nencki Inst. of Exptl. Biology, PAS, Univ. of Göttingen.*

11:00 CC3 **523.28** Neural progenitor cells overcome extrinsic inhibitors and extend axons in chronically injured spinal cord. K. KADOYA*; K. NGUYEN; M. TUSZYNSKI. *UCSD, VAMC.*

8:00 CC4 **523.29** ● Histology and mechanisms underpinning dose response injections of a PTPRS modulator following spinal cord injury. A. TRAN*; B. T. LANG; J. M. CREGG; M. A. DEPAUL; Y. SHEN; J. SILVER. *Case Western Reserve Univ., The Ohio State Univ.*

9:00 CC5 **523.30** Breathing easier: The benefits of neural progenitor transplantation after cervical spinal cord injury. V. SPRUANCE*; K. M. NEGRON; D. SANCHEZ; T. BEZDUDNAYA; B. OSTEEN; P. REIER; M. A. LANE; T. J. WHELAN. *Drexel Univ. Col. of Med., Univ. of Florida College of Medicine.*

POSTER

524. Schizophrenia: Dopamine and Antipsychotic Drugs

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 CC6 **524.01** Cell-type specific analysis of antipsychotic drug action in D1 and D2 neurons of the striatum. R. C. SCHWARCZ*; S. CHENG; P. GREENGARD; A. C. NAIRN. *Yale Univ., Rockefeller Univ., Yale Univ. Sch. of Med.*

9:00 CC7 **524.02** ● Molecular changes in odorant signaling in olfactory neuroepithelial cells from patients with schizophrenia. K. BORGMANN-WINTER*; H. WANG; R. RAY; B. WILLIS; B. TURETSKY; C. HAHN. *Univ. Pennsylvania, Children's Hosp. of Philadelphia at Perelman Sch. of Med. at the Univ. of Pennsylvania, City Univ. of New York Med. Sch., Univ. of Pennsylvania.*

10:00 CC8 **524.03** ● Dissociation kinetics of [14C]F17464 binding at human dopamine D2S and D3 receptor subtypes. J. MARTEL*; N. DANTY; A. ORMIERE; G. PULOU; P. SOKOLOFF. *Inst. Recherche Pierre Fabre.*

11:00 CC9 **524.04** Chronic treatment with the D2 receptor partial agonist 2-bromoterguride does not induce changes in body weight and body fat composition in rats. R. T. FRANKE*; H. H. PERTZ; H. FINK; J. BROSDA. *Free Univ. Berlin, Inst. of Pharm., Inst. of Pharmacol. and Toxicology.*

8:00 CC10 **524.05** ● Modulation of dopaminergic signalling in the striatum by phosphodiesterase 10A (PDE10A) inhibitors. J. NIELSEN; P. H. LARSEN; B. STEINIGER BRACH*. *H Lundbeck A/S, H Lundbeck A/S.*

9:00 CC11 **524.06** Inhibition of 5alpha-reductase enzyme restores gating deficits elicited by D1 and D3, but not D2 activation in rats. R. FRAU; L. MOSHER; V. BINI; A. PARDU; R. PES; S. FANNI; M. BORTOLATO; P. DEVOTO*. *Dept. of Biomed. Sci., Univ. of Kansas.*

10:00 CC12 **524.07** Chronic treatment with antipsychotic drugs disrupt histone H3 homeostasis in forebrain of rats. I. PODDAR*; C. M. HERNANDEZ; A. V. TERRY, Jr. *Georgia Regents Univ.*

11:00 CC13 **524.08** Effects of the -141C Ins/Del polymorphism in the dopamine D2 receptor gene on the dopamine system in the striatum in schizophrenia. J. MATSUMOTO*; Y. KUNII; I. MIURA; M. HINO; A. WADA; S. NIWA; H. NAWA; M. SAKAI; T. SOMEYA; H. TAKAHASHI; A. KAKITA; H. YABE. *Fukushima Med. Univ. Sch. of Med., Fukushima Med. Univ. Aizu Med. Ctr., Niigata Univ., Niigata Univ. Grad. Sch. of Med. and Dent. Sci., Univ. of Niigata.*

8:00 CC14 **524.09** Cacna1c haploinsufficiency leads to altered mesolimbic dopamine system function. C. TERRILLION*; M. ARAD; D. T. DAO; R. CACHOPE; J. F. CHEER; T. D. GOULD. *Univ. of Maryland, Baltimore.*

9:00 CC15 **524.10** Effects of chronic treatment with typical and atypical antipsychotics on mouse brain volume in genetic deletion models of D2-like dopamine receptors. E. GUMA*; J. ROCCHETTI; B. COURCOT; A. MATHIEU; G. DAL BO; P. PATEL; B. GIROS. *Douglas Res. Ctr. - McGill Univ., Douglas Mental Hlth. Univ. Institute's Brain Imaging Ctr.*

10:00 CC16 **524.11** Exploration of the role of dopamine D4 receptor in methamphetamine-induced psychosis. I. LIAO*; J. CHEN. *Grad. Inst. of Biomed. Sciences, Chang Gung Univ., Grad. Inst. of Biomed. Sciences, Chang Gung Univ.*

11:00 CC17 **524.12** Forebrain Specific Ankyrin G knockout Mouse displays mania like behavior, rescued by anti-psychiatric drugs and shows deficit in GABAergic synapse formation and ion channel activity. S. ZHU*; J. KIM; X. WANG; V. BENNETT; M. PLETNIKOV; S. BROWN; C. ROSS. *The Johns Hopkins Univ., the Johns Hopkins Univ., Duke Univ., the Johns Hopkins Univ., the Johns Hopkins Univ.*

8:00 CC18 **524.13** The association between atypical antipsychotic drugs with P-glycoprotein in the mice brain. T. WATANABE*; K. OSADA; T. HAGA; A. MUTO; Y. OGAWA; A. TAGUCHI; M. NAKANO; Y. SASUGA; N. YAMAGUCHI. *St. Marianna Univ. Sch. of Med.*

9:00 CC19 **524.14** Nicotine effect on a model of hyperactivation of the dopaminergic system using a temporal bisection task. I. GONZALEZ RIVERA*; D. B. PAZ-TREJO; O. ZAMORA-AREVALO; O. GALICIA; H. SANCHEZ-CASTILLO. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autonoma de Mexico, Psychology School., Sociedad Iberoamericana de Neurociencia Aplicada, Univ. Iberoamericana.*

10:00 CC20 **524.15** Redox and methylation effects of D4 dopamine receptor expression and activation. R. C. DETH*; N. HODGSON; Y. LI; M. WALY. *Northeastern Univ., Sultan Qaabos Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 CC21 **524.16** ● ▲ Homer transcripts topography is modulated in cortex and striatum by minocycline or memantine when added to haloperidol: Implication for treatment resistant psychosis. E. F. BUONAGURO; C. TOMASETTI; F. MARMO; C. SARAPPA; A. ERAMO; F. IASEVOLI; A. DE BARTOLOMEIS*. *Univ. Sch. Med. Federico II, Lundbeck LLC, Med. Affairs & Phase IV Clin. Affairs.*

8:00 CC22 **524.17** ▲ Homodimerization and phosphorylation of n-terminal serines control the subcellular localization of PDE11A4. G. PATHAK*; S. HEGDE; S. P. WILSON; J. L. FISHER; M. P. KELLY. *Univ. of South Carolina Sch. of Med., Univ. of South Carolina Sch. of Med.*

9:00 CC23 **524.18** Global profiling of phospoproteome using mass spectroscopy to identify phosphorylation changes upon M1 activation in striatum. M. POPIOLEK*; J. HARMS; S. XI; S. GRIMWOOD. *Pfizer.*

10:00 CC24 **524.19** Haloperidol-environment interaction modulates expression of c-Fos proteins within the regions of the basal ganglia in rats. L. N. SCHIMMEL*; E. HAWKEN; E. DUMONT; T. BANASIKOWSKI; R. BENINGER. *Queen's Univ., Univ. of Pittsburgh.*

POSTER

525. Schizophrenia: Experimental Therapeutics and Preclinical Pharmacology

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 CC25 **525.01** Burst firing in the mediodorsal thalamus and related cognitive circuits is modulated by metabotropic glutamate receptors. C. S. COPELAND*; S. A. NEALE; T. E. SALT. *Univ. Col. London, Neurexpert Ltd.*

9:00 CC26 **525.02** Preclinical efficacy of novel 5-HT_{2c} agonists for the treatment of schizophrenia-like behaviors. C. M. SCHMERBERG; V. M. POGORELOV; P. SKIBA; R. M. RODRIGUIZ; S. PARK; B. L. ROTH; A. P. KOZIKOWSKI; W. C. WETSEL*. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Sch. of Medicine, Univ. of North Carolina, Univ. of Illinois at Chicago.*

10:00 CC27 **525.03** Effects of pharmacological blockade of Lingo-1 signaling pathways in a phencyclidine rat model for schizophrenia. J. L. ANDREWS*; R. P. SULLIVAN; K. A. NEWELL; X. HUANG; F. FERNANDEZ-ENRIGHT. *Illawarra Hlth. and Med. Res. Inst., Schizophrenia Res. Inst., Intelligent Polymer Res. Institute/AIIM Fac., Fac. of Social Sci.*

11:00 CC28 **525.04** D-serine treatment enhances cortical parvalbumin GABAergic neuronal development through synaptic NMDA receptors. H. LIN; F. HSU; A. JACOBI; B. H. BAUMANN; D. A. COULTER; S. A. ANDERSON; D. R. LYNCH*. *The Children's Hosp. of Philadelphia, Hosp Univ. Pennsylvania.*

8:00 CC29 **525.05** NR_{2b} antagonist CP101,606 abolishes pitch-mediated deviance detection in awake rats. S. V. DIGAVALLI*; P. CHEN; Y. YANG; Y. LI; R. PIESCHL; M. K. AHLIJANIAN. *Bristol Myers Squibb Co.*

9:00 CC30 **525.06** Neuregulin-1 treatment prevents PCP-induced parvalbumin and GAD67 changes in frontal cortex neurons. M. ENGEL*; L. OOI; X. HUANG; E. FRANK. *Illawarra Hlth. and Med. Res. Inst., Schizophrenia Res. Inst.*

10:00 CC31 **525.07** Potential implication of the kynurenine pathway in a juvenile two-hit animal model of schizophrenia: Reversal of PPI deficits by the inhibition of indoleamine 2,3-dioxygenase. J. DESLAURIERS*; P. SARRET; S. GRIGNON. *Univ. de Sherbrooke, Univ. de Sherbrooke.*

11:00 CC32 **525.08** ● Muscarinic M_4 receptor regulation of psychosis-like behaviors induced by a dopamine D_1 receptor-selective agonist in mice. A. CHEN*; A. CHRISTOPOULOS; M. CANALS; D. T. MALONE. *Monash Inst. of Pharmaceut. Sci.*

8:00 CC33 **525.09** The role of ERK and AKT kinases in the antipsychotic efficacy of Clozapine. M. SCARSELLI*; S. ARINGHIERI; S. KOLACHALAM; C. GERACE; V. VERDESCA; M. CAPANNOLO; R. MAGGIO. *Univ. of Pisa, Dept. of Translational Res. and New Technologies in Med. and Surgery, Dept. of Biotechnological and Applied Clin. Sciences, Univ. of L'Aquila, Italy.*

9:00 CC34 **525.10** Analysis of effects by repetitive Transcranial Magnetic Stimulation (rTMS) on neurosychatricand neurodegenerative disorder. T. IKEDA*; N. NUKINA. *Kyoto Prefecture Univ. of Med., Juntendo Univ.*

10:00 CC35 **525.11** modified DRL task in ad libitum fed rats: Effects of Sigma 1 receptor blockade. P. COTTONE*; A. BLASIO; K. C. RICE; M. R. IYER; V. SABINO. *Boston Univ. Sch. of Med., NIH.*

11:00 CC36 **525.12** Neuromodulation induced by focused ultrasound-induced blood-brain barrier opening combined with intravenous GABA agonists. H. LAI*; P. CHU; Y. CHANG; T. CHEN; H. LIU; Y. PEI. *Chang Gung Mem. Hosp. At Linkou, Chang Gung Univ., Chang Gung Univ.*

8:00 DD1 **525.13** ● Validation of alanine serine cysteine transporter-1 as a novel target for schizophrenia using siRNA and inducible knock-down mice. S. PARMENTIER-BATTEUR*; L. WARREN; V. KUZMICK GRAUFELDS; M. J. MARINO; R. GENTZEL; K. M. SMITH; S. JAYARAMAN; J. D. VARDIGAN; T. ROSAHL; M. TADIN-STRAPPS; B. C. MAGLIARO; A. J. COOKE; J. J. RENGER. *Merck Reserch Labs., Merck Res. Labs., Merck Resarch Labs., Merck research Labs., Merck Res. Labs., Merck Res. Labs., Merck Res. Labs., Merck Res. Labs.*

9:00 DD2 **525.14** ● M4 muscarinic acetylcholine receptor-specific modulation of immediate early gene expression in mouse brain. X. WANG*; M. PEARSON; R. GENTZEL; J. USLANER; F. THOMSON. *Merck Res. Labs.*

10:00 DD3 **525.15** Effects of a β-arrestin biased ligand on schizophrenia-like behaviors in mice. S. PARK*; C. M. SCHMERBERG; R. M. RODRIGUIZ; M. G. CARON; B. L. ROTH; J. JIN; W. C. WETSEL. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Sch. of Medicine, Univ. of North Carolina, Eshelman Sch. of Pharmacy, Univ. of North Carolina.*

11:00 DD4 **525.16** Nitric oxide signaling system as an augmentative therapeutic target in schizophrenia: experience from a trial with l-lysine. M. FAROKHNIA*; P. MAZAHERI; H. YEKEHTAZ; N. BEHBAHANI-NEJAD; S. AKHONDZADEH. *Tehran Univ. of Med. Schools, Univ. of Michigan.*

8:00 DD5 **525.17** Differential effects of antipsychotics on serotonin transporter, 5-HT2A and 5-HT2C receptor binding density in the brain of male and female juvenile rats. C. DENG*; J. LIAN. *Univ. of Wollongong.*

9:00 DD6 **525.18** MT-3014, a novel PDE10A inhibitor I. pharmacological characterization of MT-3014. M. TAKAKUWA; Y. WATANABE; M. MURATA; J. ANABUKI; M. KATSU; K. TAKASHINA; H. YASUMATSU*. *Mitsubishi Tanabe Pharma Corp.*

10:00 DD7 **525.19** MT-3014, a novel PDE10A inhibitor II.The relationship between the inhibitory effect of MT-3014 on conditioned avoidance response and the brain PDE10A occupancy in rats. Y. WATANABE; T. SAIJO; K. KOJIMA; S. SATO; M. TAKAKUWA; K. TAKASHINA; K. TESHIMA*; H. YASUMATSU. *Mitsubishi Tanabe Pharma Corp., Mitsubishi Tanabe Pharma Corp., Mitsubishi Tanabe Pharma Corp., Mitsubishi Tanabe Pharma Corp.*

11:00 DD8 **525.20** Modulation of dopamine release in the nucleus accumbens core by lithium treatment. A. CAN*; R. CACHOPE; D. O. FROST; J. F. CHEER; T. D. GOULD. *Univ. of Maryland, Sch. of Med., CHDI Fndn., Univ. of Maryland, Sch. of Med., Univ. of Maryland, Sch. of Med.*

8:00 DD9 **525.21** Ketamine acts on 5-HT1B receptors in the nucleus accumbens and ventral pallidum: a possible role for its antidepressant action. H. YAMANAKA; C. YOKOYAMA; H. MIZUMA; H. DOI; S. J. FINNEMA; C. HALLDIN; H. ONOE*. *RIKEN CLST, Karolinska Inst., RIKEN CLST.*

9:00 DD10 **525.22** Deconstructing auditory verbal hallucinations: a phenomenological approach. C. ROSEN*; K. A. CHASE; H. GIN; R. P. SHARMA. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago.*

POSTER

526. Opiate Reinforcement

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 DD11 **526.01** Transgenerational effects of female adolescent morphine exposure on offspring morphine self-administration, reinstatement, and gene expression. F. M. VASSOLER*; E. M. BYRNES. *Tufts Univ. Cummings Sch. of Vet. Med.*

9:00 DD12 **526.02** Augmentation of heroin seeking following chronic food restriction in the rat: A role for mesolimbic and nigrostriatal dopamine? T. M. D'CUNHA*; E. DAOUD; A. BISHOP; L. HAMEL; F. SEDKI; U. SHALEV. *Concordia Univ.*

10:00 DD13 **526.03** A classically conditioned opioid cue acquires greater control over motivated behavior and induces greater Fos protein expression in rats prone to attribute incentive salience to a food cue. L. M. YAGER*; K. K. PITCHERS; S. B. FLAGEL; T. E. ROBINSON. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

11:00 DD14 **526.04** Sex, drugs, and food: The role of sex hormones in chronic food restricted-induced augmentation of heroin seeking in female rats under withdrawal. F. SEDKI*; J. GREGORY GARDNER; A. LUMINARE; I. AKHTAR; T. D'CUNHA; J. DUCHESNEAU. *Concordia Univ.*

8:00 DD15 **526.05** Role of projections from ventral subiculum to nucleus accumbens shell in context-induced reinstatement of heroin seeking. J. M. BOSSERT*; R. M. ST. LAURENT; N. J. MARCHANT; H. WANG; M. MORALES; Y. SHAHAM. *NIH, NIDA, IRP, Univ. of Melbourne, NIH, NIDA, IRP.*

9:00 DD16 **526.06** Effects of chronic intravenous morphine self-administration on *in vivo* brain glucose utilization (18FDG-PET) and transcriptome expression (RNA Sequencing) in rats. K. CHOI*; T. LE; G. SUKUMAR; C. M. WILSON; R. G. SELWYN; C. L. DALGARD; R. J. URSANO. *Uniformed Services Univ. of the Hlth. Sci., Ctr. for the Study of Traumatic Stress, Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci., Ctr. for Neurosci. and Regenerative Med.*

10:00 DD17 **526.07** Environmental enrichment protects against self-administration of the short-acting opioid remifentanil. R. S. HOFFORD*; M. T. BARDO. *Univ. of Kentucky.*

11:00 DD18 **526.08** Sex differences in conditioned morphine reward. D. G. WEIDEMANN; A. K. DENOBREGA; H. HANIF; S. A. M. BOBZEAN; L. I. PERROTTI*. *UT Arlington.*

8:00 DD19 **526.09** Exposure to HIV-1 Tat protein potentiates the rewarding effects of morphine, and reinstates extinguished conditioned place preference. J. P. MCLAUGHLIN*; M. L. GANNO; Y. ZHANG; M. J. KREEK; J. J. PARIS. *Torrey Pines Inst. For Mol. Studies, Torrey Pines Inst. for Mol. Studies, The Rockefeller Univ.*

9:00 DD20 **526.10** Tracking sleep in a rodent model of heroin addiction. A. A. COFFEY*; Z. GUAN; P. S. GRIGSON; J. FANG. *Penn State Col. of Med.*

10:00 DD21 **526.11** Mouse models of the OPRM1 (A118G) polymorphism: Differential heroin self-administration behavior compared to wild type mice. Y. ZHANG*; R. PICETTI; E. R. BUTELMAN; A. HO; J. BLENDY; M. KREEK. *Rockefeller Univ., The Rockefeller Univ., The Rockefeller Univ., Perelman Sch. of Medicine; Univ. of Pennsylvania.*

11:00 DD22 **526.12** Endomorphin analogs fully substitute for morphine without suppressing operant responses for food in a discrimination model: Potential role in opioid addiction pharmacotherapy. M. R. NILGES*; J. E. ZADINA. *Tulane Univ. Sch. of Med., Tulane Univ. Sch. of Med., SE LA Veterans Hlth. Care Syst.*

POSTER

527. Monoamines and Behavior: Serotonin and Histamine

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 DD23 **527.01** Differential effect of selective 5-HT7 receptor antagonist on reversal learning and attentional set shifting in rats. A. HRNJADOVIC*; P. J. ALLEN; B. KOCSIS. *Harvard Med. Sch., Harvard Med. Sch.*

9:00 DD24 **527.02** Distinct circuits underlie the effects of 5-HT1B receptors on aggression and impulsivity. K. M. NAUTIYAL*; K. TANAKA; M. M. BARR; Y. LE DANTEC; L. TRITSCHLER; D. J. DAVID; A. M. GARDIER; C. BLANCO; S. AHMARI; R. HEN. *Columbia Univ., N.Y.S.P.I., Keio Univ., Barnard Col., Univ. Paris Sud, N.Y.S.P.I., Univ. of Pittsburgh, N.Y.S.P.I.*

10:00 DD25 **527.03** ● Development of a discrete trials task to assess serotonergic modulation of interval timing in mice. A. L. HALBERSTADT*; K. SCHEFFERS; A. D. FLYNN; J. W. YOUNG; M. A. GEYER. *UCSD, Univ. of Utrecht, Univ. of California San Diego.*

11:00 DD26 **527.04** Prenatal exposure to antenatal depression and antidepressants alters the ROCK2 expression. J. D. OLIVIER*; H. ÅKERUD; H. KAIHOLA; Å. EDVINSSON; A. SKALKIDOU; I. SUNDSTRÖM-POROMAA. *Uppsala Univ.*

8:00 DD27 **527.05** Individual wheel running activity of laboratory rats using a radio frequency identification technology. N. KUBOTA*; S. YANAGITA; Y. TAKANO; K. TAKEDA. *Tokyo Univ. of Sci., Tokyo Univ. of Sci.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 DD28 **527.06** A highly efficient approach for specific targeting of postnatal brain serotonin synthesis. M. S. WHITNEY*; E. DENERIS. *Case Western Reserve Univ.*

10:00 DD29 **527.07** Stimulation of serotonin 5-ht3 receptors cause vomiting via the activation of ca/camkii-dependent erk1/2 signaling in the least shrew (cryptotis parva). W. ZHONG; T. HUTCHINSON; S. CHEBOLU; N. A. DARMANI*. *Coll Osteo. Med. Pacific, Western Univ. Hlth. Sci.*

11:00 DD30 **527.08** Anxiogenic-like effect of acute administration of two selective serotonin reuptake inhibitors - Repeated measurements of freezing behavior during presentation of brief acoustic stimuli. S. M. HAGSÄTER*; J. THORÉN; R. PETTERSSON; E. ERIKSSON. *Inst. of Neurosci.*

8:00 DD31 **527.09** Increased impulsivity in the stop-signal reaction time task in a mouse model of Prader-Willi syndrome: Role of 5-HT2C receptors. J. R. DAVIES; T. HUMBY; L. S. WILKINSON; A. R. ISLES*. *Neurosci. and Mental Hlth. Res. Inst., Cardiff Univ., Neurosci. and Mental Hlth. Res. Inst.*

9:00 DD32 **527.10** The roles of 5-Hydroxytryptamine 2A and 2C receptors in maternal behaviors in rats. J. GAO*; M. LI. *Univ. of Nebraska-Lincoln.*

10:00 EE1 **527.11** Monoamine precursor injections influence individual difference of spontaneous physical activity in rats. S. YANAGITA*; N. KUBOTA; Y. TAKANO; T. MATSUZAWA; T. ISHIWATA; K. TAKEDA. *Tokyo Univ. of Sci., Rikkyo Univ.*

11:00 EE2 **527.12** Mechanisms of 3,4-methylenedioxymet hamphetamine(MDMA)-induced enhancement of prosocial behavior and sensitization in mice. D. W. CURRY*; A. BELKOFF; L. L. HOWELL. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Emory Univ., Emory Univ.*

8:00 EE3 **527.13** 5-HT2A receptors expression in prelimbic cortex of rats selectively breed for high and low anxiety traits. L. A. LEÓN*; F. P. CÁRDENAS; S. ZARATE; V. C. GOMES; J. LANDEIRA-FERNANDEZ. *Univ. of Sao Paulo, Univ. de los Andes, Univ. Federal de São João Del-Rei, Pontificia Univ. Catolica de Rio de Janeiro.*

9:00 EE4 **527.14** Mdma increases prosocial behavior and vocalizations in squirrel monkeys. E. G. PITTS*; M. T. LOGUN; L. L. HOWELL. *Emory Univ.*

10:00 EE5 **527.15** Role of 5-HT1A receptors located in the dorsal sub-region and lateral wings of the dorsal raphe nucleus in the modulation of inhibitory avoidance and escape behaviors. R. L. POBBE*; A. SPIACCI JR; H. ZANGROSSI JR. *Univ. of São Paulo.*

11:00 EE6 **527.16** Wfs1-deficient mice display altered glycemic control and immobility behaviour in response to antidepressants treatment. R. REIMETS*; M. LOOMETS; M. PLAAS; S. RAUD; T. VISNAPUU; E. VASAR. *Dept. of Physiol.*

8:00 EE7 **527.17** Characterization of serotonin receptor subtype 2C (5-HT2C) in pain and depression using novel compounds derived from marine cyanobacteria. N. C. LAX*; C. M. IGNATZ; K. AHMED; K. J. TIDGEWELL; B. J. KOLBER. *Duquesne Univ.*

POSTER

528. Drug Discovery and Development: Neurodegenerative Diseases II

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 EE8 **528.01** The national institute for neurological disorders and stroke (ninds) repository biomarker discovery collection is a public resource of biomaterials for neurodegenerative disorders. G. BALABURSKI*; S. HEIL; A. GREEN; C. KOPIL; M. FRASER; M. SUTHERLAND; K. GWINN; R. CORRIVEAU; C. TARN. *Coriell Inst. For Med. Res., Michael J Fox Fndn., Natl. Inst. for Neurolog. Disorders and Stroke.*

9:00 EE9 **528.02** ● Oxidation of alternative energy substrates in response to reduced mitochondrial pyruvate transport is experimentally neuroprotective. A. S. DIVAKARUNI; A. Y. ANDREYEV; T. P. CIARALDI; C. R. GREEN; M. WALLACE; C. M. METALLO; A. N. MURPHY*. *UCSD, UCSD, UCSD, UCSD.*

10:00 EE10 **528.03** ● Validation of a high content screening system to develop therapeutics for enhancing OPC differentiation. J. S. LUNN*; M. TORRES-CASTILLO; S. MEDICETTY; B. TRAPP; B. BAI; B. BAI. *Renovo Neural, Cleveland Clin.*

11:00 EE11 **528.04** ● Targeting extracellular cyclophilin A-mediated neurovascular dysfunction. R. D. BELL*; G. SUIDAN; A. CAMERON; M. ILARDI; N. KABLAOUI; K. FONSECA. *Pfizer, Inc, Pfizer.*

8:00 EE12 **528.05** Transgenic mice that over-express NAAA in microglia: A tool to understand the role of NAAA in neuroinflammation. A. RIBEIRO*; S. PONTIS; A. GUIJARRO; D. PIOMELLI. *Fondazione Inst. Italiano Di Tecnologia.*

9:00 EE13 **528.06** ● Comparative evaluation of target engagement for monoacylglycerol lipase (MAGL) inhibitors and cyclooxygenase (COX) inhibitors: Impact of tandem mass spectrometry (LC-MS/MS) and automated behavioral analysis in mice. C. PORAZIK*; A. WITTING; B. FERGER. *Boehringer Ingelheim Pharma GmbH & Co. KG, Ulm Univ.*

10:00 EE14 **528.07** ● CNS102 (trans-geranylgeranyl acetone) protects against kainic acid- induced neurotoxicity in rat through multiple signaling pathways. Y. PAN*; F. ERMINI; J. BRIDGEWATER; H. LISTER; W. G. HAAG; A. ARGADE; H. SERIZAWA. *Coyote Pharmaceuticals, Optim Sci. Corp.*

11:00 EE15 **528.08** ● CNS102, a new drug in development for amyotrophic lateral sclerosis, improves survival and behavior in SOD1 mice. F. ERMINI*; Y. PAN; W. G. HAAG; A. ARGADE; H. SERIZAWA. *Coyote Pharmaceuticals, Optim Sci.*

8:00 EE16 **528.09** The dimerization state of the human translocator protein (TSPO) is differentially affected by its ligands. S. CHUA*; A. MASEDUNSKA; S. BANISTER; Y. D. KE; P. GUNNING; M. KASSIOU; L. M. ITTNER*. *UNSW, UNSW, Univ. of Sydney.*

9:00 EE17 **528.10** ● NDC-1308, a gain of function estradiol analog for inducing remyelination in multiple sclerosis patients. S. H. NYE*; J. G. YARGER. *ENDECE Neural, LLC.*

10:00 EE18 **528.11** ● The Nrf2 transcriptional target, OSGIN1, contributes to the cytoprotective properties of monomethyl fumarate. M. S. BRENNAN*; M. F. MATOS; C. SUN; S. SZAK; R. H. SCANNEVIN. *Biogen Idec and Boston Univ., Biogen Idec.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 EE19 **528.12** Preventing neurodegeneration by inhibiting the correct HDACs: Molecular and pharmacological strategies. M. BOURASSA*; R. R. RATAN. *Burke-Cornell Med. Res. Inst.*

8:00 EE20 **528.13** ● UCB0255, a new and selective synaptic vesicle protein 2A (SV2A) ligand with promising efficacy for cognitive deficits. E. R. DETRAIT*; E. JNOFF; F. BROUTA; K. LECLERCQ; E. JIGOREL; M. WOOD; M. GILLARD; H. KLITGAARD; A. MATAGNE; Y. LAMBERTY; B. KENDA; L. PROVINS. *UCB Biopharma.*

9:00 EE21 **528.14** Ameliorating the CNS Niemann-Pick type C phenotype by modulating Wnt signaling. A. G. EFTHYMIOU*; J. STEINER; M. S. RAO; N. MALIK. *USUHS, NIH.*

10:00 EE22 **528.15** Systemic neonatal lipopolysaccharide-induced brain injury can be ameliorated by melatonin. L. TIEN*; Y. LEE; L. FAN. *Fu Jen Catholic Univ., Univ. of Mississippi Med. Ctr.*

11:00 EE23 **528.16** ● Investigations of the dose-dependent effects of the PDE10A inhibitor PF-2545920 on primate regional cerebral glucose metabolism in the resting state. G. V. WILLIAMS*; D. W. CAMPBELL; C. J. SCHMIDT; M. M. ZALESKA; C. M. SANDIEGO; R. E. CARSON; S. A. CASTNER. *Yale Univ. Sch. of Med., VA Connecticut Healthcare Syst, Pfizer Global Res. and Develop., Yale Sch. of Med.*

8:00 EE24 **528.17** The protective role of vitamin C against Alzheimer's disease. S. DIXIT*; F. E. HARRISON. *Vanderbilt Univ., Vanderbilt Univ.*

9:00 EE25 **528.18** ● Effect of the nicotinic $\alpha 4\beta 2$-receptor partial agonist varenicline on non-invasive brain stimulation-induced neuroplasticity in the human motor cortex. M. A. NITSCHE*; M. KUO; W. PAULUS; J. GRUNDEY; G. BATSIKADZE. *Georg-august-University, Georg-August-University.*

10:00 EE26 **528.19** Lithium reduced hippocampal progenitor cell death, inflammation, central hypothyroidism and cognitive dysfunction after irradiation to the young rat brain. C. ZHU*; K. ZHOU; C. XIE; Y. ZHANG; T. LI; Y. SUN; Y. XU; K. BLOMGREN. *Ctr. For Brain Repair & Rehabilitation, Univ. of Gothenburg, Ctr. for Brain Repair & Rehabilitation, Univ. of Gothenburg, Zhengzhou Children's Hosp., Zhengzhou Univ., Karolinska Inst.*

11:00 EE27 **528.20** ▲ Treatment with Nymphaea lotus lowers blood pressure, anxiety and improves erectile function in L-Name rats. M. P. KAMENI*; D. D. P. DZEUFIET; P. KAMTCHOUING; T. DIMO. *Univ. of Yaounde 1.*

8:00 EE28 **528.21** Liraglutide exerts neuroprotective effects for cerebral infarct model of rats. J. MORIMOTO*; K. SATO; M. KAMEDA; T. YASUHARA; T. AGARI; T. BABA; F. WANG; A. SHINKO; T. WAKAMORI; A. TOYOSHIMA; H. TAKEUCHI; T. SASAKI; S. SASADA; A. KONDO; C. V. BORLONGAN; M. MATSUMAE; I. DATE. *Okayama Univ. Grad Sch. of Med., Tokai Univ., Ctr. for Innovative and Translational Medicine, Kochi Univ. Med. Sch., Univ. of South Florida Col. Med.*

9:00 FF1 **528.22** Gentamicin improves survival and outcome after experimental subarachnoid hemorrhage. R. LISEK; V. FRIEDRICH; M. G. BAXTER; J. B. BEDERSON; F. A. SEHBA*. *Mount Sinai Sch. of Med., Mount Sinai Sch. of Med.*

POSTER

529. Auditory Processing: Temporal, Frequency, and Spectral Processing-Perception

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 FF2 **529.01** Neural detection of signals in noise. K. M. SCHRODE*; M. A. BEE. *Univ. of Minnesota, Univ. of Minnesota.*

9:00 FF3 **529.02** Critical period hearing loss disrupts subsequent amplitude modulation detection. M. L. CARAS*; D. H. SANES. *New York Univ.*

10:00 FF4 **529.03** Effects of noise-induced tinnitus on frequency discrimination acuity in mice. L. MWILAMBWE-TSHILOBO; A. J. O. DAVIS; M. N. GEFFEN*. *Univ. of Pennsylvania Sch. of Med.*

11:00 FF5 **529.04** Aldosterone augments prepulse inhibition but not startle amplitude in middle-aged cba/caj mice. J. D. HALONEN*; A. HINTON; X. ZHU; A. LOWE; J. WALTON. *Global Ctr. For Hearing and Speech Res., Univ. of South Florida, Univ. of Tampa, Univ. of South Florida.*

8:00 FF6 **529.05** Aldosterone modulates both simple and complex auditory processing in the auditory midbrain of aging CBA mice. E. J. BRECHT; X. ZHU; R. D. FRISINA; J. P. WALTON*. *Univ. South Florida, Univ. South Florida, Univ. South Florida.*

9:00 FF7 **529.06** ● The aftermath of hormone replacement therapy in CBA/CaJ middle age female mice. T. WILLIAMSON*; X. ZHU; J. P. WALTON; R. D. FRISINA. *Global Ctr. For Hearing and Speech Res., Univ. of South Florida, Univ. of South Florida.*

10:00 FF8 **529.07** A mouse model of hormone replacement therapy reveals positive effects of estrogen on hearing. A. S. HINTON*; T. T. WILLIAMSON; X. ZHU; J. M. MANSOUR; R. D. FRISINA; J. P. WALTON. *Univ. of South Florida, Univ. of South Florida, Univ. of South Florida.*

11:00 FF9 **529.08** Phase coherence of auditory steady-state response (ASSR) reflects internal brain activation level modulated by a modified N-back task: an MEG study. Y. YOKOTA*; Y. NARUSE. *NICT.*

8:00 FF10 **529.09** ▲ Internal stochastic resonance within the human brain elicited by binaural noises. A. GUTIERREZ*; N. HUIDUBRO; R. KRISTEVA; E. MANJARREZ. *Inst. De Fisiologia, Benemerita Univ. Au, Benemerita Univ. Autonoma de Puebla, Univ. of Freiburg.*

9:00 FF11 **529.10** Differentiating phase-locked responses to the temporal envelopes of speech sentences. R. E. MILLMAN*; S. R. JOHNSON. *York Neuroimaging Centre, Univ. of York.*

10:00 FF12 **529.11** Differential oscillatory responses to aversive sounds in children with autism spectrum disorder showing auditory hypersensitivity. K. SHIMONO*; J. MATSUZAKI; H. SUGATA; I. HIRATA; R. HANAIE; F. NAGATANI; M. TACHIBANA; K. TOMINAGA; M. HIRATA; I. MOHRI; M. TANIIKE. *Osaka Univ., Osaka Univ., Osaka Univ., Osaka Univ.*

11:00 FF13 **529.12** A model of theta band oscillation entrainment to speech. D. HARRELL*; O. GHITZA; E. LARGE. *Univ. of Connecticut, Boston Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

530. Auditory Processing: Neural Coding, Animal Studies, and Computation

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 FF14 **530.01** Influence of efferent innervation on lateral line sensing in larval zebrafish (Danio rerio). M. HAEHNEL*; C. A. SMITH; J. C. LIAO. *Univ. of Florida, Univ. of Florida.*

9:00 FF15 **530.02** Population coding for sound localization in the owl's midbrain. F. CAZETTES*; B. J. FISCHER; J. L. PENA. *Albert Einstein Sch. of Med., Seattle Univ.*

10:00 FF16 **530.03** Temporal sequence processing & natural song time-scales in Zebra finch auditory cortex. T. J. GARDNER*; B. SHINN-CUNNINGHAM; Y. LIM. *Boston Univ., Boston Univ., Boston Univ., Korea Inst. of Sci. and Technol.*

11:00 FF17 **530.04** Compensatory gain control partially restores midbrain and cortical sound coding following profound peripheral nerve degeneration. A. R. CHAMBERS*; Y. YUAN; A. S. EDGE; M. C. LIBERMAN; D. B. POLLEY. *Harvard Med. Sch., Eaton-Peabody Laboratories, Massachusetts Eye and Ear Infirmary, Fu Dan Univ., Harvard Med. Sch.*

8:00 FF18 **530.05** Linear integration for perceptual behavior in mouse primary auditory and visual cortex. M. H. HISTED*; N. T. COMFORT; R. T. OHMAN; A. R. PERILLO; J. H. R. MAUNSELL. *Harvard Med. Sch.*

9:00 FF19 **530.06** Brain state dependency of rate and temporal coding in the primary auditory cortex. J. BAMBER*; S. SAKATA; J. HERRMANN. *Inst. for Adaptive and Neural Computation, Strathclyde Inst. of Pharm. and Biomed. Sci., Inst. of Perception, Action and Behaviour.*

10:00 FF20 **530.07** The contribution of sensory and cortical processing to perceptual decision-making. M. INSANALLY*; I. CARCEA; B. ALBANNA; R. FROEMKE. *NYU Sch. of Medicine, Skirball Inst., Univ. of California, Berkeley, Univ. of California, Berkeley.*

11:00 FF21 **530.08** Characterization of invariances to stimulus perception in auditory processing. J. F. LIÉNARD*; S. V. DAVID; A. G. DIMITROV. *Washington State Univ., Oregon Hlth. & Sci. Univ.*

8:00 FF22 **530.09** Neural encoding of noisy vocalizations in primary auditory cortex of the marmoset monkey. R. NI*; N. M. LEDBETTER; J. R. GAMBLE; D. A. BENDER; D. L. BARBOUR. *Washington Univ. in St. Louis, Washington Univ. in St. Louis.*

9:00 FF23 **530.10** Contribution of transient neural responses to stimulus discriminability in auditory cortex. W. SUN*; N. M. LEDBETTER; D. L. BARBOUR. *Washington Univ. in St. Louis.*

10:00 FF24 **530.11** Neural mechanisms underlying long lasting contextual modulations in auditory cortex of awake marmoset studied by intracellular recording. L. GAO*; X. WANG. *The Johns Hopkins Univ., The Johns Hopkins Univ. Sch. of Med.*

11:00 FF25 **530.12** Frequency tagging and neural correlates of the cocktail party effect in the monkey inferior colliculus. D. S. PAGES*; V. C. CARUSO; S. TOKDAR; J. M. GROH. *Duke Univ.*

POSTER

531. Auditory Processing: Neural Coding, Human Experiment, and Theory

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 FF26 **531.01** Specialized auditory temporal processing in the theta and gamma bands revealed by priming. X. TENG*; D. POEPPEL. *New York Univ.*

9:00 FF27 **531.02** Influence of aging on cortical auditory temporal processing of speech in noise. A. PRESACCO*; S. ANDERSON; J. SIMON. *Univ. of Maryland, Univ. of Maryland, Univ. of Maryland.*

10:00 FF28 **531.03** Nonlinearities of auditory neurons explained by predictive coding. I. B. YILDIZ*; S. DENEVE. *Ecole Normale Superieure.*

11:00 FF29 **531.04** Maximum noise entropy models reveal multidimensional auditory cortical receptive fields. C. A. ATENCIO*; T. O. SHARPEE; C. E. SCHREINER. *UCSF, The Salk Inst. for Biol. Studies.*

8:00 FF30 **531.05** Combinatorial analysis of models for high-order neural representation of natural sounds. I. L. THORSON*; J. F. LIÉNARD; A. G. DIMITROV; S. V. DAVID. *Oregon Hlth. & Sci. Univ., Washington State Univ.*

9:00 FF31 **531.06** Neural computations underlying temporal and rate coding in auditory cortex. D. A. BENDOR*. *UCL.*

10:00 FF32 **531.07** ● Locally competitive networks mediated by inhibition as a basis for the development of cortical processing of natural auditory stimuli. O. ROURKE*; D. A. BUTTS. *Univ. of Maryland.*

11:00 GG1 **531.08** A neurodynamic model of pitch perception. K. D. LERUD*; J. C. KIM; E. W. LARGE, III. *Univ. of Connecticut.*

8:00 GG2 **531.09** Facilitated inhibition biases tritone comparison in a network model. C. HUANG*; B. ENGLITZ; S. SHAMMA; J. RINZEL. *New York Univ., École normale supérieure, Univ. of Maryland, New York Univ.*

9:00 GG3 **531.10** Noise-robust automatic speech recognition by detecting syllables and phonetic features. P. SCHAFER*; D. Z. JIN. *Pennsylvania State Univ.*

POSTER

532. Striate Cortex: Intracortical Circuitry

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 GG4 **532.01** Exploring the network anatomy of visual cortical processing. W. A. LEE*; V. BONIN; M. REED; K. GLATTFELDER; J. HOHMANN; R. C. REID. *Harvard Med. Sch., Allen Inst. for Brain Sci.*

9:00 GG5 **532.02** Resting state correlations in visual cortex reflect fluctuations of cortical arousal. B. MOORE*; M. A. COX; K. DOUGHERTY; M. S. YOUNG; A. MAIER. *Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 GG6 **532.03** Orientation tuning of Gamma band measured in human MEG and across multiple scales of measurement in macaque V1 reveals network mechanisms. M. J. ROBERTS*; E. LOWET; A. HADJIPAPAS; A. PETER; P. DE WEERD. *Univ. of Maastricht, Radboud Univ. Nijmegen, Univ. of Nicosia Med. Sch., Ernst Strungmann Inst. for Neurosci. in cooperation with Max Planck Society.*

11:00 GG7 **532.04** Computing local-field potentials based on a point-neuron network model of cat V1. D. DAHMEN*; E. HAGEN; M. L. STAVRINOU; H. LINDÉN; T. TETZLAFF; S. VAN ALBADA; M. DIESMANN; S. GRÜN; G. T. EINEVOLL. *Jülich Res. Ctr., Norwegian Univ. of Life Sci. (NMBU), Univ. of Copenhagen, Royal Inst. of Technol. (KTH), RWTH Aachen Univ., RWTH Aachen Univ., Univ. of Oslo.*

8:00 GG8 **532.05** Stimulus dependent spatial distribution of synaptic inhibition in simple cells of cat striate cortex. M. SEDIGH-SARVESTANI*; L. VIGELAND; L. A. PALMER; D. CONTRERAS. *Univ. of Pennsylvania.*

9:00 GG9 **532.06** Modeling optogenetic manipulation of neural circuits. M. AVERY*; J. H. REYNOLDS; J. J. NASSI. *Salk Inst.*

10:00 GG10 **532.07** How SOM+ and PV+ inhibitory neurons could differentially modulate surround suppression of cortical neurons. M. JADI*; T. J. SEJNOWSKI. *Salk Inst.*

11:00 GG11 **532.08** Spatial summation induce layer-specific gamma oscillations in the local field potential in primate V1. M. A. GIESELMANN*; J. CLARKSON; A. THIELE. *Newcastle Univ.*

8:00 GG12 **532.09** Intra-cortical excitatory circuitry innervating layer 6 pyramidal neurons of the rat primary visual cortex. F. COTEL*; J. APERGIS-SCHOUTE; S. R. WILLIAMS. *Queensland Brain Inst., Univ. of Cambridge, Univ. of Cambridge.*

9:00 GG13 **532.10** Probing the synaptic effects of distal connectivity in mouse visual cortex. T. SATO*; B. HAIDER; M. HAUSSER; M. CARANDINI. *Univ. Col. London, Univ. Col. London.*

10:00 GG14 **532.11** Distinct excitatory/inhibtory balance in subnetworks within mouse primary visual cortex (v1). P. BISTA; A. H. BURKHALTER*. *Washington Univ. Med. Sch.*

11:00 GG15 **532.12** *In vivo* GABAergic parvalbumin interneuron contribution to cortical transforms is laminar dependent. D. E. PAFUNDO*; B. D. FEESE; S. J. KUHLMAN. *Carnegie Mellon Univ.*

8:00 GG16 **532.13** Very long-range disynaptic connections through layer 6 pyramidal neurons in macaque monkey V1. D. C. LYON*; Y. LIU; M. ARREOLA. *Univ. of California.*

9:00 GG17 **532.14** The sparseness of excitatory lateral connections can account for the formation of species-dependent orientation representation in the mammalian primary visual cortex. M. MIYASHITA*; S. TANAKA. *Numazu Natl. Col. of Technol., Univ. of Electro-Communications.*

10:00 GG18 **532.15** GABAergic interneurons form spatial clusters in the mouse visual cortex to enhance inhibitory actions on excitatory neurons. T. EBINA*; K. SOHYA; I. IMAYOSHI; S. YIN; R. KIMURA; Y. YANAGAWA; H. KAMEDA; H. HIOKI; T. KANEKO; T. TSUMOTO. *BSI, RIKEN, The Hakubi Center, Inst. for Virus Research, Kyoto Univ., Gunma Univ. Grad. Sch. of Med., Kyoto Univ. Grad. Sch. of Med.*

11:00 GG19 **532.16** Layer 6 corticothalamic neurons activate layer 5a pyramidal neurons. J. KIM; C. J. MATNEY; A. BLANKENSHIP; S. HESTRIN; S. P. BROWN*. *Johns Hopkins Sch. of Med., Stanford Sch. of Med.*

8:00 GG20 **532.17** Cellular imaging of genetically defined populations in layer 4 of mouse primary visual cortex reveals functional diversity. A. R. GARNER*; A. CHENG; L. MADISEN; H. ZENG; R. C. REID. *Allen Inst. For Brain Sci.*

9:00 GG21 **532.18** A comprehensive large-scale spiking model of cat primary visual cortex. J. ANTOLÍK; C. MONIER; Y. FRÉGNAC; A. P. DAVISON*. *Ctr. Nationale De La Recherche Scientifique (CNRS).*

10:00 GG22 **532.19** Different cortical layers in V1 encode different visual information in different frequency bands. S. C. LOWE*; D. ZALDIVAR; Y. MURAYAMA; M. C. W. VAN ROSSUM; N. K. LOGOTHETIS; S. PANZERI. *Univ. of Edinburgh, Max Planck Inst., Intl. Max Planck Res. Sch., Italian Inst. of Technol.*

11:00 GG23 **532.20** Dynamic processing of visual information by layer-specific functional interaction between the pulvinar and primary visual cortex. C. YU*; K. SELLERS; J. LU; Y. I. SHIH; R. MURROW; F. FROHLICH. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

8:00 GG24 **532.21** Modulation of spike rate by optogenetic control of GABAergic neurons alters contrast adaptation in mouse primary visual cortex. N. A. CROWDER*; K. R. STOVER; J. L. KING; K. M. GORDON. *Dalhousie Univ.*

9:00 GG25 **532.22** No functional specialization of Calretinin-expressing neurons in the mouse visual cortex. D. CAMILLO; C. N. LEVELT; J. A. HEIMEL*. *Netherlands Inst. for Neurosci., Netherlands Inst. for Neurosci., Netherlands Inst. Neurosci.*

10:00 GG26 **532.23** Inhibition-stabilized balanced dynamics account for stimulus-induced changes of noise variability in the cortex. Y. AHMADIAN; G. HENNEQUIN; D. B. RUBIN; K. D. MILLER; M. LENGYEL*. *Columbia Univ., Univ. of Cambridge.*

POSTER

533. Eye Movements and Perception

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 GG27 **533.01** Modeling eye-position gain fields for population coding recovery of stimulus locations. A. B. SERENO*; M. E. SERENO; S. R. LEHKY. *UT Houston Med. Sch., Univ. of Oregon, The Salk Inst.*

9:00 GG28 **533.02** The contribution of corollary discharge to perceived eye location for different movement orientations and amplitudes. S. BANSAL*; L. C. BRAY; M. S. PETERSON; W. M. JOINER. *George Mason Univ., George Mason Univ., George Mason Univ.*

10:00 GG29 **533.03** Gain and timing adaptation for smooth pursuit eye movements. S. ONO*. *Univ. of Washington.*

11:00 GG30 **533.04** What eye movements tell us about visual saliency in different states of awareness. Y. YANG*; S. YEH; A. BARTELS. *Univ. of Tübingen, Natl. Taiwan Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 GG31 **533.05** Effect of sensorimotor adaptation of saccades on covert exogenous attention. O. HABCHI; R. MATHIEU; C. URQUIZAR; A. FARNÈ; D. PELISSON*. *INSERM U1028-CNRS UMR5292/CRNL.*

9:00 GG32 **533.06** Temporal structure of population activity supplements the instantaneous rate code in gating saccade initiation. U. K. JAGADISAN; N. J. GANDHI*. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

10:00 GG33 **533.07** Blinks and eye closures - More happening in the brain than meets the eye. D. KONG*; J. ONG; M. W. CHEE. *Duke-Nus Grad. Med. Sch.*

11:00 GG34 **533.08** Dissociation of pursuit eye movement and perception of visual motion under binocular and dichoptic condition. B. CAO*; E. EYUBOGLU; A. MECKEL; A. YAZDANBAKHSH. *Boston Univ., Univ. of Texas Hlth. Sci. Ctr., Belmont Hill Sch., Boston Univ.*

8:00 GG35 **533.09** Target motion predictability determines the predictability of gaze decisions from retinal inputs. L. C. OSBORNE*; M. E. BATTIFARANO. *Univ. of Chicago, Univ. of Chicago.*

9:00 GG36 **533.10** The relation of perisaccadic perceived location to eye position and time. J. POLA*; E. MATIN; L. MATIN. *SUNY Col. Optometry, LIU Post, Columbia Univ.*

10:00 HH1 **533.11** Dynamic network interactions of the human oculomotor system based on intrinsic connectivity. A. ASHOURVAN*; A. PUCE; N. L. PORT. *Indiana Univ., Indiana university, Indiana Univ.*

11:00 HH2 **533.12** Accurate smooth pursuit eye movements improve hand movements in a manual interception task. J. FOOKEN; S. YEO; D. K. PAI; M. SPERING*. *Univ. of British Columbia, Univ. of Cambridge, Brain Res. Ctr., Univ. of British Columbia.*

8:00 HH3 **533.13** Neural signatures of perceptual load during natural reading. B. WEISS*; B. KNAKKER; Z. VIDNYÁNSZKY. *Hungarian Acad. of Sci., Pázmány Péter Catholic Univ., Budapest Univ. of Technol. and Econ.*

9:00 HH4 **533.14** A recurrent excitation-inhibition model that captures population temporal structure explains saccade initiation. U. K. JAGADISAN*; N. J. GANDHI. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

10:00 HH5 **533.15** Illusory objects are altered by saccadic eye movement preparation. W. J. HARRISON*; G. MAIELLO; P. J. BEX. *Harvard Med. Sch., Univ. Col. London.*

11:00 HH6 **533.16** Perisaccadic perception of visual space in people with schizophrenia. A. RICHARD*; J. CHURAN; V. WHITFORD; G. O'DRISCOLL; D. TITONE; C. PACK. *McGill Univ.*

8:00 HH7 **533.17** ▲ A meta-analysis of functional imaging studies of smooth pursuit eye movement abnormalities in patients with schizophrenia. M. YOUNG; D. GURLER; C. MOORE; M. S. BOLDING*. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

9:00 HH8 **533.18** Oculomotor executive function abnormalities with increased tic severity in Tourette Syndrome. C. B. JETER*; S. S. PATEL; J. S. MORRIS; A. Z. CHUANG; I. J. BUTLER; A. B. SERENO. *Univ. Texas Sch. of Dent., Baylor Col. of Med., The Univ. of Texas M. D. Anderson Cancer Ctr., The Univ. of Texas Hlth. Sci. Ctr. at Houston Med. Sch., The Univ. of Texas Hlth. Sci. Ctr. at Houston Med. Sch., The Univ. of Texas Hlth. Sci. Ctr. at Houston Med. Sch.*

10:00 HH9 **533.19** Oculometric assessment of dynamic visual processing. D. B. LISTON*; L. STONE. *NASA Ames Res. Ctr., San Jose State Univ.*

11:00 HH10 **533.20** Electrodermal activity and eye movements inform the usability of passwords. J. C. ROMANO BERGSTROM*; K. GREENE; D. HAWKINS; C. GONZALEZ. *Fors Marsh Group, Natl. Inst. of Standards and Technol.*

8:00 HH11 **533.21** The cognitive control of gaze patterns when decoding the affordances of complex tool use. N. NATRAJ*; Y. M. PELLA; A. M. BORGHI; L. WHEATON. *Georgia Institute Of Technology, Univ. of Bologna.*

POSTER

534. Nociceptors: Molecular and Pharmacological Studies

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 HH12 **534.01** Acute inflammation reveals potential nociceptive role of peripheral GABA A receptors. I. JANG*; Y. KIM; S. JUNG; H. FURUE; S. OH. *Seoul Natl. Univ., Hanyang Univ., Natl. Inst. of Physiological Sci.*

9:00 HH13 **534.02** ● Investigating the role of TRESK in sensory afferent function using a selective opener. L. CAO*; A. LOUCIF; P. SAINTOT; M. K. PATEL; C. ADAMS; K. KUAN; R. FISH; M. RIGBY; B. ANTONIO; K. OMOTO; D. PRYDE; E. B. STEVENS. *Neusentis, Pfizer UK, Univ. of Virginia Hlth. Syst., Pfizer Neusentis.*

10:00 HH14 **534.03** Effects of pharmacological agents on pain tolerance in lynx1 knockout mice through the manipulation of nicotinic acetylcholine receptors. K. R. ANDERSON*; C. M. GARRISON; K. L. ACKERMAN; J. M. MIWA. *Lehigh Univ.*

11:00 HH15 **534.04** Role of TASK-3 leak potassium channels in peripheral cold thermosensation. C. MORENILLA-PALAO; E. LUIS; C. FERNÁNDEZ-PEÑA; E. QUINTERO; J. L. WEAVER; D. A. BAYLISS; F. VIANA*. *Univ. Miguel Hernández UMH-CSIC, Univ. of Virginia, Univ. Miguel Hernandez-CSIC.*

8:00 HH16 **534.05** Phosphorylation of Epac1 by GRK2 inhibits Epac1-to-Rap1 signaling and prevents chronic pain. A. KAVELAARS*; P. SINGHMAR; X. HUO; N. EIJKELKAMP; S. R. BERCIANO; F. MAYOR, Jr.; Y. ZHOU; F. C. MEI; C. MURGA; X. CHENG; C. J. HEIJNEN. *Univ. of Texas MD Anderson Cancer Ctr., Univ. Med. Ctr. Utrecht, Unisversidad Autonoma de Madrid, Univ. of Texas Hlth. Sci. Ctr.*

9:00 HH17 **534.06** NMDA receptor-induced substance P release from primary afferent terminals is inhibited by μ and κ, but not δ, opioid receptors. W. CHEN*; H. KIM; H. S. ENNES; W. WALWYN; J. A. MCROBERTS; J. G. MARVIZON. *UCLA, Veteran Affairs Greater Los Angeles Healthcare Syst.*

10:00 HH18 **534.07** The TrkA receptor and not the p75NTR mediates thermal hyperalgesia from NGF in the rat hind paw. A. KHODOROVA*; G. NICOL; G. STRICHARTZ. *Harvard Med. Sch. Brigham and Women's Hosp, Indiana Univ. Sch. of Med.*

11:00 HH19 **534.08** Involvement of P2X3 in peripheral sensitization of UVB-induced inflammatory pain. E. KASAI; S. OMACHI; T. ASAKI; G. SAKAGUCHI; S. SHINOHARA*. *Shionogi & Co, Ltd.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 HH20 **534.09** Endovanilloids modulate synaptic transmission by three distinct mechanisms. Y. WANG*; B. D. BURRELL. *Univ. of South Dakota.*

9:00 HH21 **534.10** ▲ AMPK-mediated control of P bodies as a novel mechanism of gene expression control in peripheral sensory neurons. G. L. MEJIA; O. K. MELEMEDJIAN; G. DUSSOR; T. J. PRICE*. *UTD, Univ. of Arizona, Univ. of Texas at Dallas, UTD.*

10:00 HH22 **534.11** An essential role for eIF4E phosphorylation in peripherally-mediated pain plasticity. J. K. MOY*; M. N. ASIEDU; A. KHOUTORSKY; D. V. TILLU; O. K. MELEMEDJIAN; G. L. MEJIA; J. KIM; N. SONENBERG; G. DUSSOR; T. J. PRICE. *Univ. of Texas At Dallas, Univ. of Arizona, Univ. of Texas at Dallas, McGill Univ.*

11:00 HH23 **534.12** Cdk5 is an important modulator of pain signaling. M. PROCHAZKOVA; E. UTRERAS; A. TERSE; B. HALL; A. B. KULKARNI*. *NIDCR, NIH, Dept. of Biol.*

8:00 HH24 **534.13** Nociceptive sensitization by activation of Protease-Activated Receptor 2 (PAR-2) in rats. K. KIDO*; E. MASAKI. *Tohoku Univ. Hospital, Dept. of Dent. Anesthesia.*

9:00 HH25 **534.14** Epigenetic regulation of spinal cord gene expression controls opioid-induced hyperalgesia and tolerance. D. LIANG*; Y. SUN; P. SAHBAIE; X. SHI; W. LI; D. J. CLARK. *Stanford Univ., Stanford Univ.*

10:00 HH26 **534.15** The role of mechanosensitive ion channels in osteoarthritis pain. H. HE*; A. DAVIDOVA; R. SHARIF NAEINI. *McGill Univ., McGill Univ.*

11:00 HH27 **534.16** Endocannabinoids/endovanilloids attenuate injury-induced hyperalgesia but not mechanical allodynia. T. L. SUMMERS*; B. HANTEN; W. PETERSON; B. D. BURRELL. *Univ. of South Dakota.*

8:00 HH28 **534.17** Allosteric interactions within delta opioid receptor - kappa opioid receptor (DOR-KOR) heteromers in peripheral sensory neurons. B. A. MCGUIRE*; T. A. CHAVERA; W. P. CLARKE; K. A. BERG. *UT Hlth. Sci. Ctr.*

9:00 HH29 **534.18** Cathepsin S induces peripheral and central activation of pain via biased agonism of Protease-Activated Receptor 2. T. LIEU*; P. ZHAO; N. BARLOW; D. P. POOLE; B. SEBASTIAN; N. W. BUNNETT. *Monash Inst. of Pharmaceut. Sci.*

10:00 HH30 **534.19** CXCL10 directly sensitizes a subset of cutaneous nociceptors through CXCR3 and contributes to itch in a murine model of allergic contact dermatitis. L. QU; K. FU; S. G. SHIMADA; R. H. LAMOTTE*. *Yale Univ. Sch. Med., Jinan Univ.*

11:00 HH31 **534.20** NMDA receptor-induced substance P release from primary afferent terminals is inhibited by α2A adrenergic receptors, lack of synergism with μ-opioid receptors. H. KIM*; W. CHEN; H. S. ENNES; W. WALWYN; J. A. MCROBERTS; J. G. MARVIZON. *UCLA, Veteran Affairs Greater Los Angeles Healthcare Syst.*

8:00 HH32 **534.21** Pharmacological evidence for a dominant role of NaV 1.7 in action potential regulation in guinea pig and human vagal nociceptors. A. HERBSTOMER; M. KOLLARIK; S. MEEKER; J. KRAJEWSKI; B. LI; K. JOHNSON; E. NISENBAUM; B. J. UNDEM*. *Johns Hopkins Univ. Sch. Med., Eli Lilly.*

9:00 II1 **534.22** Phosphorylation of mTOR maintains pain hypersensitivity after the tissue injury. Y. IZUMI; M. SASAKI; F. AMAYA*. *Saiseikai Kyoto Hosp., Kyoto Prefectural Univ. of Med.*

10:00 II2 **534.23** Different effects of the cytokine Interferon-γ on slowly or fast conducting nociceptive nerve fibers in rat *in vivo.* F. RICHTER*; S. WANDT; J. FINK; M. RAUSCHELBACH; H. WITZENHAUSEN; H. SCHAIBLE. *Univ. Hosp. Jena.*

11:00 II3 **534.24** Correlation of the electrophysiological profiles and sodium channel transcripts of individual rat dorsal root ganglia neurons. M. CHAHINE*; O. THÉRIAULT. *Inst. universitaire en santé mentale de Québec.*

8:00 II4 **534.25** Systems view of axotomy with rna-seq analysis of dorsal root ganglion, dorsal horn and ventral horn. S. C. GOSWAMI; J. R. GROSS; J. K. NEUBERT*; A. J. MANNES; M. J. IADAROLA. *Clin. Center, NIH, Univ. Florida.*

9:00 II5 **534.26** Aminooxyacetic Acid: An aspartate aminotransferase inhibitor with local analgesic properties during chronic inflammation. B. R. BOLT*; K. E. MILLER. *Oklahoma State Univ. Ctr. For Hlth. Sci.*

10:00 II6 **534.27** Prolactin sex-dependently regulates peripheral and spinal postoperative hypersensitivity. M. J. PATIL*; V. GOFFIN; M. HENRY; A. AKOPIAN. *UT Hlth. Sci. Ctr., Inserm and Univ. Paris Descartes, UTHSCSA.*

POSTER

535. Somatosensory: Local Cortical Circuits

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 II7 **535.01** The barrel cortex connectome - dense connectivity from sparse reconstructions of neural circuits. R. EGGER*; V. J. DERCKSEN; D. UDVARY; H. HEGE; M. OBERLAENDER. *Max Planck Inst. For Biol. Cybernetics, Univ. of Tuebingen, Zuse Inst. Berlin, Max Planck Florida Inst., Bernstein Ctr. for Computat. Neurosci.*

9:00 II8 **535.02** The relationship between microcircuit structure and dynamics in the rat barrel cortex. I. D. LANDAU*; R. EGGER; M. OBERLAENDER; H. SOMPOLINSKY. *The Hebrew Univ. of Jerusalem, Max Planck Inst. for Biol. Cybernetics, Max Planck Florida Inst. for Neurosci., Harvard Univ.*

10:00 II9 **535.03** A computational model for interacting assembly sequences. W. MAASS*; R. LEGENSTEIN; J. MACLEAN. *Graz Univ. of Technol., The Univ. of Chicago.*

11:00 II10 **535.04** Circuit mechanisms underlying the thalamocortical transformation during active tactile sensation. J. YU*; D. GUTNISKY; A. HIRES; K. SVOBODA. *HHMI Janelia Farm Res. Campus.*

8:00 II11 **535.05** Exploring the impact of optogenetic silencing of PV interneurons on barrel cortex microcircuit activity by two photon Ca^{2+} imaging. P. PROUVOT*; G. K. PRAMANIK; J. W. YANG; H. LUHMANN; A. STROH. *FTN Ag Stroh, Johannes Gutenberg Univ., Univ. Med. Ctr. of the Johannes Gutenberg Univ. Mainz.*

9:00 II12 **535.06** Technology innovations for leveraging supercomputers for reconstruction and simulation of large-scale detailed tissue models. J. G. KING; F. DELALONDRE; B. MAGALHAES; P. KUMBHAR; T. EWART; A. OVCHARENKO; F. CREMONESI; M. HINES; E. MULLER; F. SCHUERMANN*; H. MARKRAM. *Blue Brain Project, Brain Mind Institute, EPFL, Dept. of Neurobio., Yale Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 II13 **535.07** ● Multiscale model of glia metabolism linked to an electrical model of cerebral cortex. D. KELLER*; J. S. COGGAN; J. G. KING; C. CALI; H. LEHVASLAIHO; H. MARKRAM; F. SCHUERMANN; P. MAGISTRETTI. *Blue Brain Project, Brain Mind Institute, EPFL, KAUST.*

11:00 II14 **535.08** Morphological analysis and classification of neuronal types in the neocortical microcircuit. L. KANARI*; G. ATENEKENG; J. W. GRAHAM; R. HATELAND; Y. SHI; J. SHILLCOCK; F. SCHUERMANN; H. MARKRAM. *Blue Brain Project, EPFL.*

8:00 II15 **535.09** Predictive in silico reconstruction of neuronal input-output organization in the neocortical microcircuit. S. RAMASWAMY*; M. REIMANN; J. G. KING; E. B. MULLER; H. MARKRAM. *Blue Brain Project, Brain Mind Institute, EPFL.*

9:00 II16 **535.10** Towards an integrated sensory-motor model of a mouse. M. GEWALTIG*; C. EROE; B. DENIZDURDURAN; H. MARKRAM. *Blue Brain Project, Brain Mind Institute, EPFL.*

10:00 II17 **535.11** Incorporating synthesized meso-scale pyramidal axons into a reconstruction of neocortical tissue. Y. KIM; J. DYNES; J. KING; E. B. MULLER*; M. REIMANN; J. SHILLCOCK; H. MARKRAM. *Blue Brain Project, Brain Mind Institute, EPFL.*

11:00 II18 **535.12** Embedding gap junctions in high fidelity models of neocortical microcircuitry. O. AMSALEM; J. G. KING*; W. VAN GEIT; B. MAGALHAES; E. MULLER; H. MARKRAM; I. SEGEV. *Inst. of Life Sciences, Hebrew Univ., Blue Brain Project, Brain Mind Institute, EPFL.*

8:00 II19 **535.13** The HBP unified portal: Collaborative data-driven multi-scale reconstruction and simulation of neural tissue. J. MULLER*; J. G. BJAALIE; L. CORBEIL; J. COURCOL; D. DARINE; F. DELALONDRE; S. HILL; D. MALLMAN; C. MCMURTRIE; C. MEZZANOTTE; E. MULLER; R. NIEDERBERGER; B. ORTH; F. SCHUERMANN; B. SCHULLER; M. TELEFONT; S. ZANINETTA; H. MARKRAM. *Blue Brain Project, Brain Mind Institute, EPFL, Universitetet I Oslo, Eidgenoessische Technische Hochschule Zurich, Forschungszentrum Juelich GMBH.*

9:00 II20 **535.14** Sensory and Cognitive electrophysiology in rats: Tactile stimulation and micro-ECoG recordings in freely moving animals. G. DIMITRIADIS*; A. M. FRANSEN; E. MARIS. *Donders Inst. For Brain, Cognition and Behaviour.*

10:00 II21 **535.15** Effect of bicuculline on the temporal dynamics of the evoked local field potential: Implication on the interpretation of EEG. M. BRUYNS-HAYLETT; J. LUO; A. KENNERLEY; S. HARRIS; L. BOORMAN; N. VAUTRELLE; C. MARTIN; B. WHALLEY; M. JONES; J. BERWICK; Y. ZHENG*. *Univ. of Reading, Univ. of Sheffield, Univ. of Sheffield, Univ. of Reading.*

11:00 II22 **535.16** Investigating the shift in balance between neural excitation and inhibition due to bicuculline infusion using a two-compartment model of local field potentials. J. LUO*; M. BRUYNS-HAYLETT; J. BERWICK; A. KENNERLEY; L. BOORMAN; S. HARRIS; E. MILNE; D. COCA; S. BILLINGS; Y. ZHENG. *Univ. of Reading, The Univ. of Sheffield, The university of Sheffield.*

8:00 II23 **535.17** *In vivo* optogenetic manipulation of cells within the neurovascular unit leads to local changes in neural activity. T. C. BROWN*; C. BURLEY; K. SALEHI; T. KISHKOVICH; C. DEISTER; C. MOORE. *Brown Univ.*

9:00 II24 **535.18** ▲ Orexin-dependent activation of layer vib enhances cortical network activity and integration of non-specific thalamocortical inputs. A. H. HAY*; S. ANDJELIC; S. BADR; B. LAMBOLEZ. *CNRS/UMR7102, CNRS/UMR8246, Ljubljana Univ. Med. Ctr.*

10:00 II25 **535.19** ● Synaptic properties of inverted pyramidal cells in layer vi of the rodent barrel cortex. R. STEGER*; L. BLACHORSKY; J. C. BRUMBERG. *Grad. Ctr., Queens College, CUNY, Queens College, CUNY, The Grad. Center, CUNY.*

11:00 II26 **535.20** Cebus monkeys have a relatively complex somatosensory cortex: An architectonic study of the anterior parietal cortex and area 5 of Broadmann. A. MAYER*; M. N. S. LUIZ; N. B. KEHER; R. E. BITTENCOURT-NAVARRETE; R. GATTASS; J. G. FRANCA. *Federal Univ. of Rio De Janeiro, Federal Univ. of Juiz de Fora.*

8:00 II27 **535.21** Tyrosine-protein kinase Kit (c-Kit) protein as a marker for supragranular neurogliaform cells in the neocortex. I. KRUGLIKOV; Z. TALBOT; L. BAYER; A. Z. AHMED; R. MACHOLD; B. RUDY*. *NYU Neurosience Inst., NYU Sch. of Med.*

9:00 II28 **535.22** Mouse barrel connectomics. K. M. BOERGENS*; P. BASTIANS; M. BERNING; B. COWGILL; I. YU; N. MARAHORI; M. HELMSTAEDTER. *Max Planck Inst. of Neurobio.*

10:00 II29 **535.23** Structural distinguishability of neocortical circuit models. E. KLINGER*; T. KRETSCHMAR; F. THEIS; M. HELMSTAEDTER. *Max Planck Inst. of Neurobio., Inst. of Bioinformatics and Systems Biol.*

11:00 II30 **535.24** Target-specificity of long-range cortical input to mouse barrel cortex. F. P. DRAWITSCH*; Y. HUA; M. HELMSTAEDTER. *Max Planck Inst. of Neurobio.*

8:00 JJ1 **535.25** ● Comparative analysis of local circuits in six- and three-layered sensory cortices. P. BASTIANS*; M. HEMBERGER; G. LAURENT; M. HELMSTAEDTER. *MPI of Neurobio., Max Planck Inst. for Brain Res.*

9:00 JJ2 **535.26** Influence of area 5 on motor cortical excitability during the pre-movement phase of a GO/NO-GO task in humans. T. N. MACKENZIE*; A. J. NELSON. *McMaster Univ.*

10:00 JJ3 **535.27** Neurotensin decreases the frequency of the cortical slow oscillation and excites a neuronal population residing in the white matter. L. CASE*; C. BROBERGER. *Karolinska Institutet.*

11:00 JJ4 **535.28** Layer 2/3 neurons in mouse barrel cortex receive direct synaptic input from the posterior-medial nucleus of the thalamus. N. AUDETTE*; J. JOUHANNEAU; J. F. A. POULET; A. L. BARTH. *Dept. of Biol. Sci., Dept. of Neuroscience, Max Delbruck Ctr. for Mol. Med., Dept. of Biol. Sci. and Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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POSTER

536. Plasticity After Spinal Cord Injury I

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 JJ5 **536.01** In rats with transection of the dorsal column ascending tract soleus H-reflex conditioning impairs locomotion. L. CHEN*; Y. CHEN; Y. WANG; J. R. WOLPAW; X. Y. CHEN. *Wadsworth Ctr, NYS Dept Hlth. & SUNY.*

9:00 JJ6 **536.02** Impact of dorsal column ascending tract transection on locomotion after successful H-reflex conditioning in rats. Y. CHEN*; L. CHEN; R. L. LIU; Y. WANG; J. R. WOLPAW; X. Y. CHEN. *Wadsworth Ctr, NYS Dept Hlth. & SUNY.*

10:00 JJ7 **536.03** Inferior olive to cerebellum to sensorimotor cortex to spinal cord: A hierarchy of plasticity probably underlies down-conditioning of the H-reflex. X. Y. CHEN*; Y. CHEN; L. CHEN; Y. WANG; J. R. WOLPAW. *Wadsworth Ctr, NYS Dept Hlth. & SUNY.*

11:00 JJ8 **536.04** H-reflex conditioning appears to affect motoneuron axon initial segment size and voltage-gated sodium channel labeling. Y. WANG*; L. CHEN; Y. CHEN; J. R. WOLPOW; X. Y. CHEN. *Wadsworth Ctr. NYS Dept Hlth. & SUNY.*

8:00 JJ9 **536.05** Long-term single-neuron data from behaving rats undergoing operant conditioning of the H-reflex: Initial data. J. R. WOLPAW*; W. T. BAXTER; Y. CHEN; J. S. CARP; X. Y. CHEN. *Wadsworth Ctr, NYS Dept Hlth.*

9:00 JJ10 **536.06** Trial-to-trial and session-to-session variability in the human soleus stretch reflexes. Y. MAKIHARA*; P. P. SILVA; L. ARENDT-NIELSEN; A. K. THOMPSON; N. MRACHACZ-KERSTING. *Helen Hayes Hospital, New York State Dept. of Hlth., Ctr. for Sensory-Motor Interaction (SMI), Aalborg Univ., Helen Hayes Hosp. NYS Dpt Hlth., Wadsworth Ctr., Columbia Univ., State Univ. of New York at Albany.*

10:00 JJ11 **536.07** Phrenic motoneuron loss and diaphragm function following cervical spinal cord injury. L. N. LITTLE*; S. HUSSEY; E. E. GONZALEZ-ROTHI; L. M. MERCIER; D. D. FULLER; M. A. LANE; P. J. REIER; P. J. REIER. *Univ. of Florida, Univ. of Florida.*

11:00 JJ12 **536.08** Electrical stimulation of the diaphragm following cervical spinal cord injury in rats. K. A. STREETER*; E. J. GONZALEZ-ROTHI; G. FITZPATRICK; G. ARMSTRONG; P. J. REIER; E. J. FOX; D. D. FULLER. *Univ. of Florida, Univ. of Florida.*

8:00 JJ13 **536.09** Impact of high frequency epidural stimulation on respiratory function following incomplete cervical spinal cord injury. E. J. GONZALEZ-ROTHI*; S. M. TURNER; K. A. STREETER; G. M. FITZPATRICK; P. J. REIER; D. M. BAEKEY; D. D. FULLER. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

9:00 JJ14 **536.10** Ampakine administration potentiates intermittent hypoxia-induced long-term facilitation in mice. S. TURNER*; M. K. ELMALLAH; E. J. GONZALEZ-ROTHI; J. GREER; D. FULLER. *Univ. of Florida, Univ. of Alberta.*

10:00 JJ15 **536.11** Supraspinal respiratory neuroplasticity within reticular nuclei following cervical spinal cord injury. T. BEZDUDNAYA*; V. MARCHENKO; T. J. WHELAN; M. A. LANE. *Drexel Univ. Col. of Med.*

11:00 JJ16 **536.12** ▲ Assessment of sensory function after human spinal cord injury. R. A. MACKLIN*; P. H. ELLAWAY; M. A. PEREZ. *Univ. of Pittsburgh, Imperial Col. London.*

8:00 JJ17 **536.13** Reduced motor cortical maps during voluntary activity after incomplete spinal cord injury. T. TAZOE*; M. A. PEREZ. *Univ. of Pittsburgh.*

9:00 JJ18 **536.14** Impaired corticospinal excitability during inhibition of voluntary movement after tetraplegia. P. FEDERICO*; M. A. PEREZ. *Univ. of Pittsburgh.*

10:00 JJ19 **536.15** Temporal pattern of corticospinal volleys influences motor function after tetraplegia. J. CIRILLO*; F. J. CALABRO; M. A. PEREZ. *Univ. of Pittsburgh.*

11:00 JJ20 **536.16** Molecular adaptations in the periaqueductal gray in a rat model of chronic neuropathic pain: Focus on dopamine D1 receptors. P. J. VOULALAS*; Y. JI; L. JIANG; R. MASRI. *Univ. of Maryland Sch. of Dent.*

8:00 JJ21 **536.17** Post-translational modifications of cortical GluA1 receptors in a rat model of spinal cord injury pain. L. JIANG*; P. VOULALAS; Y. JI; R. MASRI. *Univ. of Maryland Dent. Sch., Univ. of Maryland Med. Sch.*

9:00 JJ22 **536.18** Unilateral, but not bilateral motor cortex electrical stimulation promotes corticospinal function after injury. T. T. BETHEA*; Y. HAROONIAN; G. DRUMMOND; A. KHALILI; J. B. CARMEL. *Burke-Cornell Med. Res. Inst., Weill Med. Col. of Cornell Univ.*

10:00 JJ23 **536.19** PIAS1 may play a role in repetitive acute intermittent hypoxia induced down-regulation of spinal inflammatory gene expression in rats. B. J. DOUGHERTY*; S. S. SPRINGBORN; A. S. ROOPRA; K. K. BOWEN; G. S. MITCHELL; J. J. WATTERS. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

11:00 JJ24 **536.20** Chronic morphine exposure activates mTOR pathway through μ-opioid receptor in dorsal horn neurons. L. SUN*; L. LIANG; S. WU; X. GU; B. LUTZ; A. BEKKER; Y. TAO. *Anesthesiol. Department, NJMS, Rutgers, Rutgers New Jersey Med. Sch., Rutgers New Jersey Med. Sch.*

8:00 JJ25 **536.21** Pharmacological inhibition of histone deacetylase-6 as a treatment for spinal cord injury. M. METCALFE*. *Burke Med. Res. Inst.*

9:00 JJ26 **536.22** Effect of hyperbaric oxygen therapy on Fos expression in neuroropathic pain following spinal cord injury. G. SENGUL*; A. KESER; M. ERTURK; T. DAğCı; B. BALKAN; F. AYDıN. *Ege Univ. Sch. Med., Ege Univ. Sch. Med., Ege Univ. Sch. Med., Neoks Hyperbaric Oxygen Therapy Ctr.*

POSTER

537. Plasticity After Spinal Cord Injury II

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 JJ27 **537.01** Plasticity of indirect cortico-motoneuronal excitations in relaxed hand muscles in humans. T. NAKAJIMA*; S. SUZUKI; H. OHTSUKA; T. ENDOH; Y. MASUGI; S. IRIE; T. KOMIYAMA; Y. OHKI. *Kyorin Unversity Sch. of Med., Chiba Univ., Hlth. Sci. Univ. of Hokkaido, Uekusa Gakuen Univ., Univ. of Tokyo, Chiba Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 JJ28 **537.02** Decreased spinal inhibition during muscle lengthening in humans with incomplete spinal cord injury may contribute to increased central activation during eccentric contractions. H. E. KIM*; D. M. CORCOS; T. G. HORNBY. *Univ. of Illinois At Chicago, Northwestern Univ., Univ. of Illinois At Chicago.*

10:00 JJ29 **537.03** Locomotor training modifies soleus motoneuron excitability in human spinal cord injury. M. KNIKOU*; A. C. SMITH; W. Z. RYMER. *City Univ. of New York, Northwestern Univ., Northwestern Univ.*

11:00 JJ30 **537.04** Operant up-conditioning of the tibialis anterior motor evoked potential in neurologically normal subjects. J. A. BRANGACCIO*; B. M. FAVALE; G. FIORENZA; A. THOMPSON. *Helen Hayes Hosp., Helen Hayes Hosp., Wadsworth Center, NYS Dept Hlth., Dept. of Neurology, Neurolog. Institute, Columbia Univ., Dept. of Biomed. Sciences, State Univ. of New York.*

8:00 JJ31 **537.05** Operant up-conditioning of the tibialis anterior motor evoked potential in neurologically normal subjects. B. FAVALE*; J. VELEZ; P. FALIVENA; A. K. THOMPSON. *Helen Hayes Hosp. NYS Dpt Hlth., Wadsworth Center, NYS Dept Hlth., Dept. of Neurology, Neurolog. Institute, Columbia Univ., Dept. of Biomed. Sciences, State Univ. of New York.*

9:00 JJ32 **537.06** Operant conditioning of spinal reflexes in people with chronic CNS damage. A. THOMPSON*; J. R. WOLPAW. *Helen Hayes Hosp NYS Dept Hlth., Wadsworth Center, NYS Dept Hlth., Dept. of Neurology, Neurolog. Institute, Columbia Univ., Dept. of Biomed. Sciences, State Univ. of New York.*

10:00 JJ33 **537.07** Afferent regulation of the upper limb motor cortex following incomplete cervical spinal cord injury. A. BAILEY*; P. MI; A. J. NELSON. *McMaster Univ.*

11:00 JJ34 **537.08** Short and long-interval intracortical inhibition in flexor carpi radialis muscle in incomplete spinal cord injury. Y. P. MI*; A. BAILEY; A. J. NELSON. *McMaster Univ.*

8:00 JJ35 **537.09** Effects of zolmitriptan and N-methyl-D-aspartate on the sensory input processing of deep dorsal horn neurons in mice with acute spinal cord injury. T. THAWEERATTANASINP*; C. J. HECKMAN; V. M. TYSSELING. *Northwestern University, Feinberg Sch. of Medici, Northwestern University, Feinberg Sch. of Med., Northwestern University, Feinberg Sch. of Med.*

9:00 JJ36 **537.10** Proteolytic cleavage of sodium channels and co-transporters KCC2: Mechanism leading to spasticity after spinal cord injury. V. PLANTIER; F. GACKIÈRE; C. BROCARD; S. LIABEUF; L. VINAY; F. BROCARD*. *CNRS.*

10:00 KK1 **537.11** Injury discharge immediately following a T10 spinal contusion is critical for the development of DRG neuron hyperexcitability. J. DU*; E. T. WALTERS; S. M. CARLTON. *Univ. Texas Med. Br., UT Hlth. Sci. Ctr.*

11:00 KK2 **537.12** Cardiovascular responses to cutaneous nociceptive input after cervical spinal cord injury: Role of pain afferent types and their plasticity. H. LEE*; J. CHUNG; K. E. TANSEY. *Emory Univ., Emory Univ., VAMC.*

8:00 KK3 **537.13** Chronic SSRI treatment following incomplete spinal cord injury changes 5HT-2c receptor activity. V. M. TYSSELING*; D. A. KLEIN; R. IMHOFF; C. HECKMAN; M. C. TRESCH. *Northwestern Univ., Northwestern Univ., Univ. Paris Descartes, Northwestern Univ., Northwestern Univ.*

9:00 KK4 **537.14** Changes in electrophysiological properties of interneurons over time following incomplete spinal cord injury. M. M. RANK*; J. R. FLYNN; M. P. GALEA; R. CALLISTER; R. J. CALLISTER. *Univ. of Newcastle, Univ. of Melbourne.*

10:00 KK5 **537.15** Assessment of Hebbian plasticity in the spinal cord. A. J. FUGLEVAND*; M. J. RAMIREZ. *Univ. Arizona, Univ. Arizona.*

11:00 KK6 **537.16** The use of F-response in defining interstimulus intervals appropriate for LTP-like plasticity induction in lower limb spinal paired associative stimulation. A. SHULGA*; P. LIOUMIS; E. KIRVESKARI; S. SAVOLAINEN; J. P. MÄKELÄ; A. YLINEN. *Helsinki Univ. Central Hosp., Univ. of Helsinki, Synapsia Rehabil. Ctr.*

8:00 KK7 **537.17** Comparison of two TMS plasticity protocols across two TMS labs. A. D. WU*; D. J. EDWARDS; M. IACOBONI; C. DEBLIECK; M. CORTES; R. R. RATAN; B. DOBKIN. *UCLA, UCLA, Burke Med. Res. Inst., Cornell Univ., UCLA.*

9:00 KK8 **537.18** Characterization of thoracic (Th9), complete transection spinal cord injury model of muscle spasticity in the rat. J. A. CORLETO*; M. BRAVO-HERNANDEZ; O. KAKINOHANA; M. HEFFERAN; M. MARSALA. *UCSD, Ctr. de Investigacion y de Estudios Avanzados, UCSD, Neuralstem Inc.*

10:00 KK9 **537.19** Multi muscle neuromuscular stimulation of the lower limbs: Effect on Motor Pools. G. F. FORREST*; E. JOHNSON; A. RAMANUJAM; E. GARBARINI; R. LAMB. *Kessler Fndn. Res. Ctr., Kessler Fndn. Inc.*

11:00 KK10 **537.20** Optogenetic mapping of forelimb movement in the rat cervical spinal cord. S. E. MONDELLO*; M. D. SUNSHINE; P. J. HORNER; C. T. MORITZ. *Univ. of Washington, Univ. of Washington.*

8:00 KK11 **537.21** Inhibition of Nav1.8 channels reduces pain-related behavior after spinal cord injury. M. A. ODEM*; J. K. HADDEN; R. J. CROOK; J. DU; S. M. CARLTON; Q. YANG; E. T. WALTERS. *UT Hlth. Sci. Ctr., Univ. of Texas Med. Br.*

9:00 KK12 **537.22** Sympathetic preganglionic and afferent stimulation-evoked responses in paravertebral thoracic chain ganglia. M. HALDER*; M. SAWCHUK; S. HOCHMAN. *Emory Univ., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med.*

POSTER

538. Circuit Connectivity

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 KK13 **538.01** Conditional silencing of adult rat spinal locomotor circuitry induces hopping. A. POCRATSKY*; A. S. RIEGLER; J. R. MOREHOUSE; D. A. BURKE; J. T. HARDIN; R. M. HOWARD; D. S. K. MAGNUSON; S. R. WHITTEMORE. *Univ. of Louisville, Univ. of Louisville, Univ. of Louisville.*

9:00 KK14 **538.02** Proprioceptive feedback affects antidromic activity in sensory afferents of crayfish legs. B. CHUNG; J. BACQUE-CAZENAVE; D. CATTAERT; D. H. EDWARDS*. *Georgia State Univ., Univ. of Bordeaux I.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 KK15 **538.03** Experimental and theoretical studies concerning an inter-segmental neuronal network controlling locomotion, and application of the results to locomotion with more than six legs. M. J. GRABOWSKA*; T. I. TÓTH; A. BÜSCHGES; A. BORGMANN; S. DAUN-GRUHN. *Univ. of Cologne.*

11:00 KK16 **538.04** Electrical coupling influences the synchrony and pattern of spiking in identified peptidergic neurons. C. C. BEEKHARRY*; N. S. MAGOSKI. *Queen's Univ.*

8:00 KK17 **538.05** Recruitment of spinal neurons recorded with GCaMP6 during different modes of locomotion in the larval zebrafish. K. E. SEVERI*; A. PRENDERGAST; K. KAWAKAMI; C. WYART. *ICM, INSERM UMRS 1127, F-75013, CNRS UMR 7225, F-75013, UPMC Univ. Paris 06, F-75005, Div. of Mol. and Developmental Biology, Natl. Inst. of Genet.*

9:00 KK18 **538.06** Organization of the descending locomotor drive from the mesencephalic locomotor region to reticulospinal neurons in salamanders. D. RYCZKO*; F. AUCLAIR; J. CABELGUEN; R. DUBUC. *Univ. Montreal, Univ. du Quebec a Montreal, INSERM U862 - Neurocentre Magendie, Motor Syst. Dis. Team.*

10:00 KK19 **538.07** The anatomy and physiology of the diffuse chemosensory system in the sea lamprey. G. DAGHFOUS*; F. BLUMENTHAL; F. AUCLAIR; M. MANSOURI; B. ZIELINSKI; R. DUBUC. *Univ. Montreal, Univ. du Quebec a Montreal, Univ. of Windsor.*

11:00 KK20 **538.08** ChannelRhodopsin mediated mapping of CerebroSpinal Fluid Contacting Neuron connectivity in the zebrafish spinal cord. J. HUBBARD*; C. STOKES; S. NUNES-FIGUEIREDO; C. WYART. *Inst. Du Cerveau Et De La Moelle Epiniere.*

8:00 KK21 **538.09** Effect on intrinsic bursting on restoration of rhythmic activity in respiratory network. N. TOPORIKOVA*; N. MELLEN. *Washington and Lee Univ., Univ. of Louisville.*

9:00 KK22 **538.10** Network properties underlying vocal production in the African clawed frog, Xenopus laevis. K. LAWTON; J. PERRY; E. ZORNIK*. *Reed Col.*

10:00 KK23 **538.11** Computational modeling and qualitative analysis of spinal circuits underlying locomotor pattern generation and frequency-dependent left-right coordination. B. BACAK*; Y. MOLKOV; I. RYBAK. *Drexel Univ. Col. of Med., Indiana Univ. - Purdue Univ. Indianapolis.*

11:00 KK24 **538.12** Computational modeling of neural circuits in the mammalian spinal cord involved in left-right coordination of neural activity during locomotion. N. A. SHEVTSOVA*; A. E. TALPALAR; S. N. MARKIN; R. M. HARRIS-WARRICK; O. KIEHN; I. A. RYBAK. *Drexel Univ. Col. of Med., Karolinska Inst., Cornell Univ.*

8:00 KK25 **538.13** Synaptic modulation of spinal motoneurons during locomotor-like rhythmic activity in the alpha-chimaerin knockout mouse *in vitro.* H. NISHIMARU*; R. KOBAYASHI; S. ITOHARA; T. IWASATO. *Fac. Medicine, Univ. Tsukuba, Natl. Inst. of Informatics, SOKENDAI, RIKEN BSI, Natl. Inst. of Genet., SOKENDAI.*

9:00 KK26 **538.14** Corollary discharge informs cranial motor systems about locomotor activity. R. BANCHI; S. HÄNZI; H. STRAKA; B. P. CHAGNAUD*. *Ludwig Maximilians Univ.*

10:00 KK27 **538.15** Developmental modifications of premotor excitatory drive match changes in motoneuron properties. C. M. VANDUNK*; S. KISHORE; D. L. MCLEAN. *Northwestern Univ.*

11:00 KK28 **538.16** Investigating weakly coupled oscillators in the stick insect locomotor system. A. BORGMANN; C. MANTZIARIS; N. ROSJAT; S. GRUHN; A. BUSCHGES*. *Univ. Koln.*

8:00 KK29 **538.17** ▲ Using dynamic causal modeling in the study of the stick insect locomotor system. N. ROSJAT*; T. TÓTH; C. MANTZIARIS; A. BORGMANN; S. GRUHN. *Univ. of Cologne.*

9:00 KK30 **538.18** ● Reconstructing the connectivity of the larval zebrafish spinal cord. F. SVARA*; J. KORNFELD; J. BOLLMANN; W. DENK. *Max Planck Inst. For Med. Res.*

10:00 KK31 **538.19** Investigating the cellular basis of the differential recruitment of motoneurons in the *Drosophila* larval locomotor system. M. ZWART*; S. R. PULVER; R. D. FETTER; A. CARDONA; M. LANDGRAF. *HHMI Janelia Farm, Univ. of Cambridge.*

11:00 KK32 **538.20** The role of glycinergic inhibition in the locomotor rhythm of the lamprey hindbrain. J. T. BUCHANAN*; A. A. RASMUSSEN; K. M. KENNEY; J. M. SCHEEL. *Marquette Univ.*

8:00 LL1 **538.21** V3 spinal interneurons are crucial in regulating weight-loading movement. H. ZHANG*; H. HAMODAT; Y. ZHANG. *Dalhousie Univ.*

9:00 LL2 **538.22** Unraveling the leech connectome. J. PIPKIN*; W. B. KRISTAN. *Univ. of California At San Diego.*

10:00 LL3 **538.23** Neuronal cerebrospinal fluid-contacting cells in lamprey are sensitive to fluid movement. E. JALALVAND; B. ROBERTSON; P. WALLEN*; S. GRILLNER. *Karolinska Inst, Dept Neurosci.*

11:00 LL4 **538.24** Membrane resonance influences the frequency of an electrically coupled network. Y. CHEN*; F. NADIM; H. ROTSTEIN. *New Jersey Inst. of Technol.*

8:00 LL5 **538.25** Eupnea, tachypnea, and autoresuscitation in a closed-loop respiratory control model. C. O. DIEKMAN*; C. G. WILSON; P. J. THOMAS. *Dept. of Math. Sci., New Jersey Inst. of Technol., Lloma Linda Univ., Case Western Reserve Univ.*

POSTER

539. Motor Neurons and Muscle

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 LL6 **539.01** Sciatic nerve injury affects osseointegration of hydroxyapatite implant in bone defect of rat`s tibia. R. N. ISAYAMA*; I. O. LARAIA; M. S. PETTIAN; E. A. GALDEANO; G. R. DOS SANTOS; M. R. DA CUNHA. *UNASP-SP, UNASP-SP, Faculdade de Medicina de Jundiaí (FMJ), UNIANCHIETA-Jundai.*

9:00 LL7 **539.02** Video based behavioural analysis of rodents on the rotarod provides additional parameters to discriminate between drug effects. R. WILLEMS*; M. MAHIEU; L. VER DONCK. *Janssen Res. & Development, A Div. of Janssen Pharmaceutica NV.*

10:00 LL8 **539.03** Nerve crush induces a smaller loss of central IA afferent synapses (VGLUT1) on injured motoneurons than complete nerve transection. T. M. ROTTERMAN*; A. DWARAKANATH; P. NARDELLI; T. C. COPE; F. J. ALVAREZ. *Emory Univ., Emory Univ., Wright State Univ.*

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11:00 LL9 **539.04** GAL-160, a peripheral chemoreceptor stimulant, selectively increases hypoglossal nerve and genioglossal muscle activities during unobstructed and obstructed breathing in rats. S. M. BABY*; S. I. MARDIROSIAN; T. SCHEMM; S. PENG; F. J. GOLDER; D. E. MACINTYRE. *Galleon Pharmaceuticals,Inc, Galleon Pharmaceuiticals, Inc.*

8:00 LL10 **539.05** Measuring twitch interpolation and motor evoked potentials in the first dorsal interosseous muscle: Transcranial magnetic stimulation versus peripheral nerve stimulation. M. R. RAFFERTY*; H. E. KIM; D. M. CORCOS; S. MADHAVAN. *Univ. of Illinois at Chicago, Northwestern Univ., Univ. of Illinois at Chicago.*

9:00 LL11 **539.06** Circadian modulation of neuromotor control. H. O. DE LA IGLESIA*; J. J. GILE; O. JOHNSON; B. SMARR; H. CHIZECK. *Univ. of Washington, Univ. of Washington, UC Berkeley.*

10:00 LL12 **539.07** Functional implications of anterograde tracing in the mouse corticospinal tract. H. SCHRODER*; S. TOCHMAFSCHAN; B. DENGLER; S. ARNDT. *Univ. of Cologne, Utrecht Univ.*

11:00 LL13 **539.08** Motor-execution network activity following stroke and rehabilitation. S. BAJAJ*; D. DRAKE; A. BUTLER; M. DHAMALA. *Dept. of Physics & Astronomy, Georgia State Univ., Byrdine F. Lewis Sch. of Nursing & Hlth. Professions, Georgia State Univ., Dept. of Veteran's Affairs, Atlanta Rehabil. Res. and Develop. Ctr. of Excellence, Dept. of Physics and Astronomy, Georgia State Univ.*

8:00 LL14 **539.09** ▲ Sensory deficits in mouse models of ALS. S. VAUGHAN; S. ZHANG*; Z. KEMP; T. HATZIPETROS; F. VIEIRA; G. VALDEZ. *Virginia Tech. Carilion Res. Inst., ALS Therapy Develop. Inst., Dept. of Biol. Sciences, Virginia Tech.*

9:00 LL15 **539.10** Pacific Ciguatoxin-1 modulates motor function and EEG activity in mice. G. KUMAR*; Y. WANG; N. P. B. AU; Y. L. MAK; L. L. CHAN; P. K. S. LAM; L. L. H. CHAN; C. H. E. MA. *City Univ. of Hong Kong, City Univ. of Hong Kong, City Univ. of Hong Kong.*

10:00 LL16 **539.11** Age-related strength loss is due to peripheral muscle weakness. Y. CHANG*; N. HUANG; F. CHANG; Y. CHUANG. *Chang Gung Univ.*

11:00 LL17 **539.12** ▲ An investigation of the mirror neuron system activation in expert dancers and their performance on a novel task. L. PACKARD*; C. J. KETCHAM. *Elon Univ., Elon Univ.*

8:00 LL18 **539.13** Nerve injury-induced mitochondrial fission is an essential adaptive response to maintain neuronal survival and promote axonal regeneration. S. KIRYU-SEO*; H. TAMADA; Y. KATO; N. ISHIHARA; M. NOMURA; K. MIHARA; H. KIYAMA. *Nagoya University, Grad. Sch. of Med., Kurume University, Inst. of Life Sci., Kyushu University,Graduate Sch. of Med. Sci., Kyushu University, Grad. Sch. of Med. Sci.*

9:00 LL19 **539.14** Altered overlapping pattern of hand movement representation by electromyogram triggered neuromuscular stimulation in humans. W. TSUCHIHASHI*; T. ONO; S. KASUGA; J. USHIBA. *Keio Univ., Saiseikai Kanagawa-ken Hosp., Keio Univ.*

10:00 LL20 **539.15** ● Optogenetic inhibition of peripheral nervous system circuitry. C. GORINI*; S. M. IYER; K. L. MONTGOMERY; S. YOUNG; H. SCUTT; A. CHRISTENSEN; D. J. CLARK; K. DEISSEROTH; S. L. DELP. *Stanford Univ., Stanford Univ.*

11:00 LL21 **539.16** Effect of acute upside down body posture on human respiratory control. J. E. BUTLER*; A. L. HUDSON; F. JOULIA; A. A. BUTLER; R. C. FITZPATRICK; S. C. GANDEVIA. *Neurosci. Res. Australia, Univ. of New South Wales, Univ. of Toulon.*

8:00 LL22 **539.17** Sensory-parietal cortex stimulation for enhancing motor recovery in chronic subcortical capsular infarct model. R. KIM*; J. CHO; D. KIM; J. PARK; M. LEE; H. KIM. *Gwangju Inst. of Sci. and Technol., Chonnam Natl. Univ.*

9:00 LL23 **539.18** Group Ia reciprocal excitation between ankle antagonists in a plantigrade animal. A. S. DEARDORFF*; R. E. W. FYFFE; T. C. COPE. *Wright State Univ., Wright State Univ., Wright State Univ.*

10:00 LL24 **539.19** Effects of 60-min sciatic nerve stimulation immediately after cut and repair of feline soleus and lateral gastrocnemius nerves on locomotor EMG activity of ankle muscles. A. PANTALL*; R. J. GREGOR; R. MEHTA; B. I. PRILUTSKY. *Michigan State Univ., USC, Georgia Inst. of Technol.*

11:00 LL25 **539.20** Dependence of the nociceptive withdrawal response of the tail on initial angle in intact, unanesthetized rats. J. KIM*; S. B. DONAIRE; R. E. MULLINS; J. J. YANG; C. L. CLELAND. *James Madison Univ.*

8:00 LL26 **539.21** ▲ Rat hind limb nociceptive withdrawal response to heat stimuli depends on initial paw posture but not stimulus location. K. SEAMON*; M. HARTMANN; C. A. CHRZAN; M. N. KABORE; K. A. MOORE; C. L. CLELAND. *James Madison Univ.*

9:00 LL27 **539.22** Combination electrical stimulation and pulsatile acetylcholine release therapy to preserve neuromuscular juntion health in peripheral nerve injury. J. R. ELES*; C. L. KOLARCIK; K. A. CATT; X. T. CUI. *Univ. of Pittsburgh, Ctr. for Neural Basis of Cognition, Univ. of Pittsburgh, McGowan Inst. for Regenerative Med.*

10:00 LL28 **539.23** Time course "dose" of cross-education of strength after handgrip training. Y. SUN*; T. BARSS; T. KLARNER; E. ZEHR. *Rehabil. Neurosci. Laboratory, Univ. Victoria, ICORD, Ctr. of Biomed. Research, Univ. of Victoria, Div. of Med. Science, Univ. of Victoria.*

11:00 MM1 **539.24** Phase-dependent cutaneous reflex reversal during walking emerges from reflex signs produced by afferents in discrete foot sole regions. T. KOMIYAMA*; T. NAKAJIMA; E. P. ZEHR; S. SUZUKI; R. A. MEZZARANE; H. OHTSUKA; G. FUTATSUBASHI; T. KLARNER; T. S. BARSS. *Chiba Univ., Kyorin University, Sch. of Med., Univ. of Victoria, Univ. of Victoria, Univ. of Victoria, Univ. of Brasília, Hlth. Sci. Univ. of Hokkaido.*

8:00 MM2 **539.25** Arm and leg cycling training to improve neurological function and walking ability after stroke. T. KLARNER*; T. S. BARSS; Y. SUN; C. KAUPP; P. LOADMAN; E. ZEHR. *Rehabil. Neurosci. Laboratory, Univ. Victoria, Ctr. for Biomed. Res., ICORD.*

9:00 MM3 **539.26** Effects of presynaptic inhibition on bilateral fluctuations of H- and T-reflexes of the soleus muscle. R. A. MEZZARANE*; F. MAGALHÃES; A. KOHN. *Univ. of Brasilia (unb), Univ. of Sao Paulo, Univ. of Sao Paulo.*

10:00 MM4 **539.27** Effects of enhanced sensory feedback on cross-education of strength in the wrist extensors. T. S. BARSS*; T. KLARNER; K. INOUYE; E. ZEHR. *Rehabil. Neurosci. Laboratory, Univ. of Victoria, ICORD, Ctr. for Biomed. Research, Univ. of Victoria, Div. of Med. Sciences, Univ. of Victoria.*

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11:00 MM5 **539.28** Limb-specific control of interlimb reflex transmission during walking in humans. S. SUZUKI*; T. NAKAJIMA; G. FUTATSUBASHI; R. A. MEZZARANE; H. OHTSUKA; T. KOMIYAMA. *The United Grad. Sch. of Education, Tokyo Gakugei Univ., Kyorin University, Sch. of Med., Chiba Univ., Jobu Univ., Univ. of Brasília, Hlth. Sci. Univ. of Hokkaido.*

8:00 MM6 **539.29** Changes in acoustic startle reflex in the upper trapezius during periods of low and high psychosocial stress. R. J. MARKER*; K. S. MALUF. *Univ. of Colorado Anschutz Med. Campus.*

9:00 MM7 **539.30** Quantification of patellar tendon reflex response using an iPod wireless gyroscope application with experimentation conducted in Lhasa, Tibet and post-processing conducted in Flagstaff, Arizona through wireless Internet connectivity. R. C. LEMOYNE*; T. MASTROIANNI. *Independent, Northern Arizona Univ., Independent.*

POSTER

540. Cortex and Nuclei: Anatomy and *In Vitro* Studies

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 MM8 **540.01** Diversity of Purkinje cell morphology and physiology in the cerebellum of the adult zebrafish. V. Z. HAN*; J. P. WELSH. *Seattle Children's.*

9:00 MM9 **540.02** ▲ Dicer knockout mice suggest critical role of micro-rna in cerebellar cell proliferation, organization, and migration. E. ARNESON*; T. MIGHELL; M. BOSCH; G. SOUKUP; C. BRADFIELD; A. SHIBATA. *Creighton Univ., Creighton Univ.*

10:00 MM10 **540.03** Ethanol disrupts transmissoin through the cerebellar cortex via GABAA and non-GABAA receptor-mediated mechanisms in C57BL/6J and DBA/2J mice. J. KAPLAN*; D. J. ROSSI. *Oregon Hlth. and Sci. Univ., Washington State Univ.*

11:00 MM11 **540.04** ● Loss of β_4 reduces the pacemaker frequency of cerebellar Purkinje neurons in an ataxic mouse model. B. BENEDETTI*; B. E. FLUCHER. *Innsbruck Med. Univ.*

8:00 MM12 **540.05** The molecular profile of ion channels in cultured cerebellar neurons from mouse. K. J. CURTICE*; L. S. LEAVITT; T. R. HARRIS; K. CHASE; R. W. TEICHERT; M. P. HORVATH; B. M. OLIVERA. *Univ. of Utah, Univ. of Utah.*

9:00 MM13 **540.06** Intrinsic and synaptic properties of identified nucleo-olivary cells of the deep cerebellar nuclei. M. NAJAC*; I. M. RAMAN. *Northwestern Univ.*

10:00 MM14 **540.07** Ionic mechanisms shaping DCN responses to pauses in PC background firing. C. M. PEDROARENA*. *Hertie-Inst EKU-Tübingen.*

11:00 MM15 **540.08** Upregulation of mGluR1/5-modulated current in the deep cerebellar nuclei of male Gabrb3 mutant mice and its effect on cerebellar behavior. A. TURNOWCHYK*; K. J. PALARZ; I. M. RAMAN. *Northwestern Univ.*

8:00 MM16 **540.09** *In vivo* two-photon imaging of cortico-cerebellar mossy fiber synapses. D. RYLKOVA*; Z. YE; A. CRANK; D. L. LINDEN. *Johns Hopkins Univ.*

9:00 MM17 **540.10** Mossy fiber excitation of cerebellar nuclear cells preserves phase-locked spiking resulting from synchrony of Purkinje cells. Y. WU*; I. M. RAMAN. *Northwestern Univ.*

10:00 MM18 **540.11** Optogenetic mapping of inhibitory circuit between Purkinje cells and cerebellar molecular layer interneurons. J. KIM*; G. J. AUGUSTINE. *LKC Med. School-NTU, Korea Inst. of Sci. and Technol.*

11:00 MM19 **540.12** A tale of two circuits - parallel processing in the rat cerebellum. G. J. WOJACZYNSKI*; J. P. CARD. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

POSTER

541. Transmitters and Neuromodulation

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 MM20 **541.01** Striatal interneurons expressing calretinin in 6-OHDA-lesioned mice. S. PETRYSZYN*; D. GAGNON; J. BEAULIEU; A. PARENT; M. PARENT. *CRIUSMQ.*

9:00 MM21 **541.02** Serotonin innervation of the striatum in a primate model of Parkinson's disease. D. GAGNON*; T. DIPAOLO; M. PARENT. *CR-IUSMQ, CR-CHU.*

10:00 MM22 **541.03** The contribution of the dopamine system to selection of motor programs. J. PÉREZ*; A. KARDAMAKIS; B. ROBERTSON; S. GRILLNER. *Karolinska Inst.*

11:00 MM23 **541.04** The pedunculopontine nucleus: A precise anatomical and neurochemical description in human and non-human primates. L. GOETZ*; M. WALLMAN; A. PARENT; M. PARENT. *CRIUSMQ, Univ. Laval.*

8:00 MM24 **541.05** Serotonin innervation of the internal and external pallidum in a primate model of Parkinson's disease. L. EID*; D. GAGNON; C. WHISSEL; T. DIPAOLO; A. PARENT; M. PARENT. *Univ. Laval, Univ. Laval.*

9:00 MM25 **541.06** Cholinergic neurons intrinsic to primate external pallidum. A. PARENT*; L. EID; M. PARENT. *Psychiat. & Neurosci. Dept, Univ. Laval.*

10:00 MM26 **541.07** Similarities and differences in GABA and glutamate-mediated modulation of striatal dopamine release between mouse and guinea pig. B. O'NEILL*; J. C. PATEL; M. E. RICE. *New York Univ. Sch. of Med.*

11:00 MM27 **541.08** Differential expression of cb1 receptor-dependent long-term depression at corticostriatal and thalamostriatal synapses. Y. WU; J. KIM; V. L. TAWFIK; G. SCHERRER; J. B. DING*. *Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med., Stanford Univ.*

8:00 MM28 **541.09** Essential role of VGLUT3 in striatal signaling and behavior. C. B. DIVITO*; H. ZHANG; E. C. HOLMSTRAND; S. G. WILLIAMS; T. F. SUN; M. E. RUBIO; D. SULZER; R. H. EDWARDS; R. P. SEAL. *Univ. of Pittsburgh, Thomas Jefferson Univ., Univ. of Pittsburgh, Columbia Univ., Univ. of California, San Francisco.*

9:00 MM29 **541.10** Dual recording of real-time dopamine release and presynaptic calcium transients reveals distinct properties of dopaminergic afferents in dorsal and ventral striatum. C. SGOBIO; H. CAI; D. M. LOVINGER*. *Natl. Inst. Aging, Natl. Inst. Alcohol Abuse & Alcohol.*

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10:00 MM30 **541.11** Evidence against dopamine as a basal ganglia regulator of behavioral disengagement. M. N. TERMINEL*; T. MORENO; A. E. HERNANDEZ; J. RAMOS; E. CASTAÑEDA. *Univ. of Texas At El Paso.*

11:00 MM31 **541.12** Opioidergic control of striatal low threshold spiking interneurons (LTSIs). R. ELGHABA; J. BERWICK*; E. BRACCI. *Univ. of Sheffield, Univ. Sheffield, Univ. of Sheffield.*

8:00 MM32 **541.13** Regionally distinct dopamine release dynamics between striosome and matrix compartments of the striatum. A. G. SALINAS*; M. I. DAVIS; K. T. BLACKWELL; D. M. LOVINGER; Y. MATEO. *Natl. Inst. On Alcohol Abuse and Alcoholism, George Mason Univ.*

9:00 MM33 **541.14** Lisophosphatydilinosytol modulates GABA release in substantia nigra pars reticulata trough GPR55 receptor. R. SANCHEZ*; G. LOPEZ-RAMIREZ; F. PAZ-BERMUDEZ; M. RODRÍGUEZ-SÁNCHEZ; M. MUNOZ-ARENAS; B. FLORAN. *CINVESTAV, BUAP.*

10:00 MM34 **541.15** Cannabinoids disrupt the cortical information transmission through the sensorimotor circuit of the basal ganglia. T. MORERA-HERRERAS*; I. BUSTINZA; A. GUTIERREZ; L. UGEDO. *Dept. Pharmacology. Univ. of the Basque Count.*

11:00 MM35 **541.16** Selective D3 dopamine receptor activation reduces the head twitch response and improves cortico-striatal alterations induced by 1-(2,5-dimethoxy-4-iodophenyl)-2-aminopropane (DOI). C. RANGEL BARAJAS*; A. ESTRADA-SÁNCHEZ; M. MALIK; R. H. MACH; R. R. LUEDTKE; G. V. REBEC. *Indiana Univ., Univ. of North Texas Hlth. Sci. Ctr., Univ. of California Los Angeles, Univ. of Pennsylvania Sch. of Med.*

8:00 MM36 **541.17** Activation of D3 dopamine receptors by the novel full agonist WC 44 improves dysregulated corticostriatal neuronal processing related to drug-induced head twitching. A. N. STRICKHOLM*; A. M. ESTRADA-SANCHEZ; C. RANGEL-BARAJAS; M. MALIK; R. MACH; R. LUEDTKE; G. V. REBEC. *Indiana Univ., Intellectual and Developmental Disabilities Res. Center, Semel Inst., Univ. of North Texas Hlth. Sci. Ctr., Univ. of Pennsylvania Sch. of Med.*

9:00 NN1 **541.18** Cholinergic mechanisms of DBS in entopeduncular nucleus. F. LUO*; T. CHOMIAK; Z. KISS. *Hotchkiss Brain Inst.*

POSTER

542. Plasticity of Voluntary Movements

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 NN2 **542.01** ● TMS can selectively activate and condition two different sets of excitatory synaptic inputs to corticospinal neurones in human. M. SOMMER; K. D'OSTILIO; M. CIOCCA; R. HANNAH; P. HAMMOND; S. M. GOETZ; R. CHIEFFO; J. A. CHEN; A. V. PETERCHEV; N. NEEF; W. PAULUS; J. C. ROTHWELL*. *Inst. Neurol, Univ. of Göttingen, 3MoVeRe Group, Cyclotron Res. Ctr., Fondazione IRCCS Ca'Granda, Ospedale Maggiore Policlinico, Duke Univ., Tech. Univ., Scientific Inst. Hosp. San Raffaele, China Med. Univ. Hosp., Bernstein Focus Neurotechnology.*

9:00 NN3 **542.02** Aerobic exercise modulates the cortical response to motor training. A. M. SINGH*; J. L. NEVA; W. R. STAINES. *Univ. of Waterloo.*

10:00 NN4 **542.03** Evaluating the role of the premotor cortex in early somatosensory processing using somatosensory evoked potentials (SEPs) and continuous theta burst stimulation (cTBS). M. J. BROWN*; J. L. NEVA; A. M. SINGH; W. R. STAINES. *Univ. of Waterloo.*

11:00 NN5 **542.04** Changes in corticospinal excitability induced by paired associative transcranial alternating current stimulation. E. MCNICKLE*; R. G. CARSON. *Trinity Col. Dublin, Queen' Univ. Belfast.*

8:00 NN6 **542.05** Changes in neuronal responses induced by paired associative nerve stimulation. B. HABEKOST*; S. N. BAKER. *Inst. of Neurosci.*

9:00 NN7 **542.06** ▲ Reliability of measures of motor cortical inhibition derived from transcranial magnetic stimulation. A. VIRANI*; D. RADKE; T. DAVIDSON; F. TREMBLAY. *Univ. of Ottawa, Univ. of Ottawa, Univ. of Ottawa.*

10:00 NN8 **542.07** ▲ Hemispheric inhibition between motor cortices: A reliability study of TMS-derived measures of interhemispheric inhibition. D. P. RADKE*; A. VIRANI; T. DAVIDSON; F. TREMBLAY. *Bruyère Res. Inst.*

11:00 NN9 **542.08** ● Modulation of transcallosal inhibition in the motor cortex by transcranial direct current stimulation (tDCS). T. DAVIDSON*; F. TREMBLAY; M. BOLIC. *Univ. of Ottawa, Bruyère Res. Inst., Univ. of Ottawa, Univ. of Ottawa.*

8:00 NN10 **542.09** Hemispheric differences in modulation of corticospinal excitability associated with mental tasks. L. FERRON*; F. TREMBLAY. *Univ. of Ottawa.*

9:00 NN11 **542.10** Effects of stress on motor map expression and behaviour. K. A. SCULLION*; A. KIM; M. GRAY; M. N. HILL; G. C. TESKEY. *Univ. of Calgary.*

10:00 NN12 **542.11** Changes of corticospinal tract after wearing prosthesis in serial bilateral below knee amputation. S. KANG*; D. KIM; K. SEO; J. KIM. *Chung-Ang Univ. Col. of Med., Chung-Ang Univ. Col. of Med.*

11:00 NN13 **542.12** Influence of BDNF polymorphism on neurophysiology in human motor cortex. R. CASH*; K. UDUPA; R. CHEN. *Toronto Western Res. Inst.*

8:00 NN14 **542.13** Brief high intensity cycling enhances BDNF release and locomotor learning. E. E. HELM*; K. MATT; K. KIRSCHNER; D. REISMAN. *Univ. of Delaware.*

9:00 NN15 **542.14** (In) Activity-induced structural changes of the cerebellar cortex noradrenergic fibers. H. NEDELESCU*; K. TATEYAMA; T. CHOWDHURY; G. WABLE; G. ARBUTHNOTT; C. AOKI. *Okinawa Inst. of Sci. and Technol. Grad. Univ., Univ. of Antwerp, New York Univ.*

10:00 NN16 **542.15** Frontal and cerebellar networks interact to determine potential for motor cortex plasticity. J. L. MIRDAMADI*; L. Y. SUZUKI; S. K. MEEHAN. *Univ. of Michigan.*

