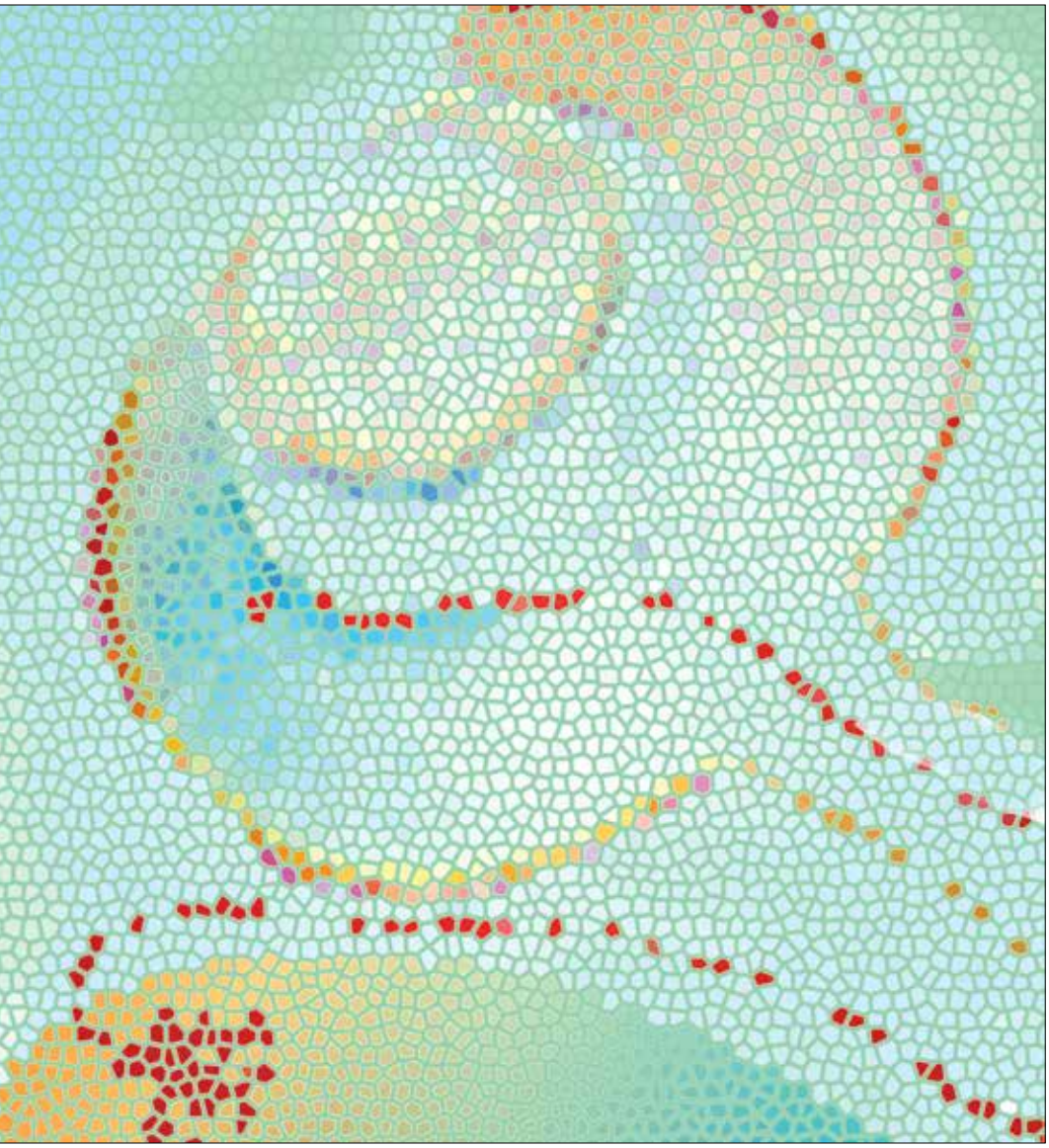
Sunday

Scientific Session Listings 100–272



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: Artistic interpretation of a retinal section from an embryonic mouse that expresses the transcription factor Foxd1 (blue) in the temporal area. Axons arising in the temporal retina (red) will exit the retina, traverse the developing brain, and finally innervate the anterior part of the superior colliculus, which is represented as a yellow-blue semi-ellipse in the bottom of the image.