11:00 NN17 **542.16** Short-term memory requirements decrease potential for plasticity in motor cortex. L. Y. SUZUKI; J. L. MIRDAMADI; M. SIERANT; S. K. MEEHAN*. *Univ. of Michigan.*

8:00 NN18 **542.17** Separate representations of the unimpaired and the impaired forelimbs in primary motor cortex following neonatal pyramidotomy in rats. T. WEN*; D. GUPTA; J. B. CARMEL. *Burke Med. Res. Inst., Brain and Mind Res. Inst.*

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9:00 NN19 **542.18** The effect of motor point associative stimulation and tDCS on manual dexterity and neurophysiology of the motor cortex. N. HOSEINI*; H. J. BLOCK. *Indiana Univ.*

10:00 NN20 **542.19** Myelin water fraction imaging to evaluate white matter content changes after upper-limb training in a semi-immersive virtual reality environment. B. LAKHANI*; J. N. JACKSON; M. R. BORICH; A. L. MACKAY; L. A. BOYD. *Univ. of British Columbia, Emory Univ.*

11:00 NN21 **542.20** ● Vagus nerve stimulation dependent enhancement of cortical plasticity requires cholinergic innervation of the cortex. D. HULSEY*; S. HAYS; N. KHODAPARAST; R. CASAVANT; A. RUIZ; P. DAS; E. NUTTING; X. CARRIER; M. IYENGAR; I. QUARESHI; S. SULTANA; R. RENNAKER, II; M. KILGARD. *The Univ. of Texas At Dallas, Microtransponder Inc.*

8:00 NN22 **542.21** Amputation-related changes in inter-hemispheric interactions are reversible through transplantation of the human hand. K. F. VALYEAR*; B. A. PHILIP; C. L. KAUFMAN; J. E. KUTZ; S. H. FREY. *Univ. of Missouri, Christine M. Kleinert Inst.*

9:00 NN23 **542.22** Anodal transcranial direct current stimulation (tDCS) enhances prolonged motor skill learning in chronic stroke patients. M. HAMOUDI; H. M. SCHAMBRA; L. G. COHEN; A. SCHOECHLIN-MARX; B. FRITSCH; J. REIS*. *Univ. of Freiburg, The Neurolog. Inst. of New York Columbia Univ. Med. Ctr., Natl. Inst. of Neurolog. Disorders and Stroke, NIH.*

10:00 NN24 **542.23** Motor skill learning in the acute phase of stroke: Does training-induced plasticity surpass spontaneous biological recovery? P. PAPE; A. SCHÖCHLIN-MARX; B. FRITSCH*; J. REIS. *Univ. of Freiburg/ Neurocenter.*

11:00 NN25 **542.24** Cortical and behavioral correlates of a conditioning protocol that combines action observation with peripheral electrical nerve stimulation. A. BISIO*; L. AVANZINO; N. GUEUGNEAU; T. POZZO; P. RUGGERI; M. BOVE. *Univ. Genoa, Italian Inst. of Technol.*

8:00 NN26 **542.25** Neuroplasticity within repetitive robotic arm training changes with age. C. L. MASSIE*; S. S. KANTAK; P. NARAYANAN; G. F. WITTENBERG. *Univ. of Maryland Sch. of Med., Moss Rehabil. Res. Inst., Univ. of Maryland Sch. of Med.*

9:00 NN27 **542.26** Short-term plasticity in human motor cortex is associated with changes in cerebral blood flow delivery. R. HERMOSILLO; K. FJELD; T. BURNETT; D. CHENG; F. COLINO; G. BINSTED; P. VAN DONKELAAR*. *UBC - Okanagan.*

10:00 NN28 **542.27** Physical training improves brain connectivity. H. E. HULSHOFF POL*; A. SVÁTKOVÁ; R. MANDL; T. SCHEEWE; R. KAHN; W. CAHN. *Brain Ctr. Rudolf Magnus, Univ. Med. Ctr. Utrecht, CEITEC.*

11:00 NN29 **542.28** Targeting the right dorsolateral prefrontal cortex with transcranial direct current stimulation during a concurrent implicit and explicit sequence task. B. GREELEY*; R. SEIDLER. *Univ. of Michigan, Dept. of Psychology.*

POSTER

543. Luteinizing Hormone Secretion, Puberty, and Seasonality

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 NN30 **543.01** Immunolesions of melanopsin receptive neurons in the adult Pekin drake attenuates the hormonal reproductive axis. G. S. FRALEY*. *Hope Col.*

9:00 NN31 **543.02** Season- and steroid-dependent regulation of D2 dopamine receptor, kisspeptin, and neurokinin B in KNDy cells of the ovine arcuate nucleus. P. W. WEEMS*; R. L. GOODMAN; L. M. COOLEN; M. N. LEHMAN. *Univ. of Mississippi Med. Ctr., West Virginia Univ., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

10:00 NN32 **543.03** The stimulatory effect of Neuromedin U on pulsatile LH secretion: Insights from a seasonal mammal. P. GRACHEV*; R. B. MCCOSH; J. A. LOPEZ; G. L. NESSELROD; M. VALENT; S. L. HARDY; J. M. CONNORS; S. M. HILEMAN; R. L. GOODMAN. *West Virginia University, Sch. of Med.*

11:00 NN33 **543.04** Kappa opioid receptor is present within a majority of KNDy neurons in the ewe. C. F. WITTY*; P. W. WEEMS; R. L. GOODMAN; L. M. COOLEN; M. N. LEHMAN. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., West Virginia Univ., Univ. of Mississippi Med. Ctr.*

8:00 NN34 **543.05** Is dynorphin involved in the prepubertal suppression of LH secretion by estradiol in female sheep? J. A. LOPEZ; L. J. MEADOWS; R. B. MCCOSH; R. L. GOODMAN*; S. M. HILEMAN. *West Virginia Univ., West Virginia Univ.*

9:00 NN35 **543.06** Neuronal insulin signaling is not required for reproductive maturation or competency in mice. M. C. EVANS*; G. M. ANDERSON. *Univ. of Otago.*

10:00 NN36 **543.07** Evidence for a repressive role of zinc finger genes in the hypothalamic control of primate puberty. J. M. CASTELLANO; V. MATAGNE; A. LOMNICZI; C. TORO; M. TENA-SEMPERE; T. M. PLANT; S. R. OJEDA*. *Oregon Natl. Primate Ctr., Univ. of Cordoba, IMIBIC/HURS, Ctr. for Res. in Reproductive Physiology, and Magee Womens Res. Institute, Univ. of Pittsburgh Sch. of Med.*

11:00 OO1 **543.08** The role of the posterodorsal medial amygdala in pubertal timing in female rats. M. HU*; X. LI; B. P. HANLEY; Y. LIN; L. POSTON; S. L. LIGHTMAN; K. T. O'BYRNE. *King's Col. London, Univ. of Bristol.*

8:00 OO2 **543.09** The central role of substance p/nka in puberty onset and fertility. V. M. NAVARRO*; S. SIMAVLI; R. CARROLL; U. B. KAISER. *Brigham and Women's Hosp. / Harvard Med. Sch.*

9:00 OO3 **543.10** Increased luteinising hormone pulse frequency in a mouse model of polycystic ovarian syndrome. M. PRESCOTT*; C. J. MARSHALL; R. E. CAMPBELL. *Univ. of Otago.*

10:00 OO4 **543.11** Involvement of kndy neurons in luteinizing hormone surges induced by steroids. C. V. HELENA*; N. TOPORIKOVA; B. KALIL; A. M. STATHOPOULOS; J. A. ANSELMO-FRANCI; R. BERTRAM. *Florida State Univ., Washington and Lee Univ., Univ. of Sao Paulo, Florida State Univ.*

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11:00 OO5 **543.12** Estrogen modulates the interaction of leptin and nitrergic system in the brain areas involved in the control of the reproductive function in females rats. L. OLIVEIRA*; B. DEL-BIANCO BORGES; C. R. FRANCI. *Ribeirão Preto Med. School, Univ. of São Paulo.*

8:00 OO6 **543.13** Biphasic influence of substance P on LH secretion in female rats. S. Y. LI*; M. H. HU; X. F. LI; B. KALIL; T. M. PLANT; K. T. O'BYRNE. *King's Col. London, Univ. of Pittsburgh, and Magee-Womens Res. Inst., Univ. of Sao Paulo.*

9:00 OO7 **543.14** Effect of ovarian steroids in the response to oxytocin of anterior pituitary gonadotrophs from intact and ovariectomized female rats. A. E. GONZALEZ-IGLESIAS*; J. A. ARIAS-CRISTANCHO; P. A. FLETCHER; R. CRISTANCHO-GORDO; R. BERTRAM; J. TABAK. *Florida State Univ., Florida State Univ.*

10:00 OO8 **543.15** Deletion of estrogen receptor-α (ERα) from RFamide-related peptide-3 (RFRP-3) neurons disrupts the negative and positive feedback effects of estradiol on gonadotrophin secretion. M. Z. RIZWAN*; M. A. INGLIS; G. M. ANDERSON. *Univ. of Otago.*

POSTER

544. Sexual Differentiation

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 OO9 **544.01** Sex differences in medium spiny neuron electrophysiological properties in pre-pubertal rat dorsal striatum. D. M. DORRIS; J. CAO; J. MEITZEN*. *North Carolina State Univ.*

9:00 OO10 **544.02** Sex hormones and sex chromosomes separately influence brain structure of intact mice as seen by MRI. C. CORRE*; M. FRIEDEL; D. A. VOUSDEN; A. METCALF; S. SPRING; L. R. QIU; M. R. PALMERT; J. P. LERCH. *The Hosp. For Sick Children, The Hosp. For Sick Children.*

10:00 OO11 **544.03** BDNF immunolabeling in SNB motoneurons and levels in target musculature are not dependent on estrogens during postnatal development. L. M. RUDOLPH*; D. R. SENGELAUB. *Indiana Univ.*

11:00 OO12 **544.04** Sex differences of blood in DNA methylation. M. INOSHITA*; S. NUMATA; M. KINOSHITA; A. TAJIMA; I. IMOTO; T. OHMORI. *The Univ. of Tokushima, Inst. of Hlth. Biosciences, The Univ. of Tokushima Grad. Sch.*

8:00 OO13 **544.05** ▲ Gestational and trans-generational effects of Bisphenol-A on vasopressin immunoreactive AVP. J. GOLDSBY*; J. T. WOLSTENHOLME; E. F. RISSMAN. *Univ. of Virginia Sch. of Med.*

9:00 OO14 **544.06** Deciphering roles for CB1 versus CB2 endocannabinoid receptors in development of the amygdala. K. J. ARGUE*; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med.*

10:00 OO15 **544.07** Endocannabinoid-induced phagocytosis in the developing amygdala mediates a sex difference in cell genesis. J. W. VANRYZIN*; M. M. MCCARTHY. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore.*

11:00 OO16 **544.08** Sexual dimorphism in the expression of pituitary specific genes during rat development. I. BJELOBABA*; K. MAREK; S. S. STOJILKOVIC. *Natl. Inst. of Child Hlth. and Human Develop.*

8:00 OO17 **544.09** Sex difference and laterality in the number of astrocytes in the adult posterodorsal aspect of the medial amygdala of mice. D. R. PFAU*; N. J. HOBBS; S. M. BREEDLOVE; C. L. JORDAN. *Michigan State Univ., Michigan State Univ.*

9:00 OO18 **544.10** Aggressive behavior in progesterone receptor knockout (PRKO) mice. D. LALITSASIVIMOL*; C. K. WAGNER. *Univ. At Albany.*

10:00 OO19 **544.11** Serotonin promotes feminization of sexually dimorphic nuclei in a cell phenotype-specific manner. A. M. MADDEN*; N. E. SHTEYNBERG; A. A. BARTLETT; A. T. PAUL; S. L. ZUP. *Univ. of Massachusetts Boston.*

11:00 OO20 **544.12** ▲ Sex differences in the distribution of Calbindin-D28K immunoreactive cells in wildtype and progesterone receptor knock-out (PRKO) mice in adulthood. B. GROTH; D. LALITSASIVIMOL; C. K. WAGNER*. *Univ. At Albany, Univ. At Albany, Univ. Albany.*

8:00 OO21 **544.13** Effects of exposure to bisphenol A (BPA) during development on progesterone receptor expression in the medial preoptic nucleus of female rats. A. PHILLIPS; K. STRYKER; P. Q. MENNELLA*; C. K. WAGNER. *Univ. at Albany, Bay Path Col.*

POSTER

545. Neuroimmunology: Behavioral Effects

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 OO22 **545.01** Age-related impairments in the dynamic regulation of active microglia by astrocytes. D. M. NORDEN*; P. J. TROJANOWSKI; F. R. WALKER; J. P. GODBOUT. *The Ohio State Univ., Univ. of Newcastle.*

9:00 OO23 **545.02** The effects of surgery and morphine treatment on neuroinflammation and cognitive decline in aged rats. R. M. BARRIENTOS*; V. M. THOMPSON; M. M. KITT; L. R. WATKINS; S. F. MAIER. *Univ. Colorado Boulder.*

10:00 OO24 **545.03** ▲ Absence of mast cells disrupts grooming behavior in mice: Involvement of dopaminergic and histaminergic systems. M. I. SOLLOZO DUPONT*; F. GUZMAN-MEJÍA; C. GONZÁLEZ-ESPINOSA; C. LÓPEZ-RUBALCAVA. *Ctr. de Investigación y de Estudios Avanzados del IPN (CINVESTAV-IPN).*

11:00 OO25 **545.04** Acute but not chronic social stress activates microglia in the prefrontal cortex of CX3CR1-GFP reporter mice. M. L. LEHMANN*; R. B. SCHEINERT; M. E. DEAN; H. A. COOPER; M. HERKENHAM. *NIH.*

8:00 OO26 **545.05** Minocycline treatment blocks LPS-induced impairment in context discrimination memory retrieval. J. CZERNIAWSKI*; J. F. GUZOWSKI. *Univ. of California, Irvine.*

9:00 OO27 **545.06** Churg-Strauss syndrome following vaccination against 2010 influenza A (H1N1): A case report. H. M. FU*. *Med. 5th Floor, Dept. of Neurology.*

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10:00 OO28 **545.07** Sex differences in neonatal immune function and potential implications for developmental delays in learning. J. I. CAULFIELD; L. S. TERASAKI; J. M. SCHWARZ*. *Univ. of Delaware.*

11:00 OO29 **545.08** Interleukin 1 receptor signaling and fadrozole regulate anxiety behaviors in mice. K. A. DUNCAN*; A. FEIGHERY; J. JOSIMOVICH; J. ORR; K. BLACKSHEAR; C. J. SALDANHA; K. S. HOLLOWAY. *Vassar Col., Vassar Col., The American Univ., Vassar Col.*

8:00 OO30 **545.09** Microglia possess a circadian clock that controls inflammatory responses independent of glucocorticoids. L. K. FONKEN*; M. G. FRANK; M. M. KITT; L. R. WATKINS; S. F. MAIER. *Univ. of Colorado Boulder.*

9:00 OO31 **545.10** Social Influences on Neuroinflammation after Ischemia. M. M. GAUDIER-DIAZ*; N. ZHANG; M. ZHOU; A. C. DEVRIES. *The Ohio State Univ.*

10:00 OO32 **545.11** Dynamics of TLRs and chemokine expression in the regulation of inflammatory immune cells migration into the CNS: A potential mechanism for neuropathogenesis in drug abuse/HIV model with secondary infection. R. DUTTA*; S. ROY. *Univ. of Minnesota.*

11:00 PP1 **545.12** Kynurenine metabolism mediates inflammation-induced cognitive dysfunction and impulsivity. J. C. O'CONNOR*; J. M. HEISLER; J. MORALES; D. A. CRUZ; P. M. THOMPSON. *UTHSCSA, UTHSCSA.*

8:00 PP2 **545.13** Hippocampal neuroinflammation and cognitive decline as a consequence of acute myocardial ischemia-reperfusion. B. JOHNSTON*; K. E. EVONUK; M. E. YOUNG; T. M. DESILVA. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

9:00 PP3 **545.14** Cerebral expression of IFN-α reduces weight gain with low plasma leptin in mice. J. WANG*; Y. DAI. *Univ. Missouri-Kansas City.*

10:00 PP4 **545.15** Effect of cold shock on neural function and behavior. H. M. CHARLES*; K. A. KILLIAN. *Miami Univ.*

11:00 PP5 **545.16** ▲ Mold exposure alters adult new neuron migration in the mouse hippocampus. A. LOPEZ*; K. PAGE; E. NORMAND; B. SHAUKAT; N. ADAMS; K. LIN; L. BICKERTON; C. F. HARDING; C. L. PYTTE. *Queens College, CUNY, Grad. Center, CUNY, Hunter College, CUNY.*

8:00 PP6 **545.17** ▲ Environmental mold exposure leads to spatial memory deficits. D. LIAO*; C. HARDING; R. PERSAUD; K. LIN; K. PAGE; C. L. PYTTE. *Hunter College, CUNY, Grad. Center, CUNY, Queens College, CUNY.*

9:00 PP7 **545.18** Mold-induced changes in microglial morphology: A method for quantifying dimensions. K. PAGE*; M. NAGAI; T. DESAI; C. F. HARDING; C. L. PYTTE. *Grad. Center, CUNY, Queens College, CUNY, Hunter College, CUNY, Hunter College, CUNY.*

10:00 PP8 **545.19** Developmental programming of body weight, neuroinflammation, and behavior by western diets. M. G. WILEY*; J. L. BOLTON; L. A. SIMMONS; B. RYAN; S. TRUONG; S. D. BILBO. *Duke Univ., Duke Univ., Duke Univ. Sch. of Nursing.*

11:00 PP9 **545.20** Inflammation-induced fatigue: Exploring neurobiological mechanisms and potential treatments. D. BONSALL*; H. KIM; A. M. PETRONZIO; P. C. MOLYNEUX; T. E. SCAMMELL; M. E. HARRINGTON. *Smith Col., Beth Israel Deaconess Med. Ctr.*

8:00 PP10 **545.21** Chronic T. gondii infection in the Nurr1-null heterozygous mice exacerbates elevated open field activity and disrupts sensorimotor gaiting. J. B. EELLS*; A. VARELA-STOKES; S. X. GUO-ROSS; E. KUMMARI; H. M. SMITH; E. COX; D. S. LINDSAY. *Mississippi St Univ., Mississippi St Univ., Virginia Technol.*

9:00 PP11 **545.22** The effect of interleukin 1-beta (IL-1β) on memory reconsolidation is mediated by a reduction in glutamate release, calcium influx and AMPA phosphorylation. Modulation by alpha-melanocyte-stimulating hormone (α-MSH). I. MACHADO*; P. GONZALEZ; A. VILCAES; M. LASAGA; T. SCIMONELLI. *IFEC-CONICET Facultad De Ciencias Químicas- UNC, CIQUIBIC-CONICET, Dept. de Química Biológica. Facultad de Ciencias Químicas. UNC, Inst. de Investigaciones Biomédicas INBIOMED UBA-CONICET, Facultad de Medicina, Buenos Aires, Argentina.*

10:00 PP12 **545.23** IL-1 receptor antagonism in the basolateral amygdala reduces binge-like ethanol intake of C57BL/6J mice. S. A. MARSHALL*; J. A. RINKER; J. D. CASACHAHUA; D. T. LYSLE; T. E. THIELE. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

11:00 PP13 **545.24** Meningeal sinuses: Key site for T cells in regulating brain function? A. LOUVEAU*; S. GADANI; N. DERECKI; T. HARRIS; J. KIPNIS. *Ctr. For Brain Immunol. and Glia, Ctr. for Brain Immunol. and Glia.*

8:00 PP14 **545.25** Chronic fatigue syndrome from vagus nerve infection: A psychoneuroimmunological hypothesis. M. B. VANELZAKKER*. *Tufts Univ., Massachusetts Gen. Hosp.*

9:00 PP15 **545.26** The gut microbiota as an important intercurrent variable in behavioral research. A. C. ERICSSON; D. J. DAVIS; C. L. FRANKLIN; C. E. HAGAN*. *Univ. of Missouri.*

10:00 PP16 **545.27** Neurotoxic kynurenine metabolism mediates inflammation induced behavioral despair in mice. J. M. PARROTT*; L. REDUS; J. C. O'CONNOR. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Ctr. for Biomed. Neurosci.*

11:00 PP17 **545.28** Mast cells in the neonatal brain: Sex differences, biochemical mediators and early life programming of social and anxiety behavior. K. M. LENZ*; A. GALAN. *The Ohio State Univ.*

8:00 PP18 **545.29** Diet-induced obesity prevents spatial learning deficits following bacterial endotoxin exposure. S. SETTI*; A. LITTLEFIELD; C. DIAZ; A. JONES; S. JOHNSON; R. A. KOHMAN. *UNC Wilmington, UNC Wilmington.*

POSTER

546. Stress: Cellular Consequences

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 PP19 **546.01** A comparative analysis of GSK3β serine 9 and serine 389 inhibitory phosphorylation following acute challenge, variate stress, or voluntary exercise. B. D. HARE*; T. M. THORNTON; M. RINCON; D. M. JAWORSKI; W. A. FALLS. *Univ. of Vermont, Univ. of Vermont Col. of Med., Univ. of Vermont Col. of Med.*

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9:00 PP20 **546.02** How the stress-induced protein DRR1 modulates actin dynamics. A. KRETZSCHMAR*; J. SCHÜLKE; M. MASANA; M. B. MÜLLER; A. R. BAUSCH; T. REIN. *Max Planck Inst. of Psychiatry, Johannes Gutenberg Univ. Med. Ctr., Max Planck Inst. of Psychiatry, Technische Univ. München.*

10:00 PP21 **546.03** Stress-mediated signaling by the Gs-coupled GPCR PAC1 at the adrenomedullary synapse: Role of a novel camp sensor, NCS/Rapgef2. A. C. EMERY*; N. STROTH; T. MUSTAFA; L. E. EIDEN. *NIMH, Karolinska Institutet.*

11:00 PP22 **546.04** The omega-3 polyunsaturated fatty acid docosahexaenoic acid (DHA) as a novel strategy for stress-related psychiatric disorders: reversal of corticosterone-induced changes in cortical neurons. M. PUSCEDDU*; Y. M. NOLAN; H. F. GREEN; P. KELLY; T. G. DINAN; J. F. CRYAN*. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Karolinska Inst., TEAGASC.*

8:00 PP23 **546.05** The role of tyrosine hydroxylase-2 producing neurons of zebrafish in stress response. S. SEMENOVA; Y. CHEN; P. A. PANULA*. *Univy Helsinki.*

9:00 PP24 **546.06** ▲ Activation of noradrenergic neurons in the locus coeruleus by different stress paradigms. I. R. DOS SANTOS*; N. PESTANA-OLIVEIRA; J. A. ANSELMO-FRANCI; C. M. LEITE. *Ctr. Universitário Barão De Mauá, Sch. of Med. of Ribeirao Preto, Dent. Sch. of Ribeirao Preto.*

10:00 QQ1 **546.07** Post transcriptional regulation of adrenal TH gene expression contributes to the maladaptive responses triggered by insulin-induced recurrent hypoglycemia. B. B. NANKOVA*; N. KIRTOK; O. CHAN; C. STERLING; A. TANK; E. F. LAGAMMA. *New York Med. Col., New York Med. Col. and Maria Fareri Childrens Hosp., Yale Sch. of Med., Univ. of Rochester Med. Ctr., New York Med. Col. and Regional Neonatal Center, Maria Fareri Childrens Hosp.*

11:00 QQ2 **546.08** Role of dexras1 and stress in triggering of type 2 diabetes mellitus. A. THAPLIYAL*; R. VERMA; M. THAPLIYAL; P. ANTHWAL; T. KAPOOR; P. SEMWAL. *Graphic Era Univ., Pt. LMS Govt. PG Autonomous College, Rishikesh.*

8:00 QQ3 **546.09** Temporal course of the serotonergic system of the medial amygdala in male rats subjected to restraint stress. M. R. GONZALEZ LOPEZ*; N. L. GARCÍA-SALDÍVAR; R. DOMÍNGUEZ; S. E. CRUZ-MORALES. *UNAM FES-Iztacala, UNAM FES-Zaragoza.*

9:00 QQ4 **546.10** Prenatal protein malnutrition in adult rats under stress results in increased activation of inhibitory interneurons in the anterior cingulate and medial prefrontal cortex. X. WANG*; A. C. AMARAL; F. MORTAZAVI; J. A. MCGAUGHY; D. J. MOKLER; J. R. GALLER; R. J. RUSHMORE; D. L. ROSENE. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Univ. of New Hampshire, Univ. of New England, Harvard Med. Sch.*

10:00 QQ5 **546.11** Tonic and phasic endocannabinoid heterosynaptic modulation in hypothalamic magnocellular neuroendocrine cells. S. DI; I. R. POPESCU; J. G. TASKER*. *Tulane Univ.*

11:00 QQ6 **546.12** Fluorescent visualization of central osmosensitive areas activated by acute osmotic stimulation in c-fos-eGFP transgenic rats. Y. UETA*; T. ARITOMI; K. SHOGUCHI; T. MATSUURA; M. YOSHIMURA; T. ISHIKURA; T. MARUYAMA; H. HASHIMOTO. *Univ. Occupat, Environml Hlth, Japan.*

8:00 QQ7 **546.13** Inhibition in the lateral septum increases sucrose overeating in rats with a history of repeated food restriction and stress. A. MITRA*; C. LENGLOS; J. CALVEZ; G. GUEVREMONT; E. TIMOFEEVA. *Ctr. Res. Inst. Cardiol. and Pneumology Quebec (IUCPQ).*

9:00 QQ8 **546.14** Clonidine alters the response to chronic stress: Effect on neuron number and seizure susceptibility. E. W. H. MU*; K. BORGES; N. A. LAVIDIS. *Univ. of Queensland.*

10:00 QQ9 **546.15** Effect of acute stress on GSK3 α and β activity in a menopause model in rats. M. A. HERNANDEZ*; C. LOPEZ-RUVALCABA; E. ESTRADA-CAMARENA. *Inst. Nacional De Psiquiatria Ramon De La Fuen, Centro De Investigacion Y De Estudios Avanzados Del Ipn, Instituto Nacional De Psiquiatria Ramon De La Fuente Muñiz.*

11:00 QQ10 **546.16** The expression of the oxytocin-monomeric red fluorescent protein 1 fusion gene in the hypothalamus and spinal cord after acute nociceptive stimulation in transgenic rats. T. MATSUURA*; M. KAWASAKI; Y. MOTOJIMA; H. SUZUKI; M. YOSHIMURA; J. OHKUBO; T. MARUYAMA; H. HASHIMOTO; H. OHNISHI; A. SAKAI; Y. UETA. *Univ. of Occup. and Envrn. Health, Japan.*

POSTER

547. Stress: Neurodevelopmental Aspects

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 QQ11 **547.01** Dopamine D3 receptor contributes to the adult behavior deficits induced by repeated stressful experiences during preadolescence. J. H. SEO; E. V. KUZHIKANDATHIL*. *Rutgers -New Jersey Med. Sch.*

9:00 QQ12 **547.02** A "multiple hit" model of affective disorders in rats selectively bred for differences in emotional reactivity. C. AYDIN*; K. FROHMADER; A. MEDINA; S. J. WATSON, Jr; H. AKIL. *Universty of Michigan.*

10:00 QQ13 **547.03** Early-Life effortful control buffers the relationship between rumination and internalizing in adolescents: Behavioral and neural evidence. C. WESTBROOK*; C. BURGHY; D. BUSSAN; M. J. ESSEX; R. J. DAVIDSON. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

11:00 QQ14 **547.04** Differential gene expression of components of the hypothalamic-pituitary adrenal axis signalling in juvenile and adult mice. A. SADLER*; S. J. BAILEY. *Univ. of Bath.*

8:00 QQ15 **547.05** Effects of adolescent social play deprivation on responses to social stress and dendritic morphology in the ventral medial prefrontal cortex. C. A. BURLESON; R. W. PEDERSON; S. SEDDIGHI; M. A. COOPER*. *Univ. of Tennessee.*

9:00 QQ16 **547.06** Different patterns of neuronal activity in adolescent compared to adult females exposed to repeated social stress. S. LUZ; H. SCHWARZBACH; G. KELLY; R. VALENTINO; S. BHATNAGAR*. *Children's Hosp Philadelphia, Univ. Pennsylvania, Univ. Pennsylvania Sch. of Medicine, Children's Hosp Philadelphia, Univ. Pennsylvania, Children's Hosp Philadelphia.*

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10:00 QQ17 **547.07** Effect of early-life enriched environment treatment on depression-like behavior in mice lacking BDNF expression through promoter IV. S. JHA; K. SAKATA*. *Univ. Tennessee, IISER Bhopal.*

11:00 QQ18 **547.08** ▲ Effects of chronic fluoxetine and paroxetine treatment on affective behavior in male and female adolescent rats. Z. R. HARMONY*; S. E. EATON; M. J. STONE; L. VANSA; C. A. CRAWFORD. *California State University, San Bernardino.*

8:00 QQ19 **547.09** ▲ Age and sex differences in serum cytokine levels following exposure to a bacterial endotoxin. J. ROOKE*; D. KOLMOGOROVA; R. WENG; L. KANE; J. LIANG; N. ISMAIL. *Univ. of Ottawa, Univ. of Ottawa.*

9:00 QQ20 **547.10** Differential activation of microglia in the mouse brain following an immune challenge may contribute to vulnerability to stressors during puberty. M. K. HOLDER*; J. D. BLAUSTEIN. *Univ. of Massachusetts, Amherst.*

10:00 QQ21 **547.11** Prefrontal-limbic change in dopamine turnover by acupuncture in maternally separated rat pups. S. KIM*; D. KIM; H. JEON. *Pusan Natl. Univ.*

11:00 QQ22 **547.12** The presence of the mother alters the valence of cues associated with painful stimuli and regulates changes in gene expression in the amygdala of infant rats. G. A. BARR*; R. M. SULLIVAN. *Children's Hosp. of Philadelphia, Perelman Sch. of Medicine, Univ. of Pennsylvania, New York Univ. Sch. of Med., Nathan Kline Institute, New York Univ., New York Univ.*

POSTER

548. Sleep: Mechanisms and Molecules I

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 QQ23 **548.01** Changes in sleep architecture in response to remote pre-conditioning and ischemic stroke: Impact of Bmal1. A. J. BRAGER*; T. YANG; J. EHLEN; R. MELLER; K. PAUL. *Morehouse Sch. of Med.*

9:00 QQ24 **548.02** Increased mRNA expression and putative release of neuropeptide S after sleep deprivation in rat. C. ADORI*; S. BARDE; S. VAS; R. K. REINSCHEID; G. BAGDY; T. HÖKFELT. *Karolinska Inst. Dept. of Neurosci., Semmelweis University, Dept. of Pharmacodynamics, Univ. of California, Dept. of Pharmaceut. Sci.*

10:00 QQ25 **548.03** ● Acute inhibition of catecholaminergic A1/C1 neurons reduces genioglossus muscle activity in behaving mice. I. RUKHADZE; P. M. FULLER; V. B. FENIK*. *Beth Israel Deaconess Med. Ctr. and Harvard Med. Sch., Veterans Affairs Greater Los Angeles Healthcare Syst., VA GLA Healthcare System/BBRI/Webscience*s.

11:00 QQ26 **548.04** Suppression of cortical activation from both gamma band auditory stimulation and hypercarbia-induced arousals from sleep by optogenetic inhibition of basal forebrain parvalbumin-containing GABA neurons. R. W. MCCARLEY*; S. THANKACHAN; J. W. CORDEIRA; T. KIM; J. M. MCNALLY; J. T. MCKENNA; R. BASHEER; R. E. STRECKER; R. E. BROWN. *VA Boston Healthcare Syst. & Harvard Med. Sch.*

8:00 QQ27 **548.05** Macrophages are required for normal recovery sleep after sleep loss. C. AMES; E. SZENTIRMAI*. *Washington State Univ., Washington State Univ.*

9:00 QQ28 **548.06** Early signs of activation in the chick embryo cholinergic system. A. CHAN*; M. POMPEIANO. *McGill Univ.*

10:00 QQ29 **548.07** Dopamine d2 receptor plays a key role in sleep and circadian activity. I. MERCADO*; P. SABANDAL; K. HAN. *Univ. of Texas At El Paso.*

11:00 QQ30 **548.08** Melanin-concentrating hormone neurons in the chick embryo: ontogeny and signs of prenatal activation. M. POMPEIANO*; A. YIP; J. BIRD; K. E. GODDEN; B. S. SEOK; D. MARTINEZ-GONZALEZ. *McGill University-Dept Psychology, Max Planck Inst. for Ornithology - Seewiesen.*

8:00 QQ31 **548.09** Brown adipose tissue plays a central role in sleep responses to systemic inflammation. L. KAPAS*; E. SZENTIRMAI. *Washington State University, Spokane.*

9:00 QQ32 **548.10** Homeostatic sleep need is mediated by adenosine via a glial-neuronal circuit. T. E. BJORNESS*; A. SUZUKI; N. DALE; G. METTLACH; J. A. BIBB; M. YANAGISAWA; A. FIENBERG; R. W. GREENE. *Univ. of Texas, Southwestern Med. Ctr., Univ. of Texas Southwestern, Univ. of Warwick, Intra-Cellular Therapies.*

10:00 QQ33 **548.11** Selective activation of cholinergic basal forebrain neurons induces immediate sleep-wake transitions. Y. HAN*; Y. SHI; W. XI; R. ZHOU; Z. TAN; H. WANG; X. LI; Z. CHEN; G. FENG; M. LUO; Z. HUANG; S. DUAN; Y. YU. *Zhejiang Univ. Sch. of Med., McGovern Inst., Natl. Inst. of Biol. Sci., Shanghai Med. Col.*

11:00 QQ34 **548.12** Nigrostriatal dopamine acting on globus pallidus regulates sleep. M. H. QIU; Q. L. YAO; R. VETRIVELAN; M. C. CHEN; J. LU*. *Sch. of Basic Med. Science, Fudan Univ., Beth Israel Deaconess Med. Ctr.*

8:00 QQ35 **548.13** The role of GABAergic neurons of the central amygdala in emotion-triggered cataplexy. C. E. MAHONEY*; L. VONG; B. B. LOWELL; T. SCAMMELL. *Beth Israel Deaconess Med. Ctr., Harvard Med. Sch., Beth Israel Deaconess Med. Ctr., Harvard Med. Sch., Harvard Med. Sch.*

9:00 QQ36 **548.14** Cortical nNOS/NK1 neurons are regulated by cholinergic inputs. R. H. WILLIAMS*; J. VAZQUEZ-DEROSE; A. NGUYEN; T. S. KILDUFF. *SRI Intl.*

10:00 RR1 **548.15** Cytotoxic chemotherapy increases NREM and REM sleep with concurrent sleep fragmentation. J. C. BORNIGER*; M. M. GAUDIER-DIAZ; N. ZHANG; R. J. NELSON; A. C. DEVRIES. *The Ohio State Univ. Wexner Med. Ctr.*

11:00 RR2 **548.16** Role of thalamic reticular nucleus in sleep spindle generation: An optogenetic investigation in the mouse with implications for schizophrenia. S. THANKACHAN*; J. M. MCNALLY; R. E. STRECKER; J. T. MCKENNA; R. E. BROWN; R. W. MCCARLEY. *VA Boston Healthcare Syst. & Harvard Med. Sch.*

8:00 RR3 **548.17** Chronic administration of glycine modify sleep pattern and metabolic parameters in rats. A. JIMENEZ-ANGUIANO*; J. C. RODRIGUEZ-AGUILAR; I. JASSO-VILLAGOMEZ; G. BLANCAS-FLORES; F. J. ALARCON-AGUILAR; J. VELAZQUEZ-MOCTEZUMA. *Univ. Autónoma Metropolitana-Iztapalapa, Univ. Autonoma Metropolitana-Iztapalapa.*

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9:00 RR4 **548.18** Optogenetic activation of cholinergic neurons in the LDT increases REM sleep. C. J. VAN DORT*; J. KENNY; D. ZACHS; R. GOLDBLUM; M. WILSON; E. BROWN. *Massachusetts Gen Hosp, MIT, Massachusetts Gen Hosp, MIT.*

10:00 RR5 **548.19** Pharmacogenetic activation of cholinergic, glutamatergic and GABAergic neurons in the PPT and their roles in sleep/wake behavior. D. KROEGER*; L. L. FERRARI; L. J. AGOSTINELLI; E. ARRIGONI; T. E. SCAMMELL. *BIDMC / Harvard Univ.*

11:00 RR6 **548.20** Optogenetic interrogation reveals a causal role for VTA dopamine neurons in the regulation of sleep and wakefulness. A. D. EBAN-ROTHSCHILD*; W. J. GIARDINO; L. DE LECEA. *Stanford Univ.*

8:00 RR7 **548.21** Regulation of sleep by Neuropeptide Y in zebrafish larvae. C. SINGH*; C. N. CHIU; V. SAPIN; D. A. PROBER. *Caltech.*

9:00 RR8 **548.22** Glutamate release in the cortex of the inferior colliculus is correlated with phasic motor activity in sleep. T. KODAMA; K. HSIEH; J. M. SIEGEL; Y. LAI*. *Tokyo Metropolitan Inst. For Neurosci., VAGLAHS Sepulveda, VAGLAHS Sepulveda/UCLA, UCLA/VAGLAHS Sepulveda.*

10:00 RR9 **548.23** ● Orexin receptor antagonists promote both non-rem and rem sleep similar to physiological sleep onset in pre-clinical species. S. V. FOX*; P. L. TANNENBAUM; A. L. GOTTER; S. L. GARSON; A. T. SAVITZ; J. STEVENS; S. D. KUDUK; P. J. COLEMAN; C. J. WINROW; J. J. RENGER. *Merck & Co., Inc., Merck & Co., Inc., Merck & Co., Inc., Merck & Co., Inc.*

11:00 RR10 **548.24** Trib2-immunization induces hypocretin/orexin changes. S. TANAKA; Y. HONDA; K. HONDA; M. HONDA; M. WATANABE; T. KODAMA*. *Tokyo Metropol Inst. Med. Sci.*

8:00 RR11 **548.25** Optogenetic dissection of the neural circuitry underlying hypercapnia induced-arousals. S. KAUR*; D. KROEGER; P. FULLER; C. SAPER. *Beth Israel Deaconess Med. Ctr. and Harvard M.*

9:00 RR12 **548.26** Modifying sleep continuity with transcranial direct current stimulation. F. JAHN*; S. ZITTEL; L. KRONE; P. SELHAUSEN; L. FRASE; H. PIOSCZYK; B. FEIGE; D. RIEMANN; M. NITSCHE; C. NISSEN. *Univ. Med. Ctr., Univ. Med. Ctr.*

10:00 RR13 **548.27** Modulating sleep in a human model for cortical hyperarousal by transcranial direct current stimulation. P. SELHAUSEN*; S. ZITTEL; F. JAHN; L. KRONE; L. FRASE; H. PIOSCZYK; B. FEIGE; M. NITSCHE; D. RIEMANN; C. NISSEN. *Univ. Med. Ctr., Univ. Med. Sch.*

11:00 RR14 **548.28** Modulation of sleep by transcranial direct current stimulation as an area-specific effect. L. KRONE*; S. ZITTEL; P. SELHAUSEN; F. JAHN; L. FRASE; H. PIOSCZYK; B. FEIGE; M. NITSCHE; D. RIEMANN; C. NISSEN. *Univ. Med. Ctr., Univ. Med. Sch.*

8:00 RR15 **548.29** ● Orexin projections control locus coeruleus activity. L. FERRARI*; D. PARK; L. J. AGOSTINELLI; T. E. SCAMMELL; E. ARRIGONI. *Beth Israel Deaconess Med. Ctr. - Harvard Med. Sch.*

POSTER

549. Sleep: Mechanisms and Molecules II

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

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 RR16 **549.01** Pumilio regulates the sleep homeostatic response to chronic sleep deprivation in *Drosophila melanogaster*. L. DE JESUS*; N. RODRIGUEZ; C. PACHECO; J. ORTEGA; H. RODRIGUEZ; G. DIAZ; F. RIVERA; M. REYES; E. RIVERA; J. ALEMAN-RIOS; A. AVALOS; J. L. AGOSTO-RIVERA. *Univ. of Puerto Rico, Univ. of Puerto Rico.*

9:00 RR17 **549.02** Discovery of a neuropeptide signaling pathway that regulates sleep/wake behavior in zebrafish. C. N. CHIU*; J. RIHEL; E. A. MOSSER; D. A. LEE; C. SINGH; S. CHAKRAVARTHY; A. F. SCHIER; D. A. PROBER. *Caltech, Univ. Col. London, Harvard.*

10:00 RR18 **549.03** The effects of combined lithium and ethanol treatment on the behavioral circadian activity rhythm. J. A. SEGGIO*; K. CARLSON; N. NASCIMENTO; D. AMARAL; D. PYNE; G. NASH. *Bridgewater State Univ.*

11:00 RR19 **549.04** Rapid eye movement sleep induction and maintenance by gabaergic neurons in the ventral medulla. F. WEBER*; S. CHUNG; M. XU; Y. DAN. *UC Berkeley, Howard Hughes Med. Inst.*

8:00 RR20 **549.05** Gabaergic parafacial zone neurons are necessary for the expression of normal slow-wave-sleep. C. ANACLET*; L. FERRARI; E. ARRIGONI; P. FULLER. *BIDMC Harvard.*

9:00 RR21 **549.06** The sleep promoting effect of DORA-12 is sex dependent in rats. J. A. MONG*; D. M. CUSMANO. *Univ. Maryland, Sch. Med.*

10:00 RR22 **549.07** Real-time sensing of glutamate in the basolateral amygdala (BLA) in the rat brain across sleep-wake states. L. D. SANFORD*; M. H. KIM; L. L. WELLMAN; H. YOON. *Eastern Virginia Med. Sch., Norfolk State Univ.*

11:00 RR23 **549.08** ▲ Analyzing sleep/wake architecture in mice with progressive orexin/hypocretin cell loss. A. F. BRANCH; W. NAVIDI; S. TABUCHI; A. YAMANAKA; T. E. SCAMMELL; C. DINIZ BEHN*. *Colorado Sch. of Mines, Nagoya Univ., Beth Israel Deaconess Med. Ctr.*

8:00 RR24 **549.09** Selective tracing of descending basal forebrain projections. L. J. AGOSTINELLI*; T. E. SCAMMELL. *Beth Israel Deaconess Med. Ctr., Beth Israel Deaconess Med. Ctr., Harvard Med. Sch.*

9:00 RR25 **549.10** Distribution of terminals originating in pontine noradrenergic A6 (locus coeruleus), A7 and subcoeruleus neurons in the medullary viscerosensory nucleus of the solitary tract and hypoglossal motor nucleus. L. KUBIN*; K. BENINCASA HERR; C. D. HESKETH; D. V. VOLGIN; G. L. MANN. *Univ. of Pennsylvania.*

10:00 RR26 **549.11** Electrical stimulation of the parabrachial nucleus induces reanimation from general anesthesia. F. MUINDI*; C. J. VAN DORT; J. KENNY; N. TAYLOR; K. SOLT; M. WILSON; E. N. BROWN. *MIT, Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

550. Visual Perception: Neural Mechanisms

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 RR27 **550.01** Common brain activity patterns during perception, imagery, and dreaming. T. HORIKAWA*; Y. HOSOKAWA; Y. KAMITANI. *ATR, NAIST.*

9:00 RR28 **550.02** Recovery of high-level visual functions in patients with lobectomy or hemispherectomy. A. NESTOR*; T. LIU; D. C. PLAUT; C. PATTERSON; M. BEHRMANN. *Univ. of Toronto Scarborough, Carnegie Mellon Univ., Children's Hosp. of Pittsburgh of UPMC.*

10:00 RR29 **550.03** Energy landscape of human brain activity during bistable perception. T. WATANABE*; N. MASUDA; F. MEGUMI; R. KANAI; G. REES. *Inst. of Cognitive Neuroscience, Univ. Col. London, Univ. of Bristol, Univ. of Sussex.*

11:00 RR30 **550.04** Functional differences in processing preferred and non-preferred stimuli at object selective areas. U. CHOI*; Y. SUNG; Y. KIM; Z. CHO; H. YOON; S. OGAWA. *Neurosci. Res. Institute, Gachon Univ. of Med. and Sci., Kansei Fukushi Res. Inst., Dept. of Art Therapy.*

8:00 RR31 **550.05** Preserved expert object recognition in a case of unilateral visual agnosia. J. RENNIG*; H. KARNATH; M. HIMMELBACH. *Div. of Neuropsychology, Ctr. of Neurology, Univ. of Tübingen, , Dept. of Psychology, Univ. of South Carolina, Ctr. for Integrative Neuroscience, Univ. of Tübingen.*

9:00 RR32 **550.06** Tracking dynamic mental imagery in early visual cortex. A. ALBERS*; P. KOK; R. BOYACIOğLU; I. TONI; F. P. DE LANGE. *Radboud Univ. Nijmegen, Donders Inst. For Brain Cognition and Behaviour.*

10:00 RR33 **550.07** Neural representation for properties determining the navigability of a scene. J. KANG; H. I. SAIR; S. PARK*. *Johns Hopkins Univ.*

11:00 RR34 **550.08** Temporospatial entropy- and phase-based connectivity in the tilt illusion: The effects of context in perception. F. J. PARADA*; L. MORAVEC; B. EMERICK; O. SPORNS; T. BUSEY. *Indiana Univ., Harvard Univ.*

8:00 RR35 **550.09** Cortical neuronal oscillations modulated by respiration. D. H. HECK*; A. BABAJANI-FEREMI; R. REZAIE; Y. LIU; A. PAPANICOLAOU. *Univ. of Tennessee, Univ. of Tennessee Hlth. Sci. Ctr., Le Bonheur Children's Hosp., Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr.*

9:00 RR36 **550.10** Fronto-occipital beta band phase synchronization underlying perceptual closure process in two-tone visual image presentation. Y. KAKIMOTO*; A. OKI; H. SAGAWA; H. TAGAWA; O. ARAKI. *Tokyo Univ. of Sci.*

10:00 RR37 **550.11** Prefrontal-parietal EEG correlation during motor imagery in expert video game players. M. L. ALMANZA*; J. LLAMAS; M. A. GUEVARA; M. HERNÁNDEZ-GONZÁLEZ. *Inst. De Neurociencias.*

11:00 RR38 **550.12** Variations on the quartet illusion. S. VATTIKUTI; C. C. CHOW*. *NIH/NIDDK, NIH/NIDDK.*

8:00 RR39 **550.13** Visual number beats abstract numerosity: Format-dependent representations of Arabic digits and dot patterns in the human parietal cortex. J. BULTHE*; B. DE SMEDT; H. OP DE BEECK. *KU LEUVEN.*

9:00 RR40 **550.14** What is likely to happen next? Neural correlates of probabilities of future events. S. TRAPP*; J. LEPSIEN; S. KOTZ; M. BAR. *Max Planck Inst. For Human Cognitive and Brain Sci., Max Planck Inst. for Human Cognitive and Brain Sci., Sch. of Psychological Sciences, The Univ. of Manchester, Gonda Ctr. for Brain Research, Bar-Ilan Univ.*

10:00 RR41 **550.15** Neural representation of visual fractals. T. P. O'CONNELL*; M. M. CHUN. *Yale Univ., Yale Univ. Sch. of Med.*

11:00 RR42 **550.16** Influence of lexical status, orthographic similarity and semantics on the multi-voxel response of the visual word form area. A. BAECK*; D. KRAVITZ; C. BAKER; H. OP DE BEECK. *Univ. of Leuven, The George Washington Univ., Natl. Inst. of Mental Hlth.*

8:00 RR43 **550.17** Perception of sound-encoded faces selectively activates the left fusiform face area in congenitally blind humans. P. L. PLAZA; L. A. RENIER; A. G. DE VOLDER; J. P. RAUSCHECKER*. *Georgetown Univ. Med. Ctr., Univ. Catholique de Louvain.*

9:00 RR44 **550.18** Human brain mapping metamodel. C. C. LEITH*; J. ROSENGARTEN; P. EPSTEIN; L. ROBBINS; L. SIEGEL; H. SUN. *Neurodynamics Res. Inst., Smart Scan MRI, Advanced Neurodiagnostics, Robbins Headache Clin., Illinois Bone & Joint Inst.*

10:00 RR45 **550.19** Multiple neural processes underlying binocular rivalry in retinotopic visual areas. H. YAMASHIRO*; H. YAMAMOTO; H. MANO; M. UMEDA; T. HIGUCHI; J. SAIKI. *Kyoto Univ., Aino Univ., Osaka Univ., Meiji Univ. of Integrative Med., Meiji Univ. of Integrative Med.*

11:00 RR46 **550.20** Effects of temporoparietal tDCS on EEG relative powers and cybersickness in virtual navigation. H. JEON*; Y. CHUN; C. PARK; T. W. WENDIMAGEGN; J. JEONG; H. KIM. *Korea Univ.*

8:00 RR47 **550.21** The dissociation of different measures of cortical inhibition in the visual system, and their use for non-invasive monitoring of epilepsy susceptibility. P. YAZDANI*; J. READ; R. WHITTAKER; R. GEORGIOU; A. TREVELYAN. *Newcastle Univ., Royal Victoria Infirmary, Newcastle Univ.*

9:00 RR48 **550.22** Effect of anticipation triggered by prior dyspnea experience on brain activity. H. NAKAI*; K. TSUJIMOTO; T. FUCHIGAMI; S. OMATSU; H. NAKANO; S. MORIOKA. *Higashi Osaka Hosp., Natl. Inst. for Physiological Sci., Okuma Central Hosp., Murata Hosp., Kio Univ., Yamato Univ.*

POSTER

551. Human Long-Term Memory: Medial Temporal Lobe III

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 RR49 **551.01** Dissociable roles of hippocampal subfields in episodic simulation. E. M. STEIN*; V. C. MCLELLAND; A. DEVITT; D. L. SCHACTER; A. R. PRESTON; D. ADDIS. *The Univ. of Texas at Austin, Univ. of Toronto, The Univ. of Auckland, Harvard Univ.*

9:00 RR50 **551.02** Memory reconsolidation and updating: The role of memory strength and context. K. C. NEWMAN-SMITH*; R. L. GOMEZ; L. NADEL. *Univ. of Arizona.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 SS1 **551.03** The Simpson's Paradox and functional connectivity in fMRI. R. P. ROBERTS*; S. HACH; L. J. TIPPETT; D. ADDIS. *The Univ. of Auckland.*

11:00 SS2 **551.04** Representation of subjective memory strength and visual category by single neurons in the human medial temporal lobe during memory retrieval. S. YE; M. KOROMA-LE BRAS; O. TUDUSCIUC; I. ROSS; J. M. CHUNG; A. N. MAMELAK; U. RUTISHAUSER*. *Caltech, Cedars-Sinai Med. Ctr., École Normale Supérieure, Caltech, Huntington Mem. Hosp., Cedars-Sinai Med. Ctr., Caltech, Cedars-Sinai Med. Ctr.*

8:00 SS3 **551.05** Human entorhinal neurons activate at multiple related locations in an environment. J. MILLER*; I. FRIED; J. JACOBS. *Drexel Univ., Univ. of California Los Angeles.*

9:00 SS4 **551.06** An analysis of human navigation-related theta oscillations using spike triggered field potentials and autocorrelations. T. J. COFFEY*; J. JACOBS; N. BURGESS. *Drexel Univ., Drexel Univ., Univ. Col. London.*

10:00 SS5 **551.07** Human hippocampal theta oscillations are traveling waves. H. ZHANG*; J. JACOBS. *Drexel Univ., Drexel Univ.*

11:00 SS6 **551.08** Structural differences in hippocampal and entorhinal gray matter volume support individual differences in first-person navigational ability. K. R. SHERRILL*; E. R. CHRASTIL; I. ASELCIOGLU; M. E. HASSELMO; C. E. STERN. *Boston Univ., Athinoula A. Martinos Ctr. for Biomed. Imaging, Massachusetts Gen. Hosp.*

8:00 SS7 **551.09** Combined working memory exercise and prefrontal transcranial direct current stimulation influences cognitive control. B. M. ROBERTS*; S. WANG; M. MONTCHAL; B. WANCEWICZ; C. CARTER; C. RANGANATH. *Univ. of California, Davis.*

9:00 SS8 **551.10** Encoding related delay period activity in hippocampal subfields and medial temporal cortex during delayed matching to sample: A high-resolution fMRI study. R. K. NAUER*; A. S. WHITEMAN; M. F. DUNNE; C. E. STERN; K. SCHON. *Boston Univ., Boston Univ., Boston Univ., Boston Univ. Sch. of Med.*

10:00 SS9 **551.11** To be, or not to be, remembered: Patterns of memorability in the medial temporal lobe. W. A. BAINBRIDGE*; D. D. DILKS; A. OLIVA. *MIT, Emory Univ., MIT.*

11:00 SS10 **551.12** Cortical representation of serial position information in temporal sequences. L. HSIEH*; C. RANGANATH. *UC Davis, UC Davis.*

8:00 SS11 **551.13** A high-resolution fmri investigation of temporal memory within the medial temporal lobe. J. M. ROBERTS*; Z. M. REAGH; E. MURRAY; M. A. YASSA. *Univ. of California, Irvine.*

9:00 SS12 **551.14** Learning contextual significance in the medial temporal lobe. L. A. LIBBY*; M. C. INHOFF; B. C. LOVE; C. RANGANATH. *UC Davis, Univ. Col. London, UC Davis.*

10:00 SS13 **551.15** Tracking location during complex human path integration recruits hippocampus and retrosplenial cortex. E. R. CHRASTIL*; K. R. SHERRILL; M. E. HASSELMO; C. E. STERN. *Boston Univ., Ctr. for Memory and Brain, Athinoula A. Martinos Ctr. for Biomed. Imaging.*

11:00 SS14 **551.16** Encoding related activity in the hippocampus and medial temporal lobe cortex is modulated by aerobic fitness and BDNF in humans. M. F. DUNNE*; A. S. WHITEMAN; R. K. NAUER; C. E. STERN; K. SCHON. *Boston Univ., Boston Univ., Boston Univ., Boston Univ. Sch. of Med.*

8:00 SS15 **551.17** Are familiarity-based memory representations in human perirhinal cortex distributed. C. B. MARTIN*; R. A. COWELL; P. L. GRIBBLE; S. KöHLER. *Western Univ., Univ. of Massachusetts Amherst, Rotman Res. Institute, Baycrest Ctr.*

9:00 SS16 **551.18** Relationship of hippocampal subfields to memory performance changes with age. S. G. TRAVIS*; Y. HUANG; F. OLSEN; R. CARTER; E. FUJIWARA; P. SERES; N. V. MALYKHIN. *Univ. of Alberta, Univ. of Alberta.*

10:00 SS17 **551.19** Oculomotor capture by aversive stimuli in the absence of contingency knowledge. L. HOPKINS*; F. J. HELMSTETTER; D. E. HANNULA. *Univ. of Wisconsin-Milwaukee.*

11:00 SS18 **551.20** Contextual significance shapes item representations in the medial temporal lobe. M. C. INHOFF*; L. A. LIBBY; B. C. LOVE; C. RANGANATH. *UC Davis, Univ. Col. London, UC Davis.*

8:00 SS19 **551.21** Disparateness of episodic details modulates default network activity during future simulation. D. ADDIS*; R. P. ROBERTS; V. VAN MULUKOM; R. SUMNER; C. L. GRADY; D. L. SCHACTER. *The Univ. of Auckland, Rotman Res. Inst., Harvard Univ.*

9:00 SS20 **551.22** Hippocampal theta during encoding predicts subsequent attentional deployment. E. PATAI*; M. WOOLRICH; G. SALVATO; A. NOBRE. *Oxford Ctr. For Human Brain Activity.*

10:00 SS21 **551.23** Human perirhinal cortex supports frequency judgments as well as judgments of cumulative lifetime familiarity. D. DUKE*; B. BOWLES; C. B. MARTIN; S. R. ROSENBAUM; K. MCRAE; S. KÖHLER. *Western Univ., UC Berkeley, York Univ., Rotman Res. Institute, Baycrest Ctr.*

11:00 SS22 **551.24** Connectivity between the perirhinal cortex and V2 in young and older adults. L. CACCIAMANI*; E. WAGER; M. A. PETERSON; P. E. SCALF. *Univ. of Arizona, Univ. of Arizona.*

8:00 SS23 **551.25** [Unable to Attend] Context and memory phase dependent effects of stress on extinction memory in a predictive learning task. O. T. WOLF*; T. C. HAMACHER-DANG. *Ruhr-Universitaet Bochum, Ruhr Univ. Bochum, Intl. Grad. Sch. of Neurosci.*

9:00 SS24 **551.26** ● Functional connectivity from the human entorhinal cortex: A cortico-cortical evoked potential study. H. TAKEYAMA*; R. MATSUMOTO; K. KOBAYASHI; K. USAMI; A. SHIMOTAKE; T. KIKUCHI; T. KUNIEDA; S. MIYAMOTO; R. TAKAHASHI; A. IKEDA. *Kyoto Univ., Kyoto Univ., Kyoto Univ., Kyoto Univ.*

10:00 SS25 **551.27** Properties of spatial contextual representation within the human hippocampus during episodic memory retrieval. C. KYLE*; J. STOKES; A. EKSTROM. *Univ. of California, Davis.*

11:00 SS26 **551.28** Distinct white matter correlates of intelligence, recall and recognition: Evidence from developmental amnesia. A. M. DZIECIOL*; E. Z. PATAI; K. K. SEUNARINE; C. A. CLARK; F. VARGHA-KHADEM. *UCL Inst. of Child Hlth., Univ. of Oxford.*

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POSTER

552. Language: Neuropsychological Approaches

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 SS27 **552.01** Effects of varying cloze probability on prediction and integration during sentence processing. K. P. REVILL*. *Emory Univ.*

9:00 SS28 **552.02** Native bilingualism shapes the structure of Heschl's gyrus. J. A. BERKEN*; K. MOK; J. CHEN; V. GRACCO; S. BAUM; K. WATKINS; D. KLEIN. *Montreal Neurolog. Institute, McGill Univ., Ctr. for Res. on Brain, Language, and Music, Univ. of Oxford.*

10:00 SS29 **552.03** Cerebral blood response for speech production in inferior prefrontal cortex: A near-infrared spectroscopy study in stuttering. J. OGURA*; S. CHU; R. A; K. OCHI; K. MORI. *Res. Inst. Natl. Rehabil. Ctr.*

11:00 SS30 **552.04** Impairment in sentence comprehension in patients with the behavioral variant of frontotemporal degeneration. R. B. WILLIAMS*; K. RASCOVSKY; M. GROSSMAN. *Univ. of Pennsylvania.*

8:00 SS31 **552.05** A functional mri study of the relationship between concise chinese aphasic test scoring and resting state functional connectivity in post-stroke aphasia. P. TSAI*; C. TSENG; F. YANG; C. LIN; B. YIP; S. LIN; T. CHIANG; L. TSENG; L. HUNG; L. KUO. *Natl. Taiwan Univ. Hosp. Hsin-Chu Branc, Natl. Tsing Hua Univ., Changhua Christian Hosp., Hsinchu Cathay Gen. Hosp., Natl. Hlth. Res. Inst.*

9:00 SS32 **552.06** Perception of degraded low-context speech in early psychosis. D. LADOWSKI; E. ABDELMOTAAL; I. S. JOHNSRUDE*. *Queen's Univ., Queen's Univ.*

10:00 SS33 **552.07** Down syndrome children's ability to infer a referent. N. ARIAS-TREJO*; J. B. BARRÓN-MARTÍNEZ; T. JASSO LÓPEZ; E. A. ALVA CANTO. *UNAM.*

11:00 SS34 **552.08** ● Abbreviated pyramids and palm trees test effectively discriminates semantic-variant progressive aphasia from other variants of primary progressive aphasia. K. COHEN*; C. MCMILLAN; K. RASCOVSKY; C. ONYIKE; V. M. LEE; J. Q. TROJANOWSKI; A. HILLIS; M. GROSSMAN. *Univ. of Pennsylvania, Johns Hopkins Univ., Univ. of Pennsylvania, Johns Hopkins Univ.*

8:00 SS35 **552.09** ● Dysgraphia in patients with the behavioral variant of frontotemporal degeneration and primary progressive aphasia. E. MORAN*; R. WILLIAMS; S. ASH; K. RASCOVSKY; M. GROSSMAN. *Univ. of Pennsylvania.*

9:00 SS36 **552.10** Self-monitoring after stroke: A case study. S. MEEKINGS*; S. EVANS; F. GERANMAYEH; R. WISE; S. K. SCOTT. *UCL, Univ. Col. London, Imperial Col. London.*

10:00 SS37 **552.11** Affective prosody in adults with william syndrome. N. WOO-VONHOOGENSTYN*; P. LAI; J. REILLY; U. BELLUGI. *Salk Inst., San Diego State Univ., Univ. of California San Diego.*

11:00 SS38 **552.12** More than Speech? Tone discrimination deficits correlate to atrophy in the logopenic variant of primary progressive aphasia. A. ISENBERG*; J. REILLY; M. GROSSMAN. *Univ. of Pennsylvania, Temple Univ.*

8:00 SS39 **552.13** Language neurodevelopment in children aged 6 to 8 months old: Its relation to gender, mother's age and educational level. S. N. CAZARES*; G. RIZO; S. LEÓN; T. VILLASEÑOR. *Univ. De Guadalajara, Univ. De Guadalajara, Univ. De Guadalajara.*

9:00 SS40 **552.14** Constructing the white matter networks of semantic processing with healthy and patient populations. Y. FANG*; S. ZHONG; G. GONG; L. SONG; Z. HAN; Y. BI. *State Key Lab. of Cognitive Neurosci. and, State Key Lab. of Cognitive Neurosci. and Learning., Rehabil. Col. and China Rehabil. Res. Center, Capital Med. Univ.*

10:00 SS41 **552.15** Impaired sentence expression in amyotrophic lateral sclerosis. S. ASH*; C. OLM; C. T. MCMILLAN; A. BOLLER; D. J. IRWIN; L. MCCLUSKY; L. ELMAN; M. GROSSMAN. *Univ. Pennsylvania Sch. Med.*

11:00 SS42 **552.16** Cerebellar tDCS alters articulation and verbal fluency: Location and polarity effects. C. J. STOODLEY*; M. K. SWEARS; A. DESKO; P. E. TURKELTAUB. *American Univ., Georgetown Univ., MedStar Natl. Rehabil. Hosp.*

8:00 SS43 **552.17** Relationship between gene expression profiles, structural neuroimaging, and clinical phenotypes in 22q11.2 microdeletion syndrome. M. JALBRZIKOWSKI*; R. JONAS; A. PATEL; L. KUSHAN; F. GAO; G. COPPOLA; C. E. BEARDEN. *UCLA.*

9:00 SS44 **552.18** Prospective evaluation of the sensitivity and specificity of cognitive tasks for diagnosis of the cerebellar cognitive affective syndrome. F. HOCHE*; L. C. HORTON; J. A. HARDING; S. MANCUSO; R. RANGAMANNAR; M. G. VANGEL; J. C. SHERMAN; J. D. SCHMAHMANN. *Massachusetts Gen. Hosp., Massachusetts Gen. Hospital, Psychology Assessment Ctr., Massachusetts Gen. Hospital, Martinos Ctr. for Biomed. Imaging.*

POSTER

553. Human Emotion: Behavioral and Neural Mechanisms

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 SS45 **553.01** Competitive interactions between emotion and reward in the amygdala and striatum. S. PADMALA*; W. ZHAN; L. PESSOA. *Univ. of Maryland.*

9:00 SS46 **553.02** The cognitive and neural basis of myopic decisions induced by negative emotional priming. X. LI*; S. GUAN; J. LUAN; L. CHENG. *East China Normal University,.*

10:00 SS47 **553.03** Perceptual and physiological differences between genuine and posed emotional vocalizations. S. H. CHEN*; S. EVANS; C. F. LIMA; N. DEMNITZ; D. BOEBINGER; S. SCOTT. *Inst. of Cognitive Neurosci., Univ. of Porto.*

11:00 SS48 **553.04** Development of an eeg-based neural decoding system as an affective evaluation tool. T. FUJIMURA*; R. P. HASEGAWA. *AIST.*

8:00 SS49 **553.05** Don't crack a smile: An fMRI study on counterproductive effect of smile. S. PARK*; N. SHIN; S. LEE; S. HAN. *Yonsei Univ., Yonsei Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 SS50 **553.06** The Multidimensional Auditory Affective Ratings Inventory (MAARI) and Computerized Emotion Recognition Toolbox (CERT): measuring facial responses to standardized, non-verbal, human vocalizations of emotion. M. D. MULLANE*; S. OKHOVAT; M. DIFLEY; J. MARTIN QUIROGA; S. ZIOGAS; M. BARTLETT; G. LITTLEWORT; A. A. CHIBA. *UCSD, UCSD, UCSD, UCSD.*

10:00 SS51 **553.07** Emotional arousal amplifies biased competition in visual processing. T. LEE*; S. G. GREENING; N. SOSA; M. MATHER. *USC, USC, USC.*

11:00 SS52 **553.08** Individual differences in anxiety influence the integration of early sensory signals corresponding to aversive unconditioned stimuli. S. G. GREENING*; T. LEE; M. MATHER. *USC.*

8:00 SS53 **553.09** Competitive stimuli as an effective intrinsic motivator in the study of affect during human performance. J. S. METCALFE*; A. PASSARO; S. GORDON; K. OIE. *DCS Corp, DCS Corp, US Army Res. Lab.*

9:00 SS54 **553.10** ● Effects of focusing on negative and positive attributes of self-image on self-esteem and psycho-physiology. M. C. NIEDZIELA*; E. CARBONE; P. BOLLS. *HCD Res., HCD Res., Univ. of Missouri.*

10:00 SS55 **553.11** ● Changes in autonomic arousal elicited by subcallosal cingulate DBS are associated with white matter connectivity to the mid-cingulate cortex. C. INMAN*; P. RIVA POSSE; K. CHOI; A. CROWELL; S. DANIELSON; S. GARLOW; H. MAYBERG; S. HAMANN. *Emory Univ., Emory Univ.*

11:00 SS56 **553.12** Neural mechanisms underlying effects of giving monetary reward and punishment on successful encoding of episodic memories in social and non-social context. Y. SHIGEMUNE*; T. TSUKIURA. *Kyoto Univ.*

8:00 SS57 **553.13** ● ▲ Relationship between brain activity and emotional state during multi task. T. OKAMURA*; U. YAMAMOTO; T. HIROYASU. *Doshisha Univ., DOSHISHA Univ.*

9:00 SS58 **553.14** Interpreting cognitive and physiological states from biometric sensors to predict performance degradation. B. K. BRACKEN*; S. GUARINO; W. DORIN; P. DIZIO; J. LACKNER; V. ROMERO; J. PFAUTZ. *Charles River Analytics, Brandeis Univ.*

10:00 SS59 **553.15** Task-evoked skin conductance responses and intrinsic amygdala connectivity independently predict subjective experience of arousal. C. XIA*; A. TOUROUTOGLOU; M. ADEBAYO; C. CASO; M. STEPANOVIC; V. HUNTOON; J. ANDREANO; E. SIEGEL; K. QUIGLEY; B. DICKERSON; L. FELDMAN BARRETT. *Massachusetts Gen. Hosp., Northeastern Univ.*

11:00 SS60 **553.16** Monitoring versus implementation in emotional top-down control. R. CLARKE; T. JOHNSTONE*. *Univ. of Reading.*

8:00 SS61 **553.17** Mindfulness Based Stress Reduction correlates with frontal lobe changes during mood induction fMRI. B. B. BRADEN*; T. K. GLASPY; T. PIPE; K. STEINKE; C. T. ELROD; L. C. BAXTER. *Barrow Neurolog. Inst., Arizona State Univ.*

9:00 SS62 **553.18** Emotion-related N250 is generated near temporo-parietal junction and is evoked both by faces and by affectively valent non-social images. J. ATHILINGAM; J. JONES-ROUNDS; D. J. POST; B. L. GANZEL; M. K. BELMONTE*. *Univ. of California San Francisco, Cornell Univ., Univ. of Illinois at Chicago, Binghamton Univ., Natl. Brain Res. Ctr., The Groden Ctr.*

10:00 SS63 **553.19** ▲ Music-induced mood improves retention in sensorimotor adaptation. K. WACLAWIK; L. LEOW; J. A. GRAHN*. *Univ. of Western Ontario, Univ. of Western Ontario.*

11:00 SS64 **553.20** Brain network for text based emoticons. K. KIM*; S. LEE; B. JEONG; J. CHOI. *KAIST, The Catholic Univ. of Korea Col. of Med.*

8:00 SS65 **553.21** Common amygdalar functional coupling mechanisms underlie emotional bias and explicit memory following negative-emotional processing: An evaluative conditioning paradigm. R. C. LAPATE*; T. KRAL; K. AROOR; B. SCHUYLER; R. J. DAVIDSON. *Univ. of Wisconsin-Madison.*

9:00 SS66 **553.22** The role of the human amygdaloid complex in fear conditioning: A functional connectivity analysis. S. YIN*; Y. LIU; A. KEIL; M. DING. *Univ. of Florida, Univ. of California, Davis, Univ. of Florida.*

10:00 SS67 **553.23** Affective state is associated with changes in the neural response to threat. N. G. HARNETT*; M. D. WHEELOCK; K. H. WOOD; S. MRUG; D. C. KNIGHT. *Univ. of Alabama At Birmingham.*

11:00 SS68 **553.24** Threat imminence influences emotional and defensive brain resposnses. L. L. PORTUGAL; O. F. JUNIOR; R. S. ALVES; F. S. ERTHAL; E. VOLCHAN; T. A. SANCHEZ; S. PADMALA; L. OLIVEIRA; L. PESSOA; M. G. PEREIRA*. *Federal Fluminense Univ., Federal Univ. of Rio de Janeiro, Univ. of Maryland.*

8:00 TT1 **553.25** Motivation counteracts aversive processing in the amygdala and visual cortex. M. SIRBU*; S. J. E. LANGESLAG; S. PADMALA; L. PESSOA. *Univ. of Maryland.*

9:00 TT2 **553.26** Decoding spontaneous emotional states from neural activation during rest. P. A. KRAGEL*; A. R. HARIRI; K. S. LABAR. *Duke Univ.*

10:00 TT3 **553.27** The neural response in humans is diminished to predictable and controllable threats. K. H. WOOD*; M. D. WHEELOCK; J. R. SHUMEN; L. W. VER HOEF; D. C. KNIGHT. *Univ. of Alabama at Birmingham, Dept. of Psychology, Univ. of Alabama at Birmingham, Dept. of Neurol., Birmingham VA Med. Ctr.*

POSTER

554. Working Memory II

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 TT4 **554.01** Mobile brain/body imaging: Combined EEG and motion capture during a dart throwing visuospatial working memory task. R. J. GOUGELET*; M. MIYAKOSHI; A. BIRGER; J. LE; A. WOOTEN; S. MAKEIG. *UCSD, Swartz Ctr. for Computat. Neurosci.*

9:00 TT5 **554.02** 2D:4D, mental rotations, SQ and EQ in a typical population. P. T. ORR*; C. E. LOWE; B. E. ZIMMERMAN; M. R. BUSCH. *Univ. of Scranton.*

10:00 TT6 **554.03** Effects of estrogen receptor alpha gene on emotional processing in middle-age women. M. SOLIS-ORTIZ*; M. E. FAJARDO-ARAUJO; M. L. GUTIÉRREZ-MUÑOZ. *Inst. Invest Med, Univ. Guanajuato.*

Tue. AM

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 TT7 **554.04** Cholinergic enhancement improves visual short-term memory performance. S. M. YOUSEF*; S. L. SHEREMATA; R. K. KANETA; A. N. HAREWOOD; M. A. SILVER. *Univ. of California, Berkeley, Univ. of California, Berkeley, George Washington Univ., Univ. of California, Berkeley.*

8:00 TT8 **554.05** Temporal desynchronisation may underlie audio-spatial binding in working memory: An EEG study under anesthesia in humans. T. MINAMOTO*; T. IKEDA; K. ENDO; A. NAKAE; S. HAGIHIRA; Y. FUJINO; T. MASHIMO; M. OSAKA. *Osaka Univ., Osaka Univ., Kyoto Univ., Osaka Univ., Toyonaka Municipal Hosp.*

9:00 TT9 **554.06** Differential encoding of behavioral tasks by stereotaxically recorded CA1 and CA3 neurons in human hippocampus. M. R. WITCHER; D. E. COUTURE; A. M. LAXTON; G. POPLI; M. J. SOLLMAN; C. A. SEXTON; S. A. DEADWYLER; R. E. HAMPSON*. *Wake Forest Baptist Med. Ctr., Wake Forest Baptist Med. Ctr., Wake Forest Baptist Med. Ctr., Wake Forest Sch. of Med., Wake Forest Sch. of Med.*

10:00 TT10 **554.07** Conscious control over the BOLD effect in the DLPFC is linked with task performance. M. S. SHERWOOD*; J. H. KANE; M. P. WEISEND; J. G. PARKER. *Wright State Res. Inst., Wright State Univ.*

11:00 TT11 **554.08** ● Investigating the effects of 4-weeks multivitamin/mineral supplementation on functional brain activity during working memory. D. J. WHITE*; M. HUGHES; A. PIPINGAS; A. B. SCHOLEY. *Swinburne Univ., Swinburne Univ.*

8:00 TT12 **554.09** Cholinergic activity in human medial temporal lobe during active maintenance of configural information. K. SHATTUCK*; J. W. VANMETER. *Georgetown Univ., Georgetown Univ.*

9:00 TT13 **554.10** Direct recordings of sustained theta-band electrical activity in the human auditory cortex during working memory for tones. P. E. GANDER*; S. KUMAR; K. V. NOURSKI; H. OYA; H. KAWASAKI; M. A. HOWARD, III; T. D. GRIFFITHS. *Univ. of Iowa Hosp. and Clinics, Newcastle Univ., Univ. Col. London.*

10:00 TT14 **554.11** Are default mode and task network activity anti-correlated? J. M. JANSMA*; T. R. VAN RAALTEN; J. H. CALLICOTT; N. F. RAMSEY. *UMC Utrecht, Rudolf Magnus Inst. of Neurosci., UMC Utrecht, Brain Ctr. Rudolf Magnus, NIH, NIMH.*

11:00 TT15 **554.12** Attentional filtering and working memory storage in mild cognitive impairment and Parkinson's disease. N. G. MUELLER*; J. BLATT; A. VELLAGE. *DZNE & Otto von Guericke Univ. Clin.*

8:00 TT16 **554.13** rTMS/EEG of MT+ during STM for transparent motion. A. D. SHELDON*; J. SAMAHA; N. S. ROSE; A. C. RIGGALL; X. HUANG; B. R. POSTLE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

9:00 TT17 **554.14** Rinzai Zen meditators are superior to resolve semantic interference: An fMRI study based on a Stroop paradigm. N. OSAKA*; T. MINAMOTO; K. YAOI; M. AZUMA; M. OSAKA. *Kyoto Univ., Osaka Univ.*

10:00 TT18 **554.15** Changes in global brain connectivity predict behavioural performance across task difficulty. D. VATANSEVER*; D. K. MENON; A. MANKTELOW; E. A. STAMATAKIS. *Univ. of Cambridge.*

11:00 TT19 **554.16** Ghost in the machine: Neural mechanisms of spatial working memory. C. PAPADIMITRIOU*; R. L. WHITE; L. H. SNYDER. *Washington Univ. In St. Louis, Univ. of California, Berkeley.*

POSTER

555. Human Decision-Making: Cognition and Computation

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 TT20 **555.01** Adaptation to action-related changes in a volatile environment. H. THÉRO*; V. CHAMBON; E. KOECHLIN. *ENS LNC.*

9:00 TT21 **555.02** The role of working memory in the Iowa Gambling Task. A. PIERCE; M. SAULS; R. TANK; W. H. OVERMAN*, Jr. *Univ. North Carolina Wilmington.*

10:00 TT22 **555.03** EEG correlates of activity within salience, central executive and default-mode networks after errors. A. NAVARRO-CEBRIAN*; A. S. KAYSER; T. A. VEGA. *UCSF, Univ. of California, Berkeley.*

11:00 TT23 **555.04** Dynamics of human anterior cingulate cortex responses during cognitive control. H. TANG; H. YU; C. CHOU; J. MADSEN; W. S. ANDERSON; G. KREIMAN*. *Harvard Univ., Veterans Gen. Hosp., Boston Children's Hosp., John Hopkins Sch. of Med., Harvard Med. Sch.*

8:00 TT24 **555.05** Cortical activity reflecting a tactical thinking to follow a rule: An fNIRS study. N. MIURA*; N. SHIRASAWA; S. KANOH. *Tohoku Inst. of Technol., Shibaura Inst. of Technol.*

9:00 TT25 **555.06** ● Transcranial magnetic stimulation in human inferior frontal cortex alters voluntary action decisions. S. ANGSTMANN*; J. ZHANG; B. HALLSSON; K. H. MADSEN; J. B. ROWE; H. R. SIEBNER. *Copenhagen Univ. Hosp. Hvidovre, DRCMR, MRC Cognition and Brain Sci. Unit.*

10:00 TT26 **555.07** Identification of context enables use of model-based learning strategies in value-based decision making. M. BALCARRAS*; O. ABID; T. WOMELSDORF. *York Univ., York Univ.*

11:00 TT27 **555.08** Cognitive mechanisms underlying instructed choice exploration of small city maps. S. SAKELLARIDI*; P. CHRISTOVA; J. PEPONIS; A. P. GEORGOPOULOS. *Univ. of Minnesota, Univ. of Minnesota, Georgia Inst. of Technol.*

8:00 TT28 **555.09** ▲ Identifying the relative influence of multiple prior events on predictions of a probabilistic future: An artificial neural network analysis. J. FREEDMAN; A. AMLIE-WOLF; R. WITTENBERG; O. SHOHAM; S. R. ARONSON; M. D. LOOSE*. *Oberlin Col., Univ. of Pennsylvania, UC San Diego.*

9:00 TT29 **555.10** Cue and outcome-based task retrieval in human. M. E. EKOVICH*; E. KOECHLIN. *Ecole Normale Superieure.*

10:00 TT30 **555.11** Electroencephalographic correlates of system two decision making. O. E. KRIGOLSON*; C. HASSALL. *Dalhousie Univ.*

11:00 TT31 **555.12** Is there overlapping neural activation from different sources of decision difficulty? B. E. KIM-VIECHNICKI*; J. W. KABLE. *Univ. of Pennsylvania, Dept of Psychology.*

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8:00 TT32 **555.13** Frequency-dependent feedback-related information exchange in the human medial and lateral prefrontal cortex. S. A. SHETH*; G. BANKS; M. K. MIAN; S. R. PATEL; E. N. ESKANDAR; E. H. SMITH. *Columbia Univ., Massachusetts Gen. Hosp.*

9:00 TT33 **555.14** Measuring and manipulating satisficing decision strategies in models, humans, and monkeys. H. OH; P. ZHU; K. RAFIE; S. FERRARI; J. BECK; T. EGNER; M. A. SOMMER*. *Duke Univ.*

10:00 TT34 **555.15** Exploration and exploitation in action selection in humans depends on striatal GABA. A. S. ROKEM*; G. S. TANG; T. LUCAS; A. THAMRONGRATTANARIT; L. BALTUSIS; R. F. DOUGHERTY; R. MATA; L. L. CARSTENSEN; G. R. SAMANEZ-LARKIN; S. M. MCCLURE. *Stanford Univ., California State University, Northridge, Brandeis, Univ. of Basel, Vanderbilt Univ.*

11:00 TT35 **555.16** ● Cortical-subcortical circuits underlying parallel behavioural control systems. V. VOON*; L. MORRIS; P. KUNDU; M. IRVINE; T. ROBBINS; E. BULLMORE; N. DAW. *Univ. of Cambridge, New York Univ.*

8:00 TT36 **555.17** Electroencephalographic evidence for the sparsity heuristic. C. D. HASSALL*; P. C. CONNOR; T. P. TRAPPENBERG; O. E. KRIGOLSON. *Dalhousie Univ.*

9:00 TT37 **555.18** Calibration of persistence based on delay-timing distribution is preserved in sleep deprivation. S. A. MASSAR*; M. W. L. CHEE. *Duke-Nus Grad. Med. Sch.*

10:00 TT38 **555.19** A general form for state-space representation in frontal and temporal cortex. M. M. BOTVINICK*; C. DIUK; D. YEE; J. CHEONG; A. WEINSTEIN; Y. NIV; A. BARTO. *Princeton Univ., Facebook, Inc., Washington Univ., Univ. of Massachusetts.*

11:00 TT39 **555.20** Source of choice behavior variability in probabilistic events: Noise vs suboptimal inference. J. TEE*; L. T. MALONEY. *New York Univ., New York Univ., New York Univ.*

8:00 TT40 **555.21** A core brain network for mixed-strategy decision-making. A. C. PARR*; B. C. COE; M. C. DORRIS; D. P. MUNOZ. *Queen's Univ., Shanghai Inst. for Biol. Sci.*

9:00 TT41 **555.22** Dynamic normalization in cascaded decision circuits. T. LOFARO*; K. LOUIE; P. W. GLIMCHER. *Gustavus Adolphus Col., New York Univ.*

10:00 TT42 **555.23** Investigation of the effect of different dopaminergic levels on the basal ganglia action selection properties using a biologically constrained computational model. J. BELLOT; J. LIÉNARD; M. KHAMASSI; B. GIRARD*. *CNRS / UPMC, Washington State Univ., CNRS / UPMC.*

11:00 TT43 **555.24** Divisive normalization and neurobiological constraints on decision-making. R. WEBB*; P. W. GLIMCHER; K. LOUIE. *Univ. of Toronto, New York Univ.*

8:00 TT44 **555.25** Analogical mapping within and across modalities: Modular abilities or analo-g? G. ENGLISH*; N. PARROTT; E. FEARON; N. LIU; N. GALLAGHER; A. GREEN. *Georgetown Univ., Georgetown Univ., Georgetown Univ.*

POSTER

556. Human Cognition: Timing and Temporal Processing

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 TT45 **556.01** Sleep inspires temporal insight but not categorical insight. L. CANNELLA*; I. LERNER; D. OHIOMA; M. A. GLUCK. *Rutgers Univ. Newark.*

9:00 TT46 **556.02** A neurocomputational model of how memory replay during slow-wave sleep inspires insight. I. LERNER*; M. GLUCK. *Rutgers Univ.*

10:00 TT47 **556.03** Dissecting human cortical oscillations with surgical transections: White and grey matter contributions to independent oscillatory units. A. H. HAWASLI*; D. KIM; N. M. LEDBETTER; S. DAHIYA; D. L. BARBOUR; E. C. LEUTHARDT. *Washington Univ. Sch. of Med., Washington Univ. in St. Louis, Washington Univ. Sch. of Med.*

11:00 TT48 **556.04** Temporal coordination in human communications - Phase-oscillator analysis of a two-person alternate tapping task. Y. CHENG; M. KAWASAKI; K. KITAJO; Y. YAMAGUCHI*. *Univ. of Tokyo, Tsukuba Univ., RBIP Unit, RIKEN BSI-Toyota Collaboration Ctr., ABSP Lab, RIKEN BSI, RIKEN BSI.*

8:00 TT49 **556.05** Temporal orienting of attention can be preserved in normal ageing. J. CHAUVIN*; C. GILLEBERT; G. ROHENKOHL; G. HUMPHREYS; A. NOBRE. *Univ. of Oxford.*

9:00 TT50 **556.06** Integration of short-term and long-term temporal information in interval timing. S. W. EGGER*; M. JAZAYERI. *MIT, MIT.*

10:00 TT51 **556.07** ▲ Mindfulness meditation alters subjective experience of time. D. SMITH*; A. CATE; M. KOFFARNUS. *Virginia Tech., Virginia Tech. Carilion Res. Inst.*

11:00 TT52 **556.08** Neural substrate of omitted stimulus response: A simultaneous EEG-fMRI study. I. B. SAMUEL*; H. HUANG; A. RAJAN; M. DING. *Univ. of Florida.*

8:00 TT53 **556.09** Processing of sub- and supra-second intervals in primate brain results from the calibration of multiple neuronal oscillators via sensory/motor and feedback processes. D. S. GUPTA*. *Camden County Col.*

9:00 TT54 **556.10** Transcranial magnetic stimulation over the right dorsal premotor cortex increases dependence on prior information during tactile temporal order judgment. M. MIYAZAKI*; S. TAKEUCHI; H. SEKIGUCHI. *Res. Inst. for Time Studies, Yamaguchi Univ., Jobu Univ.*

10:00 TT55 **556.11** Electromagnetic signatures of mental travel in time and space. B. GAUTHIER*; K. PESTKE; V. VAN WASSENHOVE. *Cea/dsv/i2bm/Neurospin Center/ Cognitive Neuroimaging Unit.*

11:00 TT56 **556.12** The role of the supplementary motor area and the cerebellum in beat-based and non-beat-based timing. L. LEOW*; J. A. GRAHN. *Brain and Mind Inst.*

8:00 TT57 **556.13** Novel regimes in dynamic attractor networks account for timing and temporal warping. N. HARDY*; D. V. BUONOMANO. *UCLA.*

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9:00 TT58 **556.14** Brain activity differences during rhythm discrimination in adults who stutter. E. A. WIELAND*; J. D. MCAULEY; D. ZHU; L. C. DILLEY; S. CHANG. *Michigan State Univ., Michigan State Univ., Michigan State Univ., Univ. of Michigan.*

10:00 TT59 **556.15** Motor activity improves interval timing judgments. E. THOMAS*; L. FAUTRELLE; D. MARESCHAL; R. FRENCH. *Univ. De Bourgogne, Univ. Paris Ouest, Univ. of Birkbeck, CNRS.*

11:00 TT60 **556.16** Representation of elapsed time in the human posterior parietal cortex. M. I. LEON*; N. B. FLYNN; J. E. MEDINA. *Cal State Univ, Bakersfield.*

8:00 TT61 **556.17** The effects of energy drinks on cognitive performance on the Stroop test. B. C. NOLAN*; G. L. HUBER. *Quincy Univ.*

9:00 TT62 **556.18** Analysis of the trajectories of the neuronal population activity in the premotor cortex of Rhesus monkeys during a Synchronization-Continuation Task. J. GAMEZ; R. BARTOLO; H. MERCHANT*. *Inst. de Neurobiologia UNAM.*

10:00 TT63 **556.19** Theta oscillations during processing of rapid frequency change differ between infants with a family history of Specific Language Impairment and controls. N. A. CHOUDHURY*; S. ORTIZ-MANTILLA; J. PARASCANDO; A. A. BENASICH. *Ramapo Col., Rutgers University, Newark.*

11:00 TT64 **556.20** ▲ Saccadic eye movements during a bisection timing task. A. TOSCANO ZAPIEN*; D. DANIEL VELAZQUEZ-LOPEZ; D. VELAZQUEZ-MARTINEZ. *Univ. Nacional Autónoma De México, Univ. Nacional Autónoma de México.*

8:00 TT65 **556.21** The role of multisensory signals in interval timing: An MEG study. T. W. KONONOWICZ*; L. LECOUTRE; V. VAN WASSENHOVE. *CEA, NeuroSpin Center, INSERM, Univ. Paris-Sud.*

9:00 TT66 **556.22** Paced auditory stimuli with distinct characteristics affect differently the clock-like neural process? D. MINCIACCHI*; E. QUARTA; E. J. COHEN; R. BRAVI. *Univ. of Florence.*

10:00 TT67 **556.23** The role of perceptual and semantic processing on visually distracted time reproduction. K. FOLTA*. *Univ. of Hildesheim.*

11:00 TT68 **556.24** Spatial and temporal neural dynamics in infant development with early auditory experience. G. MUSACCHIA*; S. ORTIZ-MANTILLA; N. CHOUDHURY; T. REALPE-BONILLA; H. LOVERING; R. SHELL; A. A. BENASICH. *Montclair State Univ., Rutgers Univ., Ramapo Col. of New Jersey.*

8:00 TT69 **556.25** ▲ Effect of Transcranial Magnetic Stimulation on Long Range Temporal Correlations in the motor cortex of the human brain. E. BLAGOVECHTCHENSKI*; M. NAZAROVA; V. NIKULIN. *Higher Sch. of Econ., Natl. Res. Univ. "Higher Sch. of Economics".*

9:00 TT70 **556.26** Neural dynamics of perceptual narrowing for phonemes in infants. S. C. ORTIZ-MANTILLA*; J. A. HÄMÄLÄINEN; A. A. BENASICH. *Rutgers The State Univ. of New Jersey, Univ. of Jyväskylä.*

10:00 TT71 **556.27** Long-term recalibration of neural time lag in audiovisual temporal order judgment. S. YAMAMOTO*; K. MORI. *AIST.*

POSTER

557. Executive Function: Models of Disorders I

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 TT72 **557.01** A comparison of the effects of different pharmacological stressor and restraint stress on effort-based decision-making. C. A. BRYCE; S. B. FLORESCO*. *Univ. British Columbia, Univ. British Columbia.*

9:00 TT73 **557.02** Prefrontal GABAA receptor regulation of working memory assessed with a delayed non-match to position task. M. AUGER*; S. B. FLORESCO. *Univ. of British Columbia.*

10:00 TT74 **557.03** ▲ Alterations in probabilistic learning, testosterone and the prefrontal cortex during aging. R. J. TOMM; C. Q. MA; M. T. TSE; M. M. GRIST; S. B. FLORESCO; K. K. SOMA*. *Univ. British Columbia.*

11:00 TT75 **557.04** ● Predictive validity of the neurokinin-1 knockout mouse model of ADHD. K. PILLIDGE*; A. PORTER; Y. TSAI; T. VASILI; D. HEAL; C. STANFORD. *UCL, RenaSci Ltd.*

8:00 TT76 **557.05** The brain renin angiotensin system influences the locomotor hyperactivity and impulsivity of neurokinin-1 receptor 'knockout' mice. A. J. PORTER*; K. PILLIDGE; T. VASILI; C. STANFORD. *Univ. Col. London, Univ. Col. London.*

9:00 TT77 **557.06** ▲ Chemotherapy reduces locomotor activity, impairs working and spatial memory and decreases BDNF, but does not affect anxiety or visual memory. D. WOO*; C. RICHARDSON; C. STREET; K. URIBE; M. QADRI; N. TALUKDER; G. DEJESUS; S. PEREZ; T. AHLES; K. HUBBARD; K. Y. SALAS-RAMIREZ. *Sophie Davis Sch. of Biomed. Education, CCNY, The City Col. of New York, The Sophie Davis Sch. of Biomed. Education, CCNY, Lehman College, CUNY, Mem. Sloan Kettering Cancer Ctr.*

10:00 TT78 **557.07** Amygdalar pathways target excitatory and distinct inhibitory mechanisms in mnemonic cortices of the primate medial temporal lobe. J. G. BUNCE*; H. BARBAS. *Boston Univ.*

11:00 TT79 **557.08** Context and emotion: Computational modeling of interactions between hippocampus and amygdala. Y. J. JOHN*; D. BULLOCK; J. G. BUNCE; B. ZIKOPOULOS; H. BARBAS. *Boston Univ., Boston Univ.*

8:00 TT80 **557.09** Common architecture of subgenual anterior cingulate cortices and white matter pathways in human and non-human primates. B. ZIKOPOULOS*; M. Á. GARCÍA-CABEZAS; H. BARBAS. *Boston Univ.*

9:00 TT81 **557.10** A novel pathway from the anterior cingulate to the premotor cortex may link cognitive control and movement. O. K. SWANSON; M. GARCIA-CABEZAS*; H. BARBAS. *Sargent College, Boston Univ.*

10:00 TT82 **557.11** Effects of ventral medial-prefrontal-cortex NMDAR-NR1 subunit deletion on a spatial reference memory radial maze task in adult mice. R. M. WESTON; M. J. MANA*; A. M. SCHILLER; T. V. NGUYEN; M. M. GORHAM; R. F. KYDD; R. W. GREENE; J. M. FINLAY. *Western Washington Univ., UTSW & Dallas VAMC.*

11:00 TT83 **557.12** Effects of ventral medial prefrontal cortex NMDAR-NR1 subunit deletion on attention and response inhibition in adult mice. H. G. MANNING; M. A. MAYNES; R. K. FLYNN; R. M. WESTON; R. W. GREENE; J. M. FINLAY*. *Western Washington Univ., UTSW & Dallas VAMC.*

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8:00 TT84 **557.13** The neurosteroid pregnenolone sulfate interacts with the NMDA receptor antagonist MK-801 to impair cognitive flexibility and spatial working memory in a rat model of schizophrenia. M. R. STEFANI*; J. K. GEHRMANN; E. D. H. BARNARD; D. M. PRIOR. *Middlebury Col.*

9:00 TT85 **557.14** Cerebellar pathology influences cerebellar-nucleus accumbens and striatum pathways in modulating dopamine release: Relevance to Autism-related behavioral disorders. E. MCKIMM; D. M. COOMES; M. A. CALTON; D. GOLDOWITZ; G. MITTLEMAN; C. D. BLAHA*. *Univ. of Memphis, Ctr. for Mol. Med. and Therapeut.*

10:00 TT86 **557.15** Does lack of CaMKII autophosphorylation model a neuropsychiatric disorder? K. MIZUNO*; K. GIESE. *Kings Col. London.*

11:00 TT87 **557.16** Behavioral assay of the lack of the SLITRK1 gene in C57BL/6 mice. J. M. ANDRE*; S. NISHIMURA; A. LOUVI; C. PITTENGER. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

8:00 TT88 **557.17** Familial hemiplegic migraine type 1 mutant mice show cognitive impairment in hippocampal memory tasks. A. M. LENSELINK*; T. HOUBEN; E. DILEKÖZ; C. AYATA; M. FERRARI; A. B. SMIT; A. M. J. M. VAN DEN MAAGDENBERG; S. SPIJKER. *VU Amsterdam, Leiden Univ. Med. Ctr., Massachusetts Gen. Hospital, Harvard Med. Sch.*

POSTER

558. Decision Making I

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 TT89 **558.01** Nicotine's effects on cognitive effort are dependent upon individual differences: acetylcholine manipulation on a rodent cost/benefit decision-making task. J. G. HOSKING*; F. C. W. LAM; C. A. WINSTANLEY. *Dept. of Psychology, Univ. of British Columbia, Univ. of British Columbia.*

9:00 TT90 **558.02** Noradrenergic regulation of optimal decision making. E. M. VAZEY*; G. ASTON-JONES. *MUSC.*

10:00 TT91 **558.03** Locus coeruleus norepinephrine neurons are phasically activated during behavioral response inhibition. M. D. RIEDY*; G. ASTON-JONES. *Med. Univ. of South Carolina.*

11:00 TT92 **558.04** Genetics and pharmacogenetics of simple vertebrate decision-making. R. JAIN*; K. MARSDEN; M. WOLMAN; H. BELL; K. HAYER; J. HOGENESCH; M. GRANATO. *Univ. of Pennsylvania, Univ. of Wisconsin.*

8:00 UU1 **558.05** Choice of strategies is influenced by emotionality in a repeated prisoner's dilemma in mice. K. KIM*; I. CHOE; I. KIM; S. PARK; H. SHIN. *Inst. For Basic Sci., Inst. for Basic Sci.*

9:00 UU2 **558.06** Altered performance on a novel effortful maze task following methamphetamine in rats. A. STOLYAROVA*; A. DE LA TORRE; A. B. THOMPSON; A. IZQUIERDO. *UCLA.*

10:00 UU3 **558.07** Effects of nicotine exposure on probability discounting in rats. C. REICH*; J. BURK. *The Col. of William & Mary, The Col. of William & Mary.*

11:00 UU4 **558.08** Action-dependent state prediction in the parietal cortex of mouse during a virtual navigation task. A. FUNAMIZU*; B. KUHN; K. DOYA. *Okinawa Inst. of Sci. and Technol.*

8:00 UU5 **558.09** Emergence of abstract knowledge that guides decision making in rats. S. TERADA*; H. NAKAHARA; S. FUJISAWA. *Kyto Univ., RIKEN Brain Sci. Inst., Japan Society for the Promotion of Sci., RIKEN Brain Sci. Inst.*

9:00 UU6 **558.10** Addition of numerical quantities in working memory by rhesus monkeys. B. MASSI*; H. SOHN; N. CENERI; D. LEE. *Yale Univ.*

10:00 UU7 **558.11** Maternal rats use frontal cortex to discriminate between own and alien pups. A. FRANSSEN*; A. J. HAUVER; J. LAFEVRE; M. CLASEN; K. GAFFNEY; A. PARDES; R. PRUETT; H. UYGUNER; M. VASSALLO; C. L. FRANSSEN. *Longwood Univ., James Madison Univ., Longwood Univ.*

11:00 UU8 **558.12** Low level lead exposure differentially impairs performance of an attentional set shifting task depending on developmental period of exposure. L. S. NEUWIRTH*; D. W. ANDERSON; J. S. SCHNEIDER. *Thomas Jefferson Univ., Thomas Jefferson Univ.*

8:00 UU9 **558.13** Ipsilateral ventral striatal lesions disrupt reward prediction error signals in rat dopamine neurons. Y. K. TAKAHASHI*; G. SCHOENBAUM. *NIDA/NIH, NIDA/NIH.*

9:00 UU10 **558.14** Neuronal activity-dependent BDNF alterations in corticostriatal circuits during flexible decision-making. R. COLE*; P. J. PATEL; P. N. OSUAGWU; V. PARIKH. *Temple Univ.*

10:00 UU11 **558.15** The role of temporal variability during time-constrained motor sequences: A computational study. I. COS-AGUILERA*; P. RUEDA-OROZCO; D. ROBBE; B. GIRARD. *ISIR, Univ. Pierre et Marie Curie, Inst. de Neurobiologie de la Mediterranee (INMED).*

11:00 UU12 **558.16** Investigating the neural mechanisms of disordered gambling using the N-Arm Bandit Task. C. S. LASKOWSKI*; R. WILLIAMS; A. GRUBER; K. MARTENS; D. EUSTON. *The Univ. of Lethbridge, The Univ. of Lethbridge, The Univ. of Lethbridge, The Univ. of British Columbia.*

8:00 UU13 **558.17** The nematode *C. elegans:* A new model organism for economic decision making. A. W. KATZEN*; W. T. HARBAUGH; S. R. LOCKERY. *Univ. of Oregon, Univ. of Oregon, Univ. of Oregon.*

9:00 UU14 **558.18** Variability of perceptual decision-related activity differs between the frontal eye field and caudate nucleus. J. A. CABALLERO; J. I. GOLD; L. DING*. *Univ. of Pennsylvania.*

10:00 UU15 **558.19** Dorsomedial striatum lesions disrupt the balance between model-free and model-based learning in a multi-stage decision-making task in rats. S. M. GROMAN*; L. CHEN; N. J. SMITH; D. LEE; J. R. TAYLOR. *Yale Univ., Yale Univ.*

11:00 UU16 **558.20** Neural correlates of risk/reward decision making in nucleus accumbens neurons. J. D. LARKIN*; S. B. FLORESCO. *Univ. of British Columbia.*

8:00 UU17 **558.21** Distinct mechanisms of reward that underlie decision-making in mice. C. F. ROBLES*; J. ROTONDO; A. GRANT; A. W. JOHNSON. *Michigan State Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 UU18 **558.22** Reward timing in primary sensory cortex during multi-modal intertemporal decision-making. J. M. LEVY*; M. G. SHULER. *Johns Hopkins, Johns Hopkins Univ.*

10:00 UU19 **558.23** Optical dissection of cortical circuits underlying short-term memory. M. GOARD*; G. PHO; M. SUR. *MIT.*

11:00 UU20 **558.24** ● Dysfunctional learning: what happens in the dentate nucleus when one gets the answer to an acoustically cued question wrong? C. D. WOODY*. *UCLA Med. Cntr. NPI 58-258.*

8:00 UU21 **558.25** Adaptive interpretation of sounds without the auditory cortex. T. L. GIMENEZ; M. LORENC; S. JARAMILLO*. *Univ. of Oregon, Cold Spring Harbor Lab.*

9:00 UU22 **558.26** Early termination of drift diffusion trajectories in decision making in monkeys. S. CHANDRA*; M. A. G. ELDRIDGE; B. RICHMOND. *NIH.*

10:00 UU23 **558.27** VTA neurons exhibit associative activity to cues based on inferred value. B. F. SADACCA*; G. SCHOENBAUM. *Natl. Inst. On Drug Abuse.*

11:00 UU24 **558.28** Different effects of dopamine D1 and D2 receptor knock-out on performance in a dynamic and uncertain environment. S. KWAK*; N. HUH; J. SEO; J. LEE; P. HAN; M. W. JUNG. *Systems Neurosci. Lab., Ctr. for Synaptic Brain Dysfunctions, Inst. of Basic Sci., Dept. of Brain and Cognitive Sciences, Ewha Womans Univ., Ctr. for Synaptic Brain Dysfunctions, Inst. for Basic Scinece, Dept. of Biol. Sceince, Korea Advanced Inst. of Sci. and Technol.*

8:00 UU25 **558.29** Information processing in temporal lobe area TE and in rhinal cortex during a visual categorization task. K. LOWE*; M. A. G. ELDRIDGE; R. C. SAUNDERS; B. J. RICHMOND. *NIH.*

POSTER

559. Memory Consolidation and Reconsolidation: Neural Mechanisms

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 UU26 **559.01** Optogenetic induction of fast-gamma and sharp-wave ripples *in vivo.* D. C. KLORIG*; G. ALBERTO; M. MASICAMPO; D. W. GODWIN. *Wake Forest Hlth. Sci., Wake Forest Univ. Hlth. Sci., Wake Forest Univ. Hlth. Sci.*

9:00 UU27 **559.02** Role of astrocyte connexins in the regulation of sleep oscillatory patterns. M. M. LACROIX*; L. ROUX; C. GIAUME; K. BENCHENANE. *CNRS UMR7637, New-York Univ., Collège de France, CIRB 7241, ESPCI Paris Tech.*

10:00 UU28 **559.03** Sleep-scoring in mice using gamma frequency in the olfactory bulb. S. BAGUR*; M. LACROIX; K. BENCHENANE. *ESPCI, ESPCI - ParisTech.*

11:00 UU29 **559.04** ▲ Explicit memory creation during sleep: The causal role of place cell on navigation. G. DE LAVILLEON*; M. M. LACROIX; L. RONDI-REIG; K. BENCHENANE. *Brain Plasticity Unit, UMR 8249 CNRS ESPCI, Neurosciences Paris Seine, CNRS UMR 8246, INSERM UMR-S 1130.*

8:00 UU30 **559.05** Sleep and memory consolidation of auditory classification learning in European starlings. T. P. BRAWN*; H. C. NUSBAUM; D. MARGOLIASH. *Univ. of Chicago.*

9:00 UU31 **559.06** Selective intervention in hippocampal and cortical consolidation: Impact of novelty and sleep. L. GENZEL*; J. ROSSATO; R. FITZPATRICK; R. G. M. MORRIS. *Univ. of Edinburgh.*

10:00 UU32 **559.07** The neural basis of complex associative memory in tone-light compound fear conditioning in mice. O. I. IVASHKINA*; M. ROSHCHINA; K. TOROPOVA; K. ANOKHIN. *NRC Kurchatov Institute, NBICS-Center, Anokhin Inst. of Normal Physiol. RAMS, Inst. of Higher Nervous Activity and Physiol. RAS, Moscow Inst. of Physics and Technol.*

11:00 UU33 **559.08** Erasure of recent and remote hippocampus-dependent fear memory by enhancing memory forgetting through increase in adult hippocampal neurogenesis. R. ISHIKAWA*; P. FRANKLAND; S. KIDA. *Tokyo Univ. of Agr., Univ. of Toronto, CREST, JST.*

8:00 UU34 **559.09** Up-regulation of CREB activity in forebrain enhances working-like memory and increases spine density in the hippocampus. T. SERITA*; H. FUKUSHIMA; S. KIDA. *Tokyo Univ.Of Agr., JST, CREST.*

9:00 UU35 **559.10** Poly ADP-ribosylation is required for reconsolidation and extinction of contextual fear memory. H. INABA*; A. TSUKAGOSHI; S. KIDA. *Dept. of Biosci, Tokyo Univ. of Agr., CREST, JST.*

10:00 UU36 **559.11** Posttraining optogenetic control of basolateral amygdala projections to the ventral hippocampus modulates the consolidation of emotional, but not contextual, learning in rats. M. L. HUFF*; R. T. LALUMIERE. *Univ. of Iowa.*

11:00 UU37 **559.12** Retrieval of contextual fear memory enhances the post-burst afterhyperpolarization in burst-spiking cells in the subiculum. K. A. HOPE*; S. M. NEUNER; L. A. WILMOTT; C. C. KACZOROWSKI. *UTHSC.*

8:00 UU38 **559.13** Acute effects of exposure to space radiation on CNS function and cognitive performance. B. M. RABIN*; B. SHUKITT-HALE; K. L. CARRIHILL-KNOLL; D. F. BIELINSKI; S. M. POULOSE; N. A. HEROUX; C. BAXTER. *Univ. Maryland Baltimore County, USDA-ARS.*

9:00 UU39 **559.14** Layer specific inputs to layer V primary motor cortex exhibit different profiles of training-induced synaptic plasticity. Q. LI*; H. KO; C. W. CHAN; G. ARBUTHNOTT; Y. KE; W. H. YUNG. *The Chinese Univ. of Hong Kong, Okinawa Inst. of Sci. and Technol. Grad. Univ.*

10:00 UU40 **559.15** The effect of subhypnotic doses of propofol on spatial memory retrieval and the phosphorylation of glycogen synthase kinase-3β in the hippocampus. H. LIU; X. LIU*; Y. LI. *1st Affiliated Hosp. of Anhui Med. University, Anhui, China, 1st Affiliated Hosp. of Anhui Med. Univ.*

11:00 UU41 **559.16** Neural mechanisms of strategy change during conditioned learning. R. KOZMA; M. H. MYERS*; W. J. FREEMAN. *Univ. of Memphis, Univ. of Memphis, Univ. of California.*

8:00 UU42 **559.17** Median raphe nucleus regulates hippocampal ripple oscillation and memory consolidation. D. V. WANG*; H. YAU; C. J. BROKER; J. TSOU; A. BONCI; S. IKEMOTO. *Natl. Inst. On Drug Abuse.*

9:00 UU43 **559.18** Rapid encoding of novel spatial information requires LTD. D. M. ASHBY*; Y. WANG. *Univ. of British Columbia, Univ. of British Columbia.*

10:00 UU44 **559.19** Inflammation as a potential mediator of decreased NMDA receptor function and the onset of age-related cognitive decline: A test for the effectiveness of anti-inflammatory drugs. A. KUMAR*; A. RANI; T. C. FOSTER. *Univ. of Florida.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 UU45 **559.20** Coordinated increase of excitatory and Purkinje cell somatic synapses on eyeblink projection neurons of the anterior interpositus after eyeblink conditioning. J. GONZALEZ-JOEKES*; B. G. SCHREURS. *WVU.*

8:00 UU46 **559.21** The role of dopamine 1 and 5 receptors in hippocampal dependent learning and memory. J. SARINANA*; T. KITAMURA; P. KÜNZLER; L. SULTZMAN; S. TONEGAWA. *Massachusetts Inst. of Technology, The Picower Inst. for Learning and Me, Inno-Motion Ltd., MIT.*

9:00 UU47 **559.22** ▲ Muscarinic receptor-mediated destabilization of object memories is blocked by proteasome inhibition. M. L. STIVER*; D. L. JACKLIN; N. VICIC; J. CARLIN; M. O'HARA; B. D. WINTERS. *Univ. of Guelph.*

POSTER

560. Hippocampal and Cortical Circuits II

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 UU48 **560.01** Aging is associated with altered intrinsic neural dynamics in the basolateral complex of the amygdala. R. D. SAMSON*; A. W. LESTER; P. LIPA; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

9:00 UU49 **560.02** Behavior of normal aged rats mimics the pattern of task performance of rats with hippocampal lesions on a W-track continuous spatial alternation task. A. R. UPRETY*; A. I. ESPINOZA; A. RICHARDS; A. C. SMITH; C. A. BARNES. *Univ. Arizona, Univ. Arizona, Univ. Arizona.*

10:00 UU50 **560.03** Age-related changes in high-frequency local field activity in the rodent hippocampus during ripple and inter-ripple periods. J. WIEGAND*; D. T. GRAY; L. A. SCHIMANSKI; P. LIPA; C. A. BARNES; S. L. COWEN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

11:00 UU51 **560.04** Age-associated changes in spike-timing of hippocampal principal cells and interneurons during ripple oscillations. S. L. COWEN*; J. WIEGAND; D. T. GRAY; L. A. SCHIMANSKI; P. LIPA; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

8:00 UU52 **560.05** Non-linear optical imaging: A powerful new technique for acquiring high-resolution brain images and possible application for identifying cell types and neuronal activity. M. A. MILLER*; S. MEHRAVAR; D. T. GRAY; A. A. KOSHY; C. M. CABRAL; M. K. CHAWLA; K. Q. KIEU; C. A. BARNES; S. L. COWEN; N. N. PEYGHAMBARIAN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

9:00 UU53 **560.06** Novel method for behavior-driven molecular and structural investigation in rodent whole brain. M. K. CHAWLA*; D. T. GRAY; A. E. COMRIE; B. K. BAGGETT; U. UTZINGER; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

10:00 UU54 **560.07** Selective changes in inhibitory networks of the medial temporal lobe correlate with behavioral and electrophysiological deficits in aged rhesus macaques. D. T. GRAY*; A. THOME; C. A. ERICKSON; P. LIPA; C. L. TAKAMATSU; A. E. COMRIE; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Metropolitan State Univ. of Denver, Univ. of Arizona.*

11:00 UU55 **560.08** PACAP expression is downregulated in aged nonhuman primates. P. HAN*; M. R. PERMENTER; J. A. VOGT; J. R. ENGLE; C. A. BARNES; J. SHI. *Dignity Health-SJHMC, Univ. of California, Davis, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

8:00 UU56 **560.09** Unique contributions of medial and lateral entorhinal cortices to episodic memory in a context-guided object-association task. C. S. KEENE*; J. H. BLADON; S. MCKENZIE; H. EICHENBAUM. *Boston Univ.*

9:00 UU57 **560.10** Investigating the role of the medial entorhinal cortex in the hippocampal encoding of time and space for memory function. N. T. ROBINSON*; J. W. RUECKEMANN; J. B. PRIESTLEY; A. D. GARCIA; V. A. SMEGLIN; A. CHUONG; E. BOYDEN; H. B. EICHENBAUM. *Boston Univ., MIT.*

10:00 UU58 **560.11** Single cell and ensemble odor-place representations in the dentate gyrus and CA1 of the hippocampus. L. M. RANGEL*; P. D. RIVIÈRE; C. H. BUDLONG; I. HEIMBUCH; B. S. PORTER; H. EICHENBAUM. *Boston Univ., Boston Univ., Boston Univ., Univ. of Otago.*

11:00 UU59 **560.12** Bidirectional hippocampal-prefrontal interactions support context guided memory. R. J. PLACE*; A. FAROVIK; H. EICHENBAUM. *Boston Univ., Boston Univ., Boston Univ.*

8:00 UU60 **560.13** Name-calling in the hippocampus (and beyond): Coming to terms with neuron types and properties. D. J. HAMILTON*; D. W. WHEELER; C. WHITE; C. L. REES; A. O. KOMENDANTOV; S. VENKADESH; G. A. ASCOLI. *George Mason Univ.*

9:00 UU61 **560.14** Firing pattern classification of hippocampal neurons. A. O. KOMENDANTOV*; D. W. WHEELER; C. L. REES; C. WHITE; D. J. HAMILTON; S. VENKADESH; G. A. ASCOLI. *George Mason Univ.*

10:00 UU62 **560.15** Using Hippocampome.org to unravel the circuitry of the hippocampal connectome. C. L. REES*; D. W. WHEELER; C. WHITE; A. O. KOMENDANTOV; D. J. HAMILTON; S. VENKADESH; G. A. ASCOLI. *George Mason Univ.*

11:00 UU63 **560.16** Parameter optimization in a CA3 network model by evolutionary algorithms. S. VENKADESH*; A. O. KOMENDANTOV; D. W. WHEELER; C. L. REES; C. WHITE; D. J. HAMILTON; G. A. ASCOLI. *George Mason Univ.*

8:00 UU64 **560.17** Hippocampome.org: a knowledge base of neuron type properties for the rodent hippocampus. D. W. WHEELER*; C. WHITE; A. O. KOMENDANTOV; F. FAGHIHI; C. L. REES; D. J. HAMILTON; S. VENKADESH; B. HOLMES; G. A. ASCOLI. *George Mason Univ., Wright State Univ.*

9:00 UU65 **560.18** Memory-guided visual search reveals behavioral and autonomic markers of aging and Alzheimer's disease. M. DRAGAN*; T. K. LEONARD; A. M. LOZANO; M. MCANDREWS; K. NG; J. D. RYAN; D. F. TANG-WAI; J. WYNN; K. L. HOFFMAN. *York Univ., Ctr. for Vision Res., York Univ., York Univ., Univ. of Toronto, Toronto Western Hosp., Rotman Res. Institute, Baycrest.*

10:00 UU66 **560.19** Sharp wave ripples in the primate hippocampus during visual exploration. T. K. LEONARD*; E. N. ESKANDAR; J. L. GERRARD; D. KAPING; J. M. MIKKILA; S. PATEL; T. WOMELSDORF; K. L. HOFFMAN. *York Univ., Nayef Al-Rodhan Labs., Yale Sch. of Med., Karolinska Inst., York Univ., Massachusetts Gen. Hospital, Boston, York Univ., York Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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11:00 UU67 **560.20** State- and frequency-dependent changes in medial temporal lobe activity after Deep Brain Stimulation in the macaque. A. GÓMEZ PALACIO SCHJETNAN*; T. K. LEONARD; K. HOFFMAN. *York Univ.*

8:00 UU68 **560.21** Theta-gamma cross-frequency coupling in the macaque hippocampus during learning and recollection. J. M. MIKKILA*; T. K. LEONARD; R. MONTEFUSCO-SIEGMUND; K. L. HOFFMAN. *York Univ., York Univ., York Univ., York Univ.*

POSTER

561. Invertebrate Learning and Memory II

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 UU69 **561.01** ▲ Characterization of the rapid transcriptional response to long-term sensitization training in *Aplysia californica*. S. HERDEGEN; G. HOLMES; R. CALIN-JAGEMAN*; I. E. CALIN-JAGEMAN. *Dominican Univ., Dominican Univ.*

9:00 UU70 **561.02** Distinct growth factor families engage spatially and temporally unique molecular cascades during two-trial long-term memory formation in *Aplysia.* A. M. KOPEC*; T. J. CAREW. *New York Univ.*

10:00 UU71 **561.03** Taste avoidance conditioning with electrical shock as unconditional stimulus in Lymnaea stagnalis. M. SAKAKIBARA*; S. TAKIGAMI. *Tokai Univ.*

11:00 UU72 **561.04** Nitric oxide synthase is involved in maintenance but not in induction of activity-dependent LTP in the vertical lobe of the octopus. A. TURCHETTI-MAIA*; T. SHOMRAT; B. HOCHNER. *Dept. Neurobiology, Silberman Inst. of Life Sciences, The Hebrew Univ., The Edmond and Lily Safra Ctr. for Brain Sci., The Ruppin Academic Center, Sch. of Marine Sci., Interdisciplinary Ctr. for Neural Computation.*

8:00 UU73 **561.05** The role of lrn-2/scd-2 in sensory integration and learning in *Caenorhabditis elegans*. G. S. WOLFE*; D. VAN DER KOOY. *Univ. of Toronto, Univ. of Toronto.*

9:00 UU74 **561.06** BK SLO-1 channel mediates specific aspects of locomotion, posture, and habituation learning on and off alcohol in *C. elegans.* C. H. C. LIN; S. KHAN; D. HSIAO; A. HUNG; S. SA; B. MENON; F. PSOLTANI; D. CHAIM; C. H. RANKIN*. *Univ. British Columbia, Univ. British Columbia.*

10:00 UU75 **561.07** A single gustatory sensory neuron of *Caenorhabditis elegans* generates memory-dependent behaviors in nacl chemotaxis. L. WANG*; M. TOMIOKA; H. KUNITOMO; Y. IINO. *The Univ. of Tokyo, The Univ. of Tokyo.*

11:00 UU76 **561.08** Cellular and molecular mechanisms of short-term associative memory in *C. elegans.* A. SYLVAIN*; G. STEIN; M. RAHIMI; C. T. MURPHY. *Princeton Univ.*

8:00 UU77 **561.09** Transcriptional profiling of dissociated adult *C. elegans* neurons reveals short-term memory components of Insulin/FOXO signaling. R. AREY*; R. KALETSKY; A. WILLIAMS; V. LAKHINA; J. LANDIS; C. MURPHY. *Princeton Univ.*

9:00 UU78 **561.10** Interneuronal mechanism for Tinbergen's hierarchical model of behavioral choice. M. CROSSLEY; Z. PIRGER; S. NASKAR; Z. LASZLO; G. KEMENES; M. O'SHEA; P. R. BENJAMIN*; I. KEMENES. *Univ. Sussex.*

10:00 UU79 **561.11** Memory lapses are a general feature of consolidation after both reward and aversive classical conditioning. F. LORENZETTI; M. CROSSLEY; S. NASKAR; M. O'SHEA; P. R. BENJAMIN; I. KEMENES*. *Univ. of Sussex.*

11:00 UU80 **561.12** Doxorubicin attenuates serotonin-induced long-term synaptic facilitation by phosphorylation of p38 MAPK in *Aplysia.* R. LIU*; Y. ZHANG; B. L. COUGHLIN; L. J. CLEARY; J. H. BYRNE. *Univ. Texas Med. Sch. Houston.*

8:00 UU81 **561.13** Doxorubicin enhances phosphorylation of ERK and p38 MAPK in *Aplysia* sensory. Y. ZHANG*; R. LIU; L. J. CLEARY; J. H. BYRNE. *Univ. Texas.*

9:00 UU82 **561.14** Evidence for attention in a non-visual invertebrate, *Aplysia.* K. PEARCE; T. W. ABRAMS*. *U of Maryland Med. Sch.*

10:00 UU83 **561.15** Genomic dissection of the *Aplysia californica* siphon-withdrawal reflex circuit: One neuron at a time. C. BOSTWICK*; Q. YANG; T. P. MOROZ; A. B. KOHN; R. D. HAWKINS; L. L. MOROZ. *Univ. of Florida, Whitney Marine Lab., Columbia Univ., Univ. of Florida, Whitney Marine Lab., New York State Psychiatric Inst.*

11:00 UU84 **561.16** Hyperpolarization-activated, cyclic nucleotide-gated cation (HCN) channels contribute to classical conditioning of the *Aplysia* siphon-withdrawal reflex. R. D. HAWKINS*; P. KUZYK; I. ANTONOV; Q. YANG; C. BOSTWICK; A. KOHN; L. L. MOROZ. *Columbia Univ., New York State Psychiatric Inst., Univ. of Florida, Univ. of Florida.*

8:00 UU85 **561.17** *Aplysia* neurotrophin and its Trk receptor play an essential role during the transition from short-term to intermediate-term facilitation produced by 5HT at *Aplysia* sensory-motor neuron synapses. I. JIN*; S. KASSABOV; H. UDO; R. NICHOLLS; E. R. KANDEL; R. D. HAWKINS. *Columbia Univ., Kyushu Univ.*

POSTER

562. Decision-Making: Neuropharmacology

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 UU86 **562.01** ▲ High-yawning rats are more anxious than low-yawning in elevated plus-maze and in the light-dark box: Effects of diazepam. M. PALACIOS*; C. URIBE; M. CORTES; J. EGUIBAR. *Inst. of Physiol. Benemérita Univ. Autónoma De Puebla.*

9:00 UU87 **562.02** A DA-SP-ENK interface promotes the translocation of the δ-opioid receptor on cholinergic interneurons in the striatum. E. M. HEATH*; B. CHIENG; V. LAURENT; J. BERTRAN-GONZALEZ; M. CHRISTIE; B. BALLEINE. *The Univ. of Sydney, The Univ. of Queensland, The Univ. of Sydney.*

10:00 UU88 **562.03** Pharmacological fingerprints of contextual uncertainty. L. MARSHALL*; D. RUGE; C. MATHYS; K. E. STEPHAN; P. DAYAN; S. BESTMANN. *UCL Inst. of Neurol., UCL Inst. of Neurol., Univ. of Zurich & ETH Zurich, UCL.*

11:00 UU89 **562.04** Animal models of effort-related decision making: Reversal of the effects of tetrabenazine with the MAO-B inhibitor deprenyl (selegiline). H. M. CONTRERAS*; M. A. ROWLAND; S. E. YOHN; M. W. JONES; M. CORREA; J. D. SALAMONE. *Univ. of Connecticut, Univ. Jaume I.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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8:00 UU90 **562.05** Orally ingested curcumin attenuates shifts in effort-related choice behavior induced by the vmat-2 inhibitor tetrabenazine: Implications for depression. S. E. YOHN*; A. MISTRY; S. COLLINS; L. XIE; A. MANCHANDA; B. BOLLING; R. BOGNER; M. CORREA; J. D. SALAMONE. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut, Univ. Jaume I.*

9:00 UU91 **562.06** ● Animal models of effort-related decision making: Reversal of the effects of the VMAT-2 inhibitor tetrabenazine with drugs acting on dopamine transmission. J. D. SALAMONE*; S. E. YOHN; H. M. CONTRERAS; E. J. NUNES; P. A. RANDALL; M. A. ROWLAND; S. COLLINS; M. W. JONES; Y. BAQI; C. E. MÜLLER; M. CORREA. *Univ. Connecticut, Yale Univ., Univ. of North Carolina, Sultan Qaboos Univ., Univ. Bonn, Univ. Jaume I.*

10:00 UU92 **562.07** ▲ Animal models of effort-related decision making: The antidepressant fluoxetine potentiates effort-related effects of the dopamine depleting agent tetrabenazine. M. A. ROWLAND*; H. M. CONTERAS; M. W. JONES; S. E. YOHN; M. CORREA; J. D. SALAMONE. *Univ. of Connecticut, Univ. of Jaume I.*

11:00 VV1 **562.08** Dopamine depletion reduces preference for physical effort in animals with low but not high experience of exercise: Shift to sedentary sources of reinforcement. L. LOPEZ-CRUZ*; N. SAN MIGUEL; P. BAYARRI; J. MEDRANO; C. CARRATALÁ; L. MONFERRER; J. D. SALAMONE; M. CORREA. *Univ. Jaume I, Univ. of Connecticut.*

8:00 VV2 **562.09** Low dopamine D2/D3 receptor availability is associated with steep discounting of delayed rewards in methamphetamine dependence. M. E. BALLARD*; M. A. MANDELKERN; J. R. MONTEROSSO; E. HSU; C. L. ROBERTSON; K. ISHIBASHI; A. C. DEAN; E. D. LONDON. *UCLA, Veterans Affairs Greater Los Angeles Healthcare Syst., Univ. of California, Irvine, USC, UCLA, UCLA, UCLA.*

9:00 VV3 **562.10** The effects of cocaine on oral sucrose self-administration by 6-hydroxydopamine lesioned male and female rats. H. M. BARROS*; K. M. BISOGNIN; L. S. UMPIERREZ; T. B. LOS SANTOS; L. FREESE; M. F. SOUZA. *UFCSPA, UFCSPA.*

10:00 VV4 **562.11** The effects of acute fluoxetine administration on functional abnormalities during temporal discounting in children with ADHD. C. O. CARLISI*; L. J. NORMAN; K. CHANTILUKE; A. CHRISTAKOU; M. J. BRAMMER; V. GIAMPIETRO; K. RUBIA. *Inst. of Psychiatry, King's Col. London.*

11:00 VV5 **562.12** Effects of mixed-function serotonergic compounds in a novel rodent cost/benefit decision-making task. A. L. PERSONS*; S. E. TEDFORD; T. NAPIER. *Rush Univ. Med. Ctr.*

8:00 VV6 **562.13** Nicotinic receptors in the ventral tegmental area mediates uncertainty-driven exploration in mice. J. NAUDÉ; S. TOLU; M. DONGELMANS; N. TORQUET; U. MASKOS; P. FAURE*. *Univ. Pierre et Marie Curie / CNRS, Inst. Pasteur, CNRS UMR8246, INSERM U1130.*

POSTER

563. Motivation and Emotions: Neurocircuitry

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 VV7 **563.01** The forebrain circuitry underlying fear behavior: Connections between the mediodorsal thalamus, frontal cortices and basolateral amygdala in mice. F. MATYAS*; J. LEE; H. SHIN; L. ACSÁDY. *Inst. of Exptl. Med. of the Hungarian Acad. of Sci., Inst. for Basic Sci.*

9:00 VV8 **563.02** The role of amygdala in human aggression disorders. F. V. GOUVEIA*; C. C. OLIVEIRA; L. T. C. SANTOS; M. D. J. SENO; E. T. FONOFF; E. ALHO; S. P. RIGONATTI; J. P. OTOCH; M. J. TEIXEIRA; *. C. R. MARTINEZ. *Intituto Sirio Libanes De Ensino E Pesquisa, Faculdade de Medicina da Univ. de São Paulo, Faculdade de Medicina da Univ. de São Paulo.*

10:00 VV9 **563.03** Amygdala lesions compromise reinforcement learning to impact behavioral flexibility. D. R. LUCAS*, III; V. D. COSTA; O. DAL MONTE; P. H. RUDEBECK; E. A. MURRAY; B. B. AVERBECK. *NIH.*

11:00 VV10 **563.04** The control of social and self-directed behaviors. W. HONG*; D. KIM; D. J. ANDERSON. *Caltech.*

8:00 VV11 **563.05** Ambiguous social threat perception and the role of the basolateral amygdala - Evidence from fMRI. R. HORTENSIUS*; D. TERBURG; B. MORGAN; D. J. STEIN; J. VAN HONK; B. DE GELDER. *Tilburg Univ., Utrecht Univ., Univ. of Cape Town, Univ. of Cape Town, Univ. of Cape Town, Maastricht Univ., Leuven Univ.*

9:00 VV12 **563.06** Long range amygdalar inputs to cortico-PAG neurons in infralimbic cortex. M. K. KAUSHIK; A. N. FERREIRA; H. YOUSUF; M. T. DINH; P. L. SHEETS*. *Indiana Univ. Sch. of Medicine-South Bend, Univ. of Notre Dame.*

10:00 VV13 **563.07** Dissection of neural circuitry underlying trauma-induced enhancements in fear and aggression. M. ZELIKOWSKY*; D. J. ANDERSON. *California Tech. Inst.*

11:00 VV14 **563.08** Dissecting a central amygdala neural circuitry for feeding behavior. H. CAI*; D. J. ANDERSON. *Caltech, California Inst. of Technology, HHMI.*

8:00 VV15 **563.09** Rapid control over food intake by accumbal to hypothalamic projection neurons. E. C. O'CONNOR*; S. LEFORT; V. PASCOLI; C. LUSCHER. *Dept. of Basic Neurosciences, Univ. of Geneva.*

9:00 VV16 **563.10** Control of stress-induced persistent anxiety by an extra-amygdala septohypothalamic circuit. T. E. ANTHONY*; N. DEE; A. BERNARD; W. LERCHNER; N. HEINTZ; D. J. ANDERSON. *Caltech, Allen Inst. for Brain Sci., NIH, The Rockefeller Univ.*

10:00 VV17 **563.11** *In vivo* calcium imaging of nucleus accumbens neurons in freely feeding mice. S. LEFORT*; E. C. O'CONNOR; C. LÜSCHER. *CMU - Univ. of Geneva.*

11:00 VV18 **563.12** Modulation of the amygdala-dorsal periaqueductal grey pathway by long-range inputs from the infralimbic cortex and ventral periaqueductal grey. A. FERREIRA*; P. L. SHEETS. *Univ. of Notre Dame, Indiana Univ. Sch. of Medicine-South Bend.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 VV19 **563.13** Characterization of amino acid neurotransmitter release in the prelimbic cortex of anxiety vulnerable rats in response to basolateral amygdala stimulation. J. E. CATUZZI*; D. M. GREGOR; K. C. H. PANG; K. D. BECK. *Dept. of Veterans Affairs, NJHCS, Grad. Sch. of Biomed. Sciences, Rutgers, The State Univ. of New Jersey, New Jersey Med. School, Rutgers, The State Univ. of New Jersey.*

9:00 VV20 **563.14** Excitation/inhibition balance in the nucleus accumbens microcircuit underlies stress resilience or susceptibility. M. HESHMATI*; S. A. GOLDEN; H. ALEYASIN; D. J. CHRISTOFFEL; M. L. PFAU; I. MAZE; P. H. GOFF; G. E. HODES; L. A. KHIBNIK; N. REBUSI; J. L. ABLES; S. J. RUSSO. *Icahn Sch. of Med. at Mount Sinai, The Rockefeller Univ., Icahn Sch. of Med. at Mount Sinai.*

10:00 VV21 **563.15** Normalising high trait anxiety in monkeys; the role of hippocampal-medial prefrontal circuitry. J. ZEREDO; Y. SHIBA; A. ROBERTS*; H. F. CLARKE. *Univ. of Cambridge, Univ. of Brasilia, Univ. of Cambridge.*

11:00 VV22 **563.16** Activation of noradrenergic locus coeruleus neurons promotes anxiety-like and aversive behaviors. J. G. MCCALL*; R. AL-HASANI; E. R. SIUDA; D. Y. HONG; C. P. FORD; M. R. BRUCHAS. *Washington Univ., Case Western Reserve Univ.*

8:00 VV23 **563.17** Is it safe? Brain areas involved in the the processing of safety signals. F. S. ERTHAL*; I. MOCAIBER; L. OLIVEIRA; M. PEREIRA; V. ROCHA-REGO; I. FIGUEIRA; E. VOLCHAN. *Federal Univ. of Rio de Janeiro, Federal Fluminense Univ., Federal Fluminense Univ.*

9:00 VV24 **563.18** Sexually dimorphic neurons control levels of aggressiveness in male *Drosophila* through the neuropeptide Tachykinin. K. ASAHINA*; K. WATANABE; B. J. DUISTERMARS; E. HOOPFER; C. ROBERTO GONZÁLEZ; E. A. EYJÓLFSDÓTTIR; P. PERONA; D. J. ANDERSON. *Caltech, Howard Hughes Med. Inst., HHMI Janelia Farm Res. Campus, Caltech.*

10:00 VV25 **563.19** The anatomical connections of the interpeduncular nucleus: Another interface between the habenula and the mesopontine tegmentum. L. LIMA; L. GONÇALVES; F. LEITE; M. METZGER*. *Univ. of Sao Paulo, Federal Univ. of the Triangulo Mineiro.*

11:00 VV26 **563.20** Ventral striatal projections to the lateral habenula modulate the motivational component of aggressive behavior. S. GOLDEN*; D. J. CHRISTOFFEL; M. HESHMATI; K. GUISE; M. PFAU; H. ALEYASIN; G. E. HODES; M. FLANIGAN; D. BREGMAN; L. KHIBNIK; J. TAI; B. KRAWITZ; D. CHAUDHURY; J. WALSH; M. HAN; M. SHAPIRO; S. J. RUSSO. *Mount Sinai Sch. of Med., Stanford Univ. Med. Ctr., Mount Sinai Sch. of Med.*

8:00 VV27 **563.21** ● Anatomical connections subserving the default mode network in monkeys. S. R. HEILBRONNER*; S. N. HABER. *Univ. of Rochester, Univ. of Rochester.*

9:00 VV28 **563.22** Diffusion tensor imaging of extraordinary altruists: Differences in fractional anisotropy in non-directed living kidney donors. K. M. BRETHEL-HAURWITZ*; E. M. CARDINALE; S. A. STOYCOS; J. W. VANMETER; A. A. MARSH. *Georgetown Univ., Georgetown Univ. Med. Ctr.*

POSTER

564. Social Behavior: Neuropharmacology

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 VV29 **564.01** ▲ Acute dietary tryptophan manipulation differentially alters social behavior and plasma corticosterone in inbred mice. W. Q. ZHANG; P. BARBA-ESCOBEDO; M. GAMEZ; C. M. SMOLIK; L. C. DAWS; G. G. GOULD*. *UT Hlth. Sci. Ctr, SA, Rice Univ., Texas A&M San Antonio.*

9:00 VV30 **564.02** The role of dopamine in social processing and behavior. M. J. LEVY*; A. PETRULIS. *Neurosci. Institute, Georgia State Univ., Georgia State Univ.*

10:00 VV31 **564.03** Glutamate input in the dorsal raphe nucleus as a determinant of escalated aggression in the male mouse. A. TAKAHASHI*; R. X. LEE; T. IWASATO; S. ITOHARA; H. ARIMA; B. BETTLER; K. A. MICZEK; T. KOIDE. *Natl. Inst. of Genet., Okinawa Inst. of Sci. and Technol. Grad. Univ., Natl. Inst. of Genet., RIKEN Brain Sci. Inst., Nagoya Univ. Grad. Sch. of Med., Univ. of Basel, Tufts Univ.*

11:00 VV32 **564.04** Oral intake of monosodium glutamate during the period of development effects on social behavior mediated by gut-brain communication in an ADHD model rat. H. HIDA*; Y. YOKOYAMA; R. MARUMOTO; Y. SHIMIZU; Y. UEDA; S. MISUMI; A. ISHIDA; C. JUNG. *Nagoya City Univ. Grad Sch. Med. Sci.*

8:00 VV33 **564.05** Cocaine- and amphetamine-regulated transcript in the central nucleus of amygdala is enhanced by environmental enrichment in ADHD model rat. Y. SHIMIZU*; Y. YOKOYAMA; S. MISUMI; A. ISHIDA; C. JUNG; H. HIDA. *Nagoya City Univ. Grad. Sch. of Med. Sci.*

9:00 VV34 **564.06** ● ▲ Berberine blocks 'uptake 2' and enhances mouse sociability. A. SANCHEZ*; C. SMOLIK; T. PHAM; K. LALANI; G. G. GOULD. *UTHSCSA, Hlth. Careers High Sch.*

10:00 VV35 **564.07** GABAergic and glutamatergic connections in the social neural network. A. R. BURNS*; A. PETRULIS. *Georgia State Univ.*

11:00 VV36 **564.08** Adenosine receptor antagonists differentially modulate ethanol-induced impairments on social interaction and recognition in mice. M. CORREA*; L. LÓPEZ-CRUZ; N. SAN MIGUEL; P. BAYARRI; C. CARRATALÁ; J. LUCERÓN; J. MEDRANO; L. DIAZ; L. MONFERRER; Y. BAQI; C. E. MÜELLER; J. D. SALAMONE. *Psicobiologia. Univ. Jaume I, Pharmazeutisches Institut, Pharmazeutische Chemie, Univ. Bonn, Dept. Psychology. Univ. of Connecticut.*

8:00 VV37 **564.09** Excitation of D2-expressing cells in prefrontal cortex leads to reduced social behavior in mice. C. K. HANSEN*; I. ELLWOOD; T. PATEL; F. DAVATOLHAGH; V. SOHAL. *UCSF.*

9:00 VV38 **564.10** Dual, intra-amygdala injection-recording technique to explore oxytocin-mediated changes in social behaviors and neural activity in macaque monkeys. P. PUTNAM*; K. LASZLO; L. DIECKMAN; J. WIEGAND; J. ROMAN; G. LACY; K. GOTHARD. *Univ. Of Arizona, Univ. of Pécs, Univ. of Arizona.*

10:00 VV39 **564.11** Anterior insula mediates social behaviors that are finely regulated by retinoic acid and 5-HT2C receptor in its layer 5 pyramidal neurons. S. KIM*; M. D. RANNALS; J. MOORE; B. J. MAHER; A. SAWA. *Johns Hopkins Univ., Lieber Inst.*

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POSTER

565. Vocal Communication in Songbirds: Sensory and Motor Mechanisms II

Theme F: Cognition and Behavior

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 VV40 **565.01** Is the speech phenotype of the R553H FoxP2 mutation really due to haploinsufficiency? Insights from the zebra finch (Taeniopygia guttata) FoxP subfamily. E. MENDOZA*; N. ARPENIK; U. KOBALZ; C. SCHARFF. *Freie Univ.*

9:00 VV41 **565.02** Changes in FoxP2 expression intensities during functional integration of adult-generated neurons into avian basal ganglia circuits. J. F. KOSUBEK*; C. SCHARFF. *Free Univ. Berlin.*

10:00 VV42 **565.03** The Reelin receptor VLDLR is a direct target of FoxP2 and regulated developmentally and by singing. I. ADAM*; E. MENDOZA; U. KOBALZ; S. WOHLGEMUTH; C. SCHARFF. *Free Univ. Berlin.*

11:00 VV43 **565.04** ● FoxP2 expression in the brain after chick calls. C. BESSHO*; T. TSUZUKI. *Kyoto Sangyo Univ., Kyoto Sangyo Univ.*

8:00 VV44 **565.05** ZEBrA Redux: An improved digital atlas for exploring brain gene expression in the adult male Zebra Finch (www.zebrafinchatlas.org). C. V. MELLO*; P. V. LOVELL; J. B. CARLETON; M. WIRTHLIN; B. SNIDER. *Oregon Hlth. Sci. Univ., Oregon Hlth. Sci. Univ., Oregon Hlth. Sci. Univ.*

9:00 VV45 **565.06** Calcitonin gene related peptide (CGRP) increases neuronal activity in the zebra finch premotor song nucleus RA. C. A. WILLIAMS*; A. F. GARCIA; D. J. PERKEL. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

10:00 VV46 **565.07** Effects of statins on auditory memories, neurogenesis and neuronal morphology in the zebra finch. S. C. TSOI*; A. QURESHI; A. BARRIENTOS; U. V. AIYA; M. L. PIERCE; E. SOYMAN; D. STALBOW; S. RIBEIRO; D. S. VICARIO; C. L. PYTTE; M. L. PHAN. *The Grad. Center, CUNY, Queens College, CUNY, Rutgers Univ.*

11:00 VV47 **565.08** Song-inducible gene expression in the songbird auditory forebrain: evidence for sex differences, regional differences, and a role for estrogen synthesis. A. A. KRENTZEL*; L. REMAGE-HEALEY. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst.*

8:00 VV48 **565.09** Song-mediated activation and habituation of the mTOR cascade in the zebra finch auditory cortex. S. AHMADIANTEHRANI*; S. E. LONDON. *Univ. of Chicago, Univ. of Chicago.*

9:00 VV49 **565.10** Motor and auditory coding of sub-syllabic transitions in zebra finch song. Y. LIM*; J. MARKOWITZ; T. J. GARDNER. *Boston Univ., Korea Inst. of Sci. and Technol., Boston Univ., Boston Univ.*

10:00 VV50 **565.11** Recurrent circuitry shapes a sparse premotor neural sequence. G. KOSCHE*; D. VALLENTIN; M. A. LONG. *NYU Sch. of Med.*

11:00 VV51 **565.12** ▲ Contributions of higher-order auditory cortical areas to adult song maintenance in the zebra finch, Taeniopygia guttata. H. SHOENHARD*; N. F. DAY; Z. BURKETT; M. J. COLEMAN. *Scripps Col., W. M. Keck Sci. Dept. of Claremont McKenna, Scripps, and Pitzer Colleges, UCLA.*

8:00 VV52 **565.13** ▲ Hearing the call: HVC lesion disrupts auditory processing of conspecific calls in Bengalese finches. A. E. ASTON; C. M. URBANO; B. G. COOPER*. *Texas Christian Univ.*

9:00 VV53 **565.14** A novel cell type mediates motor to auditory interactions necessary to feedback-dependent song plasticity. E. HISEY*; M. TANAKA; R. MOONEY. *Duke Univ.*

10:00 VV54 **565.15** Song-control system or vocal-control system? HVC is active during production of learned aggressive calls. S. K. MISCHLER*; E. KARLIN; S. A. MACDOUGALL-SHACKLETON. *Univ. of Western Ontario, Advanced Facility for Avian Res.*

11:00 VV55 **565.16** Breathing to sing: HVC modulates air pressure during song. C. M. URBANO*; B. G. COOPER. *Texas Christian Univ.*

8:00 VV56 **565.17** Aberrant song alters new neuron survival in Area X and NCM in the adult male zebra finch. A. PEREZ*; K. WASNER; S. RIBEIRO; A. LOPEZ; E. RODRIGUEZ; S. BIENSTOCK; C. PYTTE. *Grad. Center, City Univ. of New York, Queens Col., Duke Univ.*

9:00 VV57 **565.18** A glutamatergic neuron influences pallidal firing patterns in zebra finch Area X. A. BUDZILLO*; D. J. PERKEL. *Univ. of Washington, Univ. of Washington.*

10:00 VV58 **565.19** *In vivo* two-photon targeted single-cell labeling in the zebra finch. S. BENEZRA*; R. T. NARAYANAN; M. OBERLANDER; M. A. LONG. *NYU Sch. of Medicine, Dept. of Physiol. and Neurosci., Max Planck Inst.*

11:00 VV59 **565.20** Unilateral cooling differentially affects song timing and syntax in Bengalese finch. Y. ZHANG*; A. A. KOZHEVNIKOV. *Pennsylvania State Univ.*

8:00 VV60 **565.21** Sensorimotor feedback maintains auditory objects formation. S. MA*; M. GAHR. *Max-planck-Institute For Ornithology, Grad. Sch. of Systemic Neurosciences, Ludwig Maximilian Univ. of Munich.*

9:00 VV61 **565.22** Temporal cue cognition of the song auditory information processing in auditory forebrain of zebra finch. M. ARAKI; M. M. BANDI; C. P. CONNAUGHTON; Y. YAZAKI-SUGIYAMA*. *Okinawa Inst. of Sci. and Technol. (OIST) Grad. Univ., Okinawa Inst. of Sci. and Technol. (OIST) Grad. Univ., Univ. of Warwick.*

10:00 VV62 **565.23** The role of norepinephrine in acute auditory processing of learned vocalizations. M. IKEDA*; D. JEON; L. REMAGE-HEALEY. *Univ. of Massachusetts, Univ. of Massachusetts, Univ. of Massachusetts.*

POSTER

566. Optical Methods for Studying Neural Pathways

Theme G: Novel Methods and Technology Development

Tue. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 VV63 **566.01** Functional connectivity and nonlinear information propagation in visual cortical circuits revealed by all-optical neurophysiology in the awake mouse. J. H. MARSHEL*; S. YANG; W. E. ALLEN; R. PRAKASH; I. KAUVAR; C. RAMAKRISHNAN; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

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▲ Indicates a high school or undergraduate student presenter.

9:00 VV64 **566.02** ▲ All-Optical physiology: Combining two-photon calcium imaging with single-cell optogenetic stimulation *in vivo.* J. M. DOERING*; G. PRAMANIK; E. ROSALES; A. TOSE; Z. BARGER; A. STROH. *Johannes Gutenberg-University.*

10:00 VV65 **566.03** A combination study of optogenetics and optical imaging to identify unknown cortico-cortical projection patterns in macaque. Y. NAKAMICHI*; M. HASHIMOTO; N. KITAMURA; K. HAGIYA; T. SATO; M. TANIFUJI. *RIKEN/ Brain Sci. Inst., Nagoya Univ. Grad. Sch. of Medicine, Dept. of Anat. and Cell Biol.*

11:00 VV66 **566.04** Expanding the dynamic range of genetically-encoded calcium indicators for monitoring high frequency neuronal activity in *Drosophila.* Y. SUN*; J. A. STROTHER; J. P. HASSEMAN; G. TSEGAYE; B. FOSQUE; E. R. SCHREITER; A. NERN; M. B. REISER; K. SVOBODA; L. L. LOOGER; V. JAYARAMAN; D. S. KIM. *Janelia Farm Res. Campus, HHMI.*

8:00 VV67 **566.05** Developing a genetically encoded voltage sensor for visualizing neuronal connectivity *in vivo.* N. FLYTZANIS*; C. BEDBROOK; H. CHIU; S. MCISAAC; C. XIAO; K. CHAN; M. ENGQVIST; L. HERWIG; P. STERNBERG; F. ARNOLD; V. GRADINARU. *Caltech, Caltech, Caltech.*

9:00 VV68 **566.06** Improved red fluorescent genetically-encoded calcium indicators for *in vivo* imaging. H. DANA*; Y. SUN; J. P. HASSEMAN; G. TSEGAYE; B. F. FOSQUE; E. R. SCHREITER; B. LIN; S. D. BRENOWITZ; V. JAYARAMAN; L. L. LOOGER; K. SVOBODA; D. S. KIM. *Howard Hughes Med. Inst.*

10:00 VV69 **566.07** Identification of cellular-activity timing relationships spanning large tissue volumes during behavior. L. GROSENICK*; M. BROXTON; C. K. KIM; C. LISTON; P. KALANITHI; B. POOLE; S. YANG; A. ANDALMAN; T. ANDERSON; L. C. LEUNG; E. SCHARFF; E. FERENCZI; J. T. VOGELSTEIN; N. COHEN; A. LEVSKAYA; Z. ZHANG; O. YIZHAR; R. MADELAINE; C. RAMAKRISHNAN; S. GANGULI; A. MUTO; K. KAWAKAMI; P. MOURRAIN; S. J. SMITH; P. SUPPES; M. LEVOY; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Duke Univ., Stanford Univ., Div. of Mol. and Developmental Biol., Stanford Univ.*

11:00 VV70 **566.08** Optogenetic tracing of cell-type specific projections from the pedunculopontine nucleus to midbrain in the rat. C. XIAO*; J. T. TREWEEK; S. R. KUMAR; K. CHAN; S. L. MCKINNEY; B. YANG; V. GRADINARU. *Caltech.*

8:00 VV71 **566.09** Physical and chemical properties of CLARITY brain-polymer hybrids. A. TOM*; A. MALKOVSKIY; Z. BAO; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Howard Hughes Med. Inst.*

9:00 VV72 **566.10** Applying CLARITY-based methods for structural interrogation of intact biological systems to diverse peripheral and primate tissues. B. HSUEH*; J. EPP; P. PAUERSTEIN; L. YE; R. TOMER; Y. NIIBORI; S. KIM; D. LYONS; A. SCHATZBERG; P. FRANKLAND; S. JOSSELYN; K. DEISSEROTH. *Stanford Univ., The Hosp. for Sick Children.*

10:00 VV73 **566.11** CLARITY-based whole brain activity mapping with immediate early gene TRAP. L. YE*; R. TOMER; B. HSUEH; C. J. GUENTHNER; L. LUO; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

11:00 VV74 **566.12** Single-cell phenotyping within transparent intact tissue through whole-body clearing. B. YANG*; C. CHEN; B. E. DEVERMAN; R. P. KULKARNI; J. B. TREWEEK; V. GRADINARU. *Caltech, UCLA.*

8:00 VV75 **566.13** Optogenetic investigation of dopamine D2-receptor signaling in risk-preference. K. ZALOCUSKY*; C. RAMAKRISHNAN; B. KNUTSON; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., HHMI, Stanford Univ.*

9:00 VV76 **566.14** Top-down bidirectional control of learned fear responses. A. ADHIKARI*; J. FINKELSTEIN; T. N. LERNER; L. A. GUNAYDIN; S. PAK; A. LEI; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Howard Hughes Med. Inst.*

10:00 VV77 **566.15** Decoding zebrafish neural circuits using optogenetics and patterned excitation. A. W. THOMPSON*; L. A. HEAP; I. A. FAVRE-BULLE; H. RUBINSZTEIN-DUNLOP; E. K. SCOTT. *The Univ. of Queensland, The Univ. of Queensland.*

11:00 VV78 **566.16** Advancements in neuronal silencing using inhibitory chloride-conducting channelrhodopsins. A. BERNDT*; S. LEE; C. RAMAKRISHNAN; K. DEISSEROTH. *Stanford Univ., Stanford Univ.*

8:00 VV79 **566.17** Achieving dual and separable optogenetic inhibition of different neuronal subtypes within microcircuits. S. LEE*; A. BERNDT; C. RAMAKRISHNAN; L. FENNO; R. PRAKASH; F. ZHANG; K. DEISSEROTH. *Stanford Univ., MIT.*

9:00 VV80 **566.18** Subsecond cholinergic dynamics underlying hippocampal network state in freely-behaving rats. T. J. DAVIDSON*; E. B. ANDERSON; T. N. LERNER; C. RAMAKRISHNAN; J. MATTIS; L. M. GROSENICK; I. V. KAUVAR; L. M. FRANK; K. DEISSEROTH. *Stanford Univ. Sch. of Med., Univ. of California, San Francisco, Stanford Univ. Sch. of Med.*

10:00 VV81 **566.19** Brain-wide imaging of an anhedonic state using awake optogenetic functional MRI (ofMRI). E. FERENCZI*; C. LISTON; K. ZALOCUSKY; K. KATOVICH; M. R. WARDEN; D. AMATYA; B. PATENAUDE; L. GROSENICK; C. RAMAKRISHNAN; P. KALANITHI; A. ETKIN; B. KNUTSON; G. H. GLOVER; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

11:00 VV82 **566.20** Thalamic driving of cortical spindles and seizures with on demand loss of consciousness. J. PAZ*; J. SOROKIN; T. J. DAVIDSON; K. DEISSEROTH; J. R. HUGUENARD. *Gladstone Inst. / UCSF, Stanford, Stanford.*

8:00 VV83 **566.21** Mechanisms of neuromodulatory control of the zebrafish acoustic startle response: Optogenetic control with the light-controlled metabotropic glutamate receptor 2 (limglur2). C. J. PANTOJA*; A. HOAGLAND; E. CARROLL; E. ISACOFF. *Univ. of California, Berkeley.*

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SPECIAL LECTURE *Walter E. Washington Convention Center*

567. Generating and Shaping Novel Action Repertoires — CME

Tue. 1:00 PM - 2:10 PM — Hall D

Speaker: R. M. COSTA, *Champalimaud Fndn., Portugal*

Many actions are learned anew throughout life, likely through a process of trial and selection. Researchers investigated how novel self-paced actions are generated and how actions that lead to particular outcomes are then selected. Research found that dopamine is critical for the initiation of novel actions and that plasticity in cortico-basal ganglia circuits is essential for action selection. With iteration, actions become organized in modules, and neural substrates of chunking emerge in these circuits.

SYMPOSIUM *Walter E. Washington Convention Center*

568. Auditory Cortical Processing in Real-World Listening — CME

Tue. 1:30 PM - 4:00 PM — Ballroom C

Chair: I. NELKEN
Co-Chair: J. BIZLEY

The auditory system has to solve daunting computational problems to create a useful representation of the acoustic environment. The four speakers in this symposium will each describe the way the auditory cortex deals with the real-world challenges of listening in complex auditory scenes, using a variety of animal models, auditory computations, and neurophysiological methods.

1:30 **568.01** Introduction.

1:35 **568.02** Exploring the neural basis of perceptual invariance in Auditory Cortex. J. K. BIZLEY. *Univ. Col. London.*

2:10 **568.03** Cortical mechanisms in the perception of auditory objects. S. SHAMMA. *Univ. of Maryland.*

2:45 **568.04** Harmonic processing by auditory cortex. X. WANG. *Johns Hopkins Univ. Sch. Med.*

3:20 **568.05** Surprises in auditory cortex. I. NELKEN. *Hebrew Univ.*

3:55 **568.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

569. Cellular and Molecular Mechanisms of Neural Regeneration — CME

Tue. 1:30 PM - 4:00 PM — Ballroom A

Chair: Z. HE
Co-Chair: J. GOLDBERG

Understanding the mechanisms regulating neural regeneration remains an unmet challenge in neuroscience and medicine. Recent studies in different species and models have started to reveal fundamental principles and key molecular players in such processes. This symposium highlights several advances in our understanding of axon regeneration in mammals and neural tissue regeneration in salamanders.

1:30 **569.01** Introduction.

1:35 **569.02** Epigenetic control of nerve repair. V. CAVALLI. *Washington Univ. Sch. of Med.*

2:10 **569.03** Transcriptional regulation of axon regeneration in adult CNS. J. GOLDBERG. *UC San Diego.*

2:45 **569.04** ● Intrinsic barriers for axon regeneration in adult CNS. Z. HE. *Children's Hosp Boston.*

3:20 **569.05** Neural tissue regeneration. E. M. TANAKA. *Max Planck Inst. of Mol. Cell Biol. and Genet.*

3:55 **569.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

570. More Than a Pore: Ion Channel Signaling Complexes — CME

Tue. 1:30 PM - 4:00 PM — 151AB

Chair: A. LEE

Voltage- and ligand- gated ion channels are some of the most studied of all proteins in heterologous expression systems. Yet ion channels often exhibit unexpected properties *in vivo* due to their interaction with a variety of signaling/scaffolding proteins. The objective of this symposium is to explore the view that ion channels act as macromolecular complexes, the dysregulation of which may lead to a variety of nervous system disorders.

1:30 **570.01** Introduction.

1:35 **570.02** Fine-tuning of Ca^{2+} channels by calmodulin-like Ca^{2+} binding proteins. A. LEE. *Univ. of Iowa.*

2:10 **570.03** High-resolution proteomics of native ion channel complexes. B. FAKLER. *Univ. of Freiburg.*

2:45 **570.04** ● Na channel ß subunits: Overachievers of the ion channel family. L. L. ISOM. *Univ. of Michigan.*

3:20 **570.05** ● Neuronal timing and RNA-binding ion channels. L. K. KACZMAREK. *Yale Univ. Sch. Med.*

3:55 **570.06** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

571. Bath Salts, Spice, and Related Designer Drugs: The Science Behind the Headlines — CME

Tue. 1:30 PM - 4:00 PM — Ballroom B

Chair: M. H. BAUMANN
Co-Chair: J. L. WILEY

Recently there has been an alarming increase in the nonmedical use of novel psychoactive substances known as "designer drugs." Synthetic cathinones and synthetic cannabinoids are two of the most widely abused classes of designer drugs. This minisymposium presents the most up-to-date information about the molecular sites of action, pharmacokinetics and metabolism, and *in vivo* neurobiology of synthetic cathinones and cannabinoids.

1:30 **571.01** Introduction.

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

1:35 **571.02** Electrophysiological effects of synthetic cathinone analogs on dopamine transporter proteins. E. SOLIS. *Virginia Commonwealth Univ.*

1:55 **571.03** Pharmacodynamics, pharmacokinetics and metabolism of 3,4-methylenedioxypyrovalerone . M. H. BAUMANN. *IRP, NIDA, NIH.*

2:15 **571.04** Abuse liability of synthetic cathinones as revealed by drug self-administration studies in rats. L. R. WATTERSON. *Arizona State Univ.*

2:35 **571.05** Interaction of synthetic cannabimimetic drugs with CB1 and CB2 receptors. J. L. WILEY. *RTI Intl.*

2:55 **571.06** Bioactive metabolites of synthetic cannabinoids: Relevance for *in vivo* effects. W. E. FANTEGROSSI. *Univ. of Arkansas for Med. Sci.*

3:15 **571.07** *In vivo* neurobiology of synthetic cannabinoid compounds in mice. J. A. MARUSICH. *RTI Intl.*

3:35 **571.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

572. Hypothalamic Control of Autonomic Nervous System Outflow and Obesity: Impact on Multiple Systems — CME

Tue. 1:30 PM - 4:00 PM — 146AB

Chair: C. M. NOVAK
Co-Chair: H. SHI

Alterations in the central control of autonomic nervous system activity modulate metabolism and metabolic disease risk and sequelae. There has been renewed interest in brain — specifically hypothalamic — modulation of autonomic drive, especially as it relates to thermogenesis and lipid and glucose metabolism. This minisymposium explores how diet- and obesity-related changes in autonomic activity impact multiple physiological systems, and probes common pathways among these systems as they relate to obesity.

1:30 **572.01** Introduction.

1:35 **572.02** Sympathetic overactivation in obesity: Consequences and mechanisms. K. RAHMOUNI. *Univ. of Iowa.*

1:55 **572.03** Central thermoregulatory leptin action. H. MUNZBERG. *Pennington Biomed Res. Ctr.*

2:15 **572.04** Brown adipose tissue transplantation impacts metabolism through altering sympathetic drive. H. SHI. *Miami Univ.*

2:35 **572.05** Brain melanocortins and SNS activation of skeletal muscle activity thermogenesis in the lean phenotype. C. NOVAK. *Kent State Univ.*

2:55 **572.06** Thermogenesis modulates sympathetic nervous system-dependent bone remodeling. K. J. MOTYL. *Maine Med. Ctr. Res. Inst.*

3:15 **572.07** Hypothalamic control of lipid metabolism: NPY and ANS effects on liver, WAT, and BAT. A. KALSBEEK. *Academic Med. Center, Univ. of Amsterdam.*

3:35 **572.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

573. Noradrenergic Function and Dysfunction: New Insight From Selective Genetic Targeting of Locus Coeruleus — CME

Tue. 1:30 PM - 4:00 PM — 145B

Chair: E. M. VAZEY

The broad projection network from the brain nucleus locus coeruleus (LC) provides diverse functions in arousal, mood, and cognitive processes. However, selectively targeting the small brainstem LC nucleus has been challenging. This minisymposium highlights recent advances in genetic strategies to specifically manipulate LC–norepinephrine (LC–NE) neurons and define functions in reward, neural development, anxiety, and pain.

1:30 **573.01** Introduction.

1:35 **573.02** Dissecting locus coeruleus circuits in stress and anxiety behavior. M. R. BRUCHAS. *Washington Univ.*

1:55 **573.03** Intersectional genetic strategies to unravel the function of the LC/NE system during embryonic development. P. JENSEN. *NIEHS/NIH.*

2:15 **573.04** Functional dissection of locus coeruleus modules. A. PICKERING. *Univ. of Bristol.*

2:35 **573.05** Pharmacogenetic investigation of neuromodulatory mechanisms underlying threat learning. R. SEARS. *New York Univ.*

2:55 **573.06** Selective locus coeruleus manipulation of forebrain function. E. VAZEY. *MUSC.*

3:15 **573.07** ● Optogenetic self-stimulation of the locus coeruleus. D. WEINSHENKER. *Emory Univ. Sch. Med.*

3:35 **573.08** Closing Remarks.

FRED KAVLI HISTORY OF NEUROSCIENCE LECTURE
Walter E. Washington Convention Center

574. ● The Messengers of the Mind

Tue. 2:30 PM - 3:40 PM — Hall D

Speaker: F. E. BLOOM, *The Scripps Research Institute*

Support contributed by: The Kavli Foundation

At the cellular and molecular levels of operation, neurons and their circuits achieve brain functions by chemical signals, in which the principle agents, neurotransmitters, convey the signal from the sending neuron to the receiving neuron. The discovery of each of the chemical families of neurotransmitters (amino acids, amines, and neuropeptides) provides important insight on understanding how brains function, changing our concepts of the complexities of short-term and long-term brain events, and how medications can intervene in brain dysfunctions.

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

PRESIDENTIAL SPECIAL LECTURE *Walter E. Washington Convention Center*

575. Stem Cells in the Brain: Glial Identity and Niches — CME

Tue. 5:15 PM - 6:25 PM — Hall D

Speaker: F. DOETSCH*, Columbia Univ.*

Support contributed by: Janssen Research and Development, LLC

Glia play key roles in brain development, homeostasis, plasticity, and injury. Specialized glia are stem cells both during development and in adults, and continuously generate new neurons in restricted brain regions throughout life. Doetsch will review the current understanding of the nature of specialized glia cells in the brain and the unique features of the niche in which they reside. Illuminating the biology of endogenous neural stem cells has important implications for brain repair.

NANOSYMPOSIUM

576. Synapse Function in Development and Disease

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 147A

1:00 **576.01** High content image analysis identifies novel regulators of synaptogenesis in a high-throughput RNAi screen of primary neurons. T. NIELAND*; D. LOGAN; J. SAULNIER; D. LAM; C. JOHNSON; D. ROOT; A. CARPENTER; B. SABATINI. *MIT, Broad Inst. MIT Harvard, Howard Hughes Med. Institute, Harvard Med. Sch.*

1:15 **576.02** Understanding mechanisms of synapse development through longitudinal *in vivo* imaging of identified presynaptic terminals before, during and after the critical period. T. EVANS; L. BURY; S. L. SABO*. *Case Western Reserve Univ. Sch. of Med., Case Western Reserve Univ. Sch. of Med., Case Western Reserve Univ. Sch. of Med.*

1:30 **576.03** Distinct lineage-dependent structural and functional organization of the hippocampus. H. XU*; Z. HAN; P. GAO; S. HE; Z. LI; W. SHI; O. KODISH; W. SHAO; K. BROWN; K. HUANG; S. SHI. *MSKCC, Col. of Software, Nankai Univ., Weill Cornell Med. Col., Weill Cornell Med. Col., Dept. of Biomed. Informatics, The Ohio State Univ.*

1:45 **576.04** The splicing factor Rbfox1 mediates the maturation and synaptic integration of cortical interneurons. X. JAGLIN*; B. WAMSLEY; H. XU; G. SALDI; B. RUDY; G. FISHELL. *New York Univ. Sch. of Med., NYUAD.*

2:00 **576.05** The function of MET signaling in developing synaptic organization. Z. XIE*; K. EAGLESON; P. LEVITT. *The Saban Res. Institute, CHLA, Dept. of Cell & Neurobiology, Keck Sch. of Med. of the Univ. of Southern California, Dept. of Pediatrics, Keck Sch. of Med. of the Univ. of Southern California.*

2:15 **576.06** Torsin mediates primary envelopment of large ribonucleoprotein granules at the nuclear envelope for the egress of synaptically localized transcripts. V. JOKHI*; J. ASHLEY; J. NUNNARI; A. NOMA; N. ITO; N. WAKABAYASHI-ITO; M. MOORE; V. BUDNIK. *Univ. of Massachusetts Med. Sch., Univ. of Massachusetts, Med. Sch., Univ. of Massachusetts, Med. Sch., Harvard Med. Sch. Dept. of Neurol. and Radiology.*

2:30 **576.07** Regulation of Climbing fiber-purkinje cell synaptic pruning in a mouse model of SCA1. E. A. LEATHLEY*; M. INGRAM; H. Y. ZOGHBI; H. T. ORR. *Univ. of Minnesota, Baylor Col. of Med.*

2:45 **576.08** Using exogenous trafficking motifs to elucidate the mechanism by which autism associated PTEN point mutations result in loss of function. C. J. FRICANO*; T. DESPENZA, Jr.; M. LI; M. R. WILLIAMS; B. W. LUIKART. *Geisel Sch. of Med. At Dartmouth Col.*

3:00 **576.09** Hyperactivity of developing neurons lacking the autism-associated gene Pten results from increased excitatory synaptic drive. M. R. WILLIAMS*; J. LEE; G. B. RUSSO; D. R. RACINE; A. T. GULLEDGE; B. W. LUIKART. *Dartmouth Med. Sch., Dartmouth Col., Geisel Sch. of Med. at Dartmouth Col.*

NANOSYMPOSIUM

577. Physiology of Glia-Neuronal Interactions

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 206

1:00 **577.01** The dynamic extension of radial glial filopodia in response to neuronal activity contributes to synaptic maturation in the developing Xenopus retinotectal system. M. SILD*; M. VAN HORN; D. JIA; E. S. RUTHAZER. *McGill Univ., McGill Univ., Montreal Neurolog. Institute, McGill Univ.*

1:15 **577.02** Super-resolution optical imaging of aquaporin-4 arrays in astrocyte foot processes. A. J. SMITH*; A. S. VERKMAN. *UCSF.*

1:30 **577.03** *Drosophila* scotopic vision relies on a glutamate-gated chloride channel in glia. P. GUO*; Z. LUAN; C. KRAWIC; H. LI. *Univ. Mass. Med.*

1:45 **577.04** Regulation of the neuroprotective transcription factor creb during glia-neuron interactions. S. PUGAZHENTHI*; L. QIN; R. BOUCHARD; T. CHONG. *Denver VA Med. Ctr., Univ. of Colorado, Denver VA Med. Ctr.*

2:00 **577.05** *Drosophila* visual glia circulate extracellular K+ to facilitate inhibitory neuronal signaling. Z. LUAN; P. GUO; H. LI*. *Univ. Mass. Med. Sch.*

2:15 **577.06** Intracellular trafficking, matrix association and function of VEGF in astroglial cells. K. EGERVARI; G. POTTER; P. SALMON; B. WEHRLE-HALLER; M. L. GUZMÁN-HERNÁNDEZ; T. BALLA; J. Z. KISS*. *Dept Neurosci, Univ. Geneva Med. Sch., Dept. Cell Physiol. and Metabolism, Univ. Geneva Med. Sch., NICHD, Natl. Inst. of Hlth.*

2:30 **577.07** The role of connexin 30 in sleep homeostasis. X. LIU*; J. PETIT; A. BOULAY; M. COHEN-SALMON; P. MAGISTRETTI; C. GIAUME. *Collège De France, Brain Mind Institute, EPFL.*

2:45 **577.08** Heterogeneity of astrocyte morphology and function in hippocampal dentate gyrus. G. NASERI KOUZEHGARANI*; M. U. GILLETTE. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

3:00 **577.09** Changes in retinal metabolomics after selective Müller cell ablation. W. SHEN*; J. DU; S. LEE; S. H. CHUNG; L. ZHU; C. D. RAE; J. B. HURLEY; M. C. GILLIES. *The Univ. of Sydney, Univ. of Washington, Univ. of New South Wales.*

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3:15 **577.10** Long-term memory is defective in mice with impaired astrocytic calcium signaling. A. PINTO-DUARTE*; A. J. ROBERTS; K. OUYANG; J. CHEN; T. J. SEJNOWSKI. *The Salk Inst. For Biol. Studies and Howard Hughes Med. Inst., The Scripps Res. Inst., Peking Univ. Shenzhen Grad. Sch., UCSD.*

3:30 **577.11** Real time changes of extracellular lactate levels during synaptic train stimulation in rat hippocampal slices. F. GALEFFI*; M. MESSERLI; G. KATUL; D. A. TURNER. *Duke Univ. Med. Ctr., Durham VA Med. Ctr., Marine Biol. Lab., Nicholas Sch. of the Envrn. and Earth Sciences, Duke Univ., Duke Univ. Med. Ctr.*

3:45 **577.12** Purinergic signalling in the nucleus tractus solitarius controls hypoxic ventilatory responses in awake rats. P. S. HOSFORD*; M. LI; M. FIGUEIREDO; A. GOURINE; S. KASPAROV; N. MARINA. *Univ. College, London, Univ. College, London, Univ. of Bristol.*

4:00 **577.13** A novel type of neuronal death including ectopic mitochondrial calcification occurs during *in vitro* culture of rat hippocampal slices. T. RIEW*; Y. SHIN; J. PARK; H. KIM; M. LEE. *Dept. of Anatomy, Col. of Medicine, The Catholic Univ. of Korea, Integrative Res. Support Center, Col. of Medicine, The Catholic Univ. of Korea.*

4:15 **577.14** Physiology of *Drosophila* astrocyte-like glial cells: Intrinsic properties and response to channelrhodopsin-mediated neuronal activity. S. E. MACNAMEE*; L. P. TOLBERT; L. A. OLAND. *Univ. of Arizona.*

NANOSYMPOSIUM

578. Tauopathy: Molecular Pathogenesis and Experimental Therapy

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 152A

1:00 **578.01** The MAPT p.A152T mutation leads to excitotoxicity in a brain slice model of progressive supranuclear palsy (PSP). J. M. DECKER*; L. KRÜGER; E. MANDELKOW; E. MANDELKOW. *DZNE, Caesar Res. Ctr., Max-Planck-Institute for Neurolog. Res.*

1:15 **578.02** Analysis of *in vivo* turnover of tau in a mouse model of tauopathy. K. YAMADA*; T. K. PATEL; K. HOCHGRÄFE; T. E. MAHAN; H. JIANG; F. R. STEWART; E. MANDELKOW; D. M. HOLTZMAN. *The Univ. of Tokyo, Washington Univ., MPI for Neurolog. Res., DZNE, CAESAR Res. Ctr.*

1:30 **578.03** Targeting tau-mediated NMDA receptor hypofunction reverses deficits in a mouse model of frontotemporal dementia. E. D. ROBERSON*; B. A. WARMUS; D. R. SEKAR; E. MCCUTCHEN; G. D. SCHELLENBERG; L. L. MCMAHON. *UAB, UAB, Univ. of Pennsylvania.*

1:45 **578.04** Progressive tauopathy-dependent neurodegeneration in mice expressing an inducible tau transgene: Towards a new model of Alzheimer's disease. T. LI*; J. ZHANG; A. LAU. *The Johns Hopkins Univ.*

2:00 **578.05** A mechanism by which β-amyloid peptide and MARK/PAR-1 trigger abnormal metabolism and toxicity of microtubule-associated protein tau in a *Drosophila* model of Alzheimer's disease. K. ANDO*; Y. OHTAKE; A. MARUKO-OTAKE; M. SEKIYA; K. M. IIJIMA. *Thomas Jefferson Univ., Natl. Ctr. for Geriatrics and Gerontology.*

2:15 **578.06** Insulin resistance prevents AMPK-mediated tau dephosphorylation through increased AMPKSer485 phosphorylation. B. KIM*; P. CRYSTAL; C. BACKUS; E. L. FELDMAN. *Univ. Michigan, Univ. of Michigan.*

2:30 **578.07** Zebrafish tauopathy models optimized for drug discovery and development. E. A. BURTON*; Q. BAI; Y. ZHOU; A. DUKES. *Univ. Pittsburgh, Univ. of Pittsburgh.*

2:45 **578.08** Microglia and exosome-mediated spread of pathogenic tau in Alzheimer's disease. T. IKEZU*; H. ASAI; S. IKEZU; T. HAYDAR; B. WOLOZIN; S. KÜGLER. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Univ. Med. Göttingen.*

NANOSYMPOSIUM

579. Risk Factors for Neurodegenerative Diseases

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 150B

1:00 **579.01** Prenatal marginal vitamin a deficiency facilitates Alzheimer's disease pathogenesis. J. ZENG*; Q. CHEN; Z. FAN; H. JIANG; L. CHEN; J. CHEN; T. LI; W. SONG. *The Univ. of British Columbia, The Children's Hosp. of Chongqing Med. Univ.*

1:15 **579.02** Isoform and lipid dependent interaction of apolipoprotein E (apoE) with LRP1. I. Y. TAMBOLI*; G. REBECK. *Georgetown Univ.*

1:30 **579.03** A multimodal network associated with asymptomatic frontotemporal degeneration. C. MCMILLAN*; K. RASCOVSKY; E. WOOD; A. CHEN-PLOTKIN; B. AVANTS; P. COOK; J. POWERS; C. OLM; L. BAEHR; J. GEE; V. M. LEE; J. Q. TROJANOWKSI; V. VAN DEERLIN; M. GROSSMAN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:45 **579.04** External radiation is associated with reduction of aβ plaque burden and hippocampal synaptophysin staining in a murine model of Alzheimer's disease. D. B. MICHAEL*; A. HANNA; R. HUNT; A. MARTINEZ; M. MADDENS; G. WILSON; J. FONTANESI; B. MARPLES. *Michigan Head & Spine Inst., William Beaumont Hosp., Oakland Univ. William Beaumont Sch. of Med., Botsford Cancer Ctr.*

2:00 **579.05** The role of apoe4-induced phospholipid dysregulation in Alzheimer's disease pathogenesis. D. CAI*; L. ZHU; G. ELDER; S. GANDY; C. CARDOZO; N. ROBAKIS. *James J Peters VA Med. Center/Mount Sinai Sch. of Med., James J Peters VA Med. Center/Mount Sinai Sch. of Med., Mount Sinai Sch. of Med.*

2:15 **579.06** The pro-neurotrophin receptor sortilin is a major neuronal apoE receptor for catabolism of amyloid-β peptide in the brain. A. CARLO*; C. GUSTAFSEN; G. MASTROBUONI; S. KEMPA; C. M. PETERSEN; T. E. WILLNOW. *MDC, MIND, MDC.*

2:30 **579.07** Multi-omic analysis of apoE isoform effects in an AD-vulnerable brain region. T. NURIEL*; L. LIU; R. CHAN; A. DILLMAN; Q. CHEN; V. DROUET; G. DI PAOLO; M. COOKSON; S. S. GROSS; K. DUFF. *Columbia Univ. Med. Ctr., Natl. Inst. on Aging, Weill Cornell Med. Col.*

2:45 **579.08** Differential responses to antioxidant and exercise interventions in male and female GFAP-ApoE3 and -ApoE4 mice. K. CHAUDHARI*; J. M. WONG; P. H. VANN; N. SUMIEN. *Univ. of North Texas Hlth. Sci. Ctr.*

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3:00 **579.09** Epigenetic regulation of FKBP5 in aging and disease. L. J. BLAIR*; J. J. SABBAGH; T. KLENGEL; E. BINDER; C. A. DICKEY. *Univ. of South Florida, Emory Univ. Sch. of Med.*

NANOSYMPOSIUM

580. Parkinson's Disease: Mechanisms and Circuits

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 146C

1:00 **580.01** The nature of the brain dopamine storage defect in Parkinson's disease: A study in isolated synaptic vesicles of human caudate and putamen. C. PIFL*; A. RAJPUT; H. REITHER; J. BLESA; C. CAVADA; J. A. OBESO; A. H. RAJPUT; O. HORNYKIEWICZ. *Ctr. for Brain Res., Med. Univ. of Vienna, Royal Univ. Hospital, Univ. of Saskatchewan, CIMA and Clinica Univ. de Navarra, Facultad de Medicina, Universidad, Autónoma de Madrid.*

1:15 **580.02** Brainstem volume as an imaging biomarker of Parkinson's disease. C. D. SCHROEDER*; G. T. STEBBINS; J. G. GOLDMAN. *Rush Univ. Med. Ctr.*

1:30 **580.03** Substantia nigra diffusion parameters in newly diagnosed parkinson patients: should fractional anisotropy be considered a biomarker? T. ROLHEISER*; K. P. GOOD; R. LESLIE; J. FISK; G. PHILLIPS; R. MCKELVEY; K. ROCKWOOD; M. WOJTOWICZ; O. THEOU; D. LEWIS; M. ARMSTRONG; R. GAN; R. STERNICZUK; P. CHIASSON; M. N. KHAN; C. MACKNIGHT; K. SCHOFFER; M. SCHMIDT; A. NEWMAN; B. RUSAK; H. ROBERTSON. *Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ.*

1:45 **580.04** Striatal cholinergic interneurons and motor symptoms of Parkinson's disease. M. AMALRIC*; M. LIBERGE; S. ZTAOU; N. MAURICE; F. JAOUEN; L. KERKERIAN-LEGOFF; C. BEURRIER. *Aix-Marseille Univ. CNRS, Aix Marseille Univ., Aix-Marseille Univ. CNRS.*

2:00 **580.05** Comparison between short-term beta phase cross-frequency-coupling and beta band power in subthalamic nucleus local field potentials recorded from monkeys with parkinsonism. T. H. SANDERS*; A. DEVERGNAS; M. CLEMENTS; T. WICHMANN. *Georgia Inst. of Technol., Udall Ctr. of Excellence in Parkinson's Dis. Res., Yerkes Natl. Primate Res. Ctr., Emory Univ.*

2:15 **580.06** Cortico-subthalamic transmission is the causative mechanism of parkinsonian hypokinetic movements. M. PAN*; C. TAI; W. LIU; W. LAI; C. KUO. *Natl. Taiwan Univ. Hosp., Natl. Taiwan Univ. Col. of Med., Natl. Taiwan Univ. Hosp. Yun-Lin Br., Natl. Taiwan Univ.*

2:30 **580.07** Glycosylation profiling in plasma of patients with Parkinson's disease reveals putative biomarkers. K. GOTOVAC; O. GORNIK; S. TELAROVIC; V. MILETIC; L. C. GUEDES; J. FERREIRA; T. F. OUTEIRO; G. LAUC; F. BOROVECKI*. *Univ. of Zagreb Sch. of Med., Fac. of Pharm. and Biochemistry, Univ. of Zagreb, Univ. Hosp. Ctr. Zagreb, Faculdade de Medicina da Univ. de Lisboa, Univ. Med. Ctr. Göttingen, Genos Glycoscience Lab.*

2:45 **580.08** Alterations in alpha-galactosidase A activity in Parkinson's disease brain. M. P. NELSON*; T. E. TSE; D. B. O'QUINN; D. G. WARNOCK; J. J. SHACKA. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Birmingham VA Med. Ctr.*

3:00 **580.09** Structural brain connectivity in Parkinson's disease patients with impulse control disorder: Graph-theoretical analysis. A. STRAFELLA*; S. CHO; M. CRIAUD; K. AMINIAN. *Univ. Toronto.*

3:15 **580.10** Reorganization of structural brain connectivity in Parkinson's disease patients with pathological gambling: Generalized structured component analysis. S. CHO*; K. JUNG; K. AMINIAN; E. ABI-JAOUDE; H. HWANG; A. P. STRAFELLA. *CAMH, Univ. of Texas, Univ. of Toronto, McGill Univ., Univ. of Toronto.*

3:30 **580.11** Aberrant dopamine in the salience network and parahippocampal gyrus contributes to memory impairment in Parkinson's disease. L. CHRISTOPHER*; C. MARRAS; S. DUFF-CANNING; Y. KOSHIMORI; R. CHEN; I. BOILEAU; B. SEGURA; A. LANG; P. RUSJAN; S. HOULE; A. STRAFELLA. *PET Imaging Centre, Ctr. For Addiction and Mental Health, Univ. of Toront, Div. of Brain, Imaging and Behaviour – Systems Neuroscience, Toronto Western Res. Inst., Morton and Gloria Shulman Movement Disorder Unit & E.J. Safra Parkinson Dis. Program, Toronto Western Hosp.*

NANOSYMPOSIUM

581. Ischemia: Cellular Mechanisms and Neuroprotection II

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 156

1:00 **581.01** Early brain injury disturbs spontaneous correlated cortical activity in the developing brain. S. RANASINGHE*; G. OR; C. M. NIELL; V. CHAU; P. K. H. WONG; H. C. GLASS; J. SULLIVAN; P. S. MCQUILLEN. *UCSF, UCSF, Univ. of British Columbia, British Columbia Children's Hosp., Univ. of British Columbia, British Columbia Children's Hosp., UCSF, UCSF.*

1:15 **581.02** Hydroxamic based histone deacetylase (HDAC) inhibitors can mediate neuroprotection independent of HDAC inhibition. S. SLEIMAN*; D. E. OLSON; M. W. BOURASSA; S. S. KARUPPAGOUNDER; Y. ZHANG; J. GALE; F. F. WAGNER; G. COPPOLA; J. PINTO; E. HOLSON; R. R. RATAN. *NYU Sch. of Med., The Broad Inst. of MIT and Harvard, MA 02142, Burke/Cornell Univ., UCLA, New York Med. College,.*

1:30 **581.03** Role of acetylation in the repair of DNA double-strand breaks in neurons. C. BROCHIER*; R. MEYER; G. DENNIS; B. LANGLEY. *Burke/Cornell Med. Res. Inst., Brain and Mind Res. Institute, Weill Cornell Med. Col.*

1:45 **581.04** Sex differences in the regulation of DNA demethylation following brain injury. M. E. WILSON*; K. MURRAY; J. WESTBERRY. *Univ. of Kentucky.*

2:00 **581.05** OCT4B-190 exerts neuroprotection after stroke via modulating GSK3β and HDAC6. Y. CHEN*; Z. WU; X. ZHU; X. ZANG; J. JIN; Y. XU. *Affiliated Drum Tower Hosp. of Nanjing Univ.*

2:15 **581.06** Inter-alpha inhibitor proteins prevent complex auditory processing deficits following neonatal brain injury in rats. S. W. THRELKELD*; M. E. LA RUE; C. M. GAUDET; Y. LIM; B. S. STONESTREET. *Rhode Island Col., Rhode Island Col., Rhode Island Col., ProThera Biologics, The Alpert Med. Sch. of Brown University, Women and Infants Hosp. of Rhode Island.*

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2:30 **581.07** Molecular hydrogen suppresses apoptosis in neuron and oligodendrocyte caused by neonatal exposure to general anesthetics in mice. S. YUFUNE*; T. SHIMADA; R. YONAMINE; Y. SATOH; T. KAZAMA. *Dept. of Anesthesiology, Natl. Def. Med.*

2:45 **581.08** The effects of genetic deletion of galectin-3 on microglia activation after acute neonatal focal stroke. S. CHIP*; F. LI; N. DERUGIN; J. FAUSTINO; Z. VEXLER. *Dept. of Neurology, Univ. California San Francisco.*

NANOSYMPOSIUM

582. Visual Processing: Faces

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 143A

1:00 **582.01** Intracerebral recording of an objective face detection threshold in the human ventral temporal cortex. J. LIU-SHUANG; J. JONAS; J. M. ALES; A. M. NORCIA; L. MAILLARD; B. ROSSION*. *Univ. of Louvain, CHU Nancy, Univ. of St-Andrews, Stanford Univ., Univ. catholique Louvain.*

1:15 **582.02** Ventral visual stream (&EBA) only critical for person perception, not for biological motion perception: Evidence from patients and a model suggestion. S. GILAIE-DOTAN*. *UCL.*

1:30 **582.03** Resting state networks of the macaque face patch system. C. M. SCHWIEDRZIK*; W. ZARCO; S. EVERLING; W. A. FREIWALD. *Rockefeller Univ., Univ. of Western Ontario, Univ. of Western Ontario.*

1:45 **582.04** Decoding what types of information are in the macaque face patch system. E. M. MEYERS*; M. BORZELLO; W. FREIWALD; D. TSAO. *MIT, MGH, Rockefeller Univ., CalTech.*

2:00 **582.05** Structural equation modeling reveals relationships between the left and right fusiform gyri for processing faces. M. MENG*; Z. LI. *Dartmouth Col., The Geisel Sch. of Med. at Dartmouth Col.*

2:15 **582.06** fMRI decoding reveals impaired face configural processing in the right fusiform face area of individuals with developmental prosopagnosia. J. ZHANG*; J. LIU; Y. XU. *Harvard Univ., Beijing Normal Univ.*

2:30 **582.07** The resiliency of cortical networks: Stable functional organization of the face processing network after surgical resection of the right inferior occipital gyrus. K. S. WEINER*; L. MAILLARD; J. JONAS; H. BRISSART; G. HOSSU; C. JACQUES; D. LOFTUS; J. GOMEZ; K. GRILL-SPECTOR; B. ROSSION. *Stanford Univ., Univ. Hosp. of Nancy, Univ. Hosp. of Nancy, , Univ. of Louvain.*

2:45 **582.08** Distributed neural systems for category-specific visual processing. N. TANDON*; C. KADIPASAOGLU; V. BABOYAN. *Univ. Texas Med. Sch.*

3:00 **582.09** Face selectivity and representation of central vision develop in tandem along the fusiform gyrus among children. G. GOLARAI*; A. LIBERMAN; K. GRILL-SPECTOR. *Stanford Univ.*

3:15 **582.10** Dynamic encoding of face information in human fusiform. A. S. GHUMAN*; N. M. BRUNET; Y. LI; R. O. KONECKY; J. A. PYLES; V. DESTEFINO; W. WANG; R. M. RICHARDSON. *UPMC Dept. of Neurolog. Surgery, Carnegie Mellon Univ., UPMC Dept. of Physical Med. and Rehabil.*

3:30 **582.11** Face-selective regions of the marmoset extrastriate visual cortex - revealed by fMRI & electrocorticography. C. HUNG*; C. C. YEN; J. L. CIUCHTA; J. R. DAY-COONEY; D. PAPOTI; N. A. BOCK; B. E. RUSS; D. A. LEOPOLD; A. C. SILVA. *NINDS, NIH, NIMH, NIH, McMaster Univ.*

3:45 **582.12** Representation of a parameterized realistic face space across different face patches. L. CHANG*; D. TSAO. *CALIFORNIA INSTITUTE OF TECHNOLOGY.*

4:00 **582.13** Non-hierarchical network dynamics of face perception. C. M. KADIPASAOGLU*; C. CONNER; V. BABOYAN; N. TANDON. *Univ. of Texas Med. Sch. At Houston.*

NANOSYMPOSIUM

583. Brainstem: Motor and Sensory Systems

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 144A

1:00 **583.01** Measurements of somatotopic organization in the deep layers of human superior colliculus. D. RESS*; S. KATYAL; C. GREENE. *Baylor Col. of Med., Univ. of Minnesota, Univ. of California.*

1:15 **583.02** Neuromuscular correlates of midbrain periaqueductal gray induced vocalization in decerebrate cats: Principles of descending laryngeal and respiratory motor control. H. SUBRAMANIAN*; M. ARUN. *The Univ. of Queensland.*

1:30 **583.03** *In vivo* delineation of human brainstem grey matter with Diffusion Tensor Imaging at 7 Tesla. M. BIANCIARDI*; N. TOSCHI; C. EICHNER; B. EDLOW; J. R. POLIMENI; K. SETSOMPOP; D. BOAS; L. L. WALD. *MGH & HMS, Massachusetts Gen. Hosp. and Harvard Med. Sch., Fac. of Medicine, Univ. of Rome "Tor Vergata", Massachusetts Gen. Hosp.*

1:45 **583.04** Identification of brainstem nuclei in resting-state fMRI data based on their cortical connectivity profiles. F. BEISSNER*; A. SCHUMANN; F. BRUENNER; K. BÄR. *Somatosensory and Autonomic Therapy Res., Univ. Hosp. Jena.*

2:00 **583.05** Connectomics of the inspiratory center: Anatomical tract and propagation dynamics from the preBötzinger complex. Y. OKADA*; Y. OKU; S. YOKOTA; Y. OYAMADA; Y. YASUI; N. KOSHIYA. *Murayama Med. Ctr., Dept. of Physiol., Hyogo Col. of Med., Dept. of Anat. & Molphol. Neurosci., Shimane Univ. Sch. of Med., Dept. of Respirol., Tokyo Med. Ctr., NIH - NINDS.*

2:15 **583.06** Enhancement of INaP-mediated resonance by mGluR-I activation induces burst firing in mesencephalic trigeminal sensory neurons. Y. KANG; G. CHUNG*; M. SAITO; M. TAKADA; Y. BAE; J. KIM; S. OH. *Osaka Univ., Seoul Natl. Univ., Kyoto Univ., Kyungpook Natl. Univ., Seoul Natl. Univ.*

2:30 **583.07** Loss of teeth in genetically-mapped recombinant inbred mouse strains as a model to study the genetic control of orofacial sensorimotor functions and the associated functional and sMRI-defined plasticity of the orofacial sensorimotor cortex post-injury. L. AVIVI-ARBER*; M. FRIEDEL; J. LERCH; Y. HAYASHI; G. LANDZBERG; M. MOAYEDI; K. D. DAVIS; Z. SELTZER; B. J. SESSLE. *Univ. of Toronto, Hosp. for Sick Children, Nihon Univ. Sch. of Dent. at Matsudo, Univ. of Toronto, Univ. Col. London, Univ. of Toronto, Univ. of Toronto Ctr. for the Study of Pain.*

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2:45 **583.08** Cerebral cortical projections to trigeminal premotoneurons controlling jaw-movements. A. YOSHIDA*; K. TSUTSUMI; F. SATO; H. OHARA; T. KATO. *Osaka Univ. Grad. Sch. of Dent.*

3:00 **583.09** Histaminergic modulation of oral-motor activity. K. NAKAYAMA; C. GEMBA; S. NAKAMURA; A. MOCHIZUKI; M. INOUE; T. INOUE*. *Showa Univ. Sch. Dent., Showa Univ. Sch. Dent.*

NANOSYMPOSIUM

584. Early Exposure to Stress: Environmental Factors

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 147B

1:00 **584.01** Maternal stress exacerbates the effects of prenatal air pollution exposure on offspring anxiety, cognition, and neuroimmune function in a sex-specific manner. J. L. BOLTON*; N. C. HUFF; S. H. SMITH; N. MASON; M. FOSTER; R. L. AUTEN; S. D. BILBO. *Duke Univ., Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

1:15 **584.02** Maternal interleukin-6 concentrations during pregnancy and newborn functional brain connectivity. C. BUSS*; A. M. GRAHAM; M. D. RUDOLPH; J. RASMUSSEN; S. ENTRINGER; P. D. WADHWA; D. A. FAIR. *Charité Univ. Med. Berlin, Oregon Hlth. & Sci. Univ., UC Irvine.*

1:30 **584.03** High fat/sugar diet restored heightened anxiety-like behaviour induced by early life stress and paradoxically reduced hippocampal neurotrophic and mitochondrial biogenesis genes in male rats. J. MANIAM*; C. ANTONIADIS; M. J. MORRIS. *UNSW Australia.*

1:45 **584.04** Modulation of fear memory by dietary polyunsaturated fatty acids via cannabinoid receptors. D. YAMADA*; J. TAKEO; P. KOPPENSTEINER; K. WADA; M. SEKIGUCHI. *Natl. Inst. of Neurosci., Central Res. Laboratory, Nippon Suisan Kaisha.*

2:00 **584.05** ● Foods of the father: Probiotics save infant rats from the transgenerational effects of early stress on fear-related behaviours. C. S. COWAN*; B. L. CALLAGHAN; R. RICHARDSON. *Univ. of New South Wales.*

2:15 **584.06** The transgenerational inheritance of metabolism-related cognitive impairment: epigenetic modifications linking diet and brain health. S. FUSCO*; A. MASTRODONATO; S. COCCO; C. RIPOLI; S. A. BARBATI; M. SPINELLI; C. GRASSI. *Univ. Cattolica Del Sacro Cuore.*

2:30 **584.07** Germline and maternal pathways in the transmission of paternal food restriction stress. R. MASHOODH*; I. B. HABRYLO; K. GUDSNUK; F. A. CHAMPAGNE. *Columbia Univ.*

2:45 **584.08** Transgenerational and multigenerational programming of altered stress response and mental health. J. K. MCCREARY*; Z. T. ERICKSON; G. A. S. METZ. *Univ. of Lethbridge, Canadian Ctr. for Behavioural Neurosci.*

3:00 **584.09** Neonatal injury has sex-specific effects on social play and brain vasopressin receptor binding. B. M. COOKE*; A. P. ROSS; N. C. VICTORIA; A. HAMKI; A. Z. MURPHY. *Georgia State Univ.*

3:15 **584.10** Precipitated withdrawal in newborn rats is worse after a 3 day exposure to dexmedetomidine (DEX) vs. clonidine (CLON). K. KESAVAN; A. MASON; R. CHAVEZ-VALDEZ; T. EZELL; Z. MASTER; S. KUDCHADKAR; G. MCLEMORE; E. B. GAUDA*. *Univ. Of California, Johns Hopkins Inst., Morgan State Univ.*

3:30 **584.11** Microglial inflammatory responses in CO2 evoked fear. L. L. VOLLMER*; S. N. SCHMELTZER; I. LEWKOWICH; R. W. PUTNAM; R. SAH. *Univ. Of Cincinnati, Cincinnati Children's Hosp. Med. Ctr., Wright State Univ.*

NANOSYMPOSIUM

585. Brain Glucose and Energy-Sensing

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 152B

1:00 **585.01** Role of acyl-coa binding protein (acbp) in hypothalamic control of energy balance. L. BUDRY; K. BOUYAKDAN; B. TAIB; C. CHRETIEN; D. RODAROS; F. LIENARD; A. MARCHER; D. NEESS; S. MANDRUP; L. PENICAUD; N. J. FAERGEMAN; X. FIORAMONTI; T. ALQUIER*. *CRCHUM, Univ. de Bourgogne, Univ. of Southern Denmark.*

1:15 **585.02** Glucose excites hypothalamic neurons through the activation of Transient Receptor Potential Canonical (TRPC) channels. C. CHRÉTIEN; C. FENECH; S. GRALL; L. PÉNICAUD; C. LELOUP; X. FIORAMONTI*. *CSGA.*

1:30 **585.03** The monounsaturated fatty acid oleate in the ventral tegmental area inhibits feeding behaviour and dopamine neurotransmission. C. HRYHORCZUK; Z. SHENG; V. ROUTH; T. ALQUIER; S. E. FULTON*. *CRCHUM, Univ. de Montréal, Montreal Diabetes Res. Ctr., Rutgers.*

1:45 **585.04** Glia-neuron interaction and energy homeostasis. M. V. KOKOEVA*; T. DJOGO; S. ROBINS; D. KRYZSKAYA; T. STROH. *McGill Univ.*

2:00 **585.05** Xbp1s in Pomc neurons connects ER stress with energy balance and glucose homeostasis. K. W. WILLIAMS*; T. LIU; M. FUKUDA; Y. DENG; X. KONG; E. D. BERGLUND; Z. DENG; J. SOHN; M. M. SCOTT; S. LEE; C. E. LEE; P. E. SCHERER; J. K. ELMQUIST. *Univ. Texas Southwestern, Baylor Col. of Med., Beth Israel Deaconess, Univ. Texas Southwestern, The Univ. of Virginia.*

2:15 **585.06** Specific deletion of lipoprotein lipase in ventromedian hypothalamus induces obesity and impairment of glucose homeostasis in mice. E. LAPERROUSAZ; V. S. MOULLÉ; N. KASSIS; R. G. DENIS; S. LUQUET; C. MAGNAN; C. CRUCIANI-GUGLIELMACCI*. *Univ. Paris Diderot, BFA.*

2:30 **585.07** Direct input to orexin/hypocretin neurones from forebrain areas related to metabolism regulation. A. GONZALEZ*; D. BURDAKOV. *MRC Natl. Inst. For Med. Res.*

2:45 **585.08** Activation of lateral hypothalamic area (LHA) orexin glucose-inhibited (GI) neurons in low glucose induces glutamate plasticity on ventral tegmental area (VTA) dopamine neurons. V. H. ROUTH*; Z. SHENG; M. P. THOMAS. *RBHS: New Jersey Med. Sch., Univ. Northern CO.*

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3:00 **585.09** Preoptic leptin-responsive neurons regulate energy expenditure and body temperature. S. YU*; K. REZAI-ZADEH; H. MÜNZBERG. *Pennington Biomed. Res. Ctr.*

3:15 **585.10** Glucose-dependent dual effects of central adiponectin on POMC neurons in arcuate nucleus. S. SUYAMA*; F. MAEKAWA; Y. MAEJIMA; N. KUBOTA; T. KADOWAKI; T. YADA. *Jichi Med. Univ., Natl. Inst. for Envrn. Studies, Univ. of Tokyo.*

3:30 **585.11** Carnitine acyltranserfase links a metabolic rhythm to nutirent sensing in the POMC neurons. Z. B. ANDREWS*; G. PREMANATHAN; S. H. LOCKIE. *Monash Uni, Monash Univ.*

3:45 **585.12** *In vivo* evidence for hypothalamic ketone bodies sensing: impact on food intake and endocrine responses in mice. L. CARNEIRO*; L. PELLERIN. *UNIL.*

4:00 **585.13** The role of Agouti-related peptide neurons in inflammatory anorexia. L. GAUTRON*; Y. LIU; Y. HUANG; T. LIU. *Univ. Texas Southwestern Med. Ctr.*

NANOSYMPOSIUM

586. Human Long-Term Memory: Encoding-Retrieval Interactions

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 140A

1:00 **586.01** The nature of true and false memory activity in motion versus shape processing cortex. J. M. KARANIAN*; S. D. SLOTNICK. *Boston Col.*

1:15 **586.02** Exploring the neural correlates of true and false memory for conceptual pictures in older adults. I. C. TURNEY*; C. E. JOHNSON; N. A. DENNIS. *The Pennsylvania State Univ.*

1:30 **586.03** Examining the influence of thematic information on retrieval success. C. E. JOHNSON*; I. C. TURNEY; N. A. DENNIS. *The Pennsylvania State Univ.*

1:45 **586.04** Object information in hippocampus and visual cortex during perception and retrieval from long-term memory. S. LEE*; M. L. KING; D. J. KRAVITZ; C. I. BAKER. *NIH/NIMH, The George Washington Univ.*

2:00 **586.05** Anchoring the neural compass: Coding of local spatial reference frames in human medial parietal cortex. S. A. MARCHETTE*; L. K. VASS; J. RYAN; R. A. EPSTEIN. *Univ. of Pennsylvania.*

2:15 **586.06** Odor-evoked episodic memory in humans: From cognitive process to neural network. A. SAIVE*; N. RAVEL; M. THÉVENET; S. GARCIA; J. ROYET; J. PLAILLY. *Lyon Neurosci. Res. Ctr.*

2:30 **586.07** Echoic memory for meaningless stimuli: Evidence for fast neuronal specialization? J. VISWANATHAN*; N. MACÉ; A. S. CAUQUIL; S. J. THORPE; F. REMY. *CerCo, CNRS UMR 5549, Univ. Toulouse III - Paul Sabatier.*

2:45 **586.08** Hippocampal brain activity and functional connectivity in humans change as material is forgotten across one month. C. N. SMITH*; R. E. CLARK; L. R. SQUIRE. *UCSD, Veterans Affairs San Diego Healthcare Syst., UCSD, UCSD.*

3:00 **586.09** Relative and absolute familiarity are associated with two topographically dissociable early ERP old/new effects. R. BADER*; P. MEYER. *Central Inst. for Mental Hlth.*

3:15 **586.10** Memory representation strength modulates the neural networks supporting associative recognition and novelty detection. Y. FANDAKOVA*; M. C. SANDER; R. CABEZA; U. LINDENBERGER; M. WERKLE-BERGNER; Y. L. SHING. *Univ. of California, Max Planck Inst. for Human Develop., Duke Univ.*

3:30 **586.11** Word length effect in free recall of randomly assembled word lists. M. KATKOV*; S. ROMANI; M. TSODYKS. *Weizmann Inst. of Sci., Columbia Univercity.*

3:45 **586.12** How shifts in visual perspective modify autobiographical memory: A functional neuroimaging study. P. L. ST. JACQUES*. *Harvard Univ.*

4:00 **586.13** Remembering exceptions to the rule: Dorsolateral PFC and Striatum support memory for schema-incongruent events. G. BROD*; U. LINDENBERGER; M. WERKLE-BERGNER; Y. L. SHING. *Max Planck Inst. For Human Develop.*

4:15 **586.14** Episodic memory retrieval benefits from a less modular brain network organization. A. J. WESTPHAL*; M. M. MONTI; N. REGGENTE; O. YAZDANSHENAS; J. RISSMAN. *UCLA.*

NANOSYMPOSIUM

587. Human Decision-Making: Neural Mechanisms

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, 150A

1:00 **587.01** Rapid intermittent deep brain stimulation biases behavior in financial decision-making task. S. R. PATEL*; S. SHETH; M. MIAN; S. BOURNE; J. YANG; E. ESKANDAR. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

1:15 **587.02** Serotonin transporter gene (5-HTTLPR) modulates the neural activation of ventromedial prefrontal cortex in loss aversion. Q. HE*; G. XUE; C. CHEN; Q. DONG; A. BECHARA. *Southwest Univ., Beijing Normal Univ., USC.*

1:30 **587.03** Neural correlates of effort-discounted value and effort-based uncertainty in human decision making. J. BERNACER*; I. MARTINEZ-VALBUENA; M. MARTINEZ; N. PUJOL; M. A. PASTOR. *Univ. De Navarra, Univ. De Navarra.*

1:45 **587.04** Using metabolic cost to determine the subjective value of effort in movement decisions. E. SUMMERSIDE*; A. AHMED. *Univ. of Colorado.*

2:00 **587.05** Individual differences in belief formation predicted by frontal-subcortical connectivity. C. MOUTSIANA*; N. GARRETT; C. CHARPENTIER; M. X. COHEN; T. SHAROT. *Exptl. Psychology, Univ. Col. London, Inst. of Cognitive Neuroscience, Univ. Col. London, Dept. of Psychology,University of Amsterdam.*

2:15 **587.06** Integration of values and information in decision-making. M. ROUAULT*; J. DRUGOWITSCH; E. KOECHLIN. *INSERM - Ecole Normale Supérieure, Univ. de Genève.*

2:30 **587.07** A predictive model of the task environment tunes control processes during contextual decision-making. M. L. WASKOM*; A. D. WAGNER. *Stanford Univ.*

2:45 **587.08** Human subthalamic nucleus theta coherence and spike phase locking delay decision making during conflict. B. A. ZAVALA*; P. BROWN; K. ZAGHLOUL. *Natl. Inst. of Neurolog. Dis. and Str, Univ. of Oxford.*

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3:00 **587.09** Predicting actions in speeded reaction-time and delayed-action tasks, an intracortical human study. U. MAOZ*; L. MUDRIK-DENAN; U. RUTISHAUSER; A. MAMELAK; C. KOCH. *Caltech, Cedars Sinai Med. Ctr., Allen Inst. for Brain Sci.*

3:15 **587.10** A task-independent neural representation of subjective certainty. J. HEEREMAN*; H. HEEKEREN. *Freie Univ. Berlin, Berlin Sch. of Mind and Brain, Dahlem Inst. for the Neuroimaging of Emotion.*

3:30 **587.11** Subjective confidence in one's decision and group size effect during group decisions. S. A. PARK*; S. GOIAME; J. DREHER. *Inst. Des Sci. Cognitives, CNRS.*

POSTER

588. Neuronal Differentiation: Transcriptional Mechanisms

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A1 **588.01** Differential conservation of transcription factor codes specifying mouse and human olfactory bulb interneuron phenotypes. N. FUJIWARA*; J. W. CAVE. *Burke Medical Research Institute, Weill Cornell Medical College, Brain And Mind Research Institute.*

2:00 A2 **588.02** Mechanisms of neuronal maturation are impaired in the developing neocortex of Mecp2 null embryos. F. BEDOGNI*; C. COBOLLI GIGLI; D. POZZI; R. ROSSI; L. SCARAMUZZA; C. ZELI; C. KILSTRUP-NIELSEN; M. MATTEOLI; N. LANDSBERGER. *San Raffaele Res. Inst., Humanitas Clin. and Res. Ctr., Inst. Nazionale Genetica Molecolare, Univ. of Insubria.*

3:00 A3 **588.03** Novel regulatory mechanisms for the SoxC transcriptional network required for visual pathway development. X. ZHANG*; J. HERTZ; X. JIN; B. A. DEROSA; J. Y. LI; P. VENUGOPALAN; D. A. VALENZUELA; R. D. PATEL; K. R. RUSSANO; S. A. ALSHAMEKH; D. VELMESHEV; Y. CHENG; T. M. BOYCE; A. DREYFUSS; M. S. UDDIN; K. J. MULLER; D. M. DYKXHOORN; J. L. GOLDBERG. *UCSD, Univ. of Miami, Univ. of Miami, Univ. of Miami.*

4:00 A4 **588.04** Genetic control of dopaminergic neuron subtype differentiation in zebrafish. W. DRIEVER*; M. MANOLI; M. RATH; E. CARL; T. MUELLER; A. FILIPPI. *Univ. Freiburg.*

1:00 A5 **588.05** The significance of NeuroD1 for external germinal layer formation. M. HANZEL; T. BUTTS; R. J. WINGATE*. *King's Col. London, King's Col. London.*

2:00 A6 **588.06** Analyzing the role of FoxD4 in neuronal differentiation using a mouse embryonic stem cell model. J. H. SHERMAN*; B. KARPINSKI-OAKLEY; M. FRALISH; S. MOODY; A. LAMANTIA; T. MAYNARD. *The George Washington Univ., The.*

3:00 A7 **588.07** Stat3 promotes motor neuron differentiation by collaborating with motor neuron-specific LIM complex. S. SEO; J. C. RHEE*; S. LEE; R. SHEN; H. CHO; J. LEE; S. LEE. *Seoul Natl. Univ., SNU Pharm., OHSU.*

4:00 A8 **588.08** Postmitotic dorsal spinal cord neurons are transfated into commissural neurons by induced misexpression of *Barh1*. T. SATO*; Y. MUROYAMA; T. SAITO. *Dev. Neurosci. Grad. Sch. of Med. Tohoku Univ., Current Address: Dev. Neurosci., Grad. Sch. of Med., Tohoku Univ., Dept. of Dev. Biol., Grad. Sch. of Med., Chiba Univ.*

1:00 A9 **588.09** Molecular interactions between Gsx2 and Ascl1 in lateral ganglionic eminence (LGE) progenitors of the mouse. K. ROYCHOUDHURY*; M. NAKAFUKU; B. GEBELEIN; K. CAMPBELL. *Cincinnati Children's Hosp.*

2:00 A10 **588.10** Identification and characterization of the genes that play important roles for the development of motor neurons. K. SUZUKI*; S. LEE; R. SHEN; J. W. LEE; S. LEE. *Oregon Health& Sci. Univ., Seoul Natl. Univ.*

3:00 A11 **588.11** Cortical neuron cell types develop highly divergent epigenetic configurations. E. A. MUKAMEL*; A. MO; F. P. DAVIS; C. LUO; G. L. HENRY; S. R. EDDY; T. J. SEJNOWSKI; J. R. ECKER; J. NATHANS. *Univ. of California-San Diego, Salk Inst. for Biol. Studies, Johns Hopkins Univ. Sch. of Med., Janelia Farm Res. Campus, Howard Hughes Med. Inst., Salk Inst. for Biol. Studies, Howard Hughes Med. Institute, The Salk Inst. for Biol. Studies.*

POSTER

589. Oligodendrocyte and Schwann Cell Biology

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A12 **589.01** Hedgehog and Wnt Signaling determinants of the outcome of demyelination revealed by Sox17 transgenesis. X. MING; L. CHEW*; J. DUPREE; V. GALLO. *Children's Res. Inst., Virginia Commonwealth Univ.*

2:00 A13 **589.02** Interactions of sox10 with tgf-b signaling in schwann cells. J. RODRIGUEZ-MOLINA*; J. MORAN; J. SVAREN. *Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Wisconsin.*

3:00 A14 **589.03** Hypoxia-induced alterations in white matter-producing cells of the perinatal piglet. P. D. MORTON*; N. ISHIBASHI; L. KOROTCOVA; K. AGEMATSU; R. A. JONAS; V. GALLO. *Childrens Natl. Med. Ctr., Childrens Natl. Med. Ctr.*

4:00 A15 **589.04** Alpha-synuclein expression in rodent and human pluripotent stem cell-derived oligodendrocytes: Implications for Multiple system atrophy. M. DJELLOUL*; C. VIGNON; K. FOG; L. ROYBON. *Lund Univ., H. Lundbeck A/S, Neurodegeneration-1.*

1:00 A16 **589.05** Non-synaptic junctions on myelinating glia promote preferential myelination of electrically-active axons. R. D. FIELDS*; H. WAKE; F. C. ORTIZ; P. R. LEE; M. C. ANGULO. *NIH, National. Inst. Basic Biol., NINS, INSERM, NICHD.*

2:00 A17 **589.06** Function of CD44 in NG2 progenitor cell differentiation and the potential of CD44 as the therapeutic target for multiple sclerosis. T. UEKI*; S. IDE; M. MURANO; K. SHIBASAKI; S. MORIKAWA; Y. OUCHI. *Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med.*

3:00 A18 **589.07** Identification and characterization of novel intronic enhancer elements of the mouse Cspg4 gene in oligodendrocyte lineage cells. H. GOTOH*; T. NOMURA; K. ONO; A. NISHIYAMA. *Kyoto Prefectural Univ. of Med., Univ. of Connecticut.*

4:00 A19 **589.08** Role of myosin light-chain kinase in schwann cell cytoskeletal organization, differentiation, and myelination. T. TOSEEF*; C. V. MELENDEZ-VASQUEZ. *Hunter College, CUNY.*

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1:00 A20 **589.09** A critical role of tuberous sclerosis complex-1 (tsc1) for myelination in the cns. M. JIANG*; L. LIU; X. HE; Q. R. LU. *Cincinnati Children's Hosp. Med. Ctr., West China Med. Univ. of Sichuan Univ.*

2:00 A21 **589.10** Juxtacrine signalling via Notch and ErbB receptors in the switch to fate commitment of bone marrow-derived Schwann cells. D. K. SHUM*; E. W. Y. TAI; G. K. H. SHEA; A. Y. P. TSUI; K. H. Y. LEUNG; Y. S. CHAN. *Fac Med, The Univ. of Hong Kong, Fac Med, The Univ. of Hong Kong.*

3:00 A22 **589.11** Optogenetic modulation of endogenous adenylate cyclase level in cultured schwann cells. X. FENG*; W. XIE; Z. WANG; Z. ZHOU; Y. ZHOU; Y. QIU; L. WANG. *Shenzhen Inst. of Advanced Technol.*

4:00 A23 **589.12** [Unable to Attend] Nanofiber-mediated microRNA delivery for enhanced oligodendrocyte differentiation. S. CHEW*; H. DIAO; W. LOW; U. MILBRETA; R. Q. LU. *Nanyang Technological Univ., Nanyang Technological Univ., Nanyang Technological Univ., Cincinnati Children's Hosp. Med. Ctr.*

1:00 A24 **589.13** Sox17 affects oligodendroglial cell lineage progression. M. FAUVEAU; B. WILMET; C. KERNINON; C. DEBOUX; B. NAIT-OUMESMAR*. *ICM, Inserm-Upmc UMRS-1127, CNRS UMR 7225.*

2:00 A25 **589.14** Wnt effector TCF7l2 regulates oligodendrocyte differentiation independent of Wnt signaling. F. GUO*; J. LANG; Y. MAEDA; M. POPAL SAEED; E. M. HAMMOND; D. PLEASURE. *UC Davis Sch. Med., Inst. of Pediatric Regenerative Medicine, Shriners Hosp. for Children.*

3:00 A26 **589.15** Oligodendrocyte dynamics in the adult brain. E. G. HUGHES*; D. E. BERGLES. *Johns Hopkins Sch. of Med.*

4:00 A27 **589.16** Terminal Schwann cells sense the spillover of ACh at the neuromuscular junction by muscarinic and α7 nicotinic receptors. E. KREJCI*; E. GIRARD; C. COLASANTE; V. BERNARD; N. LENIZ; D. SAMIGULLIN; J. LEROY; B. PLAUD; E. NIKOLSKY; K. PETROV. *COGNAC G, UMR 8257 CNRS, CNRS UMR 5239/ENS, Fac. of Medicine, Univ. of "Los Andes", Neurosci. Paris Seine, Univ. Pierre et Marie Curie, Kazan Inst. of Biochem. and Biophysics, Arbuzov Inst. of Organic and Physical Chem.*

1:00 A28 **589.17** Differential regulation of non-myelinating & immature gene expression profiles in schwann cells from Cx32-null mice. M. M. FREIDIN*; C. K. ABRAMS. *Albert Einstein Col. of Med., SUNY Downstate.*

2:00 A29 **589.18** Unravelling the PLPnull phenotype: Identification of SIRT2 targets in oligodendrocytes. K. KUSCH; O. JAHN; I. TZVETANOVA; H. B. WERNER; J. M. EDGAR; B. KASAPOGLU; K. -. NAVE*. *Max-Planck-Institute of Exptl. Med.*

3:00 A30 **589.19** Tubulin post-translational modifications in Schwann cells. S. D. GADAU*; S. SECHI; R. COCCO; A. MURA. *Univ. of Sassari, Univ. of Sassari.*

4:00 A31 **589.20** Loss of Pals1 in Schwann cells leads to radial sorting defects. D. R. ZOLLINGER*; K. CHANG; T. BAUER; K. BAALMAN; S. KIM; M. N. RASBAND. *Baylor Col. of Med., Baylor Col. of Med., Temple Univ. Sch. of Med.*

1:00 A32 **589.21** Ablation of NG2 glial cells induced neuronal cell death in the hippocampus through apoptotic pathway. M. NAKANO*; Y. TAMURA; A. EGUCHI; M. YAMATO; S. KUME; Y. MIYASHIGE; Y. KATAOKA. *RIKEN Ctr. for Life Sci. Technologies, Osaka City Univ. Grad. Sch. of Med.*

POSTER

590. Disease Modeling Using Pluripotent Stem Cells II

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A33 **590.01** Development of interneuron progenitors from human Down syndrome (Trisomy 21) induced pluripotent stem cells (iPSCs). A. BHATTACHARYYA*; Y. LIU; M. MUSSER; A. PRASAD; R. REESE; S. ZHANG. *Univ. Wisconsin.*

2:00 A34 **590.02** Modeling the neuromuscular junction in C9ORF72-associated motor neuron disease using iPSCs. E. SWARTZ*; M. PRIBADI; J. BAEK; G. COPPOLA. *UCLA, Semel Inst. for Neurosci. and Human Behavior.*

3:00 A35 **590.03** ● Single transfection of a synthetic polycistronic self-replicative RNA yields human iPSCs that can be efficiently expanded & directed to neural progenitor cells. V. T. CHU*; M. LU; N. YOSHIOKA; S. DOWDY. *EMD Millipore, EMD Millipore, UCSD Sch. of Med., UCSD Sch. of Med.*

4:00 A36 **590.04** Characterization of iPSC-derived neuronal preparations and bioassays for use in transplantation in Parkinson's disease. T. M. OSBORN*; J. L. JANSSON; G. A. SMITH; J. A. BEAGAN; Z. E. SCHNEIDER-LYNCH; D. A. AHMADI; J. A. KORECKA; P. J. HALLETT; O. ISACSON. *McLean Hospital/Harvard Med. Sch.*

1:00 A37 **590.05** Expression of oxidative stress genes in human stem cells in physiological versus atmospheric oxygen levels. K. M. KLEMAN*; R. REESE; S. HANSON; A. BHATTACHARYYA. *Gilson, Univ. of Wisconsin-Madison.*

2:00 A38 **590.06** The role of Olig2 gene function in the production of interneurons in Down syndrome. C. CHEN*; P. JIANG; Y. LIU; W. DENG. *Univ. of California, Davis, Univ. of California, Davis, Univ. of Texas Hlth. Sci. Ctr. at Houston.*

3:00 A39 **590.07** The role of SHANK3 in ASD. A. KATHURIA*; G. COCKS; P. NOWOSIAD; V. WOOD; R. DIXON; W. LUCCHESI; D. SRIVASTAVA; J. PRICE. *King's Col. London.*

4:00 A40 **590.08** Disease-relevant genomic DISC1 disruption has selective effects on DISC1 expression and Wnt signaling. P. SRIKANTH*; C. R. MURATORE; D. J. SELKOE; T. L. YOUNG-PEARSE. *HMS, Brigham and Women's Hosp.*

1:00 A41 **590.09** Modeling enteric nervous system function in children with Autism Spectrum Disorder. A. L. WAGONER*; D. L. MACK; E. E. MCKEE; S. J. WALKER. *Wake Forest Univ. Hlth. Sci., Wake Forest Inst. for Regenerative Med., Inst. for Stem Cell and Regenerative Medicine, Univ. of Washington.*

2:00 A42 **590.10** ▲ Tissue responses and repair in cortical stroke after transplant of distinct iPS progenitor populations. A. CRUZ*; I. L. LLORENTE; J. CINKORNPUMIN; C. MALONE; W. E. LOWRY; S. T. CARMICHAEL. *California State University, Northridge, UCLA, UCLA, California State University, Northridge, UCLA.*

3:00 A43 **590.11** Modeling of major mental disorders using GABAergic interneurons derived from patient iPSCs with a defined DISC1 mutation. X. WANG*; Z. WEN; H. NGUYEN; C. ZHANG; H. SONG; G. MING. *Fudan Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

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4:00 A44 **590.12** Synaptic pathophysiology in stem cell-derived neurons from dup15q autism and Angelman syndrome patients. J. J. FINK*; T. M. ROBINSON; K. A. BOLDUC; E. S. LEVINE. *Univ. of Connecticut Hlth. Ctr., Univ. of Connecticut Hlth. Ctr.*

1:00 A45 **590.13** Axonal pathology in patient-derived neurons harboring spg11 mutations: An ipsc model for spatacsin-linked hereditary spastic paraplegia. H. K. MISHRA; F. PEREZ-BRANGULI; I. PROTS; S. HAVLICEK; Z. KOHL; D. SAUL; C. RUMMEL; J. DORCA-AREVALO; M. REGENSBURGER; D. GRAEF; E. SOCK; J. BLASI; T. W. GROEMER; U. SCHLÖTZER-SCHREHARDT; J. WINKLER; B. WINNER*. *Friedrich-Alexander-Universitaet Erlangen-Nuernberg, Universitätsklinikum Erlangen, Univ. de Barcelona (UB)-Campus Bellvitge, Barcelona, Inst. of Biochemistry, Emil-Fischer Zentrum, Friedrich-Alexander-Universitaet Erlangen-Nuernberg, Univ. de Barcelona (UB)-Campus Bellvitge, Barcelona, Universitätsklinikum Erlangen, Universitätsklinikum Erlangen, Universitätsklinikum Erlangen.*

2:00 A46 **590.14** The role of SLC25A12 on interneuron development. J. CHEN*; X. ORTIZ-GONZALEZ; A. RAVINDRAN; D. C. WALLACE; S. A. ANDERSON. *Mahoney Inst. of Neurolog. Sci., Children's Hosp. of Philadelphia.*

3:00 A47 **590.15** Dissecting the role of FOXG1 in patients with autism using induced pluripotent stem cells. J. MARIANI*; G. COPPOLA; P. ZHANG; J. R. HOWE; F. M. VACCARINO. *Yale Univ., Yale Univ., Yale Univ.*

4:00 A48 **590.16** Interneuron alterations in ipsc models of bipolar disorder. M. G. MCINNIS; M. BAME; C. J. DELONG; A. WILLIAMS; Y. TSAN; O. MABROUK; R. KENNEDY; K. O'SHEA*. *Univ. Michigan Sch. Med., Univ. Michigan Sch. Med., Univ. Michigan.*

1:00 A49 **590.17** The NINDS Repository collection of patient-derived fibroblasts and induced pluripotent stem cells for neurodegenerative disease research. C. A. PEREZ*; S. HEIL; C. GRANDIZIO; S. GANDRE-BABBE; K. HODGES; M. SUTHERLAND; R. A. CORRIVEAU; C. TARN. *Coriell Inst., Coriell Inst., Coriell Inst., NIH/NINDS.*

2:00 A50 **590.18** Extracellular vesicle-mediated spread of α-synuclein in the pathogenesis of multiple system atrophy. J. FISCHER*; R. GORRIS; A. LEINHAAS; K. DE MIROSCHEDJI; B. GIEBEL; M. KARUS; O. BRUESTLE. *Inst. of Reconstructive Neurobio. Life & Brain Ctr., Univ. Duisburg-Essen, Inst. for Transfusion Med.*

3:00 A51 **590.19** Glucocerebrosidase deficiency results in lysosomal depletion and autophagy block in neuropathic Gaucher disease ipsc-neurons. O. AWAD*; C. SARKAR; M. LIPINSKI; D. MILLER; X. ZENG; L. M. PANICKER; J. A. SGAMBATO; R. A. FELDMAN. *Univ. of Maryland, Univ. of Maryland, Buck Inst. for Age Res.*

4:00 A52 **590.20** ▲ Dendritic spines in cortical neurons derived from human pluripotent stem cells. L. GOUDER; H. GOUBRAN-BOTROS; A. POULET; A. BENCHOUA; S. PONS; U. MASKOS; M. J. SCHMEISSER; T. M. BOECKERS; T. BOURGERON; I. CLOËZ-TAYARANI*. *Inst. Pasteur; CNRS URA2182; Univ. P.Diderot, Neuroplasticity and Therapeutics, CECS, I-STEM, AFM, Inst. Pasteur; CNRS URA2182, Ulm Univ.*

1:00 A53 **590.21** Psen-1 mutant and isogenic control familial Alzheimer's disease ipsc models. A. SPROUL*; S. JACOB; D. PAQUET; M. ORTIZ-VIRUMBRALES; D. PAULL; B. A. CAMPOS; M. E. EHRLICH; S. GANDY; M. TESSIER-LAVIGNE; S. A. NOGGLE. *The New York Stem Cell Fndn. Res. Institu, Rockefeller Univ., Icahn Sch. of Med. at Mount Sinai.*

2:00 A54 **590.22** Targeting aspartoacylase-deficiency in a mouse model of canavan's disease using human induced pluripotent stem cell-derived neural cells. V. C. KAPS*; M. MIZHOROVA; J. FISCHER; M. REISENHOFER; M. BLOSCHIES; J. SASS; T. QUANDEL; M. KARUS; O. BRUESTLE. *Reconstructive Neurobio., Paul-Flechsig-Institute, Clin. Chem. & Biochemistry, Univ. Children's Hosp. Zuerich.*

3:00 A55 **590.23** Aβ promotes astrocyte activation in iPSC-derived neural cultures from familial Alzheimer's disease lines. C. R. MURATORE*; T. SHIN; D. G. CALLAHAN; C. ZHOU; T. L. YOUNG-PEARSE. *Harvard Med. Sch., Brigham and Women's Hosp.*

4:00 A56 **590.24** Motor neurons from spinal muscular atrophy patients exhibit hyperexcitability. H. LIU*; J. LU; H. CHEN; Z. DU; S. ZHANG. *Waisman Ctr.*

1:00 A57 **590.25** Electrophysiological properties and secretion of Abeta, sAPP and Tau during development of cortical neurons differentiated from human iPS cells of chondrocytic origin. T. OLSSON BONTELL*; J. STRANDBERG; L. AGHOLME; F. NAZIR; E. HANSE; K. BLENNOW; H. ZETTERBERG; P. BERGSTRÖM. *Gothenburg Univ., Inst. of Neurosci. and Physiol., Inst. of Neurosci. and Physiol.*

2:00 A58 **590.26** Lineage priming in pluripotent human stem cells. S. KIM; A. JAISHANKAR; Y. WANG; G. STEIN O'BRIEN; S. SEO; C. COLANTUONI; J. SHIN; J. G. CHENOWETH; D. HOEPPNER*; R. D. MCKAY. *Lieber Inst. For Brain Develop.*

3:00 A59 **590.27** The *in vitro* development of oligodendrocytes from oligodendrocyte precursor cells derived from human pluripotent stem cells. M. R. LIVESEY*; D. MAGNANI; B. T. SELVARAJ; K. BURR; N. A. VASISTHA; D. STORY; G. E. HARDINGHAM; S. CHANDRAN; D. J. A. WYLLIE. *Univ. of Edinburgh, Univ. of Edinburgh.*

4:00 A60 **590.28** ● Efficient generation of NKX2.2 and OLIG2 positive progenitor cells from human pluripotent stem cells in defined serum free culture. Y. CHEN*; N. ASBROCK; V. CHU. *EMD Millipore.*

1:00 A61 **590.29** Functional imaging of human iPSCs-derived neurons integrated in mouse cortex using 2-photon microscopy *in vivo.* C. A. TRUJILLO; H. UHLIROVA; K. KILIC; P. A. SAISAN; Q. CHENG; K. L. WELDY; A. M. DALE; A. R. MUOTRI*; A. DEVOR. *UCSD, UCSD, UCSD, UCSD, UCSD, MGH/Harvard Med. Sch.*

2:00 A62 **590.30** Model of non-cell autonomous effects of presenilin-2 mutations on neurons using human induced pluripotent stem cells. P. AMOS*; B. L. SOPHER; A. CASE; J. C. GILLESPIE; J. M. SULLIVAN; H. NEUMANN; G. A. GARDEN; S. JAYADEV. *Univ. of Washington, Univ. of Washington, Univ. Bonn.*

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POSTER

591. Axon Growth and Guidance: Cytoskeletal Dynamics

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A63 **591.01** Promotion of axonal regeneration by manipulating microtubule posttranslational modification. S. LIN*; Y. LIU; X. TANG; P. W. BAAS; G. M. SMITH. *Temple Univ. Sch. of Med., Drexel Univ. Col. of Med., Temple Univ. Sch. of Med.*

2:00 A64 **591.02** Cytoskeleton remodeling as a target for TTR-induced neurodegeneration. J. EIRA; M. SOUSA; M. LIZ*. *IBMC, IBMC.*

3:00 A65 **591.03** Live STED nanoscopy of the actin organization in the axon initial segment. E. D'ESTE; D. KAMIN*; A. EL HADY; S. W. HELL. *Max Planck Inst. for Biophysical Chem.*

4:00 A66 **591.04** ● APC and alpha-catenin binding regions for beta-catenin differentially and cooperatively modulate growth cones, arborization and targeting of optic axons *in vivo*. T. M. ELUL*; E. WU; G. PENG. *Touro Univ., Touro Univ. California.*

1:00 A67 **591.05** Actin and myosin-dependent localization of mRNA to dendrites. V. BALASANYAN*; D. ARNOLD. *USC.*

2:00 A68 **591.06** MEC-17 regulates α-tubulin acetylation and modulates axon growth in hippocampal neurons. L. BAO*; D. WEI; N. GAO. *Inst. of Biochem. and Cell Biology, Chinese Acad. of Sci.*

3:00 B1 **591.07** WITHDRAWN.