Maria Isabel Carreres, Augusto Escalante, Blanca Murillo1, Geraud Chauvin, Patricia Gaspar, Celia Vegar, and Eloisa Herrera, 2011, *The Journal of Neuroscience*, 31(15): 5673-5681.

Sunday Highlights

Preregistration Required
Course Fee
Professional Development
Networking
Public Outreach
Online Content

Special Lecture
What Drives Sleep–Wake Cycles: Identification of Molecules and Circuits in *Drosophila* CME
Amita Sehgal, PhD
Perelman School of Medicine at the University of Pennsylvania, Howard Hughes Medical Instiitute
8:30–9:40 a.m.
Walter E. Washington Convention Center: Hall D

Symposia
Advances in Studying Human Cortical Development CME
Chair: Arnold Kriegstein, MD, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: Ballroom C

Symposia
Implicit Processes in Action Control CME
Chair: Patrick Haggard, PhD
Co-chair: Hiroaki Gomi, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: Ballroom B

Symposia
Enhancing Reproducibility of Neuroscience Studies CME
Chair: Story Landis, PhD
Co-chair: Thomas Insel, MD
8:30–11 a.m.
Walter E. Washington Convention Center: Ballroom A

Minisymposia
Activity–Dependent Regulation of Synapse Organization and Function by Palmitoylation CME
Chair: Elva Diaz, PhD
Co-chair: Shernaz Bamji, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: 151AB

Minisymposia
Advances in Understanding Mechanisms of Cortico–Thalamic Interactions in Cognition and Behavior CME
Chair: Yogita Chudasama, PhD
Co–chair: Anna S. Mitchell, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: 146AB

Minisymposia
Lipidomics and Lipid Signaling in Neurodegeneration CME
Chair: Kimberly B. Kegel–Gleason, PhD
8:30–11 a.m.
Walter E. Washington Convention Center: 145B

A Guide to Publishing and Responsible Conduct
9–11 a.m.
Walter E. Washington Convention Center: 207A

Special Lecture
The Glymphatic System and Its Possible Roles in CNS Diseases CME
Maiken Nedergaard, MD, DMSc
University of Rochester
10–11:10 a.m.
Walter E. Washington Convention Center: Hall D

David Kopf Lecture on Neuroethics
Mind, Brain, and the Ethics of Intergroup Behavior
Mahzarin Banaji, PhD
Harvard University
11:30 a.m.–12:40 p.m.
Walter E. Washington Convention Center: Hall D
Support contributed by: David Kopf Instruments

Chapters Workshop
Chapter Value: Engaging Members and the Community
11:30 a.m.–1 p.m.
Walter E. Washington Convention Center: 103A

Successful Career Advancement Through Networking: Is It Who You Know?
11:30 a.m.–1 p.m.
Walter E. Washington Convention Center: 207B

Special Lecture
Surprising Origins of Sex Differences in the Brain CME
Margaret M. McCarthy, PhD
University of Maryland School of Medicine
1–2:10 p.m.
Walter E. Washington Convention Center: Hall D

Plan to Attend

Monday, Nov. 17

Special Lecture
Building a Synapse Through Nuclear Export of Large RNA Granules and Exosomes CME
Vivian Budnik, PhD
University of Massachusetts Medical School
8:30–9:40 a.m.
Walter E. Washington Convention Center: Hall D

Special Lecture
Genes and Environment Interaction During Development: Redox Imbalance in Schizophrenia CME
Kim Quang Do, PhD
Center for Psychiatric Neuroscience, Lausanne University Hospital, Switzerland
10–11:10 a.m.
Walter E. Washington Convention Center: Hall D

Special Lecture
The Brain Is Needed to Cure Spinal Cord Injury CME
Tadashi Isa, MD, PhD
National Institute for Physiological Sciences, Japan
11:30 a.m.–12:40 p.m.
Walter E. Washington Convention Center: Hall D
Support contributed by: Lilly USA, LLC

Albert and Ellen Grass Lecture
Cellular and Molecular Mechanisms of Explicit Learning in the Hippocampus CME
Roger A. Nicoll, MD
University of California, San Francisco
3:15–4:25 p.m.
Walter E. Washington Convention Center: Hall D
Support contributed by: The Grass Foundation

Presidential Special Lecture
The First Steps in Vision: Computation and Repair CME
Botond Roska, MD, PhD
Friedrich Miescher Institute for Biomedical Research, University of Basel, Switzerland
5:15–6:25 p.m.
Walter E. Washington Convention Center: Hall D
Support contributed by: Amgen

Sunday Highlights

Preregistration Required
Course Fee
Professional Development
Networking
Public Outreach
Online Content

Social Issues Roundtable

The Neuroscience of Gaming

1–3 p.m.