4:00 B2 **591.08** Pftaire kinase (eip63e/cdk14) regulates axogenesis via rhoa activation in *Drosophila melanogaster* and mice during embryonic cns development. Y. RODRIGUEZ GONZALEZ*; F. KAMKAR; P. JAFARNEJAD; S. WANG; L. SANCHEZ ALVAREZ; P. ALBERT; R. S. SLACK; M. SONNENFELD; D. S. PARK. *Univ. of Ottawa.*

1:00 B3 **591.09** Formins in neuronal cells. A. HLEIHEL*; D. HYNDS. *TWU.*

2:00 B4 **591.10** Analysis of correlation between second messenger dynamics and structural changes of the growth cone. F. NAGASE*; T. KOBAYASHI; K. HOTTA; K. OKA. *Keio Univ.*

3:00 B5 **591.11** Activation of Sonic Hedgehog signaling in dendrites accelerates axon outgrowth in hippocampal neurons. R. S. PETRALIA*; P. J. YAO, F; M. P. MATTSON. *NIDCD/NIH, NIA/NIH.*

4:00 B6 **591.12** Ezrin regulates neuritogenesis through down-regulation of RhoA signaling pathway. Y. MATSUMOTO; M. INDEN*; A. TAMURA; R. HATANO; S. TSUKITA; S. ASANO. *Ritsumeikan Univ., Gifu Parmaceutical Univ., Osaka Univ.*

1:00 B7 **591.13** Mical is required for retinal ganglion cell axon repulsion. K. P. ATKINSON-LEADBEATER*; C. L. HEHR; J. JOHNSTON; G. BERTOLESI; S. MCFARLANE. *Mount Royal Univ., Univ. of Calgary.*

2:00 B8 **591.14** Neurotropin suppresses lidocaine-induced inhibition of neurite growth in cultured rat spinal neurons. R. ISONAKA*; T. TAKENAMI; T. KATAKURA; T. KAWAKAMI. *Kitasato Univ. Sch. of Med., Kitasato Univ. Sch. of Med.*

3:00 B9 **591.15** Cannabinoid-induced actomyosin contractility shapes neuronal morphology and growth. Z. LENKEI*; A. ROLAND; A. RICOBARAZA; D. CARREL; F. RICO; A. SIMON; M. HUMBERT-CLAUDE; B. F. JORDAN; S. SCHEURING. *ESPCI-CNRS UMR 7637, ESPCI-ParisTech, ESPCI-ParisTech, Inst. Curie, Harvard Univ.*

4:00 B10 **591.16** TACC3 is a microtubule plus-end tracking protein that promotes axon elongation and microtubule polymerization in growth cones. L. A. LOWERY*; B. NWAGBARA; A. FARIS; B. ERDOGAN; E. BEARCE; P. EBBERT; M. EVANS; C. BAKER; T. ENZENBACHER. *Boston Col.*

1:00 B11 **591.17** The role of tau phosphorylation in regulating cytoskeletal dynamics in cortical growth cones during axon outgrowth. S. BISWAS*; Q. GAN; K. KALIL. *Univ. of Wisconsin.*

2:00 B12 **591.18** The WAVE regulatory complex links diverse neuronal receptors to the actin cytoskeleton. B. CHEN*; P. CHIA; K. BRINKMANN; Z. CHEN; C. W. PAK; Y. LIAO; P. LI; S. SHI; L. HENRY; N. V. GRISHIN; S. BOGDAN; K. SHEN; M. K. ROSEN. *UT Southwestern Med. Center, HHMI, Stanford University, HHMI, Inst. für Neurobiologie, Univ. Münster, Tsinghua Univ. - Current Address.*

3:00 B13 **591.19** Protein arginine methylation of CRMP and tubulin in neurons - a role in axonal development? N. K. JWAD*; L. HEJAZI; R. GAMSJAEGER; N. J. SUCHER; S. C. PILLER. *Univ. of Western Sydney, Univ. of Western Sydney, Roxbury Community Col., Univ. of Western Sydney.*

4:00 B14 **591.20** Identification of a novel developmental mechanism that promotes sensory axon collateral formation via the regulation of microtubule bundling. S. TYMANSKYJ; L. MA*. *USC.*

1:00 B15 **591.21** Fully automated quantification of growth cone dynamics at high resolution reveals differential regimes in RhoGTPase function. M. M. BAGONIS*; L. FUSCO; G. AZARIAS; O. PERTZ; G. DANUSER. *Harvard Univ., Univ. of Basel.*

POSTER

592. Axon Growth and Guidance: Adhesion Molecules

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B16 **592.01** Regulation of mouse cochlear spiral ganglion neuron innervation by EphA7. Y. KIM*; L. A. IBRAHIM; S. WANG; H. W. TAO; L. I. ZHANG. *USC, Univ. of California, San Francisco.*

2:00 B17 **592.02** CLAC-P/collagen type XXV in muscle, but not in motor neurons, is required for intramuscular development of motor axons. H. OIZUMI*; T. TANAKA; S. NISHIO; H. MUNEZANE; T. HASHIMOTO; A. HARADA; T. WAKABAYASHI; T. IWATSUBO. *Univ. of Tokyo, Univ. of Tokyo, Osaka Univ.*

3:00 B18 **592.03** ▲ The role of $\alpha 6\beta 4$ integrin receptor in laminin-mediated axon outgrowth. J. WETHERELL; A. BUONACCORSI; N. DOPPLER; M. I. JAREB*. *Sacred Heart Univ.*

4:00 B19 **592.04** Investigating the role of integrins in *Caenorhabditis elegans* axon patterning. D. OLIVER; M. M. FRANCIS; M. L. LEMONS*. *Assumption Col., Univ. of Massachusetts Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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1:00 B20 **592.05** Proteolytic cleavage of IgLON adhesion proteins by MMPs promotes neurite outgrowth. R. L. SANZ*; A. FOURNIER. *McGill Univ.*

2:00 B21 **592.06** Vstm5, a putative cell adhesion membrane protein, regulates dendritic protrusion and synapse formation in hippocampal neurons. A. LEE; H. LEE; M. SONG; C. PARK*. *GIST, Cell Dynamics Res. Ctr., Natl. Leading Res. Lab.*

3:00 B22 **592.07** Calcium/Calpain dependent cleavage of Talin and FAK regulates axon pathfinding. P. C. KERSTEIN*; K. PATEL; T. M. GOMEZ. *Univ. of Wisconsin-Madison.*

4:00 B23 **592.08** The role of focal adhesion kinase in axonal remodeling. A. I. NAVARRO; B. RICO*. *Inst. de Neurociencias,UMH-CSIC.*

1:00 B24 **592.09** Loss of neural recognition molecule NB-3 delays the normal projection and terminal branching of developing corticospinal tract axons. Y. LIU*. *Inst. of Neuroscience, Soochow Univ.*

2:00 B25 **592.10** Spatiotemporally coordinated Tetraspanin-3 proteins provide a functional microdomain for Nogo-A-D20-induced spreading and neurite outgrowth inhibition. N. K. THIEDE-STAN*; D. ALBRECHT; B. TEWS; Z. RISTIC; H. EWERS; M. SCHWAB. *Brain Res. Inst. UZH and Dept. of Hlth. & Technol. ETH, Randall Div. of Cell and Mol. Biophysics, King's Col. London, Div. of Mol. Mechanisms of Tumor Invasion, German Cancer Res. Ctr., Univ. of Heidelberg and DKFZ.*

3:00 B26 **592.11** Determining the influence of confinement on growth cone response to inhibitory biochemical borders. M. S. SMIRNOV*; H. M. GELLER; J. S. URBACH. *Georgetown Univ., NIH, Georgetown Univ.*

4:00 B27 **592.12** Synaptic activity regulates vGAT and vGlut1 expression in developing cortical neurons. V. L. SAVCHENKO*. *Univ. of Arkansas, Univ. of Florida.*

1:00 B28 **592.13** Electrically driven axonal outgrowth on multi-electrode arrays. S. A. WEYDERT*; C. FORRO; J. CHAABAN; H. DERMUTZ; L. DEMKO; J. VOROS. *Lab. of Biosensors and Bioelectronics, ETH Zurich.*

POSTER

593. Axon Growth and Guidance: Intrinsic Mechanisms

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B29 **593.01** The proinflammatory cytokine, interleukin-17A, augments axonal plasticity and mitochondrial function of cultured adult sensory neurons. T. HABASH*; A. SALEH; S. ROY CHOWDHURY; P. FERNYHOUGH. *St-Boniface Hosp. Res. Ctr., Univ. of Manitoba.*

2:00 B30 **593.02** Imaging axonal varicosities of developing neurons by cryo-electron tomography. N. SCHROD; D. VANHECKE; W. BAUMEISTER; V. LUCIC*. *Max Planck Inst. of Biochem., Univ. of Fribourg.*

3:00 B31 **593.03** Sirtuin 2 is a sensor of energy status and inducer of neurite outgrowth in adult sensory neurons. E. D. SCHARTNER*; A. SALEH; R. VIEIRA DA SILVA; S. CHOWDHURY; D. SMITH; P. FERNYHOUGH. *St. Boniface Hosptial Res., Univ. of Manitoba.*

4:00 B32 **593.04** ▲ Process retraction requires the calcium-activated protease calpain in homolog avoidance leading to tiling by motor neurons. L. SOLANO; E. R. MACAGNO; M. W. BAKER*. *UCSD, Unive California, San Diego.*

1:00 B33 **593.05** The quantitative proteomes and transcriptomes of projection-specific growth cones from mouse brain. A. POULOPOULOS*; A. J. MURPHY; P. F. DAVIS; J. D. MACKLIS. *Harvard Univ.*

2:00 B34 **593.06** Functions of Cdk12 in axonal elongation and neural development. M. FANN*; H. CHEN; C. HUANG. *Natl. Yang-Ming Univ.*

3:00 B35 **593.07** A developmental switch of the axon guidance in the continues regeneration mouse olfactory system. Y. WU*; L. MA; Q. QIU; H. SCHEERER; A. MORAN; C. R. YU. *Stowers Insitute For Med. Res., the Open Univ., Univ. of Kansas Med. Ctr.*

4:00 B36 **593.08** Understanding the roles of intrinsic and extrinsic influences on fetal arcuate nucleus neuron development in gestational obesity. T. R. SANDERS; C. JASONI*. *Univ. of Otago.*

1:00 B37 **593.09** Presynaptic mitochondrial capture is required for proper axon branching *in vitro* and *in vivo*. T. LEWIS*, JR; J. COURCHET; F. POLLEUX. *Columbia Univ. Med. Ctr.*

2:00 B38 **593.10** Hyperactivating mutations in alpha2-chimaerin alter motor neuron development to cause Duane Retraction Syndrome. A. A. NUGENT*; Y. WEI; J. G. PARK; M. M. DELISLE; E. C. ENGLE. *Boston Children's Hosp.*

3:00 B39 **593.11** Competing aPKC isoforms regulate neuronal polarity. S. S. PARKER; S. M. HAPAK; E. K. MANDELL; S. GHOSH*. *Univ. of Arizona, Univ. of Pittsburgh Sch. of Med., Yale Univ. Sch. of Med.*

4:00 B40 **593.12** ● Sildenafil promotes axonal growth of dorsal root ganglia neurons under high glucose conditions. L. JIA*. *Henry Ford Hosp.*

1:00 B41 **593.13** Post-transcriptional control of axonal growth by binding of HuD and KSRP to common neuronal targets. A. S. GARDINER; C. GOMES; J. SAAVEDRA; J. L. TWISS; N. PERRONE-BIZZOZERO*. *Univ. of New Mexico HSC, Univ. of South Carolina.*

2:00 B42 **593.14** Extracellular vimentin promotes axonal growth via IGF1R. M. SHIGYO*; T. KUBOYAMA; C. TOHDA. *Inst. of Natural Medicine, Univ. of Toyama.*

3:00 B43 **593.15** Goα protein modulates the neuritogenesis in primary neurons. H. OH*; J. CHOI; S. YOON; Y. LEE; S. KIM; H. SUH-KIM*. *Ajou University, Sch. of Med., Ajou University, Sch. of Med.*

4:00 B44 **593.16** Dual roles of Unc-51-like kinase 1/2 in embryonic and postnatal mouse brain development. B. WANG*; M. KUNDU. *Univ. of Tennessee Hlth. Sci. Ctr., St Jude Children's Res. Hosp.*

1:00 B45 **593.17** Characterization and differential expression analysis of polyadenylated and non-polyadenylated riboRNA-depleted transcripts during maturation of defined population of CNS neurons. E. F. TRAKHTENBERG*; D. W. PITA-THOMAS; D. VELMESHEV; S. M. DOMBROWSKI; J. L. GOLDBERG. *Boston Children's Hospital, Harvard Med. Sch., Washington Univ., Univ. of Miami Sch. of Med., Genomatix Software; and Wayne State Univ. Sch. of Med., Univ. of California San Diego.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 B46 **593.18** Involvement of thyroid hormone receptor alpha in GnRH neuronal migration. A. LAMARCA*; E. FLANNERY; S. WRAY. *Natl. Inst. of Hlth.*

3:00 B47 **593.19** Mild and persistent axon stretch upregulates developmental and regenerative associated genes. J. R. LOVERDE*; P. SOTEROPOULOS; B. J. PFISTER. *New Jersey Inst. of Technol., Rutgers Univ. - New Jersey Med. Sch.*

4:00 B48 **593.20** LKB1 and NUAK1 kinases regulate terminal axon branching in cortical neurons through control of presynaptic mitochondria capture and function. J. COURCHET*; T. L. LEWIS; F. POLLEUX. *Columbia Univ.*

1:00 B49 **593.21** HDAC6 inhibition promotes axon growth by selectively modifying the acetylome in the distal axon. A. L. KALINSKI*; P. BRITO-VARGAS; M. RIVECCIO; B. LANGLEY; J. L. TWISS. *Univ. of South Carolina, Drexel Univ., Burke Med. Res. Inst.*

2:00 B50 **593.22** Local translation of Down syndrome cell adhesion molecule in axon growth and guidance. S. JAIN*; K. WELSHHANS. *Kent State Univ.*

3:00 B51 **593.23** Exploring the role of the mitochondria/endoplasmic reticulum (ER) interface in axonal development. Y. HIRABAYASHI*; F. POLLEUX. *Columbia Univ.*

4:00 B52 **593.24** The scaffold protein mAKAPα regulates retinal ganglion cell survival and axon growth. J. L. GOLDBERG*; Y. WANG; J. LI; T. L. STILES; J. HERTZ; M. D. KRITZER; T. NGUYEN; M. S. KAPILOFF. *UC San Diego, Departments of Pediatrics and Medicine, Univ. of Miami, Bascom Palmer Eye Inst.*

1:00 B53 **593.25** Plexin-a4 mediates the maintenance of postnatal callosal axons. A. I. SON*; F. SUTO; Y. MOROZOV; S. ISHII; P. RAKIC; P. LEVITT; K. HASHIMOTO-TORII; M. TORII. *Children's Natl. Hlth. Syst., Natl. Ctr. of Neurol. and Psychiatry, Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., USC.*

2:00 B54 **593.26** Developmental connectomics of axonal reorganization in avian ciliary ganglion. R. EGAWA*; S. HOSOSHIMA; T. ISHIZUKA; H. YAWO. *Tohoku Univ. Grad Sch. Life Sci.*

3:00 B55 **593.27** Regulation of axonal trafficking of nuclear-encoded mitochondrial COXIV mRNA. A. KAR*; N. KHOSHAB; N. M. GERVASI; S. S. SCOTT; C. Y. CHEN; J. KOWALAK; A. E. GIOIO; B. B. KAPLAN. *NIH, NIH, NIH.*

4:00 B56 **593.28** RACK1 regulates local translation at point contacts in growth cones. L. J. KERSHNER*; J. SERRE; K. WELSHHANS. *Kent State Univ.*

1:00 B57 **593.29** The UNC-23-HSP-1 chaperone system determines localization of Parkinson's disease-related kinase LRK-1 in *C. elegans.* T. ALAM*; T. FUKUZONO; S. PASTUHOV; O. FUKUSHIMA; C. LI; A. HATTORI; H. HANAFUSA; K. MATSUMOTO; N. HISAMOTO. *Nagoya Univ.*

2:00 B58 **593.30** Investigating the role of mechanical cues in axon guidance. G. SHERIDAN*; H. SVOBODA; D. E. KOSER; A. DWIVEDY; A. J. THOMPSON; M. P. VIANA; L. F. COSTA; J. GUCK; C. E. HOLT; K. FRANZE. *Univ. of Cambridge, Univ. of Cambridge, Univ. of Sao Paulo, Univ. of Cambridge.*

POSTER

594. Axon Growth and Guidance: Extrinsic Mechanisms

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B59 **594.01** α2-chimaerin function in spinal motor axon guidance. T. KAO*; G. C. B. NICHOLL; J. A. JOHANSEN; A. KANIA; A. BEG. *Taipei Med. Univ., Inst. de Recherches Cliniques de Montréal, Univ. of Michigan Med. Sch., Univ. of Michigan, Central Michigan Univ., McGill Univ., Univ. de Montréal.*

2:00 B60 **594.02** A simple technique for directed axonal guidance on multi-electrode arrays with arbitrary topology. C. FORRO*; L. DEMKO; H. DERMUTZ; J. VOROS. *Lab. of Biosensors and Bioelectronics, ETH Zurich.*

3:00 C1 **594.03** Activity-dependent structural maturation of the cisternal organelle in the axon initial segment of visual system neurons *in vivo.* M. ENGELHARDT*; A. SCHLÜTER; S. ROSSBERGER; S. VORWALD; C. SCHULTZ. *Univ. Heidelberg, Med. Fac. Mannheim, Heidelberg Univ.*

4:00 C2 **594.04** RNA-binding protein SFPQ regulates axonal bclw mRNA to promote axon viability. S. J. FENSTERMACHER*; K. E. COSKER; M. F. PAZYRA-MURPHY; R. A. SEGAL. *Dana Farber Cancer Inst., Harvard Med. Sch.*

1:00 C3 **594.05** Netrin 5 expressed by boundary cap cells prevents motor neuron migration out of the ventral horn of the spinal cord. A. M. GARRETT*; T. J. JUCIUS; S. L. ACKERMAN; R. W. BURGESS. *The Jackson Lab.*

2:00 C4 **594.06** Identification and genetic characterization of new ligands for receptor tyrosine phosphatases. N. BALI*; H. LEE; K. G. ZINN. *Caltech.*

3:00 C5 **594.07** Endocannabinoids modulate cortical development by configuring Slit2/Robo1 signaling. D. CALVIGIONI*; A. ALPÁR; M. J. NIPHAKIS; I. MILENKOVIC; J. BAKKER; G. A. CAMERON; J. HANICS; C. V. MORRIS; J. FUZIK; G. G. KOVACS; B. F. CRAVATT; J. G. PARNAVELAS; W. D. ANDREWS; Y. L. HURD; E. KEIMPEMA; T. HARKANY. *Ctr. For Brain Res., Semmelweis Univ., The Scripps Res. Inst., Med. Univ. of Vienna, Med. Univ. of Vienna, Univ. of Aberdeen, Icahn Sch. of Medicin at Mount Sinai, Med. Univ. of Vienna, Univ. Col. London, Karolinska Institutet.*

4:00 C6 **594.08** Targeting of cochlear inner hair cells by type I spiral ganglion neurons is controlled by Sema3f/Nrp2 signaling. T. M. COATE*; K. T. ISGRIG; M. W. KELLEY. *NIH/NIDCD, Georgetown Univ., NIH/NIDCD.*

1:00 C7 **594.09** The pattern of activity in injured and non-injured axons after selected axonal microdissection in microchannels. R. HABIBEY*; A. GOLABCHI; M. NANNI; F. DIFATO; A. BLAU. *Italian Inst. of Technol. (IIT).*

2:00 C8 **594.10** Mathematical model of the epidermal axon growth. Y. KOBAYASHI*; M. TSUTSUMI; J. KUMAMOTO; M. DENDA; M. NAGAYAMA. *Hokkaido Univ., Shiseido Co., Ltd.*

3:00 C9 **594.11** Serotonin regulates midline axon crossing via ephrinb2 and is involved in remodeling after hypoxia. J. BONKOWSKY*; L. XING; J. SON; T. STEVENSON. *Univ. of Utah Sch. of Med., Univ. of Utah.*

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4:00 C10 **594.12** Coronin-1 mediates hierarchal neurotrophin signaling required for sympathetic neuron target innervation. D. SUO*; J. PARK; C. DEPPMANN. *Univ. of Virginia.*

1:00 C11 **594.13** Elimination of cortico-motoneuronal connections during development by Sema6D-PlexA1-mediated axon pruning in mice. J. KALAMBOGIAS*; Z. GU; M. UENO; A. KUMANOGOH; J. MARTIN; Y. YOSHIDA. *The City Col. of New York, Div. of Developmental Biology, Cincinnati Children's Hosp. Med. Ctr., Osaka Univ., Dept. of Physiology, Pharmacol. & Neuroscience, The City Col. of the City Univ. of New York.*

POSTER

595. Extrinsic Mechanisms Controlling CNS Regeneration

Theme A: Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C12 **595.01** Extracellular histones, a putative inhibitor of cns axonal regeneration, are blocked by activated protein c (apc). M. M. SIDDIQ; S. S. HANNILA; Y. ZORINA; V. RABINOVICH; E. NIKULINA; W. MELLADO*; R. IYENGAR; M. T. FILBIN. *Mount Sinai Sch. of Med., Univ. of Manitoba, Acorda Therapeut., The Feinstein Inst. for Med. Res., Burke Med. Res. Inst., Hunter Col.*

2:00 C13 **595.02** Systems therapeutic approach for axonal regeneration in the injured CNS. M. M. SIDDIQ*; Y. ZORINA; V. RABINOVICH; E. KAPLAN; M. T. FILBIN; R. IYENGAR. *Mount Sinai Sch. of Med., Acorda Therapeutics, Inc, Mount Sinai Sch. of Med., Hunter Col.*

3:00 C14 **595.03** Microglial depletion reduces neurogenesis in response to QA-induced lesioning in adult zebrafish telencephalon. K. SKAGGS*; D. GOLDMAN; J. M. PARENT. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

4:00 C15 **595.04** Aging diminishes the regenerative capacity of PTEN deleted rubrospinal neurons following spinal cord injury. B. J. HILTON*; W. TETZLAFF. *Univ. of British Columbia, Intl. Collaboration on Repair Discoveries (ICORD).*

1:00 C16 **595.05** Direct conversion of adult spinal cord-derived oligodendrocyte progenitor cells (OPCs) to spinal motor neurons. S. BAZAREK*; R. A. MARR; C. A. BRIGGS; G. E. STUTZMANN; R. M. HOWARD; S. R. WHITTEMORE; D. A. PETERSON. *Rosalind Franklin Univ/Chicago Med. Sch., Univ. of Louisville.*

2:00 C17 **595.06** N-cadherin function in the adult zebrafish optic nerve regeneration. S. BHATTARAI; R. L. LONDRAVILLE; Q. LIU*. *Univ. of Akron, Univ. Akron, Univ. Akron.*

3:00 C18 **595.07** Characterization of AAV vectors' potentials to promote long distance optic nerve regeneration, path-finding, and restoration of visual functions after injury. B. YUNGHER*; T. SCHMIDT; K. CHEW; X. LUO; K. LYAPICHEV; T. CHOU; V. PORCIATTI; M. BLACKMORE; S. HATTAR; K. PARK. *Univ. of Miami Miller Sch. of Med., Johns Hopkins Univ., Univ. of Miami Miller Sch. of Med., Marquette Univ.*

4:00 C19 **595.08** ● Unraveling the therapeutic mechanisms of human umbilical cord tissue-derived cells (hUTC) in retinal degenerative diseases. S. KOH*; N. KIM; N. DEJENEKA; I. HARRIS; H. YIN; C. EROGLU. *Duke Univ., Duke Univ., Janssen Res. & Develop.*

1:00 C20 **595.09** Expression of RhoA in lamprey brain after spinal cord injury. K. G. ZHANG*; J. HU; W. RODEMER; M. E. SELZER. *Temple Univ. Sch. of Med., Temple Univ. Sch. of Med.*

2:00 C21 **595.10** Anisotropic capillary hydrogels with cellular growth factor delivery promote linear axonal growth in the injured spinal cord. M. GÜNTHER*; M. MOTSCH; N. WEIDNER; R. MÜLLER; A. BLESCH. *Univ. Hosp. Heidelberg, Univ. of Regensburg.*

3:00 C22 **595.11** ▲ Implantable fibrin hydrogels as novel engineered microenvironments that recruit and guide endogenous neural stem cells for cell replacement therapy in the brain. A. R. CLARK; A. B. CARTER; E. M. PRICE*. *Marshall Univ.*

4:00 C23 **595.12** The hanalyzer: A tool to model neurodegenerative and -regenerative events after spinal cord injury. W. BAUMGARTNER JR; D. M. WALDERA-LUPA; D. PAPE; I. GEORGIEV; I. GRICHTCHENKO; L. HUNTER; K. STUEHLER; K. COHEN; B. GRIMPE*. *Computat. Biosci. Program, Sch. of Medicine, Univ. of Colorado at Denver, USA, Mol. Proteomics Laboratory, Biol. Med. Res. Ctr., Applied Neurobiology, Dept. of Neurol., Univ. of Duesseldorf.*

1:00 C24 **595.13** Creating a migratory stream of transplanted glial restricted progenitors as a therapeutic strategy for spinal cord injury. X. YUAN*; C. HAAS; I. FISCHER. *Drexel Univ. Col. of Med.*

2:00 C25 **595.14** Limited functional effects of subacute syngenic bone marrow stromal cell transplantation after rat spinal cord injury. B. SANDNER*; M. CIATIPIS; M. MOTSCH; N. WEIDNER; A. BLESCH. *Univ. Hosp. Heidelberg.*

3:00 C26 **595.15** The immune receptor dectin-1 participates in conditioning injury-induced axonal regeneration of sensory neurons. C. YOON*; K. CARBAJAL; K. BALDWIN; B. SEGAL; R. GIGER. *Univ. of Michigan Med. Sch.*

4:00 C27 **595.16** Unconventional granulocytes are recruited by zymosan and promote central nervous system regeneration. K. CARBAJAL*; K. T. BALDWIN; R. J. GIGER; B. M. SEGAL. *Univ. of Michigan, Univ. of Michigan.*

1:00 C28 **595.17** Beta-glucan/dectin-1 signaling in immune cells activates the canonical NF-kB pathway to induce long-distance cns axon regeneration. K. T. BALDWIN*; K. S. CARBAJAL; B. M. SEGAL; R. J. GIGER. *Univ. of Michigan, Univ. of Michigan.*

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POSTER

596. Synaptic Signaling: Retrograde Messengers

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C29 **596.01** ● Differential nanoscale organization of cannabinoid signaling at perisomatic and dendritic GABAergic synapses uncovered by cell type-specific STORM superresolution imaging. B. DUDOK*; L. BARNA; S. I. SZABÓ; E. SZABADITS; B. PINTÉR; S. G. WOODHAMS; C. M. HENSTRIDGE; G. Y. BALLA; R. NYILAS; C. VARGA; S. LEE; M. MATOLCSI; J. CERVENAK; I. KACSKOVICS; M. WATANABE; M. MELIS; M. PISTIS; I. SOLTESZ; I. KATONA. *Inst. of Exp. Med, HAS, Univ. of California, Alfred Renyi Inst. of Mathematics, ImmunoGenes Kft, Eötvös Loránd Univ., Hokkaido Univ. Sch. of Med., Univ. of Cagliari, CNR Neurosci. Inst.*

2:00 C30 **596.02** ● Polyclonal and monoclonal antibody production for CB_1 cannabinoid receptors in FcRn transgenic animals. G. Y. BALLA*; J. CERVENAK; C. M. HENSTRIDGE; A. ILIÁS; E. SZABADITS; M. LEDRI; S. I. SZABÓ; B. DUDOK; B. LÁSZLÓ; I. KACSKOVICS; I. KATONA. *Inst. of Exp. Med., HAS, ImmunoGenes Kft, Eötvös Loránd Univ.*

3:00 C31 **596.03** A new approach for correlated confocal and superresolution microscopy visualizes the distribution of presynaptic CB_1 cannabinoid receptors at the nanoscale. L. BARNA*; B. DUDOK; V. MICZÁN; S. I. SZABÓ; A. HORVÁTH; M. MATOLCSI; I. KATONA. *IEM HAS, Pázmány Péter Catholic Univ., Alfred Renyi Inst. of Mathematics.*

4:00 C32 **596.04** Corticosterone-endocannabinoid signaling for memory recovery from general anesthesia. F. WANG; L. TONG; X. LI; R. KINDEN; L. XIONG; H. DONG; X. ZHANG*. *Univ. Ottawa, Fourth Military Med. Univ.*

1:00 C33 **596.05** Medial prefrontal cortex endocannabinoid system modulates autonomics response in rats submitted to restraint stress. T. B. MORAES NETO*; A. FASSINI; F. M. A. CORREA; L. B. M. RESSTEL. *Univ. of Sao Paulo - Sch. of Med. of Ribeirao Preto.*

2:00 C34 **596.06** Activation of CB1 cannabinoid receptors stimulate transmitter release in striatopallidal terminals of the rat mouse brain when Gi Protein-Receptor coupling is restricted. R. CABALLERO-FLORAN; L. LOPEZ-SANTIAGO; L. ISOM; J. ACEVES; D. ERLIJ; G. B. FLORAN*. *CINVESTAV IPN, Univ. of Michigan Med. Ctr., CINVESTAV IPN, SUNY Dowstate Med. Ctr., CINVESTAV IPN.*

3:00 C35 **596.07** The endocannabinoid 2-arachidonoyl glycerol suppresses seizures by decreasing excitatory synaptic input around the inner molecular layer of the dentate gyrus. Y. SUGAYA*; M. YAMAZAKI; K. SAKIMURA; M. KANO. *The Univ. of Tokyo, Brain research institute, Niigata Univ.*

4:00 C36 **596.08** Macamides as inhibitors of fatty acid amide hydrolase (FAAH). M. ALAMOUDI; M. BOHLKE; T. J. MAHER; A. J. PINO-FIGUEROA*. *MCPHS.*

1:00 C37 **596.09** Neuronal localization of endothelial nitric oxide synthase. A. CAVIEDES; J. BRAVO; A. MASSMANN; J. FIGUEROA; F. NUALART; U. WYNEKEN*. *Univ. De Los Andes, Wake Forest Univ. Hlth. Sci., Ctr. for Advanced Microscopy Bio-Bio.*

2:00 C38 **596.10** Slit2 as a β-Catenin-dependent retrograde signal for presynaptic differentiation. A. BARIK*; H. WU; Y. LU; W. XIONG; L. MEI. *Georgia Regents Univ., Georgia Regents Univ., Georgia Regents Univ.*

3:00 C39 **596.11** Pathway-specific neuromodulation of striatonigral and striatopallidal neurons in the pathophysiology of motor control. M. TRUSEL; A. CAVACCINI*; B. GRECO; A. GUIJARRO; P. P. SAINTOT; M. CEROVIC; I. M. MORELLA; R. BRAMBILLA; R. TONINI. *Fondazione Inst. Italiano Di Tecnologia, Fondazione Inst. Italiano Di Tecnologia, Inst. di Ricerche Farmacologiche Mario Negri, Inst. of Exptl. Neurology, Div. of Neuroscience, San Raffaele Scientific Inst. and Univ.*

4:00 C40 **596.12** ● ▲ Corticotropin releasing hormone increases 2-arachidonoylglycerol in the medial prefrontal cortex. A. B. KIM; M. GRAY; D. J. HERMANSON; R. J. MCLAUGHLIN; C. D. WILSON; H. A. VECCHIARELLI; B. S. MCEWEN; J. SCHULKIN; I. N. KARATSOREOS; S. PATEL; M. N. HILL*. *Univ. of Calgary, Vanderbilt Univ., McGill Univ., New York Univ., Rockefeller Univ., Univ. of Washington, Washington State Univ., Univ. of Calgary.*

1:00 C41 **596.13** Increased NFκB signalling upregulates human PINK1 gene expression. X. DUAN*; J. TONG; Q. XU; Y. WU; F. CAI; W. SONG. *Univ. of British Columbia, Chongqing Med. Univ.*

2:00 C42 **596.14** Brain distribution pattern of radiolabel from carbon-14 labeled anandamide. K. QIAN*; Y. MIAO; S. SONTI; R. DUCLOS; S. J. GATLEY. *Northeastern Univ.*

POSTER

597. Cellular Mechanisms of Neural Excitability: Ion Channels

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C43 **597.01** Expression of transient receptor potential ankyrin type 1 in the mouse brain. S. HONG*; S. MA; J. HWANG; J. KIM; J. SEO; S. LEE; C. JANG. *Sungkyunkwan Univ.*

2:00 C44 **597.02** Intense/prolonged sensory stimulation activates neuronal pannexin-1 channels in the mouse brain *in vivo*. T. DALKARA*; B. DÖNMEZ-DEMIR; K. KILIC; E. EREN-KOCAK; Y. GÜRSOY-ÖZDEMIR; P. MAGISTRETTI; H. KARATAS. *Hacettepe Univ. Fac. of Med., Hacettepe University, Inst. of Neurolog. Sci. and Psychiatry, Brain Mind Institute, EPFL.*

3:00 C45 **597.03** Anoctamin 1 mediates histamine-independent itch signaling in somatosensory neurons. H. KIM; B. LEE*; H. CHO; H. CHUN; J. Y. CHA; J. JUNG; U. OH. *Sensory Res. Center, CRI, Col. of Pharmacy, Seoul Natl. Univ., Seoul Natl. Univ., Dept. of Physiology, Col. of Medicine, Korea Univ., Dept. of Mol. Med. and Biopharmaceutical Sciences, Grad. Sch. of Convergence Sci. and Technology, Seoul Natl. Univ.*

4:00 C46 **597.04** ● Inhibition of recombinant $GABA_A$ receptor by sulphated neurosteroids - a study of molecular mechanism and elucidation of binding sites. D. SACHIDANANDAN*; T. AHMED; A. K. BERA. *Indian Inst. of Technol. Madras.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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1:00 C47 **597.05** The ClC-2 channel: contribution to neuronal excitability in the thalamocortical network. C. E. NITURAD*; N. DAMMEIER; U. B. S. HEDRICH; S. MALJEVIC; H. LERCHE. *Hertie Inst. For Clin. Brain Res.*

2:00 C48 **597.06** Characterization of Cl^- channel modulators on the currents of TMEM16A and Bestrophin1. H. ZHANG*; Y. LIU; H. ZHANG; D. HUANG; X. DU; N. GAMPER. *Hebei Med. Univ., Univ. of Leeds.*

3:00 C49 **597.07** The influence of intracellular ATP on rat P2X2a receptor desensitization. M. ROKIC*; C. CODDOU; E. LEIVA-SALCEDO; S. STOJILKOVIC. *NIH, Fac. of Medicine, Univ. Catolica del Norte.*

4:00 C50 **597.08** Effects of chronic caffeine administration on brain sodium-potassium atpase activities in streptozotocine-induced diabetic female wistar rats. A. O. MAHMUD-IMAMFULANI*; O. K. BAMIKOLE; B. V. OWOYELE. *Univ. of Ilorin.*

1:00 C51 **597.09** Modulation of p2x7 receptor mediated calcium signaling by pannexin hemichannel. V. SIRISHA*; A. K. BERA; A. MANI. *IITM.*

2:00 C52 **597.10** Angiopoietin-1 inhibits zinc entry through PIP2 hydrolysis-induced ion channel blockage. J. LIM*; J. KOH. *Asan Med. Ctr., Asan Med. Ctr.*

3:00 C53 **597.11** ● Software for model-based design of experiments. S. G. CARVER*; M. HINES. *The Johns Hopkins Univ., American Univ., Yale Univ.*

4:00 C54 **597.12** Modulation of acid sensing ion channels by estrogen and quercetin. M. MUKHOPADHYAY*; A. K. BERA; S. CHAKRAVARTY; P. JHELUM. *Indian Inst. of Technol., Indian Inst. of chemical technology.*

1:00 C55 **597.13** Nicotine exposure fragments Golgi and alters the recycling and glycosylation of alpha4beta2-type nicotinic acetylcholine receptors. A. P. GOVIND*; Y. VALLEJO; W. GREEN. *Univ. of Chicago, Natl. Cancer Inst., Marine Biol. Lab.*

2:00 C56 **597.14** Pannexin1 mediates astrocyte cell death. E. SCEMES*; D. G. JACKSON; J. WANG; R. W. KEANE; G. P. DAHL. *Albert Einstein Col. of Med., Univ. of Miami Sch. of Med.*

3:00 C57 **597.15** Compound action potential inhibition produced by aroma-oil compounds without TRP activation in the frog sciatic nerve. S. OHTSUBO; T. FUJITA; A. MATSUSHITA; C. JIANG; E. KUMAMOTO*. *Dept Physiol, Saga Med. Sch.*

4:00 C58 **597.16** Frog sciatic nerve compound action potential inhibitions by crude medicines contained in daikenchuto and interaction between the inhibitions. A. MATSUSHITA; T. FUJITA*; S. OHTSUBO; C. JIANG; E. KUMAMOTO. *Dept. Physiol., Fac. Med., Saga Univ.*

1:00 C59 **597.17** ● Effects of membrane sealing agents poloxamer-188 and citicoline to cortical spreading depression-induced megachannel opening in the brain. S. LULE*; T. YILDIRIM; A. EYLEN; S. CANKURTARAN-SAYAR; K. SAYAR; M. UGUR; O. UGUR; T. DALKARA; Y. GURSOY-OZDEMIR. *Hacettepe Univ., Ankara Atatürk Educ. and Res. Hosp., Ankara Univ., Ankara Univ., Ankara Univ., Fac. of Med.*

POSTER

598. Presynaptic Organization and Structure

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C60 **598.01** Local corticothalamic feedback via presynaptic GABAa receptors on thalamocortical terminals in rat V1. L. WANG*; M. KLOC; A. ERISIR; A. MAFFEI. *SUNY At Stony Brook, Univ. of Virginia.*

2:00 C61 **598.02** Effects of seizure-inducing munc18-1 mutations on synaptic neurotransmission. S. LOGAN*; A. M. OROCK; F. DEAK. *Univ. of Oklahoma HSC, Univ. of Oklahoma HSC.*

3:00 C62 **598.03** Kv3 channel clustering in presynaptic boutons of cerebellar interneurons imparts local control of spike duration between release sites. M. J. ROWAN*; J. M. CHRISTIE. *Max Planck Florida Inst.*

4:00 C63 **598.04** Neurones in the spinal cord of the mouse innervating the external urethral sphincter: Its identification and quantitative analysis of their presynaptic inputs. Y. MERICAN*; R. M. ICHIYAMA; S. A. DEUCHARS; J. DEUCHARS. *Univ. of Leeds.*

1:00 C64 **598.05** Time resolved cryo-electron tomography of stimulated synaptosomes. S. ASANO*; U. DITTMANN; Z. KOCHOVSKI; V. LUCIC; W. BAUMEISTER. *Max Planck Inst. of Biochem.*

2:00 C65 **598.06** Presynaptic calcium channel - vesicle release site relationships probed using measurements of synaptic latency. A. E. HOMAN; J. MA; M. DITTRICH; S. D. MERINEY*. *Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. Pittsburgh.*

3:00 C66 **598.07** Adenosine receptors and muscarinic receptors cooperate in acetylcholine release modulation on neuromuscular synapse. N. GARCIA*; M. PRIEGO; M. M. SANTAFÉ; T. OBIS; M. TOMÀS; M. A. LANUZA; N. ORTIZ; E. HURTADO; L. NADAL; J. M. TOMÀS. *Univ. Rovira i Virgili.*

4:00 C67 **598.08** Loss of laminin-α4 leads to decreased functional capacity in neurotransmission at maturing neuromuscular junctions. K. K. CHAND*; K. M. LEE; B. L. PATTON; P. G. NOAKES; N. A. LAVIDIS. *The Univ. of Queensland, Oregon Hlth. & Sci. Univ., Queensland Brain Inst.*

1:00 C68 **598.09** Locating synaptic calcium channels. S. A. MERRILL*; S. WATANABE; E. HUJBER; J. R. RICHARDS; E. M. JORGENSEN. *Univ. of Utah.*

2:00 C69 **598.10** Nanodomain coupling of P/Q-type Ca^{2+} channels with truncated C-terminus of the alpha1A subunit to the release of synaptic vesicles at a central synapse in the Leaner (tgla/la) mouse. Y. YANG*; M. J. FEDCHYSHYN; T. M. EPPS; O. C. SNEAD; L. C. ABBOTT; L. WANG. *The Hosp. For Sick Children, Univ. of Toronto, Univ. of Toronto, The Texas A&M Univ.*

3:00 C70 **598.11** The novel protein kinase C epsilon isoform at the adult neuromuscular synapse: Location, synaptic activity-related expression, phosphorylation function and coupling to ACh release. M. A. LANUZA*; E. HURTADO; N. BESALDUCH; T. OBIS; L. NADAL; N. GARCIA; M. M. SANTAFE; M. PRIEGO; M. TOMAS; J. TOMAS. *Univ. Rovira i Virgili.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 C71 **598.12** A novel mechanism controlling reclustering of synaptic vesicles in *Drosophila* synapses. Å. M. E. WINTHER; K. A. REES; O. VORONTSOVA; E. SOPOVA; A. PECHSTEIN; W. JIAO; G. ARPINO; O. SHUPLIAKOV*. *Karolinska Institutet.*

1:00 C72 **598.13** The localization of ATR (ataxia telangiectasia and Rad3-related) in synaptic vesicles - A super-resolution study. A. CHENG*; T. ZHAO; M. LOY; K. HERRUP. *HKUST, HKUST, Rutgers Univ.*

2:00 D1 **598.14** Enrichment of GABARAP relative to LC3 in the axonal initial segments of neurons. M. KOIKE*; I. TANIDA; T. NANAO; N. TADA; J. IWATA; T. UENO; E. KOMINAMI; Y. UCHIYAMA. *Juntendo Univ. Sch. Med., Natl. Inst. of Infectious Dis.*

3:00 D2 **598.15** Comparison of different slice angles in preservation of major hippocampal pathways in the mouse. G. XIONG*; B. JOHNSON; C. SMITH; A. S. COHEN. *Children's Hosp Philadelphia, Univ. of Pennsylvania Perelman Sch. of Med.*

4:00 D3 **598.16** Pancreatic islet beta cells employ synaptic cleft proteins and synaptogenic mechanisms to establish insulin secretory function. S. D. CHESSLER*; C. ZHANG; M. R. MIRBOLOOKI. *UC Irvine Sch. of Med.*

1:00 D4 **598.17** The importance of the organization of presynaptic calcium channels and synaptic vesicle release sites in plasticity and disease. J. MA; T. TARR; S. D. MERINEY; M. DITTRICH*. *Carnegie Mellon Univ., Univ. of Pittsburgh.*

2:00 D5 **598.18** ● Assayable markers of presynaptic neuronal function suitable for high-throughput screening using fixable FM-dyes. M. NIEDRINGHAUS*; A. M. TAYLOR. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

3:00 D6 **598.19** ▲ Chronic social isolation reduces excitatory synaptic inputs in medial prefrontal cortex. K. YAMAMURO*; H. YOSHINO; Y. OGAWA; M. MAKINODAN; C. GABRIEL; T. KISHIMOTO. *Dept. of Psychiatry, Nara Med. Univ., Dept. of Physiol. 1, Nara Med. Univ., Dept. of Neurology, Boston Children's Hospital, Harvard Med. Sch.*

4:00 D7 **598.20** Analysis of Rab3 structure as related to its function in active zone formation at the *Drosophila* neuromuscular junction. S. CHEN; H. K. GENDELMAN; J. P. ROCHE; P. ALSHARIF; E. GRAF*. *Amherst Col.*

1:00 D8 **598.21** The molecular organization of the synaptic bouton. S. TRUCKENBRODT*; B. G. WILHELM; S. MANDAD; K. KRÖHNERT; C. SCHÄFER; B. RAMMNER; S. J. KOO; G. A. CLAßEN; M. KRAUSS; V. HAUCKE; H. URLAUB; S. O. RIZZOLI. *Univ. of Göttingen Med. Ctr., Max-Planck-Institute for Biophysical Chem., Leibniz-Institute for Mol. Pharmacol.*

2:00 D9 **598.22** The differential gene and isoform expression levels contribute to the functional diversity of Neurexin-3. J. N. AOTO*; C. FÖLDY; D. MARTINELLI; K. TABUCHI; R. MALENKA; T. SÜDHOF. *Stanford Univ. Sch. of Med., Stanford Univ., Shishu Univ., Stanford Univ., Howard Hughes Med. Inst.*

3:00 D10 **598.23** Tomographic analysis of clustering and bridging filaments organized for the release of synaptic vesicles in hippocampal synapses. A. A. COLE*; X. CHEN; T. S. REESE. *NINDS.*

4:00 D11 **598.24** Control of a slow phase of synaptic transmission at a retinal ribbon synapse. J. KE; L. S. MORTENSEN; K. REIM; J. RHEE; N. BROSE; J. H. SINGER*. *Univ. of Maryland, Max Planck Inst. for Exptl. Med.*

1:00 D12 **598.25** Loss of laminin-α4 accelerates aging of the neuromuscular junction. K. LEE*; K. K. CHAND; B. L. PATTON; N. A. LAVIDIS; P. G. NOAKES. *The Univ. of Queensland, Oregon Hlth. and Sci. Univ., The Univ. of Queensland.*

2:00 D13 **598.26** Microtubule-dependent trafficking of synaptic vesicle "superpool" in cultured giant synapse. L. GUILLAUD*; D. DIMITROV; T. TAKAHASHI. *Okinawa Inst. of Sci. and Technol. Grad. Univ.*

3:00 D14 **598.27** Control of antero- and retrograde mitochondrial transport in *Drosophila* motor axons. M. BABIC*; B. W. HUNTER; G. J. RUSSO; A. J. WELLINGTON; K. E. ZINSMAIER. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

4:00 D15 **598.28** The trade-off between the capacity to sustain neurotransmitter release and presynaptic energy efficiency. Z. LU*; A. CHOUHAN; A. ROSSANO; G. MACLEOD. *Florida Atlantic Univ., Baylor Col. of Med., Univ. of Texas Hlth. Sci. Ctr. At San Antonio.*

POSTER

599. Synaptic Transmission: Modulation III

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D16 **599.01** Dynamic phosphorylation of synaptic and extrasynaptic AMPA receptors in the rat striatum and prefrontal cortex in response to amphetamine. B. XUE*; L. MAO; J. WANG. *UMKC Sch. of Med.*

2:00 D17 **599.02** Neural bases for the excitatory control of VTA dopamine neurons by the ventral subiculum. C. GLANGETAS*; G. R. FOIS; M. JALABERT; C. HERRY; M. DIANA; S. CAILLÉ; F. GEORGES. *IINS UMR CNRS 5297, Dept. of Chem. Pharmacol., INMED, INSERM CRI U862, CNRS UMR 5287.*

3:00 D18 **599.03** *In vivo* homeostatic plasticity in BNST neurons. F. E. GEORGES*; G. FOIS; M. JALABERT; D. GIRARD; M. DIANA; C. GLANGETAS. *IINS-CNRS 5297, Dept of Chem. & Pharm., INMED.*

4:00 D19 **599.04** Modelling the spatiotemporal dynamics of adenosine in neural tissue. A. NEWTON*; M. J. WALL; M. J. E. RICHARDSON. *Univ. of Warwick.*

1:00 D20 **599.05** Rapid PACAP-induced plasticity at autonomic synapses requires nAChR-dependent NOS1 activation and AKAP-mediated PKA targeting. J. F. MARGIOTTA*; S. S. JAYAKAR; P. C. PUGH; E. R. STARR. *UT Col. of Med. & Life Sci., Harvard Med. Sch., Univ. of Alabama.*

2:00 D21 **599.06** Direct evidence of altered neuronal excitability due to electric field stimulation. B. LAFON*; A. RAHMAN; M. BIKSON; L. C. PARRA. *City Col. of New York.*

3:00 D22 **599.07** Robust and novel modulation of synaptic excitability in the Hippocampus via endogenous free iron. R. S. WHITE*; A. BHATTACHARYA; Y. CHEN; G. CARLSON; S. KIM. *Univ. of Pennsylvania Perelman Sch. of Med.*

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4:00 D23 **599.08** Waves of noradrenaline and corticosterone after stress differentially affect glutamatergic transmission in the mouse basolateral amygdala. H. KARST*; M. JOËLS. *Univ. Med. Ctr. Utrecht.*

1:00 D24 **599.09** Compartment-specific modulation of GABAergic inputs by TRPV1 channels in the dentate gyrus. A. E. CHAVEZ*; V. M. HERNANDEZ; A. RODENAS-RUANO; S. CHAN; P. E. CASTILLO. *Albert Einstein Col. Medici, Dept. of Physiology, Feinberg Sch. of Medicine, Northwestern Univ.*

2:00 D25 **599.10** Protein phosphatase 2A mediates adenosine A1 receptor-induced GluA1 AMPA receptor internalization and persistent synaptic depression in rat hippocampus. F. S. CAYABYAB*; J. STOCKWELL; Z. CHEN; Z. MING; A. GARGOUM. *Univ. of Saskatchewan.*

3:00 D26 **599.11** Species differences in the BNST-VTA pathway: Comparative anatomical and electrophysiological analysis. J. KAUFLING*; D. GIRARD; M. MAITRE; F. GEORGES. *Interdisciplinary Inst. for Neurosci., Ctr. de Recherche Inserm U862.*

4:00 D27 **599.12** Platelet activating factor enhances presynaptic vesicle release. J. W. HAMMOND*; S. LU; H. A. GELBARD. *Univ. of Rochester.*

1:00 D28 **599.13** tDCS current intensity on immediate early gene induction *in vivo.* J. WAGNER*; R. JANKARD. *Wright State Univ., Wright Patterson Air Force Base.*

2:00 D29 **599.14** PACAP induces acute and sustained synaptic plasticity by distinct cellular mechanisms. E. R. STARR*; J. F. MARGIOTTA. *UT Col. of Med. & Life Sci.*

3:00 D30 **599.15** Calcium channel subtypes on glutamatergic presynaptic terminal projecting to rat hippocampal CA3 neurons. M. SHIN*; K. NONAKA; M. YOSHIMURA; N. AKAIKE. *Kumamoto Hlth. Sci. Univ.*

4:00 D31 **599.16** Melanin-Concentrating Hormone modulates excitatory transmission at the hippocampal synapses by acting on astrocytes. L. LE BARILLIER*; M. ROSIER; G. MALLERET; P. SALIN. *CRNL Univ. Claude Bernard.*

1:00 D32 **599.17** Presynaptic adenosine A2A-receptor mediated pathway acts as a counteragent of calcineurin-based downregulation of L-type calcium channel activity in mouse neuromuscular junctions. E. TARASOVA*; A. GAYDUKOV; O. BALEZINA. *Fac. of Biology, Moscow State Lomonosov Univers.*

2:00 D33 **599.18** Regulation of spontaneous synaptic transmission by extracellular calcium at excitatory synapses onto hippocampal CA1 pyramidal cells. W. E. BABIEC; R. GUGLIETTA; S. A. JAMI; T. J. O'DELL*. *David Geffen Sch. Med. UCLA, UCLA, UCLA.*

3:00 D34 **599.19** *In vitro* exposure to nicotinic agonists modulates the function of NMDA receptors present on glutamatergic and GABAergic nerve endings in rat nucleus accumbens. M. MARCHI*; S. ZAPPETTINI; M. GRILLI; G. OLIVERO; J. CHEN; C. PADOLECCHIA; A. PITTALUGA. *Univ. of Genova, Inst. de Neurosciences des Systèmes Inserm UMR1106.*

4:00 D35 **599.20** Fetal application of HDAC inhibitors facilitates the elongation of Purkinje cell dendrites and the network formation in rat cerebellar cortex. S. YOSHIDA*; N. HOZUMI; D. KATSUMATA; T. ABE; Y. FUETA; S. UENO; Y. SEKINO. *Toyohashi Univ. Technol., Toyohashi Univ. Technol., Univ. Occup. and Envrn. Hlth., Natl. Inst. of Hlth. Sci.*

1:00 D36 **599.21** Regulation of histone H3 phosphorylation at K27me3S28 in response to amphetamine and haloperidol. G. FISONE*; A. BONITO-OLIVA; E. SÖDERSTEN; X. HU; G. SPIGOLON; J. CABOCHE; K. HANSEN. *Karolinska Inst., Univ. Pierre et Marie Curie, BRIC.*

2:00 D37 **599.22** Distinct populations of synaptic vesicles in dopamine neurons. H. GU*; L. IACOVITTI; Q. ZHANG. *Vanderbilt Univ., Thomas Jefferson Univ.*

3:00 D38 **599.23** Estrogen treatment offsets IPSC frequency reduction and calcium buffering elevation in basal forebrain neurons of reproductively senescent F344 female rats. D. A. MURCHISON*; A. FINCHER; S. BAKE; D. W. DUBOIS; J. C. DAMBORSKY; W. H. GRIFFITH. *Texas A&M Hlth. Sci. Ctr.*

4:00 D39 **599.24** BDNF-TRKB signaling regulation of GABAergic neurotransmission. M. P. LOZANO; M. MARTA; J. R. DIAZ; Z. CASAS; S. L. ALBARRACIN; J. J. SUTACHAN-RUBIO*. *Pontificia Univ. Javerina, Pontificai Univ. Javerina, Pontificia Univ. Javeriana.*

1:00 D40 **599.25** Apparent receptor kinetics analyses of EPSPs evoked by ipsilateral pericentral canal stimulation in spinal cord motoneurons *in vitro.* W. QIN; C. ZHENG; B. WANG; M. WANG*. *Wannan Med. Col.*

2:00 D41 **599.26** Potentiation of synaptic transmission in mouse neuromuscular junctions by ATP. P. O. BOGATCHEVA*; O. P. BALEZINA. *Moscow State Univ.*

3:00 D42 **599.27** O-GlcNAcylation dampens hyperexcitability in hippocampus during acute epileptoform activity. L. T. STEWART; K. WANG; J. C. CHATHAM; L. L. MCMAHON*. *UAB, Univ. of Alabama at Birmingham.*

POSTER

600. Synaptic Plasticity: Short-Term Plasticity

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D43 **600.01** ▲ Expression of long-term memory after training with inedible food in *Aplysia:* Modification of fast synaptic connections from buccal ganglia mechanoafferents to B4, but not to B31/B32. S. TAM*. *BAR ILAN UNIVERSITY, Bar Ilan Univ.*

2:00 D44 **600.02** Vesicular glutamate transporters at corticothalamic synapses contribute to short-term plasticity and visual attention. B. GRANSETH*; S. H. LINDSTROM. *Linkoping Univ., Linkoping university.*

3:00 D45 **600.03** Compartmentalized calcium microdomains in large mossy fiber terminals gates short-term facilitation at mossy fiber to CA3 pyramidal cell synapses. S. CHAMBERLAND*; A. EVSTRATOVA; K. TÓTH. *CRULRG, IUSMQ.*

4:00 D46 **600.04** Differential synaptically-evoked spiking of two subgroups of NPY interneurons in the stratum radiatum of hippocampal CA1. Q. LI*; A. F. BARTLEY; L. E. DOBRUNZ. *Univ. of Alabama At Birimgham.*

1:00 D47 **600.05** *In vivo* analysis of synaptic function in CA3 microcircuits using optogenetics. S. ZUCCA*; M. GRIGUOLI; C. MULLE. *Okinawa Inst. of Sci. and Technol., Interdisciplinary Inst. for Neuroscience, Univ. of Bordeaux, CNRS UMR 5297.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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2:00 D48 **600.06** PKC is a calcium sensor for short-term synaptic plasticity. D. FIORAVANTE*; Y. CHU; A. P. H. DE JONG; M. LEITGES; P. KAESER; W. REGEHR. *Ctr. For Neuroscience, Univ. of California Davis, Harvard Med. Sch., The Biotech. Ctr. of Oslo, Univ. of Oslo.*

3:00 D49 **600.07** The role of presenilin in presynaptic plasticity at hippocampal mossy fiber synapses revealed by an optogenetic approach. C. MULLE*; J. RUMI; G. BARTHET. *Interdisciplinary Inst. For Neuroscience, Univ. Bordeaux.*

4:00 D50 **600.08** ▲ Characterization of the heterosynaptic interaction of the septal and crossed entorhinal projections to the dentate gyrus after unilateral entorhinal cortex lesion in rats: A time course study. N. A. UPRIGHT; E. L. KRAUSE; G. R. SMITH; M. K. MOSES-HAMPTON; P. G. LAKHMANI; J. J. RAMIREZ*. *Davidson Col.*

1:00 D51 **600.09** ● Prolonged ketamine exposure increases synaptic plasticity in the anterior cingulate cortex of neonatal rats. S. KOKANE; J. PERISH; R. WANG; A. WOMACK; R. STEVENS; X. ZOU; Q. LIN*. *Univ. of Texas at Arlington, Univ. of Texas At Arlington.*

2:00 D52 **600.10** Effect of synaptic activity on the replenishment of resting pool. M. I. GLAVINOVIC*; L. BUI. *McGill Univ.*

3:00 D53 **600.11** Presynaptic Ca^{2+} dynamics in the mature calyx of Held synapse with morphological heterogeneity. A. FEKETE*; L. WANG. *The Hosp. for Sick Children.*

4:00 D54 **600.12** The NMDA receptor-mediated spontaneous EPSCs are sensitive to constitutively- active ghrelin receptors in the hippocampus. M. ISOKAWA*. *Univ. Texas-Brownsville.*

1:00 D55 **600.13** Differences in short-term modulation of excitatory synaptic responses in stratum radiatum and stratum lacunosum moleculare in mouse hippocampus. D. PEKALA; M. RAASTAD*. *Emory Univ. Sch. of Med.*

POSTER

601. Long-Term Depression

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D56 **601.01** Mechanism of metabotropic glutamate receptor 5-dependent long-term depression induced by cathodal direct-current stimulation in mouse primary motor cortex. Y. SUN*; J. LIPTON; M. SAHIN; A. ROTENBERG. *Boston Children's Hosp., Harvard Med. Sch., Harvard Med. Sch.*

2:00 D57 **601.02** The roles of IP_3R in LTD induction in visual cortex. D. KALIKULOV*; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst.*

3:00 D58 **601.03** Chemical LTD mediated changes in synaptic AMPA receptors is associated to changes in postsynaptic density scaffold proteins. J. RODRIGUEZ-ALVAREZ*; W. CHEN; D. SIEDLECKI; V. JIMENEZ; A. OTXOA DE AMEZAGA; C. A. SAURA; A. J. MINANO-MOLINA. *Inst. De Neurociencies/ UAB, Inst. de Neurociencies and Dpt. Bioquímica i Biología Molecular, Univ. Autònoma de Barcelona.*

4:00 D59 **601.04** The BDNF pro-peptide is a novel facilitator of hippocampal LTD, and its biological action is altered by the common BDNF polymorphism Val66Met. M. KOJIMA*; T. MIZUI; H. KUMANOGOH; Y. ISHIKAWA. *Natl. Inst. Adv Sci. and Technol(AIST), The BDNF pro-peptide is a novel facilitator of hippocampal LTD, and its biological action is altered by the common BDNF polymorphism Val66Met, Natl. Inst. Adv Sci. and Technol(AIST), Core Res. for Evolutional Sci. and Technol. (CREST), Japan Sci. and Technol. Agency (JST), Hlth. Res. Inst. (HRI), Natl. Inst. of Advanced Industrial Sci. and Technol. (AIST), Lab. of Functional Neuroscience, Nara Inst. of Sci. and Technol. (NAIST).*

1:00 D60 **601.05** Distinct roles of neurabin and spinophilin in the targeting and regulation of protein phosphatase 1 in AMPA receptor trafficking and LTD induction. H. YANG*, V; J. GAO; X. HU; H. XIA. *LSU Hlth. Sci. Ctr.*

2:00 D61 **601.06** Control of hippocampal to medial prefrontal cortex signalling by long-term depression of NMDA receptor mediated transmission. P. J. BANKS*; A. BURROUGHS; Z. I. BASHIR. *Univ. of Bristol.*

3:00 D62 **601.07** A myosin va mouse mutation acting as a dominant negative disrupts glutamate scaffolding in the hippocampus and abnormal behavior. S. PANDIAN*; Y. MURATA; J. ZHAO; M. CONSTANTINE-PATON. *MIT.*

4:00 D63 **601.08** How plasticity of inhibitory transmission in area CA2 modulates CA1 activity. K. NASRALLAH*; R. A. PISKOROWSKI; V. CHEVALEYRE. *CNRS UMR8118.*

1:00 D64 **601.09** Bidirectional structural changes driven by protein synthesis-dependent activity at individual spines. Y. RAMIRO*; I. ISRAELY. *Champalimaud Ctr. For the Unknown.*

2:00 D65 **601.10** Role of microtubule-dependent transport in synaptic plasticity. A. LARIO*; J. D. PETERESEN; D. CHOQUET; J. A. ESTEBAN. *Ctr. De Biología Mol. Severo Ochoa. CSIC - UAM, Univ. Bordeaux, Inst. Interdisciplinaire de Neurosciences, UMR 5297, F-33000, CNRS, Inst. Interdisciplinaire de Neurosciences, UMR 5297, F-33000.*

3:00 D66 **601.11** Rab11Fip5, a Rab11 adaptor, is selectively required for hippocampal LTD. T. BACAJ*; M. AHMAD; S. JURADO; R. C. MALENKA; T. C. SUDHOF. *Stanford Univ., Univ. of Oklahoma Hlth. Sci. Ctr., Stanford Univ., Univ. of Maryland Sch. of Med., Stanford Univ.*

4:00 D67 **601.12** Effects of BRAG1 X-Linked Intellectual Disability mutations on synaptic function. A. N. PETERSEN*; J. C. BROWN; N. Z. GERGES. *Med. Col. of Wisconsin.*

1:00 D68 **601.13** Calcium threshold shift enables frequency-independent control of plasticity by an instructive signal. H. TITLEY*; C. PIOCHON; Y. ELGERSMA; C. HANSEL. *Univ. of Chicago, Erasmus Med. Ctr.*

2:00 D69 **601.14** Co-regulation of synaptic plasticity, learning and memory in the mouse hippocampus by D2 dopamine receptor and dopamine transporter. J. ROCCHETTI*; C. FASANO; E. GUMA; G. DAL BO; E. ISINGRINI; S. EL MESTIKAWY; T. WONG; B. GIROS. *Douglas Res. Ctr.*

3:00 D70 **601.15** Neurotensin induces presynaptic, calcineurin-dependent LTD of dopamine D2 autoreceptor-mediated neurotransmission in midbrain dopamine neurons. E. PICCART*; N. A. COURTNEY; C. P. FORD; M. J. BECKSTEAD. *UTHSCSA, Case Western Reserve Univ. Sch. of Med.*

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4:00 D71 **601.16** Nicotinic modulation of striatal synaptic transmission and plasticity in the dorsolateral striatum of rat. A. LOTFI*; L. ADERMARK. *Univ. of Gothenburg.*

1:00 D72 **601.17** Replication of chronic intermittent ethanol-induced metaplasticity in C57Bl6/J DRD1a-TdTomato medium spiny neurons in the nucleus accumbens shell. R. RENTERIA*, III; T. R. BUSKE; R. MORRISETT. *UT Austin - Inst. For Neurosci., Univ. of Texas at Austin.*

2:00 E1 **601.18** ▲ Endocannabinoid LTD at Nucleus Tractus Solitarius excitatory synapses depends on the nutritional status. A. KHLAIFIA; F. J. TELL*. *CNRS UMR 7286.*

3:00 E2 **601.19** ● ATP consumption in molecular reactions of neuronal signaling. N. RASUMOV*; E. DE SCHUTTER. *Okinawa Inst. of Sci. and Technol. 1919-1.*

4:00 E3 **601.20** Ca^{2+}/Calmodulin promotes postsynaptic release of PSD-95 by preventing palmitoylation. L. MATT*; Y. ZHANG; T. PATRIARCHI; D. K. PARK; D. CHOWDHURY; Z. A. MALIK; J. B. AMES; J. W. HELL. *Univ. of California Davis, Univ. of California Davis.*

POSTER

602. Autism Behavioral Analysis I

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 E4 **602.01** Predictive and reactive precision grip force control in individuals with autism. Z. WANG*; G. MAGNON; R. GREENE; J. SWEENEY; M. MOSCONI. *UT Southwestern Med. Ctr.*

2:00 E5 **602.02** RBM8a regulates anxiety and social behaviors. C. MCSWEENEY*; A. ALACHKAR; P. D. HULLIHEN; D. ZOU; Y. ZHOU; F. DONG; D. DENG; Y. MAO. *Penn State Univ., Univ. of California Irvine.*

3:00 E6 **602.03** ▲ Yoga as a co-therapeutic approach for autism spectrum disorders. I. J. ROSEMBERG GARCIA*; A. RUIZ-GARCÍA; J. VÁZQUEZ-RAMÍREZ; M. CORZO; P. ZÁRATE-GONZÁLEZ; H. SÁNCHEZ-CASTILLO. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autonoma De Mexico, Univ. del Valle de México, Inst. Nacional de Rehabilitación, Clave Consultora para la Ciudadanía.*

4:00 E7 **602.04** ▲ Using HRV, skin conductance, and neurofeedback training thresholds to quantify progress in children diagnosed with ASD. H. COURELLIS*; A. COURELLI; E. FRIEDRICH; J. A. PINEDA. *UCSD, UCSD.*

1:00 E8 **602.05** The role of dietary polyunsaturated fatty acids in the pathogenesis and treatment of autism spectrum disorders. K. VAN ELST; J. E. MERKENS; H. BRUINING; B. BIRTOLI; C. TERREAUX; J. BUITELAAR; G. M. RAMAKERS*; M. J. H. KAS. *Brain Ctr. Rudolf Magnus, Dept. of Psychiatry - UMC Utrecht, Vifor Pharma, Donders Inst. for Brain, Cognition and Behavior, Dept. of Cognitive Neuroscience, Radboud Univ. Nijmegen Med. Ctr., Rudolf Magnus Inst. of Neuroscience, UMC Utrecht.*

2:00 E9 **602.06** Behavioral characterization of internal models and predictive mechanisms in autism. C. EGO*; L. BOHOMME; J. ORBAN DE XIVRY; D. DA FONSECA; P. LEFÈVRE; G. S. MASSON; C. DERUELLE. *Univ. catholique de Louvain, Univ. catholique de Louvain, CNRS & Aix-Marseille Univ.*

3:00 E10 **602.07** Social deficits in ASD are linked with greater task-driven neural synchrony under naturalistic conditions. K. JASMIN*; S. J. GOTTS; Y. XU; N. ABDULSABUR; S. LIU; J. E. INGEHOLM; I. W. EISENBERG; B. ORIONZI; A. R. BRAUN; A. MARTIN. *NIMH/NIH, UCL, NIDCD/NIH.*

4:00 E11 **602.08** Investigations in neuronal receptors expression in the animal model of autism based on the early blockade of GRPR: Potential role in the behavioral impairments observed in ASD. J. PRESTI TORRES*; M. AUDET; J. JAMES; P. KENT; Z. MERALI. *PUCRS, Univ. of Ottawa, Carleton Univ.*

1:00 E12 **602.09** Intrinsic motivation and theory of mind in adolescents with autism. M. FIRESTEIN*; P. F. GERHARDT; H. HOCH. *Columbia Univ., JPG Autism Consulting, Barnard Col.*

2:00 E13 **602.10** What eye movements reveal about the reliability of the Autism-Spectrum Quotient. J. L. STEVENSON*; K. R. HART; K. A. WILLIAMS; L. S. MULLER. *Ursinus Col., Ursinus Col., Ursinus Col.*

3:00 E14 **602.11** Autistic behavior in adolescent Fmr1 knockout mice - With parallels to the valproate rat model of autism. E. SORENSEN; T. BANKE; F. BERTELSEN; J. SCHEEL-KRUGER; A. MOLLER; K. DRASBEK*. *Aarhus Univ., Aarhus Univ., Aarhus Univ. Hosp.*

4:00 E15 **602.12** Perinatal exposure to benzyl butyl phthalate (bbp) induces alterations in neuronal development/maturation proteins, estrogen responses, and fear conditioning in rodents. D. DEBARTOLO; S. JAYATILAKA; R. VONTELL; R. RAMOS; M. ROSE; N. SIU; R. MERVIS; A. J. BETZ*. *Quinnipiac Univ., Quinnipiac Univ., Kings Col. London, New York Inst. of Technology, Col. of Osteo. Med., Univ. of South Florida Col. of Med., Quinnipiac Univ.*

1:00 F1 **602.13** Altered amygdala-cortical gray-matter structural covariance in males with autism spectrum disorder. Y. C. CHEN*; ,. Y. LIN; J. O. S. GOH; S. S. F. GAU. *Natl. Taiwan Univ., Dept. of Psychiatry, Natl. Taiwan Univ. Hosp. and Col. of Med., Grad. Inst. of Brain and Mind Sciences, Natl. Taiwan Univ. Col. of Med.*

2:00 F2 **602.14** Over-expression of Tbx1 or COMT in the mouse hippocampus partially recapitulates behavioral phenotypes of 22q11.2 duplication. S. BOKU*; T. IZUMI; T. TAKAHASHI; G. KANG; A. HISHIMOTO; A. NISHI; S. KATO; K. KOBAYASHI; K. TANIGAKI; T. HIRAMOTO; N. HIROI. *Albert Einstein Col. of Med., Fukushima Med. Univ., Shiga Med. Res. Inst.*

3:00 F3 **602.15** Sensory and social reinforcement monitor for identification of an autism-like phenotype in rats. J. B. RICHARDS*; J. PERON; R. WANG; D. R. LLOYD; R. SHEN; S. HAJ-DAHMANE. *Res. Inst. On Addictions, State Univ. of New York at Buffalo, State Univ. of New York at Buffalo, State Univ. of New York at Buffalo.*

4:00 F4 **602.16** Hyper-fear memory formation is associated with hyper-plasticity in the amygdala in the VPA rat model of autism and hypo-fear memory formation is associated with hypo-plasticity in the amygdala in the MAM model of schizophrenia. D. LA MENDOLA*; V. DELATTRE; H. MARKRAM; K. MARKRAM. *EPFL.*

1:00 F5 **602.17** Transfer of remote emotional information in a mouse model of autism. K. Z. MEYZA*; T. NIKOLAJEW; K. KONDRAKIEWICZ; K. ZIEGART; A. PUSCIAN; E. KNAPSKA. *Nencki Inst. of Exptl. Biol.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 F6 **602.18** Effects of a ketogenic diet in BTBR mice using a novel test-retest protocol in the 3-chamber sociability test. D. N. RUSKIN*; J. H. ALTSCHULER; H. S. REUMAN; S. A. MASINO. *Trinity Col.*

3:00 F7 **602.19** Effect of GABAAR subtype-selective positive allosteric modulators in the BTBR mouse model of autism. R. F. YOSHIMURA*; M. B. TRAN; D. J. HOGENKAMP; R. J. EGUSQUIZA; T. K. GEE; K. W. GEE. *Univ. of California, Irvine.*

4:00 F8 **602.20** Moment-to-moment task adaptation and maintenance of task set in ASD. R. LUDLUM*; X. YOU; K. DUDLEY; Y. GRANADER; L. KENWORTHY; W. D. GAILLARD; C. J. VAIDYA. *Georgetown Univ., Children's Natl. Med. Ctr.*

1:00 F9 **602.21** Impact of virtual stimulation on motor skills of autistic children. C. N. CRESPO CORTÉS*; P. SAFT; G. A. CORIA-AVILA; L. I. GARCIA; M. E. HERNANDEZ; J. MANZO. *Univ. Veracruzana, Univ. Veracruzana.*

2:00 F10 **602.22** Animals reared in impoverished conditions are slower to habituate to the reinforcing effects of sensory reinforcers. R. WANG*; J. B. RICHARDS; D. R. LLOYD; S. HAJ-DAHMANE; R. SHEN. *Res. Inst. on Addictions, SUNY at Buffalo.*

3:00 F11 **602.23** Behavioral motor deficits in juvenile mice induced by unilateral cerebellar haemorrhage and inflammation. S. TREMBLAY*; D. GOLDOWITZ. *CMMT.*

4:00 F12 **602.24** ● The role of mTOR signaling in parvalbumin interneuron function. A. KOEPPEN-BABCOCK*. *Children's Hosp. of Philadelphia.*

1:00 G1 **602.25** Diagnostic prediction in autism using random forest and classification trees of functional connectivities. C. P. CHEN*; A. JAHEDI; R. MUELLER. *San Diego State Univ., San Diego State Univ., San Diego State Univ.*

2:00 G2 **602.26** Differences in neuronal activation and gene expression in the fragile X mouse. T. D. ROGERS*; C. G. FORSBERG; J. VEENSTRA-VANDERWEELE. *Vanderbilt Univ.*

3:00 G3 **602.27** Choroid plexus target-based therapy in rats with chronic hydrocephalus: Use of an aquaporin-1 antibody treatment. H. L. PHILLIPS; S. SURASH; M. G. LUCIANO; J. CROSS; J. R. HOLLERMAN*. *Allegheny Col., Nuffield Hlth., Cleveland Clinic, Main Campus.*

POSTER

603. Autism Genetic Models

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 G4 **603.01** Evaluation of ganaxolone in B6 mice and the BTBR mouse model of autism. T. M. KAZDOBA*; D. ZOLKOWSKA; M. A. ROGAWSKI; R. J. HAGERMAN; J. N. CRAWLEY. *Univ. of California, Davis, Univ. of California Davis, Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis.*

2:00 G5 **603.02** Social deficits with the Neurofibromatosis type 1 mutation, a role for the extracellular signal-regulated kinase (ERK) pathway. D. H. ARENDT*; C. BERNABE; L. FEDERICI; S. FITZ; W. D. CLAPP; A. I. MOLOSH; P. L. JOHNSON; A. SHEKHAR. *IU Sch. of Med., IU Sch. of Med., IU Sch. of Med., IU Sch. of Med., IU Sch. of Med., IU Sch. of Med., IU Sch. of Med., IU Sch. of Med.*

3:00 G6 **603.03** Purinergic P2X4 knockout mice exhibit altered expression of dopaminergic proteins. Implications of P2X4 receptors in multiple neurological disorders. S. KHOJA*; L. ASATRYAN; M. W. JAKOWEC; D. L. DAVIES. *USC, USC, USC.*

4:00 G7 **603.04** Behavioral consequences of disrupted MET signaling. B. L. THOMPSON*; W. RODRIGUEZ; P. LEVITT. *Univ. of Southern California, Childrens Hosp. of Los Angeles.*

1:00 G8 **603.05** Haploinsufficiency of the autism-linked gene Protocadherin 10 causes male-specific behavioral deficits. H. SCHOCH; S. L. FERRI*; A. S. KREIBICH; H. C. DOW; S. HIRANO; R. T. SCHULZ; E. S. BRODKIN; E. ABEL. *Univ. of Pennsylvania, Univ. of Pennsylvania, Kansai Med. Univ., Children's Hosp. of Philadelphia.*

2:00 G9 **603.06** A touchscreen version of delayed non-match to position (DNMTP) in inbred mice. P. T. LEACH*; J. N. CRAWLEY. *MIND Institute, Univ. of California Davis Sch., MIND Institute, Univ. of California Davis Sch. of Med.*

3:00 G10 **603.07** ▲ Shank3+/- mice exhibit probabilistic learning deficits, but not altered repetitive behaviors. A. SYED; D. A. AMODEO; J. A. SWEENEY; M. E. RAGOZZINO*. *Univ. Illinois Chicago, Univ. of Illinois at Chicago, Univ. of Texas Southwestern, Univ. Illinois Chicago.*

4:00 G11 **603.08** Mutant DISC1 produces smaller Purkinje cells and impairs recognition memory and social behavior in adult mice. A. V. SHEVELKIN*; B. N. ABAZYAN; G. L. RUDOW; J. C. TRONCOSO; C. A. ROSS; M. V. PLETNIKOV. *P.K.Anokhin Inst. Norm Physiol, Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

1:00 G12 **603.09** Autism-associated insertion mutation in shank3 results in impaired behavior and synaptic transmission. M. KOUSER*; H. E. SPEED; J. M. REIMERS; Z. XUAN; C. F. OCHOA; C. M. POWELL. *Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr.*

2:00 H1 **603.10** Male-specific deficits in reinforcement learning, motivation, striatal volume, and white-matter integrity in the 16p11.2del/+ mouse model of autism. N. M. GRISSOM; S. MCKEE; J. LIDSKY-EVERSON; H. SCHOCH; R. HAVEKES; M. KUMAR; S. PICKUP; V. KUMAR; H. POPTANI; T. NICKL-JOCKSCHAT; T. M. REYES; T. G. ABEL*. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. Hosp. Aachen (Universitätsklinikum Aachen).*

3:00 H2 **603.11** GABA-B receptor agonist r-baclofen reverses social deficits and reduces repetitive behavior in two mouse models of autism. J. L. SILVERMAN*; M. C. PRIDE; J. E. HAYES; K. R. PUHGER; J. N. CRAWLEY. *UC Davis Sch. of Med.*

4:00 H3 **603.12** Axonal localization of Ca^{2+}-dependent activator protein for secretion 2 is critical for subcellular locality of brain-derived neurotrophic factor and neurotrophin-3 release affecting proper development of postnatal mouse cerebellum. T. SADAKATA*. *Gunma Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 H4 **603.13** Behavioral and neuro-anatomical characterization of synapsin 1, 2 and 3 mutant lines. M. L. SCATTONI*; C. MICHETTI; A. CARUSO; M. SABBIONI; M. MORINI; M. PAGANI; M. BLESA; A. GOZZI; F. BENFENATI. *Inst. Superiore di Sanita, Sapienza Univ. of Rome, Dept. of Physiol. and Pharmacol., Sapienza Univ. of Rome, Dept. of Biol. and Biotech., Neurosci. and Brain Technologies, Inst. Italiano di Tecnologia, Ctr. for Neurosci. and Cognitive Systems @UniTn, Inst. Italiano di Tecnologia.*

2:00 H5 **603.14** Generation and analysis of neurodevelopmental disorder model marmoset. N. KISHI*; K. SATO; M. OKUNO; H. J. OKANO; E. SASAKI; H. OKANO. *RIKEN BSI, Keio Univ. Sch. of Med., Central Inst. for Exptl. Animals, Jikei Univ. Sch. of Med.*

3:00 H6 **603.15** Is erbb4 a susceptibility gene for autism spectrum disorders endophenotype? an association study in korean population. R. WOO*; S. KIM. *Sch. of Medicine, Eulji Univ., Sch. of Medicine, Eulji Univ.*

4:00 H7 **603.16** Early-onset parkinsonism and psychiatric disorder in a patient with missense mutation in the C-terminal tail of DAT. F. H. HENRIKSEN*; T. SKJØRRINGE; N. V. ARENDS; S. YASMEEN; K. ERREGER; H. J. G. MATTHIES; A. GALLI; L. E. HJERMIND; L. B. MØLLER; U. GETHER. *The Panum Inst., Kennedy Center, Copenhagen Univ. Hosp., Vanderbilt Univ., Copenhagen Univ. Hosp.*

1:00 H8 **603.17** 16p11.2 deletion syndrome mice display ultrasonic vocalization deficits during social interactions. M. YANG*; E. J. MAHRT; F. C. LEWIS; G. M. FOLEY; T. PORTMANN; R. E. DOLMETSCH; C. V. PORTFORS; J. N. CRAWLEY. *MIND Institute, UC Davis, Washington State Univ., Stanford Univ. Sch. of Med., Novartis Inst. for Biomed. Res.*

2:00 H9 **603.18** In search of biomarkers and treatment for a subpopulation of autism spectrum disorder (ASD) with high serotonin (sASD). K. CHEN; Y. CHENG; C. CHEN; C. YANG; J. C. SHIH*. *USC-Taiwan Ctr. for Translational Res., USC, Inst. of Neuroscience, Natl. Yang-Ming Univ. and Dept. of Rehabilitation, Natl. Yang-Ming Univ. Hosp., Natl. Central Univ., Dept. of Educ. and Research, Taipei City Hosp., Inst. of Microbiology and Immunology, Natl. Yang-Ming Univ., Univ. Southern California.*

3:00 H10 **603.19** ● ▲ Genetic abnormalities in autistic disorder. D. AHUJA*; C. SMILEY; P. NUNI. *Univ. Of Vermont/ Genesys Diagnostics, Genesys Diagnostics.*

4:00 H11 **603.20** Abnormal dendritic spines in amygdala of mice haploinsufficient for Protocadherin 10, an autism-associated gene. H. SCHOCH*; A. KREIBICH; H. DOW; S. HIRANO; R. T. SCHULTZ; T. ABEL; E. BRODKIN; D. FELDMEYER. *Univ. of Pennsylvania, Univ. of Pennsylvania, Kansai Med. Univ., Children's Hosp. of Philadelphia, Dept. of Pediatrics, Univ. of Pennsylvania, Res. Ctr. Jülich, RWTH Aachen Univ.*

1:00 H12 **603.21** Rapamycin, an inhibitor of mTORC1 signaling activity, improved measures of sociability in the BTBR T+ Itpr3tf/J mouse model of autism spectrum disorder. J. A. BURKET*; A. D. BENSON; A. H. TANG; S. I. DEUTSCH. *Eastern Virginia Med. Sch., Eastern Virginia Med. Sch.*

2:00 I1 **603.22** Multiple Shank3 mutant mouse models of autism result in decreased synaptic homer1b/c in striatum. C. F. OCHOA*; J. M. REIMERS; Z. XUAN; T. C. JARAMILLO; M. KOUSER; H. E. SPEED; C. M. DEWEY; S. LUI; C. M. POWELL. *UT Southwestern, Buck Inst. for Res. on Aging, UT Southwestern.*

3:00 I2 **603.23** The role of CHD8, an autism spectrum disorder risk gene, in brain development. O. DURAK*; Y. KAESER-WOO; A. MORTELL; A. NOTT; L. TSAI. *Picower Institute, MIT, Picower Inst. for Learning and Memory.*

POSTER

604. Autism Synaptic and Cellular Mechanisms

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 I3 **604.01** Role of A2BP1, a candidate gene for ASD, in establishing the architecture of the developing cerebral cortex. K. NAGATA*; N. HAMADA; H. ITO; I. IWAMOTO; R. MORISHITA; H. TABATA. *Inst. For Developmental Research, Aichi Human Service Ctr.*

2:00 I4 **604.02** KRAS mediated enhancement of ERK signalling during brain development results in synaptic plasticity deficits and learning disabilities. R. BRAMBILLA*; A. PAPALE; N. SOLARI; R. D'ISA; M. CAMBIAGHI; M. CURSI; L. LETIZIA; M. CEROVIC; N. HARDINGHAM; E. MENNA; M. MATTEOLI. *San Raffaele Scientific Inst., Cardiff Univ., Univ. of Milan.*

3:00 I5 **604.03** The molecular basis of altered emotional learning in an environmentally induced animal model of Autism. A. BANERJEE*; J. A. LUONG; A. MORALES; A. HO; B. SAULS; J. E. PLOSKI. *Univ. of Texas At Dallas.*

4:00 I6 **604.04** Oxytocin counteracts inflammatory effects of bacterial endotoxin in gut cells. H. TAMIR*; B. Y. KLEIN; D. L. HIRSCHBERG; R. J. LUDWIG; M. M. MYERS; S. GLICKSTEIN; M. G. WELCH. *Columbia Univ. Col. of Physicians and Surgeons, New York State Psychiatric Inst., Columbia Univ. Col. of Physicians and Surgeons, Columbia Univ. Col. of Physicians and Surgeons, Columbia Univ. Col. of Physicians and Surgeons, Columbia Univ. Col. of Physicians and Surgeons, EB Sci.*

1:00 I7 **604.05** A novel *in vivo* assay of Pten autism alleles reveals necessary roles for Pten in cortical GABAergic interneuron development. D. VOGT*; K. K. CHO; A. T. LEE; V. S. SOHAL; J. L. RUBENSTEIN. *Univ. of California San Francisco.*

2:00 I8 **604.06** Thimerosal induces autistic behaviors in mice: Possible involvement of metalloprotease activation, zinc dyshomeostasis, and BDNF upregulation. M. YOO*; J. LIM; T. KIM; H. BYUN; B. SEO; J. KOH. *Asan Life Sci. Res. Inst., Asan Med. Ctr.*

3:00 I9 **604.07** Comprehensive analysis of gene expression associated with the prefrontal circuit maturation. S. UEDA*; M. NIWA; A. SAWA; T. SAKURAI. *MIC, Grad. Sch. of Med., Kyoto Univ., Johns Hopkins Univ. Sch. of Med.*

4:00 I10 **604.08** The chromosome 20p12.1 autism genome-wide significant association signal implicates the long non-coding RNAs RPS10P2AS and MACROD2-AS1. D. B. CAMPBELL*; N. GREPO. *USC.*

1:00 I11 **604.09** Activity-dependent neuroprotective protein (ADNP) interacts with the eukaryotic translation initiation factor 4e (eIF4E): an autism upstream regulator. I. GOZES*; A. MALISHKEVICH; N. AMRAM; G. HACOHEN-KLEIMAN. *Sackler Sch. Med/Tel Aviv Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 I12 **604.10** ▲ Reduced striatal 5-HT2A receptor but not serotonin transporter levels in the subchronic valproate model. M. M. SKOVBORG*; F. BERTELSEN; D. FOLLONI; P. WEIKOP; J. SCHEEL-KRÜGER; A. MØLLER; A. M. LANDAU. *Aarhus Univ. Hosp., Aarhus Univ. Hosp., Psychiatric Ctr. Copenhagen.*

3:00 J1 **604.11** Modulation of aberrant ERK signaling as a potential therapeutic strategy in the BTBR mouse model of autism. N. CHENG*; Y. AHN; R. MYCHASIUK; R. TOBIAS; D. RUSKIN; S. MASINO; J. M. RHO. *Univ. of Calgary, Trinity Col.*

4:00 J2 **604.12** sncRNA expression differs more with age and by region in typical brain development than in ASD. B. STAMOVA; B. P. ANDER; N. BARGER; F. R. SHARP; C. SCHUMANN*. *UC Davis MIND Inst., UC Davis MIND Inst.*

1:00 J3 **604.13** Interneuronal subpopulations in prefrontal cortex (BA 46) in autism. V. MARTINEZ-CERDENO*; E. HASHEMI; J. ARIZA. *UC Davis.*

2:00 J4 **604.14** Developmental trajectories of neuron numbers across amygdaloid nuclei in Autism Spectrum Disorder. N. BARGER*; M. V. VARGAS; C. M. SCHUMANN. *Univ. of California, Davis - MIND Inst., MIND Institute, Univ. of California, Davis, MIND Institute, Univ. of California, Davis.*

3:00 J5 **604.15** NMDA receptor dysfunction contributes to impaired long-term depression in a valproate-induced rat autism model. H. WU*; H. YEN; P. CHEN; H. LIN. *Natl. Yang-Ming Univ., Natl. Yang-Ming Univ., Natl. Cheng Kung Univ.*

4:00 J6 **604.16** ● EU-AIMS - a boost for pre-clinical and clinical autism Research. W. SPOOREN*. *Hoffmann-La Roche.*

1:00 J7 **604.17** ● Synaptic characterization of Nlgn3 KO Rats. R. NAIR*; E. SYLWESTRAK; P. SCHEIFFELE; A. GHOSH. *F.Hoffmann La Roche, Biozentrum, Univ. of Basel.*

2:00 J8 **604.18** Decreased PI3K-Akt-mTOR signaling pathways in human autism and in rats exposed to valproic acid. M. FAHNESTOCK*; C. NICOLINI; Y. AHN; B. MICHALSKI; J. M. RHO. *McMaster Univ., McMaster Univ., Univ. of Calgary.*

3:00 J9 **604.19** Role for the secreted amyloid-β precursor protein (sAPPα) in Autism as early neurodevelopmental disorder. D. K. LAHIRI*; D. K. SOKOL; B. RAY. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

4:00 J10 **604.20** Prenatal exposure to histone deacetylase inhibitors delays neuronal maturation by regulating gene expression of morphogenesis-related molecules. T. KAWANAI*; R. WATANABE; A. INOUE; Y. AGO; K. TAKUMA; T. MTSUDA. *Osaka Univ., Unit-Grad. Sch. of Child Dev., Osaka Univ.*

1:00 J11 **604.21** Blocking MEK-ERK1/2 activity in TSC rescues defects in neuronal dendritic trees. C. M. BARTLEY*; L. ZHANG; X. GONG; L. S. HSIEH; T. V. LIN; A. BORDEY. *Yale Univ., Yale Univ. Sch. of Med.*

2:00 J12 **604.22** Dynamic autism-associated protein interaction networks engaged by glutamate activity at the synapse. S. E. SMITH*; S. C. NEIER; T. R. DAVIS; A. G. SCHRUM. *Mayo Clin.*

3:00 K1 **604.23** Role of FMRP in activity-dependent expression of synaptic proteins revealed by TimeSTAMP-tagging of PSD95. Y. GENG*; Y. YANG; M. Z. LIN. *Stanford Univ., Stanford Univ.*

4:00 K2 **604.24** Loss of Cntnap4 differentially alters GABAergic and dopaminergic synaptic transmission and triggers behavioral endophenotypes. G. J. FISHELL; E. AU; J. C. PATEL*; I. KRUGLIKOV; S. MARKX; R. DELORME; D. HERON; D. SALOMON; J. GLESSNER; S. RESTITUITO; A. GORDON; L. RODRIGUEZ-MURILLO; N. ROY; J. GOGOS; B. RUDY; M. E. RICE; M. KARAYIORGOU; H. HAKONARSON; B. KEREN; G. HUGUET; T. BOURGERON; C. HOEFFER; R. W. TSIEN; E. PELES; T. KARAYANNIS. *NYU Sch. of Med., NYU Sch. of Med., Columbia Univ., Inst. Pasteur, Pitie-Salpetriere, Children's Hosp. of Philadelphia, Weizmann Inst. of Sci., NYU Sch. of Med.*

1:00 K3 **604.25** Neural mechanisms of circuit homeostasis failure in MeCP2 disorders. H. LU*; R. T. ASH; W. WANG; D. YU; B. R. ARENKIEL; S. M. SMIRNAKIS; H. Y. ZOGHBI. *Baylor Col. of Med., Howard Hughes Med. Inst., Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

POSTER

605. Status Epilepticus-Induced Changes

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 K4 **605.01** ▲ Fn14-TWEAK mediate an inflammatory response in Status Epilepticus. Z. POTTANAT*. *Foff Lab.*

2:00 K5 **605.02** Alterations of amino acids involved in threonine metabolism in a rat model of acute seizures induced by lithium-pilocarpine. V. ARRIAGA-AVILA*; J. LANDGRAVE-GÓMEZ; O. MERCADO-GÓMEZ; R. GUEVARA-GUZMÁN. *Univ. Nacional Autonoma de Mexico.*

3:00 K6 **605.03** Characterization of chloride homeostais alteration in a rodent model of temporal lobe epilepsy. N. KOURDOUGLI*; C. PELLEGRINO; G. CHAZAL; J. GAIARSA; V. CRÉPEL; C. RIVERA. *INSERM UMR901.*

4:00 K7 **605.04** Interleukin-1β and IL-1RI expression in the developing rat thalamus and amygdala following status epilepticus. D. ALVAREZ-CRODA*; L. BELTRÁN-PARRAZAL; C. MORGADO-VALLE; C. A. PEREZ-ESTUDILLO; M. L. LÓPEZ-MERAZ. *Univ. Veracruzana, Univ. Veracruzana.*

1:00 K8 **605.05** Cellular and regional specific changes in multidrug efflux transporter expression during recovery of vasogenic edema in the rat hippocampus and piriform cortex. T. KANG*; J. KIM; A. KO; Y. KIM; J. KIM. *Col. Med, Hallym Univ.*

2:00 K9 **605.06** ▲ Balance in mitochondrial fission and fusion in neuronal injury in pilocarpine-induced epileptic rats. D. CARRERA-CALVO; J. SOLÍS-NAVARRETE; L. CÓRDOVA-DÁVALOS*; O. MERCADO-GÓMEZ; V. ARRIAGA-ÁVILA; E. MARTÍNEZ-ABUNDIS; R. GUEVARA-GUZMÁN. *UNAM, Univ. Juárez Autónoma de Tabasco.*

3:00 L1 **605.07** PARP1 activation/expression modulates regional specific neuronal and glial responses to seizure in a hemodynamic-independent manner. J. KIM*; J. KIM; Y. KIM; A. KO; T. KANG. *Dept. of Anat. and Neurobiology, Hallym Univ.*

4:00 L2 **605.08** Clonal analysis of newborn hippocampal dentate granule cell proliferation and development in temporal lobe epilepsy. S. P. SINGH*; S. C. DANZER. *Cincinnati Children's Hosp. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 L3 **605.09** Breaking the bottleneck of using kainate-resistant C57BL/6J mice in epilepsy research: Developing an advantageous early-onset mouse model of epilepsy. S. PUTTACHARY*; S. SHARMA; K. TSE; J. CRUTISON; A. SEXTON; T. THIPPESWAMY. *Iowa State Univ., Univ. of Liverpool.*

2:00 L4 **605.10** Changes in the expression of histone deacetylases 1-11 mRNAs in the hippocampus in mouse models of temporal lobe epilepsy. G. SPERK*; R. JAGIRDAR; M. DREXEL; R. TASAN. *Med. Univ. Innsbruck.*

3:00 L5 **605.11** Predicting and reversing depression and cognitive deficits in experimental temporal lobe epilepsy. C. BERNARD*; A. GHESTEM; F. BARTOLOMEI; S. SIYOUCEF; E. BOUVIER; C. BECKER; J. BENOLIEL. *INSERM U1106, UMRS 975.*

4:00 L6 **605.12** Diffusion tensor imaging detects progressive changes in hippocampal subfields during epileptogenesis. A. SIERRA LOPEZ*; T. MIETTINEN; R. SALO; T. LAITINEN; A. PITKÄNEN; O. GRÖHN. *A.I.Virtanen Inst., Univ. of Eastern Finland, Kuopio Univ. Hosp.*

1:00 L7 **605.13** MicroRNAs as biomarkers of epilepsy: expression profiling in the pilocarpine model. P. RONCON*; M. SOUKUPOVÀ; A. BINASCHI; C. FALCICCHIA; S. ZUCCHINI; M. FERRACIN; E. PETRETTO; M. R. JOHNSON; S. R. LANGLEY; M. SIMONATO. *Univ. of Ferrara, Univ. of Ferrara, Univ. of Ferrara, Imperial Col. London, Hammersmith Hosp., Imperial Col. London, Charing Cross Hosp.*

2:00 L8 **605.14** Loss of GluR1 and NeuN labeling within the dysgranular retrosplenial cortex after status epilepticus is not associated with cell death. S. HU*; A. M. SLOMKO; D. I. GREENTREE; J. WONGVGRAVIT; N. W. MACKLIN; L. K. FRIEDMAN. *New York Med. Col.*

3:00 L9 **605.15** Role of phosphatidylinositol 3-kinase in excitotoxicity induced by intrahippocampal microinjection of pilocarpine in C57BL/6 mice. I. V. LIMA*; A. C. CAMPOS; L. B. VIEIRA; M. F. D. MORAES; A. L. TEIXEIRA; A. C. P. DE OLIVEIRA. *Federal Univ. of Minas Gerais, Federal Univ. of Minas Gerais, Federal Univ. of Minas Gerais, Federal Univ. of Minas Gerais.*

POSTER

606. Human Studies of Epilepsy

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 L10 **606.01** Memory and forgetting in epileptics and controls: Testing the free-recall of emotional and neutral stimuli across three trials. V. M. SOLIS*, SR. *Psychology Dept. Natl. Univ. of Mexico.*

2:00 L11 **606.02** A virtual t-maze to assess oscillations during a working memory task in patients with temporal lobe epilepsy. A. A. ROBBINS*; A. S. TITIZ; G. L. HOLMES; B. C. JOBST. *Geisel Sch. of Med., Univ. of Vermont Col. of Med., Dartmouth Hitchcock Med. Ctr.*

3:00 L12 **606.03** Real-time cortical language mapping during spontaneous conversation with children. J. A. WILSON*; R. ARYA; H. FUJIWARA; F. T. MANGANO; D. ROSE. *Cincinnati Children's Hosp., Cincinnati Children's Hosp.*

4:00 M1 **606.04** Effects of subclinical epileptiform discharges on driving performance in people with epilepsy. Y. SI*; E. GUDBRANSON; W. C. CHEN; M. MIDURA; R. WU; B. GENG; P. VITKOVSKIY; A. SIVARAJU; R. SAINJU; A. FERNANDEZ; A. ALAREDDY; I. QURAISHI; R. B. DUCKROW; L. J. HIRSCH; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

1:00 M2 **606.05** A portable handheld device for prospective driving evaluation in the epilepsy monitoring unit. N. LI; J. THOMSON; W. CHEN; D. KLUGER; C. CUNNINGHAM; R. GEBRE; Y. SI; J. BLUMENFELD; E. CHEN; M. JOHNSON; P. VITKOVSKIY; Y. BAYKARA; E. GUDBRANSON; A. MORAWO; H. BLUMENFELD*. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

2:00 M3 **606.06** Examining white matter abnormalities in patients with Temporal Lobe Epilepsy using diffusion MRI. A. J. BARNETT*; M. P. MCANDREWS. *Univ. of Toronto, Univ. Hlth. Network.*

3:00 M4 **606.07** Improving seizure detection with single/multiunit information in the MTL requires the extraction of specific subpopulations. X. LONG*; A. MISRA; M. R. SPERLING; A. D. SHARAN; K. A. MOXON. *Drexel Univ., Thomas Jefferson Univ., Thomas Jefferson Univ.*

4:00 M5 **606.08** ● Single-unit activity evoked by electrical stimulation of human epileptogenic cortex. A. BARBORICA*; C. DONOS; I. MINDRUTA; J. CIUREA. *Univ. of Bucharest, FHC Europe, Univ. Emergency Hosp., Bagdasar-Arseni Emergency Hosp.*

1:00 M6 **606.09** Glutamate-mediated up-regulation of the multidrug resistance protein 2 in porcine and human brain capillaries. H. L. MUNGUÌA*; J. D. SALVAMOSER; B. PASCHER; T. PIEPER; T. GETZINGER; M. KUDERNATSCH; H. POTSCHKA. *CINVESTAV, Ludwig-Maximilians-University Munich, Neuropediatric Clin. and Clin. for Neurorehabilitation, Schon Klinik Vogtareuth, Schon Klinik Vogtareuth.*

2:00 M7 **606.10** ● Impaired cerebrovascular reactivity in patients with mesial temporal lobe epilepsy. K. ALHADID*; O. SOBCYK; J. POUBLANC; A. CRAWLEY; L. VENKATRAGHAVAN; J. A. FISHER; D. J. MIKULIS; T. A. VALIANTE. *Toronto Western Res. Inst., Inst. of Med. Science, Univ. of Toronto, Joint Dept. of Med. Imaging, Univ. Hlth. Network, Univ. Hlth. Network, Dept. of Anaesthesia and Pain Management, Univ. Hlth. Network, Dept. of Physiology,University of Toronto, Joint department of Med. Imaging, Univ. Hlth. Network, Dept. of Surgery, Div. of Neurosurgery, Univ. of Toronto.*

3:00 M8 **606.11** Hippocampal newborn cells in infantile rasmussen encephalitis patients. E. D. MAGNO*; E. A. CAVALHEIRO; R. CORAS; I. BLÜMCKE. *UNIFESP, Hosp. Univ. of Erlangen.*

4:00 M9 **606.12** Epileptogenic mechanisms in mesial temporal lobe epilepsy: an *in vitro* optical imaging study of resected human hippocampus specimens. H. KITAURA*; H. SHIROZU; M. SONODA; H. SHIMIZU; H. MASUDA; H. TAKAHASHI; S. KAMEYAMA; A. KAKITA. *Brain Res. Inst, Niigata Univ., Nishi-Niigata Chuo Natl. Hosp.*

1:00 M10 **606.13** Pyramidal cell morphology in human cortical dysplasia. W. G. JANSSEN*; F. HAMZEI-SICHANI; J. C. ZINN; J. EVANS; A. D. SHARAN; M. R. SPERLING; K. SIMONYAN; P. R. HOF; J. H. MORRISON. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Thomas Jefferson Univ., Icahn Sch. of Med. at Mount Sinai, Thomas Jefferson Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 M11 **606.14** The functional connectome of high frequency networks during epileptic seizures. S. FUERTINGER*; F. HAMZEI-SICHANI; J. C. ZINN; M. R. SPERLING; A. D. SHARAN; K. SIMONYAN. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Thomas Jefferson Univ., Thomas Jefferson Univ.*

3:00 M12 **606.15** Pyramidal cell morphology in seizure onset zone, seizure spread zone and silent cortical areas in patients with parietal lobe epilepsy. F. HAMZEI-SICHANI*; J. C. ZINN; W. G. M. JANSSEN; J. EVANS; A. D. SHARAN; M. R. SPERLING; K. SIMONYAN; P. R. HOF; J. H. MORRISON. *Mount Sinai Sch. of Med., Mount Sinai Sch. of Med., Mount Sinai Sch. of Med., Thomas Jefferson Univ., Thomas Jefferson Univ.*

4:00 N1 **606.16** Redundancy and synergetic circuits in inter-ictal activity of human temporal lobe epilepsy. S. STRAMAGLIA*; A. ERRAMUZPE; G. J. ORTEGA; J. PASTOR; R. G. DE SOLA; D. MARINAZZO; J. M. CORTES. *Univ. Di Bari - Dept. Fisica, Ikerbasque: The Basque Fndn. for Sci., Biocruces Hlth. Res. Institute., Inst. de Investigación Sanitaria Hosp. de la Princesa, Ghent Univ.*

1:00 N2 **606.17** Ultrafast oscillations and cognitive processes in epileptic drug-resistant patients. M. MONTES DE OCA BASURTO*; F. VELASCO CAMPOS; R. J. STABA; D. VÁZQUEZ-BARRÓN; V. ANA LUISA; A. NUCHE-BRICAIRE; M. CUÉLLAR-HERRERA. *UNAM, Hosp. Gen. de México, David Geffen Sch. of Med. at UCLA.*

2:00 N3 **606.18** Alterations of 5-HT1A receptor-induced G-protein functional activation and relationship to memory deficits in patients with pharmacoresistant temporal lobe epilepsy. M. CUÉLLAR-HERRERA*; L. ROCHA; F. VELASCO; D. TREJO-MARTINEZ; A. NUCHE-BRICAIRE; M. ALONSO-VENEGAS; A. L. VELASCO. *Hosp. Gen. de Mexico, Ctr. of Res. and Advanced Studies., Hosp. Gen. de Mexico, Natl. Inst. of Neurol. and Neurosurg. Manuel Velasco Suarez.*

3:00 N4 **606.19** Changes in neuronal activity outside of the seizure focus in patients with temporal lobe epilepsy. J. NAFTULIN*; O. AHMED; S. CASH. *Massachusetts Gen. Hosp.*

4:00 N5 **606.20** The role of BDNF-TRKB signaling in epileptogenesis in human hypothalamic hamartoma. Y. HUANG; S. SEMAAN; Q. LIU; Y. CHANG*; J. WU. *St. Joseph's Hosp. and Med. Ctr., Barrow Neurolog. Inst., St. Joseph's Hosp. & Med. Ctr.*

1:00 N6 **606.21** Yield of linear pairwise granger causality in seizure onset identification versus visual EEG evaluation in pharmaco-resistant non-lesional partial epilepsy. E. ANDRADE*; Z. LIU. *Univ. Florida.*

2:00 N7 **606.22** Differential neuronal loss in the hippocampus of patients with temporal lobe epilepsy and psychiatric comorbidities. J. B. DE ROSS*; L. KANDRATAVICIUS; R. C. SCANDIUZZI; C. G. CARLOTTI JR; J. A. ASSIRATI JR; J. E. C. HALLAK; J. P. LEITE; J. A. S. CRIPPA. *Univ. of Sao Paulo.*

3:00 N8 **606.23** Brain connectivity analysis can identify primary epileptogenic zone in pediatric epilepsy patients. D. LEE*; Y. HUR; R. YU; H. KIM. *Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med., Inje Univ. Haeundae Paik Hosp.*

4:00 N9 **606.24** Genetics markers associated with refractory epilepsy in mexican patients. V. CAMPOS-PEÑA*; D. TORAL-RIOS; M. ALONSO-VANEGAS; J. VILLEDA-HERNÁNDEZ. *INSTITUTO NACIONAL DE Neurología Y Neurocirugía, Ctr. de Investigación y de Estudios Avanzados, Inst. Nacional de Nuerología y Neurocirugía.*

1:00 N10 **606.25** Empirical mode decomposition as a seizure detection tool. K. R. ASHMONT*; R. WAHNOUN; P. ADELSON; S. HELMS TILLERY; B. GREGER. *Arizona State Univ., Barrow Neurolog. Inst. at Phoenix Children's Hosp.*

2:00 N11 **606.26** Changes in extracellular metabolites during cooling of the epileptogenic cortex in human epilepsy; an intraoperative microdialysis study. T. INOUE*; S. NOMURA; M. FUJII; Y. HE; Y. MARUTA; H. KOIZUMI; E. SUEHIRO; H. IMOTO; T. YAMAKAWA; M. SUZUKI. *Yamaguchi Univ., Fuzzy Logic Syst. Inst.*

3:00 N12 **606.27** Deviations from critical dynamics in inter-ictal epileptiform activity. O. ARVIV*; L. SHEINTUCH; M. MEDVEDOVSKY; A. GOLDSTEIN; A. FRIEDMAN; O. SHRIKI. *Bar Ilan Univ., Ben-Gurion Univ. of the Negev, Ben-Gurion Univ. of the Negev, Tel-Aviv Sourasky Med. Ctr., Bar-Ilan Univ., Ben-Gurion Univ. of the Negev.*

4:00 O1 **606.28** ▲ Brain metals: Methods of analysis and their role in epilepsy. L. K. FRUTOS*; L. K. FRUTOS*; E. L. OHAYON; A. LAM. *Green Neurosci. Laboratory, Neurolinx Res. Inst., Toronto Western Res. Institute, Univ. of Toronto.*

POSTER

607. Traumatic Brain Injury: Cellular Events and Repair

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 O2 **607.01** Mild traumatic brain injury in adult mice induces marked neurogenesis in the dentate gyrus. T. L. NIEDZIELKO*; P. C. PUGH; J. H. CHANCEY; L. OVERSTREET-WADICHE; C. L. FLOYD. *Univ. Alabama, Birmingham, Univ. Alabama, Birmingham.*

2:00 O3 **607.02** T cell infiltration into the brain after traumatic brain injury is associated with injury severity. X. E. NDODE-EKANE*; L. MATTHIESEN; A. PITKÄNEN. *A.I. Virtanen Institute, Univ. of Eastern Fin.*

3:00 O4 **607.03** Neuronal death and glial activation in rat organotypic hippocampal slice cultures exposed to a blast injury. A. P. MILLER*; A. SHAH; B. V. APERI; M. D. BUDDE; F. A. PINTAR; S. KURPAD; B. D. STEMPER; A. GLAVASKI-JOKSIMOVIC. *Med. Col. of Wisconsin, Med. Col. of Wisconsin.*

4:00 O5 **607.04** Effect of aging on cognitive outcome and neuroinflammatory response after traumatic brain injury. A. CHOU*; J. M. MORGANTI; S. ROSI. *Univ. of California, San Francisco.*

1:00 O6 **607.05** Effects of PTEN inhibition on neuronal morphological changes and survival after traumatic brain injury. C. LIANG*; K. ELMORSHEDY; P. SWIATKOWSKI; T. M. KAZDOBA; I. NIKOLAEVA; M. BEAMER; D. F. MEANEY; G. D'ARCANGELO; B. L. FIRESTEIN. *Rutgers Univ., Univ. of Pennsylvania.*

2:00 O7 **607.06** Expression and effects of c-Ski in mice brain after traumatic brain injury. Y. ZHOU*; P. LI; X. CHEN; Y. PENG; Z. ZHAO; Y. NING; N. YANG; Y. ZHAO; X. CHEN; R. XIONG. *Res. Inst. Surg and Daping Hosp. ,TMMU.*

3:00 O8 **607.07** Phosphorylation of Tau after blast exposure: A potential predisposition to Alzheimer's-like pathology. P. ARUN*; D. M. WILDER; A. A. EDWARDS; Y. WANG; I. D. GIST; J. B. LONG. *Walter Reed Army Inst. of Res.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 O9 **607.08** Quantitative microscopic analysis of morphology of individual neuronal mitochondria in the cortex of anesthetized mice under injury. M. KISLIN*; E. PRYAZHNIKOV; E. LIHAVAINEN; R. AFZALOV; D. TOPTUNOV; A. S. RIBEIRO; L. KHIROUG. *Univ. of Helsinki, Tampere Univ. of Technol.*

1:00 O10 **607.09** Progression of myelin pathology in TBI with traumatic axonal injury of the corpus callosum. A. J. MIERZWA*; C. M. MARION; G. M. SULLIVAN; D. MCDANIEL; R. C. ARMSTRONG. *Uniformed Services Univ. of the Hlth. Sci., Ctr. for Neurosci. and Regenerative Med.*

2:00 O11 **607.10** Early M1 and M2 response in hippocampus following traumatic brain injury. M. A. ANSARI*; K. N. ROBBERTS; T. L. SUDDUTH; D. M. WILCOCK; S. W. SCHEFF. *Univ. Kentucky, Univ. of Kentucky, Uneversity of Kentucky.*

3:00 O12 **607.11** MTORC1 signal activation in the mouse hippocampus after traumatic brain injury. I. K. NIKOLAEVA*; B. CROWELL; J. VALENZIANO; D. MEANEY; G. D'ARCANGELO. *Rutgers, the State Univ. of New Jersey, Rutgers, the State Univ. of New Jersey, Univ. of Pennsylvania, Rutgers, the State Univ. of New Jersey.*

4:00 P1 **607.12** TBI influences systemic inflammation by mediating differentiation of myeloid cells. S. LEE*; N. SINGHAL; J. SACRAMENTO; A. LIN; J. C. BRESNAHAN; M. S. BEATTIE. *UCSF.*

1:00 P2 **607.13** Decreased axonal transport following pediatric traumatic brain injury. L. A. HANLON*; J. W. HUH; D. P. FOX; R. RAGHUPATHI. *Drexel Univ. Col. of Med., Children's Hosp. of Philadelphia.*

2:00 P3 **607.14** Decreased expression of wild-type alpha-synuclein in rat ipsilateral hippocampus after traumatic brain injury. H. Q. YAN; Y. LI; J. J. HENCHIR; X. MA; S. CARLSON; C. DIXON*. *Univ. of Pittsburgh, VA Pittsburgh Healthcare Syst.*

3:00 P4 **607.15** Structural differences between granule cells and semilunar granule cells. F. ELGAMMAL; A. GUPTA; A. PRODDUTUR; B. SWIETEK; V. SANTHAKUMAR*. *Fatima Elgammal, New Jersey Med. School, Rutgers, New Jersey Med. School, Rutgers.*

4:00 P5 **607.16** Temporal changes in brain lipids after traumatic brain injury - A global lipidomics study. T. ANTHONYMUTHU; Y. Y. TYURINA; J. LEWIS; V. A. TYURIN; A. A. AMOSCATO; P. KOCHANEK; V. E. KAGAN; H. BAYIR*. *Univ. Pittsburgh, Univ. Pittsburgh, Univ. Pittsburgh, Univ. Pittsburgh.*

1:00 P6 **607.17** HB-GAM overcomes the CSPG-dependent inhibition of neurite growth and cell attachment. M. N. PAVELIEV*; H. RAUVALA. *Univ. of Helsinki.*

2:00 P7 **607.18** MicroRNAs regulate mitophagy induced by experimental traumatic brain injury. H. CHAO; X. XU; N. LIU; J. JI*. *Nanjing Med. Univ., Univ. of Pittsburgh.*

3:00 P8 **607.19** Cold environment exacerbates brain pathology and oxidative stress following traumatic brain injuries. Potential therapeutic effects of nanowired antioxidant H-290/51. A. SHARMA*; D. F. MURESANU; P. SJÖQUIST; Z. TIAN; H. S. SHARMA. *Uppsala Univ., Univ. of Med. & Pharm., Karolinska Institute, Karolinska Univ. Hosp., Univ. of Arkansas, Uppsala Univ. Hosp.*

4:00 P9 **607.20** Tio2 nanowired dl-3-n-butylphthalide (dl-nbp) delivery, a chinese traditional medicine profoundly attenuates blood-brain barrier disruption, brain edema formation and neuronal injuries following concussive head injury. L. FENG*; A. SHARMA; H. YIN; J. V. LAFUENTE; H. S. SHARMA. *Bethune Intl. Peace Hosp., Uppsala Univ. Hosp., CSPC NBP Pharmaceut. Med., Univ. of Basque Country.*

1:00 P10 **607.21** Nanowired delivery of histamine receptor antagonists attenuate nitric oxide synthase upregulation and spinal cord pathology following trauma. R. PATNAIK*; A. SHARMA; J. V. LAFUENTE; D. F. MURESANU; A. NOZARI; H. S. SHARMA. *Indian Inst. of Technology,Banaras Hindu Univ., Uppsala Univ. Hosp., Univ. of Basque Country, Univ. of Med. & Pharm., Massachusetts Gen. Hospital, Harvard Med. Sch.*

2:00 P11 **607.22** Superior neuroprotective effects of nanowired delivery of AP-713 as compared to AP-173 and AP-364 compounds on functional recovery and cellular injuries following spinal cord trauma. A. K. PANDEY*; A. SHARMA; J. V. LAFUENTE; Z. TIAN; D. F. MURESANU; R. PATNAIK; T. LUNDSTEDT; E. SEIFERT; H. S. SHARMA. *Senior Res. Fellow, IIT-BHU, Uppsala Univ. Hosp., Univ. of Basque Country, Univ. of Arkansas, Univ. of Med. & Pharm., Indian Inst. of Technology, Banaras Hindu Univ., Uppsala Univ., Acure Pharma.*

3:00 P12 **607.23** Perivascular basement membrane proteins changes long-term after a juvenile traumatic brain injury: Possible link with amyloid-beta accumulation. A. JULLIENNE*; J. BADAUT; J. ROBERTS; V. POP; M. P. MURPHY; E. HEAD; W. J. PEARCE; G. J. BIX. *Loma Linda Univ., Loma Linda Univ., Loma Linda Univ., Bordeaux Univ., Univ. of Kentucky.*

4:00 Q1 **607.24** Serum Amyloid A1 is induced in the liver following traumatic brain injury. S. VILLAPOL; D. KRYNDUSHKIN; M. BALAREZO; A. CAMPBELL; J. SAAVEDRA; F. P. SHEWMAKER; A. J. SYMES*. *USUHS, Georgetown Univ.*

1:00 Q2 **607.25** The cerebral cortex proteome in rodent models of fear conditioning and repetitive blast. A. M. BOUTTE*; J. GUINGAB-CAGMAT; E. MAUDLIN-JERONIMO; Y. CHEN; L. SIMMONS; S. AHLERS; R. GENOVESE; F. TORTELLA; K. SCHMID; J. DAVE. *Brain Trauma Neuroprotection and Neurorestoration Branch, Ctr. for Military Psychiatry and Neuroscience, Walter Reed Army Inst. of Res., Banyan Biomarkers, Inc., Dept. of Neurotrauma, Operational and Undersea Med. Directorate, Naval Med. Res. Ctr., Behavioral Biol. Branch, Ctr. for Military Psychiatry and Neuroscience, Walter Reed Army Inst. of Res., Brain Trauma Neuroprotection and Neurorestoration Branch, Ctr. for Military Psychiatry and Neuroscience, Walter Reed Army Inst. of Res.*

2:00 Q3 **607.26** ● MALDI analysis of lysophosphatidic acid levels after experimental traumatic brain injury in the rat. W. S. MCDONALD*; R. R. DRAKE; J. WOJCIAK; A. J. MORRIS; E. E. JONES; R. A. SABBADINI; N. G. HARRIS. *Univ. of California, Los Angeles, Med. Univ. of South Carolina, Lpath Inc., Univ. of Kentucky Col. of Med.*

Tue. PM

• Indicated a real or perceived conflict of interest, see page 157 for details.

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POSTER

608. Traumatic Brain Injury: Mechanisms and Therapeutics II

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Q4 **608.01** Glucose-dependent insulinotropic polypeptide (GIP) ameliorates traumatic brain injury-induced memory deficits in rats. Y. YU*; T. HSIEH; J. LAI; K. CHEN; J. LIN; Y. CHIANG. *Taipei Med. Univ., Taipei Med. Univ., Taipei Med. Univ., Taipei Med. Univ.*

2:00 Q5 **608.02** TBI-induced memory deficits are fully rescued by cannabinoid receptor agonist administration. M. B. ARAIN; L. A. CRAIG; S. T. NAKANISHI*. *Alberta Children's Hosp. Res. Inst., Regeneration Unit in Neurobio., Univ. Calgary.*

3:00 Q6 **608.03** Enriched environment can prevent most behavioral alterations induced by different schedules of noise exposure. S. J. MOLINA; M. SAINT-MARTIN; F. CAPANI; L. R. GUELMAN*. *Fac Med, UBA-CEFYBO-CONICET, Lab. de plasticidad y citoaerquitectura neuronal, ININCA-CONICET.*

4:00 Q7 **608.04** ● Novel allosteric inhibitors of TNF-R1 modulate post-traumatic sleep resulting from experimental diffuse TBI in the mouse. R. K. ROWE; J. L. HARRISON; H. ZHANG; D. P. HESSON; M. GREENE; J. LIFSHITZ*. *Phoenix Children's Hosp., Arizona State Univ., Univ. of Pennsylvania Perelman Sch. of Med.*

1:00 Q8 **608.05** Effects of tamoxifen in hindlimb kinematics after a penetrating injury in CA1 hippocampal region. J. R. LOPEZ RUIZ*; L. P. OSUNA CARRASCO; B. DE LA TORRE VALDOVINOS; N. E. FRANCO RODRIGUEZ; C. R. MOYA GARCÍA; I. JIMÉNEZ; J. M. DUEÑAS; S. DUEÑAS. *Univ. De Guadalajara, Univ. De Guadalajara, CINVESTAV, Univ. De Guadalajara.*

2:00 Q9 **608.06** A strategy to restore brain circuitry using micro-tissue engineered neural networks. J. P. HARRIS*; L. A. STRUZYNA; P. L. MURPHY; D. K. CULLEN. *Univ. of Pennsylvania, Philadelphia Veterans Affairs Med. Ctr.*

3:00 R1 **608.07** Traumatic brain injury and post-traumatic epilepsy: *In vivo* neuroprotective role of M-type K^+ channel. S. M. BIERBOWER*; M. S. SHAPIRO. *Univ. of Texas Hlth. Sci. Ctr.*

4:00 R2 **608.08** A "NEET" mitochondrial target: The importance of mitoNEET in pioglitazone mediated neuroprotection following TBI. H. M. YONUTAS*; J. D. PANDYA; A. H. SEBASTIAN; W. J. GELDENHUYS; R. T. CARROLL; P. G. SULLIVAN. *Univ. of Kentucky, Univ. of Kentucky, Northeast Ohio Med. Univ.*

1:00 R3 **608.09** The membrane-resealing agent, Poloxamer 188, provides protection from blood brain barrier disruption and neuronal damage following traumatic brain injury. L. L. KRAFJACK*; D. P. FOX; R. RAGHUPATHI. *Drexel Univ. Col. of Med.*

2:00 R4 **608.10** Targeting the p53 pathway to protect against traumatic brain injury. L. YANG*; K. CHANG; Y. CHU; N. GREIG; J. WANG. *Taipei Med. Univ., Taipei Med. Univ., NIH.*

3:00 R5 **608.11** A new treatment method for severe TBI. S. LU*. *411th Navy Hosp.*

4:00 R6 **608.12** Ischemic lesion in the white matter produces enduring spasticity in a rodent model. P. K. BOSE*; G. MUSTAFA; J. HOU; R. NELSON; J. DALY; S. E. NADEAU; S. DORE; F. J. THOMPSON. *North Florida/South Georgia VAMC, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

1:00 R7 **608.13** Mild traumatic brain injury (mTBI) produces alteration in orofacial and peripheral pain in a rodent model. G. MUSTAFA*; J. HOU; S. TSUDA; R. NELSON; A. SINHAROY; R. M. CAUDLE; J. K. NEUBERT; F. J. THOMPSON; P. BOSE. *North Florida/South Georgia Veterans Hlth. Syst., Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

2:00 R8 **608.14** Acute intrathecal baclofen (ITB) reduces TBI-Induced spasticity in a dose-dependent manner without adversely affecting cognitive performance. F. J. THOMPSON*; J. HOU; R. NELSON; G. MUSTAFA; A. SINHAROY; R. PANDEY; Z. WILKIE; S. TSUDA; L. PAGE; P. BOSE. *North Florida/South Georgia Veterans Hlth. Syst., Univ. of Florida, Univ. of Florida, North Florida/South Georgia Veterans Hlth. Syst., Univ. of Florida, Medtronic, Univ. of Florida.*

3:00 R9 **608.15** Transcranial magnetic stimulation (TMS) improves TBI-induced spasticity, balance and anxiety disorders. J. HOU*; R. NELSON; Z. WILKIE; J. JOHN; G. MUSTAFA; S. TSUDA; A. SINHAROY; R. PANDEY; P. BOSE; F. J. THOMPSON. *North Florida/South Georgia Veterans Hlth. Syst., Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

4:00 R10 **608.16** Closed-head traumatic brain injury (cTBI) disrupts the integrity of central noradrenergic system in rat. S. TSUDA*; J. HOU; R. NELSON; G. MUSTAFA; Z. WILKIE; R. PANDEY; A. SINHAROY; F. THOMPSON; P. BOSE. *Malcom Randal VA Med. Ctr., Univ. of Florida, Malcom Randal VA Med. Ctr., Univ. of Florida, Malcom Randal VA Med. Ctr., Univ. of Florida.*

1:00 R11 **608.17** Moderate docosahexaenoic acid deficiency impairs recovery from traumatic brain injury. J. BARNES*; A. DESAI; K. KEVALA; M. RASHID; H. KIM. *Natl. Inst. On Alcohol Abuse and Alcoholism.*

2:00 R12 **608.18** Preservation of whisker sensation due to Wnt administration following traumatic brain injury in the barrel cortex of mice. J. Y. ZHANG*; J. LEE; X. GU; S. P. YU; L. WEI. *Emory Univ., Emory Univ.*

3:00 S1 **608.19** Magnetic retention of human neuroprogenitor cells transplanted into a traumatic brain injury model. W. SHEN; C. PLACHEZ; D. YARNELL; O. TSYMBALYUK; S. XU; A. C. PUCHE; J. SIMARD; P. S. FISHMAN; P. J. YAROWSKY*. *Univ. Maryland, Sch. of Med., VA MD Healthcare Syst., Univ. Maryland, Sch. of Med., Univ. Maryland, Sch. of Med., Univ. Maryland, Sch. of Med., Univ. Maryland, Sch. of Med., Univ. Maryland, Sch. of Med.*

4:00 S2 **608.20** Behavioral changes in docosahexaenoic acid deficient female mice after traumatic brain injury. A. DESAI*; J. BARNES; K. KEVALA; H. KIM. *Natl. Inst. On Alcohol Abuse and Alcoholism.*

1:00 S3 **608.21** Classifying pediatric traumatic brain injury using an automated digital measurement algorithm to detect cerebral edema. E. TA*; S. LAUGHLIN; C. S. PARSHURAM; J. HUTCHISON; A. M. GUERGUERIAN; Y. INVESTIGATORS. *The Hosp. For Sick Children - Res. Inst., The Hosp. For Sick Children, The Hosp. For Sick Children - Res. Inst., The Hosp. For Sick Children - Res. Inst., Canadian Critical Care Trials Group.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 S4 **608.22** Neurotherapeutic effect in mice after traumatic brain injury by CD45+ hematopoietic cells from human cord blood. P. LAZAROVICI*; H. ARIEN-ZAKAY; G. GINCBERG; A. NAGLER; G. COHEN; S. LIRAZ-ZALTSMAN; V. TREMBOVLER; A. G. ALEXANDROVICH; I. MATOK; H. GALSKI; U. ELCHALAL; P. LELKES; E. SHOHAMI. *Hebrew Univ. Jerusalem, Chaim Sheba Med. Ctr., Hadassah Univ. Hosp., Temple Univ.*

3:00 S5 **608.23** Flavanol (-)-epicatechin is neuroprotective after intracerebral hemorrhage. J. WANG*; C. CHANG; S. CHO. *Johns Hopkins Univ., Sch. of Med.*

4:00 S6 **608.24** Digitally controlling the biomechanics of fluid percussion injury to better understand the range of mild tbi. M. LONG*; S. P. SINHA; N. NADPARA; K. PANG; B. PFISTER. *New Jersey Inst. of Technol., Rutgers Biomed. and Hlth. Sci., New Jersey Med. Sch., The Col. of New Jersey, Veterans Affairs Med. Ctr.*

1:00 S7 **608.25** WITHDRAWN.

2:00 S8 **608.26** Enhanced fear learning and increased cortical GABA following mild traumatic brain injury in mice. B. SCHNEIDER*; F. GHODDOUSSI; J. CHARLTON; R. KOHLER; S. A. PERRINE; A. C. CONTI. *John D. Dingell VA Med. Ctr., Wayne State Univ., Wayne State Univ., Wayne State Univ.*

3:00 S9 **608.27** The emergence of a depressive phenotype after mild concussions in the adult mouse. N. MISTRY*; S. HALAVI; M. HAMER; A. OBENAUS; R. E. HARTMAN. *Loma Linda Univ., Loma Linda Univ., Loma Linda Univ., Univ. of California Riverside.*

4:00 S10 **608.28** The effects of closed-head injury on scent marking behaviors in mice. S. HALAVI*; N. MISTRY; M. HAMER; M. EVANS; B. SEMPLE; A. OBENAUS; R. HARTMAN. *Loma Linda Univ., Loma Linda Univ., Univ. of California, San Francisco, Loma Linda Univ., Univ. of California Riverside.*

1:00 S11 **608.29** Impairments in social familiarity-induced anxiolysis (SoFiA) after mild blast-induced traumatic brain injury (mbTBI). S. M. VEGA ALVAREZ*; E. LUNGWITZ; N. RACE; T. R. WARNER; W. TRUITT; R. SHI. *Purdue Univ., Purdue Univ., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Purdue Univ., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

2:00 S12 **608.30** Neuroinflammation and cognitive deficits in a rabbit pediatric traumatic brain injury model. Z. ZHANG*; M. SARASWATI; R. C. KOEHLER; C. ROBERTSON; S. KANNAN. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

POSTER

609. Spinal Cord Signaling in Trauma

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 T1 **609.01** α-Synuclein increases in the injured spinal cord and is linked to axon loss. A. D. SAUERBECK*; D. M. MCTIGUE. *Ohio State Univ.*

2:00 T2 **609.02** Chronic oligodendrogenesis and remyelination after spinal cord injury in mice and rats. Z. C. HESP*; E. Z. GOLDSTEIN; C. J. MIRANDA; B. K. KASPAR; D. M. MCTIGUE. *The Ohio State Univ., Nationwide Children's Hosp., The Ohio State Univ.*

3:00 T3 **609.03** Toll-like receptor 4 (TLR4) deficiency impairs oligodendrocyte lineage cell responses after spinal cord injury. J. S. CHURCH*; P. G. POPOVICH; D. M. MCTIGUE. *The Ohio State Univ.*

4:00 T4 **609.04** Disruption of the gut microbiome enhances inflammation and impairs recovery after spinal cord injury. K. A. KIGERL*; J. C. HALL; P. G. POPOVICH. *The Ohio State Univ.*

1:00 T5 **609.05** TLR4 signaling promotes iron storage but enhances iron-mediated oligodendrocyte death in the CNS. E. GOLDSTEIN*; J. S. CHURCH; P. G. POPOVICH; D. M. MCTIGUE. *The Ohio State Univ.*

2:00 T6 **609.06** Activation of dectin-1, an anti-fungal immune receptor, by endogenous CNS proteins causes destructive inflammation after traumatic spinal cord injury. Y. WANG*; J. HALL; Z. GUAN; P. POPOVICH. *Wexner Med. Ctr. At Ohio State Univ., Waxner Med. Ctr. at the Ohio State Univ.*

3:00 T7 **609.07** Is placental growth factor involved in spinal cord repair? R. /. FRANZEN*; L. CHABALLE; P. ROWART; F. SCHOLTES; J. SCHOENEN. *Univ. of Leige.*

4:00 T8 **609.08** Transforming growth factor beta-induced expression of chondroitin sulphate proteoglycans in reactive astrocytes: roles of non-Smad signaling pathways and autophagy. S. S. HANNILA*; N. JAHAN; S. GHAVAMI. *Univ. of Manitoba.*

1:00 T9 **609.09** Epigenetic regulation of axonal regeneration. M. I. SHIFMAN*; J. CHEN; C. LARAMORE; A. CORNICK; J. SHAHOUD. *Temple Univ. Sch. of Med.*

2:00 T10 **609.10** Nogo, MAG, OMgp and CSPGs are not critical barriers preventing intraspinal regeneration of dorsal root axons. J. ZHAI; H. KIM; S. HAN; J. K. LEE; B. ZHENG; G. M. SMITH; Y. SON*. *Temple Univ. Sch. of Med., Univ. of Miami, Univ. of California.*

3:00 T11 **609.11** Regeneration occurs in the CNS of CAST/Ei mice as a consequence of enhanced Activin signaling. T. OMURA*; K. OMURA; P. RIVA; A. TEDESCHI; L. ROJAS; J. MARTIN; H. A. HUEBNER; M. PAINTER; A. LATREMOLIERE; Y. YIN; L. BARRETT; B. SINGH; S. LEE; T. CRISMAN; F. GAO; S. LI; D. GESCHWIND; G. COPPOLA; Z. HE; S. T. CARMICHAEL; L. BENOWITZ; M. COSTIGAN; C. WOOLF. *Hamamatsu Univ. Sch. of Med., Boston Chlidren's Hosp. and Harvard Med. Sch., Semel Inst. for Neurosci. and Human Behavior, David Geffen Sch. of Medicine, Univ. of California, Los Angeles, David Geffen Sch. of Medicine, and Multiple Myeloma Res. Consortium, Semel Inst. for Neurosci. and Human Behavior, Univ. of California.*

4:00 T12 **609.12** The role of epigenetics in axonal regeneration and functional recovery following spinal cord injury. A. HERVERA; L. ZHOU; I. PALMISANO; G. KONG; R. PUTTAGUNTA; R. LINDNER; S. DI GIOVANNI*. *Imperial Col. London, HIH, Imperial Col. London.*

1:00 U1 **609.13** Blocking cPLA2 ameliorated motor deficits and reduced tissue damage after spinal cord injury. N. LIU*; L. DENG; Y. ZHANG; Q. LU; X. WANG; J. HU; C. L. WALKER; J. V. BONVENTRE; C. B. SHIELDS; X. XU. *Indiana Univ., Norton Healthcare, Harvard Med. Sch.*

2:00 U2 **609.14** Targeting sci induced dendritic spine dysgenesis to attenuate neuropathic pain. A. M. TAN*; S. LIU; B. VOHRA; S. G. WAXMAN. *Yale University/ VA Connecticut Healthcare Syst., Yale University/VA Connecticut.*

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3:00 U3 **609.15** Disrupted autophagy after spinal cord injury is associated with neuronal cell death. S. S. LIU*; C. SARKAR; E. Y. KOH; J. WU; M. LIPINSKI. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

4:00 U4 **609.16** Factors influencing macrophage polarization in spinal cord injury. A. KRONER-MILSCH*; A. D. GREENHALGH; J. G. ZARRUK; S. DAVID. *Ctr. For Res. In Neuroscience, Res. Inst. of the McGill Univ.*

1:00 U5 **609.17** Genetic modifications of Crmp enhance axonal regrowth after spinal cord injury by reducing cytoskeletal destabilization and inflammatory responses. J. NAGAI*; Y. KITAMURA; K. OWADA; Y. GOSHIMA; T. OHSHIMA. *Waseda Univ., Yokohama City Univ.*

2:00 U6 **609.18** ▲ Virally delivered ADAMTS-5 as a strategy to promote axon growth in inhibitory CSPG environments. K. WINSOR*; Z. WANG; D. COLEY; C. NIENHAUS; M. BLACKMORE. *Marquette Univ.*

3:00 U7 **609.19** Cannabinoid CB2 receptor (CB2R) stimulation delays rubrospinal mitochondrial-dependent degeneration and improves functional recovery after spinal cord hemisection. M. VISCOMI*; L. LATINI; E. BISICCHIA; V. SASSO; V. CAVALLUCCI; M. MOLINARI. *Fondazione Santa Lucia.*

4:00 U8 **609.20** FasL modulates disruption of the blood-spinal cord barrier, glial scarring and inflammation after spinal cord injury: Evidence from human tissue and mouse model. W. YU*; M. G. FEHLINGS. *Divisions of Genet. & Develop. and Neurosurgery, Toronto Western Res.*

1:00 U9 **609.21** Role of toll-like receptor 9 activation in the intact spinal cord: Effects on neurons and glia. A. PALLOTTIE*; L. NI; W. DONG; R. F. HEARY; S. ELKABES. *Grad. Sch. of Biomed. Sci., Rutgers Univ., Reynolds Family Spine Laboratory, New Jersey Med. School, Rutgers, The State Univ. of New Jersey.*

2:00 U10 **609.22** Depression-like behaviors and altered serotonergic signaling resulting from spinal cord injury in rats. D. STEWART*; C. FLOYD. *Univ. of Alabama At Birmingham.*

3:00 U11 **609.23** The severity-dependent negative effects of isolated thoracic spinal cord contusion in mice on cognitive and affective behaviors. Z. ZHAO*; B. A. STOICA; A. I. FADEN; J. WU. *Univ. of Maryland At Baltimore, Univ. of Maryland Sch. of Med.*

POSTER

610. Neuroprotection in Ischemia, Stress, and Injury

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 U12 **610.01** Neuroprotective effect of sodium nitroprusside depends of cellular differentiation stage and damage conditions in different cell lineages. R. MACIAS-VÉLEZ*; L. SAUCEDO ARELLANO; M. RIVERA CERVANTES; R. SCHLIEBS. *Univ. De Guadalajara, Paul Flechsig Inst. for Brain Res.*

2:00 U13 **610.02** ● The neurotherapeutic effects of the calcium binding protein apoaequorin. V. L. EHLERS*; E. L. ADAMS; N. B. FETTINGER; S. C. MICHELS; J. R. MOYER, Jr. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee.*

3:00 U14 **610.03** GABA treatment induces significant differences in the unfolded protein response (UPR) in cerebral cortex and hippocampus in an oxygen and glucose deprivation (OGD) model. M. SANTOS GALDIANO*; D. PEREZ-RODRIGUEZ; B. ANUNCIBAY-SOTO; E. FONT; I. FERNANDEZ-UGIDOS; P. GONZALEZ-RODRIGUEZ; C. C. PEREZ-GARCIA; A. FERNANDEZ-LOPEZ. *Univ. de Leon, Univ. de Leon. Inst. de Biomedicina, Univ. de Leon. Inst. de Biomedicina.*

4:00 U15 **610.04** Distinct roles of polycomb group proteins and their associated proteins in neuronal cells and endocrinal cells. F. BIAN*; J. RICE; L. CAO; Y. LI; A. ZHOU. *Morehouse Sch. of Med., Spelman college, Morehouse Sch. of Med.*

1:00 U16 **610.05** Inhibition of 20-hydroxyeicosatetraenoic acid (20-HETE) synthesis decreases apoptotic and necrotic neurodegeneration produced by oxygen-glucose deprivation. L. DU; S. M. POLOYAC; T. C. JACKSON; H. BAYIR; P. M. KOCHANEK; R. S. B. CLARK; M. D. MANOLE*. *Univ. of Pittsburgh, Univ. Pittsburgh.*

2:00 U17 **610.06** ● The tri-block co-polymer F-68 (Poloxamer 188) blocks oxygen-glucose deprivation-induced increases in reactive oxygen species and prevents lipid peroxidation. P. B. SHELAT; J. C. WANG; J. D. MARKS*. *Univ. of Chicago.*

3:00 U18 **610.07** 2-(4-Methoxyphenyl)ethyl-2-acetamido-2-deoxy-β-D-pyranoside confers neuroprotection in cell and animal models of ischemic stroke through calpain1/PKA/CREB-mediated induction of neuronal glucose transporter 3. S. YU; Q. HE; L. WEI; F. DING*. *Nantong University, China.*

4:00 U19 **610.08** The ability of a pomegranate husk extract to modify Alzheimer's disease pathology in aged transgenic mice. G. M. SUBAIEA*; A. H. AHMED; N. P. SEERAM; A. E. EID; N. H. ZAWIA. *Univ. of Hail, Univ. of Rhode Island, Univ. of Rhode Island.*

1:00 U20 **610.09** Activated Protein C exert its neuroprotective activity via FAIM2 against oxygen-glucose deprivation in cultured SH-SY5Y Cells. M. K. SRIWASTVA*; R. KUNJUNNI; K. PRASAD; R. SAXENA; V. SUBBIAH. *All India Instiute of Med. Sci., All India Instiute of Med. Sci., All India Instiute of Med. Sci.*

2:00 U21 **610.10** Activation of the delta opioid receptor attenuates ASIC1a-mediated neuronal death. J. VICK*; T. SHERWOOD; E. SCHIMMOELLER; C. ASKWITH. *The Ohio State Univ.*

3:00 U22 **610.11** Glucose-deprivation attenuates sortilin expression via AMP kinase cascade in PC12 cells. K. KAWASHIMA*; K. FUJINO; Y. OGURA; N. MIYANISHI; T. NEDACHI. *Toyo Univ.*

4:00 U23 **610.12** PPAR-γ by suppressing NADPH oxidase subunit p22-phox transcription attenuates ischemic brain damage. J. WU*; H. TSAI; W. CHEUNG; T. LIN. *IBMS Academia sinica.*

1:00 U24 **610.13** Demonstration of ischemic preconditioning in white matter: Critical role for toll-like receptor-4. M. A. HAMNER*; R. V. LEE; Z. YE; D. C. HANSSEN; B. R. RANSOM; J. R. WEINSTEIN. *Univ. Washington.*

2:00 U25 **610.14** Alpha(α)-synuclein increases injury vulnerability due to oxidative stress or ischemia. X. YANG*; H. ZHOU; M. A. HAMNER; Z. YE; B. R. RANSOM. *Univ. of Washington, Ruijin Hospital, affiliated with Shanghai Jiaotong Univ. Sch. of Med., Univ. of Washington.*

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3:00 U26 **610.15** Functionalized magnetic iron oxide nanoparticles induced Ubiquitin and heat shock protein responses following hyperthermia in the central nervous system is attenuated by nanowired cerebrolysin. P. K. MENON*; J. V. LAFUENTE; A. SHARMA; D. F. MURESANU; A. WANG; Z. P. AGUILAR; R. PATNAIK; H. MOESSLER; H. S. SHARMA. *Banaras Hindu Univ., Univ. of Basque Country, Uppsala Univ. Hosp., Univ. of Med. & Pharm., Ocean NanoTech, Zystein, LLC, Indian Inst. of Technology, Banaras Hindu Univ., Ever Neuro Pharma, Uppsala Univ. Hosp.*

4:00 U27 **610.16** Superior antioxidant effects of nanowired cerebrolysin in heat stroke following intoxication of engineered Ag and Cu nanoparticles. D. F. MURESANU*; A. SHARMA; R. PATNAIK; A. BUZOIANU; H. MOESSLER; H. S. SHARMA. *Romanian Society for the Study of Neuroprotection and Neuroplasticity, Uppsala Univ. Hosp., Indian Inst. of Technology, Banaras Hindu Univ., Univ. of Med. & Pharm., Ever Neuro Pharma.*

1:00 U28 **610.17** Autophagic containment of mitochondria: Role in preconditioning protection. B. N. LIZAMA-MANIBUSAN*; A. M. PALUBINSKY; I. S. KHAN; R. J. SINGER; B. MCLAUGHLIN. *Vanderbilt Univ. Med. Ctr., Dartmouth-Hitchcock Med. Ctr., Vanderbilt Univ. Med. Ctr.*

2:00 U29 **610.18** The possible role of PINK1 in cardiolipin mediated mitophagy. M. K. DAIL*; C. T. CHU. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 U30 **610.19** Haplo-insufficiency of autophagy proteins beclin 1 and VPS34 is linked to age-dependent neuroprotection. N. C. MCKNIGHT*; M. S. WOLD; Z. YUE. *Mount Sinai Sch. of Med., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

POSTER

611. Ischemia Inflammation: White Cells and Cytokines

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 U31 **611.01** Characterization of inflammation in acute and non-acute ischemic infarcts in human brain tissue. K. P. DOYLE; J. BEISCHEL FRYE; T. V. NGUYEN*. *Univ. of Arizona, Arizona Ctr. on Aging.*

2:00 U32 **611.02** Effects of LPS pretreatment on body temperature and lesion volume after stroke. S. LEWIS*; D. N. DOLL; X. REN; H. HU; J. W. SIMPKINS. *West Virginia Univ.*

3:00 U33 **611.03** Interleukin-1 receptor antagonist attenuates neonatal LPS exposure-enhanced neurotoxicity of dopaminergic system by rotenone challenge in adult rats. L. FAN*; L. TIEN; J. SHEN; H. ZHU; A. J. BHATT; Y. PANG. *Univ. Mississippi Med. Ctr., Fu Jen Catholic Univ.*

4:00 U34 **611.04** The acute inflammatory response following a cortical microhemorrhage is dominated by brain-resident microglia and not blood-borne macrophages. S. AHN*; J. C. CRUZ HERNANDEZ; J. ANRATHER; N. NISHIMURA; C. B. SCHAFFER. *Cornell Univ., Weill Cornell Med. Col.*

1:00 U35 **611.05** ● TNF-alpha inhibition modulates chronic inflammation following cervical spinal cord injury in rats. J. R. HUIE*; R. SAIGAL; A. LIN; J. SACRAMENTO; D. SZYMKOWSKI; A. FERGUSON; J. BRESNAHAN; M. BEATTIE. *UCSF, Xencor, Inc.*

2:00 U36 **611.06** Role of orexin A signaling in dietary saturated fatty acid activated microglial cells. C. M. DUFFY*; J. P. NIXON; C. J. BILLINGTON; C. M. KOTZ; T. A. BUTTERICK. *Veterans Admin. Hlth. Care Syst., Univ. of Minnesota, Univ. of Minnesota, Minnesota Obesity Ctr.*

3:00 V1 **611.07** Excessive dietary α-tocopherol increases post-stroke microglial activation and contributes to brain injury. C. L. RINK*; S. GNYAWALI; M. HEIGEL; S. ROY; C. K. SEN; S. KHANNA. *The Ohio State Univ. Wexner Med. Ctr.*

4:00 V2 **611.08** Tocotrienol vitamin E induces arteriogenesis and protects against ischemic stroke brain injury. S. TEPLITSKY*; S. KHANNA; M. HEIGEL; K. OLICKAL; C. K. SEN; C. RINK. *The Ohio State Univ.*

1:00 V3 **611.09** Impact of chronic neuroinflammation on microcircuit activity in mouse visual cortex *in vivo* using two photon calcium imaging. G. K. PRAMANIK*; E. ELLWARDT; E. ROSALES JUBAL; Z. BARGER; E. WITSCH; D. LUCHTMANN; F. ZIPP; A. STROH. *University-Medicine of Johannes Gutenberg Universi, University-medicine of Johannes Gutenberg-University, Univ. of Washington.*

2:00 V4 **611.10** Blockade of L-VDCCs or RyRs during chronic neuroinflammation improves spatial memory, normalizes synaptic function, and reduces expression of inflammatory markers. S. C. HOPP*; H. M. D'ANGELO; S. E. ROYER; R. M. KAERCHER; L. ADZOVIC; A. M. CROCKETT; G. L. WENK. *Ohio State Univ., Ohio State Univ.*

3:00 V5 **611.11** The role of TNF in pain induction and secondary consequences in the hippocampus following peripheral nerve injury. T. DEL RIVERO*; A. DELLAROLE; J. BETHEA. *Drexel Univ., Univ. of Miami, Drexel Univ.*

4:00 V6 **611.12** Sex differences in immediate microglia and astrocyte responses in models of brain injury. H. MORRISON*; J. FILOSA. *Univ. of Arizona Col. of Nursing, Georgia Regents Univ.*

POSTER

612. Neuroinflammation: HIV and Infections

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 V7 **612.01** Exposure to HIV-1 Tat in brain impairs sensorimotor gating and activates microglia in medial prefrontal cortex of male mice. J. J. PARIS*; H. D. SINGH; A. N. CAREY; J. P. MCLAUGHLIN. *Torrey Pines Inst. For Mol. Studies, Torrey Pines Inst. for Mol. Studies, Simmons Col., Torrey Pines Inst. for Mol. Studies.*

2:00 V8 **612.02** IFNβ mediated neuroprotection in HIV-1 associated brain injury. V. E. THANEY*; M. M. HOEFER; M. KAUL. *Sanford Burnham Med. Res. Inst., Univ. of California San Diego.*

3:00 V9 **612.03** Strain of LCM virus influences tropism and pathology in the developing brain. J. M. PLUME*; B. KARACAY; J. MAHONEY; D. BONTHIUS. *Univ. of Iowa, Univ. of Iowa.*

4:00 V10 **612.04** Altered microglial gene expression suggests impaired microglial function in HIV infection, even in the absence of detectable virus in brain. T. FISCHER-SMITH*; S. D. GINSBERG; M. J. ALLDRED; S. GUNNAM. *Temple Univ. Sch. of Med., Nathan Kline Inst.*

Tue. PM

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1:00 V11 **612.05** Alterations in mitochondria biogenesis during HIVE:
Implications for mechanisms of neurodegeneration. J. A. FIELDS*; E. MASLIAH. *UCSD, UCSD.*

2:00 V12 **612.06** Cysteinyl leukotrienes are essential to neurotoxicity of HIV-infected macrophages. A. B. SANCHEZ*; C. M. DE ROZIERES; K. E. MEDDERS; R. MAUNG; M. KAUL. *Sanford-Burnham Med. Res. Inst., Univ. of California San Diego.*

3:00 V13 **612.07** TIA-1 orchestrates antiviral granule formation in vesicular stomatitis virus-induced encephalitis *in vivo* and *in vitro.* Y. CHUNG*; K. BULLOCH. *Rockefeller Univ., The Rockefeller Univ.*

4:00 V14 **612.08** Impact of SIV inoculation on cognitive performance in aged female rhesus monkeys. K. GURNSEY; N. NANIA; H. P. JEDEMA; S. J. BISSEL*; C. A. WILEY; C. W. BRADBERRY. *Univ. of Pittsburgh, Univ. Pittsburgh, VA Pittsburgh Hlth. Services.*

1:00 V15 **612.09** Early host-pathogen interactions influence outcomes of herpes simplex encephalitis in the developing brain. D. R. WILCOX*; N. R. WADHWANI; D. E. ALEXANDER; D. A. LEIB; B. HE; R. M. LONGNECKER; W. J. MULLER. *Northwestern Univ. Sch. of Med., Ann & Robert H. Lurie Children's Hosp. of Chicago, Dartmouth Med. Sch., Univ. of Illinois at Chicago, Northwestern Univ. Sch. of Med.*

2:00 V16 **612.10** Inflammatory profile in encephalopathy patients with a history of Lyme disease. E. A. ECKMAN*; J. PACHECO-QUINTO; J. J. HALPERIN. *Biomed. Res. Inst. of New Jersey, Atlantic Hlth. Syst., Overlook Med. Ctr.*

3:00 V17 **612.11** CCL5 activates a orphan G-protein coupled receptor 75 in human neuroblastoma SH-SY5Y cell line. S. DEDONI*; V. AVDOSHINA; I. MOCCHETTI. *Univ. of Cagliari, Georgetown Univ.*

4:00 V18 **612.12** Efavirenz promotes β-secretase expression and increased Aβ1-40,42 via oxidative stress and reduced microglial phagocytosis: Implications for HIVassociated neurocognitive disorders (HAND). D. FERRELL*; L. BROWN; J. JIN; B. GIUNTA. *Univ. of South Florida Col. of Medicine, D, USF Hlth.*

1:00 V19 **612.13** Helix-A peptide blocks HIV gp120 neurotoxicity by restoring microtubular transport in neurons. V. AVDOSHINA; F. TARABALLI; P. CASTELLANO; S. DEDONI; A. KALLARAKAL; A. UREN; E. EUGENIN; E. TASCIOTTI; I. MOCCHETTI*. *Georgetown Univ. Med. Ctr., The Methodist Hosp. Res. Inst., Rutgers University, The State Univ. of New Jersey, Georgetown Univ. Med. Ctr., Lombardi Comprehensive Cancer Ctr.*

2:00 V20 **612.14** Delayed virus clearance and immune cell infiltration in a mouse model of alphavirus encephalomyelitis treated with a glutamine antagonist. V. BAXTER*; M. C. POTTER; B. S. SLUSHER; D. E. GRIFFIN. *Johns Hopkins Bloomberg Sch. of Publ. Hlth., Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

3:00 V21 **612.15** Glial M1/M2 balance in morphine-potentiated LP-BM5 murine AIDS. V. D. MCLANE*; L. CAO; C. L. WILLIS. *Univ. of New England.*

4:00 V22 **612.16** HIV-1 Tat protein induces microglial neurotoxic activity via potassium channel Kv1.3. J. LIU; H. LIU; J. ZHANG; H. (. XIONG*. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

1:00 V23 **612.17** ● Mechanism of astrocyte activation during the pathogenesis of HIV-associated pain. Y. ZHANG*; Y. SHI; B. LI; W. RU; S. TANG. *Jiangsu Province Key Lab. of Anesthesiol., Univ. of Texas Med. Br.*

2:00 V24 **612.18** Effect of 17-β estradiol and progesterone on Toxoplasma gondii infection in astrocytes *in vitro.* A. F. GUTIÉRREZ MALDONADO*; J. DUEÑAS JIMENEZ; L. RODRÍGUEZ–PÉREZ; M. GALVÁN-RAMÍREZ. *Univ. of Guadalajara.*

3:00 V25 **612.19** Microglia Contribute to HIV1-gp120Bal-induced synapse loss. W. RU*; S. TANG. *Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

4:00 V26 **612.20** ▲ Amyloid beta reduces cytopathic effects of Herpes Simplex virus type I. J. MERRITT*; A. ANGAJALA; J. R. BABU; G. GRIFFIN. *Tuskegee Univ., Auburn Univ.*

POSTER

613. Schizophrenia: Glutamate

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 V27 **613.01** ▲ Rats reared in isolation from weaning show decreased expression of NMDA receptors in the medial prefrontal cortex. G. G. BORGES*; M. FERREIRA; J. RODRIGUES; K. MORIYAMA; M. SANTOS; H. FACHIM; M. IYOMASA; M. ROSA. *FIPA - Faculdades Integradas Padre Albino, Faculdade Filosofia Ciencias e Letras - FFCLRP-USP, Inst. de Neurociencias -INeC, Barretos Sch. of Hlth. Sci.*

2:00 V28 **613.02** The NMDA receptor GluN2C subunit regulates behavioral and cellular phenotypes relevant to schizophrenia. A. RAVIKRISHNAN*; B. G. HILLMAN; S. C. GUPTA; R. PAVULURI; D. J. STAIRS; S. M. DRAVID. *Creighton Univ.*

3:00 V29 **613.03** Epigenetic regulation of NMDAR expression in prefrontal cortex and hippocampus during development in the methylazoxymethanol model and Disrupted-in-Schizophrenia-1 model for schizophrenia. Y. GULCHINA*; M. A. SNYDER; M. V. PLETNIKOV; W. GAO. *Drexel Univ. Col. of Med., Johns Hopkins Univ. Sch. of Med.*

4:00 V30 **613.04** ● Reversion of behavior deficits with nitric oxide synthase inhibitor and gene expression in MAM schizophrenia model. C. SALUM*; M. C. BROSCO; O. M. LIMA-FILHO; G. S. V. HIGA; A. H. KIHARA. *Univ. Federal Do ABC, UFABC.*

1:00 V31 **613.05** Untangling GSK3β, DISC1 and NMDAR interactions in prefrontal cortical neurons. S. MONACO*; W. GAO. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

2:00 V32 **613.06** ● "Two-hit" developmental model of schizophrenia (prenatal Poly I:C and neonatal PCP): Transient effects on microglia activation. C. SCHIFANI; A. RELO; C. KLEIN*; A. Y. BESPALOV. *AbbVie.*

3:00 W1 **613.07** ● Which acetylcholine receptors participate to the lurasidone-induced improvement in novel object recognition subchronic phencyclidine model of cognition in schizophrenia? M. MIYAUCHI*; L. RAJAGOPAL; M. HUANG; S. KWON; Y. OYAMADA; H. Y. MELTZER. *Northwestern Univ., Dainippon Sumitomo Pharma Co., Ltd.*

4:00 W2 **613.08** Examining the effects of a chronic exposure to phencyclidine on a rodent system: An analysis of functional network connectivity, behavioral performance, and mRNA expression. C. M. MAGCALAS*; N. I. PERRONE-BIZZOZERO; V. D. CALHOUN; J. BUSTILLO; E. E. PEREZ; D. A. HAMILTON. *Univ. of New Mexico, Univ. of New Mexico, The Mind Res. Network, Univ. of New Mexico.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 W3 **613.09** Psychosis-Like behaviors in rats induced by toluene exposure: Role of NMDA receptors. M. T. RIVERA*; C. LÓPEZ-RUBALCAVA; S. CRUZ. *Cinvestav.*

2:00 W4 **613.10** Changes in NMDA receptor subunits following developmental ketamine administration. V. JEEVAKUMAR*; S. KROENER. *The Univ. of Texas At Dallas, The Univ. of Texas at Dallas.*

3:00 W5 **613.11** Dose-dependent effects of repeated ketamine administration on novelty detection and cognitive processes. A. SCHUMACHER*; E. C. TOLLEDO; B. SIVANANDAN; J. WOLDEGABRIEL; R. ITO. *Univ. of Toronto Scarborough.*

4:00 W6 **613.12** Inhibition of D-amino acid oxidase does not increase D-serine plasma levels in monkey or dog. J. ALT; N. ATOR; T. TSUKAMOTO; C. ROJAS; B. S. SLUSHER*. *John Hopkins Brain Sci. Inst., John Hopkins.*

1:00 W7 **613.13** Age-dependent effects of mGluR2 agonist LY395756 on NMDA receptor expression and function in the rat prefrontal cortex. M. LEE*; B. XING; W. GAO; X. HU; F. LI. *Drexel Univ. Col. of Med., the Third Affiliated Hosp. of Sun Yat-Sen Univ., Zhongshan Col. of Med.*

2:00 W8 **613.14** Characterization of a subchronic PCP rat model of shizophrenia and evaluation of effects of Bitopertin and Tolcapone. V. ANGLADE*; D. PARACHOU; E. CAYRE; E. R. DETRAIT; C. DRIEU LA ROCHELLE. *Biotrial Pharmacol., CNS Research, UCB S.A.*

3:00 W9 **613.15** Effects of electroconvulsive seizure on the neonatal MK-801 treatment-induced long-term changes in behaviors and protein translation signal pathway in the rat frontal cortex. S. KIM*; H. PARK; Y. KIM. *Seoul Ntl Univ. Col. Med., Seoul Ntl Col. Med., Dongguk Univ. Med. Sch.*

4:00 W10 **613.16** Effects of chronic prenatal MK-801 treatment on behaviour and dopamine functioning in the adult rat offspring. S. GALLANT*; L. WELCH; P. MARTONE; U. SHALEV. *Ctr. For Studies In Behavioral Neurobio. - Concordia Univ.*

1:00 W11 **613.17** Sub-chronic ketamine effects in the rodent odor span task. D. PANOZ-BROWN; C. ANDERSON; R. WELCH; M. DEAL; K. GOBENCIONG; S. HANNAH; S. HESS; C. MYERS; K. E. BRUCE; A. PRICHARD; J. GALIZIO*. *Univ. North Carolina.*

2:00 W12 **613.18** Ketamine-induced brain activation determined by fMRI in conscious nonhuman primates as a translational model to evaluate the CNS effects of antipsychotics. E. MALTBIE*; K. GOPINATH; N. URUSHINO; L. HOWELL. *Emory Univ., Emory Univ., Yerkes Imaging Ctr. Emory Univ., Yerkes Natl. Primate Res. Center, Emory Univ.*

3:00 W13 **613.19** Impaired Social activity in NMDA receptor GluN3A (NR3A) subunit knockout mice. J. LEE*; X. JI; L. WEI; S. P. YU. *Emory Univ.*

4:00 W14 **613.20** Evaluation of the effect of sarcosine, an endogenous glycine transporter 1 inhibitor, on behavioral performance and the glutamate hypothesis of schizophrenia in mice. W. HUNG*; W. LAI. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

POSTER

614. Biomarkers in Serious Mental Illness

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 W15 **614.01** Neural mechanisms of empathy in autism and aggressive conduct disorder. E. T. KLAPWIJK*; M. AGHAJANI; O. F. COLINS; N. D. J. VAN LANG; N. J. A. VAN DER WEE; R. R. J. M. VERMEIREN. *Leiden Univ. Med. Ctr., Leiden Inst. for Brain and Cognition, Leiden Univ. Med. Ctr.*

2:00 W16 **614.02** ● Enigma schizophrenia working group findings from 2,028 cases and 2,540 controls. T. G. VAN ERP*; D. P. HIBAR; P. M. THOMPSON; J. A. TURNER; T. ENIGMA SCHIZOPHRENIA WORKING GROUP. *Univ. of California Irvine, Imaging Genet. Center, Univ. of Southern California, Georgia State Univ., Univ. of Southern Calornia.*

3:00 W17 **614.03** ENIGMA Bipolar disorder working group findings from 1,745 cases and 2,613 controls. D. P. HIBAR*; L. T. WESTLYE; P. M. THOMPSON; O. A. ANDREASSEN; . FOR THE ENIGMA BIPOLAR DISORDER WORKING GROUP. *Imaging Genet. Ctr., Norwegian Ctr. for Mental Disorders Res. (NORMENT), KG Jebsen Ctr. for Psychosis Research, Oslo Univ. Hosp., http://enigma.ini.usc.edu/ongoing/enigma-bipolar-working-group/.*

4:00 W18 **614.04** Study of candidate gene effects on white matter microstructure in 4000+ individuals - from the ENIGMA-DTI working group. N. JAHANSHAD*; P. KOCHUNOV; E. SPROOTEN; E. DTI WG; P. THOMPSON; D. GLAHN; T. E. NICHOLS; R. C. W. MANDL; R. M. BROUWER; B. LANDMAN; H. LEMAITRE; A. DEN BRABER. *USC, Univ. of MD, Yale Univ., Warwick Univ., Univ. Med. Ctr. Utrecht, Vanderbilt Univ., INSERM-CEA-Faculté de Médecine Paris-Sud, VU Univ.*

1:00 W19 **614.05** Subcortical brain volume abnormalities in major depressive disorder: Prospective meta-analytic findings from the enigma major depressive disorder working group. L. SCHMAAL*; D. J. VELTMAN; D. P. HIBAR; ;. FOR THE ENIGMA-MDD WORKING GROUP. *GGZ Ingeest, VU Univ. Med. Ctr., USC, http://enigma.ini.usc.edu/ongoing/enigma-mdd-working-group/.*

2:00 W20 **614.06** Brain structure in ADHD across the life span: The ENIGMA ADHD working group. B. FRANKE*; M. HOOGMAN; M. ZWIERS; M. MENNES; . FOR THE ENIGMA-ADHD WORKING GROUP. *Donders Inst. For Brain, Cognition and Behavio, Donders Inst. for Brain, Cognition and Behaviour, http://enigma.ini.usc.edu/ongoing/enigma-adhd-working-group/.*

3:00 W21 **614.07** Neural correlates of implicit face-emotion processing in youth with severe irritability. B. SHARIF-ASKARY; J. STODDARD*; P. KIM; J. Y. YI; K. HINTON; M. A. BROTMAN; D. S. PINE; E. LEIBENLUFT. *NIMH, NIMH, Univ. of Denver, Vanderbilt Univ., NIMH.*

4:00 W22 **614.08** Aberrant striatal functional connectivity in schizophrenia patients and unaffected first-degree relatives. P. LI*; R. ZHAO; L. SHI; Y. FAN; H. SUN; L. LU. *Natl. Inst. On Drug Dependence,Peking Unive, Beijing Hui-Long-Guan Hospital, Peking Univ., Inst. of Mental Health/Peking Univ. Sixth Hosp. and Key Lab. of Mental Health, Ministry of Health,Peking Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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1:00 W23 **614.09** Probing electrophysiological and behavioral correlates of working memory deficits in schizophrenia. S. FISH; E. PAPPA; M. TOUMAIAN; T. DAVIES; C. G. THELERITIS*; C. SAVILLE; M. ECONOMOU; C. KLEIN; N. SMYRNIS. *Univ. Mental Hlth. Res. Inst., Bangor Univ., Univ. Athens Med. Sch., Univ. Athens Med. Sch.*

2:00 W24 **614.10** Enhanced regional homogeneity in the anterior cingulate cortex contributes to adaptive rumination in major depressive disorder. S. SPINELLI*; J. SPÄTI; J. HÄNGGI; J. ERNST; N. DOERIG; F. SAMBATARO; J. BRAKOWSKI; L. JÄNCKE; M. GROSSE HOLTFORTH; E. SEIFRITZ. *Psychiatric Univ. Hosp. Zurich, Natl. Ctr. of Neurol. and Psychiatry, Inst. of Psychology, Univ. of Zurich, Psychiatric Hospital, Univ. of Zurich, Univ. of Zurich, Inst. Italiano di Tecnologia, Psychiatric Hospital, Univ. of Zurich,, Inst. of Psychology, Univ. of Zurich,, Univ. of Bern.*

3:00 W25 **614.11** Impact of smoking and age on WM compared to GM of schizophrenia. H. SAMPATH*; P. KOCHUNOV; F. MUELLERKLEIN; L. E. HONG. *Maryland Psychiatric Res. Ctr., Univ. of Maryland Ctr. for Brain Imaging Res.*

4:00 W26 **614.12** The impact of onset age on intrinsic functional connectivity of amygdala in major depression. D. L. CLARK*; A. KEMP; N. KONDURU; F. CORTESE; S. BRAY; I. GAXIOLOA-VALDEZ; B. GOODYEAR; R. RAMASUBBU. *Univ. of Calgary, Alberta Children's Hosp.*

1:00 W27 **614.13** Probing speeded decision processing in schizophrenia patients with fMRI. C. GRIGORAS; E. THRAPSANIOTI; G. PANAGIOTAROPOULOU; L. MANTONAKIS; E. KARAVASILIS; T. SOLDATOS; E. ANGELOPOULOS; N. P. SMYRNIS*. *Univ. Mental Hlth. Res. Inst., Natl. and Tech. Univ. of Athens, Natl. Univ. of Athens Med. Sch., Natl. and Kapodistrian Univ. of Athens.*

2:00 W28 **614.14** Smooth eye pursuit and fixation endophenotypes in schizophrenia and obsessive compulsive disorder. A. DAMILOU; C. THELERITIS; G. V. PANTES*; I. EVDOKIMIDIS; N. SMYRNIS. *Univ. Mental Hlth. Res. Inst., Natl. Univ. of Athens Med. Sch., Univ. Athens Med. Sch.*

3:00 W29 **614.15** Cognitive bias for negative information in women with and without past depression correlates with differences in brain network activity and functional connectivity. K. ALBERT*; V. GAU; B. BOYD; E. EISENBERG; P. NEWHOUSE. *Vanderbilt Univ. - Ctr. For Cognitive Med., Dept. of Obstetrics and Gynecology, Vanderbilt Univ. Sch. of Med.*

4:00 W30 **614.16** Abnormal functional interactions of sensorimotor and social association networks in childhood-onset schizophrenia. R. A. BERMAN*; H. M. MCADAMS; D. GREENSTEIN; A. MARTIN; S. J. GOTTS; N. GOGTAY; J. L. RAPOPORT. *NIMH, NIH, NIMH, NIH.*

1:00 W31 **614.17** Effectiveness of fast mapping to promote learning of novel stimuli in schizophrenia. S. A. KORENIC*; S. J. NISONGER; C. M. SALTER; B. W. KRAUSE; S. A. WIJTENBURG; L. M. ROWLAND. *Univ. of Maryland Sch. of Med. (MPRC).*

2:00 W32 **614.18** Left frontal peak alpha frequency correlates with depression in male combat veterans with mTBI or mTBI+PTSD. J. A. ONTON*; I. SHU; S. C. MATTHEWS. *Warfighter Performance, Veterans Affairs San Diego Healthcare Syst.*

3:00 W33 **614.19** Risk variants for bipolar disorder influence multiple cellular and molecular mechanisms leading to altered neuronal excitability. S. A. AMENT*; K. ROULEAU; J. PEARL; C. FUNK; M. SHELTON; R. GELINAS; J. C. ROACH; L. HOOD; N. D. PRICE. *Inst. For Systems Biol., Inst. for Systems Biol., Univ. of Washington.*

4:00 W34 **614.20** Pupillary reactivity in subjects affected by Schizophrenia during free viewing of natural images of different complexity. C. ACEVEDO; K. MUÑOZ; S. MADARIAGA; R. MAYOL; J. I. EGANA*; P. MALDONADO. *ICBM / BNI / Univ. de Chile, Univ. de Chile, Facultad De Medicina / Univ. De Chile, Hosp. Clinico Univ. de Chile.*

1:00 W35 **614.21** Blood glutathione predicts cortical glutamate levels and cognitive functions. T. TANAKA*; J. M. COUGHLIN; A. MARSMAN; H. WANG; S. BONEKAMP; P. K. KIM; C. HIGGS; S. POSPORELIS; M. VARVARIS; R. A. E. EDDEN; M. POMPER; D. SCHRETLEN; N. CASCELLA; P. B. BARKER; A. SAWA. *Johns Hopkins Med. Institutions, Johns Hopkins Med. Institutions.*

2:00 W36 **614.22** Evaluation of redox dysregulation in the pathology of schizophrenia using induced pluripotent stem cell technology. B. GIANGRECO*; P. STEULLET; J. CABUNGCAL; L. BARTESAGHI; N. TONI; R. CHRAST; K. Q. DO. *Ctr. For Psychiatric Neurosciences, Dept. of Med. Genet., Dept. of Fundamental Neurosciences.*

3:00 X1 **614.23** Self-disturbances in schizophrenia: Models of hippocampal-dopamine interactions and their phenomenological correlates. A. L. MISHARA*. *The Chicago Sch. of Professional Psychology: Sou.*

4:00 X2 **614.24** Resting-state brain networks predict severity of auditory hallucinations in schizophrenia. E. S. FINN; F. TOKOGLU; X. SHEN; R. E. HOFFMAN; R. T. CONSTABLE*. *Yale Univ., Yale Univ., Yale Univ. Sch. of Med.*

1:00 X3 **614.25** ● The development of a computerized neurocognitive test as an objective functional biomarker of emotional distress. L. A. KING; E. B. ROACH*; C. E. LATHAN; J. L. SPIRA. *Natl. Ctr. for PTSD, Anthrotronix Inc, AnthroTronix Inc.*

2:00 X4 **614.26** An automated toolkit to generate Cerebral Blood Volume (CBV) maps of the hippocampal circuit applied to prodromal schizophrenia. F. A. PROVENZANO*; R. R. GIRGIS; N. BRUNO; U. A. KHAN; J. A. LIEBERMAN; S. A. SMALL. *Columbia Univ., New York State Psychiatric Inst., Columbia Univ.*

POSTER

615. Depression Biology

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 X5 **615.01** Development of real-time fMRI neurofeedback attention training for depression. D. M. SCHNYER*; M. T. DEBETTENCOURT; C. G. BEEVERS; S. SHERMAN; J. D. COHEN; K. A. NORMAN; N. B. TURK-BORWNE. *Univ. of Texas, Austin, Princeton Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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2:00 X6 **615.02** Emotion-dependent functional connectivity of the default mode network in adolescent depression. T. C. HO*; C. G. CONNOLLY; J. WU; E. HENJE BLOM; K. Z. LEWINN; M. CHAN; A. N. SIMMONS; T. YANG. *Univ. of California, San Francisco, Univ. of Washington, Seattle, Karolinska Inst., UCSD, Veterans Affairs San Diego Hlth. Care Syst., Veterans Affairs Ctr. of Excellence for Stress and Mental Hlth.*

3:00 X7 **615.03** Blood diagnostic biomarkers for major depressive disorder using dna methylation profiles. S. NUMATA*; K. ISHII; A. TAJIMA; J. IGA; M. KINOSHITA; S. WATANABE; H. UMEHARA; M. FUCHIKAMI; S. OKADA; S. SHIMODERA; I. IMOTO; S. MORINOBU; T. OHMORI. *The Univ. of Tokushima Grad. Sch., Grad. Sch. of Agriculture, Tokyo Univ. of Agr. and Technol., Inst. of Hlth. Biosciences, The Univ. of Tokushima Grad. Sch., Grad. Sch. of Med. Science, Hiroshima Univ., Kochi Med. School, Kochi Univ.*

4:00 X8 **615.04** Dermal fibroblasts bring molecular insights into Major Depressive Disorder. K. A. GARBETT*; A. VERECZKEI; S. KÁLMÁN; G. FALUDI; Ž. KORADE; R. C. SHELTON; K. MIRNICS. *Vanderbilt Univ., Semmelweis Univ., Univ. of Szeged, Semmelweis Univ., Univ. of Alabama.*

1:00 X9 **615.05** Genetic variation in adenosine A2A receptor gene (rs2298383) is associated with peripheral levels of TNF-α and major depression in women. M. P. KASTER*; M. GAZAL; F. N. KAUFMANN; K. JANSEN; J. P. OSES; L. D. M. SOUZA; R. A. SILVA; D. C. MOREIRA; D. R. LARA; G. C. GHISLENI. *Univ. Federal De Santa Catarina, Univ. Católica de Pelotas, Univ. Federal do Rio Grande do Sul, Pontifícia Univ. Católica do Rio Grande do Sul.*

2:00 X10 **615.06** ● The inflammation-related gene CITED2 modulates the relationship between the dopamine-related gene NR4A2 and subgenual anterior cingulate cortical thickness in Major Depressive Disorder. H. SUZUKI*; J. MARINO; K. TEAGUE; M. MISAKI; T. VICTOR; J. SAVITZ; B. MCKINNEY; P. BELLGOWAN; W. DREVETS; J. BODURKA. *Laureate Inst. For Brain Res., Univ. of Oklahoma Sch. of Community Med., Univ. of Oklahoma Col. of Pharm., Oklahoma State Univ. Ctr. for the Hlth. Sci., The Univ. of Tulsa, The Univ. of Tulsa, Johnson & Johnson, Inc., Univ. of Oklahoma Col. of Engin.*

3:00 X11 **615.07** ● The emotion and brain wave activity to stress for women with premenstrual syndrome. Q. LIU; R. ZHOU*, SR; W. CHEN. *Sch. of Psychology, Beijing Normal Univ., State Key Lab. of Cognitive Neurosci. and Learning & IDG/McGovern Inst. for Brain Research, Beijing Normal Univ., Ctr. for Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal Univ., Res. Ctr. of Emotion Regulation, Beijing Normal Univ.*

4:00 X12 **615.08** Increased Toll-like receptor 2 and 6 protein expression in the depressed suicide brain. X. REN*; H. S. RIZAVI; G. N. PANDEY. *Univ. of Illinois at Chicago.*

1:00 X13 **615.09** Altered gene expression of proinflammatory cytokines and their receptors in the lymphocyte of depressed patients. H. ZHANG*; H. S. RIZAVI; X. REN; G. N. PANDEY. *Univ. Illinois at Chicago, Univ. Illinois at Chicago.*

2:00 X14 **615.10** Genome scale mononuclear cell gene transcriptional reactivity among Methylphenidate responders. T. GOLTSER*; E. GALILI-WEISSTUB; G. BODENHEIMER; A. MELTZER; A. SHARON; R. GIESSER; L. KALMAN; A. SHALEV; L. CENETTI; R. SEGMAN. *Hadassah Hebrew U, The Herman-Danna Div. of Pediatric Psychiatry, Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. Center; Jerusalem Israel, The Herman-Danna Div. of Pediatric Psychiatry, Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. Center; Jerusalem Israel, Mol. Psychiatry Lab. - Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. center, Jerusalem, Israel.*

3:00 X15 **615.11** Serum levels of MMP-3 in mood disorders and schizophrenia: A pilot study. C. SHIBASAKI; H. ABE; M. OKADA-TSUCHIOKA; N. KAJITANI; K. ITAGAKI; K. HISAOKA-NAKASHIMA; M. TAKEBAYASHI*. *Natl. Hosp Org Kure Med. Centr, Mihara Hosp, Hiroshima Univ. Grad Sch. of Biomed Hlth. Sci.*

4:00 X16 **615.12** Genome scale mononuclear cell expression differences implicate altered immune reactivity during the triggering of post partum depression. R. SEGMAN*; D. HOCHNER-CELNIKIER; L. CANETTI; E. GALILI-WEISSTUB; T. GOLTSER DUBNER. *Hadassah Univ. Hosp., Depratmentof Obstetrics and Gynecology - Hadassah - Hebrew Univ. Med. center, Jerusalem, Israel, Mol. Psychiatry Lab. - Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. center, Jerusalem, Israel, The Herman-Danna Div. of Pediatric Psychiatry, Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. Center; Jerusalem Israel.*

1:00 X17 **615.13** Brain nerve growth-related gene NTRK2,BDNF is associated with amygdala and orbitofrontal volumes in the human brain and mood: A voxel-based morphometry (VBM) study. S. AIZAWA*; J. AKIYOSHI; H. HIRAKAWA; K. MASUDA. *Oita Univ. Fac. of Med.*

2:00 X18 **615.14** Identical blood biomarkers in late-onset major depressive disorder patients and model mice. S. MIYATA*; M. KURACHI; N. SAKURAI; K. TAKAHASHI; H. YAMAGATA; K. MATSUO; K. NARITA; M. FUKUDA; Y. ISHIZAKI; M. MIKUNI. *Gunma University, Psychiatry and Neurosci., Gunma University, Mol. and Cell. Neurobio., Yamaguchi University, Div. of Neuropsychiatry.*

3:00 X19 **615.15** Genetic ablation of a susceptibility gene for bipolar disorder, Trpm2 exhibits altered stress-related innate behaviors and social behaviors. G. HONG; H. CHUN; J. WEE; S. LEE; D. YANG; Y. JANG; D. JEON; U. OH*. *Sensory Res. Center, CRI, Col. of Pharmacy, Seoul Natl. Univ., Dept. of Physiology, Col. of Medicine, Korea Univ., Seoul Natl. Univ. Col. Pharm, Dept. of Mol. Med. and Biopharmaceutical Sciences, Grad. Sch. of Convergence Sci. and Technol.*

4:00 X20 **615.16** Neural correlates of successful psychotherapy of depression in adolescents. J. STRAUB; P. L. PLENER; N. SPRÖBER; L. SPRENGER; M. G. KOELCH; T. KAMMER*; G. GRÖN; B. ABLER. *Univ. of Ulm, Philipps-University of Marburg, Univ. of Ulm, Univ. of Ulm.*

1:00 X21 **615.17** ● High-resolution functional mapping of the human habenula in depression. B. A. ELY*; K. A. B. LAPIDUS; D. L. ROSENTHAL; K. E. SIP; J. XU; E. R. STERN. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai.*

2:00 X22 **615.18** ● Glutamatergic levels in the healthy and depressed brain: An ultra-high field 1h-mrs ketamine treatment study. N. LALLY*; L. AN; A. NUGENT; D. BANNERJEE; J. SHEN; C. ZARATE. *NIH, Univ. Col. London, Natl. Inst. of Mental Hlth.*

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3:00 X23 **615.19** FKBP5 is associated with amygdala volumes in the human brain and mood: A voxel-based morphometry (VBM) study. J. AKIYOSHI*; H. HIRAKAWA; K. MASUDA; S. AIZAWA. *Oita Uiniversity Fac. of Medicine, Dept. of Neuropsychiatry.*

4:00 X24 **615.20** Selective serotonin reuptake inhibitor, electro-convulsive therapy, and repetitive transcranial magnetic stimulation treatments affect distinct neural systems in Major Depressive Disorder: A comprehensive meta-analytic investigation. D. T. CHAU*; P. FOGELMAN; W. C. DREVETS; P. J. HAMILTON. *Laureate Inst. For Brain Res., Janssen Pharmaceuticals of Johnson & Johnson.*

1:00 Y1 **615.21** Associations between oxytocin-related genes, anxiety, depressive, cognitive symptoms and neuroimaging. H. HIRAKAWA*; J. AKIYOSHI; K. MASUDA; S. AIZAWA. *Hasama-Machi.*

2:00 Y2 **615.22** MGAT4A gene is associated with anxiety, depressive symptoms and self-denial. K. MASUDA*; J. AKIYOSHI; H. HIRAKAWA; S. AIZAWA. *Oita Univ. Fac. of Med.*

3:00 Y3 **615.23** A delayed brain-derived neurotrophic factor response to ketamine infusion: Implications for rapid symptom improvements in treatment-resistant depression. A. P. ALLEN*; M. NAUGHTON; G. CLARKE; J. DOWLING; A. WALSH; F. ISMAIL; G. SHORTEN; L. SCOTT; J. F. CRYAN; T. G. DINAN. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork.*

4:00 Y4 **615.24** Whole blood microRNAs as biomarkers of treatment-resistant depression? Effects of ketamine and electroconvulsive therapy. K. A. SCOTT*; G. M. MOLONEY; M. NAUGHTON; R. M. O'CONNOR; D. M. MCLOUGHLIN; J. DOWLING; G. SHORTEN; A. WALSH; L. SCOTT; F. ISMAIL; G. CLARKE; T. G. DINAN; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork, Trinity Col. Dublin, St. Patrick's Univ. Hosp., Univ. Col. Cork, Univ. Col. Cork.*

1:00 Y5 **615.25** ● Cingulo-frontal network dynamics explains the correlation between EEG theta and treatment outcome in depression. J. RAMIREZ-MAHALUF; A. ROXIN; H. S. MAYBERG; A. COMPTE*. *IDIBAPS, Ctr. de Recerca Matemàtica, Emory Univ.*

2:00 Y6 **615.26** Brain responses to unpredictable threat in individuals at high risk for depression. N. KIRLIC*; M. MISAKI; J. BODURKA; W. C. DREVETS; R. P. ALVAREZ. *The Univ. of Tulsa, Laureate Inst. for Brain Res., Janssen Pharmaceuticals, The Univ. of Tulsa.*

3:00 Y7 **615.27** Effects of vagus nerve stimulation on pupil function. V. DESBEAUMES; D. K. NGUYEN; M. PHILIBERT; M. FOURNIER-GOSSELIN; P. LESPÉRANCE; F. RICHER*. *Univ. du Québec à Montréal, Univ. de Montréal, Univ. de Montréal, Univ. de Montréal, Univ. Quebec at Montreal.*

4:00 Y8 **615.28** Depression and Alzheimer's disease: Novel postmortem brain studies reveal a possible common mechanism. Y. TATEBAYASHI*; N. NIHONMATSU-KIKUCHI; Y. MATSUDA. *Tokyo Metropolitan Inst. of Med. Sci.*

POSTER

616. Cocaine: Behavioral Studies

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Y9 **616.01** Involvement of reactive oxygen species in cocaine taking-behaviors in rats. S. CHANG*; E. JANG; Y. RYU; B. LEE; R. J. FOLSOM; N. D. SCHILATY; K. KIM; C. YANG; S. C. STEFFENSEN; H. KIM. *Daegu Haany Univ., Brigham Young Univ., Korea Inst. of Oriental Med.*

2:00 Y10 **616.02** Evidence for tuning to preferred drug levels during cocaine self-administration by nucleus accumbens neurons. O. A. KIM*; K. R. COFFEY; D. J. BARKER; S. MA; A. P. PAWLAK; A. T. FABBRICATORE; M. O. WEST. *Dept. of Psychology, Rutgers Univ., Univ. of Pennsylvania.*

3:00 Y11 **616.03** Exploring individual differences in rats' addiction susceptibility: drug level titration ability is inversely related to cue induced responding. K. COFFEY*; D. SHOLLER; M. WEST. *Rutgers Univ., Rutgers.*

4:00 Y12 **616.04** Potentiation of the expression of cocaine-induced sensitization by a conditioned stressor. A. SASAKI*; A. HUSSAIN; P. SHANMUGANATHAN; A. SIVAKUMARAN; S. SIVANATHAN; S. ERB. *Univ. of Toronto, Univ. of Toronto.*

1:00 Y13 **616.05** Aversive taste reactivity predicts escalation of cocaine self-administration behavior and preference in rats. E. M. COLECHIO*; D. N. ALEXANDER; C. G. IMPERIO; K. JACKSON; P. S. GRIGSON. *Penn State Hershey, Penn State Hershey, Lebanon Valley Col.*

2:00 Y14 **616.06** The modulating effects of rottlerin on psychostimulant-induced conditioned place preference. T. LIAO*; L. YU. *Inst. of Behavioral Medicine, Natl. Cheng K.*

3:00 Y15 **616.07** The development of novel dopamine D3 receptor-selective partial agonists as potential medications to treat psychostimulant abuse. C. A. BOATENG*; O. M. OKUNOLA-BAKARE; T. M. KECK; C. BURZYNSKI; C. SCHWEPPE; R. RAIS; B. SLUSHER; P. DONTHAMSETTI; J. A. JAVITCH; W. JOHN; P. CZOTY; M. A. NADER; A. H. NEWMAN. *Natl. Inst. On Drug Abuse, Johns Hopkins Brain Sci. Inst. and Dept. of Neurol., Columbia Univ. Col. of Physicians & Surgeons, Wake Forest Sch. of Med.*

4:00 Y16 **616.08** The use of 6Beta Naltrexol to treat anxiety and depression during acute cocaine withdrawal. M. J. MUELLER*; T. DEYOUNG; J. BOYETTE-DAVIS. *York Col. of Pennsylvania, York Col. of Pennsylvania.*

1:00 Y17 **616.09** ▲ Neuronal correlates of resilience to cocaine addiction in rats. Y. VANDAELE*; S. NAVAILLES; A. DURAND; K. GUILLEM; S. AHMED. *IMN UMR 5293.*

2:00 Y18 **616.10** Amygdala and dorsal hippocampus are involved in the companions-decreasing effects on cocaine-induced conditioned place preference. W. TZENG*; L. YU. *Inst. of Basic Med. Sci. of NCKU, Inst. of Behavioral Med. of NCKU.*

3:00 Y19 **616.11** Effects of Δ^8-Tetrahydrocannabivarin (Δ^8-THCV) on appetitive effects of cocaine and nicotine in rodents. E. L. GARDNER*; P. MULDOON; X. WANG; G. BI; M. DAMAJ; A. H. LICHTMAN; R. G. PERTWEE; Z. XI. *NIDA/IRP, Virginia Commonwealth Univ., Univ. of Aberdeen.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 Y20 **616.12** Taking cocaine versus staying on task: Drug cue-evoked competition for attention and individual differences in vulnerability to cue-evoked task shifts. K. PITCHERS*; C. J. SKRZYNSKI; T. E. ROBINSON; M. SARTER. *Univ. of Michigan.*

1:00 Y21 **616.13** Effects of sensory overstimulation in early life on vulnerability to cocaine addiction. S. RAVINDER*; D. A. CHRISTAKIS; J. M. RAMIREZ; S. M. FERGUSON. *Seattle Children's Res. Inst.*

2:00 Y22 **616.14** Psychopharmacological responsiveness to cocaine across early ontogeny: possible role of D2High receptors. S. E. EATON*; A. MOHD-YUSOF; C. A. CRAWFORD; S. A. MCDOUGALL. *California State Univ.*

3:00 Y23 **616.15** A novel neuropeptide regulator of behavioral responses to cocaine. J. KASPER*; C. R. BENZON; D. L. MCCUE; J. D. HOMMEL. *Univ. Texas Med. Br., Univ. of Texas - Med. Br., Univ. of Texas - Med. Br.*

4:00 Y24 **616.16** Synergistic effects of pilocarpine and tacrine on cocaine-reinforced behavior. F. YANG*; H. XU; K. GRASING. *Kansas City VA Med. Ctr.*

1:00 Y25 **616.17** Cocaine induces a persistent dose-dependent place-preference response in marmoset monkeys. A. C. BORGES*; R. B. M. DUARTE; L. L. NOGUEIRA; A. BORGES; M. BARROS. *Univ. De Brasília, Univ. de Brasilia, Univ. de Brasilia.*

2:00 Y26 **616.18** Ceftriaxone attenuates acquisition and facilitates extinction of cocaine-induced suppression in C57BL/6J mice. C. S. FREET*; A. L. LAWRENCE. *Penn State Coll Med., The Lincoln Univ.*

3:00 Y27 **616.19** Rats with a cocaine history develop compulsive appetite due to disruption in non-homeostatic control of food intake. F. WEISS*; Y. HAO; A. MATZEU; G. DE GUGLIELMO; P. PANDAY; T. KERR; R. MARTIN-FARDON; T. C. JHOU; R. C. RITTER; N. SUTO. *The Scripps Res. Inst., Med. Univ. of South Carolina, Washington State Univ.*

4:00 Y28 **616.20** Cocaine-conditioned locomotor response is mediated by reactive oxygen species signaling. J. D. NGUYEN*; M. J. FORSTER. *Univ. of North Texas Hlth. Sci. Ctr.*

1:00 Y29 **616.21** Cocaine pre-treatment induces a shift in the balance of motivational control over behavior in approach-avoidance conflict paradigms. D. NGUYEN*; S. ERB; R. ITO. *Univ. of Toronto Scarborough.*

2:00 Y30 **616.22** Exposure to a high-fat diet attenuates the locomotor-stimulating effects of cocaine. P. M. DINGESS*; B. J. ANDERSON; A. E. CREAGER; R. A. DARLING; E. K. DOLENCE; T. E. BROWN. *Univ. of Wyoming, Univ. of Wyoming.*

POSTER

617. Cocaine: Neural Mechanisms III

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Y31 **617.01** Characterization of the role of limbic p11 on addiction and depression. M. ARANGO*; J. T. SCHWARZ; M. VERNOV; I. NINAN; R. MARONGIU; F. JEANNETEAU; E. J. NESTLER; P. GREENGARD; S. RUSSO; M. G. KAPLITT. *Inst. of Functional Genomics, Weill Cornell Med. Col., Weill Cornell Med. Col., New York Univ., Inst. of Functional Genomics, Friedman Brain Institute, Icahn Sch. of Med. at Mount Sinai, Rockefeller Univ.*

2:00 Y32 **617.02** ● Epigenetic readers of lysine acetylation regulate cocaine-induced behavioral plasticity. G. C. SARTOR*; S. K. POWELL; S. P. BROTHERS; C. WAHLESTEDT. *Univ. of Miami Miller Sch. of Med.*

3:00 Z1 **617.03** The role and regulation of histone deacetylase 4 (HDAC4) in cocaine-related behaviors. R. D. PENROD*; M. B. CARREIRA; J. KUMAR; M. TANIGUCHI; C. W. COWAN. *Harvard Med. School, McLean Hosp., UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

4:00 Z2 **617.04** ▲ A role for natural antisense transcripts in cocaine reward and addiction. S. K. POWELL*; G. C. SARTOR; D. VELMESHEV; S. P. BROTHERS; C. WAHLESTEDT. *Univ. of Miami, Univ. of Miami.*

1:00 Z3 **617.05** Involvement of Wnt/βcatenin pathway in cocaine induced sensitization. S. CUESTA*; S. B. ROSSO; A. M. PACCHIONI. *Facultad De Ciencias Bioquímicas Y Farmacéuticas,.*

2:00 Z4 **617.06** CLOCK interacts with co-repressor protein complexes to negatively regulate tyrosine hydroxylase: Mechanisms underlying the circadian control of dopamine and cocaine reward. R. W. LOGAN*; W. P. WILLIAMS, III; S. WAPLINGER; S. SPENCER; M. M. SIDOR; C. A. MCCLUNG. *Univ. of Pittsburgh, Univ. of Texas Southwestern Med. Ctr.*

3:00 Z5 **617.07** Inositol polyphosphate multikinase regulates cocaine-induced behavioral effects. M. M. HARRAZ*; R. XU; I. AHMED; S. H. SNYDER. *Johns Hopkins Univ.*

4:00 Z6 **617.08** Investigation of the PFC-amygdala pathway and its role in addiction in serotonin transporter knockout rats. P. KAREL*; A. VAN DER TOORN; R. M. DIJKHUIZEN; L. J. VANDERSCHUREN; J. R. HOMBERG. *Radboudumc, Univ. Med. Ctr. Utrecht, Utrecht Univ.*

1:00 Z7 **617.09** Loss of control over cocaine intake: The subthalamic nucleus as the critical actor. Y. PELLOUX; C. COHEN; A. TIRAN-CAPPELLO; S. LARDEUX; O. GEORGE; G. F. KOOB; S. H. AHMED; C. BAUNEZ*. *INT CNRS & Aix-Marseille Univ., Albert Einstein Coll Med., Scripps Resch Inst., The Scripps Rsrch Inst. & NIAAA, CNRS UMR 5293.*

2:00 Z8 **617.10** Optogenetic stimulation of red nucleus glutamate neurons inhibits cocaine self-administration in mice. Y. HE; H. ZHANG; G. BI; H. YAU; H. SHEN; E. GARDNER; A. BONCI; Z. XI*. *NIDA, IRP.*

3:00 Z9 **617.11** ● GABA uptake changes in mice prefrontal cortex after a cocaine Exposure: effects on anxiety-like behavior. M. P. CARVALHO*; R. MARTINS; N. PENICINALLI; A. C. MANHÃES; R. C. C. KUBRUSLY. *Univ. Federal Fluminense, Univ. Federal Fluminense, Univ. Estadual do Rio de Janeiro.*

4:00 Z10 **617.12** Estradiol rapidly enhances dopamine in nucleus accumbens shell of female but not male rats. K. E. YOEST; J. A. CUMMINGS; K. N. CHAMBERLAIN; Y. A. ALONSO; B. J. ARAGONA; J. B. BECKER*. *Univ. Michigan, Kalamazoo Col., Univ. Michigan, Univ. Michigan.*

1:00 Z11 **617.13** Alpha-1 adrenergic receptor modulation of ventral tegmental area dopamine neurons: role in cocaine sensitization. M. C. VELASQUEZ-MARTINEZ*; M. E. VELEZ-HERNANDEZ; B. SANTOS-VERA; A. VAQUER-ALICEA; R. VAZQUEZ-TORRES; C. A. JIMENEZ-RIVERA. *Univ. Industrial De Santander, Fac Salud, Med. Sci. Campus, Univ. of Puerto Rico.*

2:00 Z12 **617.14** Sex differences in hypocretin modulation of dopamine signaling in the nucleus accumbens. J. K. SHAW*; R. A. ESPAÑA. *Drexel Univ. Col. of Med.*

Tue. PM

• Indicated a real or perceived conflict of interest, see page 157 for details.

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3:00 Z13 **617.15** ● Isoflurane is an alternative anesthetic for *in vivo* voltammetry. Z. D. BRODNIK*; K. HARRIS; R. ESPANA. *Drexel Univ., Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

4:00 Z14 **617.16** Ventral tegmental area regulation of the prefrontal cortex is superactivated by chronic cocaine self-adminstration. W. BUCHTA*; A. RIEGEL. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

1:00 Z15 **617.17** Role of 5-HT1A and 5HT2A in cocaine-mediated modulation of GABA release from the thalamic reticular nucleus. B. GOITIA; N. WEISSTAUB; J. GINGRICH; E. GARCIA-RILL; V. BISAGNO; F. J. URBANO*. *IFIBYNE-CONICET, Grupo de Neurociencia de Sistemas, Sackler Inst. for Developmental Psychobiology, Ctr. for Translational Neurosci., Inst. de Investigaciones Farmacológicas (ININFA-CONICET-UBA).*

2:00 Z16 **617.18** Fluoxetine potentiates methylphenidate-induced gene regulation in the striatum: Role of 5-HT1B serotonin receptor. V. VAN WAES; S. EHRLICH; J. BEVERLEY; H. STEINER*. *Chicago Med. School/RFUMS.*

POSTER

618. Cocaine and Amphetamine Reinforcement

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Z17 **618.01** The role of 5-HT-mediated Glycogen synthase kinase 3β signaling pathway in the nucleus accumbens core in cocaine addiction. I. YOU*; S. WEE. *The Scripps Res. Inst.*

2:00 Z18 **618.02** Prefrontal correlates of addiction and the effect of subconvulsive electrical stimulation on cue-induced relapse in rats. I. GOLDENBERG*; R. GAL; S. ZIBMAN; N. BARNEA-YGAEL; A. ZANGEN. *Ben Gurion Univ., Ben Gurion Univ.*

3:00 Z19 **618.03** Blockade of TrkB receptors attenuates D-AMPH withdrawal-induced increases in dynorphin expression in the nucleus accumbens and striatum. K. A. HORNER*; R. C. MURRAY; J. J. L. FULLER. *Mercer Univ. Sch. Med., Mercer Univ. Sch. of Med.*

4:00 Z20 **618.04** Transcriptome analysis and gene targeting of a QTL influencing methamphetamine sensitivity. N. YAZDANI*; Y. SHEN; W. JOHNSON; C. D. BRYANT. *Boston Univ. Sch. of Med., Boston Univ., Boston Univ.*

1:00 Z21 **618.05** Amphetamine-induced phasic dopamine release requires dopamine cell firing and endocannabinoid signaling. D. P. COVEY*; K. BUNNER; J. F. CHEER; P. A. GARRIS. *Univ. of Maryland, Indiana Univ., Illinois State Univ.*

2:00 Z22 **618.06** M1 muscarinic and α4β2-containing nicotinic receptor ligands modulate oral methamphetamine self-administration in DBA/2 mice. M. M. FORD*. *Oregon Hlth. & Sci. Univ.*

3:00 Z23 **618.07** Toll-like receptor 4 activation by methamphetamine contributes to increased dopamine concentrations. T. A. COCHRAN*; A. L. NORTHCUTT; T. J. FABISIAK; X. WANG; M. HAAS; J. AMAT; M. R. HUTCHINSON; S. F. MAIER; K. C. RICE; L. R. WATKINS. *Univ. of Colorado, Boulder, Univ. of Adelaide, Natl. Inst. on Drug Abuse.*

4:00 Z24 **618.08** Acute high dose of methylphenidate increases the amount of synaptic NMDAR but decrease its association with lipid raft in nucleus accumbens. A. D. CABELLO ARREOLA; L. GARZA OCAÑAS; I. DELINT-RAMÍREZ*. *Univ. Autonoma De Nuevo Leon.*

1:00 Z25 **618.09** Differential effects on reward produced by synthetic cathinones. S. B. DOLAN; M. J. FORSTER*; M. B. GATCH. *Univ. North Texas Hlth. Sci. Ctr.*

2:00 Z26 **618.10** Attenuation of the sleep-disrupting effects of methamphetamine by the selective 5-HT2C agonist WAY 163909 and the selective 5-HT2A antagonist M100907 in rhesus monkeys. M. PEREZ DIAZ*; M. ANDERSEN; L. L. HOWELL. *Yerkes Natl. Primate Res. Ctr., Univ. Federal de São Paulo (UNIFESP), Emory Univ.*

3:00 Z27 **618.11** Amphetamine-induced behavioral and neuronal plasticities are regulated by Parvalbumin-positive GABAergic interneurons of the nucleus accumbens. X. WANG*; J. DENG; A. WEST. *Duke Univ., Duke Univ., Univ. of Florida, Col. of Med.*

4:00 Z28 **618.12** Tolerance to the locomotor-activating effects of 3,4-methylenedioxymethamphetamine (MDMA) predicts escalation of MDMA self-administration and cue-induced reinstatement of MDMA seeking in rats. K. T. BALL*; M. SLANE. *Bloomsburg Univ, Pennsylvania.*

1:00 Z29 **618.13** The effects of repeated amphetamine exposure during adolescence on psychomotor activity and neuronal function in the medial prefrontal cortex in young adulthood. L. K. SHERRILL*; T. KRISHNAMANI; D. O'HEARN; M. WU; Y. KUDAIMI; J. M. GULLEY. *Univ. of Illinois, Urbana-Champaign.*

2:00 Z30 **618.14** Abuse liability and toxicity of synthetic cathinones ("bath salts") as revealed by intravenous drug self-administration, *ex vivo* MRI, and immunohistochemistry. L. R. WATTERSON*; S. B. TAYLOR; F. BUDIN; S. F. ALI; P. KUFAHL; N. NEMIROVSKY; M. OLIVE. *Arizona State Univ., Hendrix Col., Univ. of North Carolina - Chapel Hill, Natl. Ctr. for Toxicological Res.*

3:00 Z31 **618.15** The role of trace amine associated receptor 1 in behaviors. X. SHI; N. WALTER; K. J. BUCK; J. K. BELKNAP; T. J. PHILLIPS; A. J. JANOWSKY*. *Oregon Hlth. & Sci. Univ., VA Med. Ctr.*

POSTER

619. Exposure to Addictive Drugs: Genetic and Behavioral Effects

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Z32 **619.01** Nicotine causes long-lasting behavioral sensitization and changes in accumbal neurotransmission. J. E. MORUD*; L. ADERMARK; M. ERICSON; B. SÖDERPALM. *Univ. of Gothenburg.*

2:00 Z33 **619.02** Role of histone modifying enzyme PRDM2 in alcohol-related behaviors. C. PITCAIRN*; E. BARBIER; A. BORICH; J. TAPOCIK; A. JOHNSTONE; J. SCHANK; Z. ZHOU; Q. YUAN; D. GOLDMAN; C. WAHLESTEDT; M. HEILIG. *NIH-NIAAA, Lab. of Clin. and Translational Studies, Natl. Inst. of Alcohol Abuse and Alcoholism, Natl. Inst. of Hlth., CTI, Dept. of Psychiatry, Univ. of Miami Miller Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 Z34 **619.03** Neuronal dna-methylation in the medial prefrontal cortex regulates alcohol-induced behavior and plasticity. A. L. BORICH*; E. BARBIER; J. TAPOCIK; N. JUERGENS; C. PITCAIRN; J. HANSON; J. SCHANK; H. SUN; A. THORSELL; K. SCHUEBEL; Z. ZHOU; Q. YUAN; M. EMMERT-BUCK; D. GOLDMAN; M. HEILIG. *Natl. Inst. On Alcohol Abuse and Alcoholism.*

4:00 Z35 **619.04** GluN2B-NMDA receptor targeted proteomic approach unveils ethanol-induced changes in molecular signaling cascades involved in plasticity. T. A. WILLS*; K. M. LOUDERBACK; A. J. BAUCUM; R. J. COLBRAN; D. G. WINDER. *Vanderbilt Univ., Vanderbilt Univ., Indiana Univ. Purdue Univ. in Indianapolis.*

1:00 Z36 **619.05** ▲ Family history of alcohol use disorder and large-scale intrinsic network connectivity in adulthood. M. H. PARRISH; C. T. SMITH; M. MENCELOGLU; S. H. OPPLER; C. A. BOETTIGER*. *Univ. of North Carolina, Univ. of North Carolina, Univesity of North Carolina, Univ. of North Carolina.*

2:00 AA1 **619.06** Exercise-induced positive activated affect is dependent on work intensity and modulated by opioid receptor system distributed in the mesolimbic pathway. A positron emission tomography study. M. HIURA*; T. NARIAI; K. ISHII; M. SAKATA; K. ODA; J. TOYOHARA; K. ISHIWATA. *Hosei Univ., Tokyo Metropolitan Inst. of Gerontology, Tokyo Med. and Dent. Univ., Hokkaido Univ. of Sci.*

3:00 AA2 **619.07** Acute and long-term effects on neurotransmission and plasticity in striatal subregions after intermittent nicotine exposure. L. ADERMARK*; J. MORUD; K. DANIELSSON; M. PEREZ ALCAZAR; M. ERICSON; A. LOTFI; B. SÖDERPALM. *Addiction Biol. Unit, Neurosci. and Physiol.*

4:00 AA3 **619.08** A hypo-status revealed by multi-modal neuroimaging in drug addicted Brain. Z. WANG*; J. SUH; C. P. O'BRIEN; T. FRANKLIN; A. R. CHILDRESS. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 AA4 **619.09** The transgenerational effects of nicotine and chronic stress in mice. N. L. YOHN*; C. KRAPP; M. S. BARTOLOMEI; J. A. BLENDY. *Univ. of Pennsylvania, Perelman Sch. of Med., Univ. of Pennsylvania, Perelman Sch. of Med.*

2:00 AA5 **619.10** Effects of adolescent exposure to morphine in female rats on cognitive function in male offspring. C. WEBBER; F. VASSOLER; R. DONAHUE; E. BYRNES; W. A. CARLEZON*, Jr. *Harvard Med. Sch./Mclean Hosp., Tufts Univ.*

3:00 AA6 **619.11** Alterations in cell proliferation following combined binge alcohol and chronic nicotine exposure in adult rats. R. T. LINGG; C. B. HARTLESS; K. Y. CHEN; K. NIXON; D. M. HAYES*. *Radford Univ., Univ. of Kentucky.*

4:00 AA7 **619.12** Effects of chronic nicotine administration on hippocampal and striatal acetylcholinesterase activities. P. U. NWOHA*; O. M. IJOMONE, Male. *Obafemi Awolowo Univ., Cross River Univ. of Technol.*

1:00 AA8 **619.13** The gene expression response of Snca and Cdk5 to nicotine dosing is adolescent-specific and correlates with nicotine preference. R. T. HALLENBERG; N. S. DHARKER; K. J. FRYXELL*. *George Mason Univ., George Mason Univ.*

2:00 AA9 **619.14** Effects of kolaviron on the histology of the hypothalamus, pituitary, and testes of adult male Wistar rats. A. U. OBI; P. U. NWOHA; C. A. ONYEKA*. *Imo State Univ., Obafemi Awolowo Univ., Univ. of Lagos, Madonna Univ.*

3:00 AA10 **619.15** Chronic nicotine administration in adolescent C57BL/6J mice results in deficits in trace fear conditioning in adulthood. D. A. CONNOR*; T. J. GOULD. *Temple Psychology, Temple.*

4:00 AA11 **619.16** The role of context preference on single trial nicotine conditioned place preference, and the role of dosing context on MAPK activation in the ventral striatum. G. M. FERNANDEZ*; D. G. EHLINGER; H. C. BERGSTROM; C. G. MCDONALD; R. F. SMITH. *George Mason Univ., Natl. Inst. on Alcohol Abuse and Alcoholism.*

1:00 AA12 **619.17** Evidence for maternal deprivation stress and gestational nicotine exposure as risk factors for affective disorders and drug abuse. M. C. GONDRE-LEWIS*; K. WARNOCK; H. WANG; H. L. JUNE. *Howard Univ. Col. of Med., Howard Univ. Col. of Med.*

2:00 AA13 **619.18** ▲ A single nicotine injection leads to neural tube defects in chicken model. V. HUMPHREY; N. BOHN; N. V. OMELCHENKO*. *West Liberty Univ.*

3:00 AA14 **619.19** Epigenetic and mutant analysis of alcohol tolerance in *Drosophila.* A. GHEZZI*; N. S. ATKINSON. *Univ. Texas Austin.*

4:00 AA15 **619.20** Significant association of rs17189632 in the glutamate receptor subunit gene (GRIN3A) with heroin dependence. X. XIE*; H. LIU; W. ZHOU. *Ningbo Inst. of Microcirculation and Henbane, Lab. of Behavioral Neuroscience, Sch. of Medicine, Ningbo Univ., Ningbo Addiction Res. and Treatment Ctr.*

1:00 AA16 **619.21** Hybrid mouse diversity panel reveals genetic correlations between impulsivity and intravenous drug self-administration. J. D. JENTSCH*; M. C. CERVANTES; R. LAUGHLIN; A. S. JAMES. *Univ. Calif, Los Angeles, Williamette Univ.*

2:00 AA17 **619.22** Studying the role of epigenetic marks in a gene cluster associated with alcohol use disorders using induced pluripotent stem cell-derived neural cultures. M. GROSS*; R. LIEBERMAN; J. COVAULT. *Univ. of Connecticut Hlth. Ctr.*

3:00 AA18 **619.23** Adolescent cocaine exposure alters acetylation and tri-methylation on histone 3 lysine 9 in the hippocampus and nucleus accumbens exclusively in selectively bred rats that are typically resilient to addiction. A. PARSEGIAN*; J. GARCIA-FUSTER; S. CHAUDHURY; P. BLANDINO; S. J. WATSON; S. FLAGEL; H. AKIL. *The Mol. & Behavioral Neurosci. Inst., Univ. of the Balearic Islands, Univ. of Michigan.*

4:00 AA19 **619.24** Strain-specific differences in microrna expression in the hippocampus following exposure to stress and/or alcohol. K. M. HAMRE*; S. LATTIMER; J. INGELS; L. LU. *Univ. Tennessee Hlth. Sci. Ctr.*

1:00 AA20 **619.25** Examining regulators of the glucocorticoid receptor in human neural cells derived from alcoholics. R. LIEBERMAN*; E. S. LEVINE; H. R. KRANZLER; J. COVAULT. *Univ. of Connecticut Hlth. Ctr., Univ. of Connecticut Hlth. Ctr., Univ. of Pennsylvania, Univ. of Connecticut Hlth. Ctr.*

2:00 AA21 **619.26** A genetic reduction in the serotonin transporter differentially influences self-administration of 3,4-methylenedioxymethamphetamine (MDMA) and heroin. B. W. BROX; B. A. ELLENBROEK*. *Victoria Univ. of Wellington.*

3:00 AA22 **619.27** Dorsal root ganglion development in nicotine-exposed zebrafish. J. SCHULD*; K. R. SVOBODA. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

620. Olfactory Sensory Neurons: Development and Signal Transduction

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 AA23 **620.01** Defining a novel intermediate progenitor cell class in the embryonic olfactory epithelium. E. M. PARONETT*; D. W. MEECHAN; T. M. MAYNARD; A. LAMANTIA. *George Washington Univ.*

2:00 AA24 **620.02** Genomic Plasticity in the olfactory epithelium is correlated with odorant exposure during early development in the zebrafish (Danio rerio). C. CALFÚN; C. DOMINGUEZ; T. PÉREZ-ACLE; K. E. WHITLOCK*. *Univ. de Valparaiso, Fundacion Ciencia y & Vida.*

3:00 BB1 **620.03** ● Crucial role of olfactory receptor accessory proteins RTP1 and RTP2 in receptor gene choice, development and odor detection. R. SHARMA*; Y. ISHIMARU; I. DAVISON; M. EHLERS; H. MATSUNAMI. *Duke Univ., Univ. of Tokyo, Boston Univ., Pfizer Neurosci.*

4:00 BB2 **620.04** Identifying odor receptors in *C. elegans.* J. J. YOUNG*; S. APOSTOL; S. NATHAN; E. NEWMAN; A. COX-HARRIS; F. TAN; C. BRUEGGEMANN; N. L'ETOILE. *Mills Col., Univ. of California, San Francisco.*

1:00 BB3 **620.05** Odorant receptor activation patterns *in vivo.* T. S. MCCLINTOCK*; K. ADIPIETRO; P. BREHENY; A. WALZ; P. MOMBAERTS; H. MATSUNAMI. *Univ. Kentucky, Duke Univ., Univ. of Iowa, Rockefeller Univ., Max Planck Inst. of Biophysics.*

2:00 BB4 **620.06** Odor responses of *Drosophila* receptor neurons - Response profiles, mixtures and individual response dynamics. D. MÜNCH*; J. S. IGNATIOUS RAJA; T. LAUDES; A. NISSLER; C. G. GALIZIA. *Univ. of Konstanz.*

3:00 BB5 **620.07** Ancestral amphibian V2Rs are expressed in the main olfactory epithelium. A. S. SYED*; S. I. KORSCHING. *Inst. for Genetics, Univ. of Cologne.*

4:00 BB6 **620.08** ▲ Compensatory plasticity in the olfactory periphery: Timing and reversibility. C. N. BARBER; D. M. COPPOLA*. *Randolph-Macon Col., Randolph-Macon Col.*

1:00 BB7 **620.09** Novel protein Rook modulates olfactory transduction kinetics and contributes to proper olfactory behavior. A. K. TALAGA*; O. MAYBERRY, III; C. SIMBOLON; J. REISERT; H. ZHAO. *The Johns Hopkins Univ., Monell Chem. Senses Ctr.*

2:00 BB8 **620.10** Formyl peptide receptor expressing neurons in the mouse vomeronasal organ - a comparative biophysical characterization. T. ACKELS*; B. VON DER WEID; I. RODRIGUEZ; M. SPEHR. *RWTH Aachen Univ., Univ. of Geneva.*

3:00 BB9 **620.11** Stimulus-dependent lateral interactions between olfactory glomeruli revealed via *in vivo* optogenetic analysis. Y. CHOI; T. TOMBAZ; R. HOMMA; T. BOZZA; L. B. COHEN*; O. BRAUBACH. *Korea Inst. of Sci. and Technol., Yale Univ., Northwestern Univ., HHMI Janelia Farm Res. Campus.*

4:00 BB10 **620.12** The role of a single olfactory receptor in odor perception. C. TRIMMER*; J. R. WILLER; A. KELLER; L. B. VOSSHALL; N. KATSANIS; H. MATSUNAMI; J. D. MAINLAND. *Monell Chem. Senses Ctr., Duke Univ., The Rockefeller Univ.*

1:00 BB11 **620.13** Determining the molecular basis of olfactory adaptation: An EOG analysis of double mutant mice that lack CNG channel desensitization and PDE1C. C. FERGUSON*; H. ZHAO. *Johns Hopkins Univ.*

2:00 BB12 **620.14** CNGA4 and TRPC2, two proteins involved in the detection of mice pheromones. D. BOVARD; J. BRECHBÜHL; M. NENNIGER TOSATO; I. RODRIGUEZ; M. BROILLET*. *Univ. Lausanne Dep. Pharmacol & Toxicol, Univ. Geneva Dep. Genet. & Evolution.*

3:00 BB13 **620.15** An RNA-Seq screen of the *Drosophila* antenna identifies a non-neuronal gene required for olfactory response to ammonia. K. MENUZ; N. K. LARTER; J. PARK; J. R. CARLSON*. *Yale Univ.*

POSTER

621. Taste

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 BB14 **621.01** Development of an automated method for analysis of mouth movements and orofacial reactions in restrained rats. M. P. GARDNER*; L. HOU; C. SAMUELSEN; A. FONTANINI; D. SAMARAS. *SUNY At Stony Brook, SUNY At Stony Brook.*

2:00 BB15 **621.02** Layer-specific amygdalar activation of excitatory and inhibitory circuits in gustatory cortex. A. MAFFEI*; M. S. HALEY; A. FONTANINI. *SUNY-Stony Brook.*

3:00 BB16 **621.03** Integration of gustatory and anticipatory signals in the gustatory thalamus (VPMpc) of behaving rats. H. LIU*; A. FONTANINI. *SUNY, Stony Brook, Program in Neuroscience, SUNY Stony Brook.*

4:00 BB17 **621.04** Multimodal integration of taste and odor signals in the gustatory cortex of alert rats. C. L. SAMUELSEN*; A. FONTANINI. *Stony Brook Univ.*

1:00 BB18 **621.05** Pre-exposure to a diverse array of tastes enhances later conditioned taste aversion to novel sucrose. V. FLORES*; A. MORAN; D. B. KATZ. *Brandeis Univ., Brandeis Univ., Brandeis Univ.*

2:00 BB19 **621.06** Pharyngeal sense organs drive robust sugar consumption in *Drosophila.* E. E. LEDUE*; Y. CHEN; A. Y. JUNG; A. M. LOMELI; A. DAHANUKAR; M. D. GORDON. *Univ. of British Columbia, Univ. of California.*

3:00 BB20 **621.07** The ventral tegmental area modulates gustatory responses of the neurons in the parabrachial nuclei. C. LI*; Y. K. CHO. *Southern Illinois Univ. Sch. Med., Kangnung Natl. Univ. Col. of Dent.*

4:00 BB21 **621.08** Toll-like receptor 4 is involved in spontaneous fat and sugar preference. S. CAMANDOLA*; R. G. CUTLER; M. P. MATTSON. *NIA.*

1:00 BB22 **621.09** Decision making in *C. elegans* chemotaxis to alkaline pH. I. MARUYAMA*; T. MURAYAMA. *Okinawa Inst. of Sci. & Technol. Grad. Univ.*

2:00 BB23 **621.10** ● Aftertaste sans taste: ageusia with palinageusia. A. R. HIRSCH*; K. V. GAFTANYUK. *Smell & Taste Treatment and Res. Fndn., Intl. Univ. of the Hlth. Sci. Sch. of Med.*

3:00 BB24 **621.11** Temporal coding of foods in the parabrachial nucleus of the awake, freely licking rat. M. S. WEISS*; P. M. DI LORENZO; J. D. VICTOR. *Binghamton Univ., Weill Cornell Med. Col.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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4:00 BB25 **621.12** L-amino acid taste: Receptor system and transduction mechanisms. S. PAL CHOUDHURI*; R. J. DELAY; E. R. DELAY. *The Univ. of Vermont.*

1:00 BB26 **621.13** Anion effect and osmotic sensitivity of salt-responsive taste bud cells isolated from mouse circumvallate papillae. B. C. LEWANDOWSKI*; S. K. SUKUMARAN; R. F. MARGOLSKEE; A. A. BACHMANOV. *Monell Chem. Senses Ctr.*

2:00 BB27 **621.14** Altered brain response to sweet taste in older adults with metabolic syndrome: An fMRI study. C. MURPHY*; A. JACOBSON; E. GREEN; L. HAASE; A. BUNCIC; E. MCINTOSH. *San Diego State Univ/Univ of California, San Diego, San Diego State Univ., SDSU/UCSD Joint Doctoral Program.*

3:00 BB28 **621.15** Effects of selective gastric vagotomy on sucrose consumption in obese and lean rats. A. DENMAN-BRICE*; P. DI LORENZO; K. CZAJA. *Binghamton Univ., Washington State Univ.*

4:00 BB29 **621.16** *In vivo* confocal Ca^{2+} imaging to study salt taste in the geniculate ganglion. A. WU*; G. DVORIANTCHIKOV; E. PEREIRA; N. CHAUDHARI; S. ROPER. *Univ. of Miami, Miller Sch. of Med., Univ. of Miami, Miller Sch. of Med.*

1:00 BB30 **621.17** Design of voltage sensitive dye imaging for analysis of taste-recognition neural network in *Aplysia* buccal ganglion. Y. MIYAKE*; Y. YOSHIMI; T. NAGAHAMA. *Dept. Appl. Chem., Shibaura Inst. Technol., Dept. Biophysics, Fac. Phar. Sci., Toho Univ.*

2:00 BB31 **621.18** Optical interrogation of peripheral taste sensation *in vivo.* M. M. CHOI*; W. LEE; S. YUN. *Harvard Med. Sch.*

3:00 BB32 **621.19** Effects of temporal inactivation of gustatory insular cortex and gustatory thalamus on taste neophobia. J. ARTHURS; S. REILLY; J. LIN*. *UIC PSYCHOLOGY.*

4:00 BB33 **621.20** Candidate second-order gustatory neurons that connect the primary gustatory center to other regions in the gnathal (subesophageal) ganglia in the *Drosophila* brain. T. MIYAZAKI*; T. LIN; K. ITO; C. LEE; M. STOPFER. *NIH, The Univ. of Tokyo.*

1:00 CC1 **621.21** Chemical neural processing and behaviour in zebrafish larvae. R. CANDELIER*; M. S. MURMU; G. SUMBRE; G. DEBREGEAS. *CNRS / UPMC, Inst. de Biologie de l'École Normale Supérieure.*

2:00 CC2 **621.22** The neural processing of gustatory information in the mouse. S. M. TYREE*; J. TÖLE; W. MEYERHOF. *German Inst. of Human Nutr. (dife) Potsdam.*

3:00 CC3 **621.23** ● Expression profile of ecto-nucleotidases and equilibrative nucleoside transporter in the rat circumvallate papillae. K. NISHIDA*; A. OHISHI; K. NAGASAWA. *Kyoto Pharmaceut. Univ.*

4:00 CC4 **621.24** A neuropod in enteroendocrine cells is nurtured by enteric glia. D. V. BOHORQUEZ*; R. A. LIDDLE. *Duke Univ. Med. Ctr.*

1:00 CC5 **621.25** Cortical responses to monosodium glutamate suggest umami is a combination of sweet and salty tastes. E. E. REID; M. A. BAEZ- SANTIAGO; J. X. MAIER; D. B. KATZ*. *Brandeis Univ., Brandeis Univ.*

2:00 CC6 **621.26** Expression of taste signaling molecules in immune organs. P. FENG*; H. WANG. *Monell Chem. Senses Ctr.*

POSTER

622. Auditory Processing: Human Studies of Perception, Cognition, and Action

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 CC7 **622.01** A wearable vibrotactile sensory substitution device for the deaf and severely hearing impaired. S. D. NOVICH*; D. M. EAGLEMAN. *Baylor Col. of Med., Rice Univ.*

2:00 CC8 **622.02** Deconstructing the sensory and cognitive components of hearing loss. K. GRODNER; B. VIPARINA; W. M. COLLINS; L. BOUCHER*. *Nova Southeastern Univ.*

3:00 CC9 **622.03** Compensatory mechanisms for processing speech in noise in older adults. S. EVANS*; D. BOEBINGER; C. LIMA; S. ROSEN; M. OSTAREK; A. RICHARDS; C. MCGETTIGAN; Z. AGNEW; S. SCOTT. *Univ. Col. London, Univ. of Porto, Univ. Col. London, Royal Holloway, Univ. of California, San Francisco.*

4:00 CC10 **622.04** Multiple deficits impact auditory stream segregation in aging. E. DINCES*; E. SUSSMAN. *Albert Einstein Col. Of Med.*

1:00 CC11 **622.05** Neural entrainment is less responsive to attentional demands in older listeners. M. J. HENRY*; B. HERRMANN; J. OBLESER. *Max Planck Inst. For Human Cognitive and Brain Sci., Max Planck Inst. for Human Cognitive and Brain Sci.*

2:00 CC12 **622.06** Low-delta phase coherence reflects implicit temporal anticipation for supra-threshold stimuli. A. WILSCH*; M. J. HENRY; B. HERRMANN; B. MAESS; J. OBLESER. *Max Planck Inst. For Human Cognitive and Brain Sci.*

3:00 CC13 **622.07** Human sensing inaudible infrasound. T. IIJIMA*; Y. NAKASHIMA; Y. SUGITA. *Dept Psychol. Waseda Univ.*

4:00 CC14 **622.08** Neural oscillatory correlates of detected concurrent spectrotemporal regularities in acoustic stimuli. A. M. GIFFORD*; M. J. KAHANA; Y. E. COHEN. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 CC15 **622.09** The role of attention in the buildup to stream segregation. J. SUSSMAN-FORT*; E. SUSSMAN. *Albert Einstein Col. of Med.*

2:00 CC16 **622.10** The mismatched negativity as a marker for acoustic and phonological distinctions between vowel sounds. J. BURNISON; J. S. BRUMBERG*. *Univ. of Kansas, Univ. of Kansas.*

3:00 CC17 **622.11** Relative magnitude of loudness determines pitch accents in sequencially presented noise-vocoded Japanese vowels. M. TAKABAYASHI*; K. I. KOBAYASI; H. RIQUIMAROUX. *Doshisha Univ., Doshisha Univ., Doshisha Univ.*

4:00 CC18 **622.12** Differential neural adaptation of spectral transition and steady-state features in speech and non-speech. M. SABRI*; K. LEWIS; C. J. HUMPHRIES; E. LIEBENTHAL. *Med. Col. of Wisconsin.*

1:00 CC19 **622.13** Neural correlates of acoustic and linguistic contributions to listening effort during speech comprehension. Y. -. LEE*; J. E. PEELLE; C. ROGERS; N. E. MIN; A. WINGFIELD; M. GROSSMAN. *Univ. of Pennsylvania, Washington Univ. in St. Louis, Brandeis Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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2:00 CC20 **622.14** Neural mechanisms for the recognition of the noise-vocoded speech sounds: An fMRI study based on individual differences. S. MURAI*; K. I. KOBAYASI; H. RIQUIMAROUX. *Doshisha Univ., Doshisha Univ., Doshisha Univ.*

3:00 CC21 **622.15** Network analysis of human speech perception: An intracranial recording perspective. M. STEINSCHNEIDER*; K. NOURSKI; A. RHONE; H. OYA; H. KAWASAKI; M. HOWARD, III. *Albert Einstein Med. Col., Univ. of Iowa Med. Ctr.*

4:00 CC22 **622.16** EEG oscillations entrain their phase to high-level features of speech sound. B. ZOEFEL*; R. VANRULLEN. *Ctr. De Recherche Cerveau Et Cognition (cerco).*

1:00 CC23 **622.17** Alpha oscillations index differential distractor-speech interference. M. WÖSTMANN*; B. HERRMANN; B. MAESS; J. OBLESER. *Max Planck Inst. For Human Cognitive and Brain.*

2:00 CC24 **622.18** Neural amplitude fluctuations in multiple frequency bands predict auditory perception in a rhythmically variable context. B. HERRMANN*; M. J. HENRY; J. OBLESER. *MPI For Human Cognitive and Brain Sci.*

3:00 CC25 **622.19** Training induced change in categorical boundaries of speech sounds. E. STIPES; P. MASON; M. PIERCE; C. TENG*. *Univ. of Virginia, Univ. of Virginia, Univ. of Virginia.*

4:00 CC26 **622.20** The influence of hearing acuity and perceptual effort on recall for word-lists. K. COUSINS*; A. WINGFIELD. *Brandeis Univ.*

1:00 CC27 **622.21** The Oxford Vocal (OxVoc) Sounds Database: A validated set of non-acted affective sounds from human infants, adults and domestic animals. C. PARSONS*; K. YOUNG; M. CRASKE; A. STEIN; M. KRINGELBACH. *Univ. of Oxford, UCLA, UCLA, Univ. of Oxford.*

2:00 CC28 **622.22** Neural substrates representing temporal and motor sequences of rhythm. N. KONOIKE*; Y. KOTOZAKI; J. HYEONJEONG; A. MIYAZAKI; K. SAKAKI; T. SHINADA; M. SUGIURA; R. KAWASHIMA; K. NAKAMURA. *Primate Res. Institute, Kyoto Univ., Inst. of Development, Aging and Cancer, Tohoku Univ.*

3:00 CC29 **622.23** Dynamic affective and neural responses to expressive timing fluctuations in music. N. K. FLAIG*; T. P. ZANTO; H. L. CHAPIN; E. W. LARGE. *Univ. of Connecticut, Univ. of California San Francisco, Educ. & Training Systems Intl. (ETSI).*

4:00 CC30 **622.24** Pitch direction modulates theta activity in classical music - an ECoG study. C. A. MIKUTTA; S. DUERSCHMID; M. LEHNE; A. ALTORFER; W. K. STRIK; J. PARVIZI; H. HEINZE; H. HINRICHS; P. BRUNNER; G. SCHALK; S. KOELSCH; R. T. KNIGHT*. *Univ. of California, Dept. of Neurol., Leibniz Inst. of Neurobio. (LIN), German Ctr. for Neurodegenerative Dis. (DZNE), Freie Univ. Berlin, Univ. of Bern, Stanford Univ., Stanford Univ., Otto-von-Guericke University,, Otto-von-Guericke Univ., Wadsworth Center, New York State Dept. of Hlth., Albany Med. Col., State Univ. of New York at Albany, Wadsworth Center, New York State Dept. of Hlth., Univ. California Berkeley.*

1:00 CC31 **622.25** Hemodynamic phase synchronization analysis reveals functional network dynamics with novel and familiar musical sequences. B. M. GREEN*; E. GLEREAN; M. SAMS; J. P. RAUSCHECKER; I. P. JÄÄSKELÄINEN. *Georgetown Univ. Med. Ctr., Aalto Univ. Sch. of Sci.*

2:00 CC32 **622.26** Mismatch negativity (MMN) used for analyzing the recognition of sounds in professional musicians using hearing protectors. E. EMMERICH; J. GÜNTHER; A. LEHMENKUHLER*; F. RICHTER. *Univ. Hosp. Jena, Pain Inst.*

3:00 CC33 **622.27** The disctinction between stimulus strength manipulations and volitional control in bistable perception. J. A. RANKIN*; J. RINZEL. *New York Univ., Courant Inst. of Mathematical Sci.*

4:00 CC34 **622.28** Dichotic listening while walking: Age effects on auditory control and spatio-temporal parameters of gait. C. RODRIGUEZ-ARANDA*; K. WATERLOO; M. M. GORECKA. *Dept. of Psychology, Univ. of Tromsø, Univ. Hosp. North Norway.*

POSTER

623. Multisensory: Cross-Modal Processing in Humans, Audio-Visual

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 CC35 **623.01** Audiovisual associations alter low-level motion perception. H. KAFALIGONUL*; C. OLUK. *Natl. Magnetic Resonance Res. Ctr. (UMRAM), Bilkent Univ., Bilkent Univ.*

2:00 CC36 **623.02** ▲ The development of audiovisual crossmodal attentional cueing. K. SCHMITTGEN*; C. VILTER; L. D. KWAKYE. *Oberlin Col.*

3:00 DD1 **623.03** ▲ The neural correlates of multisensory temporal processing in an audiovisual steady-state electroencephalogram task. S. RUSS*; E. ALIGBE; L. D. KWAKYE. *Oberlin Col.*

4:00 DD2 **623.04** Auditory-visual interactions in brain and behaviour using modulated stimuli. Q. VUONG; M. LAING; A. REES*. *Newcastle Univ.*

1:00 DD3 **623.05** Association between concurrently recorded fNIRS and EEG signals for low-level visual and auditory stimuli. L. CHEN*; P. SANDMANN; J. D. THORNE; S. DEBENER. *Carl Von Ossietzky Univ. Oldenburg, Hannover Med. Sch., Univ. of Oldenburg.*

2:00 DD4 **623.06** Phase tracking of visual speech in the human auditory cortex revealed by intracranial EEG. P. MEGEVAND*; D. M. GROPPE; A. D. MEHTA; C. E. SCHROEDER. *Hofstra North Shore LIJ Sch. of Med., Feinstein Inst. for Med. Res., Nathan S Kline Inst., Columbia Univ.*

3:00 DD5 **623.07** Electrocorticographic responses to synchronous and asynchronous audiovisual speech. D. MOHANTY*; M. OZKER; D. YOSHOR; M. S. BEAUCHAMP. *BAYLOR COLLEGE OF MEDICINE, Univ. of Texas Hlth. Sci. Ctr. at Houston, Baylor Col. of Med.*

4:00 DD6 **623.08** Processing of audiovisual speech and non-speech stimuli within and beyond human auditory cortex: An intracranial electrophysiology study. A. E. RHONE*; B. MCMURRAY; K. V. NOURSKI; H. OYA; H. KAWASAKI; M. A. HOWARD, III. *Univ. of Iowa, Univ. of Iowa.*

1:00 DD7 **623.09** The modality-specific spatial attention control between vision and audition under same stimulation background: A simultaneous EEG-fMRI study. W. WANG*; S. VISWANATHAN; S. T. GRAFTON. *UCSB.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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2:00 DD8 **623.10** The effect of early visual deprivation on the neural bases of multisensory processing. M. J. GUERREIRO*; L. PUTZAR; B. ROEDER. *Univ. of Hamburg.*

3:00 DD9 **623.11** Enhanced functional connectivity between V1 and multimodal cortex in congenitally, profoundly deaf adults revealed by time-lagged cross-correlation of the "fast" optical signal. J. L. SEYMOUR*; A. CHIARELLI; M. FABIANI; G. GRATTON; M. A. FLETCHER; K. LOW; E. MACLIN; K. MATHEWSON; M. W. G. DYE. *Univ. of Illinois at Urbana-Champaign, Univ. of Alberta.*

4:00 DD10 **623.12** Cortical coupling between occipital cortex and intraparietal sulcus predicts auditory abilities in early blind individuals. P. VOSS*; R. J. ZATORRE. *McGill Univ.*

1:00 DD11 **623.13** An fmri study of a visual-auditory paired associate task. P. T. CORBITT*; J. F. SMITH; B. HORWITZ. *NIH, NIDCD-NIH.*

POSTER

624. Visual Cognition: Decision-Making

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 DD12 **624.01** An unbiased approach to analyzing the effect of numerosity and other visual features of dot arrays on neural and behavioral variables. N. K. DEWIND*; J. PARK; G. K. ADAMS; M. L. PLATT; E. M. BRANNON. *Duke Univ.*

2:00 DD13 **624.02** Dissecting the neural network of duration perception with fMRI. M. CAI*; D. M. EAGLEMAN. *Baylor Col. of Med.*

3:00 DD14 **624.03** Overlapping topographic representations of numerosity and item size in the human parietal cortex. B. M. HARVEY*; A. FRACASSO; N. PETRIDOU; S. O. DUMOULIN. *Utrecht Univ., Utrecht Univ., Univ. Med. Ctr. Utrecht.*

4:00 DD15 **624.04** High-level expertise for mathematical concepts recycles lateral occipito-temporal and parietal regions for number processing. S. DEHAENE*; M. AMALRIC; M. PIAZZA; B. THIRION. *INSERM-CEA, Collège de France, INRIA.*

1:00 DD16 **624.05** Monkey math beyond addition. M. S. LIVINGSTONE*; D. LEE. *Harvard Med. Sch., Yale Univ. Sch. of Med.*

2:00 DD17 **624.06** Changes in cerebellar-parietal connectivity contribute to differential anterior parietal activity for complex and simple mental calculation. C. KATZ*; A. KNOPS. *Humboldt Univ. of Berlin.*

3:00 DD18 **624.07** ● Limitations of abstract number perception: An fMRI study on the temporal integration of auditory and visual number information. S. CAVDAROGLU*; A. KNOPS. *Humboldt Univ. zu Berlin.*

4:00 DD19 **624.08** Value-based attentional capture induces automatic normalization during binary-choice decisions. S. ITTHIPURIPAT*; J. T. SERENCES. *UCSD.*

1:00 DD20 **624.09** Neurophysiologic correlates of the speed-accuracy trade-off in humans: Setting thresholds in time and in amplitude. N. A. STEINEMANN*; R. G. O'CONNELL; S. P. KELLY. *Neural Systems Lab, City Col. of New York, Trinity Col. Dublin.*

2:00 DD21 **624.10** Rhythmic 30 Hz non invasive brain stimulation patterns entrain high-beta cortical oscillations relevant for conscious visual perception in the human right Frontal Eye Fields. A. VALERO CABRE*; R. QUENTIN; M. VERNET. *Lab. Cerebral Dynamics, Boston Univ. Sch. of Med., Inst. du Cerveau-CNRS UMR 7225, Inst. du Cerveau-CNRS UMR 7225, Paris, France.*

3:00 DD22 **624.11** The evaluation of visual temporal resolution in the behaving mouse. S. YOKOTA*; S. IKUTA; J. MITA; T. SHINGO; D. UCHIDA; Y. NOMURA; T. ARIMURA; A. AMANO; K. SHIMONOMURA; C. KOIKE. *Ritsumeikan Univ., Ritsumeikan Univ., Ritsumeikan Univ., Ritsumeikan Univ., Ritsumeikan Univ., PRESTO, Japan Sci. & Technol. Agency.*

4:00 DD23 **624.12** Perceptual decision related activity in the ON and OFF pathways of the lateral geniculate nucleus (LGN). Y. JIANG*; D. YAMPOLSKY; G. PURUSHOTHAMAN; V. CASAGRANDE. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

1:00 DD24 **624.13** Neurons that fire together select together: Reduced variability of visual search target selection times for simultaneously as compared to sequentially recorded neurons. W. ZINKE*; R. P. HEITZ; B. A. PURCELL; J. D. SCHALL. *Vanderbilt Univ.*

2:00 DD25 **624.14** Psychophysical measurement of visual behavior in the ferret. S. U. NUMMELA; J. LEDLEY; K. J. NIELSEN*. *Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 DD26 **624.15** Temporal evolution of information in neural networks with feedback. A. GIAHI SARAVANI; X. S. PITKOW*. *Baylor Col. of Med., Rice Univ., Baylor Col. of Med.*

4:00 DD27 **624.16** Non-invasive measurement of population dynamics during computation of choice. M. C. KLEIN-FLÜGGE*; G. R. BARNES; M. W. WOOLRICH; T. E. J. BEHRENS. *UCL, Oxford Univ.*

POSTER

625. Multisensory and Motor Interactions

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 DD28 **625.01** Suppression of enhanced physiological tremor via stochastic noise: Initial observations. C. TRENADO; F. AMTAGE; F. HUETHE; J. SCHULTE-MÖNTING; I. MENDEZ-BALBUENA; M. HEPP-REYMOND; E. MANJARREZ*; R. KRISTEVA. *Univ. of Freiburg, Univ. of Freiburg, Benemerita Univ. Autonoma de Puebla, Univ. of Zürich and ETH Zürich, Benemerita Univ. Autonoma de Puebla.*

2:00 DD29 **625.02** Relationship between neural latencies in area MT and behaviora latencies of smooth pursuit eye movements in monkeys. J. LEE*; J. YANG; S. G. LISBERGER. *Duke Med. Ctr.*

3:00 DD30 **625.03** Whole brain cellular resolution mapping of circuits underlying goal-directed behavior in zebrafish. C. A. HARRIS*; K. L. BRIGGMAN. *NIH.*

4:00 DD31 **625.04** Behavioral training for oculomotor tasks in head-free non-human primates. J. WANG*; S. W. EGGER; E. D. REMINGTON; M. JAZAYERI. *MIT, MIT.*

Tue. PM

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1:00 DD32 **625.05** Action value modulates mirror neuron activity. D. ARNSTEIN*; J. K. POMPER; P. THIER. *Hertie Inst. For Clin. Brain Res.*

2:00 EE1 **625.06** Response error signalling by single neurons in human anterior cingulate cortex, amygdala and supplementary motor area. Z. FU*; A. N. MAMELAK; I. ROSS; J. CHUNG; R. ADOLPHS; U. RUTISHAUSER. *Caltech, Caltech, Cedars-Sinai Med. Ctr., Hungtinton Mem. Hosp., Cedars-Sinai Med. Ctr.*

3:00 EE2 **625.07** Behaviorally relevant efficient cortical coding of visual motion signals in the pursuit system of monkeys. B. LIU*; L. OSBORNE. *Univ. of Chicago, Univ. of Chicago.*

4:00 EE3 **625.08** Neurons in the primate central thalamus predicting the timing of periodic stimulus. K. MATSUYAMA*; M. TANAKA. *Hokkaido University, Sch. of Med.*

1:00 EE4 **625.09** ▲ Alpha neural activity in the somatosensory and visual cortices when drawing under conflicting proprioceptive and visual inputs. N. LEBAR*; J. DANNA; S. MORE; L. MOUCHNINO; J. BLOUIN. *LNC.*

2:00 EE5 **625.10** How specific is non-specificity? Early motor facilitation during action observation is specific to the viewed effector. K. R. NAISH*; S. S. OBHI. *Wilfrid Laurier Univ.*

3:00 EE6 **625.11** The role of pretectal microcircuitry in the control of visual motor responses. L. CAPANTINI*; A. KARDAMAKIS; B. ROBERTSON; S. GRILLNER. *Karolinska Institutet.*

4:00 EE7 **625.12** Activating medullary neurons through optogenetics in the locust optic lobe. H. WANG*; R. B. DEWELL; M. U. EHRENGRUBER; F. GABBIANI. *Baylor Col. of Med., Kantonsschule Hohe Promenade, Rice Univ.*

1:00 EE8 **625.13** Development of functional connections between the superficial and intermediate layers of the rodent superior colliculus revealed by optical imaging. M. NANA*; R. P. HASEGAWA; K. MURASE; H. IKEDA. *Univ. of Fukui, Natl. Inst. of Advanced Industrial Sci. and Technol. (AIST).*

2:00 EE9 **625.14** Unilateral strength training while mirror viewing the exercising hand, augments cross-education and reduces cortical inhibition and corticospinal excitability. T. ZULT*; S. GOODALL; K. THOMAS; T. HORTOBÁGYI; G. HOWATSON. *Univ. of Groningen, Northumbria Univ.*

3:00 EE10 **625.15** Two-photon imaging of lateral interaction in the superficial layer of the superior colliculus. M. KASAI*; T. ISA. *Natl. Inst. For Physiological Sci., The Graduated Univ. for Advanced Studies (SOKENDAI).*

4:00 EE11 **625.16** Distinct roles for alpha- and beta-band oscillations during construction of goal-directed action plans. L. BRINKMAN*; F. P. DE LANGE; A. STOLK; H. C. DIJKERMAN; F. S. S. LEIJTEN; I. TONI. *Radboud Univ. Nijmegen, Donders Inst. For Brain, Cognition & Behaviour, Utrecht Univ., Univ. Med. Ctr. Utrecht.*

1:00 EE12 **625.17** Sensory gating by the delta phase determines network and behavioral response to weak visual input in freely behaving ferrets. F. FROHLICH*; J. LU; K. K. SELLERS; C. YU; S. L. SCHMIDT. *Univ. of North Carolina.*

2:00 EE13 **625.18** Tackling the sensitivity of FEFsem neurons during smooth pursuit: Microstimulation of the superior colliculus and multiple linear regression. L. R. BAKST*; J. FLEURIET; S. ONO; M. J. MUSTARI. *Univ. of Washington, Univ. of Washington.*

3:00 EE14 **625.19** Decomposition of visual vs. auditory representations of gaze target location into 3-D eye and head movement commands: A neural network study. M. DAEMI*; D. CRAWFORD. *Ctr. For Vision Res., York Univ., Ctr. for Vision Res.*

4:00 EE15 **625.20** Sensory recalibration in the ventriloquism aftereffect integrates local and global stimulus history. P. BRUNS*; B. RÖDER. *Univ. of Hamburg.*

1:00 EE16 **625.21** Use of multisensory information by flying bats. A. KRISHNAN*; W. LEE; C. F. MOSS. *Univ. of Maryland.*

2:00 EE17 **625.22** Characterization of parietal spike train spectra during multimodal limb position estimation. P. VANGILDER*, JR; Y. SHI; G. APKER; C. A. BUNEO. *Arizona State Univ.*

3:00 EE18 **625.23** Alpha activity indexes task-related neuronal populations on large and small scales: Evidence from ECoG in a multimodal study in humans and a non-human primate. A. DE PESTERS*; P. BRUNNER; A. GUNDUZ; A. L. RITACCIO; P. DE WEERD; M. ROBERTS; N. BRUNET; R. OOSTENVELD; P. FRIES; G. SCHALK. *Wadsworth Ctr., State Univ. of New York at Albany, Albany Med. Col., Univ. of Florida, Maastricht Univ., Donders Inst. for Brain, Cognition and Behaviour, Ernst Strüngmann Inst. for Neurosci.*

4:00 EE19 **625.24** Auditory modulation of wind-elicited walking behavior in the cricket. M. FUKUTOMI*; M. SOMEYA; H. OGAWA. *Hokkaido Univ., Hokkaido Univ.*

1:00 EE20 **625.25** Crossmodal integration improves sensory detection thresholds in the ferret. K. J. HOLLENSTEINER*; F. PIEPER; G. ENGLER; A. K. ENGEL. *Univ. Med. Ctr. Hamburg-Eppendorf.*

2:00 EE21 **625.26** Behavioral evidence for opposing geotaxis by geomagnetic field and gravity in *Drosophila.* J. BAE; S. KWON; Y. LEE; K. CHAE*. *Kyungpook Natl. Univ., Korea Res. Inst. of Standards and Sci., Kyungpook Natl. Univ.*

3:00 EE22 **625.27** Decoding multisensory information from the parietal cortex: A comparison of maximum likelihood and artificial neural network decoders. H. MAO; Y. SHI; G. APKER; J. SI; C. A. BUNEO*. *Arizona State Univ., Arizona State Univ., Arizona State Univ.*

4:00 EE23 **625.28** Directionality and sharpness of neuronal responses to infrared stimuli in tectum of vipers. Q. CHEN*; F. GUANGZHAN; Y. TANG. *Chengdu Inst. of Biology, Chinese Acad. of Sci.*

1:00 EE24 **625.29** Retronasal odorants modulate responses of taste cells in the nucleus of the solitary tract of the awake, behaving rat. O. D. ESCANILLA*; P. DI LORENZO. *Binghamton Univ.*

2:00 EE25 **625.30** Oscillatory alpha activity reflects tactile spatial coordinates differently in sighted and blind individuals. J. T. SCHUBERT*; V. N. BUCHHOLZ; J. FÖCKER; A. K. ENGEL; B. RÖDER; T. HEED. *Univ. of Hamburg, Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Geneva.*

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POSTER

626. Eye Movement Behavior

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 EE26 **626.01** Foveal attention modulates saccade frequency during smooth pursuit. S. J. HEINEN*; E. POTAPCHUK; S. N. J. WATAMANIUK. *Smith-Kettlewell Eye Res. Inst., Wright State Univ.*

2:00 EE27 **626.02** Physical causality guides saccades during visual pursuit initiation. K. WENDE; A. DROżDżEWSKA; B. FELTZ; M. MISSAL*. *Inst. of Neurosciences, IONS - COSY, Univ. catholique de Louvain, Inst. of Neurosciences, IONS - COSY.*

3:00 EE28 **626.03** Saccadic reaction time distributions follow the matching law in a concurrent random interval reinforcement schedule. L. MADELAIN*. *Ureca - Univ. Lille 3, Inst. de neurosciences de la Timone.*

4:00 FF1 **626.04** Spatiotemporal distortions in visual scene reconstruction during and shortly after a saccade. J. S. ATSMA*; F. MAIJ; D. E. IRWIN; W. P. MEDENDORP. *Donders Inst., Univ. of Illinois.*

1:00 FF2 **626.05** Change of gaze by retinal movements during locomotion by jumping spiders. D. B. ZUREK; C. GILBERT*. *Univ. of Pittsburg, Cornell Univ.*

2:00 FF3 **626.06** Time-frequency analysis of the precue effects on saccade latency in behaving monkeys. J. HUANG*; K. SONG; Y. XU; I. SIMPSON; K. KOSEK; Y. ZHOU; H. ZHU; W. ZHOU; H. LUO. *Univ. of Mississippi Med. Ctr., Sch. of Life Sciences, Univ. of Sci. and Technol. of China, Inst. of Biophysics, Chinese Acad. of Sci., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

3:00 FF4 **626.07** Visual and auditory targets elicit a unidirectional prosaccade switch-cost. M. D. HEATH*; F. E. STARRS; E. A. MACPHERSON; J. WEILER. *Univ. of Western Ontario.*

4:00 FF5 **626.08** Blinking during torsional optokinetic eye movements partially resets eye torsion. M. F. KHAZALI*; A. SMILGIN; F. BUNJES; P. THIER. *Hertie Inst. For Clin. Brain Res.*

1:00 FF6 **626.09** An advanced real-time monocular/binocular eye tracking system using a high frame-rate digital camera. K. MATSUDA*; A. TAKEMURA; K. MIURA; T. OGAWA; K. KAWANO. *AIST, Kyoto Univ.*

2:00 FF7 **626.10** Interspersing fixation trials better reduces anticipatory pursuit than randomizing target direction. S. N. WATAMANIUK*; S. J. HEINEN. *Wright State Univ., The Smith-Kettlewell Eye Res. Inst.*

3:00 FF8 **626.11** ▲ Sensitivity of catch-up saccades kinematics to repeated unperceived changes of target velocity. C. KAYAL; B. GAYMARD; P. M. DAYE*. *Inst. du Cerveau et de la Moelle épinière.*

4:00 FF9 **626.12** Slow eye movements reflect human decision-making about visual motion direction. S. B. KRISHNA*; E. POLAND; S. GLIM; B. EICHELBERGER; S. TREUE. *German Primate Ctr., German Primate Ctr., Bernstein Ctr. for Computat. Neurosci., Univ. of Goettingen.*

1:00 FF10 **626.13** Neural mechanisms of visuomotor updating within an illusory context. A. J. DE BROUWER*; J. B. J. SMEETS; T. GUTTELING; I. TONI; W. P. MEDENDORP. *VU Univ. Amsterdam, Radboud Univ. Nijmegen.*

2:00 FF11 **626.14** Micro-meter magnitude components of eye movement separated from miniature head motion revealing pro- and anti-correlation vectors. Y. TANAKA*; H. FUJIE; S. SHIMEGI. *Neuromathematicslaboratory, Paris-Miki Inc., Osaka Univ.*

3:00 FF12 **626.15** Seeing space through time: Visual consequences of eye movement transients. M. RUCCI*; M. POLETTI; J. D. VICTOR; M. BOI. *Boston Univ., Boston Univ., Weill Cornell Med. Col.*

4:00 FF13 **626.16** ▲ Eye movements during a transition between different non-constant target velocity profiles. E. HAINQUE*; E. APARTIS-BOURDIEU; P. M. DAYE. *CR-ICM, UMR 7225, UMRS 975. Cnrs-inserm-Université*.