Walter E. Washington Convention Center: 201

Symposia

Oligodendrocyte and Myelin Plasticity and Its Impact on the Function of Neural Circuits and Behavior CME

Chair: Gabriel Corfas, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom A

Symposia

Peripheral Gating of Pain Signals by Endogenous Lipid Mediators CME

Chair: Daniele Piomelli, PhD

Co-chair: Andrea Hohmann, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom B

Symposia

Studying Human Cognition with Intracranial EEG and Electrical Brain Stimulation CME

Chair: Josef Parvizi, MD, PhD

Co-chair: Robert T. Knight, MD

1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom C

Minisymposia

Mitochondria in the Development and Plasticity of Neurons CME

Chair: Zheng Li, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: 146AB

Minisymposia

Emerging Roles of Extracellular Vesicles in the Nervous System CME

Chair: Xandra O. Breakefield, PhD

Co-chair: Lawrence Rajendran, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: 151AB

News You Can Use: Funding Opportunities for Neuroscience Research and Training at NSF

2–4 p.m.

Walter E. Washington Convention Center: 207A

Internationalizing Your Research, Training, and Funding Experience

2–5 p.m.

Walter E. Washington Convention Center: 207B

Peter and Patricia Gruber Lecture

Circuits and Strategies for Skilled Motor Behavior

Thomas Jessell, PhD

Columbia University, Howard Hughes Medical Institute

2:30–3:40 p.m.

Walter E. Washington Convention Center: Hall D

Support contributed by: The Gruber Foundation

Presidential Special Lecture

The Integration of Interneurons Into Cortical Circuits: Both Nurture and Nature CME

Gordon J. Fishell, PhD

New York University Neuroscience Institute

5:15–6:25 p.m.

Walter E. Washington Convention Center: Hall D

SfN-Sponsored Socials

6:45–8:45 p.m.

Renaissance Washington, DC Downtown

Meeting Rooms

See page xii.