1:00 FF14 **626.17** Prior experience biases the oculomotor response to a moving target. N. DERAVET*; J. ORBAN DE XIVRY; G. BLOHM; P. LEFEVRE. *Univ. catholique de Louvain, Queen's Univ.*

2:00 FF15 **626.18** Smooth pursuit eye movements in the common marmoset. J. F. MITCHELL; N. J. PRIEBE*; C. T. MILLER. *The Salk Inst., Univ. Texas, Austin, UCSD.*

3:00 FF16 **626.19** Characterization of the optokinetic and optomotor response in mice. F. KRETSCHMER*; T. C. BADEA. *NEI/NIH.*

4:00 FF17 **626.20** Disconjugacy of eye movements in zebrafish larvae. D. STRAUMANN*; C. CHEN; C. J. BOCKISCH; G. BERTOLINI; Y. M. HUANG. *Univ. Hosp. Zurich, Dept. of Neurol., Univ. Hosp. Zurich, Dept. of Ophthalmology, Univ. Hosp. Zurich, Dept. of Otorhinolaryngology.*

1:00 FF18 **626.21** Measuring ocular drifts for the study of natural images. D. SNODDERLY*; H. KO; M. POLETTI; M. AYTEKIN. *Univ. Texas, Univ. Texas, Boston Univ.*

2:00 FF19 **626.22** Color cannot be used as a contextual cue during rhesus monkey saccadic adaptation. A. L. CECALA*; I. SMALIANCHUK; S. B. KHANNA; M. A. SMITH; N. J. GANDHI. *Elizabethtown Col., Univ. of Pittsburgh.*

POSTER

627. Spinal Cord Processing: Anatomy and Physiology

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 FF20 **627.01** Phasic and tonic types of glycine-mediated inhibition dominate in parvalbumin positive dorsal horn interneurons. R. J. CALLISTER*; K. M. SMITH; D. I. HUGHES; B. A. GRAHAM. *Univ. of Newcastle, Univ. of Glasgow.*

2:00 FF21 **627.02** Multiunit recordings of superficial dorsal horn nocicepitive neurons in a longitudinal slice of mice spinal cord. E. CISNEROS; I. MAZO; C. ROZA*; I. RIVERA-ARCONADA; J. A. LOPEZ-GARCIA. *Univ. De Alcala.*

3:00 FF22 **627.03** Hyperexcitability of spinal neurons contributes to pain in a transgenic mouse model of sickle cell disease. G. CATALDO*; K. GUPTA; D. A. SIMONE. *Univ. of Minnesota, Univ. of Minnesota.*

Tue. PM

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4:00 FF23 **627.04** Intradermic capsaicin increases autogenic and heterogenic PAD in Aδ articular afferents as part of a control mechanism that regulates information flow in nociceptive afferents. A. O. RAMIREZ*; E. F. HERNÁNDEZ; P. RUDOMIN. *Ctr. De Investigación Y Estudios Avanzados, Ctr. de Investigación y Estudios Avanzados del IPN, Colegio Nacional.*

1:00 FF24 **627.05** Stress induces pain transition by potentiation of AMPA receptor phosphorylation. S. LIU; Y. YANG; C. LI; H. FANG; O. FURMANSKI; J. SKINNER; R. JOHNS; R. HUGANIR; F. TAO*. *John Hopkins Univ. Sch. Med., Zhengzhou Univ. Basic Med. Col., Texas A&M Univ. Baylor Col. of Dent.*

2:00 FF25 **627.06** Morphological and physiological characteristics of a subgroup of GABAergic spinal lamina II neurons in CCI mice. H. ZHANG*; Y. LI; Q. YANG; P. M. DOUGHERTY. *The Univ. of Texas MD Anderson Cancer Ctr., The Univ. of Texas Hlth. Sci. Ctr. at Houston.*

3:00 FF26 **627.07** ● Properties of recombinant isolectin B4 (IB4): Binding and immunostaining. M. D. KOHLS; D. A. LAPPI*; L. R. ANCHETA. *Advanced Targeting Systems.*

4:00 FF27 **627.08** Modulation of nociceptive processing at the spinal cord level by PAR2 receptors. P. MRÓZKOVÁ*; J. PALECEK. *Inst. of Physiol. Acad. of Sci., Charles Univ. in Prague, Fac. of Sci., Inst. of Physiol. Acad. of Sci.*

1:00 FF28 **627.09** Monosynaptic convergence of somatic and visceral C-fiber afferents onto spinal lamina I neurons: A mechanism of referred pain. E. FERNANDES; L. L. LUZ; E. KOKAI; M. SIVADO; P. SZUCS; B. V. SAFRONOV*. *IBMC, Dept. of Physiol.*

2:00 FF29 **627.10** ● Temporal dynamics of dorsal horn projection neuron responses to spinal cord stimulation depend on stimulation frequency and GABAergic inhibition. T. ZHANG*; J. J. JANIK; W. M. GRILL. *Duke Univ., Stryker Corp.*

3:00 FF30 **627.11** Distributed spinal fmri responses to noxious cold and heat stimuli in anesthetized monkeys. P. YANG*; F. WANG; L. CHEN. *Vanderbilt Univ., Vanderbilt Univ.*

4:00 FF31 **627.12** Spinal cord astrocytes release endocannabinoids due to the activation of their CB1 receptors. M. ANTAL*; Z. HEGYI; T. OLÁH; A. KISS; Á. KőSZEGHY; K. HOLLÓ; T. PATONAY; L. CSERNOCH; A. MINCIC. *Univ. of Debrecen, Univ. of Oradea.*

1:00 FF32 **627.13** α5GABA-A receptors in the superficial dorsal horn regulate central sensitization. J. PÉREZ-SÁNCHEZ*; R. P. BONIN; L. LORENZO; C. LABRAKAKIS; E. M. BRIDGWATER; B. A. ORSER; Y. DE KONINCK. *CR-IUSMQ, Univ. Laval, Univ. of Ioannina, Univ. of Toronto.*

2:00 GG1 **627.14** Electrical stimulation of low-threshold afferent fibers depresses synaptic transmission of high-threshold afferent inputs in lamina II dorsal horn neurons. Q. XU; A. D. SDRULLA; V. TIWARI; S. HE; F. YANG; S. N. RAJA; X. DONG; Y. GUAN*. *Howard Hughes Med. Inst., Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 GG2 **627.15** Optogenetic dissection of pain and itch circuitry in the spinal dorsal horn. J. HACHISUKA*; K. M. BAUMBAUER; L. M. SNYDER; H. R. KOERBER; S. E. ROSS. *Univ. of Pittsburgh.*

4:00 GG3 **627.16** ● Low-threshold mechanoreceptive Aδ- and C-afferent units contribute to the inhibition of nociceptive transmission via the spinal μ-opioid system. N. WATANABE*; M. PICHÉ; H. HOTTA. *Tokyo Metropolitan Inst. of Gerontology, Univ. du Québec à Trois-Rivières.*

1:00 GG4 **627.17** Impact of spinal interneuron disinhibition on somatosensory processing in neuropathic pain. K. LEE*; S. A. PRESCOTT. *Neurosciences and Mental Health, Hosp. For Sick Children, Univ. of Toronto.*

2:00 GG5 **627.18** Three-dimensional reconstruction of synaptic relationship between interneurons of dorsal horn of the spinal cord. H. PETITJEAN*; S. PAWLOWSKI; A. DAVIDOVA; A. RIBEIRO-DA-SILVA; R. SHARIF NAEINI. *McGill Univ., McGill Univ.*

3:00 GG6 **627.19** Dopamine modulation of synaptic transmission in lamina I neurons of the dorsal horn spinal cord. M. PUOPOLO*. *Stony Brook Med.*

4:00 GG7 **627.20** Reduced pain sensitivity in plasma membrane calcium atpase 2 (pmca2) heterozygous mice. V. KHARIV*; W. DONG; R. F. HEARY; S. ELKABES. *Grad. Sch. of Biomed. Sciences, NJMS, Rutg, Dept. of Neurolog. Surgery, The Reynolds Family Spine Lab.*

1:00 GG8 **627.21** A role for the transcription factor Lmx1b in pain modality discrimination. A. KANIA*; N. SZABO; R. V. DA SILVA; S. SOTOCINAL; J. MOGIL. *(IRCM) Inst. de recherches cliniques de Montreal, McGill Univ.*

POSTER

628. Visceral Pain

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 GG9 **628.01** Role of hydrogen peroxide and TRPA1 in visceral hyperalgesia in trinitrobenzene sulphate-induced colitis. Y. KOGURE*; S. WANG; K. TANAKA; S. YAMAMOTO; N. NISHIYAMA; K. NOGUCHI; Y. DAI. *Hyogo Univ. of Hlth. Sci., Hyogo Col. of Med., Chinese Med. Confucius Inst. at Hyogo Col. of Med.*

2:00 GG10 **628.02** TRPA1, but not TRPV1 contributes to the colonic motility-dependent visceral pain in rats. Y. HAO; S. WANG; Y. KOGURE; S. YAMAMOTO; H. MIWA; K. NOGUCHI; Y. DAI*. *Hyogo Univ. of Hlth. Sci., Hyogo Col. of Med., Chinese Med. Confucius Inst. at Hyogo Col. of Med., Hyogo Col. of Med.*

3:00 GG11 **628.03** Exercise ameliorates urinary bladder hypersensitivity and dysfunction in maternally-separated female mice. A. N. PIERCE*; R. WANG; J. M. RYALS; J. A. CHRISTIANSON. *Univ. of Kansas Med. Ctr.*

4:00 GG12 **628.04** The impact of early life stress and voluntary exercise intervention on comorbid mood and urogenital pain disorders in male mice. I. FUENTES*; A. N. PIERCE; R. WANG; J. A. CHRISTIANSON. *Univ. of Kansas Med. Ctr.*

1:00 GG13 **628.05** Optogenetic dissection of bladder nociception and function in mice. V. K. SAMINENI*; J. J. DEBERRY; M. PULLEN; B. A. COPITS; B. M. DAVIS; R. W. GEREAU. *Washington Univ., Univ. of Pittsburgh, Washington Univ.*

2:00 GG14 **628.06** Prostatitis induces bladder hypersensitivity via neural cross-talk. E. S. SCHWARTZ*; E. E. YOUNG; B. FENG; G. F. GEBHART. *Univ. of Pittsburgh.*

3:00 GG15 **628.07** Estrogen receptor alpha and beta differentially mediate MAPK signaling pathway activation in the female rat spinal cord. Y. JI*; J. KARPOWICZ; S. PANDYA; D. CAO; R. TRAUB. *Univ. of Maryland, Baltimore.*

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4:00 GG16 **628.08** Adrenergic signaling mediates pancreatic hyperalgesia through activation of purinergic receptors in primary sensory neurons in rats with chronic pancreatitis. S. F. HU; H. ZHU; Y. ZHOU; Y. ZHOU; G. XU*. *Soochow Univ., Soochow Univ.*

1:00 GG17 **628.09** RvD1 and Chemerin alleviated inflammatory signs associated with endometriosis in rats. N. DMITRIEVA*; C. M. GARCIA PASCUAL; G. SUESS; R. SHIRLEY. *Florida State Univ., Florida State Univ.*

2:00 GG18 **628.10** Colonic inflammatory molecules do not underlie inflammatory, post-, and non-inflammatory colorectal hypersensitivity in the mouse. J. LA*; G. F. GEBHART. *Ctr. For Pain Research, Univ. Pittsburgh.*

3:00 GG19 **628.11** ● Attenuation of visceral and somatic nociception by peripheral administration of ghrelin agonists. E. MOHAMMADI; C. PIETRA*; K. TYLER; R. NORTHRUP; B. GREENWOOD. *VA Med. Ctr., Helsinn Healthcare SA, Helsinn Therapeut. Inc.*

4:00 GG20 **628.12** Increased glutaminase and aspartate aminotransferase in rat sacral dorsal root ganglion neurons during acute colonic inflammation. K. E. MILLER*; R. JOHN; M. B. ANDERSON; C. KIM; K. TYLER; B. GREENWOOD-VAN MEERVELD. *Oklahoma State Univ. Ctr. Hlth. Sci., Univ. Oklahoma Hlth. Sci. Ctr.*

1:00 GG21 **628.13** Altered stress-induced visceral nociception in adult female rats previously exposed to unpredictable early life adversity. S. KENNEDY*; B. GREENWOOD-VAN MEERVELD. *Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr.*

2:00 GG22 **628.14** Neurological differences between female irritable bowel syndrome patients and healthy controls during expectation of safety from abdominal threat. Z. GILL; J. LABUS; J. HONG; C. LIU; B. NALIBOFF; E. A. MAYER*; K. TILLISCH. *Ctr. for Neurobio. of Stress UCLA, Oppenheimer Family Ctr. For Neurobio. of Stress.*

3:00 GG23 **628.15** Behavioral and physiological characterization of the molecules involved in menstrual pain. K. M. HELLMAN*; F. F. TU. *NorthShore Univ. HealthSystem, Univ. of Chicago.*

4:00 GG24 **628.16** Changes in sensory and sympathetic innervation of pelvic organs and ectopic uterine growths during the development and stabilization of endometriosis (ENDO)-induced vaginal hyperalgesia in the rat. S. L. MCALLISTER*; B. K. GIOURGAS; K. J. BERKLEY. *Florida State Univ., Florida State Univ.*

1:00 GG25 **628.17** Epigenetic modulation of stress-induced visceral hypersensitivity in female rats. D. CAO; G. BAI; J. M. KARPOWICZ; Y. JI; R. J. TRAUB*. *Univ. of Maryland Sch. of Dent.*

2:00 GG26 **628.18** Effect of protamine sulfate and potassium chloride on the inhibitory rectovesical reflex in an isovolumetric bladder model. S. PERSYN; L. A. BIRDER*; J. WYNDAELE. *Univ. of Antwerp, Fac. of medicine, Univ. Pittsburgh Sch. Med.*

3:00 GG27 **628.19** Chronic mechanical allodynia and visceral hyperalgesia induced by elevated amygdala corticosteroids: Importance of histone acetylation. C. LIGON*; L. TRAN; B. GREENWOOD-VAN MEERVELD. *Univ. of Oklahoma Hlth. Sci. Ctr., Mayo Clin., Univ. of Oklahoma Hlth. Sci. Ctr.*

4:00 GG28 **628.20** ● Negative allosteric modulation of the mglu7 receptor reduces visceral hypersensitivity in a stress-sensitive rat strain. R. D. MOLONEY*; R. M. O'CONNOR; M. KALINICHEV; T. G. DINAN; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork, Addex Therapeut., Univ. Col. Cork.*

1:00 GG29 **628.21** Bladder hypersensitivity following cystitis is accompanied by altered bladder cytokine expression. A. D. SHAFFER*; J. LA; G. F. GEBHART. *Univ. of Pittsburgh Ctr. For Pain Res.*

POSTER

629. Spinal Cord Injury and Plasticity I

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 GG30 **629.01** ● A new, automated kinematic locomotor assessment system for mice with SCI. D. BASSO*; L. C. FISHER; S. WHITE; A. L. SHEETS. *Ohio State Univ., The Ohio State Univ., The Ohio State Univ., Ohio State Univ. Consultant.*

2:00 GG31 **629.02** Only moderate intensity of gamma fusimotor drive can stabilize a single joint in neuromorphic emulation. C. M. NIU*; W. SOHN; T. D. SANGER. *USC.*

3:00 GG32 **629.03** Grasping ability impairment after unilateral corticospinal tract lesion. W. A. CARVALHO*; J. C. TEIXEIRA; S. J. V. CRUZ; W. G. LEAL; P. BAHIA; A. PEREIRA. *CESUPA, FFTO/ICS/UFPa, Belém, ICB/UFPa, Brain Intitute/UFRN.*

4:00 GG33 **629.04** Morphological changes and neuronal hyperactivity in lumbar locomotor networks remote to mid-thoracic spinal cord injury. T. D. FAW*; C. N. HANSEN; L. C. FISHER; S. D. KERR; J. A. BUFORD; D. M. BASSO. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

1:00 GG34 **629.05** Prolonged immobilization and unloading leads to profound and long-lasting changes in spinal excitability. E. L. LAWRENCE*; A. NAGAMORI; F. J. VALERO-CUEVAS; J. M. FINLEY. *USC, USC.*

2:00 GG35 **629.06** The modulation of corticospinal input to the legs during arm and leg cycling. R. ZHOU*; S. KIM; S. CHONG; V. MUSHAHWAR. *Univ. of Alberta, Univ. of Alberta.*

3:00 GG36 **629.07** A urodynamic model to study the lower urinary tract function in awake spinal cord injured rats. M. P. SCHNEIDER*; F. M. HUGHES, Jr.; A. K. ENGMANN; M. GULLO; T. J. PURVES; H. KASPER; M. TEDALDI; M. E. SCHWAB; T. M. KESSLER. *Univ. of Zürich, Dept. of Urology, Univ. of Zurich.*

4:00 HH1 **629.08** Effects of attention and acute physical exercise on cutaneous reflexes in children with cerebral palsy. J. I. VOISIN*; C. GANE; S. DUFOUR; D. WYSS; K. ZABJEK; J. ANDRYSEK; D. B. MALTAIS; L. J. BOUYER. *U Laval, CIRRIS-IRDPQ, Bloorview Res. Institute, Holland Bloorview Kids Rehabil., Dept. of Physical Therapy, Univ. of Toronto, Inst. of Biomaterials and Biomed. Engineering, Univ. of Toronto.*

1:00 HH2 **629.09** Exercise-dependent increase in mTOR activity regulates KCC2 expression and reflex recovery after SCI. S. F. CHOYKE; M. COTE*. *Drexel Univ. Col. of Med.*

2:00 HH3 **629.10** Interlimb cutaneous reflex transmission after thoracic hemisection during walking on a flat treadmill or on a ladder treadmill. A. KUNDU*; M. ESCALONA; H. DELIVET-MONGRAIN; J. GOSSARD; S. ROSSIGNOL. *Univ. De Montreal.*

3:00 HH4 **629.11** Mitigation of pressure ulcers using intermittent electrical stimulation. L. R. SOLIS; P. SERES; V. K. MUSHAHWAR*. *Univ. of Alberta, Univ. of Alberta, Univ. Alberta.*

4:00 HH5 **629.12** ▲ Comparing locomotion on a flat and on a ladder treadmill in cats before and after spinal hemisection. M. ESCALONA*; A. KUNDU; H. DELIVET-MONGRAIN; J. GOSSARD; S. ROSSIGNOL. *Univ. De Montréal.*

1:00 HH6 **629.13** ▲ Evaluation of the antioxidant effect of dapsone in a model of traumatic spinal cord injury in rat based on the amount of reduced glutathione. A. S. ROJAS*; C. RIOS; A. DIAZ-RUIZ; D. NICOLAS; G. BALDERAS. *Natl. Inst. of Neurol. and Neurosurg. D, Natl. Inst. of Neurol. and Neurosurg.*

2:00 HH7 **629.14** Evaluating the necessity of the KOR in the morphine-induced attenuation of function after SCI. M. ACEVES*; M. A. HOOK. *Texas A&M Hlth. Sci. Ctr.*

3:00 HH8 **629.15** Lumbosacral spinal cord epidural stimulation enables full weight bearing standing in motor complete paraplegics. E. REJC*; C. ANGELI; S. HARKEMA. *Univ. of Louisville, Frazier Rehab Institute, Kentucky One Hlth.*

4:00 HH9 **629.16** Intra-spinal microstimulation implants for humans. A. TOOSSI*; D. G. EVERAERT; R. C. BUTZ; C. R. DENNISON; V. K. MUSHAHWAR. *Ctr. For Neuroscience, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

1:00 HH10 **629.17** Novel rehabilitative strategy to facilitate EEG-triggered locomotor training in chronic spinal cord injury patients: Preliminary results of an ongoing study. L. SAWAKI; A. C. DONATI; A. N. NOGUEIRA; C. GARABELLO; C. M. GITTI; D. CAMPOS; D. YOSHIHARA; G. A. PEREIRA; I. ARAÚJO; J. CAMPOS; L. FERREIRA; M. ARES; M. SANTOS; P. B. AUGUSTO; S. TRIPODI; E. MORYA*; M. A. L. NICOLELIS. *Univ. of Kentucky HealthCare, Cardinal Hill Rehabil. Hosp., AASDAP, AACD, Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Duke Univ., Duke Univ., Duke Univ., Duke Univ.*

2:00 HH11 **629.18** Effects of deep brain stimulation on short and long-latency stretch response in childhood generalized dystonia. E. ARGUELLES*; N. H. BHANPURI; T. D. SANGER. *USC.*

POSTER

630. Spinal Cord Injury: Repair, Training, and Rehabilitation I

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH12 **630.01** Selective stimulation of spinal sensorimotor circuits by multipolar stimulation of the spinal cord. M. CAPOGROSSO*; N. WENGER; A. MORTERA; J. GANDAR; N. PAVLOVA; S. MICERA; G. COURTINE. *Ecole Polytechnique Federale De Lausanne, Scuola Superiore Sant'Anna, Politecnico di Torino.*

2:00 HH13 **630.02** Transcutaneous spinal cord stimulation to modulate spinal reflex excitability and locomotor output after SCI. B. FARRELL*; J. BRUCE; W. B. MCKAY; K. TANSEY. *Shepherd Ctr., Emory Univ., Atlanta Veterans Admin. Med. Ctr.*

3:00 HH14 **630.03** Altering spinal cord excitability by peripheral nerve stimulation. M. KRENN*; S. M. DANNER; C. SCHLAFF; U. S. HOFSTOETTER; K. MINASSIAN; W. MAYR; M. R. DIMITRIJEVIC. *Med. Univ. of Vienna, Vienna Univ. of Technol., Baylor Col. of Med., Fndn. for Movement Recovery.*

4:00 HH15 **630.04** Short- and long-term effects of intermittent transcutaneous spinal cord stimulation on spinal spasticity and residual motor control. U. HOFSTOETTER*; M. KRENN; S. M. DANNER; B. FREUNDL; H. BINDER; F. RATTAY; W. MAYR; K. MINASSIAN. *Med. Univ. Vienna, Ctr. of Med. Physics and Biomed. Engin., Vienna Univ. of Technol., Otto Wagner Hosp.*

1:00 HH16 **630.05** Long-latency spinal reflexes predict rhythmicity in response to epidural lumbar cord stimulation. S. M. DANNER*; M. R. DIMITRIJEVIC; U. S. HOFSTOETTER; M. KRENN; W. MAYR; K. MINASSIAN; F. RATTAY; J. C. ROTHWELL. *Med. Univ. of Vienna/Center For Med. Physics and Biomed. Engineeri, Vienna Univ. of Technol., Baylor Col. of Med., Med. Univ. of Vienna, Univ. Col. of London.*

2:00 HH17 **630.06** Muscle co-activation as function of crank angle when cycling on an ergometer with altered power output. J. LACZKO*; P. KATONA; A. VALY. *Univ. of Pecs, Wigner Res. Ctr. for Physics, Pazmany Peter Cath. Univ., Semmelweis Univ.*

3:00 HH18 **630.07** Physiologically inspired multisite spinal cord stimulation improves locomotion after spinal cord injury. N. WENGER*; P. MUSIENKO; E. MARTIN-MORAUD; J. GANDAR; A. LARMAGNAC; I. MINEV; P. DETEMPLE; Q. BARRAUD; J. BEAUPARLANT; L. BAUD; M. CAPOGROSSO; N. DOMINICI; S. MICERA; J. VORÖS; S. LACOUR; G. COURTINE. *Wenger Nikolaus, Ctr. for Neuroprosthetics, EPFL, Ctr. for Neuroprosthetics, EPFL, Swiss Federal Inst. of Technol., Ctr. for Neuroprosthetics, EPFL, Inst. for Microtechnology Mainz.*

4:00 HH19 **630.08** Neuromodulation of motor cortex and spinal circuits facilitates locomotor training and promotes recovery following spinal cord injury in mice. J. A. KREIDER*; E. DE SAINT-EXUPERY; L. ASBOTH; Q. BARRAUD; G. COURTINE. *EPFL.*

1:00 HH20 **630.09** Optogenetic activation of the motor cortex unmasks supraspinal access to locomotor circuits caudal to a severe spinal cord injury in mice. L. ASBOTH*; Q. BARRAUD; J. KREIDER; J. VON ZITZEWITZ; G. COURTINE. *Swiss Federal Inst. of Technol.*

2:00 HH21 **630.10** Closed-loop control of multisite spinal cord stimulation to improve locomotion following spinal cord injury. J. GANDAR*; N. WENGER; E. M. MORAUD; P. MUSIENKO; S. MICERA; G. COURTINE. *EPFL.*

3:00 HH22 **630.11** Electrochemical stimulation of the spinal cord using a soft intrathecal interface. I. MINEV*; P. MUSIENKO; A. HIRSCH; Q. BARRAUD; J. GANDAR; N. VACHICOURAS; N. WENGER; N. PAVLOVA; E. MARTIN-MORAUD; S. DUIS; G. COURTINE; S. LACOUR. *École Polytechnique Fédérale De Lausanne (EPFL).*

4:00 HH23 **630.12** Noradrenergic neuromodulation of spinal circuits facilitates locomotion following spinal cord injury. Q. BARRAUD*; P. MUSIENKO; K. A. BARTHOLDI; G. COURTINE. *EPFL - Ctr. For Neuroprosthetics.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 HH24 **630.13** Closed-loop control of dynamic trunk posture improves gait patterns during locomotor training after spinal cord injury. S. M. WURTH*; J. MIEHLBRADT; E. MARTIN MORAUD; J. VON ZITZEWITZ; S. MICERA; G. COURTINE. *EPFL - STI CNP TNE, EPFL, EPFL.*

2:00 HH25 **630.14** Translational robotic platforms to evaluate, enable, and train locomotion and balance after neuromotor disorders. J. VON ZITZEWITZ*; L. ASBOTH; G. COURTINE. *EPFL - SV - Upcourtine.*

3:00 HH26 **630.15** Closed-loop neuromodulation of spinal circuits improves bilateral control of locomotion during training after spinal cord injury. E. MARTIN MORAUD*; N. WENGER; J. DIGIOVANNA; G. COURTINE; S. MICERA. *EPFL, Translational Neural Engin. Lab., ETH Zurich, EFPL Chair in Spinal Cord Repair, Scuola Superiore Sant'Anna.*

4:00 HH27 **630.16** Multi-electrode arrays for chronic spinal cord stimulation in freely behaving mice. S. E. DUIS*; A. LARMAGNAC; J. GANDAR; E. MARTIN MORAUD; N. PAVLOVA; N. WENGER; J. VOROS; G. COURTINE. *Ctr. For Neuroprosthetics and BMI, EPFL, ETH, EPFL.*

1:00 HH28 **630.17** Neuromodulation of spinal locomotor circuits in the freely moving rhesus monkey. D. A. BORTON*; E. MARTIN-MORAUD; N. WENGER; J. LAURENS; P. MUSIENKO; J. BLOCH; P. DETEMPLE; E. BEZARD; G. COURTINE. *Swiss Natl. Inst. of Technol. (EPFL), Ctr. hospitalier universitaire vaudois (CHUV), Inst. für Mikrotechnik Mainz GmbH (IMM), Univ. de Bordeaux.*

2:00 HH29 **630.18** Polypeptide hydrogel depot delivery of bioactive molecules after spinal cord injury. M. ANDERSON*; M. PELLISSON; S. ZHANG; T. J. DEMING; M. V. SOFRONIEW; G. COURTINE. *EPFL, Swiss Federal Inst. of Technology, Lausanne (EPFL), Univ. of California, Los Angeles (UCLA), Univ. of California, Los Angeles (UCLA), Univ. of California, Los Angeles (UCLA).*

3:00 HH30 **630.19** Multidirectional robotic support enables gait rehabilitation under natural conditions in individuals with neuromotor disorders. J. MIGNARDOT*; J. VON ZITZEWITZ; C. LE GOFF; R. VAN DEN BRAND; J. BLOCH; S. CARDA; G. COURTINE. *EPFL, Univ. Hosp. of Lausanne (CHUV).*

4:00 HH31 **630.20** Reticulospinal neurons play a key role in the recovery of voluntary locomotion in response to neuroprosthetic rehabilitation after a severe spinal cord contusion. C. MARTINEZ GONZALEZ*; L. FRIEDLI-WITTLER; J. BEAUPARLANT; G. PIDPRUZHNYKOVA; L. BAUD; S. DUIS; G. ULRICH; G. COURTINE. *EPFL.*

1:00 HH32 **630.21** Changes in spasticity-related reflexes after two forms of walking retraining in individuals with incomplete spinal cord injury. A. KHAN*; S. PATRICK; F. ROY; M. GORASSINI; J. YANG. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

2:00 II1 **630.22** Studying motor compensation and spinal motoneuron regeneration in mice with genetic absence of the corticospinal tract. L. ZHOU*; Y. DING; C. CAO. *GHM Inst. of CNS Regeneration, Jinan Univ.*

3:00 II2 **630.23** ▲ Treadmill training reduces mechanical allodynia in a mouse model of spinal cord contusion injury. T. A. NEES*; M. MOTSCH; A. TAPPE-THEODOR; R. KUNER; N. WEIDNER; A. BLESCH. *Heidelberg Univ. Hosp., Inst. of Pharmacol.*

4:00 II3 **630.24** Regaining over-ground locomotor function following severe contusion injury with epidural stimulation and treadmill training. Y. D. AL'JOBOORI*; R. M. ICHIYAMA. *Univ. of Leeds.*

1:00 II4 **630.25** Longitudinal assessment of spinal cord injury in monkeys by multi-parametric mri at 9.4t. F. WANG; A. MISHRA; Z. ZU; H. QI; C. TANG; J. GORE; L. CHEN*. *Vanderbilt Univ., Vanderbilt Univ.*

2:00 II5 **630.26** Spinal cord motor tract integrity, muscle architectural alterations, and volitional motor control following motor incomplete spinal cord injury. A. C. SMITH*; T. B. PARRISH; M. WASIELEWSKI; H. E. KIM; T. G. HORNBY; J. M. ELLIOTT. *Northwestern Univ., Rehabil. Inst. of Chicago.*

3:00 II6 **630.27** Acute exercise after spinal cord injury modulates the regenerative profile of axotomized neurons. R. SACHDEVA*; A. KALINSKI; S. SAVANT; J. TWISS; J. HOULE. *Drexel Univ. Col. of Med., Univ. of South Carolina.*

4:00 II7 **630.28** Chondroitinase gene therapy as a treatment for spinal cord injury. N. D. JAMES*; K. BARTUS; K. D. BOSCH; J. H. ROGERS; B. L. SCHNEIDER; J. VERHAAGEN; E. M. MUIR; E. J. BRADBURY. *King's Col. London, Univ. of Cambridge, Ecole Polytechnique Federale De Lausanne, Netherlands Inst. for Neurosci.*

1:00 II8 **630.29** Investigating functional plasticity and synaptogenesis following experimental spinal cord injury and chondroitinase gene therapy. E. R. BURNSIDE*; K. D. BOSCH; F. GRILLO; S. B. MCMAHON; J. S. CARP; J. BURRONE; E. J. BRADBURY. *King's Col. London, Wadsworth Center, New York State Dept. of Health, Albany, New York.*

2:00 II9 **630.30** Electro-magnetic stimulation over T2 spinal level combined with transgene delivery of neurotrophin NT-3 and exercise training improved synaptic transmission and locomotor function after contusion spinal cord injury in rats. H. A. PETROSYAN*; V. ALESSI; S. A. SISTO; V. L. ARVANIAN. *Stony Brook Univ., Northport Veterans Affairs Med. Ctr., Stony Brook Univ.*

POSTER

631. Afferent and Descending Control

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 II10 **631.01** Computer-aided neurophysiology with applications to embryonic respiratory circuit development. J. A. HAYES*; E. PAPAGIAKOUMOU; P. RUFFAULT; V. EMILIANI; G. FORTIN. *CNRS, Univ. Paris Descartes.*

2:00 II11 **631.02** Spinal excitatory circuits as hub for the descending control of hindlimb motor activity. A. E. TALPALAR*; O. KIEHN. *Dept. Neuroscience, Karolinska Institutet.*

3:00 II12 **631.03** The role of proprioception in stability control during aquatic station-holding. M. E. HALE*; R. WILLIAMS, IV. *Univ. Chicago.*

4:00 II13 **631.04** The stability of the locomotor rhythm in the lamprey central pattern generator. N. MASSARELLI; A. YAU; K. A. HOFFMAN; T. KIEMEL; E. D. TYTELL*. *Univ. Maryland, Baltimore County, Tufts Univ., Univ. Maryland, Col. Park.*

1:00 II14 **631.05** Masticatory and brux-like motor patterns in the freely behaving rat:Electromyography and phase analysis. D. B. WELCH*; J. TAYLOR; J. WALL; P. WANDA. *Southern Illinois Univ. Edwardsville - Sch. of Dent. Med., Southern Illinois Univ. Edwardsville.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 II15 **631.06** Genetics, connectivity and function of brainstem inputs to spinal lumbar interneurons. J. BOUVIER*; C. BELLARDITA; A. MUNOZ-MANCHADO; Y. XUAN; K. MELETIS; J. HJERLING-LEFFLER; O. KIEHN. *Karolinska Institutet.*

3:00 II16 **631.07** Theta frequency oscillations predominate in the mesencephalic locomotor region during voluntary treadmill locomotion. B. R. NOGA*; F. J. SANCHEZ; C. O'TOOLE; L. VILLAMIL; S. STASIENKO; S. KASICKI; U. SLAWINSKA; L. M. JORDAN. *Univ. of Miami Sch. of Med., Nencki Inst. of Exptl. Biol., Univ. of Manitoba.*

4:00 II17 **631.08** Modulation of monosynaptic reflexes during development of spinal motor systems. C. C. SMITH*; S. CHAKRABARTY; J. F. R. PATON; R. M. ICHIYAMA. *Univ. of Leeds, Univ. of Bristol.*

1:00 II18 **631.09** Removal of ankle extensors group Ia and Ib afferent feedback differentially affects walking mechanics and muscle activity in the cat: A computer simulation study. S. N. MARKIN*; A. N. KLISHKO; N. A. SHEVTSOVA; M. A. LEMAY; B. I. PRILUTSKY; I. A. RYBAK. *Drexel Univ. Col. of Med., Georgia Inst. of Technol., Temple Univ.*

2:00 II19 **631.10** Do humans use limb velocity signal to control locomotion? K. GALBREATH*; E. OLESH; S. YAKOVENKO. *WVU, WVU.*

3:00 II20 **631.11** Reciprocal functional interactions between the respiration/circulation center, the upper spinal cord, and the trigeminal system. I. YAZAWA*. *Pref Univ. of Hiroshima.*

4:00 II21 **631.12** Primary somatosensory cortical area inducing jaw-opening in the rat. K. UCHINO; K. HIGASHIYAMA; R. TAKEDA; F. SATO*; A. YOSHIDA. *Grad. Sch. of Dentistry, Osaka Univ.*

1:00 II22 **631.13** A11 neurons in the mouse project to the spinal cord, are dopaminergic and lack expression of dopamine transporter. K. KOBLINGER*; T. FÜZESI; J. E. EJDRYGIEWICZ; A. KRAJACIC; L. M. YOUNG; J. S. BAINS; P. J. WHELAN. *Univ. of Calgary, Univ. of Calgary.*

2:00 II23 **631.14** Sensorimotor adaptation in speech and its effects on auditory monitoring. C. A. NIZIOLEK*; S. S. NAGARAJAN; J. F. HOUDE. *Univ. of California San Francisco.*

3:00 II24 **631.15** Redefining the role of Broca's area in speech production. A. FLINKER*; A. KORZENIEWSKA; A. SHESTYUK; R. T. KNIGHT; N. E. CRONE. *New York Univ., Johns Hopkins Univ. Sch. of Med., Univ. of California at Berkeley, Univ. of California at Berkeley.*

4:00 II25 **631.16** Investigating the role of the cerebellum in sensory processing during vocal behavior. Z. K. AGNEW*; J. GILL; S. NAGARAJAN; R. IVRY; J. F. HOUDE. *UCL Inst. of Cognitive Neurosci., UCSF Med. Sch., UC Berkeley.*

1:00 II26 **631.17** Jaw muscle activity profile during individual chewing cycles in people lacking periodontal mechanoreceptors. M. G. TRULSSON*; A. GRIGORIADIS. *Karolinska Inst.*

2:00 II27 **631.18** Task dependent control of the jaw during food splitting. A. S. JOHANSSON; K. WESTBERG*; B. B. EDIN. *Univ. Umea, Univ. Umea, Integrative Med. Biol.*

3:00 II28 **631.19** Ultrastructural analysis of the vesicular glutamate transporters VGLUT1- and VGLUT2-expressing axon terminals on the rat trigeminal motoneurons. Y. BAE*; S. PAIK. *Sch. of Dentistry, Kyungpook Natl. Univ.*

4:00 II29 **631.20** Neuroplasticity of rat orofacial sensorimotor cortex induced by dental manipulations: Are glial cells involved? V. VARATHAN; M. SOOD; H. PUN; L. AWAMLEH; D. CHOCRON; P. BHATT; A. THAKORE; B. J. SESSLE*; L. AVIVI-ARBER. *Univ. of Toronto, Univ. of Toronto, Univ. Toronto.*

1:00 II30 **631.21** Glycine-mediated jaw-opening reflex excitability in rats. K. ADACHI*; S. HINO; R. ODAI; T. SHIMOYAMA; H. SAKAGAMI; G. J. LAVIGNE; B. J. SESSLE. *Meikai Univ. Sch. of Dent., Nihon Univ. Sch. of Dent., RIKEN Ctr. for Mol. Imaging Sci., Saitama Med. Univ., Maikai Univ. Sch. of Dent., Univ. de Montréal, Fac. of Dentistry, Univ. of Toronto.*

2:00 JJ1 **631.22** Spike-spike and spike-field coherence reveal mutual intercortical communication in the orofacial sensorimotor cortex. F. I. ARCE-MCSHANE*; C. F. ROSS; J. LEE; B. J. SESSLE; N. G. HATSOPOULOS. *Univ. of Chicago, Univ. of Toronto, Univ. of Chicago.*

3:00 JJ2 **631.23** ▲ Mechanisms and effects of stretch feedback in the heart of the American lobster, Homarus americanus. K. HARMON*; M. CHIN-PURCELL; E. S. DICKINSON; T. M. HARTLEY; O. ELLERS; A. S. JOHNSON; P. S. DICKINSON. *Bowdoin Col.*

4:00 JJ3 **631.24** Spinal interneuronal organization involved in the control of postural muscle tone in the cat. K. TAKAKUSAKI*; R. CHIBA; T. NOZU; T. OKUMURA. *Asahikawa Med. Univ., Asahikawa Med. Univ., Asahikawa Med. Univ.*

POSTER

632. Cortex and Nuclei: *In Vivo* Studies

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 JJ4 **632.01** REM sleep twitches drive Purkinje cell activity in the developing cerebellum. A. M. PLUMEAU; G. SOKOLOFF*; D. MUKHERJEE; M. S. BLUMBERG. *The Univ. of Iowa, The Univ. of Iowa.*

2:00 JJ5 **632.02** Firing rate modulation of two antagonistic Purkinje cell populations during motor timing in mice. S. OHMAE*; K. OHMAE; D. SUBRAMANIAN; J. F. MEDINA. *Univ. of Pennsylvania.*

3:00 JJ6 **632.03** Dynamic modulation of anterior interpositus neuron activity during the performance of conditioned eyelid movements in mice. S. A. HEINEY*; J. F. MEDINA. *Univ. of Pennsylvania.*

4:00 JJ7 **632.04** Timed pauses of simple spikes and up-and-down patterns of deep cerebellar nucleus activity code cerebellar temporal processing during voluntary movement tasks. K. YAMAGUCHI*; S. TAKAHASHI; Y. SAKURAI. *Kyoto University, Grad. Sch. of Letters, Dept. of Psychology, Doshisha University, Grad. Sch. of Brain Science, Dept. of Neural Circuitry.*

1:00 JJ8 **632.05** Predicting conditioned response profiles on a single trial from Purkinje cells population activity. A. KHILKEVICH*; H. E. HALVERSON; J. PILLOW; M. D. MAUK. *Univ. of Texas At Austin.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 JJ9 **632.06** Locomotion initiation and termination in mice following selective optogenetic activation of Purkinje cell ensembles. T. M. HOOGLAND*; N. A. FLIERMAN; H. HOEDEMAKER; J. R. DE GRUIJL; L. WITTER; C. B. CANTO; C. I. DE ZEEUW. *Netherlands Inst. For Neurosci., Harvard Med. Sch., Erasmus MC.*

3:00 JJ10 **632.07** Modulation of purkinje and cerebellar nuclear cell activity during running in awake mice. R. SARNAIK*; I. M. RAMAN. *Northwestern Univ.*

4:00 JJ11 **632.08** Cerebro-cerebellar encoding of motor actions involves dynamic formation of network assemblies. Y. BAUMEL; D. COHEN*. *Bar Ilan Univ., Bar Ilan Univ.*

1:00 JJ12 **632.09** Cross frequency interactions of oscillations in the cerebellum. J. GROTH*; M. SAHIN. *New Jersey Inst. of Technol.*

2:00 JJ13 **632.10** Neighboring Purkinje cells in the cerebellum are synchronized during voluntary movements. H. GAO; C. POUZAT; M. SPOLIDORO; C. LENA*. *Inst. de Biologie de l'Ecole Normale Superieure, Inst. for Advanced Interdisciplinary Res., Lab. de Physiologie Cérébrale, UFR biomédicale de l'Université René Descartes (Paris V).*

3:00 JJ14 **632.11** Role of the cerebellum in the motor system dysfunctions in Parkinson's disease. A. BOUSQUET; F. MENARDY; C. LÉNA; D. POPA*. *Inst. de Biologie de l'Ecole Normale Superieure.*

4:00 JJ15 **632.12** Plane specific zonal organization of Purkinje cell responses to vertical head rotations in the cat cerebellar nodulus and uvula. T. KITAMA*; J. KOMAGATA; K. OZAWA; Y. SUZUKI; Y. SATO. *Ctr. For Life Sci. Res., Hlth. Sci. Univ., Univ. of Yamanashi.*

1:00 JJ16 **632.13** Mossy fibers in the cerebellar hemisphere show activity during an instructed delay period. T. ISHIKAWA*; S. TOMATSU; D. S. HOFFMAN; S. KAKEI. *Tokyo Metropolitan Inst. of Med. Sci., Inst. of Neurosci., Natl. Ctr. of Neurol. and Psychiatry, Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh Sch. of Med.*

2:00 JJ17 **632.14** ● Manipulations of visual feedback modulate Purkinje cell simple spike encoding of error signals during a manual random tracking task. M. STRENG; L. POPA; T. J. EBNER*. *Univ. Minnesota.*

3:00 JJ18 **632.15** Responses of Purkinje cells during pursuit eye movement place limits on the amount of spiking synchrony across the population. M. H. PHILLIPS*; S. G. LISBERGER. *Howard Hughes Med. Institute, Duke Univ.*

4:00 JJ19 **632.16** Multiplexed coding by cerebellar Purkinje neurons. S. HONG*; M. NEGRELLO; M. JUNKER; A. SMILGIN; P. THIER; E. DE SCHUTTER. *Okinawa Inst. of Sci. and Technol., Erasmus MC, Univ. of Tübingen.*

1:00 JJ20 **632.17** Individual neurons in the caudal fastigial oculomotor region (FOR) convey information on both macro- and microsaccades. Z. SUN*; M. JUNKER; D. ARNSTEIN; A. SMILGIN; P. DICKE; P. THIER. *Hertie Inst. for Clin. Brain Research, Univ. of Tübingen, Hertie Inst.*

2:00 JJ21 **632.18** Lateral cerebellar activity correlated with microsaccades. R. T. RAGHAVAN*; V. PREVOSTO; M. A. SOMMER. *Duke Univ., Duke Univ.*

3:00 JJ22 **632.19** Estimated force during horizontal saccades controlled by monkey fastigial nucleus. F. R. ROBINSON*; Z. LINDBLOOM-BROWN; A. MUELLER; T. EGGERT; A. STRAUBE. *Univ. Washington, Univ. Washington, Stanford Univ., Ludwig-Maximilians Univ.*

4:00 JJ23 **632.20** Neural activity in the cerebellum during associative learning. A. E. IPATA*; N. N. ODEAN; Z. KRZYMINSKA; J. F. ZHANG; M. E. GOLDBERG. *Columbia Univ., Dept. of Neuroscience, Kavli Neurosci. Institute, Columbia Univ., Columbia Sch. of Engin., Departments of Neurology, Psychiatry, and Ophthalmology, Columbia Univ. Col. of Physicians and Surgeons.*

POSTER

633. Systems Physiology and Behavior

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 JJ24 **633.01** Pharmacogenetic interrogation of a cortico-basal ganglia circuit that controls vocal-motor variability in zebra finch. J. B. HESTON*; J. SIMON; S. A. WHITE. *UCLA.*

2:00 JJ25 **633.02** Sensorimotor properties of different neuron types in basal ganglia song nucleus Area X. L. KOLB*; A. HANUSCHKIN; C. SCHARFF; R. HAHNLOSER. *Inst. of Neuroinformatics ETH Zurich, Freie Univ. Berlin.*

3:00 JJ26 **633.03** Expressing mutant Huntingtin in the songbird basal ganglia increases song variability. M. TANAKA*; M. MURUGAN; R. MOONEY. *Duke Univ. Sch. of Med., Princeton Univ.*

4:00 JJ27 **633.04** Effects of the 5-HT1BR agonist CP94253 on cocaine-induced locomotion before and after abstinence from repeated cocaine administration in C57BL/6 mice. T. DER-GHAZARIAN*; S. BRUNWASSER; K. DAI; N. PENTKOWSKI; J. NEISEWANDER. *Arizona State Univ., Arizona State Univ.*

1:00 JJ28 **633.05** The subthalamic nucleus keeps you high on emotion: Behavioral consequences. Y. PELLOUX*; J. MEFFRE; E. GIORLA; C. BAUNEZ. *INT CNRS UMR7289.*

2:00 JJ29 **633.06** Optical tagging of striatal medium spiny neurons. A. V. KRAVITZ*; S. F. OWEN; A. C. KREITZER. *NIDDK, Natl. Inst. of Hlth., Natl. Inst. of Drug Abuse, Gladstone Inst. of Neurolog. Dis.*

3:00 JJ30 **633.07** Comparison of different powers and frequencies in optogenetic stimulation of striatal direct and indirect pathways. D. M. FRIEND*; A. KRAVITZ. *NIH, NIH.*

4:00 JJ31 **633.08** Optogenetic stimulation of dorsal striatal indirect pathway neurons increases anxiety. K. H. LEBLANC*; D. M. FRIEND; A. V. KRAVITZ. *NIH/NIDDK, NIH/NIDA.*

1:00 JJ32 **633.09** Ivestigating activity of striatal Fast-Spiking Interneurons using single unit recordings in rat. J. KULIK*; K. COFFEY; J. STAMOS; M. WEST. *Rutgers Univ.*

2:00 JJ33 **633.10** The role of basal ganglia beta band oscillations in blinking. L. EVINGER*; J. KAMINER; P. THAKUR; P. ENMORE. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

3:00 JJ34 **633.11** The role of the substantia nigra in licking behavior. M. A. ROSSI*; J. W. BARTER; H. H. YIN. *Duke Univ.*

4:00 JJ35 **633.12** Suppression of basal ganglia output selectively impairs the vigor of reaching movements in mice. K. MARTIN; J. BROWN; J. T. DUDMAN*. *Howard Hughes Med. Inst., HHMI.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 JJ36 **633.13** Manipulation of specific movement parameters through pathway selective optogenetic stimulation of the basal ganglia. E. A. YTTRI*; J. T. DUDMAN. *Janelia Farm - HHMI.*

2:00 KK1 **633.14** A center-out joystick task for quantifying motor variability in mice. T. BOLLU; J. H. GOLDBERG*. *Cornell Univ.*

3:00 KK2 **633.15** Substantia nigra dopaminergic neurons are critical for the initiation of self paced actions. J. ALVES DA SILVA*; F. TECUAPETLA; V. PAIXÃO; R. M. COSTA. *Champalimaud Ctr. for the Unknown, Univ. Nacional Autónoma de México.*

4:00 KK3 **633.16** Beyond reward prediction errors: Basal ganglia output and dopaminergic signaling correlates with movement kinematics. J. W. BARTER*; S. LI; T. SUKHARNIKOVA; M. A. ROSSI; R. BARTHOLOMEW; H. H. YIN. *Duke Univ.*

1:00 KK4 **633.17** Striatal substrates for making and breaking habits. J. O'HARE*; K. ADE; T. SUKHARNIKOVA; H. YIN; N. CALAKOS. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Duke Univ.*

2:00 KK5 **633.18** Cell type specific coding of movement kinematics in the sensorimotor striatum. H. H. YIN*; N. S. KIM; J. BARTER. *Duke Univ.*

3:00 KK6 **633.19** ▲ The mesencephalic locomotor region integrates motor, cognitive, and emotional information: An anatomical substrate for differential roles of the pedunculopontine and the cuneiform nuclei. C. KARACHI; B. LAU*; A. ANDRÉ; D. TANDÉ; E. C. HIRSCH; C. FRANÇOIS. *Inst. du cerveau et de la moelle épinière, AP-HP, Hôpital de la Pitié-Salpêtrière.*

4:00 KK7 **633.20** Active avoidance in non-human primate, a behavioural paradigm to investigate neural bases and serotonin modulation effects on anxiety related disorders. G. DRUI*; Y. SAGA; A. RICHARD; V. SGAMBATO-FAURE; L. TREMBLAY. *CNRS UMR5229 - Ctr. of Cognitive Neurosci.*

1:00 KK8 **633.21** ▲ Characterization of aversive-related neuronal activity and negative motivation disorders induced by local dysfunction inside ventral striatum in monkey. A. RICHARD*; Y. SAGA; G. DRUI; E. HOSHI; V. SGAMBATO-FAURE; L. TREMBLAY. *Ctr. Des Neurosciences Cognitives, Tokyo Metropolitan Inst. of Med. Sci., CREST, JST.*

2:00 KK9 **633.22** Parcellating the internal and external globus pallidus using diffusion based clustering. P. BEUKEMA*; T. VERSTYNEN. *Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ.*

3:00 KK10 **633.23** Differentiating serial cue prediction from motor sequence learning during long term skill training. B. T. LYNCH*; A. TING; S. WILHELMI; D. MARCHETTO; T. VERSTYNEN. *Carnegie Mellon Univ., Carnegie Mellon Univ.*

4:00 KK11 **633.24** Action monitoring by the striatum is critical for accurate execution of procedural memories. P. E. RUEDA-OROZCO*; D. ROBBE. *Inst. De Neurobiologie De La Méditerranée.*

1:00 KK12 **633.25** The difference between stopping and deciding not to go: Behavioral, imaging and modeling evidence. K. E. DUNOVAN*; T. MOLESWORTH; T. VERSTYNEN. *Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ.*

2:00 KK13 **633.26** Highway from the Danger Zone: Interactions between uncertainty and cost in spatial estimation. K. JARBO*; R. FLEMMING; T. VERSTYNEN. *Carnegie Mellon Univ., Ctr. for the Neural Basis of Cognition, Univ. of Pittsburgh.*

3:00 KK14 **633.27** Learning to stop or waiting to go: Targets of adaptive Bayesian updating during inhibitory control. T. D. VERSTYNEN*; L. SCHOLL; T. MOLESWORTH. *Carnegie Mellon Univ.*

4:00 KK15 **633.28** Simulating conditions in which striatal learning assigns behavior control to the fastest-computed reward-predictive representations of cues and contexts. S. PATRICK*; D. BULLOCK; A. GORCHETCHNIKOV; A. SOHAIL; M. VERSACE. *Boston Univ., Boston Univ.*

1:00 KK16 **633.29** A neural model of sleep deprivation effects on motor preparation and response: simulating adenosinergic, dopaminergic and cholinergic effects. D. H. BULLOCK*; M. A. ST. HILAIRE. *Boston Univ., Boston Univ., Brigham & Women's Hosp., Harvard Med. Sch.*

POSTER

634. Motor Skill-Learning

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 KK17 **634.01** Decay of motor memories is independent of context change detection. A. E. BRENNAN*; M. A. SMITH. *Harvard Univ.*

2:00 KK18 **634.02** Time scales of motor memory in cerebellar ataxia. M. A. SMITH*; A. M. HADJIOSIF. *Harvard Univ.*

3:00 KK19 **634.03** A modified random walk describes the low dimensional structure of motor variability in reaching trajectories. Y. R. MIYAMOTO*; M. SMITH. *Harvard Univ.*

4:00 KK20 **634.04** The effect of visual feedback latency on the retention and internal representation of visuomotor learning. A. M. HADJIOSIF*; K. E. MALLETT; M. A. SMITH. *Harvard Univ.*

1:00 KK21 **634.05** MEG-based functional connectivity changes with motor imagery training: Evidence for motor imagery as an acquired skill. S. N. KRAEUTNER; T. BARDOUILLE; S. G. BOE*. *Dalhousie Univ., IWK Hlth. Sci. Ctr., Dalhousie Univ.*

2:00 KK22 **634.06** Acquisition of skilled trajectory control in both arms after multiple days of unilateral reach training. M. D. HARRAN*; J. C. CORTES; J. W. KRAKAUER; T. KITAGO. *Columbia Univ., Johns Hopkins Univ.*

3:00 KK23 **634.07** Manual asymmetry in motor skill learning. R. L. MCGRATH; S. S. KANTAK*. *Moss Rehabil. Res. Inst.*

4:00 KK24 **634.08** Stability of precision drawing skills acquired with the non-dominant hand and associated changes in functional connectivity between sensorimotor hand representations. B. A. PHILIP*; S. H. FREY. *Univ. of Missouri, Univ. of Missouri.*

1:00 KK25 **634.09** An automated skilled reaching task to study fine motor control. D. J. ELLENS*; M. GAIDICA; S. PENG; D. K. LEVENTHAL. *Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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2:00 KK26 **634.10** Human left fronto-parietal cortices are associated with acquisition of skill-switching ability. S. UEHARA*; N. MIZUGUCHI; S. HIROSE; S. YAMAMOTO; E. NAITO. *Natl. Inst. of Information and Communications Technol., Japan Society for the Promotion of Sci., Sch. of Hlth. and Sport Sciences, Osaka Univ. of Hlth. and Sport Sci., Grad. Sch. of Medicine, Osaka Univ.*

3:00 KK27 **634.11** ● Long-term deficits in performance of skilled forelimb pellet retrieval behaviour seen in rats with unilateral motor cortex lesion. R. CHAUDHARY*; J. VENKATESH; V. REMA. *Natl. Brain Resear Ctr.*

4:00 KK28 **634.12** Differential vulnerability of different forms of skill learning in Parkinson's disease. A. LUKACS*; F. KEMENY; G. DEMETER; I. VALALIK; M. RACSMANY. *Budapest Univ. of Technol. and Econ., St. John's Hosp.*

1:00 KK29 **634.13** Enhancement of motor skill memory through reconsolidation. N. F. WYMBS*; A. J. BASTIAN; P. CELNIK. *Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ.*

2:00 KK30 **634.14** Minimal observational viewing of an animated model enhances the physical performance of a motor skill. J. J. BUCHANAN*; I. PARK. *Texas A & M Univ.*

3:00 KK31 **634.15** Applying "unusual" action contexts to familiar tools: How tools adopt new functions. J. C. MIZELLE*; L. A. WHEATON. *Georgia Tech.*

4:00 KK32 **634.16** Effects of temporal delay on implicit and explicit representations of hand position in tool use. M. K. RAND*; H. HEUER. *Ifado-Leibniz Res. Ctr.*

1:00 LL1 **634.17** ▲ Changes in electrodermal activity during motor learning: A proxy for attention? J. E. GARDNER; A. C. RAIKES; S. Y. SCHAEFER*. *Utah State Univ., Univ. of Utah, Univ. of Utah.*

2:00 LL2 **634.18** Error detection ability contributes to the compromised motor learning in older adults. Y. CHEN*; M. KWON; E. A. CHRISTOU. *Univ. of Florida.*

3:00 LL3 **634.19** Skilled motor learning increases basilar dendritic spine density on pyramidal neurons in layer II/III of mouse motor cortex. T. CLARK*; A. SITKO; T. A. JONES. *The Univ. of Texas At Austin, Columbia Univ.*

4:00 LL4 **634.20** Perception of hill steepness is altered by motor skill learning in winter sports athletes. C. A. ERICKSON*; A. R. ZAVILLA; C. B. WALTERS. *Metropolitan State Univ. of Denver.*

1:00 LL5 **634.21** The curse of task specificity: Skill becomes more task specific with practice. J. W. KRAKAUER*; D. M. HUBERDEAU; P. ROY; K. MCNALLY; O. AHMAD; A. M. HAITH. *Johns Hopkins Univ.*

2:00 LL6 **634.22** Cortical connectivity at rest predicts consolidation of a novel motor skill. J. WU*; F. KNAPP; N. VARZHAPETYAN; R. SRINIVASAN; S. C. CRAMER. *Univ. of California, Irvine, Maastricht Univ., Univ. of California, Irvine.*

3:00 LL7 **634.23** Time course of plastic changes in brain structure accompanying skill acquisition. E. WENGER*; S. KÜHN; J. VERREL; J. MÅRTENSSON; U. LINDENBERGER; M. LÖVDÉN. *Max Planck Inst. For Human Develop., Lund Univ., Karolinska Institutet.*

4:00 LL8 **634.24** Kinesthetic motor imagery of a newly learned dance is easier with eyes closed: Modulation of alpha power and subjective imagery ratings by eye state and expertise. P. M. DI NOTO*; J. M. CHARTRAND; G. R. LEVKOV; R. ANDREW; M. J. WILAND; J. F. X. DESOUZA. *York Univ., York Univ., York Univ., York Univ., Canadian Action and Perception Network.*

1:00 LL9 **634.25** Network recruitment during motor visualization of a dance in controls and expert dancers. P. DHAMI*; L. J. WILLIAMS; S. MORENO; R. J. BAR; J. F. X. DESOUZA. *York Univ., Women and Children's Hosp., Baycrest Hosp., Canada's Natl. Ballet Sch.*

POSTER

635. Reaching Learning

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 LL10 **635.01** Limited effect of temporal constraints on feedback in learning to control movement velocity. S. HILLENBRAND*; K. OKPARA; T. TU; R. IVRY. *Univ. of California--Berkeley.*

2:00 LL11 **635.02** Long-Term learning in adaptation paradigms: Cognitive versus motor memory. D. M. HUBERDEAU*; J. W. KRAKAUER; A. M. HAITH. *Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 LL12 **635.03** Rebuilding of motor memory: Increased efficiency at recall after time away from practice. S. E. PEKNY*; R. SHADMEHR. *Johns Hopkins Univ., Johns Hopkins Univ.*

4:00 LL13 **635.04** Neural correlates of human motor control. M. S. D. KERR; K. KAHN; H. PARK; S. THOMPSON; J. BULACIO; J. GONZALEZ-MARTINEZ; J. T. GALE; S. V. SARMA*. *Johns Hopkins Univ., Cleveland Clin., Johns Hopkins Univ.*

1:00 LL14 **635.05** Hemisphere Specific Ipesilesional deficits in Predictive and impedance control mechanisms. V. YADAV*; D. C. GOOD; R. L. SAINBURG. *The Pennsylvania State Univ., The Pennsylvania State Univ.*

2:00 LL15 **635.06** A computational model for learning reaching movement in 3-Dimensional Space and in force fields from scratch. H. KAMBARA*; H. SHIMIZU; D. SHIN; N. YOSHIMURA; Y. KOIKE. *Tokyo Inst. Technol.*

3:00 LL16 **635.07** Changes in error-sensitivity account for sensorimotor savings. D. HERZFELD; R. SHADMEHR*. *Johns Hopkins Univ.*

4:00 LL17 **635.08** Influence of the training schedule on intermanual transfer in the cart-pole balancing task. N. LUDOLPH*; M. A. GIESE; W. ILG. *Ctr. for Integrative Neurosci., Intl. Max-Planck Res. Sch. for Cognitive and Systems Neurosci.*

1:00 LL18 **635.09** Anodal tDCS of dorsolateral prefrontal cortex and cerebellum enhance different aspects of motor learning in a visumotor adaptation task. S. LIEW*; J. J. RAMIREZ; P. A. BUTCHER; L. G. COHEN; J. A. TAYLOR; P. A. CELNIK. *NIH, Johns Hopkins Univ., Princeton Univ., NIH.*

2:00 LL19 **635.10** Learning to coordinate a redundant motor system: The role of postural comfort. S. L. BARTON*; B. R. FAJEN. *Rensselaer Polytechnic Inst.*

3:00 LL20 **635.11** ● Motivational influence on error-based motor learning in stroke. G. QUATTROCCHI*; J. M. GALEA; R. GREENWOOD; J. C. ROTHWELL; S. BESTMANN. *UCL Inst. of Neurol., Sch. of Psychology, Univ. of Birmingham, Natl. Hosp. for Neurol. and Neurosurg.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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4:00 LL21 **635.12** Successful reward learning requires a balance between exploration and motor variability and outlasts error-based learning. A. THERRIEN*; D. M. WOLPERT; A. J. BASTIAN. *The Johns Hopkins Univ., The Kennedy Krieger Inst., The Johns Hopkins Univ. Sch. of Med., Univ. of Cambridge.*

1:00 LL22 **635.13** Reward feedback accelerates motor adaptation. M. K. O'BRIEN*; A. A. NIKOOYAN; A. A. AHMED. *Univ. of Colorado Boulder, Univ. of Colorado Boulder.*

2:00 LL23 **635.14** Responsibility-weighted multiple internal models explain stochastic decay in motor adaptation. Y. OH*; N. SCHWEIGHOFER. *USC, USC.*

3:00 LL24 **635.15** A framework for updating optimal feedback control strategies that predicts continuous action selection in complex motor tasks. A. SYLAIDI*; A. A. FAISAL. *Imperial Col. London, Imperial Col. London.*

4:00 LL25 **635.16** Altering effort costs in Parkinson's disease using non-invasive brain stimulation. Y. SALIMPOUR*; Z. MARI; R. SHADMEHR. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

1:00 LL26 **635.17** Artificial manipulation of human motor memories using noninvasive brain stimulation. D. NOZAKI*; A. YOKOI; T. KIMURA; M. HIRASHIMA; J. ORBAN DE-XIVRY. *Grad School, Univ. of Tokyo, Inst. of Cognitive Neurosci., Res. Institute, Kochi Univ. of Technol., Univ. catholique de Louvain.*

2:00 LL27 **635.18** Formation and destruction of motor policy alter the position and the velocity dependences during motor adaptation. J. IZAWA*; T. YOSHIOKA; R. OSU; H. GOMI. *NTT Communication Sci. Labs., ATR.*

3:00 LL28 **635.19** Prismatic adaptation of movements toward visual and proprioceptive targets. F. R. SARLEGNA*; H. LEFUMAT; A. HETU; P. BERNIER. *CNRS & Aix-Marseille Univ., Univ. de Sherbrooke.*

4:00 MM1 **635.20** ▲ The decay of motor adaptation to novel movement dynamics reveals hysteresis in motor primitive gain-space. K. P. NGUYEN; E. A. HOSSEINI; W. M. JOINER*. *George Mason Univ.*

1:00 MM2 **635.21** ● Dual adaptation is facilitated by intrinsic contextual cues and saturates upon extended training. M. N. AYALA*; D. Y. P. HENRIQUES. *York Univ., York Univ.*

2:00 MM3 **635.22** Investigating the mechanisms of repetitive trans-cranial magnetic stimulation using motor learning paradigms and *in vivo* 2 photon imaging. A. CANTY*; B. BENNETT; A. TANG; J. RODGER; M. HINDER; M. GARRY; J. SUMMERS. *Univ. of Tasmania, Univ. of Western Australia, Univ. of Tasmania, Liverpool John Moores Univ.*

3:00 MM4 **635.23** Joint kinematics and synergies during motor learning with a redundant arm exoskeleton in individuals with sub-acute stroke. C. WANG*; O. REMY-NERIS; D. MOTTET; I. LAFFONT; N. SCHWEIGHOFER. *USC, Faculté de Médecine, Univ. de Bretagne Occidentale, M2H Laboratory, Euromov, Univ. of Montpellier I.*

4:00 MM5 **635.24** Suppression of visual feedback during force-field adaptation impairs motor acquisition without affecting next-day retention. C. S. BATCHO*; M. GAGNÉ; L. J. BOUYER; J. ROY; C. MERCIER. *Univ. Laval, Ctr. Interdisciplinaire De Recherche En Réadaptation Et Intégration Sociale (CIRRIS).*

1:00 MM6 **635.25** Neural basis for motor learning: Sensorimotor cortical ensembles multiplex spatial, temporal and reward-related information. A. RAMAKRISHNAN*; K. P. RAND; 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. of Natal.*

2:00 MM7 **635.26** Scaling errors down improves retention of motor adaptation. R. J. VAN BEERS*; E. BRENNER; J. B. J. SMEETS; K. VAN DER KOOIJ. *VU Univ. Amsterdam.*

POSTER

636. Rehabilitation

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 MM8 **636.01** Recovery in upper body mobility through practice with body machine interface. C. PIERELLA*; F. ABDOLLAHI; A. FARSHCHIANSADEGH; J. PEDERSEN; D. CHEN; E. THORP; I. SEÁÑEZ-GONZÁLEZ; F. A. MUSSA-IVALDI; M. CASADIO. *Rehabil. Inst. of Chicago, Univ. of Genoa, Northwestern Univ., Northwestern Univ., Rehabil. Inst. of Chicago.*

2:00 MM9 **636.02** Robot-assisted training of the non-paretic arm contributes to recovery for chronic stroke survivors. M. CASADIO*; A. DE LUCA; H. VERNETTI; C. LENTINO; G. CHECCHIA; P. GIANNONI. *Univ. of Genova, Recovery and Functional Reeducation Unit, Santa Corona Hospital, ASL2 Savonese, Recovery and Functional Reeducation Unit, Santa Corona Hospital, ASL2 Savonese, ART Educ. and Rehabil. Ctr.*

3:00 MM10 **636.03** Age related effects on motor learning when using a novel body-machine interface. M. LEE*; A. FARSHCHIANSADEGH. *Michigan State Univ., Northwestern Univ.*

4:00 MM11 **636.04** Remapping upper-body movements of individuals with spinal cord injuries to control a power wheelchair. E. THORP*; F. ABDOLLAHI; D. CHEN; A. FARSHCHIANSADEGH; M. LEE; J. PEDERSEN; C. PIERELLA; E. J. ROTH; I. SEÁÑEZ-GONZÁLEZ; F. A. MUSSA-IVALDI. *Rehabil. Inst. of Chicago, Northwestern Univ., Rehabil. Inst. of Chicago, Michigan State Univ., Univ. of Genoa, Northwestern Univ.*

1:00 MM12 **636.05** Reorganization of finger movements to improve hand dexterity in stroke. R. RANGANATHAN*. *Michigan State Univ.*

2:00 MM13 **636.06** Kalman-based control of a virtual wheelchair using shoulder movements. I. SEÁÑEZ-GONZÁLEZ*; E. THORP; A. FARSHCHIANSADEGH; C. PIERELLA; F. ABDOLLAHI; F. A. MUSSA-IVALDI. *Northwestern Univ., Northwestern Univ., Rehabil. Inst. of Chicago, Northwestern Univ., Univ. of Genoa, Northwestern Univ.*

3:00 MM14 **636.07** Time required to predict movement distributions. Z. WRIGHT*; M. FISHER; F. HUANG; J. PATTON. *Univ. of Illinois At Chicago, Rehabil. Inst. of Chicago.*

4:00 MM15 **636.08** Inter-limb transfer effects following leg motor skill learning. C. KRISHNAN*; R. RANGANATHAN; M. TETARBE; L. L. LETHERWOOD. *Univ. of Michigan, Michigan State Univ., Univ. of Michigan, Univ. of Michigan.*

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1:00 MM16 **636.09** Parameterization of error in time versus space for goal-directed movements. M. FISHER*; F. HUANG; Z. WRIGHT; J. PATTON. *Rehabil. Inst. of Chicago, Univ. of Illinois at Chicago, Northwestern Univ.*

2:00 MM17 **636.10** A BMI-based robotic exoskeleton for neurorehabilitation and daily actions: Elbow and wrist movements controlled by EEG and EMG signals. T. KAWASE*; Y. SATO; K. KANSAKU. *Res. Inst. of Natl. Rehabil. Ctr.*

3:00 MM18 **636.11** Development of virtual integration environment sensing capabilities for the modular prosthetic limb. B. A. WESTER*; K. FISCHER; T. GION; G. HOTSON; J. DOWNEY; M. FIFER; F. TENORE; J. BEATY; A. RAVITZ; M. MCLOUGHLIN; R. GAUNT; J. COLLINGER; N. CRONE; S. SWETZ. *JHU/APL, Johns Hopkins Univ., Univ. of Pittsburgh, Johns Hopkins Univ., Johns Hopkins Univ.*

4:00 MM19 **636.12** Neural mechanisms of mirror feedback: An EEG study based on virtual reality. G. GARIPELLI*; V. LIAKONI; D. PEREZ-MARCOS; T. TADI. *Mindmaze SA.*

1:00 MM20 **636.13** Psychophysical, neural, and learning curve metrics toward optimizing training with a brain-computer interface. J. J. WILLIAMS*; R. N. TIEN; A. B. SCHWARTZ. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 MM21 **636.14** The Walk Again Project: Analysis of brain activity of spinal cord injury patients during training with a BMI. R. C. MOIOLI*; F. L. BRASIL; S. SHOKUR; A. L. LIN; K. FAST; N. PERETTI; A. TAKIGAMI; D. SCHWARZ; E. MORYA; M. A. L. NICOLELIS. *Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal (ELS-IINN, Duke Univ., Duke Univ., Duke Univ., Duke Univ.*

3:00 MM22 **636.15** The walk again project: Brain-controlled exoskeleton locomotion. A. LIN*; D. SCHWARZ; R. SELLAOUTI; S. SHOKUR; R. C. MOIOLI; F. L. BRASIL; K. R. FAST; N. A. PERETTI; A. TAKIGAMI; S. GALLO; K. LYONS; P. MITTENDORFER; M. LEBEDEV; S. JOSHI; G. CHENG; E. MORYA; A. RUDOLPH; M. NICOLELIS. *Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Duke Univ., Duke Univ., BiA France, Associação Alberto Santos Dumont para Apoio à Pesquisa, Univ. de São Paulo, École Polytechnique Fédérale de Lausanne, Univ. of California Davis, Tech. Univ. Munich (TUM), Univ. of California Davis, Tech. Univ. Munich (TUM), Colorado State Univ., Duke Univ., Duke Univ.*

4:00 MM23 **636.16** The walk again project (wap): Sensory feedback for brain controlled exoskeleton. S. SHOKUR*; S. GALLO; J. OLIVIER; N. PERETTI; A. TAKIGAMI; A. L. LIN; K. FAST; R. MOIOLI; F. BRASIL; E. MORYA; G. CHENG; H. BLEULER; M. A. L. NICOLELIS. *Inst. Internacional De Neurociências De Natal, Swiss Federal Inst. of Technol. (EPFL), Alberto Santos Dumont Assn. for Res. Support (AASDAP), Inst. for Cognitive Systems (ICS), Tech. Univ. Munich (TUM),, Electrical Engin. and Information Technology, Tech. Univ. Munich (TUM), Duke University,Dept. of Neurobio., Duke University, Dept of Biomed. Engin., Duke University, Psychology and Neurosci., Duke Ctr. for Neuroengineering, Duke Univ.*

1:00 MM24 **636.17** The Walk Again Project: An EEG/EMG training paradigm to control locomotion. F. L. BRASIL*; R. C. MOIOLI; S. SHOKUR; K. FAST; A. L. LIN; N. A. PERETTI; A. TAKIGAMI; K. LYONS; D. J. ZIELINSKI; L. SAWAKI; S. JOSHI; E. MORYA; M. A. L. NICOLELIS. *IINN-ELS - Intl. Inst. For Neurosciences of Natal - Edmond and Lily, Alberto Santos Dumont Assn. for Res. Support (AASDAP), Fac. of Medicine, Univ. of Sao Paulo, Univ. of California, Duke Univ., Univ. of Kentucky, Duke Univ., Duke Univ., Duke Univ., Duke Ctr. for Neuroengineering, Duke Univ.*

2:00 MM25 **636.18** The Walk Again Project: Using a Brain-Machine Interface for establishing a bi-directional Interaction between paraplegic subjects and a lower limb exoskeleton. M. A. L. NICOLELIS*; S. SHOKUR; A. LIN; R. C. MOIOLI; F. L. BRASIL; N. PERETTI; K. FAST; A. TAKIGAMI; E. MORYA; G. CHENG; L. SAWAKI; R. KOPPER; D. SCHWARZ; S. GALLO; M. LEBEDEV; S. JOSHI; H. BLEULER; A. RUDOLPH. *Duke Univ. Med. Ctr., Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Univ. of Sao Paulo, Tech. Univ. Munich, Univ. of Kentucky, Duke Univ., EPFL, Univ. of California, Davis, Colorado State Univ.*

3:00 MM26 **636.19** Restoration of sensory and motor hand function via two Utah Slanted Electrode Arrays (USEAs) in residual arm nerves after prior hand amputation. D. M. PAGE*; S. WENDELKEN; H. A. C. WARK; T. DAVIS; R. A. NORMANN; D. J. WARREN; B. GREGER; D. T. HUTCHINSON; G. A. CLARK. *Univ. of Utah, Arizona State Univ.*

4:00 MM27 **636.20** Sensing capabilities of the modular prosthetic limb. M. JOHANNES; K. KATYAL; R. ARMIGER; J. HELDER; M. PARA; J. BEATY; A. RAVITZ; M. MCLOUGHLIN; O. LASOWSKY; E. SCHLUTER; S. BENSMAIA; F. TENORE*. *Johns Hopkins Univ. APL, Univ. of Chicago.*

1:00 MM28 **636.21** Motor cortex population dynamics in freely walking rats. J. DIGIOVANNA*; N. DOMINICI; J. RIGOSA; S. DUIS; L. FRIEDLI; I. VOLLENWEIDER; J. KREIDER; R. VAN DEN BRAND; A. PANARESE; S. MICERA; G. COURTINE. *Translational Neural Engin. Lab, Ecole Polytechnique Federale De Lausanne (EPFL), Ecole Polytechnique Federale de Lausanne (EPFL), Scuola Superiore Sant'Anna.*

2:00 MM29 **636.22** Single neuron activity and population dynamics in the leg area of the motor cortex in the freely moving rhesus macaque. J. LAURENS*; D. BORTON; E. BEZARD; G. COURTINE. *Ecole Polytechnique Federale De Lausanne, Univ. de Bordeaux.*

3:00 MM30 **636.23** A little elastic for a better performance: Kinesiotaping of the motor effector modulates neural mechanisms for rhythmic movements. R. BRAVI*; E. COHEN; E. QUARTA; D. MINCIACCHI. *Univ. of Florence.*

4:00 MM31 **636.24** Partial muscle regenerative peripheral nerve interfaces for prosthetic control. S. L. WOO; M. G. URBANCHEK; M. K. LEACH; J. D. MOON; P. S. CEDERNA; N. B. LANGHALS*. *Univ. of Michigan.*

1:00 MM32 **636.25** Neural correlates of task dynamics in motor cortex. A. HADDOCK*; C. MATLACK; H. CHIZECK. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

2:00 MM33 **636.26** Demonstration of a regenerative peripheral nerve interface and custom recording device in a rhesus macaque. Z. T. IRWIN*; K. E. SCHROEDER; D. E. THOMPSON; S. L. WOO; N. B. LANGHALS; M. G. URBANCHEK; P. S. CEDERNA; C. A. CHESTEK. *Univ. of Michigan, Kansas State Univ., Univ. of Michigan.*

3:00 MM34 **636.27** ● Wireless implantable multichannel myoelectric system validation. D. R. MERRILL*; S. HIATT; K. S. GUILLORY; C. SMITH; D. MCDONNALL. *Ripple.*

4:00 MM35 **636.28** Improving performance of a neuroprosthetic robotic arm during object manipulation. J. E. DOWNEY*; M. L. BONINGER; E. C. TYLER-KABARA; A. B. SCHWARTZ; J. L. COLLINGER. *Univ. of Pittsburgh, Univ. of Pittsburgh, VA, Univ. of Pittsburgh, Univ. of Pittsburgh.*

Tue. PM

• Indicated a real or perceived conflict of interest, see page 157 for details.

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1:00 MM36 **636.29** Neural ensemble response to learning challenges in brain-machine interfaces. M. ARMENTA SALAS*; S. I. HELMS TILLERY. *Arizona State Univ., Arizona State Univ.*

2:00 NN1 **636.30** Cortical control of nonlinear, musculoskeletal systems with a brain-machine interface. F. R. WILLETT; H. KALODIMOS; J. COX; D. M. TAYLOR*. *Case Western Reserve Univ., Cleveland Clin. Lerner Res. Inst., Cleveland Functional Electrical Stimulation (FES) Ctr. of Excellence, Louis Stokes VA Med. Ctr.*

POSTER

637. Craniofacial Functions

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 NN2 **637.01** Sensorimotor control of self-timed vs. externally-timed nonspeech movements in adults who stutter. A. DALIRI; J. R. FLANAGAN; L. MAX*. *Univ. Washington, Queen's Univ., Haskins Labs.*

2:00 NN3 **637.02** Neural activation of reading words aloud in adults who stutter. S. CHU*; J. OGURA; M. WADA; K. MORI; K. OCHI. *Natl. Rehabil. Ctr. For Persons With Disabilities.*

3:00 NN4 **637.03** White matter differences in young children who stutter. S. CHANG*; A. CHOO; M. K. ANGSTADT; D. C. ZHU. *Univ. of Michigan, Michigan State Univ.*

4:00 NN5 **637.04** Focal intraoperative cooling modifies speech production in a location-specific manner. M. A. LONG*; K. A. KATLOWITZ; R. C. CLARY; T. J. F. DI CASTRI; M. A. SVIRSKY; D. R. HANSEN; M. A. HOWARD, III; J. D. W. GREENLEE. *NYU Sch. of Med., Univ. of Iowa.*

1:00 NN6 **637.05** Dopamine drives left-hemispheric lateralization of brain activity and functional connectivity during speech production: An fMRI and neural modeling study. K. SIMONYAN*; J. C. ZINN; B. HORWITZ; S. FUERTINGER. *Mount Sinai Sch. of Med., NIDCD/NIH.*

2:00 NN7 **637.06** A multi-modal imaging system for simultaneous measurement of speech articulator kinematics compatible with human electrophysiology. D. CONANT*; K. BOUCHARD; G. ANUMANCHIPALLI; B. DICHTER; E. CHANG. *UCSF, LBNL.*

3:00 NN8 **637.07** Dynamics of variability and information encoding in electrocorticography recordings during production and perception of syllables. B. DICHTER*; K. E. BOUCHARD; E. F. CHANG. *Univ. of California - San Francisco, UCSF, UC Berkeley - UC San Francisco, UCSF, UCSF, Lawrence Berkeley Natl. Lab.*

4:00 NN9 **637.08** Beyond lateralization: Inter-hemispheric communication coordinates vocal feedback control. N. KORT*; P. CUESTA; J. F. HOUDE; S. S. NAGARAJAN. *UCSF, Ctr. for Biomed. Technol. (CTB), UCSF, UCSF.*

1:00 NN10 **637.09** ▲ Neural temporal information coding in sentence repetition - an ECoG study. J. GEHRIG*; M. FORSTER; J. LEI; H. LAUFS; C. SENFT; V. SEIFERT; S. HANSLMAYR; C. KELL. *Goethe Univ., Goethe Univ., Univ. of Birmingham.*

2:00 NN11 **637.10** Possible neuroplasticity of swallow-related neural network. M. INOUE*. *Niigata Univ.*

3:00 NN12 **637.11** ▲ Adapting human videofluoroscopic swallow study (VFSS) methods to characterize dysphagia in animal models of human diseases. M. J. ALLEN*; T. E. LEVER. *Dr. Lever's Lab., Univ. of Missouri Sch. of Med.*

4:00 NN13 **637.12** The cross-training and detraining effects of tongue exercise in the cranial sensorimotor system. A. J. SCHASER*; M. R. CIUCCI; N. P. CONNOR. *Univ. of Wisconsin-Madison.*

1:00 NN14 **637.13** ● Characterizing the laryngeal adductor reflex across multiple species: Implications for human and veterinary medicine. T. E. LEVER*. *Univ. of Missouri-Columbia.*

2:00 NN15 **637.14** ● Dysphagia after stroke: Use of hyper-acute anatomical MRI for the study of brain networks and dysphagia. M. GONZALEZ-FERNANDEZ*; C. ANDERSON; A. E. HILLIS. *Johns Hopkins University, Sch. of Med., Johns Hopkins University, Sch. of Med.*

3:00 NN16 **637.15** Preclinical oromotor dysfunction and brain pathology in a PINK1 knock-out model of Parkinson's disease. M. R. CIUCCI*; C. A. KELM-NELSON; L. M. GRANT; K. P. CULLEN; E. PAUL. *Univ. Wisconsin.*

4:00 NN17 **637.16** A fast and reliable paradigm for swallowing-related functional magnetic resonance imaging (fMRI). P. SOROS*. *Univ. of Lübeck.*

1:00 NN18 **637.17** Uncoupled dynamics of magnitude and phase of beta oscillations in MIo during feeding behavior. K. TAKAHASHI*; Y. NAKAMURA; N. G. HATSOPOULOS; C. F. ROSS. *Univ. of Chicago, Niigata Univ.*

2:00 NN19 **637.18** ● Functional connectivity of swallowing network areas in children with acquired or congenital hemiplegia: A pilot study. G. MALANDRAKI*; K. FRIEL; J. J. SHEPPARD; A. GORDON. *Teachers College, Columbia Univ., Weill Cornell Med. Col.*

3:00 NN20 **637.19** Distinct roles of induced and evoked cortical oscillations for speech motor control. R. BEHROOZMAND*; N. IBRAHIM; O. KORZYUKOV; C. LARSON. *Univ. of South Carolina, Northwestern Univ.*

4:00 NN21 **637.20** Effect of transcranial direct current stimulation (tDCS) over M1 pharyngeal area on swallowing phase in post-stroke dysphagia. S. KOGANEMARU; F. OSHIMA; Y. OHASHI; H. FUKUYAMA; T. MIMA*. *Kyoto Universtiy, Japanese Red Cross Kyoto Daiichi Hospital, Human Brain Res. Cntr.*

1:00 NN22 **637.21** Central processing of masticatory muscle sensation. T. FUJIO; F. SATO; A. TOMITA; M. MORITANI*; A. YOSHIDA. *Grad. Sch. of Dentistry, Osaka Univ., Morinomiya Univ. of Med. Sci.*

2:00 NN23 **637.22** Neural excitation with positoron emission tomography after tooth mechanical stimulation. K. OMOTO; K. MARUHAMA; T. SUGIMOTO; Y. MATSUKA*. *The Univ. of Tokushima/ Inst. of Hlth. Biosci., Okayama Univ. Grad. Sch. of Med. / Dent. and Pharmaceut. Sci.*

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POSTER

638. Brain–Machine Interface: Implanted Electrodes II

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 NN24 **638.01** ● Simplified technique for localizing speech motor cortex implantation targets. P. R. KENNEDY*; A. J. CERVANTES; H. MAO. *Neural Signals Inc, Belize Healthcare Ctr., Emory Univ.*

2:00 NN25 **638.02** ● Double sealed hermetic implant package for the next generation of a wireless brain-computer interface. F. KOHLER; J. ORDONEZ; T. STIEGLITZ; S. CARDOSO DE OLIVEIRA*; J. RICKERT; M. SCHUETTLER. *Albert Ludwigs Univ. Freiburg, Bernstein Ctr. Freiburg, Albert Ludwigs Univ. Freiburg, Brain Links-BrainTools Excellence Cluster, CorTec GmbH.*

3:00 NN26 **638.03** Estimation of intracranial P300 speller sites for brain-computer interfacing with magnetoencephalography (MEG). M. KOROSTENSKAJA*; C. KAPELLER; R. PRUECKL; R. ORTNER; P. CHEN; K. LEE; T. KLEINESCHAY; C. GUGER; J. BAUMGARTNER; E. M. CASTILLO. *Functional Brain Mapping and BCI Lab, Florida Hosp. For Children, MEG Lab, Florida Hosp. for Children, Comprehensive Pediatric Epilepsy Center, Florida Hosp. for Children, g.tec Med. Engin. GmbH.*

4:00 NN27 **638.04** ● Mobile closed-loop deep brain stimulation system for ambulatory patient tremor mitigation. J. A. HERRON*; H. J. CHIZECK. *Univ. of Washington.*

1:00 NN28 **638.05** Grasp representations in the human posterior parietal cortex. C. KLAES*; S. KELLIS; T. AFLALO; B. LEE; Y. SHI; K. PEJSA; K. SHANFIELD; S. HAYES-JACKSON; M. AISEN; C. HECK; C. LIU; R. A. ANDERSEN. *Caltech, USC, Rancho Los Amigos Natl. Rehabil. Ctr.*

2:00 NN29 **638.06** Non-linear frequency coupling during brain computer interface (BCI) control - an ECoG study. J. D. WANDER*; K. WEAVER; R. P. N. RAO; J. OJEMANN; F. DARVAS. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

3:00 NN30 **638.07** ● Micro cuff electrodes for very small peripheral nerves. J. ORDONEZ; T. STIEGLITZ; J. RICKERT*; M. SCHUETTLER. *Albert-Ludwigs Univ., Bernstein Ctr. Freiburg, Brain Links-BrainTools Excellence Cluster, CorTec GmbH.*

4:00 NN31 **638.08** A novel neurofeedback paradigm enables the decoupling of LFP high gamma activity from spike rate. M. W. SLUTZKY*; Z. A. WRIGHT; R. D. FLINT; M. R. SCHEID. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

1:00 NN32 **638.09** Identifying selective auditory attention to speech from electrocorticographic signals. P. BRUNNER*; K. DIJKSTRA; A. GUNDUZ; W. G. COON; A. L. RITACCIO; J. FARQUHAR; G. SCHALK. *Wadsworth Ctr, NYSDOH, Albany Med. Col., Donders Inst. for Brain, Cognition and Behaviour, Univ. of Florida, State Univ. of New York at Albany.*

2:00 NN33 **638.10** Activation of the human primary motor cortex by sensory inputs in individuals with limb paralysis and implications for brain computer interfaces. S. V. HIREMATH*; A. D. DEGENHART; Y. YANG; J. L. COLLINGER; S. FOLDES; E. C. TYLER-KABARA; D. J. WEBER; R. GAUNT; M. L. BONINGER; W. WANG. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 NN34 **638.11** Understanding the effects of transversal intraneural stimulation in amputee: a combined experimental and computational study. S. RASPOPOVIC*; F. PETRINI; M. CAPOGROSSO; S. MICERA. *Ecole Polytechnique Federale De Lausanne, Scuola Superiore Sant'Anna, Campus Bio-Medico di Roma Univ., IRCCS S.Raffale-Pisana.*

4:00 NN35 **638.12** Data-driven model comparing the effects of glial scarring and tip metallization loss on chronic neural recordings. K. A. MALAGA*; K. E. SCHROEDER; P. R. PATEL; Z. T. IRWIN; D. E. THOMPSON; C. A. CHESTEK; P. G. PATIL. *Univ. of Michigan, Univ. of Michigan.*

1:00 NN36 **638.13** ● Complete cognitive state estimation for asynchronous brain-computer interface systems. M. PAHWA*; D. T. BUNDY; C. D. HACKER; M. KUSNER; K. WEINBERGER; E. C. LEUTHARDT. *Washington Univ., Washington Univ., Washington Univ., Washington Univ.*

2:00 OO1 **638.14** ▲ Comparison of direction information encoded in local field potentials from motor cortex during ipsilateral and contralateral arm movement. Q. ZHANG*; D. WANG; S. ZHANG; Y. LI; Y. WANG; X. ZHENG. *Qiushi Acad. For Advanced Studies, Qiushi Acad. For Advanced Studies.*

3:00 OO2 **638.15** Modulation of brain function by transcranial extracellular impedance control (tEIC). A. MATANI*; M. NAKAYAMA; M. WATANABE; Y. FURUYAMA; A. HOTTA; S. HOSHINO. *Grad. Sch. of Information Sci. and Technology, the Univ. of Tokyo, the Univ. of Tokyo.*

POSTER

639. Neurosteroids

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 OO3 **639.01** Membrane glucocorticoid receptor activation initiates rapid nuclear localization of cytosolic glucocorticoid receptor in hypothalamic neurons. J. R. RAINVILLE*; V. K. VALSARAJ; A. HUGHES; J. G. TASKER; N. VASUDEVAN. *Tulane Univ., Tulane Univ., Tulane Univ.*

2:00 OO4 **639.02** Novel antidepressant-like activity of Caffeic acid phenethyl ester mediated by enhanced glucocorticoid receptor function in the hippocampus. S. HER*; Y. KIM; B. LEE; O. PARK; K. MORITA. *KBSI, Shikoku Univ. Sch. of Hlth. Sci.*

3:00 OO5 **639.03** Hippocampus-synthesized estrogen and androgen rapidly modulate dendritic spines and LTP. S. KAWATO*; Y. HOJO; Y. HASEGAWA; H. MUKAI. *Univ. of Tokyo, Univ. of Tokyo.*

4:00 OO6 **639.04** Pgrmc1/klf4 signaling- triggered glia-neuron crosstalk plays a critical role in progesterone neuroprotection. C. SU*; F. SUN; T. NGUYEN; X. JIN; M. SINGH. *UNTHSC at Fort Worth, Univ. of North Texas - Hlth. Sci. Ctr., Univ. of North Texas Hlth. Sci. Ctr.*

1:00 OO7 **639.05** Basal and seizure-induced neurosteroid estradiol production in the hippocampus of freely moving rats. S. M. SATO*; C. S. WOOLLEY. *Northwestern Univ.*

2:00 OO8 **639.06** Knocking down expression of PXR in the midbrain ventral tegmental area of female rats attenuates actions of 3α,5α-THP via NMDA and GABA receptors for lordosis. C. A. FRYE*; C. J. KOONCE; J. C. RUSCONI; A. A. WALF. *Univ. Albany, Univ. Alaska Fairbanks, Univ. Albany, Rensselaer Polytechnic Inst.*

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3:00 OO9 **639.07** Deletion of estrogen receptor beta is associated with attenuated responses to androgenic neurosteroids to reduce depression-like behavior and lower brain derived neurotrophic factor among mice. A. A. WALF*; C. J. KOONCE; C. A. FRYE. *Rensselaer Polytechnic Institute,, Univ. Albany.*

4:00 OO10 **639.08** Androgen-mediated effects on seizure activity among male rats involves pregnane xenobiotic receptors. C. J. KOONCE*; A. A. WALF; J. C. RUSCONI; C. A. FRYE. *Univ. Albany, Univ. Alaska- Fairbanks, Rensselaer Polytechnic Inst.*

1:00 OO11 **639.09** Pregnane xenobiotic receptor deletion among female rats and mice attenuates responses to progestogens for mating. J. RUSCONI*; C. J. KOONCE; A. A. WALF; C. A. FRYE. *Univ. Albany, Univ. Alaska- Fairbanks, Rensselaer Polytechnic Inst.*

2:00 OO12 **639.10** Palmitoylation of Caveolin-1 has a role in membrane-initiated estrogen signaling. K. R. TONN*; P. G. MERMELSTEIN. *Univ. of Minnesota.*

3:00 OO13 **639.11** Inhibition of allopregnanolone synthesis via 5α-reductase type 2 counters sensorimotor gating deficits induced by dopamine D1 receptor agonists in mice. L. J. MOSHER*; S. C. GODAR; M. BORTOLATO. *Kansas Univ.*

4:00 OO14 **639.12** Sleep deprivation-induced manic-like behaviors are modulated by 5α-reductase type 1. R. PES*; S. C. GODAR; L. J. MOSHER; M. BORTOLATO. *Kansas Univ., Univ. of Cagliari, Kansas Univ.*

1:00 OO15 **639.13** Chronic GPER1 antagonism improves short term memory in male and female mice. K. J. POLLARD*; C. GERMANY. *Tulane Univ.*

POSTER

640. Steroids and Plasticity

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 OO16 **640.01** Proliferative cells and newborn GnRH3 neurons induced by androgen in female mozambique tilapia. Y. NARITA*; N. OKADA; A. TSUTIYA; T. KANEKO; R. OHTANI-KANEKO. *Toyo Univ., The Univ. of Tokyo.*

2:00 OO17 **640.02** Dissociation of androgen effects in different tissues by regulation of androgen receptor genes in a polymorphic fish. D. GONÇALVES*; M. BARUZZO; C. POLASTRO; R. F. OLIVEIRA. *Univ. of St. Joseph, ISPA-IU, Inst. Gulbenkian de Ciência.*

3:00 OO18 **640.03** Comparative expression of GPR30 in the brains of goldfish and zebrafish. J. WHITE*; T. ADEBANJO; T. SZABO-MAAS. *Delaware State Univ.*

4:00 OO19 **640.04** Multiple distinct estrogen receptor-alpha protein isoforms in the central nervous system of adult teleost. T. T. ADEBANJO*; J. WHITE; T. SZABO-MAAS. *Delaware State Univ.*

1:00 OO20 **640.05** Non-nuclear distribution patterns of estrogen receptors in the brains of goldfish. R. R. THOMPSON; L. A. MANGIAMELE*; T. NICHOLSON; D. MICHAUD; M. CHEN; J. GOMEZ; D. DARDEN. *Bowdoin Col., Smith Col., Bowdoin Col.*

2:00 OO21 **640.06** Rapid effects of aggressive interactions on DHEA, testosterone, and estradiol levels in the male song sparrow brain: A seasonal comparison. S. A. HEIMOVICS*; N. H. PRIOR; C. Q. MA; K. K. SOMA. *Univ. of St. Thomas, Univ. of British Columbia.*

3:00 OO22 **640.07** Evidence for fast, non-genomic-like actions of estrogens in the regulation of birdsong. B. A. ALWARD*; T. T. CHAN; J. BALTHAZART; C. CORNIL; G. F. BALL. *The Johns Hopkins Univ., Univ. de Liege.*

4:00 OO23 **640.08** Investigating possible intraspecific variation in testosterone-induced neuroplasticity by comparing two canary breeds. F. N. MADISON*; B. A. ALWARD; G. F. BALL. *Johns Hopkins Univ.*

1:00 OO24 **640.09** Estradiol, synthesized by reactive glia, is a potent anti-inflammatory in the injured vertebrate brain. A. L. PEDERSEN*; L. H. NELSON; C. J. SALDANHA. *The American Univ.*

2:00 OO25 **640.10** Cholinergic regulation of aromatase in brain. J. LI*; D. NELSON; R. GIBBS. *Univ. of Pittsburgh Sch. of Pharm.*

3:00 OO26 **640.11** Estradiol recruits the cannabinoid system to enhance psychostimulant locomotor sensitization in female rats. B. PETERSON*; P. G. MERMELSTEIN; R. L. MEISEL. *Univ. of Minnesota.*

4:00 OO27 **640.12** Estradiol facilitation of cocaine-induced behaviors in female rats requires activation of mGluR5. L. A. MARTINEZ*; B. M. PETERSON; R. L. MEISEL; P. G. MERMELSTEIN. *Univ. of Minnesota.*

1:00 OO28 **640.13** Interactions between estradiol and group 1 mGluR signaling influence dendritic spine density in the female rat nucleus accumbens. K. GROSS*; R. L. MEISEL; P. G. MERMELSTEIN. *Univ. of Minnesota.*

2:00 OO29 **640.14** Effects of testosterone on stages of neural development in the dentate gyrus of adult male rats. M. D. SPRITZER*; K. M. K. CALHOUN; E. A. ROY; Z. E. SCHNEIDER-LYNCH; J. M. BARKER; L. A. M. GALEA. *Middlebury Col., Univ. of British Columbia.*

3:00 OO30 **640.15** GPR30 activation stimulates mTOR-dependent protein synthesis in hippocampal slices through BDNF release. V. BRIZ*; M. BAUDRY. *Western Univ. of Hlth. Sci.*

4:00 OO31 **640.16** Right or left hemiovariectomy effects on dendritic length of CA1 and CA3 neurons of ventral hippocampus. D. A. BRAVO; A. B. SILVA*. *Escuela de Biología, BUAP, Benemérita Univ. Autónoma de Puebla.*

1:00 OO32 **640.17** Evidence for an acute estradiol-induced increase in postsynaptic sensitivity to glutamate at synapses in the hippocampus. J. G. OBERLANDER*; C. S. WOOLLEY. *Northwestern Univ.*

2:00 PP1 **640.18** Pregnenolone sulfate as a modulator of synaptic plasticity. K. SUGUNAN*; J. I. LUEBKE; V. KUMARESAN; D. H. FARB. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

3:00 PP2 **640.19** Estrogen mediates fractional anisotropy changes in the hippocampus during the menstrual cycle - A pilot DWI study. C. BARTH*; C. J. STEELE; K. ARELIN; K. MUELLER; I. BURMANN; J. KRATZSCH; A. VILLRINGER; J. SACHER. *Max Planck Inst. Human Cognitive and Brain Sci., Clin. of Cognitive Neurology, Univ. of Leipzig, Leipzig Res. Ctr. for Civilization Diseases, Univ. of Leipzig, Integrated Res. and Treatment Ctr. Adiposity Diseases, Univ. of Leipzig, Berlin Sch. of Mind and Brain, Mind and Brain Inst.*

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POSTER

641. Social Behavior: Drivers and Mechanisms

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 PP3 **641.01** Pre- and post-wean early life social environments interact to shape socio-spatial memory in prairie voles. G. S. PROUNIS*; L. FOLEY; A. REHMAN; A. OPHIR. *Cornell Univ., Oklahoma State Univ.*

2:00 PP4 **641.02** Social status affects metabolic activity patterns of the social decision making network. S. MAGUIRE*; H. A. HOFMANN. *Univ. of Texas At Austin.*

3:00 PP5 **641.03** Decreased number and mean frequency of ultrasonic vocalizations in juvenile Brattleboro rats. M. J. PAUL*; N. V. PETERS; J. WHYLINGS; C. BADEAU; G. DE VRIES. *Univ. at Buffalo, SUNY, Georgia State Univ.*

4:00 PP6 **641.04** Investigation of sex differences in wheel running and social behavior in pre-pubertal mice. E. A. GORDON*; S. F. BAMJI; K. N. BENCKER; D. N. PATEL; C. CORBITT. *Univ. of Louisville.*

1:00 PP7 **641.05** The development of play fighting: Do interactions with siblings before weaning matter? B. T. HIMMLER*; R. STRYJEK; K. MODLINSKA; S. M. HIMMLER; B. KOLB; W. PISULA; S. M. PELLIS. *Univ. of Lethbridge, Polish Acad. of Sci.*

2:00 PP8 **641.06** ▲ Reduced social anxiety and elevated fear expression in mice lacking NMDA function in CRF neurons. J. DAMERT*; T. GILMAN; J. D. MEDURI; A. M. JASNOW. *Kent State Univ.*

3:00 PP9 **641.07** Effect of stress on the anxiety-like behavior in an animal model of perimenopause. P. D. BARROS*; N. PESTANA-OLIVEIRA; C. LEITE-PANISSI; J. A. ANSELMO-FRANCI. *Univ. of São Paulo, Univ. of São Paulo.*

4:00 PP10 **641.08** Organizational and behavioral effects of the early cultural environment in the highly social prairie vole. B. S. CUSHING*; L. STETZIK. *Univ. Akron.*

1:00 PP11 **641.09** Endocannabinoid Regulation of Sociability. D. WEI*; C. MURRAY; D. LEE; A. ANGUREN; D. DINH; K. JUNG; D. PIOMELLI. *UC Irvine, UC Irvine.*

2:00 PP12 **641.10** Behavioral response and functional neuroanatomy of male golden hamsters during social eavesdropping. C. LIU*; W. YU; C. CHANG; W. LAI. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

3:00 PP13 **641.11** Dose-Response study of di-(2ethylhexyl) phthalate (dehp): Androgenic and anti-androgenic actions. K. M. QUINNIES*; E. P. HARRIS; E. F. RISSMAN. *Univ. of Virginia, Univ. of Virginia.*

4:00 PP14 **641.12** Stress inhibits partner preference in same-sex pairs of female meadow voles. A. M. ANACKER*; K. M. REITZ; E. R. GUNZEL; A. K. BEERY. *Smith Col.*

1:00 PP15 **641.13** Infection threat elicits assortative sociality in female mice. M. KAVALIERS*; C. J. CLOUTIER; K. OSSENKOPP; E. CHOLERIS. *Univ. Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Guelph.*

2:00 PP16 **641.14** Intrasexual dimorphism of the serotonergic system in a vocal fish with alternative reproductive tactics. M. TIMOTHY*; Z. N. GHAHRAMANI; A. CHERNENKO; M. GORBONOSOV; P. M. FORLANO. *Brooklyn College, City Univ. of New York (CUNY), CUNY Grad. Ctr., CUNY Grad. Ctr.*

3:00 PP17 **641.15** Association of smoking-induced variations on hypothalamic pituitary adrenal axis activity and mental health stress in African Americans. P. A. ABRAHAM*; J. KAZMAN; S. ZENO; K. DENNIS; P. DEUSTER. *Uniformed Services Univ.*

4:00 PP18 **641.16** Validation of a partner preference test in coppery titi monkeys (Callicebus cupreus). E. ROTHWELL*; S. CARP; S. FREEMAN; E. FERRER; K. BALES. *Univ. of California- Davis, Univ. of Nebraska-Omaha, Univ. of California- Davis.*

1:00 PP19 **641.17** Excitatory and inhibitory reciprocal connections between the anterodorsal and posterodorsal medial amygdala in the adult male Syrian hamster. J. WHYLINGS*; A. BURNS; P. BEHNIA; A. PETRULIS; B. M. COOKE. *Georgia State Univ., Georgia State Univ.*

2:00 PP20 **641.18** Gene co-expression network analysis in a free-living, behaviorally polymorphic species. W. M. ZINZOW-KRAMER*; B. M. HORTON; G. K. THARP; D. L. MANEY. *Emory Univ., Emory Univ.*

3:00 PP21 **641.19** Behavioral plasticity meets neuroplasticity: Neurogenesis associated with male polymorphism in the peacock blenny Salaria pavo. P. VIEIRA*; J. M. SIMÕES; R. F. OLIVEIRA; D. GONÇALVES. *Univ. of St. Joseph, Inst. Gulbenkian de Ciência, ISPA-IU, Univ. of St. Joseph.*

POSTER

642. Hormones and Cognition

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 PP22 **642.01** Neonatal maternal separation impairs osmotic stress coping in adult rat: Mapping brain metabolic activity by [18F]-FGD positron emission tomography and c-Fos expression. C. L. IRLES*; V. M. LARA; M. C. AVILA; H. BARRIO; E. RAMOS; T. MORALES; M. A. AVILA-RODRIGUEZ; L. ZHANG. *Dept. de Fisiología, Facultad de Medicina, Univ. Nacional Autónoma, Unidad PET, Facultad de Medicina, UNAM, Univ. Nacional Autónoma de México, Inst. de Neurobiologia, UNAM.*

2:00 PP23 **642.02** Over-expression of TRH and/or a TRH-like peptide in the limbic system and adrenals of a spontaneous rat mutant. A. SATTIN*; A. E. PEKARY. *VA Greater Los Angeles Hlth., VA Greater Los Angeles Hlth.*

3:00 PP24 **642.03** Effect of neonatal maternal separation and adolescent ethanol exposure on adult preference for ethanol. A. T. NAVA KOPP*; C. IRLES; H. BARRIO; L. ZHANG. *Dept. of Physiology, Fac. of Medicine, Natl. Autonomous Univ. of, Fac. of Sciences, UNAM.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 QQ1 **642.04** Maximum load exercise induced increases in neuropeptide Y and allopregnanolone correlate with fitness and increases in pain threshold and tolerance. A. RASMUSSON*; E. R. SCIOLI-SALTER; J. D. OTIS; K. ALLSUP; D. E. FORMAN. *VA Boston Healthcare System/116B-3, Boston Univ. Sch. of Med., VA Boston Healthcare Syst., Harvard Med. Sch.*

1:00 QQ2 **642.05** Gender differences in the effect of perinatal high sugar diet on spatial cognitive behavior of adolescent rats. I. ZARCO DE CORONADO*; S. MOSSO-MENDOZA. *UNAM.*

2:00 QQ3 **642.06** Hypertonicity increases arousal and anxiety following predator exposure: The direct and indirect modulation of hypothalamic vasopressin containing magnocellular neurosecretory neurons on Fos expression in limbic regions in rat. E. VAZQUEZ-JUAREZ*; F. JÁUREGUI-HUERTA; V. S. HERNÁNDEZ; L. ZHANG. *Univ. Nacional Autonoma De Mexico, Univ. de Guadalajara.*

3:00 QQ4 **642.07** Does maternal ghrelin drive transgenerational change in emotional processing and stress responsivity? G. LEE*; K. A. GOOSENS. *McGovern Inst. For Brain Res., Massachusetts Inst. of rtechnology.*

4:00 QQ5 **642.08** Activation of glucocorticoid and NMDA receptors in the prelimbic prefrontal cortex decreases the expression of contextual conditioned fear in rats. F. M. REIS*; R. C. ALMADA; M. V. FOGAÇA; M. L. BRANDÃO. *Univ. of São Paulo, Univ. of São Paulo, Univ. of São Paulo.*

1:00 QQ6 **642.09** Límbic-Region projections of vasopressin containing mangocellular neurosecretory neurons revealed by *in vivo* juxtacellular recording and anatomical analysis: its rhythmic changes under osmotic stress and implications on predator fear processing. L. ZHANG*; E. VAZQUEZ-JUAREZ; V. S. HERNÁNDEZ. *Physiology, Medicine, Natl. Autonomous Univ. of Mexico.*

2:00 QQ7 **642.10** ▲ Testosterone replacement restores spatial working memory in castrated adult male rats. B. CULLEN*; C. G. BATSON; S. C. SPILLANE; B. A. WAGNER; M. D. SPRITZER. *Middlebury Col., Middlebury Col.*

3:00 QQ8 **642.11** Neuroendocrine response to extreme challenge. V. J. MEYER*; Y. LEE; E. SHIRTCLIFF. *Univ. of New Orleans.*

4:00 QQ9 **642.12** ▲ Blocking luteinizing hormone but not gonadotropin-releasing hormone in the dorsal hippocampus rescues spatial memory deficits in ovariectomized female rats. V. L. BURNHAM; A. GOLDBERG; J. E. THORNTON*. *Oberlin Col.*

1:00 QQ10 **642.13** Toxoplasma-gondii infection shifts balance between approach-avoidance decisions towards impulsivity. D. TAN*; A. VYAS. *Nanyang Technological Univ.*

2:00 QQ11 **642.14** Investigation of the roles of the hippocampus and basolateral amygdala in rapid estrogenic enhancement of social learning. K. S. ERVIN*; P. PALETTA; M. SAWULA; A. MOORE; K. SINCLAIR; A. PHAN; E. CHOLERIS. *Univ. of Guelph, Scripps Res. Inst.*

3:00 QQ12 **642.15** Patch clamp recording in hypocretin/orexin neurons in larval zebrafish (Danio rerio) *in vivo*: sensory responses. X. GAO*; J. DU. *Yale Univ. Sch. Med., Inst. of neuroscience, Chinese Acad. of Sci.*

4:00 QQ13 **642.16** Vasopressin modulates lateral habenula network activity via both V1a and V1b receptors: Dual electrophysiological mechanisms revealed by *in vitro* whole-cell patch clamp recording. V. S. HERNANDEZ*; F. CHAY; C. IRLES; L. ZHANG. *Dept. of Physiology, Fac. of Medicine, Natl. Autonomous Univ. of Mexico.*

1:00 QQ14 **642.17** Igf-1 regulates neuronal structure and function via rhoa/rock signaling. N. ASHPOLE*; J. E. LANDOLL; E. L. HODGES; M. C. MITSCHELEN; H. YAN; J. FARLEY; W. E. SONNTAG. *Univ. of Oklahoma Hlth. Sci. Ctr.*

2:00 QQ15 **642.18** Sex differences in the response to intermittent hypoxia, a model for obstructive sleep apnea. T. G. AUBRECHT*; R. D. JENKINS; R. J. NELSON. *The Ohio State Univ.*

3:00 QQ16 **642.19** Sex-differences in hippocampal ca1 intrinsic excitability and peripheral responses in a high-energy diet-induced prediabetic rat model. E. UNDERWOOD*; L. THOMPSON. *The Univ. of Texas At Dallas.*

4:00 QQ17 **642.20** ● Low-to-severe neurotoxicity and thyroxine deficits in the absence of behavioral changes in rats with developmental hypothyroxinemia. P. R. MOUTON*; G. S. TRAVLOS; C. J. PRICE; J. HARRY. *Univ. of South Florida Col. of Med., NIEHS, RTI Intl., NIEHS.*

1:00 QQ18 **642.21** Genetic deletion of SNAP-25b: A new mouse model of genetic diabesity. I. V. ACEBES*; T. DARAIO; K. BRISMAR; S. ÖGREN; H. TOMAS; C. BARK. *Dept. of Neurosci., Karolinska Institutet, The Rolf Luft Centrum for Diabetes and Endrocrinol., The Rolf Luft Centrum for Diabetes and Endrocrinol., Karolinska Institutet, The Rolf Luft Centrum for Diabetes and Endrocrinol.*

2:00 QQ19 **642.22** ● Fetal testosterone is associated with brain white matter volumetric sex differences in adolescents. A. N. RUIGROK*; M. LAI; R. J. HOLT; M. V. LOMBARDO; B. AUYEUNG; J. SUCKLING; K. TAYLOR; G. HACKETT; E. T. BULLMORE; S. BARON-COHEN. *Autism Res. Ctr., Natl. Taiwan Univ. Hosp. and Col. of Med., Univ. of Cyprus, Univ. of Edinburgh, Cambridgeshire and Peterborough NHS Fndn. Trust, Brain Mapping Unit, Univ. of Cambridge, Behavioural and Clin. Neurosci. Institute, Univ. of Cambridge, Addenbrooke's Hosp., Rosie Maternity Hosp., Brain Mapping Unit, Univ. of Cambridge.*

POSTER

643. Respiratory Neurobiology

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 QQ20 **643.01** Distinct membrane excitability control of Ca^{2+} handling in identified synaptic terminals in *Drosophila* neuromuscular junctions. X. XING*; C. WU. *Univ. of Iowa, Univ. of Iowa.*

2:00 QQ21 **643.02** BDNF's role in the excitatory-inhibitory imbalance within the solitary tract nucleus during the critical period of postnatal development in the rat. X. GAO*; M. T. WONG-RILEY. *Med. Col. of Wisconsin.*

3:00 QQ22 **643.03** Respiratory rhythm generation emerges from an excitatory column encompassing the preBötzinger and Bötzinger Complex. T. ANDERSON*; A. J. GARCIA, III; J. RAMIREZ. *Seattle Children's Res. Inst., Univ. of Washington, Univ. of Washington.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 QQ23 **643.04** Optogenetic activation of Glycinergic neurons of the rostral Ventral Respiratory Column inhibits inspiration and affects respiratory phase transition. M. G. FORTUNA*; A. BISCHOFF; S. KÜGLER; S. HÜLSMANN. *Universitätsmedizin Göttingen, Universitätsmedizin Göttingen, Universitätsmedizin Göttingen.*

1:00 QQ24 **643.05** ● Recovering from isoflurane anesthesia: Evidence of reduced vascular reactivity and functional coupling using fMRI in awake rats. M. NEDELMAN; P. KULKARNI; S. P. FINKLESTEIN*; M. REN; M. DAVENPORT; C. F. FERRIS. *Ekam Imaging, Northeastern University, Ctr. for Translational NeuroImaging, Biotrofix, Inc.*

2:00 QQ25 **643.06** The anticipation of respiratory threat impairs performance in a subsequent visual recognition memory task. G. JURAVLE*; P. REICHERTS; M. L. WEINSTEIN-RIECHMANN; M. J. WIESER; A. VON LEUPOLDT. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Würzburg, Univ. of Leuven.*

3:00 QQ26 **643.07** The role of synaptic inhibition in respiratory rhythm and pattern generation in brainstem *in situ*. N. KOSHIYA*; H. KOIZUMI; R. ZHANG; B. P. MOSHER; M. F. TARIQ; V. MARCHENKO; I. RYBAK; J. C. SMITH. *NIH - NINDS, Drexel Univ.*

4:00 QQ27 **643.08** The role of synaptic inhibition in respiratory rhythm and pattern generation *in vivo.* V. MARCHENKO*; N. KOSHIYA; T. BEZDUDNAYA; H. KOIZUMI; R. ZHANG; I. A. RYBAK; J. C. SMITH. *Drexel Univ. Col. of Med., NINDS, NIH.*

1:00 QQ28 **643.09** Involvement of P2Y purinergic receptors in the nucleus of the solitary tract on the respiratory responses induced by hypoxia. N. MARQUES*; J. V. MENANI; P. M. DE PAULA. *Dent. School, UNESP.*

2:00 QQ29 **643.10** Medullary catecholaminergic (CA) neurons modulate hypoxic ventilatory response in neonatal rats (P7-8). L. A. PATRONE*; V. BIANCARDI; K. C. BÍCEGO; L. H. GARGAGLIONI. *Sao Paulo State University.*

3:00 QQ30 **643.11** HCN channels contribute to serotonergic modulation of ventral surface chemosensitive neurons and respiratory activity. V. E. HAWKINS*; J. M. HAWRYLUK; A. C. TAKAKURA; T. S. MOREIRA; A. V. TZINGOUNIS; D. K. MULKEY. *Univ. of Connecticut, Univ. of Sao Paulo, Univ. of Sao Paulo.*

4:00 QQ31 **643.12** Muscarinic cholinergic mechanisms within the retrotrapezoid nucleus modulate breathing without changing CO2 chemosensitivity. C. R. SOBRINHO*; A. C. TAKAKURA; I. C. WENKER; T. S. MOREIRA; D. K. MULKEY. *Univ. of Sao Paulo, Pharmacol., Univ. of Connecticut, Inst. of Biomed. Science, Univ. of São Paulo, São Paulo, SP, Univ. of Connecticut.*

1:00 QQ32 **643.13** Slow oscillations require a balance between the linear negative-slope conductance region of a regenerative inward current and persistent outward currents. Y. GUAN*; A. BOSE; J. GOLOWASCH; F. NADIM. *Rutgers Univ., New Jersey Inst. of Technol., Rutgers Univ. and NJIT.*

2:00 QQ33 **643.14** Neonatal mortality in CPEB2 knockout mice reveals its physiological function in respiratory regulation. Y. LAI; Y. HUANG*. *Academia Sinica/Institute of Biomed. Sci., Grad. Inst. of Microbiology, Natl. Taiwan Univ.*

3:00 QQ34 **643.15** Topical application of D-serine on raphe nuclei and ventral respiratory column increases fictive respiration in slices from mouse neonates. S. BELTRAN-CASTILLO*; I. LLONA; J. EUGENIN. *Univ. De Santiago De Chile.*

4:00 QQ35 **643.16** Assessing the role for murine KCNQ5 in opioid suppression of respiratory drive: KCNQ5 genomic editing by CRISPR/Cas9. A. D. WEI*; P. WAKENIGHT; T. ZWINGMAN; K. J. MILLEN; J. RAMIREZ. *Seattle Children's Res. Inst.*

1:00 QQ36 **643.17** Opioidergic modulation of breathing revealed by naloxone application in the sagittaly sectioned rat hindbrain preparation. N. M. MELLEN*; B. GOURÉVITCH. *Univ. Louisville, UMR CNRS 8195.*

2:00 RR1 **643.18** Control of the hypercapnic chemoreflex by Locus coeruleus noradrenergic neurons in female rats. M. B. DIAS*; D. C. DOURADO; J. ANSELMO-FRANCI; R. E. SZAWKA; K. C. BÍCEGO; L. H. GARGAGLIONI. *UNESP, UNESP-FCAV, Univ. of Sao Paulo, Inst. of Biol. Sciences, Federal Univ. of Minas Gerais.*

4:00 RR2 **643.19** Gender differences in hypoxic acclimatization in cyclooxygenase-2 deficient mouse. K. XU*; X. SUN; C. P. TSIPIS; G. F. BENDERRO; J. C. LAMANNA. *Case Western Reserve Univ., Case Western Reserve Univ.*

3:00 RR3 **643.20** Effects of isoflurane and caffeine on breathing in mice during the neonatal period. C. A. MASSEY*; Y. WU; K. R. CHIRCO; S. M. HARMAN; G. B. RICHERSON. *Univ. of Iowa Hosp. and Clinics, Univ. of Iowa.*

2:00 RR4 **643.21** Impact of chronic intermittent hypoxia on hippocampal neuronal function: An *in vivo* recording study. L. XU*; Q. LI; Y. KE; W. YUNG. *The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong.*

1:00 RR5 **643.22** Perinatal exposure to fluoxetine diminishes the respiratory response to hypercarbia *in vivo* and *in vitro* in mouse neonates. K. A. BRAVO*; J. EUGENÍN; I. LLONA. *Univ. De Santiago De Chile.*

3:00 RR6 **643.23** Altered insular resting-state functional connectivity in patients with obstructive sleep apnea. B. PARK*; N. TOMA; P. M. MACEY; M. A. WOO; F. L. YAN-GO; R. M. HARPER; R. KUMAR. *Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*

4:00 RR7 **643.24** Association of axonal and myelin changes with obstructive sleep apnea severity. R. KUMAR*; S. K. YADAV; B. PARK; J. A. PALOMARES; M. A. WOO; D. W. KANG; R. M. HARPER. *Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*

1:00 RR8 **643.25** Alterations in caudate nuclei resting-state functional connectivity in obstructive sleep apnea patients. R. M. HARPER*; T. IBRAHIM; B. PARK; P. M. MACEY; M. A. WOO; F. L. YAN-GO; R. K. HARPER; R. KUMAR. *Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*

2:00 RR9 **643.26** Nicotinamide mononucleotide adenylyltransferases in a mouse model of term equivalent birth asphyxia. R. GALINDO*; M. GREENBERG; D. M. HOLTZMAN. *Washington Univ. In St. Louis.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

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3:00 RR10 **643.27** TRPA1 agonist, cinnamaldehyde induced long-lasting facilitation of respiratory rhythm in the brainstem-spinal cord preparation isolated from newborn rat and in the *in situ* perfused- preparation from juvenile rat. H. ONIMARU*; S. LIN; M. TANI; I. YAZAWA; K. IKEDA; K. KAWAKAMI. *Showa Univ. Sch. of Med., Showa Univ. Sch. of Med., Hyogo Col. Med., Jichi Med. Univ.*

4:00 RR11 **643.28** Morphometric properties of Dbx1 pre-Bötzinger complex (preBötC) neurons that contribute to respiratory rhythm and pattern generation in neonatal mice slice preparations *in vitro.* V. AKINS*; C. DEL NEGRO. *Col. of William and Mary.*

1:00 RR12 **643.29** Multielectrode recording of brainstem neurons: Swallow control of the respiratory neural network. H. TSAI; G. ZHOU; K. F. MORRIS; C. GESTREAU; S. C. NUDING; L. S. SEGERS; B. G. LINDSEY; P. W. DAVENPORT*. *Univ. of Florida, Univ. of Florida, Univ. of South Florida, Univ. Florida.*

POSTER

644. Stress and Cognition

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR13 **644.01** Operantly conditioned slow breathing in the rat modifies baseline respiration and engages behavioral changes consistent with the relaxation response. D. NOBLE*; M. L. MCKINNON; T. I. NEBLETT; W. N. GOOLSBY; S. HOCHMAN. *Emory Univ., Emory Univ.*

2:00 RR14 **644.02** ADRA2B deletion variant selectively predicts stress-induced enhancement of long-term memory in females. P. R. ZOLADZ*; A. E. KALCHIK; C. E. CADLE; D. M. PETERS; M. M. HOFFMAN; R. L. AUFDENKAMPE; S. M. LYLE; C. M. BROWN; A. R. SCHARF; A. M. DAILEY; N. E. WOLTERS; J. N. TALBOT; B. R. RORABAUGH. *Ohio Northern Univ., Ohio Northern Univ., Roseman Univ. of Hlth. Sci.*

3:00 RR15 **644.03** Selective deficits in object recognition memory are part of the depressive phenotype produced by repeated corticosterone in rats. K. BRYMER*; E. Y. FENTON; J. SIMPSON; J. G. HOWLAND; L. E. KALYNCHUK. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan.*

4:00 RR16 **644.04** A matter of time: Post stress enhancement of rule based category learning performance. S. B. HUTCHINSON*; L. HAWTHORNE; L. SZYMULA; S. K. MCCOY; S. W. ELL. *Univ. of Maine - Psychology Dept., Univ. of Maine - Grad. Sch. of Biomed. Sci. & Engin.*

1:00 RR17 **644.05** Shipping stress in rats permanently alters stress response, gestational duration and epigenetic signatures. F. C. ZUCCHI*; Y. YAO; I. KOVALCHUK; G. METZ. *Univ. of Brasilia (unb), Univ. of Lethbridge, Univ. of Lethbridge.*

2:00 RR18 **644.06** Corticotropin releasing factor (CRF) impairs sustained attention in male and female rats. Y. KAWASUMI*; R. COLE; G. VAN BUSKIRK; V. PARIKH; D. BANGASSER. *Temple Univ.*

3:00 RR19 **644.07** ▲ Post-learning stress facilitates long-term memory consolidation and differentially influences emotional memory in females depending on stage of menstrual cycle. C. E. CADLE*; A. E. KALCHIK; D. M. PETERS; C. M. BROWN; A. R. SCHARF; A. M. DAILEY; M. B. EARLEY; C. L. KNIPPEN; E. D. SCHOLL; B. R. RORABAUGH; P. R. ZOLADZ. *Ohio Northern Univ., Ohio Northern Univ.*

4:00 RR20 **644.08** Functional significance of mobile genetic elements. T. A. BEDROSIAN*; C. QUAYLE; F. H. GAGE. *Salk Inst. for Biol. Studies.*

1:00 RR21 **644.09** ▲ Chronic stress effects on spatial learning and hippocampal citogenesis of senile male rats. T. MORALES-SALCEDO; G. YAÑEZ-DELGADILLO; P. HERNANDEZ-CARRILLO; G. CHIPRES-TINAJERO; F. JÁUREGUI-HUERTA; Y. RUVALCABA-DELGADILLO; J. GARCÍA-ESTRADA; M. S. LUQUIN DE ANDA*. *Univ. Guadalajara, Inst. Mexicano del Seguro Social.*

2:00 RR22 **644.10** The relationship between oxytocin and cortisol during acute psychosocial stress in a non-clinical undergraduate sample. K. MONDE*; M. PANERO; J. KIM; D. SIMEON; V. LUINE. *CUNY Hunter Col., Boston Col., Michigan State Univ., Mount Sinai Sch. of Med.*

3:00 RR23 **644.11** Odor-induced stress effects on first responder medical decision-making. B. D. WINSLOW*; N. NGUYEN; E. GOODRICH; S. DUFF; V. LUGO; D. JONES. *Design Interactive, Inc.*

4:00 RR24 **644.12** Bidirectional effects of stress on decision-making and its neural correlates in a dynamic environment. J. CHEY*; H. PARK; D. LEE; N. DAW. *Seoul Natl. Univ., Columbia Univ. Med. Sch., Yale Univ. Med. Sch., New York Univ.*

1:00 RR25 **644.13** Multiple effects of stress on decision making in a changing environment. P. HEYEON*; D. LEE; J. CHEY. *Seoul Natl. Univsersity, Yale university, Seoul Natl. Universiy.*

2:00 RR26 **644.14** Rescuing inhibitory tone following chronic stress reverses stress-induced hippocampal-dependent deficits on object placement. J. B. ORTIZ*; S. TAYLOR; P. PAODE; C. D. CONRAD. *Arizona State Univ.*

3:00 RR27 **644.15** D-serine prevents acute stress-induced cognitive deficits in mice. G. D. GUERCIO; L. E. BEVICTORI; C. M. MADEIRA; C. VARGAS-LOPES; J. D'ÁVILA; V. F. CARVALHO; R. A. PANIZZUTTI*. *Federal Univ. of Rio De Janeiro, Fiocruz.*

4:00 RR28 **644.16** Corticotropin-releasing factor acts within the prefrontal cortex to impair cognitive function. S. HUPALO*; R. C. SPENCER; C. W. BERRIDGE. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

1:00 RR29 **644.17** Computations of uncertainty predict acute stress responses in humans. A. O. DE BERKER*; R. RUTLEDGE; R. J. DOLAN; S. BESTMANN. *Univ. Col. London, Wellcome Trust Ctr. for Neuroimaging, Univ. Col. London.*

2:00 RR30 **644.18** Arousal modulates short-term emotional memory in women on hormonal contraception. S. E. NIELSEN*; S. J. BARBER; M. MATHER. *USC.*

3:00 RR31 **644.19** L. reuteri induced anxiety behavior and fear related memory change in C57BL/6J mice. M. J. EIMERBRINK*; J. D. WHITE; M. J. CHUMLEY; G. W. BOEHM. *Texas Christian Univ., Texas Christian Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 RR32 **644.20** Blood chromatin as a protein biosensor: Morphometrics, cognition and behavior. B. M. FEINER; K. A. CHASE; R. P. SHARMA*. *Univ. of Illinois at Chicago.*

1:00 RR33 **644.21** Decreased sensitivity of female rat locus coeruleus neurons to μ-opiate agonists: Electrophysiological, protein and behavioral studies. H. M. GUAJARDO*; A. HO; X. ZHANG; R. VALENTINO. *Univ. of Pennsylvania, Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

2:00 RR34 **644.22** Is enhanced retrieval of fear memories part of the depressive phenotype produced by repeated corticosterone treatment in rats? L. E. KALYNCHUK*; W. N. MARKS; E. Y. FENTON; N. M. FOURNIER; B. D. KULYK. *Univ. of Saskatchewan, Yale.*

POSTER

645. Circadian Clock

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

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR35 **645.01** Effect of a metformin-derived small molecule on circadian clock phase-resetting. H. S. ROW*; S. KIM; K. KIM. *Seoul Natl. Univ., Hanall Biopharm., Seoul Natl. Univ.*

2:00 RR36 **645.02** ▲ Expression of MAPK in hypotalamus and pons on the circadian fluctuation on rats. R. JIMENEZ-MORENO*; S. MIJANGOS-MORENO; A. POOT-AKE; A. MANJARREZ-MARTÍN; E. PACHECO-PANTOJA; P. AQUINO-HERNÁNDEZ2; M. SALAS-CRISÓSTOMO; A. TEJEDA-PADRÓN; E. MURILLO-RODRIGUEZ. *Univ. Anáhuac Mayab, Lab. de Neurociencias Moleculares e Integrativas Escuela de Medicina, División Ciencias de la Salud Univ. Anáhuac Mayab, Escuela de Medicina, División Ciencias de la Salud Univ. Anáhuac Mayab.*

3:00 RR37 **645.03** Identification and characterization of a novel agonist modulating circadian nuclear receptor, REV-ERBα. J. J. LEE*; Y. SUH; K. KIM. *Seoul Natl. Univ., Seoul Natl. Univ., Seoul Natl. Univ.*

4:00 RR38 **645.04** An integrative study of the circadian rhythmicity of electric behavior: From the field to the dish. A. SILVA*; A. MIGLIARO; P. MARCHAL. *Inst. De Investigaciones Biológicas Clemente Estable - Facultad De Ciencias, Univ. Claude Bernard, Inst. De Investigaciones Biológicas Clemente Estable.*

1:00 RR39 **645.05** LD-stress alters circadian expressions of GAD in mice. A. MUTO*; K. OSADA; T. WATANABE; A. TAGUCHI; T. HAGA; Y. OGAWA; M. NAKANO; Y. SASUGA; N. YAMAGUCHI. *St.Marianna Univ. Sch. of Med.*

2:00 RR40 **645.06** Circadian rhythms in differentiating adult neural stem cells from the dentate gyrus of the hippocampus. A. MALIK*; R. J. JAMASBI; M. E. GEUSZ. *BOWLING GREEN STATE UNIVERSITY.*

3:00 RR41 **645.07** Circadian and subregional gene expression in the suprachiasmatic nucleus. J. L. LENSIE*; E. M. MINTZ. *Kent State Univ., Kent State Univ.*

4:00 RR42 **645.08** Light effects on circadian clock modulation of metabolism. Y. ZOU*; C. LEE; S. CHEN. *Natl. Taiwan Univ.*

1:00 RR43 **645.09** Alteration of circadian clock in Afh mutants results in specific DNA methylation changes. F. TINARELLI; E. IVANOVA; G. KELSEY; V. TUCCI*. *Inst. Italiano Di Tecnologia (IIT), The Babraham Inst.*

2:00 RR44 **645.10** Metabolic feedback to the hypothalamic circadian clock by adiponectin. A. TSANG*; H. OSTER. *Univ. of Luebeck, Univ. of Goettingen, Max Planck Inst. for Biophysical Chem.*

3:00 RR45 **645.11** Rhythmic control of mRNA stability is essential for circadian amplitude of mouse period3 mRNA. J. CHOI*; S. KIM. *POSTECH, POSTECH.*

4:00 RR46 **645.12** Honey bees exhibit shift work in foraging and fanning behavior. M. A. GIANNONI GUZMAN*; T. GIRAY; J. L. AGOSTO-RIVERA. *Univ. of Puerto Rico Rio Piedras Campus.*

1:00 RR47 **645.13** Application of wavelet analysis to zebrafish circadian and behavioral data. E. A. MOSSER*; C. N. CHIU; D. A. PROBER. *California Inst. Technol.*

2:00 RR48 **645.14** Short-circuit: A circadian mutant in a novel suprachiasmatic nucleus transcription factor. M. J. PARSONS*; M. BRANCACCIO; L. MAYWOOD; J. K. EDWARDS; M. SIMON; S. SETHI; J. E. CHESHAM; A. MALLON; M. HASTINGS; P. M. NOLAN. *MRC Harwell, MRC Lab. of Mol. Biol.*

3:00 RR49 **645.15** A novel protein, CHRONO, functions as a core component of the mammalian circadian clock. F. HATANAKA*; A. GORIKI; J. MYUNG; J. K. KIM; K. FUJIMOTO; Y. KATO; A. MATSUBARA; D. FORGER; T. TAKUMI. *RIKEN, Hiroshima Univ., Univ. of Michigan, The Ohio State Univ.*

POSTER

646. Human Long-Term Memory: Encoding Retrieval Interactions

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR50 **646.01** Continuous theta-burst TMS to the right inferior frontal gyrus increases local EEG theta power and memory for contextual and non-contextual objects. W. LEGON*; R. MORAN. *Virginia Tech. Carilion Res. Inst., Virginia Tech. Carilion Res. Inst., Virginia Tech. Sch. of Med.*

2:00 SS1 **646.02** ● Memory representations of context guides visual search in an immersive virtual environment. C. LI*; M. P. AIVAR; D. M. KIT; M. H. TONG; M. M. HAYHOE. *The Univ. of Texas At Austin, Univ. Autónoma de Madrid, Univ. of Bath, The Univ. of Texas at Austin.*

3:00 SS2 **646.03** The effects of the amount of binding information on the recognition and retrieval of episodic memory. F. E. TORRES TREJO*; S. CANSINO. *UNAM.*

4:00 SS3 **646.04** Memory for sequences of events shows bilateral hippocampal and medial prefrontal cortical activity in humans. V. K. BOUCQUEY*; T. A. ALLEN; N. J. FORTIN; C. E. L. STARK. *Univ. of California, Univ. of California.*

1:00 SS4 **646.05** Manipulating mental context in a memory task using real-time fMRI. M. T. DEBETTENCOURT*; N. B. TURK-BROWNE; K. A. NORMAN. *Princeton Neurosci. Inst., Dept. of Psychology.*

2:00 SS5 **646.06** An ERP study of memory differences between musicians versus non-musicians. J. SCHAEFFER*; R. MEAHL; H. PARK. *Univ. of Texas At Arlington.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 SS6 **646.07** Cerebral bases of re-learning: An fMRI study on picture-word association learning. P. E. ROMAN*; S. A. KOTZ. *Penn State Univ., Max Planck Inst. for Human Cognitive and Brain Sci., Univ. of Manchester.*

4:00 SS7 **646.08** Intracranial evidence of parietal cortex involvement in the encoding of episodic memories. A. GONZALEZ-BARBOSA*; J. HUTCHINSON; K. F. LAROCQUE; J. CHEN; B. L. FOSTER; V. RANGARAJAN; J. PARVIZI; A. D. WAGNER. *Stanford Univ., Stanford Univ., Princeton Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

1:00 SS8 **646.09** Dopamine improves overnight consolidation of episodic memory: Recall, not recognition. J. P. GROGAN*; R. BOGACZ; D. TSIVOS; A. WHONE; E. COULTHARD. *Univ. of Bristol, Univ. of Oxford, North Bristol Trust, NHS.*

2:00 SS9 **646.10** Naturalistic and laboratory encoding contexts dissociate subjective and objective measures of episodic memory in older adults. N. DIAMOND*; B. LEVINE. *Rotman Res. Institute, Baycrest Hosp., Univ. of Toronto.*

3:00 SS10 **646.11** Transcranial direct current stimulation improves audioverbal memory in patients with stroke. T. KAZUTA*; R. OSU; K. TAKEDA; S. TANAKA; A. OISHI; K. KONDO; M. LIU. *Tokyo Bay Rehabil. Hosp., ATR Computat. Neurosci. Labs., Fujita Mem. Nanakuri Institute, Fujita Hlth. Univ., Lab. of Psychology, Hamamatsu Univ. Sch. of Med., Dept. of Rehabil. Medicine, Keio Univ. Sch. of Med.*

4:00 SS11 **646.12** Contributions from memory competition on intentional forgetting. J. A. LEWIS-PEACOCK*; K. PLACEK. *Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas at Austin.*

1:00 SS12 **646.13** Long term memory influences the deployment of auditory attention as revealed by neuromagnetic recordings. J. ZIMMERMANN*; M. MOSCOVITCH; C. ALAIN. *Rotman Res. Inst., Rotman Res. Inst.*

2:00 SS13 **646.14** Dominant elements are powerful memory cues for entire episodes. D. J. BRIDGE*; J. L. VOSS. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med.*

3:00 SS14 **646.15** Different modes of contextual association learning modulate the neural correlates memory. D. R. O'YOUNG*; J. L. VOSS. *Northwestern Univ.*

4:00 SS15 **646.16** ▲ Gamma-band oscillations in the human hippocampus during memory retrieval. O. A. ARBIV*; M. C. DRAGAN; T. K. LEONARD; R. MONTEFUSCO-SIEGMUND; T. A. VALIANTE; K. L. HOFFMAN. *York Univ., Toronto Western Res. Inst.*

POSTER

647. Attentional Networks: Brain-Behavior Relations

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS16 **647.01** Neurofeedback training of large-scale brain networks. R. LORENZ*; A. A. FAISAL; M. DINOV; I. R. VIOLANTE; R. LEECH. *Imperial Col. London, Imperial Col. London.*

2:00 SS17 **647.02** Selective attention in a dynamic auditory scene. I. CHOI*; H. GOLDBERG; H. BHARADWAJ; B. SHINN-CUNNINGHAM. *Boston Univ.*

3:00 SS18 **647.03** Failure of the default mode network to deactivate precedes attentional lapses: An intracranial EEG study. A. D. MEHTA*; P. MEGEVAND; Z. YANG; D. M. GROPPE; C. YAN; F. CASTELLANOS; M. P. MILHAM. *North Shore LIJ, Hofstra North Shore LIJ Sch. of Med., Child Mind Inst., Hofstra North Shore LIJ Sch. of Med., Nathan Kline Inst., New York Univ. Sch. of Med.*

4:00 SS19 **647.04** The functional neuroanatomy of sustained non-selective attention. C. P. COSTE; A. KLEINSCHMIDT*. *UNIGE - Geneva Univ. Hosp., Hôpitaux Universitaires de Genève, Service de Neurologie.*

1:00 SS20 **647.05** Humans expressing a subcapacity choline transporter variant: Attenuated right prefrontal activation during challenges to attention. M. SARTER*; A. S. BERRY; R. D. BLAKELY; C. LUSTIG. *Univ. Michigan, Vanderbilt Univ.*

2:00 SS21 **647.06** Objective assessment of cognitive workload during varying degrees of task difficulty using a dry EEG system: Relevance for ecological validity. K. JAQUESS*; J. C. RIETSCHEL; L. LO; M. W. MILLER; H. OH; Y. TAN; B. D. HATFIELD; R. J. GENTILI. *Univ. of Maryland, Col. Park, Veteran's Hlth. Admin., Auburn Univ., Univ. of Maryland, Univ. of Maryland.*

3:00 SS22 **647.07** Differences in alpha band lateralization between young adults and elderly when performing a lateralized delayed match-to-sample task. M. LEENDERS*; D. LOZANO SOLDEVILLA; O. JENSEN; P. DE WEERD. *Donders Inst. For Brain, Cognition & Behaviour, Maastricht Univ.*

4:00 SS23 **647.08** ● The striatum is anatomically linked to large-scale distributed networks. E. CHOI*; Y. TANIMURA; S. N. HABER. *Univ. of Rochester Med. Ctr., Kyoto Univ.*

1:00 SS24 **647.09** Frontoparietal cortices show superior to inferior gradients of preferential structural and functional connectivity with visual and auditory regions. R. M. BRAGA*; P. J. HELLYER; R. J. S. WISE; R. LEECH. *Imperial Col. London.*

2:00 SS25 **647.10** Decreased segregation of brain systems across the healthy adult lifespan. M. Y. CHAN; D. C. PARK; N. K. SAVALIA; S. E. PETERSEN; G. S. WIG*. *Univ. of Texas at Dallas, Washington Univ. Sch. of Med.*

3:00 SS26 **647.11** Breaking away from perceptual attention: Electrophysiological signatures of shifts from monitoring to signal-associated response in typically-developing children and those with obsessive-compulsive disorder. A. S. BERRY*; M. SARTER; G. L. HANNA; W. J. GEHRING; C. LUSTIG. *Univ. of Michigan.*

4:00 SS27 **647.12** Visual attention redirection interferes with saccadic performance. J. R. TORRES*. *BNI CENEM Fac. of Med. Univ. De Chile.*

1:00 SS28 **647.13** Distributed attention is implemented through theta-rhythmic gamma modulation. A. N. LANDAU*; S. VAN PELT; H. M. SCHREYER; P. FRIES. *Ernst Strüngmann Inst. (ESI) In Cooperation With Max Planck Society, Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society, Frankfurt, Germany, Ernst Strüngmann Inst. for Neurosci. (ESI) in Cooperation with Max Planck Society, Frankfurt, Germany.*

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2:00 SS29 **647.14** The slope relating neural frequency to power and attentional control: Computational mechanisms of visual anticipation. E. WHITE; J. J. BENGSON*. *Bates Col., Ctr. For Mind and Brain.*

3:00 SS30 **647.15** Cortical and sub-cortical brain regions modulated during spatial attention: A BOLD fMRI study in monkeys. A. R. BOGADHI*; R. J. KRAUZLIS. *Natl. Eye Inst. - NIH.*

4:00 SS31 **647.16** Topography and temporal dynamics of resting state network signatures in high-density EEG. S. E. SAPERSTEIN*; R. SEKULER; J. W. BOHLAND. *Boston Univ., Brandeis Univ., Boston Univ.*

1:00 SS32 **647.17** Strength of task-relevant networks at rest predicts sustained attention performance. M. D. ROSENBERG*; E. S. FINN; X. SHEN; D. SCHEINOST; X. PAPADEMETRIS; R. T. CONSTABLE; M. M. CHUN. *Yale Univ., Yale Univ., Yale Sch. of Med., Yale Univ., Yale Sch. of Med., Yale Sch. of Med.*

2:00 SS33 **647.18** Dorsal anterior cingulate cortex mediates decisions about where to attend: Evidence from graph-theoretic analysis of network connectivity. Y. LIU*; X. HONG; J. J. BENGSON; M. DING; G. R. MANGUN. *Univ. of California, Davis, Univ. of Florida, Univ. of California, Davis.*

3:00 SS34 **647.19** Detecting the feeling of somatic discomfort using near-infrared spectroscopy on prefrontal cortex. K. SAKURAI*; Y. ONO; G. KOBAYASHI; R. HAYAMA; R. IKUTA; H. WAKE; K. TAMAKI. *Meiji Univ., Kanagawa Dent. Univ., Kanagawa Dent. Univ.*

4:00 SS35 **647.20** Cortical representations of absolute and relative sound locations during an auditory spatial attention task. M. J. SEAY*; J. R. MOCK; E. J. GOLOB. *Tulane Univ., Tulane Univ.*

1:00 SS36 **647.21** Decoding the locus of attention from the full correlation matrix of the human brain. J. HUTCHINSON*; Y. WANG; N. B. TURK-BROWNE. *Princeton Univ.*

2:00 SS37 **647.22** Task-related modulations of functional connectivity in primary visual cortex are eccentricity-dependent. J. C. GRIFFIS*; R. H. CHEN; A. D. BOWMAN; W. K. BURGE; J. P. SZAFLARSKI; K. M. VISSCHER. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

3:00 SS38 **647.23** Target and oddball detection produce opposing effects on global functional connectivity in human cerebral cortex. D. GODWIN*; R. L. BARRY; R. MAROIS. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

4:00 SS39 **647.24** Paradoxical increase of the P3 event related potential in oddball tasks requiring motor responses vs. mental counting suggests the need to expand its cognitive domain. A. EMERŠIC*; J. DREO; B. PIKŠ; Z. PIRTOŠEK. *Lab. For Cognitive Neurosci., Entrapharm, d.o.o.*

1:00 SS40 **647.25** Leftward prism adaptation modulates PPC-M1 interactions within both hemispheres: A twin-coil paired-pulse TMS approach. S. SCHINTU*; L. PISELLA; M. VESIA; A. FARNÉ; K. REILLY. *Lyon Neurosci. Res. Ctr., Univ. of Lyon 1, Hospices Civils de Lyon, Neuro-immersion & Mouvement et Handicap, Toronto Western Res. Inst.*

POSTER

648. Executive Function I

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS41 **648.01** Proactive control and motor urgency: An fMRI study of the stop signal task. S. HU*; J. IDE; S. ZHANG; C. LI. *Yale Univ., SUNY Stony Brook, Univ. Federal de São Paulo.*

2:00 SS42 **648.02** Rethinking the bilingual advantage: Evidence from ERP data for a differential impact on control processes. K. HEIDLMAYR*; K. DORÉ-MAZARS; F. ISEL. *Inst. of Psychology - Paris Descartes Univ. - Sorbonne Paris Cité, Lab. d'Excellence 'Empirical Foundations of Linguistics', Sorbonne Paris Cité.*

3:00 SS43 **648.03** Neural mechanisms for neurofeedback based on EEG using functional near-infrared spectroscopy (FNIRS). X. ZHANG*; J. A. NOAH; S. YAHIL; Y. ONO; J. HIRSCH. *Yale Sch. of Med., Meiji Univ., Yale Sch. of Med.*

4:00 SS44 **648.04** The neural cascade of processing underlying response time variability in visual search. B. V. BERG*; L. G. APPELBAUM; K. CLARK; S. R. MITROFF; M. G. WOLDORFF. *Duke Univ., Univ. of Groningen.*

1:00 SS45 **648.05** ● Relationship between performance on mobile brain fitness exercises and cognitive assessment. C. H. LIN*; M. E. BAXTER; C. H. RANKIN; P. D. NUSSBAUM. *Univ. of British Columbia, Rosetta Stone, Univ. of Pittsburgh Sch. of Med.*

2:00 SS46 **648.06** Inhibitory control over unwanted memories is mediated by hippocampal GABA concentration. T. W. SCHMITZ*; M. CORREIA; C. S. FERREIRA; A. P. PRESCOT; M. C. ANDERSON. *Med. Res. Council, Univ. of Granada, Univ. of Utah.*

3:00 SS47 **648.07** Utilizing functional near-infrared spectroscopy to identify cognitive processes contributing to workload in a dual-task environment. D. BELYUSAR*; B. REIMER; B. MEHLER; D. AFERGEN; J. F. COUGHLIN; E. SOLOVEY. *MIT, Tufts Univ., Drexel Univ.*

4:00 SS48 **648.08** Cortical oscillatory networks of synesthetic conflict processing as revealed by MEG source reconstruction. J. VAN DRIEL*; R. ROUW; A. HILLEBRAND; T. H. DONNER; M. X. COHEN. *Univ. of Amsterdam, VUMC.*

1:00 SS49 **648.09** Functional parcellation of right inferior frontal cortex and anterior insula: The widely-attended and often-neglected regions in inhibitory control. W. CAI*; S. RYALI; T. CHEN; C. R. LI; V. MENON. *Stanford Univ. Sch. of Med., Yale Univ. Sch. of Med.*

2:00 SS50 **648.10** Neuroanatomical modeling of executive functioning: The algorithmic and reflective minds. J. PAN*; A. MIELE; D. GANSLER; S. DEONI. *Suffolk Univ., Brown Univ., Neurodevelopmental Ctr.*

3:00 SS51 **648.11** Parametric Manipulations in Simon and Go/NoGo reveal specificity of neural mechanisms of Response Selection and Inhibition. S. WIJEAKUMAR*; M. W. VOSS; V. A. MAGNOTTA; A. T. BUSS; R. E. HAZELTINE; J. P. SPENCER. *Univ. of Iowa.*

4:00 SS52 **648.12** Mind-wandering on the good, the bad, and the useful: Distinctive neural correlates of spontaneous thoughts differentiated by emotional valence, utility, and spontaneity. K. C. FOX*; M. L. DIXON; M. ELLAMIL; M. L. PUERTOLAS; A. RAUSCHER; K. CHRISTOFF. *Univ. of British Columbia, Rotman Res. Institute, Baycrest Ctr., NIH.*

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1:00 SS53 **648.13** Humans and a non-human primate show similar behavior in a novel context-dependent stop signal task. K. Z. XU*; V. STUPHORN; S. YANTIS; S. COURTNEY. *Johns Hopkins Univ., The Johns Hopkins Univ.*

2:00 SS54 **648.14** EEG correlates of individual differences in motor sequence planning and accuracy. M. A. NIERMEYER; M. J. EULER*; Y. SUCHY; J. MATYI; H. SCHRYVER; D. CHON; V. REDDY; P. GIBBS; E. VACCARIELLO. *Univ. of Utah, Univ. of Utah.*

3:00 SS55 **648.15** Neural correlates of attention in two relaxation techniques. S. DEEPESHWAR*; S. A. VINCHURKAR; K. NAVEEN; S. TELLES. *Swami Vivekananda Yoga Res. Fndn., Swami Vivekananda Yoga Res. Fndn., Patanajali Res. Fndn.*

4:00 SS56 **648.16** The Plaza: Executive function improvement through innovative gameplay. T. F. NUGENT III*; A. KRUSE; C. CRAWFORD; S. WOLOSIN; J. YUILL; F. PIERCE; J. GARCIA; J. WILLIAMS; A. MILHOLLUN. *Intific, Inc., Intific, Inc.*

1:00 SS57 **648.17** No truly domain-general resource in the human cerebral cortex. B. J. TAMBER-ROSENAU*; A. T. NEWTON; R. MAROIS. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

2:00 SS58 **648.18** The influence of a single session of aerobic exercise on cortical activity during a flanker task. K. B. BEYER*; M. D. SAGE; W. E. MCILROY. *Univ. of Waterloo, Univ. of Toronto, Toronto Rehabil. Inst., Sunnybrook Hlth. Sci. Ctr.*

3:00 SS59 **648.19** The relationship between manual dexterity and executive function in healthy older adults. O. VASYLENKO*; C. RODRIGUEZ-ARANDA. *UiT The Arctic Univ. of Norway.*

4:00 SS60 **648.20** Distinct representation of conflict, response, and feedback selectivity by individual neurons in human dorsal anterior cingulate cortex. G. HORGA*; M. K. MIAN; S. R. PATEL; E. N. ESKANDAR; M. M. BOTVINICK; S. A. SHETH. *Columbia Univ. Med. Ctr. (NYSPI), Massachusetts Gen. Hosp., Princeton Univ., Columbia Univ.*

1:00 SS61 **648.21** Suppressing a motivationally-triggered action tendency reduces future provocation. S. FREEMAN*; D. ALVERNAZ; A. TONNESEN; D. LINDERMAN; A. R. ARON. *UCSD.*

2:00 SS62 **648.22** Conflict-Specific cognitive control mechanisms for task rules: Switching between task rules and resolving cue incongruence. Y. SHEU*; S. M. COURTNEY. *Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 SS63 **648.23** Single time-point classification of brain activity during emotional feelings using multivariate pattern analysis. A. GOTSOPOULOS*; H. HEIKKILÄ; I. P. JÄÄSKELÄINEN; M. SAMS; L. NUMMENMAA; J. LAMPINEN. *Aalto Univ.*

4:00 SS64 **648.24** ● Optimizing cognitive task designs to improve learning rates in a large online population. N. NG*; A. KALUSZKA; J. L. HARDY; M. D. SCANLON. *Lumos Labs, Inc.*

1:00 SS65 **648.25** Neural correlates of conflict during interpersonal communication observed in dorsal lateral prefrontal cortex using NIRS. S. V. YAHIL*; X. ZHANG; A. NOAH; P. LAPBORISUTH; M. BIRIOTTI; J. HIRSCH. *Brain Function Laboratory, Yale Sch. of Med., Univ. Col. of London, Yale Sch. of Med.*

POSTER

649. Human Social Cognition II

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS66 **649.01** ● Learning from our mistakes: Apoe4 influences misdiagnosis of Alzheimer's disease and frontotemporal degeneration. J. L. HALEY*; M. GROSSMAN; C. MCMILLAN; K. RASCOVSKY; D. IRWIN; D. WOLK; J. TROJANOWSKI; V. VAN DEERLIN; B. MCCARTY WOOD; L. SHAW. *Univ. of Penn.*

2:00 SS67 **649.02** Social value orientation and choice type dependent activity in the dorsal prefrontal cortex and amygdala. A. S. R. FERMIN*; T. KIYONARI; Y. MATSUMOTO; Y. LI; M. SAKAGAMI; T. YAMAGISHI. *Tamagawa Univ., Aoyama Univ., Hokkaido Univ., Tokyo Univ.*

3:00 SS68 **649.03** Neural correlates of consciously controlling interpersonal trust. M. M. FILKOWSKI*; I. W. ANDERSON; B. W. HAAS. *Univ. of Georgia.*

4:00 TT1 **649.04** Neural mechanism of social preferences toward reference persons of the same and different gender. K. YAMADA*; S. C. TANAKA; R. KITADA; S. K. SUGAWARA; H. TAKAHASHI; F. OHTAKE; N. SADATO. *Kindai Univ., Advanced Telecommunication Res. Inst. Intl., Natl. Inst. for Physiological Sci., Osaka Univ.*

1:00 TT2 **649.05** The selective involvement of frontal lobes in naming social groups. L. PIRETTI*; A. CARNAGHI; F. CAMPANELLA; E. AMBRON; E. SOMACAL; M. SKRAP; R. RUMIATI. *SISSA, Univ. of Trieste, Azienda Ospedaliero-Universitaria "Santa Maria della Misericordia".*

2:00 TT3 **649.06** Mentalizing regions explicitly code quality and source information about other's beliefs. J. KOSTER-HALE*; H. RICHARDSON; N. VÉLEZ ALICEA; M. ASABA; R. SAXE. *MIT, Wellesley Col.*

3:00 TT4 **649.07** Empathy impairment in the behavioral variant of frontotemporal dementia: Evidence from resting-state brain activity. N. CANESSA*; S. CAMINITI; C. CERAMI; A. DODICH; C. CRESPI; A. MARCONE; S. IANNACCONE; A. FALINI; S. F. CAPPA. *Univ. Vita-Salute San Raffaele, San Raffaele Scientific Inst., Inst. Universitario di Studi Superiori - IUSS.*

4:00 TT5 **649.08** The cerebellar contribution to social cognition. F. HOCHE; J. A. HARDING; M. VANGEL; J. D. SCHMAHMANN*. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

1:00 TT6 **649.09** Emotional Contagion as an index for positive emotional responses: Mapping the minds-eye with neural substrates in Williams Syndrome. P. FILLET*; R. NG; C. O'LOUGHLIN; M. DEWITT; Y. SEARCY; P. LAI; M. EARHART; T. BROWN; A. JÄRVINEN; J. KORENBERG; U. BELLUGI. *Salk Inst., Univ. of Minnesota, Univ. of California San Diego, Univ. of California San Diego, San Diego State Univ., Univ. of California San Diego, Univ. of California San Diego, Salk Inst., Univ. of Utah, Salk Inst.*

2:00 TT7 **649.10** NIRS-based hyperscanning reveals sex differences in brain synchronization during cooperation and competition. N. LIU*; J. BAKER; X. CUI; P. VRTICKA; M. SAGGAR; A. REISS. *Stanford Univ.*

3:00 TT8 **649.11** Stimulation of the periaqueductal gray alters social perception. K. HAROUSH*; A. SHARMA; Z. WILLIAMS. *Harvard Med. Sch., Harvard Med. Sch.*

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4:00 TT9 **649.12** The embedding of social status in person knowledge: An MVPA study. J. KOSKI*; J. A. COLLINS; I. R. OLSON. *Temple Univ.*

1:00 TT10 **649.13** A neuro-computational account of behavioral and neural patterns in altruistic choice. C. HUTCHERSON*; B. BUSHONG; A. RANGEL. *Caltech, United States Dept. of Def.*

2:00 TT11 **649.14** Neural systems tracking popularity in real-world social networks. N. ZERUBAVEL*; P. BEARMAN; K. OCHSNER. *Columbia Univ., Columbia Univ.*

3:00 TT12 **649.15** Altered communicative adjustments following ventromedial prefrontal lesions. I. TONI*; G. DI PELLEGRINO; D. D'IMPERIO; A. STOLK. *Donders Inst., Univ. of Bologna.*

4:00 TT13 **649.16** Self-other differences in EEG μ-suppression reflect familiarity and perspective-taking. C. C. WOODRUFF*; A. GOODMAN; B. VELEZ; A. FORTIN; M. FECHTEL. *Northern Arizona Univ.*

1:00 TT14 **649.17** Consistent familial warmth may predict child cortisol levels. S. M. DINCES*; L. N. ROWELL; J. F. L. PINNER; S. N. HILE; M. EMERY THOMPSON; A. C. TANG; R. D. ANNETT. *Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, Children's Hosp. of Colorado.*

POSTER

650. Appetitive and Incentive Learning and Memory II

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT15 **650.01** Evidence of memory generalization in contextual locomotor sensitization induced by amphetamine: A key to addiction? D. S. ENGELKE*; R. FILEV; J. G. SANTOS-JUNIOR; L. E. A. M. MELLO. *UNIFESP, UNIFESP, FCMSCSP.*

2:00 TT16 **650.02** Voluntary wheel running reverses an established cocaine-induced negative affective state in a rodent model. J. L. GREEN*; L. A. DYKSTRA; R. M. CARELLI. *Univ. of North Carolina.*

3:00 TT17 **650.03** Prolonged abstinence from cocaine self-administration potentiates rapid dopamine signaling in the nucleus accumbens core. C. M. CAMERON*; R. M. CARELLI. *Univ. North Carolina.*

4:00 TT18 **650.04** Cocaine self-administration experience biases rats towards sign-tracking behavior in a subsequent Pavlovian task. M. SADDORIS*; X. WANG; D. R. TERRY; J. D. REID; R. M. CARELLI. *Univ. of North Carolina, Chapel Hill, Univ. of North Carolina, Chapel Hill.*

1:00 TT19 **650.05** Neural encoding in the nucleus accumbens core during learning predicts subsequent test accuracy in a sensory preconditioning task. D. H. CERRI*; M. P. SADDORIS; R. M. CARELLI. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina at Chapel Hill.*

2:00 TT20 **650.06** Dynamic shifts in nucleus accumbens neural encoding of reward-associated cues following reinforcer devaluation. E. A. WEST*; E. L. THOMAS; R. M. CARELLI. *Univ. of North Carolina, Univ. of North Carolina.*

3:00 TT21 **650.07** Effects of prolonged abstinence on cocaine-induced negative affect and the encoding of this information by nucleus accumbens neurons. M. A. PRESKER*, JR; E. A. WEST; R. M. CARELLI. *Univ. of North Carolina.*

4:00 TT22 **650.08** Rapid dopamine signaling in the nucleus accumbens during a magnitude-based decision making task. D. SACKETT*; M. P. SADDORIS; X. WANG; R. M. CARELLI. *UNC Chapel Hill.*

1:00 TT23 **650.09** Selective enhancement of performance in contingent reward assays, but not non-contingent assays, by DREADD activation of mPFC pyramidal neurons. D. M. WARTHEN*; P. S. LAMBETH; B. A. NEWMYER; R. P. GAYKEMA; M. M. SCOTT. *Univ. of Virginia.*

2:00 TT24 **650.10** Patterns of activation of excitatory and inhibitory neurons in the mouse medial prefrontal cortex associated with palatable food ingestion and food driven exploratory behavior. R. P. GAYKEMA*; X. NGUYEN; J. M. BOEHRET; P. S. LAMBETH; J. JOY-GABA; D. M. WARTHEN; M. M. SCOTT. *Univ. of Virginia Sch. of Med.*

3:00 TT25 **650.11** Plasticity within the basolateral amygdala pathways to the prelimbic cortex during Pavlovian appetitive conditioning. S. E. KEEFER*; C. J. REPPUCCI; H. S. MAYER; G. D. PETROVICH. *Boston Col.*

4:00 TT26 **650.12** Male and female rats show differential Fos induction within distinct medial prefrontal areas during renewal of Pavlovian appetitive conditioned responses. L. C. ANDERSON*; G. D. PETROVICH. *Boston Col.*

1:00 TT27 **650.13** A parametric study of appetitive Pavlovian conditioning and conditioned reinforcement in rats. R. I. TABBARA; P. BEHARRY; N. CHAUDHRI*. *CSBN/GRNC.*

2:00 TT28 **650.14** The effects of a ghrelin agonist without increased energy intake on age-related cognitive, metabolic and circadian changes in SAMR1/SAMP8 mice. I. KADISH*; M. SHARPE; T. VAN GROEN; J. PAUL; K. L. GAMBLE; M. E. YOUNG; D. B. ALLISON. *Univ. Alabama Birmingham, Univ. Alabama Birmingham, Univ. Alabama Birmingham, Univ. Alabama Birmingham.*

3:00 TT29 **650.15** ● Parallel remodeling of direct and indirect pathway neuronal activity in the nucleus accumbens during Pavlovian reward conditioning. J. G. PARKER*; J. D. MARSHALL; B. AHANONU; B. GREWE; J. ZHONG LI; M. D. EHLERS; M. J. SCHNITZER. *Pfizer, Inc, Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

4:00 TT30 **650.16** A model of negative automaintenance in pigeons: Dual learning and factored representations. F. LESAINT; O. SIGAUD; M. KHAMASSI*. *CNRS - Univ. Pierre Et Marie Curie, CNRS - Univ. Pierre Et Marie Curie (ISIR UMR 7222).*

1:00 TT31 **650.17** Value learning mechanisms for novel stimuli in orbitofrontal and anterior cingulate cortex. S. KENNERLEY*; L. T. HUNT; N. MALALASEKERA. *Univ. Col. London.*

2:00 TT32 **650.18** Induction of associative olfactory memory by targeted activation of single olfactory neurons in *Drosophila* larvae. T. HONDA*; C. LEE; M. YOSHIDA-KASHIKAWA; K. HONJO; K. FURUKUBO-TOKUNAGA. *Univ. of Tsukuba, Inst. of Biol. Sci.*

3:00 TT33 **650.19** Autoshaping the lever-press response and its subsequent continuous reinforcement in spontaneously hypertensive rats: Effects of distant placement of the lever. T. SATO*; J. GYOBA. *Tohoku Bunka Gakuen Univ., Tohoku Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 TT34 **650.20** Differential role of VTA cholinergic and glutamatergic receptors in conditioned reinforcement. R. WICKHAM*; W. SOLECKI; E. NUNES; N. ADDY. *Yale Univ.*

1:00 TT35 **650.21** Ventral hippocampal lesions attenuate the acquisition of sign-tracking behavior in rats. C. J. FITZPATRICK*; J. D. MORROW. *Univ. of Michigan.*

POSTER

651. Decision Making II

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT36 **651.01** Neuronal correlates of choosing and stopping in macaque frontal eye field. P. MIDDLEBROOKS*; J. D. SCHALL. *Vanderbilt Univ.*

2:00 TT37 **651.02** The effect of stop signal perceptual manipulations on upper limb suppression process. P. PANI*; R. MONTANARI; F. FABBRINI; F. GIARROCCO; V. MIONE; E. BRUNAMONTI; S. FERRAINA. *Sapienza Rome Univ.*

3:00 TT38 **651.03** A model of perceptual discrimination under sequential sensory evidence. E. HUGUES*; C. STEIN NAVES DE BRITO; W. GERSTNER; R. ROMO; G. DECO. *Univ. Pompeu Fabra, Ecole Polytechnique Fédérale de Lausanne, Univ. Nacional Autónoma de México, Institució Catalana de Recerca i Estudis Avançats.*

4:00 TT39 **651.04** Micro-stimulation of premotor and motor cortex delays the commitment to an action choice. D. THURA*; P. CISEK. *Univ. Montreal.*

1:00 TT40 **651.05** Supplementary eye field activity during and after self-selection of abstract rules. Z. M. ABZUG*; M. A. SOMMER. *Duke Univ.*

2:00 TT41 **651.06** Dopaminergic and opioidergic neuronal mechanisms in decision making under risk in rats: Studies using a novel operant task. V. OINIO; P. BÄCKSTRÖM; J. UHARI-VÄÄNÄNEN; A. RAASMAJA; T. PIEPPONEN*; K. KIIANMAA. *Natl. Inst. for Hlth. and Welfare, Div. Pharmacol & Pharmacother.*

3:00 TT42 **651.07** The impact of prior expectations in an auditory discrimination task. A. HERMOSO-MENDIZABAL; P. E. RUEDA-OROZCO; S. JARAMILLO; D. ROBBE; J. DE LA ROCHA*. *IDIBAPS, INMED, Inst. of Neurosci. (University of Oregon).*

4:00 TT43 **651.08** A computational model of cognitive control for context effects on multi-attribute decisions. K. JUNG*; J. JEONG; J. D. KRALIK. *Dartmouth Col., KAIST.*

1:00 TT44 **651.09** Touchscreen-paradigm for mice reveals cross-species evidence for an antagonistic relationship of cognitive flexibility and stability. A. VOGEL*; S. RICHTER; K. UELTZHÖFFER; C. MUZZILLO; M. A. VOGT; K. LANKISCH; D. J. N. ARMBRUSTER-GENÇ; M. A. RIVA; C. J. FIEBACH; B. VOLLMAYR; P. GASS. *Central Inst. of Mental Hlth., Central Inst. of Mental Health, Med. Fac. Mannheim, Heidelberg Univ., Dept. of Psychology, Goethe Univ., Dept. of Pharmacol. and Biomolecular Sciences, Univ. of Milan.*

2:00 TT45 **651.10** Rats' preferences for differently priced liquid reinforcers are modulated by budget constraints in a two alternative forced choice decision making task. M. VAN WINGERDEN*; C. MARX; T. KALENSCHER. *Heinrich-Heine Univ. Düsseldorf.*

3:00 TT46 **651.11** Exploration and uncertainty in the frontal eye field during value-guided choice. B. A. EBITZ*; E. ALBARRAN; A. SOLTANI; T. MOORE. *Stanford Univ., Stanford Univ., Dartmouth Col.*

4:00 TT47 **651.12** Reciprocal cooperation in rats playing iterated Prisoner's Dilemma. R. I. WOOD*; J. Y. KIM; G. R. LI. *Keck Sch. Med. USC, Keck Sch. Med. USC.*

1:00 TT48 **651.13** ▲ Environmental rearing effects on impulsivity, reward sensitivity, and behavioral flexibility. Z. WANG*; A. T. MARSHALL; K. KIRKPATRICK. *Kansas State Univ., Kansas State Univ.*

2:00 TT49 **651.14** The role of timing processes in three different impulsive choice procedures. J. R. PETERSON*; C. HILL; K. KIRKPATRICK. *Kansas State Univ.*

3:00 TT50 **651.15** A computational analysis of the influence of elapsed time on reward-modulated perceptual decisions. Y. FAN*; J. I. GOLD; L. DING. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

4:00 TT51 **651.16** The role of different dopaminergic populations in *Drosophila* choice behavior. C. ROHRSEN; B. BREMBS*. *Univ. Regensburg.*

1:00 TT52 **651.17** Behavioral flexibility in *Drosophila* phototaxis. E. A. GOROSTIZA*; B. BREMBS. *Univ. Regensburg.*

2:00 TT53 **651.18** Dopaminergic and serotonergic modulation of anterior insular and orbitofrontal cortex in risky decision making. H. ISHII*; S. OHARA; Y. KAIZU; P. N. TOBLER; K. TSUTSUI; T. IIJIMA. *Div. of Sys. Neurosci., Tohoku Univ., Univ. of Zurich.*

3:00 TT54 **651.19** Reduced temporal discounting by methylphenidate in non-human primates. A. Z. RAJALA; R. L. JENISON; L. C. POPULIN*. *Univ. Wisconsin, Univ. Wisconsin, Univ. Wisconsin.*

4:00 TT55 **651.20** ▲ Genetic influences on delay discounting. L. MILITELLO*; J. B. RICHARDS; A. A. PALMER. *Res. Inst. On Addictions, State Univ., Univ. of Chicago.*

1:00 TT56 **651.21** Expected information signals in the posterior cingulate cortex. D. L. BARACK*; J. GARIEPY; M. L. PLATT. *Duke Univ., Duke Univ.*

2:00 TT57 **651.22** How indirect pathway works - Stable object value coding by pallidal neurons. H. F. KIM*; O. HIKOSAKA. *NIH, NEI, LSR.*

3:00 TT58 **651.23** A 3-choice visual discrimination learning and reversal task for mice. K. KAUGARS*; H. BERGSTROM; M. REGER; L. HALLADAY; E. BUSCH; C. PICKENS; M. BACHU; A. HOLMES. *Natl. Inst. on Alcohol Abuse and Alcoholism.*

4:00 TT59 **651.24** Short- and long-term effects of adolescent methylphenidate exposure on decision-making in rats. L. R. AMODEO*; M. S. MCMURRAY; C. R. SHORT; J. D. ROITMAN. *Univ. of Illinois, Chicago.*

1:00 TT60 **651.25** Frontal beta oscillations are differentially modulated by time-on-task, cognitive control, and pauses in work. C. R. WILSON*; F. M. STOLL; M. C. M. FARAUT; K. KNOBLAUCH; J. VEZOLI; E. PROCYK. *Inserm U846, Stem Cell & Brain Res. Inst., Univ. de Lyon, UCBL, Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 TT61 **651.26** From learning-set to task-set in macaque monkeys: Behaviour and neural correlates. M. C. FARAUT*; C. R. E. WILSON; E. PROCYK. *INSERM U846, Stem Cell and Brain Res. Inst.*

3:00 TT62 **651.27** ▲ Demonstrating a stress-free way to administer drugs during behavioural testing: Modafinil restores attentional deficits in rats with lesions of the subthalamic nucleus. E. E. BOWMAN; S. XIA; D. S. TAIT; V. J. BROWN*. *Univ. St Andrews.*

4:00 TT63 **651.28** Implication of motor effort and reward size encoding in the monkey basal ganglia for decision making. S. NOUGARET; R. ABITBOL; C. BAUNEZ; M. PESSIGLIONE; S. RAVEL*. *Inst. De Neurosciences De La Timone, Motivation, Brain & Behavior lab, Brain & Spine Institute, Pitié-Salpêtrière Hosp.*

1:00 TT64 **651.29** Self-control signals in the supplementary eye field of monkeys during a temptation task. J. HWANG*; E. E. EMERIC; V. STUPHORN. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med.*

POSTER

652. Learning and Memory: Physiology II

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT65 **652.01** ● Comparing monkey and human multi-item memory. S. HOCHSTEIN*; V. YAKOVLEV. *Hebrew Univ. Jerusalem, Hebrew Univ.*

2:00 TT66 **652.02** Cav2.1 P/Q type calcium channel in CA1 region contributes to properties of the place field as well as neuronal firing pattern of the pyramidal cells. D. JUNG*; H. SHIN; J. CHO. *Korea Institude of Sci. and Technology(Kist), Univ. of Sci. and technology, Inst. for Basic Sci., Univ. of Sci. and Technol. (UST).*

3:00 TT67 **652.03** ▲ Diet-induced obesity induces insulin resistance and hyperactivity. S. BLYTHE*; S. MARWITZ; L. WOODIE. *Washington & Lee Univ.*

4:00 TT68 **652.04** Effects of ginkgo biloba supplementation on locomotor activity and anxiety levels in aged female rats. N. OKUDAN*; M. BELVIRANLI. *Dept. of Physiol. Fac. of Med. Selcu, Fac. of Med. Selcuk Univ.*

1:00 TT69 **652.05** The role of the supramammillary area in spatial learning and memory. H. SHIM*; H. PARK; H. LEE; I. SHIM. *Grad. School, Col. of Korean Medicine, Kyung Hee Univ., Acupuncture and Meridian Sci. Res. Center, Kyung Hee Univ.*

2:00 TT70 **652.06** Behavioral and neurobiochemical comparative study between males and females that have been separated from their mother during nursing. L. CORREDOR-VELANDIA; Z. DUENAS*. *Univ. Nacional De Colombia.*

3:00 TT71 **652.07** High fat diet-induced obesity promotes anxiety-like behavior in Wistar rats. S. I. NORONHA*; A. R. R. ABREU; G. S. V. CAMPOS; A. M. A. DE SOUZA; D. A. CHIANCA JR; R. C. A. MENEZES. *Federal Univ. Of Ouro Preto.*

4:00 TT72 **652.08** Over-expression of the L-type voltage-gated calcium channel CaV1.3 leads to alterations in neuronal function associated with aging. S. J. MOORE*; J. N. SLATER; G. G. MURPHY. *Univ. of Michigan, Univ. of Michigan.*

1:00 TT73 **652.09** Sustained firing patterns in rat perirhinal cortex chunk large segments of spatial trajectories in a visual discrimination task. J. J. BOS*; M. VINCK; A. B. MOURIK-DONGA; J. C. JACKSON; M. P. WITTER; C. M. A. PENNARTZ. *Univ. of Amsterdam, Yale Univ., Univ. of St. Thomas, Kavli Inst. for Systems Neurosci.*

2:00 TT74 **652.10** Corticosterone impairs adaptation in an associative place-reward learning task. S. I. RUSU*; M. JOËLS; C. M. PENNARTZ. *Swammerdam Inst. For Life Sci., Brain Ctr. Rudolf Magnus.*

3:00 TT75 **652.11** Impact of L-type voltage gated calcium channels on neurogenesis and cognition in adult and aged mice. J. MARSCHALLINGER; P. ROTHENEICHNER; C. SCHMUCKERMAIR; A. SAH; N. SINGEWALD; S. COUILLARD-DESPRES; L. J. AIGNER*. *Paracelsus Med. Univ., PMU Salzburg, Leopold-Franzens-University of Innsbruck.*

4:00 TT76 **652.12** Ginkgo biloba improves spatial memory and decreases oxidative damage in aged female rats. M. BELVIRANLI*; N. OKUDAN. *Dept. of Physiol. Fac. of Med. Selcu, Fac. of Med. Selcuk Univ.*

1:00 TT77 **652.13** Evaluating neurophysiological representations of hippocampal-dependent reversal learning with multifractal analysis. D. FETTERHOFF*; R. A. KRAFT; I. OPRIS; A. J. SWEATT; C. A. SEXTON; S. A. DEADWYLER; R. E. HAMPSON. *Wake Forest Univ., Wake Forest Univ., Wake Forest Univ. Hlth. Sci.*

2:00 TT78 **652.14** Food restriction induces anxiety-like behaviour in female Fischer rats. G. S. CAMPOS*; A. M. A. DE SOUZA; S. I. S. R. NORONHA; A. R. R. ABREU; D. A. CHIANCA JR; R. A. C. MENEZES. *Federal Univ. of Ouro Preto, Federal Univ. of Ouro Preto.*

3:00 TT79 **652.15** Hippocampal encoding of unfamiliar events. S. A. DEADWYLER*; A. J. SWEATT; I. OPRIS; F. M. MILLER; D. FETTERHOFF; C. A. SEXTON; R. E. HAMPSON. *Wake Forest Sch. of Med.*

4:00 TT80 **652.16** Locus coeruleus activity time-locked to hippocampal rythmns during sleep. G. POE; S. J. SARA*. *Univ. of Michigan, Collège de France.*

POSTER

653. Learning and Memory: Aging I

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT81 **653.01** Peripheral injection of macrophages ameliorates learning deficits in aged mice by a phagocytosis-dependent mechanism. N. C. DERECKI*; I. SMIRNOV; J. KIPNIS. *Univ. of Virginia.*

2:00 TT82 **653.02** Spatial memory deficits in old homing pigeons (Columba livia): A novel experimental model for age-related cognitive decline. V. J. COPPOLA*; V. P. BINGMAN. *Bowling Green State Univ., J.P. Scott Ctr. for Neuroscience, Mind, and Behavior.*

3:00 TT83 **653.03** Environmental enrichment induces hippocampal plasticity in the aged brain through a reduction in ccl11/eotaxin. M. MAINARDI*; M. SCALI; G. SCABIA; M. MAFFEI; L. MAFFEI. *Sacred Heart Catholic Univ., CNR - Natl. Res. Council, Univ. Hosp., CNR - Natl. Res. Council, Accademia Nazionale dei Lincei.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 TT84 **653.04** Effects and mechanisms of ADDLs on AMPA receptors trafficking and cognitive deficits. J. HAO; N. SUN; L. LEI; X. LI; K. SUN; C. GAO*. *Xuzhou Med. Col.*

1:00 TT85 **653.05** Behavioral phenotypes in the 5xFAD mouse model of Alzheimer's disease and their relation to amyloid-beta plaque load. J. J. MATYAS*; A. RECHENBERG; S. A. LOWRANCE; J. ROSSIGNOL; G. L. DUNBAR. *Field Neurosciences Inst. Lab. for Resto, Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst.*

2:00 TT86 **653.06** ● Effect of aging and repeated testing on performance of mice in the continuous alternation test. L. VER DONCK*; H. DUYTSCHAEVER; R. WILLEMS; L. MERTENS. *Janssen Res. & Development, A Div. of Jans, Janssen Res. & Development, A Div. of Janssen Pharmaceutica NV.*

3:00 TT87 **653.07** Effects of environmental enrichment in a mouse model of Alzheimer's pathology. K. E. STUART*; A. KING; M. J. SUMMERS; J. C. VICKERS. *Wicking Dementia Res. & Educ. Ctr. / Uni, Wicking Dementia Res. & Educ. Ctr., Sch. of Med.*

4:00 TT88 **653.08** Whole life environmental enrichment impacts hippocampal oscillatory activity in CA1 of aged rats. F. FUCHS*; A. BARBELIVIEN; K. HERBEAUX; C. KELCHE; C. MATHIS; M. MAJCHRZAK; R. GOUTAGNY. *CNRS UMR 7364, Univ. de Strasbourg.*

1:00 TT89 **653.09** Senile or sage? Improved memory and sensitivity to cognitive priming accompany aging in male rats. D. L. KOROL; L. A. NEWMAN; P. E. GOLD*. *Syracuse Univ., Syracuse Univ.*

2:00 TT90 **653.10** ● Evaluating aged mice in two touchscreen tests that differ in visual demands: Impaired cognitive function or declining visual abilities? N. BUSCHER; P. VAN DORSSELAER; T. STECKLER*; J. C. TALPOS. *Johnson & Johnson PRD.*

3:00 TT91 **653.11** Curcumin as a dietary intervention improves functional outcomes in middle- aged and senescent male and female c57bl/6 mice. M. SARKER*; S. F. FRANKS; N. SUMIEN; F. FILIPETTO; M. J. FORSTER. *UNT Hlth. Sci. Ctr., UNT Hlth. Sci. Ctr., UNT Hlth. Sci. Ctr.*

4:00 TT92 **653.12** Investigation of the neuroprotective potential of bone marrow mesenchymal stem cells in an *in vitro* model of Alzheimer´s disease. M. GODOY*; L. M. SARAIVA; A. VASCONCELOS-DOS-SANTOS; H. J. V. BEIRAL; C. V. BRAGA; C. A. A. SILVA; R. B. LEAL; L. R. P. CARVALHO; A. P. C. LIMA; A. VIEYRA; F. G. DE FELICE; S. T. FERREIRA; R. MENDEZ-OTERO. *Univ. Federal Do Rio De Janeiro.*

1:00 UU1 **653.13** The inhibition of histone deacetylase rescues synaptic plasticity and memory function in aged mice. G. RAMIREZ MEJIA*; P. MORENO-CASTILLA; L. RODRIGUEZ-DURAN; M. L. ESCOBAR; F. BERMUDEZ-RATTONI. *Inst. De Fisiologia Celular, Div. De Neuro, UNAM.*

2:00 UU2 **653.14** Age-related changes in the behavior and neuronal morphology of Diversity Outbred mice. L. C. ANDERSON*; L. C. HOERTZ; W. N. FERM, Jr.; E. J. CHESLER. *The Jackson Lab.*

3:00 UU3 **653.15** The effect of parity on olfactory acuity and spine density in the piriform cortex. S. BELGRAVE*; M. FRANKFURT; V. LUINE. *Hunter Col., Hofstra North Shore LIJ Sch. of Med., Hunter Col.*

4:00 UU4 **653.16** Glutamatergic regulation prevents age-related spatial memory decline through dendritic spine clustering. A. C. PEREIRA*; H. LAMBERT; Y. GROSSMAN; W. JANSSEN; B. MCEWEN; J. MORRISON. *Rockefeller Univ., Rockefeller Univ., Mount Sinai Sch. of Med.*

POSTER

654. Motivation and Emotions: Fear and Pain

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU5 **654.01** The role of specific receptors for corticotropin-releasing factor CRF1 and CRF2 from basolateral and central nuclei of amygdala in tonic immobility behavior in guinea pigs. B. B. DE PAULA; J. R. M. M. COELHO; R. L. SPINIELI; C. R. LEITE-PANISSI*. *Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Ribeirao Preto Dent. Sch. - USP.*

2:00 UU6 **654.02** The dorsal raphe nucleus is integral to negative prediction errors in Pavlovian fear. M. A. MCDANNALD*; G. SCHOENBAUM; B. A. BERG. *Boston Col., Natl. Inst. on Drug Abuse.*

3:00 UU7 **654.03** Increased Egr-1 expression in the prefrontal cortex correlates with context-shock association in the context pre-exposure facilitation effect (CPFE) in adult rats. T. CHAKRABORTY*; A. ASOK; M. E. STANTON; J. B. ROSEN. *Univ. of Delaware.*

4:00 UU8 **654.04** Effects of CB1 receptor agonism and antagonism on fear and stress responses in adult male rats. J. J. SIMONE*; M. R. GREEN; T. E. HODGES; C. M. MCCORMICK. *Brock Univ., Brock Univ.*

1:00 UU9 **654.05** Activity of the interoceptive insular cortex during expression of conditioned fear. P. CASANOVA; M. AGUILAR; M. RODRIGUEZ; F. TORREALBA*. *P. Univ. Catolica de Chile.*

2:00 UU10 **654.06** Changes in the orexin (hypocretin) system in rats following footshock exposure. H. WANG; S. LI; G. LIU; G. J. KIROUAC*. *Univ. of Manitoba, Intl. School, Guangdong Food and Drug Vocational Col., Fac. of Dent.*

3:00 UU11 **654.07** Predator Exposure, but not footshock, produces a noradrenergic-dependent flashbulb memory in rats. L. A. BULLARD*; C. R. PARK; D. M. DIAMOND. *Univ. of South Florida, VA Hosp.*

4:00 UU12 **654.08** Amygdala PKM zeta increases with functional emergence of amygdala-dependent fear learning in rat pups. P. A. SERRANO*; L. MICHELSON; R. M. SULLIVAN. *Hunter Col. and City Univ. of New York, Nathan Kline Institute, New York Univ.*

1:00 UU13 **654.09** Lack of neuroendocrine and behavioral habituation after repeated predatory threat in mice. K. S. GOMES*; A. C. CIPRIANO; R. L. NUNES-DE-SOUZA. *Univ. Estadual Paulista, Joint Grad. Program in Physiological Sci.*

2:00 UU14 **654.10** Role of Neurokinin B-expressing neurons in the basolateral amygdala in fear and fear extinction. R. O. TASAN*; G. LACH; J. WOOD; D. VERMA; S. WEGER; R. HEILBRONN; G. SPERK. *Inst. of Pharmacology, Med. Univ. Innsbruck, Westfälische Wilhelms-Universität, Charité - Univ. Med.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 UU15 **654.11** Protein synthesis inhibitor (anisomycin) microinjected into medial prefrontal cortex, amygdala or dorsal hippocampus disrupts the consolidation of step-down inhibitory avoidance in mice. L. CANTO DE SOUZA*; R. MATTIOLI. *Univ. de Sao Paulo, Univ. Federal de São Carlos.*

4:00 UU16 **654.12** Release of glutamate from ventral tegmental inputs into the lateral habenula elicits aversive conditioning. D. H. ROOT*; C. A. MEJIAS-APONTE; M. MORALES. *Natl. Inst. On Drug Abuse, Natl. Inst. on Drug Abuse.*

1:00 UU17 **654.13** Gabaergic activation in the basomedial amygdala reduces the tonic immobility response in guinea pigs: A innate fear behavior. B. B. DE PAULA*; J. R. MELO; R. L. SPINIELI; C. R. A. LEITE-PANISSI. *Univ. of São Paulo.*

2:00 UU18 **654.14** Evidence for the thalamic targets of the medial hypothalamic defensive system mediating emotional memory to social defeat. M. J. RANGEL*, JR; N. S. CANTERAS. *Univ. De São Paulo/Instituto De Ciências Biomédicas.*

3:00 UU19 **654.15** CB1 receptors in the medial habenula control emotional behavior. E. SORIA*; A. MEHIDI; A. BUSQUETS-GARCIA; L. ROUX; L. ALONSO; I. LOUIT; T. WIESNER; D. VERRIER; A. CANNICH; F. GEORGES; G. MARSICANO. *INSERM U862, INSERM, CNRS.*

4:00 UU20 **654.16** Connections between the hippocampus, amygdala and prefrontal cortex: Circuits that drive fear learning and extinction. P. SAH*; R. MAREK. *Queensland Brain Inst., The Univ. of Queensland.*

1:00 UU21 **654.17** Cross-fostering between Hatano high and low active avoidance rats altered emotional reactivity of male offspring. Y. HORII*; R. OHTA; K. TAKAHASHI; Y. SATO; K. SATO; S. NAKAJIMA; Y. SHIRAISHI; M. KAWAGUCHI. *Meiji Univ., Natl. Inst. of Genet., Hatano Res. Inst.*

2:00 UU22 **654.18** Chronic treatment with fluoxetine enhances antinociception and up-regulates 5-HT1A and 5-HT2C receptors within the periaqueductal gray in mice. D. B. SOUZA*; R. NUNES-DE-SOUZA; A. CANTO-DE-SOUZA. *Univ. Federal De São Carlos, Pharmacol, FCF/Unesp/ Araraquara.*

3:00 UU23 **654.19** The affective component of pain: The role of prostaglandins. A. K. SINGH*; M. FRITZ; A. M. KLAWONN; D. ENGBLOM. *Linköping Univ.*

4:00 UU24 **654.20** Role of TRPV1 channels of the dorsal periaqueductal gray in the modulation of phasic and tonic pain in mice. D. C. MASCARENHAS*; K. S. GOMES; R. L. NUNES DE SOUZA. *Sch. of Pharmaceut. Sciences/ UNESP, Joint Grad. Program in Physiological Sci.*

1:00 UU25 **654.21** Role of amygdala, insula and anterior cingulate cortex in the modulation of nociceptive response and pain empathy in mice. A. CANTO-DE-SOUZA*; V. PELARIN; D. BAPTISTA-DE-SOUZA. *Psychobiology Group, Dept of Psychology, UFSCar, Grad. Program in Psychology, Joint Grad. Program in Physiological Sci.*

POSTER

655. Motivation and Emotions: Rodent Anxiety Models

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU26 **655.01** Role of neuronal nitric oxide synthase neurons located in the medial prefrontal cortex on restraint-induced long lasting anxiety in rats. F. S. GUIMARAES*; C. VILA-VERDE; A. Z. MARINHO; A. B. SONEGO. *Sch. Med. Ribeirao Preto-Usp.*

2:00 UU27 **655.02** Tempol protects anxiogenic drug induced anxiety-like behavior in rats. G. D. PATKI*; A. SALVI; H. LIU; F. ATROOZ; S. SALIM. *Univ. of Houston.*

3:00 UU28 **655.03** Differential analgesic and anxiolytic effects of neuropeptide Y into periaqueductal gray of rat. P. V. LEÓN*; J. PACHECO-ROSADO; L. MENDOZA-RUIZ; A. MIRANDA-PÁEZ. *Colonia Prohogar, Inst. Politécnico Nacional.*

4:00 UU29 **655.04** Deep brain stimulation of the ventral striatum attenuates avoidance but not approach behaviors in rats. T. J. BANASIKOWSKI*; A. A. GRACE. *Univ. of Pittsburgh.*

1:00 UU30 **655.05** Anxiolytic properties of protium copal in rats. C. CAYER*; D. KOLMOGOROVA; Z. MERALI; J. T. ARNASON. *IMHR / Univ. of Ottawa, Ctr. for Advanced Res. in Envrn. Genomics / Univ. of Ottawa, Univ. Of Ottawa.*

2:00 UU31 **655.06** The effects of acute vagus nerve stimulation on anxiety in rats. L. J. NOBLE*; C. K. MCINTYRE. *Univ. of Texas At Dallas.*

3:00 UU32 **655.07** ▲ Lending a helping paw: GABAergic mechanisms in empathy and pro-social behaviors in rats. B. CAMPBELL*; J. E. MEYERS-MANOR; N. D. MATHEWS; E. P. WIERTELAK. *Macalester Col.*

4:00 UU33 **655.08** Effect of anxiety on spontaneous activity of the prefrontal cortex and its neuronal correlates of the extra-dimensional set-shifting task performance. J. PARK*; C. O. BONDI; A. DEL ARCO; J. WOOD; B. MOGHADDAM. *Univ. of Pittsburgh, Complutense Univ. of Madrid.*

1:00 UU34 **655.09** Ketamine microinjected in the prelimbic (PL) region of the PFC blunts the behavioral and neurochemical effects of inescapable stress (IS), but the PL is not necessary for systemic ketamine to blunt the effects of IS. K. H. KUBALA*; J. AMAT; R. M. ALEXSEJEV; J. KIM; L. R. WATKINS; S. F. MAIER. *Univ. of Colorado, Univ. of Colorado.*

2:00 UU35 **655.10** Activation of group II metabotropic glutamate receptors exerts an anxiolytic-like effect in ovariectomized female rats. C. PINEYRO RUIZ*; L. RIVERA ROMAN; S. GONZALEZ; N. PEREZ-ACEVEDO. *Univ. of Puerto Rico Med. Sci. Campus, Univ. of Puerto Rico Rio Piedras Campus, Univ. of Puerto Rico Med. Sci. Campus.*

3:00 UU36 **655.11** Novel acetylcholine detectors reveal that habenula cholinergic neurons regulate anxiety via nicotinic acetylcholine receptor signaling. X. PANG*; J. NGOLAB; L. LIU; R. ZHAO-SHEA; J. M. MCINTOSH; P. D. GARDNER; A. R. TAPPER. *Umassmed, George E. Wahlen Veterans Affairs Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 UU37 **655.12** The dopamine D2 receptor is involved the anxiety-like behavior in light and dark choice test. Y. IIDA*; T. KOJIMA; H. NAGAYAMA; S. YAMAMORI; M. ITAKURA; T. SASAOKA; H. MIYAOKA; M. TAKAHASHI. *Kitasato Univ. Sch. of Med., Kitasato Univ. Sch. of Med., Brain Res. Institute, Niigata Univ.*

1:00 UU38 **655.13** Chemical stimulation and inhibition of the right (but not the left) medial prefrontal cortex changes the anxiety-like behavior in mice. R. L. NUNES-DE-SOUZA*; N. S. COSTA; T. T. MIGUEL; M. A. VICENTE. *Univ. Estadual Paulista, UNESP, São Paulo State University, UNESP, Federal Univ. of Uberlândia.*

2:00 UU39 **655.14** Urocortin III injected into the amygdala does not change anxiety-like behavior in mice exposed to the elevated plus-maze. A. C. CIPRIANO*; K. GOMES; R. L. NUNES-DE-SOUZA. *Joint Grad. Program in Physiological Sci. UFSCar/UNESP, Sch. of Pharmaceut. Sciences, São Paulo State University, UNESP.*

3:00 UU40 **655.15** Genetic mutations in GluN2A serine and tyrosine phosphorylation sites controlled by PKC decrease anxiety-related behaviors in mice. D. BALU*; J. LARSON; J. V. SCHMIDT; J. P. LEONARD. *Univ. of Illinois - Chicago, Col. of Medicine, Univ. of Illinois at Chicago.*

4:00 UU41 **655.16** Cortical projections to the amygdala in mouse. Q. WANG*; L. NG; J. A. HARRIS; S. W. OH; A. BERNARD; A. M. HENRY; M. T. MORTRUD; B. OUELLETTE; J. J. HOHMANN; C. KOCH; H. ZENG. *The Allen Inst. For Brain Sci.*

1:00 UU42 **655.17** Chronic anxiety response - effects of diazepam, amphetamine and H4R antagonist. R. M. ABUHAMDAH*; S. ABUHAMDAH; P. L. CHAZOT; A. ENNACEUR. *Univesity of Jordan, Durham Univ., Univ. of Jordan, Durham Univ., Univ. of Sunderland.*

2:00 UU43 **655.18** Anxiety-like behavior in crayfish is controlled by serotonin. P. FOSSAT; J. BACQUE-CAZENAVE; P. DE DEURWAERDERE; J. DELBECQUE; D. CATTAERT*. *Univ. Bordeaux & CNRS - INCIA - UMR 5287, Univ. Bordeaux & CNRS - IMN - UMR 5293.*

3:00 UU44 **655.19** Stress enables serotonergic tuning of fear memory consolidation. M. V. BARATTA*; J. YAO; M. D. WEBER; B. GISABELLA; P. E. MONAHAN; N. PETROSSIAN; E. S. BOYDEN; K. A. GOOSENS. *Univ. of Colorado Boulder, MIT, MIT, MIT, MIT.*

4:00 UU45 **655.20** Evaluating CF 50 kHz USVs as an indicator of anxious state. J. O. TAYLOR*; S. B. KEGLEY; A. LEMKE; C. M. URBANO; B. G. COOPER. *TCU.*

POSTER

656. Reward II

Theme F: Cognition and Behavior

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU46 **656.01** Reward signaling in the dorsal raphe nucleus. Z. LIU*; J. ZHOU; Y. LI; F. HU; Q. FENG; J. ZHANG; D. WANG; J. ZENG; J. BAO; M. LUO. *Natl. Inst. of Biol. Sciences,Beijing.*

2:00 UU47 **656.02** Sonic hedgehog signaling pathway is important in the maintenance and function of adult dopaminergic neurons. X. ZHOU; Y. JIN; E. FILICHIA; K. JIN; B. J. HOFFER*; Y. LUO. *Case Western Reserve Univ., Univ. of Rochester, NIDA/NIH.*

3:00 UU48 **656.03** Encoding reward signals by dorsal raphe 5-ht neurons of freely behaving mice. Y. LI*; W. ZHONG; Z. LIU; J. ZHOU; D. WANG; J. ZENG; Q. FENG; J. BAO; C. JIA; M. LUO. *Natl. Inst. of Biol. Sciences, Beijing, Grad. Sch. of Peking Union Med. Col., Sch. of Life Sciences, Tsinghua Univ.*

4:00 UU49 **656.04** Qualitative reward prediction errors and dopamine during reward reversal. V. MARTINEZ*; L. M. BURGENO; P. E. M. PHILLIPS. *Univ. of Washington, Univ. of Washington.*

1:00 UU50 **656.05** Brain structures involved in the reinforcement omission effects modulation. T. TAVARES*; D. M. JUDICE-DAHER; J. L. O. BUENO. *Univ. de São Paulo.*

2:00 UU51 **656.06** Hedonic reward and incentive salience in rats exposed postnatally to the polybrominated diphenyl ether commercial mixture DE-71. L. L. DRISCOLL*; E. BECKETT; J. BOESE; J. WATTS; J. SPERRY; R. KASEMODEL. *Colorado Col., Colorado Col.*

3:00 UU52 **656.07** Reward prediction error signals in major depressive disorder. R. B. RUTLEDGE*; M. MOUTOUSSIS; T. HERLT; L. HRYNKIEWICZ; J. LAM; O. OUSDAL; P. FONAGY; R. J. DOLAN. *Univ. Col. London.*

4:00 UU53 **656.08** Pattern analysis of low-frequency power predicts stopping behavior in human subthalamic nucleus. J. M. PEARSON*; P. T. HICKEY; S. P. LAD; M. L. PLATT; D. A. TURNER. *Duke Univ. Med. Ctr.*

1:00 UU54 **656.09** Different monetary incentive delay neural profiles in high and low risk social drinkers. M. DIBARTOLO; X. ZHU; J. SCHACHT; B. FROELIGER*; R. ANTON; J. JOSEPH. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

2:00 UU55 **656.10** Neural encoding of incentive salience in the ventral pallidum of rats during Pavlovian conditioned approach. A. M. AHRENS*; T. E. ROBINSON; J. W. ALDRIDGE. *Univ. of Michigan.*

3:00 UU56 **656.11** Interaction between inhibition of monoamine transporter function and environmental enrichment or social isolation on responding for conditioned reinforcement in mice. C. BROWNE*; P. J. FLETCHER; F. D. ZEEB. *Univ. of Toronto/CAMH, Ctr. for Addiction and Mental Hlth.*

4:00 UU57 **656.12** Resting state and functional connectivity of the nucleus accumbens with rewards regions in overweight and obese women. K. COVELESKIE; A. GUPTA; L. A. KILPATRICK*; E. D. MAYER; C. ASHE-MCNALLEY; J. STAINS; J. S. LABUS; E. A. MAYER. *UCLA, David Geffen Sch. of Med.*

1:00 UU58 **656.13** Prenatal exposure to stress in combination with adolescent exposure to marijuana results in sexually dimorphic cognitive and physiological effects. R. J. KEELEY*; J. TROW; B. LOWRY; R. J. MCDONALD. *Univ. of Lethbridge.*

2:00 UU59 **656.14** Effects of chronic oral methylphenidate exposure on behavior and brain metabolism in female rats. L. S. ROBISON*; M. VITALE; M. MICHAELOS; J. GANDHI; S. PAENG; J. LEE; E. MIAO; M. HADJIARGYROU, Ph.D.; D. KOMATSU; P. K. THANOS. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., New York Inst. of Technol., Stony Brook Univ.*

3:00 UU60 **656.15** Persistent inhibitory circuit deficits emerge following chronic prenatal exposure to exogenous cannabinoids. G. A. VARGISH*; C. J. MCBAIN; K. A. PELKEY; X. YUAN; D. COLLINS. *NIH/NICHD.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 UU61 **656.16** ▲ Chronic peripubertal WIN55212-2 administration is associated with changes in fear conditioning, amygdalar volume, and synaptic proteins. P. DELUCA; M. BOUDREAULT; J. ANDREWS; N. LANDRY; S. HILL; C. JESSO; M. J. SAARI; A. C. WEEKS*. *Nipissing Univ.*

1:00 UU62 **656.17** Expectation of specific therapeutic effects induces generalized placebo improvement of both pain and pleasure. D. ELLINGSEN*; S. LEKNES; C. TRISCOLI; H. OLAUSSON; J. WESSBERG. *Univ. of Gothenburg, Inst. For Neurosci. and Physiol., Dept. of Psychology, Univ. of Gothenburg, Inst. of Neurosci. and Physiol., Linköping Univ.*

2:00 UU63 **656.18** Animal model of adolescent cannabis abuse exhibits permanent deficit in the endocannabinoid system signaling. A. CORCHES*; J. W. LOVELACE; A. HIROTO; E. KORZUS. *Univ. of California, Riverside.*

3:00 UU64 **656.19** A longitudinal analysis of changes in accumbens and dorsolateral striatal drug processing across protracted cocaine self-administration. D. J. BARKER*; K. COFFEY; N. GAYLIARD; J. KULIK; M. WEST. *Rutgers Univ., Rutgers Univ.*

4:00 UU65 **656.20** Characterizing the chronic dopamine microsensor. E. P. MARR; B. W. YAZEL; T. R. VANDERHOLM; S. L. DAVIS; P. W. RINNE; B. R. SORENSEN; D. P. DABERKOW*. *Eastern Washington Univ.*

POSTER

657. Techniques for Profiling and Manipulating Defined Neuronal Populations

Theme G: Novel Methods and Technology Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU66 **657.01** ▲ Combinations of housekeeping genes for normalization of qPCR data in cerebral age-related transcriptomic studies. G. BRUCKERT*; M. HEBERT; D. VIVIEN; F. DOCAGNE; B. ROUSSEL. *INSERM U919.*

2:00 UU67 **657.02** Genetically-Directed sparse and stochastic labeling of striatal direct-pathway neurons in mice: Application to study neurodevelopment and neurodegeneration. X. LU*; X. W. YANG. *Ctr. For Neurobehavioral Genetics, Semel Inst.*

3:00 UU68 **657.03** A transgenic mouse model expressing a luficerase-based sensor to study proteostasis *in vivo.* E. SCHULZ-TRIEGLAFF*; R. KLEIN; I. DUDANOVA. *Max Planck Inst. of Neurobio.*

4:00 UU69 **657.04** ▲ Isolation of DNA from genetically-defined populations of neurons. P. S. LAMBETH*; B. A. NEWMYER; D. M. WARTHEN; E. PEREZ-REYES; M. M. SCOTT. *Univ. of Virginia.*

1:00 UU70 **657.05** ● Generation of a bacterial artificial chromosome transgenic rat line for specifically expressing Cre recombinase and channelrhodopsin in dopamine neurons. Y. LU*; S. FREY; P. WANG; J. U. FREY. *Georgia Regents Univ.*

2:00 UU71 **657.06** Cell-type specific control of gene function in *Drosophila melanogaster.* Y. E. FISHER*; D. M. GOHL; T. R. CLANDININ. *Stanford Univ., Univ. of Minnesota.*

3:00 UU72 **657.07** Profiling of midbrain dopamine neuron projections to the striatum using Retro-TRAP. A. R. NECTOW*; M. I. EKSTRAND; K. N. LATCHA; J. M. FRIEDMAN. *Rockefeller Univ., Rockefeller University/HHMI.*

4:00 UU73 **657.08** Quantification of protein levels in single cells *in vivo.* C. LO; I. KAYS; F. EMRAN; T. LIN; V. CVETKOVSKA; B. E. CHEN*. *McGill Univ., Res. Inst. of the McGill Univ. Hlth. Ctr.*

1:00 UU74 **657.09** ● Efficient transfection of native sensory neurons. J. SVENSSON DALÉN*; A. G. CARBAJAL; A. KARLSSON; M. KARLSSON; T. HUCHO; P. KARILA. *Cellectricon AB, Uniklinik Köln.*

2:00 UU75 **657.10** Intravascular administration of an AAV vector to neonatal macaques results in widespread gene transduction into neurons throughout the primate brain. K. INOUE*; K. KIMURA; R. YASUKOCHI; N. SUGAWARA; Y. OKUDA; M. FUJIWARA; M. TAKADA. *Primate Res. Inst., Kyoto Univ., Sch. of Medicine, Yokohama City Univ.*

3:00 UU76 **657.11** Improved and expanded Q-system toolkit for transgene expression. O. RIABININA*; D. LUGINBUHL; E. MARR; S. LIU; M. N. WU; L. LUO; C. J. POTTER. *Johns Hopkins Univ., Stanford Univ., Johns Hopkins Univ.*

4:00 UU77 **657.12** Cas9 nickase increase efficiency in producing transgenic human embryonic stem cell lines. J. CAO*; Y. CHEN; M. XIONG; Z. DU; S. ZHANG. *Waisman Center, Univ. of Wisconsin Madison.*

1:00 UU78 **657.13** Fluorescence-activated sorting of fixed nuclei (FAST-FIN): A general method to study nuclei from specific cell populations that preserves post-translational modifications. L. MARION-POLL; E. MONTALBAN; A. MUNIER; D. HERVÉ; J. GIRAULT*. *Inserm UPMC Inst. du Fer A Moulin, UPMC.*

2:00 UU79 **657.14** Brain-specific delivery of rabies virus glycoprotein modified nanoparticles as a function of route of administration. A. PRAKAPENKA*; R. L. MCCALL; R. W. SIRIANNI; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona State Univ., Arizona State Univ., Arizona Alzheimer's Consortium, Brain Tumor Res. Center, Barrow Neurolog. Inst., Arizona State Univ.*

3:00 UU80 **657.15** Two-key recombinase system for neural ensemble labeling and manipulation of ventral striatal D1R- and D2R-MSN neural ensembles encoding primary appetitive and aversive stimuli. D. M. OPLAND*; C. W. BOND; D. S. ABRAMOV; R. J. DILEONE. *Yale Univ.*

4:00 UU81 **657.16** Towards nontoxic monosynaptic transduction. I. R. WICKERSHAM*. *MIT.*

1:00 UU82 **657.17** ● ApoE-mediated lipid nanoparticle delivery of RNA for loss-of-function and gain-of-function studies in primary neurons *in vitro* and *in vivo.* E. RAMSAY*; C. WALSH; A. ANSARI; A. THOMAS; K. OU; A. WILD; T. LEAVER; R. J. TAYLOR; D. ZWAENEPOEL. *Precision Nanosystems Inc.*

2:00 UU83 **657.18** Evaluation of a novel reporter rat line which conditionally expresses red fluorescent protein (tdTomato). H. IGARASHI*; K. KOIZUMI; R. KANEKO; K. IKEDA; H. ONIMARU; Y. YANAGAWA; S. MURAMATSU; T. ISHIZUKA; H. YAWO. *Tohoku Univ. Grad. Sch. of Med., Tohoku univ. Grad, Sch. of Life Sci., Gunma Univ. Grad. Sch. of Med., Hyogo Col. of Med., Showa univ. Sch. of Med., Jichi Med. Univ.*

3:00 UU84 **657.19** Restricted expression of transgene to astrocytes in the central nervous system following systemic injection with a novel self-complementary AAV9 vector. J. DASHKOFF*; E. HUDRY; S. TAKEDA; Z. FAN; N. TRUONG; C. A. MAGUIRE; B. T. HYMAN. *Boston Univ. Sch. of Med., MassGeneral Inst. for Neurodegenerative Dis., The Massachusetts Gen. Hosp. and Neurosci. Program, Harvard Med. Sch.*

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4:00 UU85 **657.20** Understanding the genetic basis for functional heterogeneity in telencephalic interneurons. A. B. MUNOZ-MANCHADO; A. ZEISEL; S. LINNARSSON; J. HJERLING LEFFLER*, Dr. *Karolinska Institutet.*

1:00 UU86 **657.21** Characterization of a transgenic rat expressing Cre recombinase from the dopamine transporter promoter. Y. ZHANG*; C. T. RICHIE; L. R. WHITAKER; A. F. HOFFMAN; C. E. SPIVAK; C. R. LUPICA; H. A. BALDWIN; J. J. HINKLE; G. YEH; C. MEJIAS-APONTE; M. MORALES; S. M. UNDERHILL; J. C. SMITH; J. M. PICKEL; B. T. HOPE; B. K. HARVEY. *NIDA IRP, NIAAA, NIMH IRP, NINDS IRP.*

2:00 UU87 **657.22** ● Identification of astrocytes derived from neural progenitor cells by high-throughput screening using a live cell mRNA detection technology. D. WELDON*, V; Y. WILLIAMS; A. KO; V. KOONG; W. JASTROMB. *EMD Millipore, Nikon.*

3:00 UU88 **657.23** Dissecting multiple neuronal pathways in mammalian brain using Avian sarcoma and leukosis virus envelope-receptor pairs. M. MATSUYAMA*; Y. OHASHI; T. TSUBOTA; M. YAGUCHI; K. MAMADA; S. KATO; K. KOBAYASHI; Y. MIYASHITA. *Dept. of Physiol., Univ. of Tokyo Sch. of Med., JSPS Res. Fellow, Dept. of Mol. Genetics, Inst. of Biomed. Sciences, Fukushima Med. Univ.*

4:00 UU89 **657.24** RiboTag: A novel method for measuring gene expression within discrete populations of primary neuronal cultures. A. J. LESIAK*; J. F. NEUMAIER. *Univ. of Washingotn.*

1:00 UU90 **657.25** The creation and characterization of Cre Rat Drivers. Z. LIU; X. CUI*. *SAGE Labs.*

2:00 UU91 **657.26** Improvement of gene transduction efficiency for neuron-specific retrograde gene transfer lentiviral vector with a novel fusion envelope glycoprotein. K. KOBAYASHI*; S. KATO; K. KOBAYASHI. *Fukushima Med. Univ., Natl. Inst. Physiol Sci.*

3:00 UU92 **657.27** A novel method to uniquely label transcripts for massively parallel functional dissection in the mammalian brain. T. BJORKLUND*; M. DAVIDSSON; O. SCHWICH; P. ALDRIN-KIRK; P. DIAZ-FERNANDEZ; M. TORROBA CALVO; L. QUINTINO; C. LUNDBERG. *Mol. Neuromodulation, Wallenberg Neurosci., Lund Univ.*

4:00 VV1 **657.28** ▲ Trans-synaptic retrograde transportation of Cre recombinase. K. SHIMIZU; A. INUTSUKA; A. INUI; S. OHNISHI; A. YAMANAKA*. *Nagoya Univ., Res. Inst. of Envrn. Medicine, Nagoya Univ.*

1:00 VV2 **657.29** ● Rapid and ultra-sensitive single-cell transcript profiling with Droplet Digital PCR - application to neuronal differentiation. C. LITTERST*; S. WANG; T. LEGLER; N. KLITGORD; E. HEFNER; Y. JOUVENOT; G. KARLIN-NEUMANN. *DBC Bio-Rad.*

2:00 VV3 **657.30** Co-opting fluorescent proteins for cell-specific gene manipulation. C. TANG*; T. SZIKRA; Y. KOZOROVITSKIY; M. TEXEIRA; B. SABATINI; B. ROSKA; C. CEPKO. *Harvard Med. Sch., Howard Hughes and Med. Inst., Neural Circuit Laboratories, Friedrich Miescher Inst. for Biomed. Res.*

POSTER

658. Techniques to Image or Modulate Neural Activity

Theme G: Novel Methods and Technology Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV4 **658.01** *In vivo* bioluminescence-driven optogenetics for neuronal activation and inhibition. K. A. CLISSOLD*; K. BERGLUND; M. E. KLEIN; V. PREVOSTO; M. KOVAL; Z. M. ABZUG; M. A. SOMMER; H. H. YIN; U. HOCHGESCHWENDER. *Duke Univ.*

2:00 VV5 **658.02** Conventional invasive and next-generation non-invasive optogenetic modulation of the thalamic reticular nucleus. B. HIGASHIKUBO*; S. CRANDALL; B. CONNORS; U. HOCHGESCHWENDER; C. MOORE. *Brown Univ., MIT, Duke Univ.*

3:00 VV6 **658.03** Development of Tango system for the monitoring of 5-HT2CR activity. Y. WATANABE*; A. TSUJIMURA; M. AOKI; K. TAGUCHI; M. TANAKA. *Kyoto Pref. Univ. Med.*

4:00 VV7 **658.04** ● Optogenetic-induced glutamate release in the rodent hippocampus and frontal cortex. E. MILLER*; F. POMERLEAU; P. HUETTL; J. E. QUINTERO; S. R. BATTEN; J. S. BECKMANN; Y. AI; M. LUNDBLAD; J. JAKOBSSON; R. E. HAMPSON; S. A. DEADWYLER; G. A. GERHARDT. *Univ. of Kentucky, Univ. of Kentucky, Lund Univ., Wake Forest Univ.*

1:00 VV8 **658.05** High level expression of genetic tools with improved cell type specificity. L. MADISEN*; A. GARNER; A. CHUONG; N. KLAPOETKE; L. LI; A. CHENG; B. TASIC; H. GU; M. MILLS; T. NGUYEN; T. KNÖPFEL; E. BOYDEN; R. C. REID; H. ZENG. *Allen Inst. for Brain Sci., MIT, Imperial Col. London.*

2:00 VV9 **658.06** Recent developments for neurotransmitter analysis. M. EYSBERG; L. M. VAN HEERWAARDEN*; H. BROUWER; N. REINHOUD. *Antec.*

3:00 VV10 **658.07** Optogenetics manipulation of cortical and subcortical neurons in the macaque monkey. Assessing expression of excitatory and inhibitory opsins. B. W. CORRIGAN*; R. A. GULLI; J. C. MARTINEZ; A. SACHS. *McGill Univ., McGill Univ., The Ottawa Hosp.*

4:00 VV11 **658.08** Development of a new fast-response GCaMP3 family for monitoring calcium flux *in vivo.* N. HELASSA*; E. ESPOSITO; I. CONTE; T. CARTER; J. BRADLEY; D. OGDEN; K. TOROK. *St George's Univ. of London, CNRS and Univ. Paris Descartes, MRC-National Inst. for Med. Res.*

1:00 VV12 **658.09** Elucidating input-output relations of VTA dopamine neurons. K. BEIER; K. MIYAMICHI; L. SCHWARZ; R. C. MALENKA; L. LUO*. *Stanford University, Stanford Univ. Sch. of Med., Stanford Univ., Stanford Univ. Sch. of Med.*

2:00 VV13 **658.10** Imaging cortical sensory dynamics in a transgenic mouse expressing a voltage indicator. D. SHIMAOKA*; L. ROSSI; T. SATO; A. BENUCCI; T. KNÖPFEL; L. MADISEN; H. ZENG; M. CARANDINI. *Univ. Col. London, Imperial Col. London, Allen Inst. for Brain Sci.*

3:00 VV14 **658.11** High temporal resolution method for glutamate quantification in hippocampal slices. C. L. LOPEZ VALENZUELA*; K. PARDO-PEÑA; A. MORALES-VILLAGRÁN. *Univ. De Guadalajara, Univ. De Guadalajara.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 VV15 **658.12** Development of transgenic marmosets using nonsurgical embryo collection for imaging neural activity *in vivo.* J. E. PARK; S. CHOI; X. F. ZHANG; T. P. SANTISAKULTARM; E. SASAKI; J. PICKEL; A. C. SILVA*. *NIH, NIH, Central Inst. for Exptl. Animals, Keio Univ., NIH.*

1:00 VV16 **658.13** ● A novel upright low-dose brain imager: A new tool in neuroscience and its potential applications. C. BAUER*; J. BREFCZYNSKI-LEWIS; J. W. LEWIS; M. MANDICH; S. MAJEWSKI. *West Virginia Univ.*

2:00 VV17 **658.14** Sweetie: An optimized genetically-encoded fluorescent sensor for glucose. J. P. KELLER*; J. MARVIN; E. SCHREITER; L. L. LOOGER. *Janelia Farms Res. Campus, Janelia Farms Res. Campus.*

3:00 VV18 **658.15** Optogenetic control of seizures through the nigrotectal pathway. P. A. FORCELLI*; C. SOPER; C. KULICK; S. GUTHERZ; J. ACCARDI; K. GALE. *Georgetown Univ.*

4:00 VV19 **658.16** Optimization of micropattern geometry for long-term culture of isolated neurons and identification of excitatory-inhibitory cell types. H. YAMAMOTO*; S. KONO; T. KUSHIDA; A. HIRANO-IWATA; M. NIWANO; T. TANII. *Tohoku Univ., Tohoku Univ., Waseda Univ., Tohoku Univ.*

1:00 VV20 **658.17** ● Toward efficient production of transgenic marmosets. J. OKAHARA*; H. OKANO; E. SASAKI. *Central Inst. For Exptl. Animals, Keio Univ. Sch. of Med., Central Inst. for Exptl. Animals.*

POSTER

659. Optogenetics: Integration With Electrophysiology

Theme G: Novel Methods and Technology Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV21 **659.01** Dopamine kinetics in discrete larval *Drosophila* brain regions. E. PRIVMAN*; J. VENTON. *Dept. of Chemistry, Univ. of Virginia.*

2:00 VV22 **659.02** The sinusoidal probe- towards translation in the non-human primate. H. SOHAL*; F. YOSHIDA; N. P. BICHOT; K. PAYER; G. RIGGOT; E. S. BOYDEN; R. DESIMONE. *MIT.*

3:00 VV23 **659.03** Imaging from the inside out: A design of an implantable probe for imaging of single-cell physiological dynamics in deep brain tissue at large scales. M. A. HENNINGER*; Y. YOON; J. DEGUCHI; J. SCHOLVIN; A. ZORZOS; R. HORSTMEYER; R. RASKAR; E. S. BOYDEN, III. *MIT, Toshiba Corp., Caltech.*

4:00 VV24 **659.04** Red-shifted optogenetic neural manipulation in *Drosophila melanogaster*. S. S. KIM; S. R. PULVER; D. B. TURNER-EVANS; H. HABERKERN; R. FRANCONVILLE; A. S. CHUONG; N. C. KLAPOETKE; E. S. BOYDEN; V. JAYARAMAN*. *Janelia Farm Res. Campus, HHMI, MIT.*

1:00 VV25 **659.05** *In vivo* experimental testing of scalable 3-d microfabricated electrode array neural recording in mammalian brain. J. P. KINNEY*; J. BERNSTEIN; J. SCHOLVIN; C. MOORE-KOCHLACS; N. KOPELL; E. BOYDEN. *MIT, Boston Univ.*

2:00 VV26 **659.06** Mechanical and geometric principles of interfacing to the nervous system via the vasculature. C. LINGHU*; A. N. ZORZOS; G. T. FRANZESI; H. S. SOHAL; C. T. WENTZ; N. GROSSMAN; P. BLINDER; E. S. BOYDEN. *MIT, MIT, Tel-Aviv Univ.*

3:00 VV27 **659.07** Physical principles for brain activity mapping. A. H. MARBLESTONE*; B. ZAMFT; Y. MAGUIRE; M. SHAPIRO; T. CYBULSKI; J. GLASER; D. AMODEI; B. STRANGES; R. KALHOR; D. DALRYMPLE; D. SEO; E. ALON; M. MAHARBIZ; J. RABAEY; J. CARMENA; E. S. BOYDEN; G. CHURCH; K. KORDING. *Harvard Univ., Harvard Univ., Caltech, Northwestern Univ., Stanford, Nemaload, Univ. of California at Berkeley, MIT.*

4:00 VV28 **659.08** Time course of subthreshold activity preceding spike generation in awake behaving mouse hippocampus. A. C. SINGER*; G. TALEI FRANZESI; S. B. KODANDARAMAIAH; M. TSITSIKLIS; S. SHARMA; D. BOZIC; S. BATIR; I. R. WICKERSHAM; G. L. HOLST; C. R. FOREST; C. BÖRGERS; N. J. KOPELL; E. S. BOYDEN. *McGovern Inst. and Media Lab, MIT, Georgia Inst. of Technol., Tufts Univ., Boston Univ.*

1:00 VV29 **659.09** Next-generation multiphoton optogenetic control via opsin engineering and computer generated holography. E. RONZITTI*; R. CONTI; N. KLAPOETKE; A. J. FOUST; E. PAPAGIAKOUMOU; E. S. BOYDEN; V. EMILIANI. *Univ. Paris Descartes - CNRS UMR8250, MIT Media Lab. and McGovern Inst.*

2:00 VV30 **659.10** Hearing the light: Perceptual and neurophysiological encoding of optogenetic stimulation delivered to the auditory midbrain. A. E. HIGHT*; W. GUO; J. X. CHEN; N. C. KLAPOETKE; B. G. SHINN-CUNNINGHAM; E. S. BOYDEN; D. J. LEE; D. B. POLLEY. *Massachusetts Eye and Ear Infirmary, Harvard Med. Sch., Boston Univ., Harvard Med. Sch., MIT, Harvard Med. Sch.*

3:00 VV31 **659.11** Optogenetic tool operation with extracellular vs. intracellular ionic sources. A. YANG; Y. K. CHO*; E. S. BOYDEN. *MIT.*

4:00 VV32 **659.12** ● Super-resolution microscopy across arbitrary scales. F. CHEN*; P. W. TILLBERG; E. S. BOYDEN. *MIT.*

1:00 VV33 **659.13** Simultaneous whole-animal 3D-imaging of neuronal activity using light-field microscopy. Y. YOON*; R. PREVEDEL; M. HOFFMANN; N. PAK; G. WETZSTEIN; S. KATO; T. SCHRÖDEL; R. RASKAR; M. ZIMMER; E. S. BOYDEN; A. VAZIRI. *MIT, MIT, Res. Inst. of Mol. Pathology, Univ. of Vienna, Univ. of Vienna, MIT, MIT, MIT, MIT.*

2:00 VV34 **659.14** Optogenetic inactivation of the frontal eye field (FEF) increases error rates during all epochs of the memory-guided saccade task. L. ACKER*; E. BOYDEN; R. DESIMONE. *MIT.*

3:00 VV35 **659.15** Automated exploration of intracellular mechanisms of *in vivo* neural computation. G. TALEI FRANZESI*; A. SINGER; I. KOLB; S. SHARMA; S. KODANDARAMAIAH; M. TSITSIKLIS; I. WICKERSHAM; G. HOLST; D. BOZIC; S. BATIR; C. FOREST; C. BORGERS; N. KOPELL; E. S. BOYDEN. *MIT Synthetic Neurobio. Lab., McGovern Inst. and Media Lab, MIT, Georgia Inst. of Technol., Tufts Univ., Boston Univ.*

4:00 VV36 **659.16** Automated multiple-cell patch clamp assessment of multineuron subthreshold dynamics in waking and anesthetized states. S. B. KODANDARAMAIAH*; F. J. FLORES; G. TALEI FRANZESI; A. C. SINGER; G. HOLST; I. R. WICKERSHAM; C. BORGERS; N. J. KOPELL; C. R. FOREST; E. N. BROWN; E. S. BOYDEN. *MIT Media Lab., MIT, MIT, Massachusetts Gen. Hosp., MIT, MIT, Georgia Inst. of Technol., Tufts Univ., Boston Univ., Harvard MIT, MIT.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 VV37 **659.17** Automated image-guided whole-cell patch clamp technology for mapping functional neuronal circuitry. A. A. CHUBYKIN*; I. KOLB; B. M. CALLAHAN; G. HOLST; W. STOY; C. R. FOREST; E. S. BOYDEN; M. F. BEAR. *MIT, Purdue Univ., Georgia Inst. of Technol., MIT.*

2:00 VV38 **659.18** ● High-throughput fully-automated patch clamp robot for *in vivo* electrophysiology and morphology. G. HOLST*; S. B. KODANDARAMAIAH; I. KOLB; W. STOY; I. WICKERSHAM; A. SINGER; L. LI; E. S. BOYDEN; H. ZENG; C. R. FOREST. *Georgia Inst. of Technol., MIT, Georgia Inst. of Technol., MIT, Allen Inst. for Brain Sci.*

3:00 VV39 **659.19** Optimizing unsupervised spike sorting using heuristic spike sort tuner. D. A. BJANES*; R. A. GAUNT; D. J. WEBER. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

POSTER

660. Cellular Electrophysiological Methods

Theme G: Novel Methods and Technology Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV40 **660.01** MATLAB-based automated patch clamp system for awake behaving mice. N. S. DESAI*; J. J. SIEGEL; R. A. CHITWOOD; D. JOHNSTON. *Univ. of Texas at Austin.*

2:00 VV41 **660.02** Automated intracellular recording with multiple sharp micropipettes. G. F. COLLINS*; S. N. BAKER. *Newcastle Univ.*

3:00 VV42 **660.03** Creation of an *in vitro* slice electrophysiology platform to characterize human and mouse electrophysiological cell classes. A. OLDRE; J. BERG; T. JARSKY; C. ANASTASSIOU; A. ARKHIPOV; S. CALDEJON, P. CHONG; C. CUHACIYAN; S. DATTA; N. DEE; C. FARRELL; K. GODFREY; D. HILL; L. LI; S. MIHALAS; L. NG; H. PENG; J. PERKINS; S. PARRY; C. SLAUGHTERBECK; G. SOLER-LLAVINA; S. SORENSEN; S. SUNKIN; N. TASKIN; C. TEETER; J. TING; K. TRETT; W. WAKEMAN; R. YOUNG, C. DANG, M. HAWRYLYCZ, E. LEIN; J. W. PHILLIPS, C. KOCH, H. ZENG; A. BERNARD*. *Allen Inst. Brain Sci.*

4:00 VV43 **660.04** A minimally invasive method for the analysis of sleep/wake behavior in rats. J. BAUTISTA*; D. H. MALIN; H. L. MATHEWS; D. M. NGHIEM; J. J. IZYGON; J. C. SHAHIN; C. A. MADISON; D. MCGHIEY; C. P. WARD. *Univ. of Houston Clear-Lake, Univ. of Colorado Boulder.*

1:00 VV44 **660.05** ● Automated neuronal spike detection and discrimination. E. B. MONTGOMERY JR*; H. HUANG; A. BARBORICA; F. HAER. *Greenville Neuromodulation Ctr., FHC Europe, FHC, Inc.*

2:00 VV45 **660.06** ▲ Electrophysiological properties of neurons in the mouse claustrum. N. L. PETTIT*; A. M. PACKER; S. CHUN; M. HAUSSER. *Univ. Col. London.*

3:00 VV46 **660.07** The Real-Time eXperiment Interface: A closed-loop data acquisition system with sub-millisecond latencies for electrophysiology. A. GEORGE*; Y. PATEL; F. ORTEGA; J. WHITE; D. CHRISTINI; A. DORVAL; R. BUTERA. *Weill Cornell Med. Col., Georgia Inst. of Technol., The Univ. of Utah.*

4:00 VV47 **660.08** Differentiation induction of neural stem cell microfibers. H. ONOE*; M. KATO-NEGISHI; S. TAKEUCHI. *Keio Univ., The Univ. of Tokyo, ERATO, JST.*

1:00 VV48 **660.09** A scalable system for large spherical treadmills. A. K. LEE*; N. J. SOFRONIEW; K. SVOBODA; J. COHEN. *HHMI Janelia Farm Rsrch Campus.*

2:00 VV49 **660.10** ● Evaluation of positive allosteric modulators on ligand gated ion channels using automated electrophysiology and fast fluidic exchange. J. WEBBER; A. YEHIA; J. COSTANTIN; X. JIANG*. *Mol. Devices, LLC, Fluxion Biosci.*

3:00 VV50 **660.11** Functional measures of synaptic transmission in stem cell-derived neurons intoxicated with Clostridial neurotoxins: An ultra-sensitive cell-based platform with shared pathophysiologies to *in vivo* intoxication. P. H. BESKE*; A. B. BRADFORD; M. E. LYMAN; P. M. MCNUTT. *US Army Med. Res. Inst. of Chem. Def.*

4:00 VV51 **660.12** Spatial tracking and volume reconstruction for *in vivo* blind whole cell patch-clamp recordings. D. C. CHAN*; H. KO; W. YUNG. *The Chinese Univ. of Hong Kong.*

1:00 VV52 **660.13** Fast scan cyclic voltammetry in *Drosophila melanogaster* for dopamine measurement. R. FRANCONVILLE; E. PRIVMAN; B. BARBARITS; P. AHAMMAD; M. BARBIC; V. JAYARAMAN; T. HARRIS; J. VENTON; S. KIM*. *Janelia Farm Res. Campus / HHMI, Univ. of Virginia.*

POSTER

661. Electrophysiology Recording Tools and Techniques

Theme G: Novel Methods and Technology Development

Tue. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV53 **661.01** Simultaneous multi-scale electrophysiological measurement and optical manipulation of *in vivo* cortical networks. K. BOUCHARD*; P. LEDOCHOWITSCH; L. MULLER; E. A. K. PHILLIPS; B. SEYBOLD; M. M. MAHARBIZ; A. HASENSTAUB; C. E. SCHREINER; E. F. CHANG. *UCSF, Allen Brain Inst., UCSF, UCSF, UCB.*

2:00 VV54 **661.02** Longitudinal evaluation of the safety and reliability of peripheral nerve electrode technologies. S. VASUDEVAN*; C. WELLE. *FDA.*

3:00 VV55 **661.03** A fully implantable ECoG recording device WIMAGINE® for human BCI applications: Toward a clinical trial. G. CHARVET*; C. MESTAIS; F. SAUTER; M. FOERSTER; A. LAMBERT; N. TORRES-MARTINEZ; T. COSTECALDE; D. RATEL; A. BENABID. *CEA/LETI/ CLINATEC - MINATEC Campus.*

4:00 VV56 **661.04** Simultaneous electrophysiology and calcium imaging in hippocampal slices using transparent electrodes. D. KUZUM; H. TAKANO*; E. SHIM; J. C. REED; H. JUUL; M. DICHTER; D. A. COULTER; E. CUBUKCU; B. LITT. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 VV57 **661.05** Assessing novel materials to improve chronic cortical implants. D. G. MCHAIL*; H. CHARKHKAR; G. L. KNAACK; H. S. MANDAL; J. S. KASTEE; J. F. RUBINSON; J. J. PANCRAZIO; T. C. DUMAS. *George Mason Univ., George Mason Univ., George Mason Univ., Georgetown Univ.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 VV58 **661.06** ▲ Multi-unit recording and labeling with iridium oxide modified stereotrodes in *Drosophila melanogaster*. C. ZHONG*; Q. MONTARDY; X. LIU; L. WANG. *Shenzhen Inst. of Advanced Technol.*

3:00 VV59 **661.07** Automated "spectral fingerprinting" of electrophysiological oscillations. M. HALLER; P. VARMA; T. NOTO; R. T. KNIGHT; A. SHESTYUK; B. VOYTEK*. *Univ. of California, Berkeley, Univ. of California, Berkeley, UCSD, Univ. of California, Berkeley, UCSD, UCSD.*

4:00 VV60 **661.08** Quantum wells embedded in semiconductor microtubes as optical sensors for action potentials. A. KOITMÄE*; J. HARBERTS; G. LOERS; C. BAUSCH; D. DIEDRICH; D. SONNENBERG; C. HEYN; W. HANSEN; R. BLICK. *Univ. of Hamburg, Univ. Med. Ctr. Hamburg-Eppendorf.*

1:00 VV61 **661.09** Two-dimensional, high-resolution current source density analysis of neuronal action potentials. R. FIÁTH*; P. BEREGSZÁSZI; K. KOCSIS; S. MUSA; P. RUTHER; I. ULBERT. *Res. Ctr. For Natural Sciences, Hungarian Acad. of Sci., Pázmány Péter Catholic Univ., Eötvös Loránd Univ., Interuniversity Microelectronics Ctr. (IMEC), Univ. of Freiburg, Res. Ctr. For Natural Sciences, Hungarian Acad. of Sci.*

2:00 VV62 **661.10** Flexible multi-electrode arrays for acute and chronic recordings. C. M. LEWIS*; E. FIEDLER; T. STIEGLITZ; P. FRIES. *Ernst Strüngmann Inst. (ESI) For Neurosci. In Cooperation With Max Planck, Inst. for Microsystem Technol. (IMTEK), Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society.*

3:00 VV63 **661.11** ● Development and initial characterizations of a novel 3D ultra-flexible neural interface that is implantable in brain tissue with preserved structure. J. AGORELIUS*; F. TSANAKALIS; A. FRIBERG; P. PETTERSSON; L. M. E. PETTERSSON; J. SCHOUENBORG. *Lund Univ.*

4:00 VV64 **661.12** ● Integrative physiobehavioral monitoring for health patterns feedback and research: Chronic wireless and computer vision analysis in an open-source platform. T. A. NICK*; E. D. LUNDQUIST; L. M. BERMAN; A. Z. BARNEHAMA. *Melon.*

1:00 VV65 **661.13** Whole-brain electrophysiological recording in the isolated naked mole-rat brain. D. P. MCCLOSKEY*; T. BUDYLIN; M. ZIONS. *City Univ. of New York, Grad. Ctr. of CUNY, City Univ. of New York.*

2:00 VV66 **661.14** ● High spatial and temporal resolution chemical measurements with functionalized neural probe. E. BIGELOW*; C. WHITE; J. FEINBERG-SOMERSON; K. PLAXCO; B. G. JAMIESON. *Diagnos. Biochips, Univ. of California, Santa Barbara.*

3:00 VV67 **661.15** *In vivo* recordings via microscale diameter neuroprobe block devices. H. SAWAHATA*; S. YAMAGIWA; A. MORIYA; H. OI; Y. ANDO; R. NUMANO; M. ISHIDA; K. KOIDA; T. KAWANO. *Toyohashi Univ. of Technol., Toyohashi Univ. of Technol.*

4:00 VV68 **661.16** Fabrication of microscale diameter neuroprobe block devices. S. YAMAGIWA*; H. SAWAHATA; A. MORIYA; M. ISHIDA; K. KOIDA; T. KAWANO. *Toyohashi Univ. of Technol., Electronics-Inspired Interdisciplinary Res. Inst. (EIIRIS), Toyohashi Univ. of Technol.*

1:00 VV69 **661.17** An array of vertically aligned nanoscale tipped microprobe electrodes. Y. KUBOTA*; H. OI; H. SAWAHATA; A. GORYU; Y. ANDO; R. NUMANO; M. ISHIDA; T. KAWANO. *Toyohashi Univ. of Technol., Toyohashi Univ. of Technol., Toyohashi Univ. of Technol.*

2:00 VV70 **661.18** Neural correlates of tourette syndrome within the centromedian thalamus, premotor and primary motor cortices. J. B. SHUTE*; N. MALING; J. ROSSI; C. DE HEMPTINNE; K. FOOTE; M. OKUN; A. GUNDUZ. *UF, UF, Case Western, UF, UCSF Sch. of Med., UF.*

3:00 VV71 **661.19** Intraoperative functional mapping of hand premotor cortex for chronic implantation of subdural strip electrodes. N. MALING*; J. B. SHUTE; P. J. ROSSI; C. DE HEMPTINNE; J. C. SANCHEZ; B. KRETZMAN; A. W. SHUKLA; K. D. FOOTE; M. S. OKUN; A. GUNDUZ. *Univ. of Florida, UCSF, Univ. of Miami.*

4:00 VV72 **661.20** End of anonymity for single units in extracellular recordings. P. LEDOCHOWITSCH*; D. DENMAN; A. CHENG; G. SOLER-LLAVINA; H. ZHENG; T. J. BLANCHE. *Allen Inst. For Brain Sci.*

1:00 VV73 **661.21** A wireless transmission neural interface system for non-human primates. J. FERNANDEZ-LEON*; A. PARAJULI; M. MULAS; M. HU; R. FRANKLIN; M. SORENSON; B. HANSEN; V. DRAGOI. *Univ. of Texas-Houston Med. Sch., Ctr. for Computat. Neurosci. and Robotics, Univ. of Sussex, Fakultät für Elektrotechnik und Informationstechnik, Technische Univ. München, Blackrock Microsystems, Inc., Systems Neurobio. Laboratories, Salk Inst.*

2:00 VV74 **661.22** Spike sorting for large, dense electrode arrays. S. N. KADIR*; C. ROSSANT; D. F. GOODMAN; K. D. HARRIS. *Univ. Col. London, Harvard Med. Sch.*

3:00 VV75 **661.23** Model-based measurement of eeg data from linear high-density array. R. KOZMA*; W. J. FREEMAN, III; J. J. DAVIS; C. LIN. *Univ. of Memphis, UC Berkeley, Embassy of Peace, Natl. Chiao Tung Univ.*

4:00 VV76 **661.24** Quantitative methods for determining spike sorting quality in neonatal rodent cortex. C. LAI; J. BERZHANSKAYA; M. T. COLONNESE*. *The George Washington Univ. SEAS, The George Washington Univ. Sch. of Med.*

1:00 VV77 **661.25** ● MEMS neural probe for local drug delivery to mouse brain with simultaneous recording of neural signals. I. CHO*; H. LEE; Y. SON; E. YOON; J. KIM; C. J. LEE; D. KIM; Y. KIM. *Korea Inst. of Sci. and Technol., Korea Inst. of Sci. and Technol., Korea Inst. of Sci. and Technol., Korea Inst. of Sci. and Technol.*

2:00 VV78 **661.26** A comparison of metrics for phase-amplitude coupling. C. RENNÓ-COSTA*; A. B. L. TORT. *Federal Univ. of Rio Grande do Norte.*

3:00 VV79 **661.27** Construction of *in vitro* neuronal networks by assembling single neural cells using a microfabricated cell-handling device. S. YOSHIDA*; S. TAKEUCHI. *The Univ. of Tokyo.*

4:00 VV80 **661.28** Stretchable array for epidural and subdural electrocorticogram recordings in freely moving rodents. A. HIRSCH*; N. PAVLOVA; I. MINEV; Q. BARRAUD; J. GANDAR; G. COURTINE; S. P. LACOUR. *LSBI/EPFL, EPFL, EPFL.*

1:00 VV81 **661.29** Bio-coating to improve long-term performance of chronic intracortical implants. S. DE FAVERI*; E. MAGGIOLINI; E. CASTAGNOLA; A. ANSALDO; D. RICCI; L. FADIGA; F. BENFENATI. *FONDAZIONE Istituto Italiano Di Tecnologia, Univ. of Ferrara, Univ. of Genova.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 VV82 **661.30** *In vitro* recording of hippocampal gamma oscillations with multi-electrode arrays for CNS drugs characterization. E. STEIDL*; R. TEYSSIE; M. GLEYZES; F. MADDALENA; H. SAVINEL; B. BUISSON. *Neuroservice.*

3:00 VV83 **661.31** High fidelity biopotential recordings in mice using a novel telemetry implant. S. MALPAS*; S. LAU; D. RUSSELL; D. MCCORMICK; S. GUILD; D. BUDGETT; M. KONDO. *Millar Inc.*

• Indicated a real or perceived conflict of interest, see page 157 for details.

▲ Indicates a high school or undergraduate student presenter.

Conflict of Interest Statements

The following presenters, signified by a dot (•) in the program, indicated a real or perceived conflict of interest. Presenters listed without a dot in the program had no financial relationships to disclose.

ABSTRACT NUMBER	STATEMENT
477.05	**X. Zhu:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Nutricia.
481.08	**E.N. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Technology licensing agreement with Masimo. **P.L. Purdon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Technology licensing agreement with Masimo.
482.01	**M.J. Savage:** A. Employment/Salary (full or part-time); Merck and Company. **M.S. Michener:** A. Employment/Salary (full or part-time); Merck and Company. **B.E. Smith:** A. Employment/Salary (full or part-time); Merck and Company. **J. Kalinina:** A. Employment/Salary (full or part-time); Merck and Company.
482.04	**D.W. Moechars:** A. Employment/Salary (full or part-time); Janssen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Janssen. **E. Peeraer:** A. Employment/Salary (full or part-time); Janssen. **A. Bottelbergs:** A. Employment/Salary (full or part-time); Janssen. **J. Kemp:** A. Employment/Salary (full or part-time); Janssen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Janssen.
482.05	**S.S. Ahmadian:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lster Binder PhD.
482.07	**H.U. Demuth:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock, Probiodrug AG. **S.F. Schilling:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock, Probiodrug AG. **I. Lues:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Probiodrug AG. **K. Glund:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Probiodrug AG.
482.10	**V.Y. Hook:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity, American Life Science Pharmaceuticals. **S. Jacobsen:** A. Employment/Salary (full or part-time); employment, AstraZeneca. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity, American Life Science Pharmaceuticals. **M. Kindy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity, Applied Neurological Testing. **G. Hook:** A. Employment/Salary (full or part-time); employment, American Life Science Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity, American Life Science Pharmaceuticals.
484.05	**J. Sigvarssson:** A. Employment/Salary (full or part-time); BioArctic Neuroscience.
485.01	**T. Sutula:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TS has equity in Neurogenomex.
485.05	**D. Kaetzel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DK, SS, MCW and DMK have applied for a patent relating to the use of DREADDs in the treatment of epilepsy. **S. Schorge:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DK, SS, MCW and DMK have applied for a patent relating to the use of DREADDs in the treatment of epilepsy. **M.C. Walker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DK, SS, MCW and DMK have applied for a patent relating to the use of DREADDs in the treatment of epilepsy. **D.M. Kullmann:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DK, SS, MCW and DMK have applied for a patent relating to the use of DREADDs in the treatment of epilepsy.
486.02	**M. Mullan:** A. Employment/Salary (full or part-time); Rock Creek Pharmaceuticals.
487.05	**K. Tajinda:** A. Employment/Salary (full or part-time); Astellas. **A. Sawa:** 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; Astellas.
487.09	**A. Sawa:** 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; Sucampo AG.
487.10	**H. Yukitake:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company. **K. Yamanaka:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company. **H. Kimura:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company. **K. Hirai:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company. **A. Sawa:** 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; Collaboration with Takeda Pharmaceutical Company.
490.10	**E.B. Binder:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Max Planck Institute of Psychiatry.
493.18	**L. Lee:** Other; Neurobiology and Cognitive Science Center.
496.09	**B. Hattiangady:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); MegaResveratrol Company supplied Resveratrol for these studies for no charge.
499.16	**E. Junge:** A. Employment/Salary (full or part-time); The University of Scranton. **M.A. Seid:** A. Employment/Salary (full or part-time); The University of Scranton.
499.20	**A.C. Chedotal:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Grant from Sanofi.
500.03	**G.B. Wells:** A. Employment/Salary (full or part-time); Texas A&M University. **A.M. Person:** A. Employment/Salary (full or part-time); Texas A&M University.
500.12	**G. Kirsch:** A. Employment/Salary (full or part-time); ChanTest. 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; FDA. **Y. Kuryshev:** A. Employment/Salary (full or part-time); ChanTest Corporation. **Z. Liu:** A. Employment/Salary (full or part-time); ChanTest Corporation. **L. Armstrong:** A. Employment/Salary (full or part-time); ChanTest Corporation. **C. Mathes:** A. Employment/Salary (full or part-

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	time); ChanTest Corporation. **A.M. Brown:** A. Employment/Salary (full or part-time); ChanTest Corporation. 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; FDA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); ChanTest Corporation.
500.14	**K. Dedominicis:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **H. Hwang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **M. Uddin:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **S. Lee:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **T.T. Olson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **N. Sahibzada:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **Y. Xiao:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **B.B. Wolfe:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **K.J. Kellar:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A. **R.P. Yasuda:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Georgetown University holds the patent for sazetidine-A.
501.03	**P.C.G. Haddick:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Genentech.
501.06	**P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **M. Nedelman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research, Ekam Imaging.
501.15	**C. Zorumski:** F. Consulting Fees (e.g., advisory boards); SAGE Therapeutics.
501.22	**A. Bertolino:** A. Employment/Salary (full or part-time); Hoffmann-La Roche, Ltd.
501.24	**A.J. Linsenbardt:** A. Employment/Salary (full or part-time); Washington University. **S.M. Paul:** A. Employment/Salary (full or part-time); Sage Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sage Therapeutics. **J.J. Doherty:** A. Employment/Salary (full or part-time); Sage Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sage Therapeutics. **C.F. Zorumski:** A. Employment/Salary (full or part-time); Washington University. F. Consulting Fees (e.g., advisory boards); Sage Therapeutics. **S. Mennerick:** A. Employment/Salary (full or part-time); Washington University. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Sage Therapeutics.
502.14	**B. Ferger:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co. KG.
502.28	**N.C. Stratman:** A. Employment/Salary (full or part-time); Pfizer Inc. **C.J. Schmidt:** A. Employment/Salary (full or part-time); Pfizer Inc.
503.02	**H. Mitchell:** A. Employment/Salary (full or part-time); Lieber Institute for Brain Development. **M.I. Mighdoll:** A. Employment/Salary (full or part-time); Lieber Institute for Brain Development. **G. Ursini:** A. Employment/Salary (full or part-time); Lieber Institute for Brain Development. **J. Shin:** A. Employment/Salary (full or part-time); Lieber Institute for Brain Development. **A. Jaffe:** A. Employment/ Salary (full or part-time); Lieber Institute for Brain Development. **R. Tao:** A. Employment/Salary (full or part-time); Lieber Institute for Brain Development. **D.R. Weinberger:** Other; Lieber Institute for Brain Development. **J.E. Kleinman:** A. Employment/Salary (full or part-time); Lieber Institute for Brain Development. **T.M. Hyde:** A. Employment/Salary (full or part-time); Lieber Institute for Brain Development.
507.02	**J.C. Brumberg:** A. Employment/Salary (full or part-time); Professor Queens College and the The Graduate Center, CUNY.
508.12	**C. Lin:** A. Employment/Salary (full or part-time); bernice428@gmail.com.
509.10	**H. Patel:** A. Employment/Salary (full or part-time); Biogen Idec. **A. Dunah:** A. Employment/Salary (full or part-time); Biogen Idec.
510.01	**R. Banati:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); •Patent or license related to the work being reported is held by the author and/or a university without direct corporate involvement at the time. **R.J. Middleton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); •Patent or license related to the work being reported is held by the author and/or a university without direct corporate involvement at the time. **G. Liu:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); •Patent or license related to the work being reported is held by the author and/or a university without direct corporate involvement at the time.
512.02	**B.J. Bedell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biospective, Inc.
512.10	**B. Ferger:** A. Employment/Salary (full or part-time); Boehringer Ingelheim GmbH & Co. KG.
512.13	**S. Sgroi:** A. Employment/Salary (full or part-time); Baasch-Medicus Foundation.
513.04	**M. Schmitt:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); UCB Biopharma Sprl. **B. Dehay:** A. Employment/Salary (full or part-time); (1) Institut des Maladies Neurodégénératives UMR5293, University of Bordeaux. **E. Bezard:** A. Employment/Salary (full or part-time); (1) Institut des Maladies Neurodégénératives UMR5293, University of Bordeaux. **F. Garcia-Ladona:** A. Employment/Salary (full or part-time); (2) Neurosciences Therapeutic Area , New Medicines, UCB Biopharma, (1) Institut des Maladies Neurodégénératives UMR5293, University of Bordeaux.
513.21	**O. Sesenoglu-Laird:** A. Employment/Salary (full or part-time); Copernicus Therapeutics Inc. **L. Padegimas:** A. Employment/Salary (full or part-time); Copernicus Therapeutics Inc. **M.J. Cooper:** A. Employment/Salary (full or part-time); Copernicus Therapeutics Inc.
514.04	**A.M. Haidet-Phillips:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Q

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	Therapeutics, Inc. **J.T. Campanelli:** A. Employment/Salary (full or part-time); Q Therapeutics, Inc. **N.J. Maragakis:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Q Therapeutics, Inc.
514.06	**R.L. Klein:** 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; Karyopharm Therapeutics.
514.10	**B. Ferger:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co. KG.
515.06	**R.J. Mather:** A. Employment/Salary (full or part-time); AstraZeneca. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AstraZeneca. **J. Dunlop:** A. Employment/Salary (full or part-time); AstraZeneca. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AstraZeneca. **E. Aberg:** A. Employment/Salary (full or part-time); AstraZeneca. **M.C. Quirk:** A. Employment/Salary (full or part-time); AstraZeneca. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AstraZeneca. **D.M. Katz:** 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; AstraZeneca. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); AstraZeneca.
515.11	**F.M. Longo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PharmatrophiX.
515.22	**D.M. Katz:** 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; AstraZeneca.
517.04	**V.C. Brandt:** A. Employment/Salary (full or part-time); University clinic Schleswig-Holstein Lübeck, Institute of neurogenetics. **E. Niessen:** A. Employment/Salary (full or part-time); Institute of Neuroscience and Medicine, Research Centre Jülich. **C. Ganos:** A. Employment/Salary (full or part-time); Deutsche Forschungsgemeinschaft (DFG) Deutsche Forschungsgemeinschaft (MU1692/2-1) European Science Foundation. 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; Grants by Actelion, Ipsen, Pharm Allergan and Merz Pharmaceuticals. Deutsche Forschungsgemeinschaft (DFG) Deutsche Forschungsgemeinschaft (MU1692/2-1) European Science Foundation. **T. Bäumer:** A. Employment/ Salary (full or part-time); University clinic Schleswig-Holstein Lübeck, Institute of neurogenetics. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Commercial research support: Honoraria for lectures from Pharm Allergan, Ipsen, Merz Pharmaceuticals. **A. Münchau:** A. Employment/ Salary (full or part-time); University of Lübeck, Institute of neurogenetics. 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; Commercial research support Grants by Pharm Allergan, Ipsen, Merz Pharmaceuticals. Honoraria for lectures from Pharm Allergan, Ipsen, Merz Pharmaceuticals, Actelion, GlaxoSmithKline and Desitin. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Possehl-Stiftung, Lübeck Dystonia Coalition (USA) Tourette Syndrome Association (Germany) European Huntington Disease Network N.E.MO. Charity supporting the research of paediatric movement disorders.
517.09	**C. Lord:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Western Psychological Services.
517.15	**D.J. Heal:** 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 study was funded by Shire Pharmaceuticals, UK. **H.L. Rowley:** 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 study was funded by Shire Pharmaceuticals, UK. **R.S. 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; This study was funded by Shire Pharmaceuticals, UK. **P.H. Hutson:** A. Employment/Salary (full or part-time); I am employed by Shire Developments Inc.
519.03	**M.E. Modi:** A. Employment/Salary (full or part-time); Pfizer Inc. **T. Kiss:** A. Employment/Salary (full or part-time); Pfizer Inc. **D.L. Buhl:** A. Employment/Salary (full or part-time); Pfizer Inc.
519.25	**A. Fatemi:** F. Consulting Fees (e.g., advisory boards); BlueBirdBio.
520.19	**R. Kaminski:** A. Employment/Salary (full or part-time); UCB Biopharma SPRL. **M. Neveux:** A. Employment/Salary (full or part-time); UCB Biopharma SPRL. **B. Dardenne:** A. Employment/Salary (full or part-time); UCB Biopharma SPRL. **K. Koshibu:** A. Employment/Salary (full or part-time); UCB Biopharma SPRL. **I. Jacques:** A. Employment/ Salary (full or part-time); UCB Biopharma SPRL. **K. Leclercq:** A. Employment/Salary (full or part-time); UCB Biopharma SPRL.
521.10	**V. Riban:** A. Employment/Salary (full or part-time); Biocodex. **W. Deffains:** A. Employment/Salary (full or part-time); Biocodex. **I. Heulard:** A. Employment/Salary (full or part-time); Biocodex. **M. Verleye:** A. Employment/Salary (full or part-time); Biocodex.
521.12	**P. Ghisdal:** A. Employment/Salary (full or part-time); UCB BioPharma SPRL. **N. Noel:** A. Employment/Salary (full or part-time); UCB BioPharma SPRL. **Y. Quesnel:** A. Employment/Salary (full or part-time); UCB BioPharma SPRL. **I. Niespodziany:** A. Employment/Salary (full or part-time); UCB BioPharma SPRL. **C. Wolff:** A. Employment/ Salary (full or part-time); UCB BioPharma SPRL.
522.08	**R.L. Rennaker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vulintus, LLC.
523.08	**K.C. Hoy:** 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; Neilsen Foundation.
523.13	**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; This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Science, ICT & Future Planning(2013-31-0770).
523.20	**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. Cutrone2:** A. Employment/Salary (full or part-time); Athersys Inc. **A.E. Ting:** A. Employment/Salary (full or part-time); Athersys Inc. **R.J. Deans:** A. Employment/Salary (full or part-time);

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	Athersys Inc. **R.W. Mays:** A. Employment/Salary (full or part-time); Athersys Inc.
523.29	**B.T. Lang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder of ISP. **J.M. Cregg:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder of ISP. **J. Silver:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder of ISP.
524.02	**K. Borgmann-Winter:** A. Employment/Salary (full or part-time); University of Pennsylvania, Children's Hospital of Philadelphia. **H. Wang:** A. Employment/Salary (full or part-time); City University of New York. **R. Ray:** A. Employment/Salary (full or part-time); University of Pennsylvania. **B. Willis:** A. Employment/Salary (full or part-time); University of Pennsylvania. **B. Turetsky:** A. Employment/Salary (full or part-time); University of Pennsylvania. **C. Hahn:** A. Employment/Salary (full or part-time); University of Pennsylvania.
524.03	**J. Martel:** A. Employment/Salary (full or part-time); Pierre Fabre Médicaments. **N. Danty:** A. Employment/Salary (full or part-time); Pierre Fabre Médicaments. **A. Ormiere:** A. Employment/Salary (full or part-time); Pierre Fabre Médicaments. **G. Pulou:** A. Employment/Salary (full or part-time); Pierre Fabre Médicaments. **P. Sokoloff:** A. Employment/Salary (full or part-time); Pierre Fabre Médicaments.
524.05	**J. Nielsen:** A. Employment/Salary (full or part-time); Lundbeck. **P.H. Larsen:** A. Employment/Salary (full or part-time); Lundbeck. **B. Steiniger Brach:** A. Employment/Salary (full or part-time); Lundbeck.
524.16	**A. Eramo:** A. Employment/Salary (full or part-time); Lundbeck LLC, Medical Affairs & Phase IV Clinical Affairs, Chicago, USA.
525.08	**A. Christopoulos:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Eli Lilly & Co.
525.13	**S. Parmentier-Batteur:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **L. Warren:** A. Employment/Salary (full or part-time); Merck. **V. Kuzmick Graufelds:** A. Employment/Salary (full or part-time); Merck. **M.J. Marino:** A. Employment/Salary (full or part-time); Merck. **R. Gentzel:** A. Employment/Salary (full or part-time); Merck. **K.M. Smith:** A. Employment/Salary (full or part-time); Merck. **J.D. Vardigan:** A. Employment/Salary (full or part-time); Merck. **T. Rosahl:** A. Employment/Salary (full or part-time); Merck. **M. Tadin-Strapps:** A. Employment/Salary (full or part-time); Merck. **B.C. Magliaro:** A. Employment/Salary (full or part-time); merck. **A.J. Cooke:** A. Employment/Salary (full or part-time); Merck. **J.J. Renger:** A. Employment/Salary (full or part-time); Merck.
525.14	**X. Wang:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **M. Pearson:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **R. Gentzel:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **J. Uslaner:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **F. Thomson:** A. Employment/Salary (full or part-time); Merck & Co., Inc.
527.03	**A.L. Halberstadt:** A. Employment/Salary (full or part-time); University of California San Diego. 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; NIMH, Brain & Behavior Research Foundation. **J.W. Young:** A. Employment/Salary (full or part-time); University of California San Diego. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Lundbeck, Omeros. F. Consulting Fees (e.g., advisory boards); Amgen. **M.A. Geyer:** A. Employment/Salary (full or part-time); University of California San Diego. 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, US. Veteran's Administration VISN 22 Mental Illness, Research, Education, and Clinical Center, Intracellular Therapeutics, Johnson & Johnson. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); San Diego Instruments. F. Consulting Fees (e.g., advisory boards); Amgen, Abbott, Cerca, Dart Neuroscience, Merck, Omeros, Takeda, Teva.
528.02	**A.S. Divakaruni:** F. Consulting Fees (e.g., advisory boards); Seahorse Bioscience. **A.N. Murphy:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Seahorse Bioscience. F. Consulting Fees (e.g., advisory boards); Seahorse Bioscience.
528.03	**B. Trapp:** F. Consulting Fees (e.g., advisory boards); Renovo Neural.
528.04	**R.D. Bell:** 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.
528.06	**B. Ferger:** A. Employment/Salary (full or part-time); B.F. is a full time employee of Boehringer Ingelheim Pharma GmbH & Co. KG.
528.07	**Y. Pan:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **F. Ermini:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **J. Bridgewater:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **H. Lister:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **W.G. Haag:** 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; Coyote Pharmaceutical. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **A. Argade:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **H. Serizawa:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals.
528.08	**F. Ermini:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **Y. Pan:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **W.G. Haag:** 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; Coyote Pharmaceutical. E. Ownership Interest

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	(stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals. **A. Argade:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ankush_argade@yahoo.com. **H. Serizawa:** A. Employment/Salary (full or part-time); Coyote Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coyote Pharmaceuticals.
528.10	**S.H. Nye:** A. Employment/Salary (full or part-time); ENDECE Neural. 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; MS Society. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ENDECE Neural. **J.G. Yarger:** A. Employment/Salary (full or part-time); ENDECE Neural. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ENDECE Neural.
528.11	**M.S. Brennan:** A. Employment/Salary (full or part-time); Biogen Idec. **M.F. Matos:** A. Employment/Salary (full or part-time); Biogen Idec. **C. Sun:** A. Employment/Salary (full or part-time); Biogen Idec. **S. Szak:** A. Employment/Salary (full or part-time); Biogen Idec. **R.H. Scannevin:** A. Employment/Salary (full or part-time); Biogen Idec.
528.13	**E.R. Detrait:** A. Employment/Salary (full or part-time); UCB Biopharma. **E. Jnoff:** A. Employment/Salary (full or part-time); UCB Biopharma. **F. Brouta:** A. Employment/Salary (full or part-time); UCB Biopharma. **K. Leclercq:** A. Employment/Salary (full or part-time); UCB Biopharma. **E. Jigorel:** A. Employment/Salary (full or part-time); UCB Biopharma. **M. Wood:** A. Employment/Salary (full or part-time); UCB Biopharma. **M. Gillard:** A. Employment/Salary (full or part-time); UCB Biopharma. **H. Klitgaard:** A. Employment/Salary (full or part-time); UCB Biopharma. **A. Matagne:** A. Employment/Salary (full or part-time); UCB Biopharma. **Y. Lamberty:** A. Employment/Salary (full or part-time); UCB Biopharma. **B. Kenda:** A. Employment/Salary (full or part-time); UCB Biopharma. **L. Provins:** A. Employment/Salary (full or part-time); UCB Biopharma.
528.16	**G.V. Williams:** 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 Global Research and Development. **D.W. Campbell:** 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 Global Research and Development. **C.J. Schmidt:** A. Employment/Salary (full or part-time); Pfizer Global Research and Development. **M.M. Zaleska:** A. Employment/Salary (full or part-time); Pfizer Global Research and Development. **C.M. Sandiego:** 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 Global Research and Development. **R.E. Carson:** 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 Global Research and Development. **S.A. Castner:** 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 Global Research and Development.
528.18	**M.A. Nitsche:** F. Consulting Fees (e.g., advisory boards); Advisory Board Neuroelectrics.
529.06	**T. Williamson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIH NIA Grant. **X. Zhu:** 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 NIA Grant. **J.P. Walton:** 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 NIA Grant. **R.D. Frisina:** 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 NIA Grant.
531.07	**D.A. Butts:** A. Employment/Salary (full or part-time); University of Maryland.
534.02	**L. Cao:** A. Employment/Salary (full or part-time); Pfizer. **A. Loucif:** A. Employment/Salary (full or part-time); Pfizer. **P. Saintot:** A. Employment/Salary (full or part-time); Pfizer. **C. Adams:** A. Employment/Salary (full or part-time); Pfizer. **K. Kuan:** A. Employment/Salary (full or part-time); Pfizer. **R. Fish:** A. Employment/Salary (full or part-time); Pfizer. **M. Rigby:** A. Employment/Salary (full or part-time); Pfizer. **B. Antonio:** A. Employment/Salary (full or part-time); Pfizer. **K. Omoto:** A. Employment/Salary (full or part-time); Pfizer. **D. Pryde:** A. Employment/Salary (full or part-time); Pfizer. **E.B. Stevens:** A. Employment/Salary (full or part-time); Pfizer.
535.07	**D. Keller:** A. Employment/Salary (full or part-time); EPFL. 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; The EPFL Blue Brain Project Fund, The ETH Board Funding to the Blue Brain Project, CADMOS: The financial support for CADMOS and the Blue Gene/Q system is provided by the Canton of Geneva, Canton of Vaud, Hans Wilsdorf Foundation, Louis-Jeantet Foundation, University of Geneva, U.
535.19	**R. Steger:** A. Employment/Salary (full or part-time); Quantitative Research Fellow, City University of New York. **J.C. Brumberg:** A. Employment/Salary (full or part-time); Professor Queens College and the The Graduate Center, CUNY.
535.25	**P. Bastians:** A. Employment/Salary (full or part-time); Max Planck Institute of Neurobiology.
538.18	**W. Denk:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); License income from SBEM technology.
539.15	**K. Deisseroth:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Circuit Therapeutics. F. Consulting Fees (e.g., advisory boards); Circuit Therapeutics. **S.L. Delp:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Circuit Therapeutics. F. Consulting Fees (e.g., advisory boards); Circuit Therapeutics.
540.04	**B. Benedetti:** A. Employment/Salary (full or part-time); Innsbruck Medical University, Department of Physiology and medical Physics.
542.01	**S.M. Goetz:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); S. M. Goetz is inventor on patents and patent applications on TMS technology assigned to his current and former employers. **A.V. Peterchev:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder,

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	excluding diversified mutual funds); A. V. Peterchev is inventor on patents, patent applications, and invention disclosures on TMS technology assigned to Columbia University and Duke University; he has received research support, patent, patent royalties, and travel support from Rogue Research for cTMS technology licensed to them, TMS hardware donation from Magstim, and TMS equipment loan from MagVenture.
542.08	**T. Davidson:** 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; NorDocs Technologies.
542.20	**N. Khodaparast:** A. Employment/Salary (full or part-time); Microtransponder Inc. **R. Casavant:** A. Employment/Salary (full or part-time); Microtransponder Inc. **R. Rennaker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vulintus Inc. **M. Kilgard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Microtransponder Inc.
548.03	**V.B. Fenik:** A. Employment/Salary (full or part-time); VA GLA Healthcare System.
548.23	**S.V. Fox:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **P.L. Tannenbaum:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **A.L. Gotter:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **S.L. Garson:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **A.T. Savitz:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **J. Stevens:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **S.D. Kuduk:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **P.J. Coleman:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **C.J. Winrow:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options. **J.J. Renger:** A. Employment/Salary (full or part-time); Merck & Co., Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock and/or Stock Options.
548.29	**L. Ferrari:** A. Employment/Salary (full or part-time); Jazz Pharmaceuticals.
551.26	**R. Matsumoto:** Other; Endowed department (GSK, UCB, Otsuka, Nihon Kohden). **A. Ikeda:** Other; Endowed department (GSK, UCB, Otsuka, Nihon Kohden).
552.08	**C. Onyike:** 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; Site PI for TauRx-237007, a clinical trial of LMTM in FTD sponsored by TauRx. **M. Grossman:** A. Employment/Salary (full or part-time); Penn full-time employee, NIH support.
552.09	**M. Grossman:** A. Employment/Salary (full or part-time); University of Pennsylvania full time employee, NIH support.
553.10	**M.C. Niedziela:** A. Employment/Salary (full or part-time); HCD Research, Inc. **E. Carbone:** A. Employment/Salary (full or part-time); HCD Research, Inc. **P. Bolls:** F. Consulting Fees (e.g., advisory boards); HCD Research, Inc.
553.11	**H. Mayberg:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); St. Jude Medical Neuromodulation. F. Consulting Fees (e.g., advisory boards); St. Jude Medical Neuromodulation.
553.13	**U. Yamamoto:** A. Employment/Salary (full or part-time); DOSHISHA University. **T. Hiroyasu:** A. Employment/Salary (full or part-time); DOSHISHA University.
554.08	**A.B. Scholey:** 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; Bayer.
555.06	**H.R. Siebner:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Travel Support from Mag Venture, Denmark. Other; Honoraria as speaker from Lundbeck A/S, Valby, Denmark, Biogen Idec, Denmark A/S, and Genzyme, Denmark, Honoraria as editor from Elsevier Publishers, Amsterdam, The Netherlands and Springer Publishing, Stuttgart, Germany.
555.16	**E. Bullmore:** A. Employment/Salary (full or part-time); GSK.
557.04	**D. Heal:** F. Consulting Fees (e.g., advisory boards); Shire.
558.24	**C.D. Woody:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NIH, UCLA Academic Senate.
562.06	**J.D. Salamone:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Shire, Prexa. F. Consulting Fees (e.g., advisory boards); Shire.
563.21	**S.N. Haber:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Pfizer, Inc, Eli Lilly and Company, Medtronic, Inc.
564.06	**A. Sanchez:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Harlan (mouse donation).
565.04	**C. Bessho:** A. Employment/Salary (full or part-time); KSU.
569.04	**Z. He:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rugen, Axonis.
570.04	**L.L. Isom:** F. Consulting Fees (e.g., advisory boards); Cell Signaling Technology.
570.05	**L.K. Kaczmarek:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Autifony Inc.
573.07	**D. Weinshenker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Patent publication number US-2013-0274303-A1 titled "Methods and Compositions for Treatment of Drug Addiction".
574	**F.E. Bloom:** A. Employment/Salary (full or part-time); Founder and Director of Alkermes, plc, and a Director of AgenBio Inc., and LZ Therapeutics, Inc. I have no conflicts of interest for the materials to be presented.
584.05	**C.S. Cowan:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Institut Lallemand-Rosell.
590.03	**V.T. Chu:** A. Employment/Salary (full or part-time); EMD Millipore. **M. Lu:** A. Employment/Salary (full or part-time); EMD Millipore. **N. Yoshioka:** A. Employment/Salary (full

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	or part-time); UCSD School of Medicine. **S. Dowdy:** A. Employment/Salary (full or part-time); UCSD School of Medicine.
590.28	**Y. Chen:** A. Employment/Salary (full or part-time); EMD Millipore. **N. Asbrock:** A. Employment/Salary (full or part-time); EMD Millipore. **V. Chu:** A. Employment/Salary (full or part-time); EMD Millipore.
591.04	**T.M. Elul:** A. Employment/Salary (full or part-time); Touro University California.
593.12	**L. Jia:** A. Employment/Salary (full or part-time); Henry Ford Hospital. 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 NS075084.
595.08	**N. Dejeneka:** A. Employment/Salary (full or part-time); Janssen R&D. **I. Harris:** A. Employment/Salary (full or part-time); Janssen R&D.
596.01	**J. Cervenak:** A. Employment/Salary (full or part-time); ImmunoGenes Ltd. **I. Kacskovics:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ImmunoGenes Ltd.
596.02	**J. Cervenak:** A. Employment/Salary (full or part-time); ImmunoGenes Ltd. **I. Kacskovics:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ImmunoGenes Ltd.
596.12	**M.N. Hill:** F. Consulting Fees (e.g., advisory boards); Hill - consultant for Pfizer.
597.04	**D. Sachidanandan:** A. Employment/Salary (full or part-time); IIT Madras, India, MHRD, India. 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; CSIR, India.
597.11	**S.G. Carver:** A. Employment/Salary (full or part-time); American University, Yale University. **M. Hines:** A. Employment/Salary (full or part-time); Yale 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; NINDS R01NS11613.
597.17	**S. Lule:** A. Employment/Salary (full or part-time); Hacettepe University. **T. Yildirim:** A. Employment/Salary (full or part-time); Ankara Atatürk Education and Research Hospital. **A. Eylen:** A. Employment/Salary (full or part-time); Ankara Atatürk Education and Research Hospital. **S. Cankurtaran-Sayar:** A. Employment/Salary (full or part-time); Ankara University. **K. Sayar:** A. Employment/Salary (full or part-time); Ankara University. **M. Ugur:** A. Employment/Salary (full or part-time); Ankara University. **O. Ugur:** A. Employment/Salary (full or part-time); Ankara University. **T. Dalkara:** A. Employment/Salary (full or part-time); Hacettepe University. **Y. Gursoy-Ozdemir:** A. Employment/Salary (full or part-time); Hacettepe University.
598.18	**A.M. Taylor:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); UC Irvine, Xona Microfluidics, LLC.
600.09	**Q. Lin:** 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.
601.19	**N. Rasumov:** A. Employment/Salary (full or part-time); OIST GU. **E. De Schutter:** A. Employment/Salary (full or part-time); OIST GU.
602.24	**A. Koeppen-Babcock:** A. Employment/Salary (full or part-time); Children's Hospital of Philadelphia.
603.19	**D. Ahuja:** A. Employment/Salary (full or part-time); part-time. **C. Smiley:** A. Employment/Salary (full or part-time); Full time. **P. Nuni:** A. Employment/Salary (full or part-time); full time.
604.16	**W. Spooren:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche.
604.17	**R. Nair:** A. Employment/Salary (full or part-time); Hoffmann La Roche, Biozentrum.
606.08	**A. Barborica:** A. Employment/Salary (full or part-time); FHC Inc, Bowdoin ME.
606.10	**J.A. Fisher:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Thornhill Research Inc. **D.J. Mikulis:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Thornhill Research Inc.
607.26	**J. Wojciak:** A. Employment/Salary (full or part-time); Lpath, Inc. **R.A. Sabbadini:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lpath Inc.
608.04	**H. Zhang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U.S. patent on experimental compounds F002, SGT11, and Compound 7. **D.P. Hesson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U.S. patent on experimental compounds F002, SGT11, and Compound 7. **M. Greene:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U.S. patent on experimental compounds F002, SGT11, and Compound 7. (US 8,318,699 B2).
610.02	**E.L. Adams:** A. Employment/Salary (full or part-time); Quincy Bioscience.
610.06	**J.D. Marks:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Maroon Biotech.
611.05	**J.R. Huie:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Xencor, Inc. **D. Szymkowski:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Xencor, Inc.
612.17	**Y. Zhang:** A. Employment/Salary (full or part-time); University of Texas Medical Branch. **Y. Shi:** A. Employment/ Salary (full or part-time); University of Texas Medical Branch. **B. Li:** A. Employment/Salary (full or part-time); University of Texas Medical Branch. **W. Ru:** A. Employment/Salary (full or part-time); University of Texas Medical Branch. **S. Tang:** A. Employment/Salary (full or part-time); University of Texas Medical Branch.
613.04	**C. Salum:** 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; FAPESP (2011/09548-3)/ Brazil, CNPq 476162/2011-4 / Brazil, UFABC/ Brazil. **A.H. Kihara:** 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; FAPESP/ Brazil.
613.06	**C. Schifani:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co.KG. **A. Relo:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co.KG. **C. Klein:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co.KG. **A.Y. Bespalov:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co.KG.
613.07	**M. Miyauchi:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma Co. Ltd. **Y. Oyamada:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma Co., Ltd. **H.Y. Meltzer:** 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; Dainippon Sumitomo Pharma Co., Ltd. F. Consulting Fees (e.g., advisory boards); Dainippon Sumitomo Pharma Co., Ltd.

614.02 **T.G. van Erp:** F. Consulting Fees (e.g., advisory boards); Roche Pharmaceuticals, Inc.

614.25 **C.E. Lathan:** F. Consulting Fees (e.g., advisory boards); AnthroTronix Inc. **J.L. Spira:** F. Consulting Fees (e.g., advisory boards); AnthroTronix Inc.

615.06 **W. Drevets:** A. Employment/Salary (full or part-time); Johnson & Johnson, Inc. F. Consulting Fees (e.g., advisory boards); Myriad/Rules Based Medicine, Inc.

615.07 **R. Zhou:** A. Employment/Salary (full or part-time); Beijing Key Lab of Applied Experimental Psychology, School of Psychology, Beijing Normal University, Beijing 100875, China, State Key Laboratory of Cognitive Neuroscience and Learning & IDG/McGovern Institute for Brain Research, Beijing Normal University, Center for Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal University, Research Center of Emotion Regulation, Beijing Normal University, Beijing 100875, China. 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; the National Basic Research Program of China (No2011CB505101), the key lab open project of Beijing University of Chinese Medicine (2011-SYSKFKT03), the Shangshan funding.

615.17 **K.A.B. Lapidus:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic. F. Consulting Fees (e.g., advisory boards); Halo Neuro, Inc.

615.18 **C. Zarate:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A patent application for the use of ketamine in depression has been submitted listing Dr. Carlos A. Zarate among the inventors; he has assigned his rights on the patent to the U.S. government, but wil.

615.25 **H.S. Mayberg:** F. Consulting Fees (e.g., advisory boards); St. Jude Medical Neuromodulation.

617.02 **C. Wahlestedt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-founder of Epigenetix.

617.11 **M.P. Carvalho:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CAPES.

617.15 **Z.D. Brodnik:** A. Employment/Salary (full or part-time); Drexel University College of Medicine. **R. Espana:** A. Employment/Salary (full or part-time); Drexel University College 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; NIDA (DA025279), NIDA (DA031900).

620.03 **M. Ehlers:** A. Employment/Salary (full or part-time); Pfizer Neurocience.

621.10 **A.R. Hirsch:** A. Employment/Salary (full or part-time); Smell & Taste Treatment and Research Foundation.

621.23 **K. Nishida:** A. Employment/Salary (full or part-time); Kyoto Pharm 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; A Grant-in-Aid for Young Scientists (B) (22790134) from the ministry of Education, Science and Culture of Japan. **K. Nagasawa:** A. Employment/Salary (full or part-time); Kyoto Pharmaceutical University.

624.07 **S. Cavdaroglu:** A. Employment/Salary (full or part-time); Humboldt Universitat zu Berlin. 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; DFG. **A. Knops:** A. Employment/Salary (full or part-time); Humboldt Universitat zu Berlin. 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; DFG.

627.07 **M.D. Kohls:** A. Employment/Salary (full or part-time); Advanced Targeting Systems, Inc. **D.A. Lappi:** A. Employment/Salary (full or part-time); Advanced Targeting Systems, Inc. **L.R. Ancheta:** A. Employment/Salary (full or part-time); Advanced Targeting Systems, Inc.

627.10 **J.J. Janik:** A. Employment/Salary (full or part-time); Stryker Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stryker Corporation.

627.16 **H. Hotta:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cutaneous stimulation tools, Toyoresin Co.

628.11 **E. Mohammadi:** 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; Helsinn SA. **C. Pietra:** A. Employment/Salary (full or part-time); C. Pietra, Helsinn SA. **K. Tyler:** 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; Helsinn SA. **R. Northrup:** A. Employment/Salary (full or part-time); Helsinn Therapeutics Inc. **B. Greenwood:** 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; Helsinn SA.

628.20 **M. Kalinichev:** A. Employment/Salary (full or part-time); Addex Therapeutics.

629.01 **A.L. Sheets:** F. Consulting Fees (e.g., advisory boards); Ohio State University Consultant, GRANT: NIH/NINDS NS077446.

632.14 **M. Streng:** A. Employment/Salary (full or part-time); University of Minnesota. **L. Popa:** A. Employment/Salary (full or part-time); University of Minnesota. **T.J. Ebner:** A. Employment/Salary (full or part-time); University of Minnesota.

634.11 **R. Chaudhary:** A. Employment/Salary (full or part-time); National Brain Research Centre. **J. Venkatesh:** A. Employment/Salary (full or part-time); National Brain research Centre. **V. Rema:** A. Employment/Salary (full or part-time); National Brain Research Centre. 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; Welcome Trust Senior Research Fellowship.

635.11 **S. Bestmann:** 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; European Research Council, ERC, 260424.

635.21 **M.N. Ayala:** A. Employment/Salary (full or part-time); York University. **D.Y.P. Henriques:** A. Employment/Salary (full or part-time); York 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;

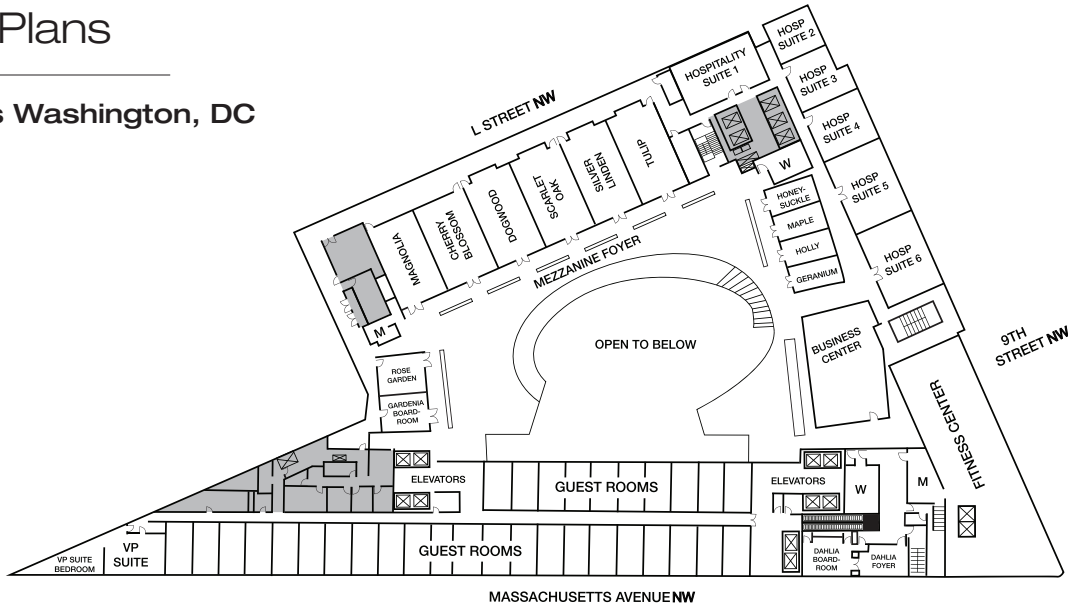
ABSTRACT NUMBER	STATEMENT
	Natural sciences and engineering research council of Canada.
636.27	**D.R. Merrill:** A. Employment/Salary (full or part-time); Ripple. **S. Hiatt:** A. Employment/Salary (full or part-time); Ripple. **K.S. Guillory:** A. Employment/Salary (full or part-time); Ripple. **C. Smith:** A. Employment/Salary (full or part-time); Ripple. **D. McDonnall:** A. Employment/Salary (full or part-time); Ripple.
637.13	**T.E. Lever:** A. Employment/Salary (full or part-time); University of Missouri. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NIH.
637.14	**M. Gonzalez-Fernandez:** A. Employment/Salary (full or part-time); Johns Hopkins University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIH Grant K23DC011056. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Book Royalties-Demos Medical Publishers. **A.E. Hillis:** A. Employment/Salary (full or part-time); Johns Hopkins University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIH R01 DC005375 .
637.18	**G. Malandraki:** A. Employment/Salary (full or part-time); Teachers College, Columbia University. **K. Friel:** A. Employment/Salary (full or part-time); Weill Cornel Medical College. 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; K award and R03 Grant. **J.J. Sheppard:** A. Employment/Salary (full or part-time); Teachers College, Columbia University. **A. Gordon:** A. Employment/Salary (full or part-time); Teachers College, Columbia University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Grant.
638.01	**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.
638.02	**T. Stieglitz:** F. Consulting Fees (e.g., advisory boards); CorTec. **J. Rickert:** A. Employment/Salary (full or part-time); CorTec. **M. Schuettler:** F. Consulting Fees (e.g., advisory boards); CorTec.
638.04	**J.A. Herron:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic Gift Funds. **H.J. Chizeck:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic Gift Funds.
638.07	**T. Stieglitz:** F. Consulting Fees (e.g., advisory boards); CorTec. **J. Rickert:** A. Employment/Salary (full or part-time); CorTec. **M. Schuettler:** F. Consulting Fees (e.g., advisory boards); CorTec.
638.13	**D.T. Bundy:** A. Employment/Salary (full or part-time); Neurolutions. **E.C. Leuthardt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurolutions.
642.20	**P.R. Mouton:** 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; Division National Toxicology Program, NIEHS/NIH (1Z01ES101623) and under NIEHS contracts (NO1-ES-25500; HHSN273201000086U. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stereology Resource Center. **G.S. Travlos:** 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; Division of Intramural Research NIEHS/NIH. **C.J. Price:** 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; RTI International, Division National Toxicology Program, NIEHS/NIH (1Z01ES101623) and under NIEHS contracts (NO1-ES-25500; HHSN273201000086U). **J. Harry:** 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; Division of Intramural Research.
642.22	**E.T. Bullmore:** A. Employment/Salary (full or part-time); GlaxoSmithKline plc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); GlaxoSmithKline plc.
643.05	**M. Nedelman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **S.P. Finklestein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biotrofix. **M. Ren:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biotrofix. **C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging, Ainimal Imaging Research.
646.02	**M.P. Aivar:** A. Employment/Salary (full or part-time); Universidad Autónoma de Madrid. **D.M. Kit:** A. Employment/Salary (full or part-time); University of Bath. **M.H. Tong:** A. Employment/Salary (full or part-time); The University of Texas at Austin. **M.M. Hayhoe:** A. Employment/Salary (full or part-time); The University of Texas at Austin.
647.08	**S.N. Haber:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Pfizer, Inc., Eli Lilly & Co., Medtronic Inc.
648.05	**C.H. Lin:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Rosetta Stone. **M.E. Baxter:** A. Employment/Salary (full or part-time); Rosetta Stone. **P.D. Nussbaum:** A. Employment/Salary (full or part-time); Rosetta Stone.
648.24	**N. Ng:** A. Employment/Salary (full or part-time); Lumos Labs, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc. **A. Kaluszka:** A. Employment/Salary (full or part-time); Lumos Labs, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc. **J.L. Hardy:** A. Employment/Salary (full or part-time); Lumos Labs, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc. **M.D. Scanlon:** A. Employment/Salary (full or part-time); Lumos Labs, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs, Inc.
649.01	**M. Grossman:** A. Employment/Salary (full or part-time); University of Penn. 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.
650.15	**J.G. Parker:** A. Employment/Salary (full or part-time);

ABSTRACT NUMBER	STATEMENT
	Pfizer. **M.D. Ehlers:** 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.J. Schnitzer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inscopix, Inc.
652.01	**S. Hochstein:** A. Employment/Salary (full or part-time); Hebrew University, Jerusalem. B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; grant from Israel Science Foundation (ISF). **V. Yakovlev:** A. Employment/Salary (full or part-time); Hebrew University, Jerusalem.
653.06	**L. Ver Donck:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica NV. **H. Duytschaever:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica NV. **R. Willems:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica NV. **L. Mertens:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica NV.
653.10	**N. Buscher:** A. Employment/Salary (full or part-time); All authors work for Janssen Research and Development. **P. van Dorsselaer:** A. Employment/Salary (full or part-time); All authors work for Janssen Research and Development. **T. Steckler:** A. Employment/Salary (full or part-time); All authors work for Janssen Research and Development. **J.C. Talpos:** A. Employment/Salary (full or part-time); All authors work for Janssen Research and Development.
657.05	**Y. Lu:** A. Employment/Salary (full or part-time); Georgia Regents University, Laboratory of Functional Plasticity, Learning and Memory (BBDI). **S. Frey:** A. Employment/ Salary (full or part-time); Georgia Regents University, Laboratory of Functional Plasticity, Learning and Memory (BBDI). **P. Wang:** A. Employment/Salary (full or part-time); Georgia Regents University, Laboratory of Functional Plasticity, Learning and Memory (BBDI). **J.U. Frey:** A. Employment/Salary (full or part-time); Georgia Regents University, Laboratory of Functional Plasticity, Learning and Memory (BBDI).
657.09	**J. Svensson Dalén:** A. Employment/Salary (full or part-time); Cellectricon AB. **A. Karlsson:** A. Employment/ Salary (full or part-time); Cellectricon AB. **M. Karlsson:** A. Employment/Salary (full or part-time); Cellectricon AB. **P. Karila:** A. Employment/Salary (full or part-time); Cellectricon AB.
657.17	**E. Ramsay:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Precision NanoSystems Inc. **C. Walsh:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Precision NanoSystems Inc. **A. Ansari:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Precision NanoSystems Inc. **A. Thomas:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Precision NanoSystems Inc. **K. Ou:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Precision NanoSystems Inc. **A. Wild:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Precision NanoSystems Inc. **T. Leaver:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Precision NanoSystems Inc. **R.J. Taylor:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Precision NanoSystems Inc. **D. Zwaenepoel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Precision NanoSystems Inc.
657.22	**D. Weldon:** A. Employment/Salary (full or part-time); EMD Millipore. **Y. Williams:** A. Employment/Salary (full or part-time); EMD Millipore. **A. Ko:** A. Employment/Salary (full or part-time); EMD Millipore. **V. Koong:** A. Employment/ Salary (full or part-time); EMD Millipore. **W. Jastromb:** A. Employment/Salary (full or part-time); Nikon.
657.29	**C. Litterst:** A. Employment/Salary (full or part-time); Bio-Rad. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Bio-Rad. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bio-Rad.
658.04	**J.E. Quintero:** F. Consulting Fees (e.g., advisory boards); Consultant for Quanteon LLC. **G.A. Gerhardt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Owner of Quanteon LLC.
658.13	**S. Majewski:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder.
658.17	**J. Okahara:** A. Employment/Salary (full or part-time); full. **H. Okano:** A. Employment/Salary (full or part-time); full. **E. Sasaki:** A. Employment/Salary (full or part-time); full.
659.12	**F. Chen:** A. Employment/Salary (full or part-time); Massachusetts Institute of Technology. **P.W. Tillberg:** A. Employment/Salary (full or part-time); Massachusetts Institute of Technology. **E.S. Boyden:** A. Employment/ Salary (full or part-time); Massachusetts Institute of Technology.
659.18	**G. Holst:** F. Consulting Fees (e.g., advisory boards); Neuromatic Devices Inc.
660.05	**E.B. Montgomery Jr:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Royalities from Wisconsin Alumni Research Foundation. F. Consulting Fees (e.g., advisory boards); FHC, Inc. **H. Huang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Royalities from Wisconsin Alumni Research Foundation. **A. Barborica:** A. Employment/ Salary (full or part-time); FHC Europe. **F. Haer:** A. Employment/Salary (full or part-time); FHC, Inc.
660.10	**J. Webber:** A. Employment/Salary (full or part-time); Molecular Devices, LLC. **A. Yehia:** A. Employment/Salary (full or part-time); Fluxion Bioscience. **J. Costantin:** A. Employment/Salary (full or part-time); Molecular Devices, LLC. **X. Jiang:** A. Employment/Salary (full or part-time); Molecular Devices, LLC.
661.11	**J. Schouenborg:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Jens Schouenborg is a stake holder in Neuronano AB that has a patent on the electrode.
661.12	**T.A. Nick:** A. Employment/Salary (full or part-time); Melon (full-time). **E.D. Lundquist:** A. Employment/Salary (full or part-time); Melon (full-time). **L.M. Berman:** A. Employment/Salary (full or part-time); Melon (full-time). **A.Z. Barnehama:** A. Employment/Salary (full or part-time); Melon (full-time).
661.14	**E. Bigelow:** A. Employment/Salary (full or part-time); Diagnostic Biochips. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Diagnostic Biochips. **C. White:** A. Employment/Salary (full or part-time); Diagnostic Biochips. **K. Plaxco:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Diagnostic Biochips. **B.G. Jamieson:** A. Employment/Salary (full or part-time); Diagnostic Biochips. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Diagnostic Biochips.
661.25	**I. Cho:** A. Employment/Salary (full or part-time); Korea Institute of Science and Technology.

Hotel Floor Plans

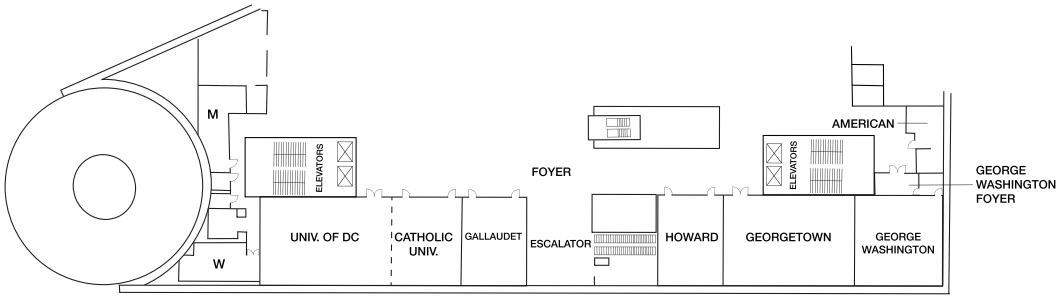
Marriott Marquis Washington, DC

Mezzanine Level



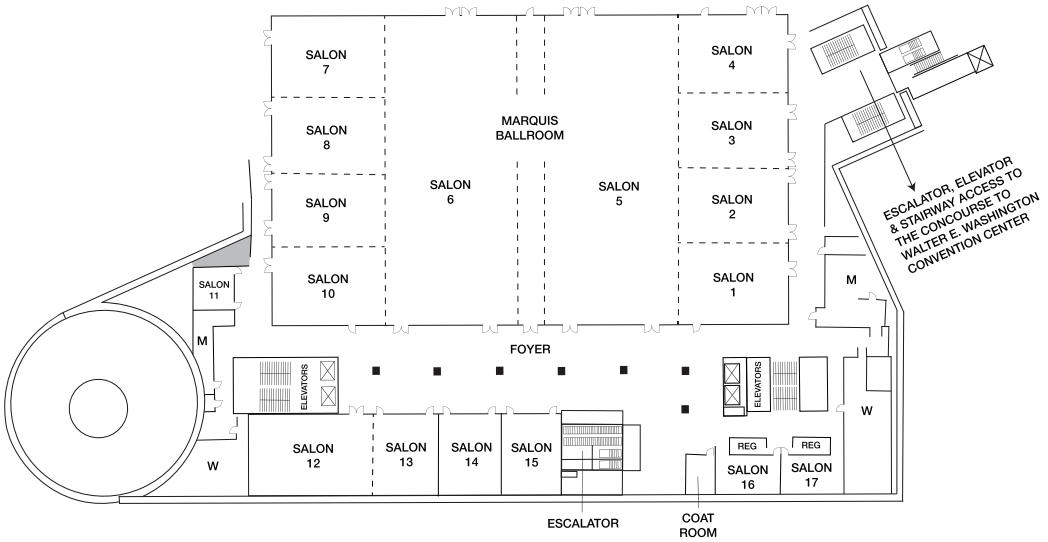
Marriott Marquis Washington, DC

Meeting Level 1



Marriott Marquis Washington, DC

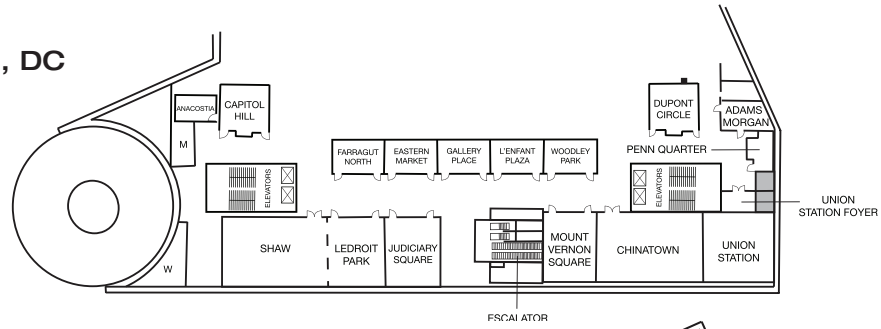
Meeting Level 2



Hotel Floor Plans

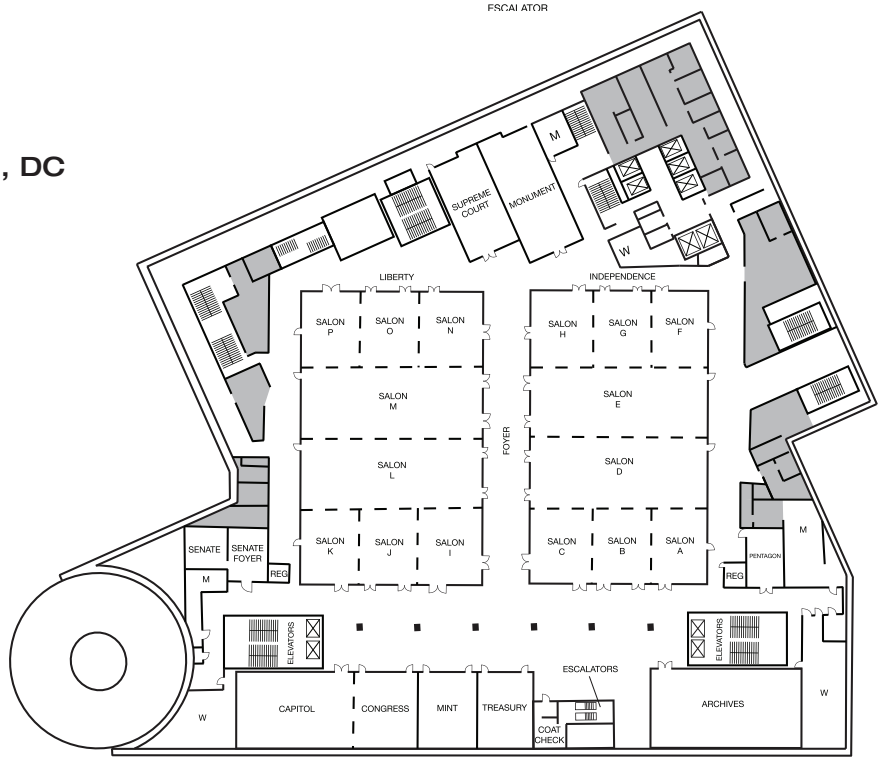
Marriott Marquis Washington, DC

Meeting Level 3



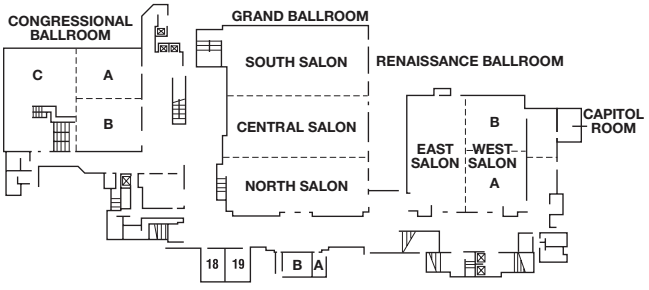
Marriott Marquis Washington, DC

Meeting Level 4



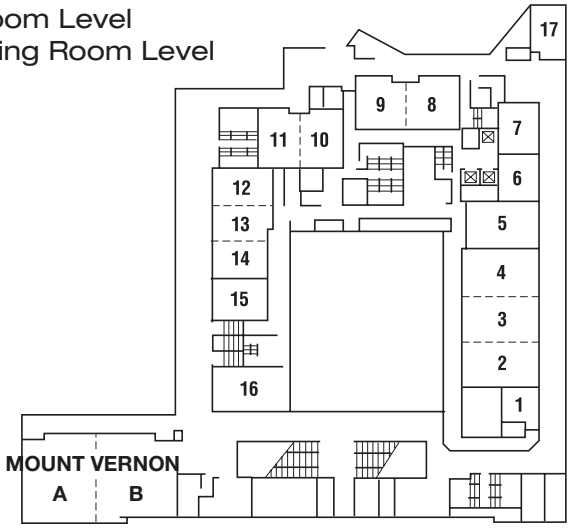
Renaissance Washington, DC Downtown Hotel

Ballroom Level



Renaissance Washington, DC Downtown Hotel

Ballroom Level
Meeting Room Level

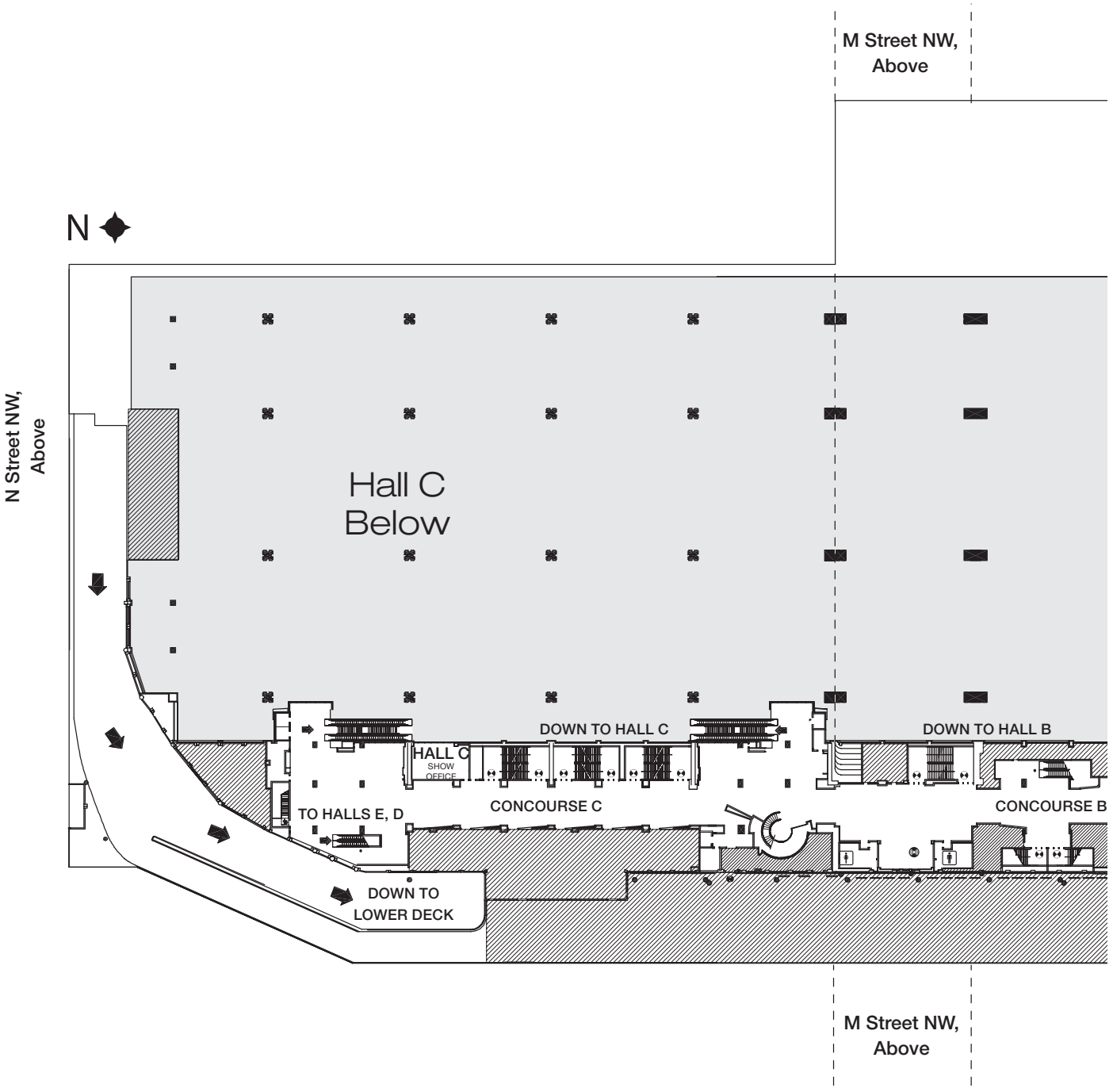


Convention Center Floor Plans

Concourse Level

Access to Exhibit Halls A–C

Show Offices A–C

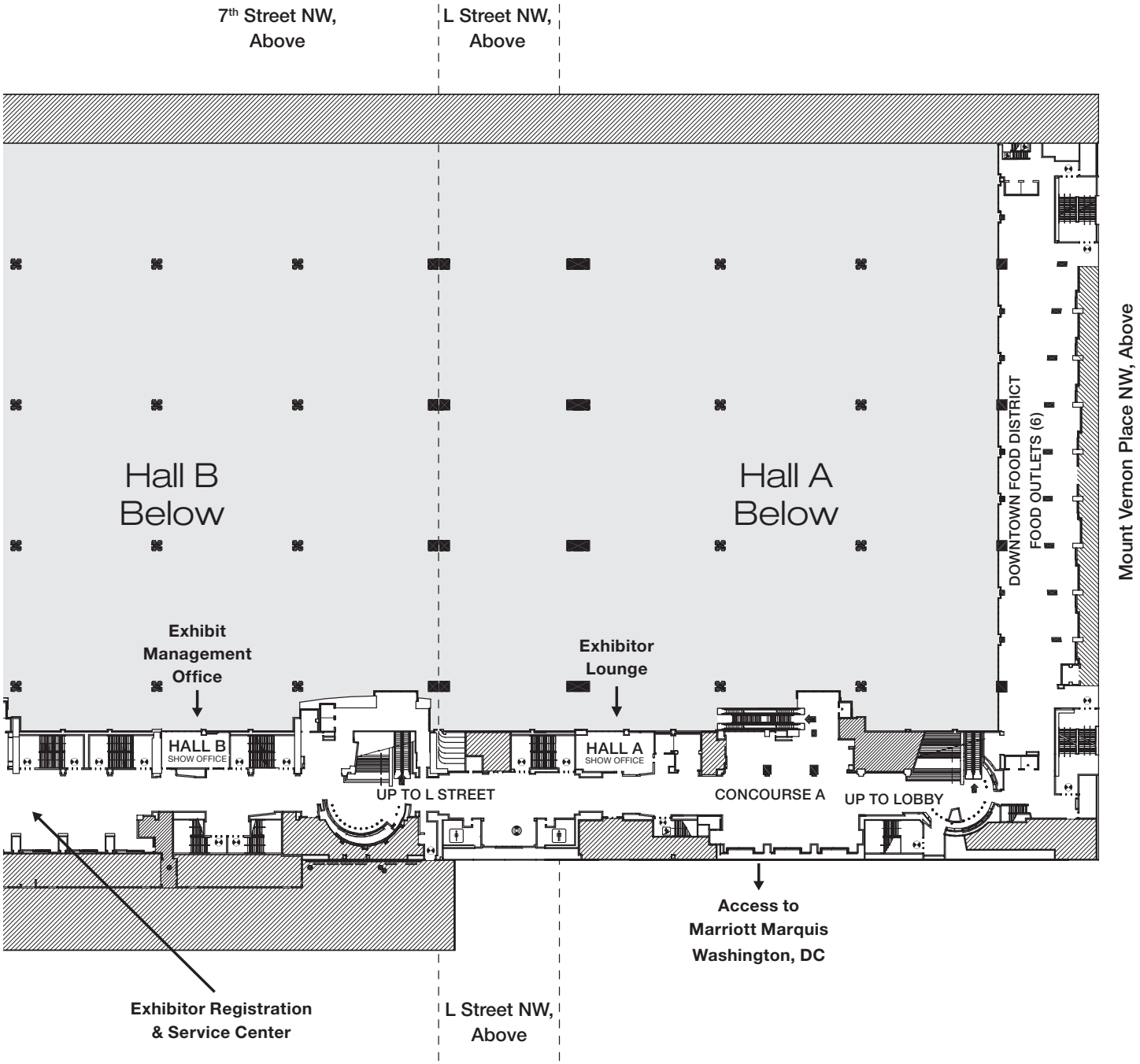


Convention Center Floor Plans

Concourse Level

Access to Exhibit Halls A–C

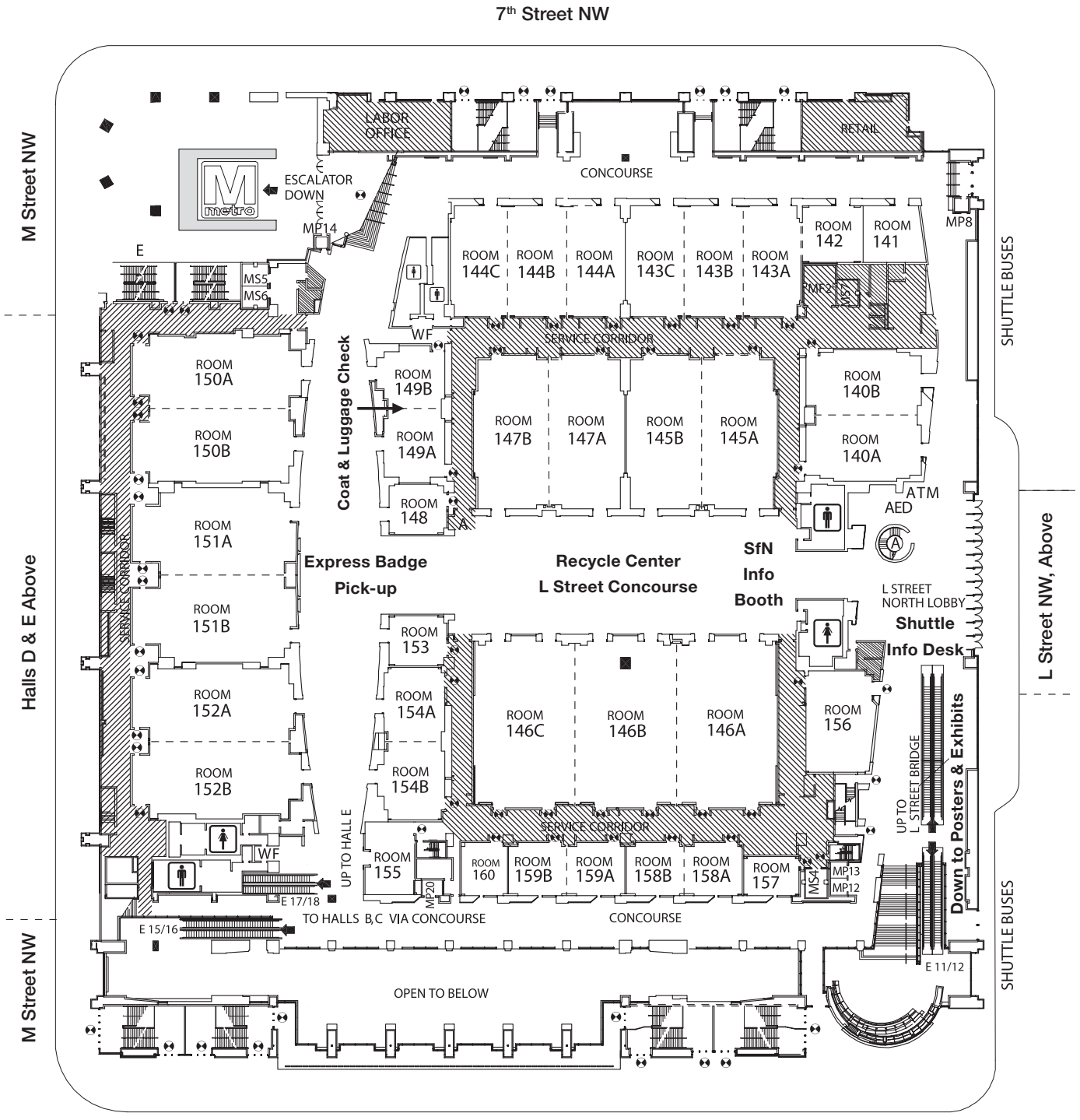
Show Offices A–C



Convention Center Floor Plans

Lobby Level/Level 1

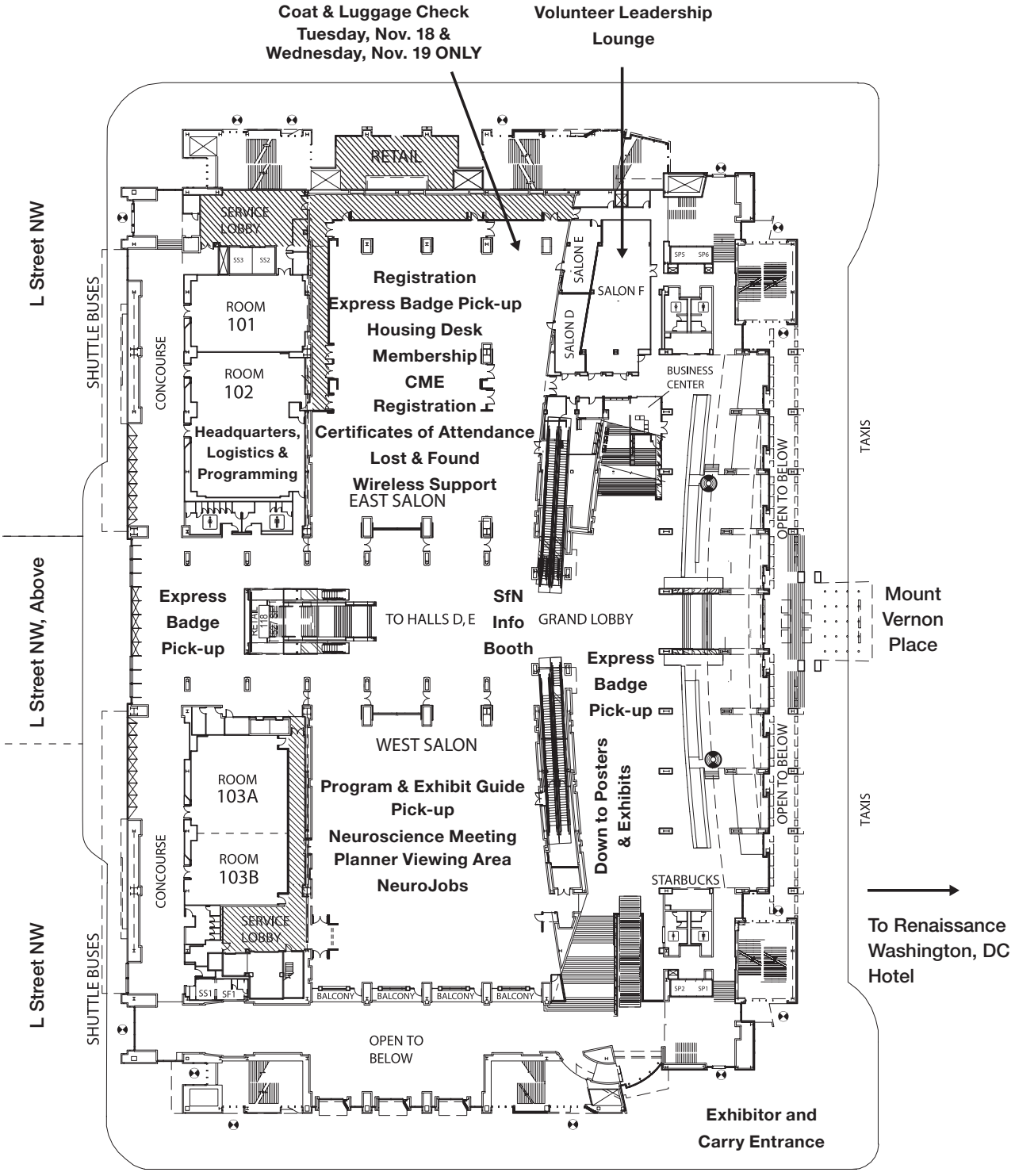
Meeting Rooms 101-103 & 150-160



Convention Center Floor Plans

Lobby Level/Level 1

Meeting Rooms 101-103 & 150-160

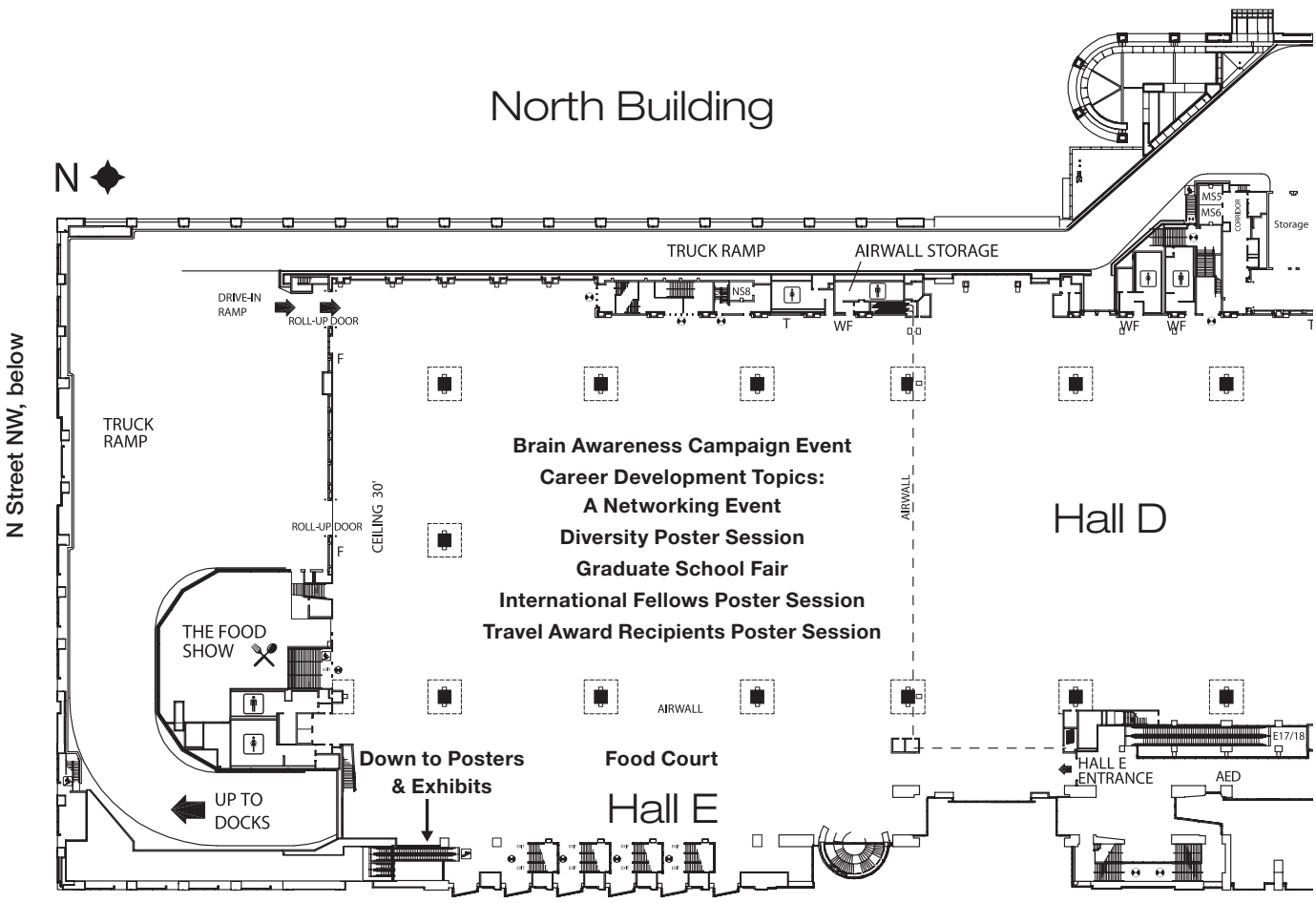


Convention Center Floor Plans

Level 2

Halls D &E

Meeting Rooms 201-210

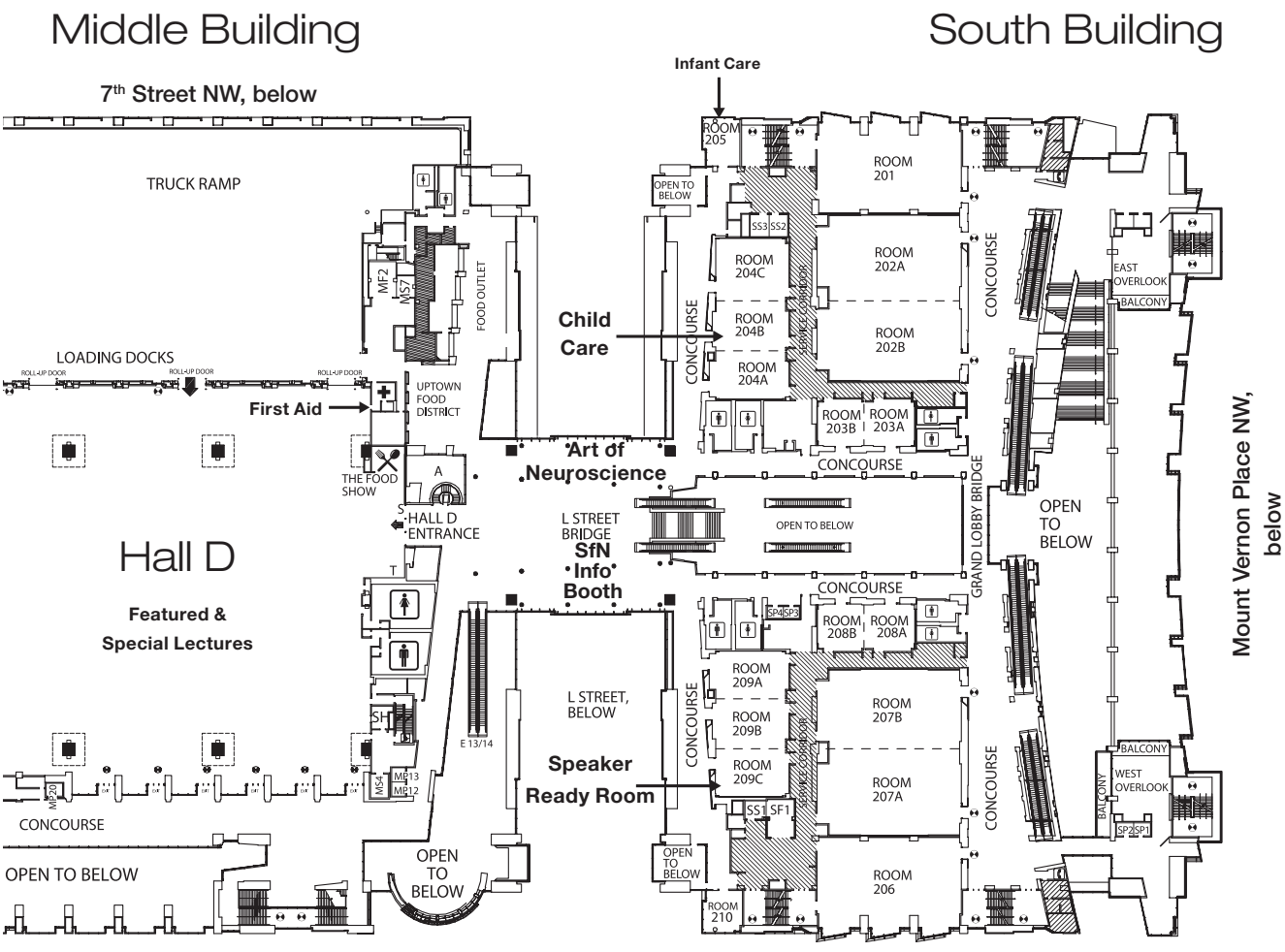


Convention Center Floor Plans

Level 2

Halls D &E

Meeting Rooms 201-210

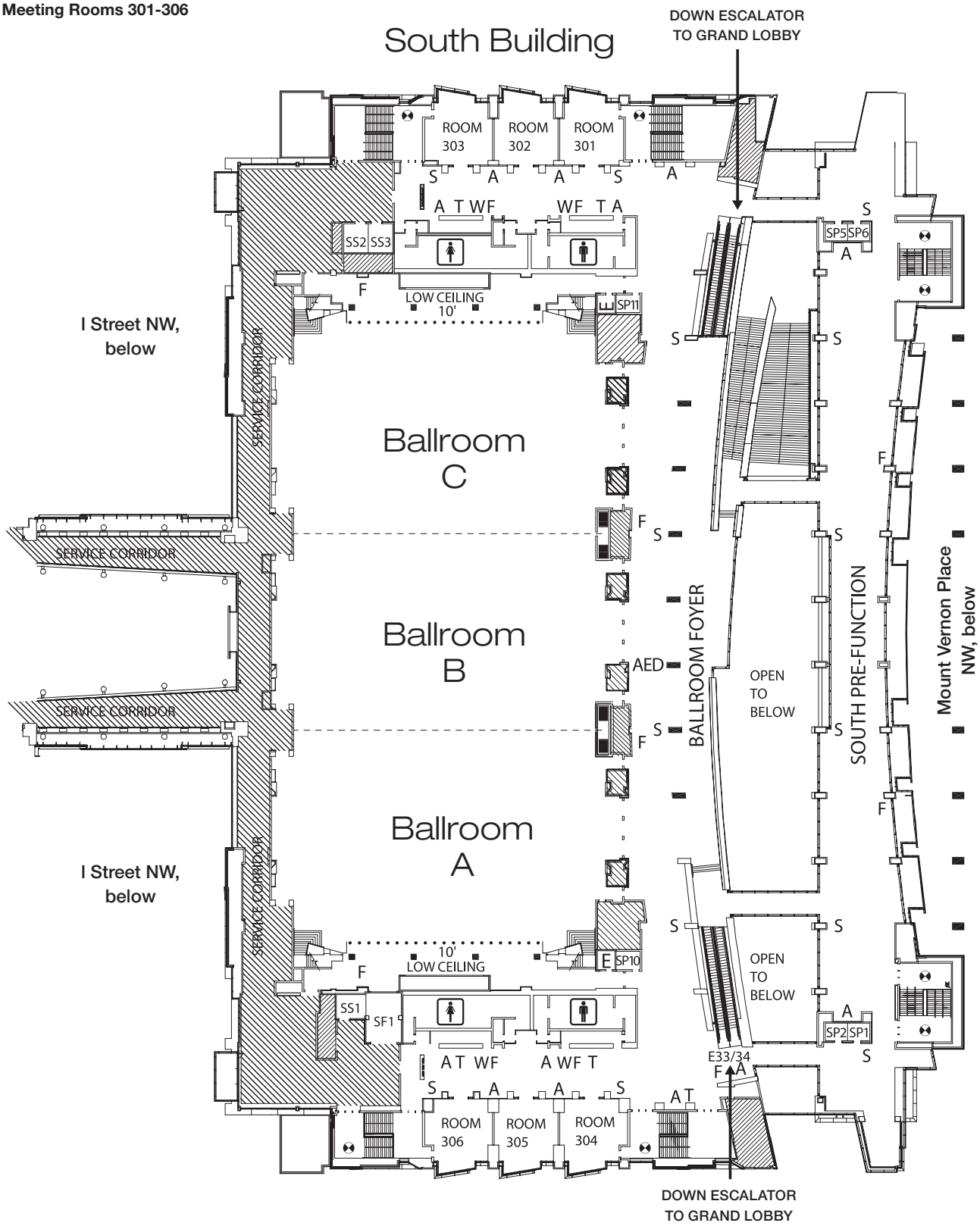


Convention Center Floor Plans

Level 3

Ballrooms A-C

Meeting Rooms 301-306



Neuroscience 2014 — Exhibits and Poster Sessions

Walter E. Washington Convention Center: Halls A–C

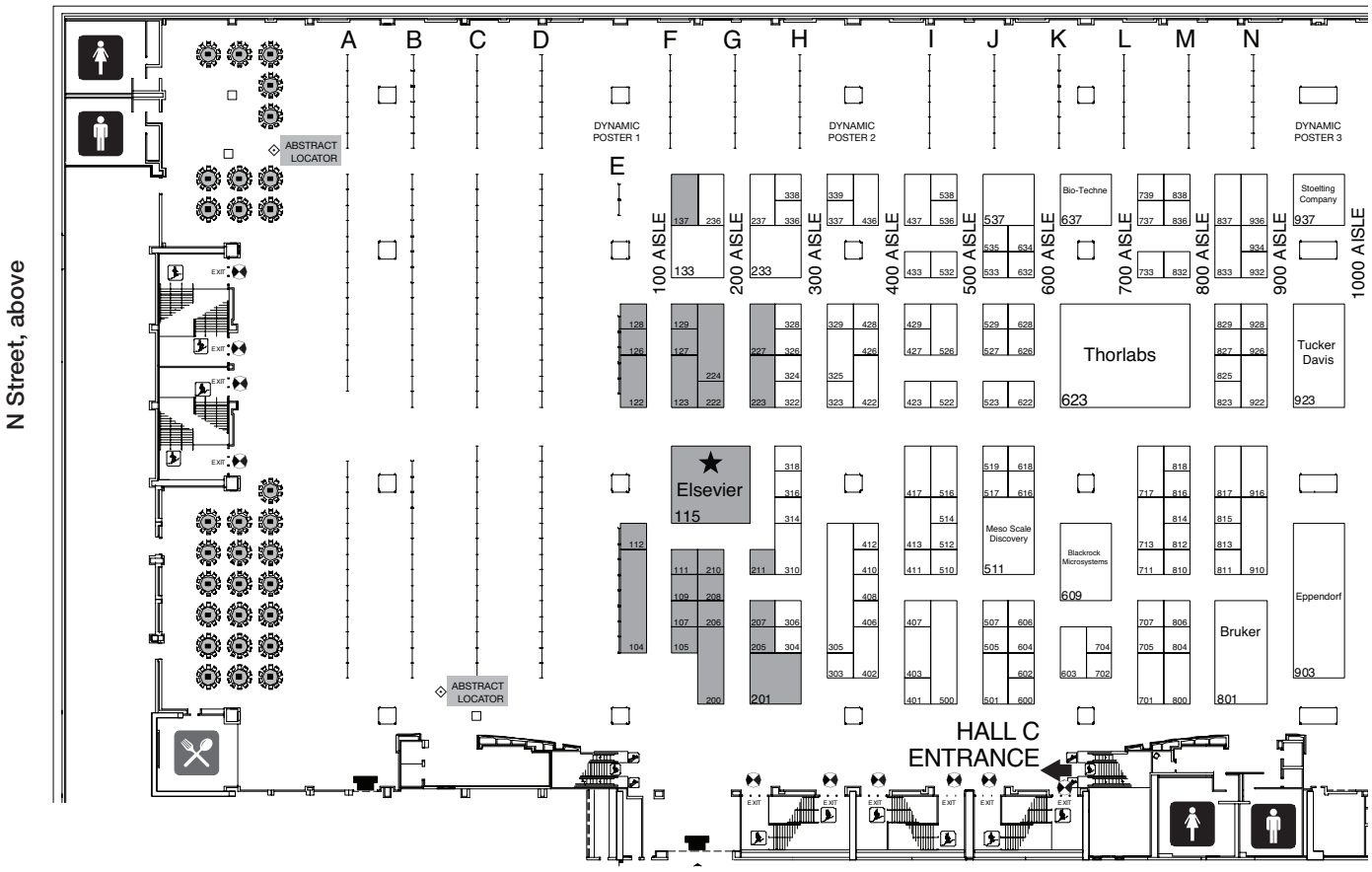
Meeting Dates: November 15–19
Exhibit Dates: November 16–19

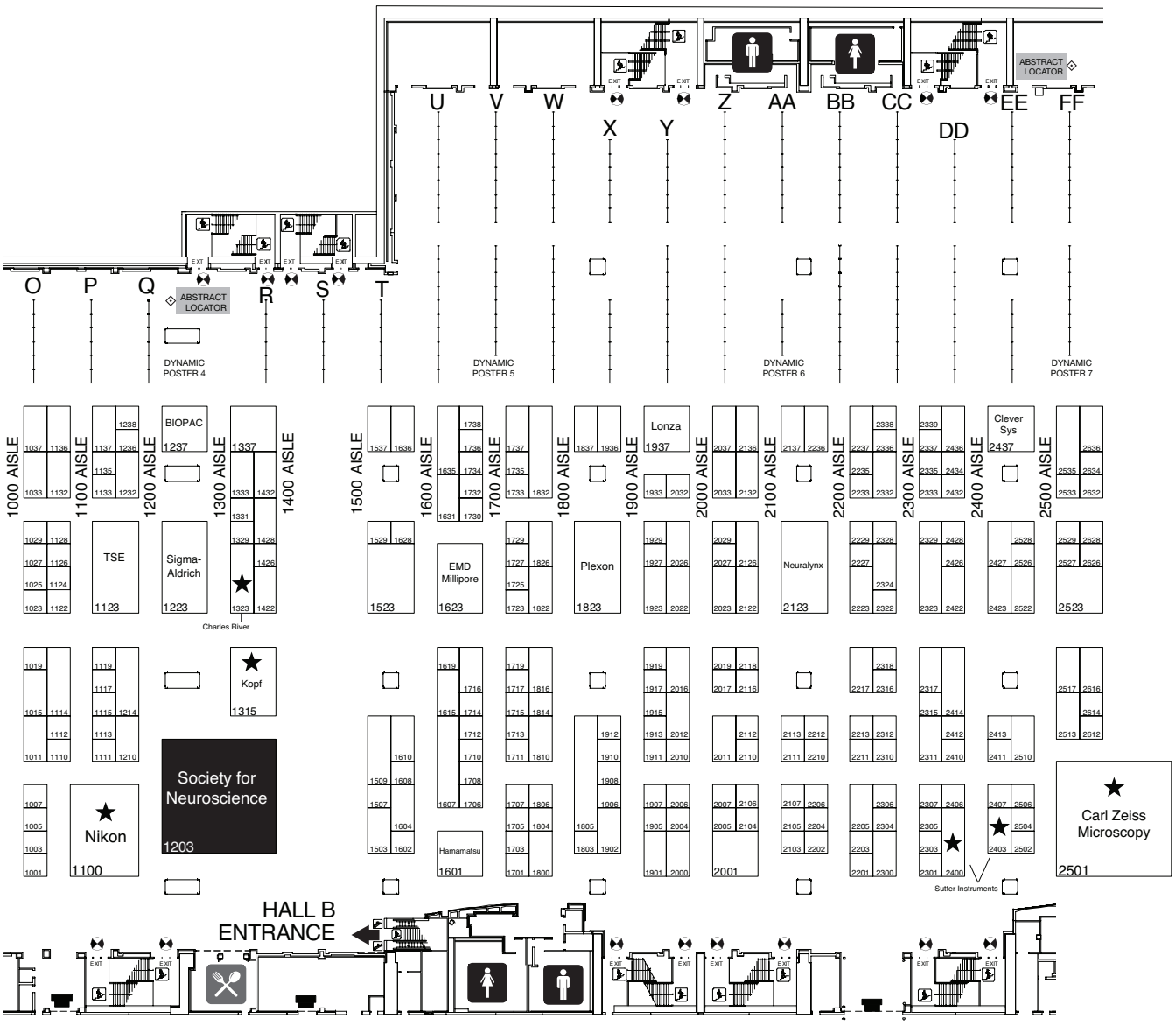
Hall entrances open at noon on Saturday, Nov. 15 and at 7 a.m. on Sunday, Nov. 16 to Wednesday, Nov. 19 for poster presenter setup.

Poster sessions are open for all attendees at 1 p.m. on Saturday, Nov. 15 and 8 a.m. Sunday, Nov. 16 to Wednesday, Nov. 19.

KEY

- Institutions
- Publishers
- Nonprofits
- ★ Sustaining Associate Members
- Abstract Locators
- SfN Booth
- First Aid Station
- Seating Area
- Concession Areas
- Restrooms
- Emergency Exit




U V W X Y Z AA BB CC DD EE FF
ABSTRACT LOCATOR
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ABSTRACT LOCATOR
DYNAMIC POSTER 4
DYNAMIC POSTER 5
DYNAMIC POSTER 6
DYNAMIC POSTER 7
1000 AISLE
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1200 AISLE
1300 AISLE
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2500 AISLE
BIOPAC 1237
Lonza 1937
Clever Sys 2437
TSE 1123
Sigma-Aldrich 1223
Charles River
EMD Millipore 1623
Plexon 1823
Neuralynx 2123
1523
2523
Kopf 1315
Society for Neuroscience 1203
Nikon 1100
Hamamatsu 1601
2001
Carl Zeiss Microscopy 2501
Sutter Instruments
HALL B ENTRANCE

KEY

- Institutions
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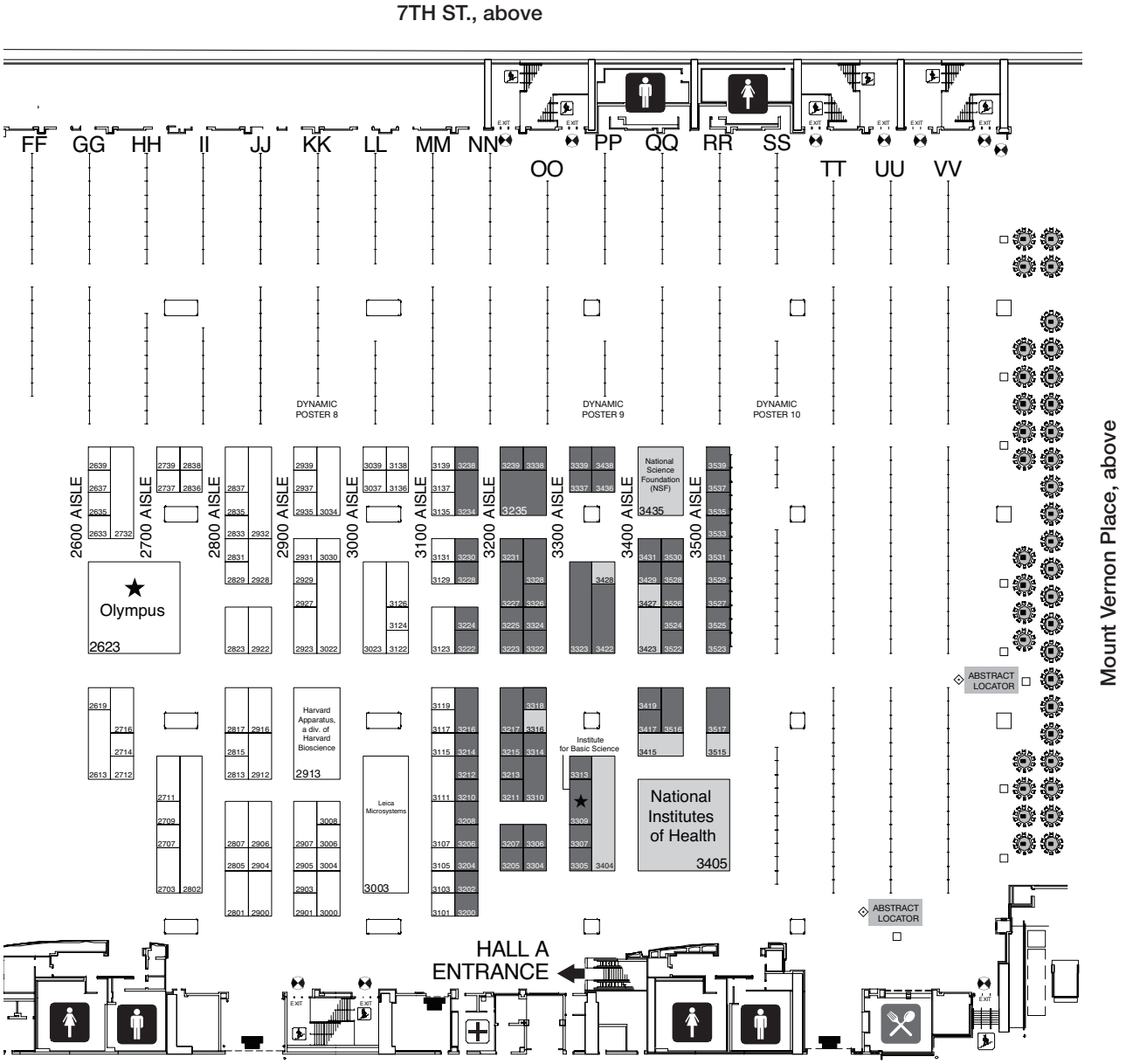

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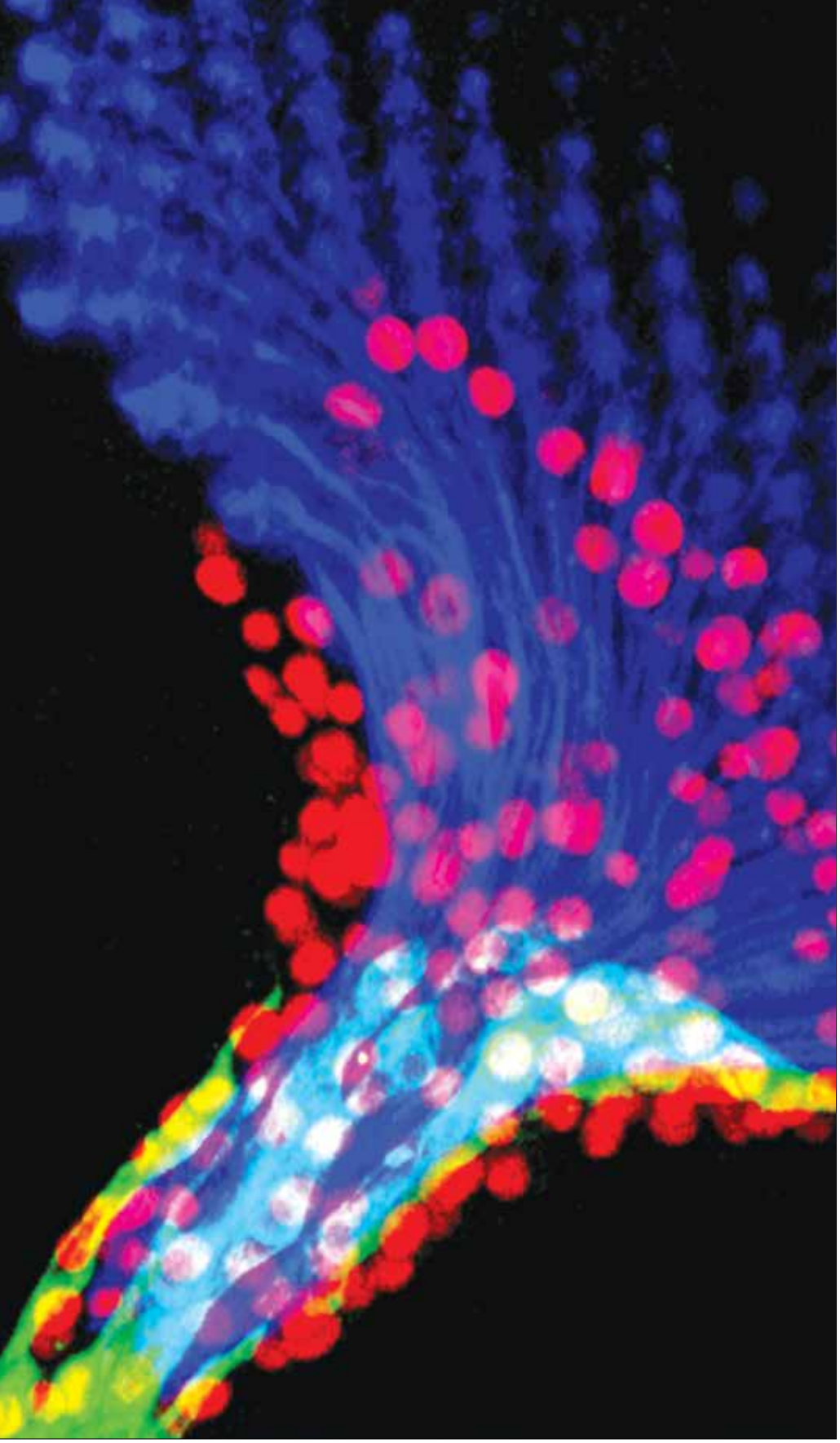
Neuroscience
2015

October **17–21**



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