Chronological List of Sunday 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							
100	E	What Drives Sleep-Wake Cycles: Identification of Molecules and Circuits in *Drosophila*	Special Lecture		Hall D	8:30–9:40 a.m.	1.25
101	A	Advances in Studying Human Cortical Development	Symposium		Ballroom C	8:30–11 a.m.	2.5
102	D	Implicit Processes in Action Control	Symposium		Ballroom B	8:30–11 a.m.	2.5
103	G	Enhancing Reproducibility of Neuroscience Studies	Symposium		Ballroom A	8:30–11 a.m.	2.5
104	B	Activity-Dependent Regulation of Synapse Organization and Function by Palmitoylation	Minisymposium		Room 151AB	8:30–11 a.m.	2.5
105	C	Lipidomics and Lipid Signaling in Neurodegeneration	Minisymposium		Room 145B	8:30–11 a.m.	2.5
106	F	Advances in Understanding Mechanisms of Cortico-Thalamic Interactions in Cognition and Behavior	Minisymposium		Room 146AB	8:30–11 a.m.	2.5
107	C	The Glymphatic System and Its Possible Roles in CNS Diseases	Special Lecture		Hall D	10–11:10 a.m.	1.25
108		Mind, Brain, and the Ethics of Intergroup Behavior	David Kopf Lecture on Neuroethics		Hall D	11:30 a.m. –12:40 p.m.	
189	E	Surprising Origins of Sex Differences in the Brain	Special Lecture		Hall D	1–2:10 p.m.	1.25
190	A	Oligodendrocyte and Myelin Plasticity and Its Impact on the Function of Neural Circuits and Behavior	Symposium		Ballroom A	1:30–4 p.m.	2.5
191	D	Peripheral Gating of Pain Signals by Endogenous Lipid Mediators	Symposium		Ballroom B	1:30–4 p.m.	2.5
192	F	Studying Human Cognition with Intracranial EEG and Electrical Brain Stimulation	Symposium		Ballroom C	1:30–4 p.m.	2.5
193	B	Mitochondria in the Development and Plasticity of Neurons	Minisymposium		Room 146AB	1:30–4 p.m.	2.5
194	C	Emerging Roles of Extracellular Vesicles in the Nervous System	Minisymposium		Room 151AB	1:30–4 p.m.	2.5
195		Circuits and Strategies for Skilled Motor Behavior	Peter and Patricia Gruber Lecture		Hall D	2:30–3:40 p.m.	
196		The Integration of Interneurons Into Cortical Circuits: Both Nurture and Nature	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)							
109	B	Astrocyte Action in CNS Disorders	Nanosymposium		Room 144A	8–11 a.m.	
110	C	Alzheimer's Disease: Genetics and Biology I	Nanosymposium		Room 152A	8–11:30 a.m.	
111	C	Motor Neuron Disease Mechanisms and Models	Nanosymposium		Room 143A	8–11:15 a.m.	
112	C	Autism: Physiology and Systems III	Nanosymposium		Room 146C	8–10:15 a.m.	
113	C	Traumatic Brain Injury: Exploring Mechanisms and Interventions	Nanosymposium		Room 150B	8–10:45 a.m.	
114	C	Gene Therapy	Nanosymposium		Room 140A	8–10:15 a.m.	
115	D	Spinal Cord Injury: Repair and Rehabilitation	Nanosymposium		Room 152B	8–9:45 a.m.	
116	E	Consequences and Mechanisms of Exposure to Stressors	Nanosymposium		Room 147B	8–10 am.	
117	F	Functional Mechanisms of Attention	Nanosymposium		Room 150A	8–11 a.m.	
118	F	Attentional Networks in Humans	Nanosymposium		Room 147A	8–10:30 a.m.	
119	F	Corticolimbic Circuits and Decision-Making	Nanosymposium		Room 206	8–11 a.m.	
THEME H POSTERS (SATURDAY 1 P.M.–SUNDAY 5 P.M.)							
21	H	History of Neuroscience	Theme H Poster	UU21–UU40	Halls A–C	8 a.m.–noon	
22	H	K–12	Theme H Poster	UU41–UU62	Halls A–C	8 a.m.–noon	
23	H	College Experiences	Theme H Poster	UU63–UU82	Halls A–C	8 a.m.–noon	
24	H	Teaching Neuroscience: College Courses	Theme H Poster	UU83–VV17	Halls A–C	8 a.m.–noon	
25	H	Graduate and Professional Education	Theme H Poster	VV18–VV36	Halls A–C	8 a.m.–noon	
26	H	Public Outreach I	Theme H Poster	VV37–VV55	Halls A–C	8 a.m.–noon	
27	H	Public Outreach II	Theme H Poster	VV56–VV75	Halls A–C	8 a.m.–noon	
28	H	Ethical and Policy Issues	Theme H Poster	VV76–V88	Halls A–C	8 a.m.–noon	
POSTERS (8 A.M.–NOON)							
120	A	Mechanisms of Neuronal Cell Fate Acquisition	Poster	A1–A11	Halls A–C	8 a.m.–noon	
121	A	Neurotrophins	Poster	A12–A40	Halls A–C	8 a.m.–noon	
122	A	Development and Age-Related Changes in Cognition	Poster	A41–A65	Halls A–C	8 a.m.–noon	
123	B	Diversity of Glutamate Receptors	Poster	A66–B15	Halls A–C	8 a.m.–noon	
124	B	Glycine and GABAA Receptors	Poster	B16–B42	Halls A–C	8 a.m.–noon	
125	B	TRP Channels	Poster	B43–B54	Halls A–C	8 a.m.–noon	
126	B	Ion Channels and Disease States I	Poster	B55–C4	Halls A–C	8 a.m.–noon	
127	B	Glutamate and Glutamate Transporters	Poster	C5–C27	Halls A–C	8 a.m.–noon	
128	B	Synaptic Transmission: Synaptic Integration I	Poster	C28–C43	Halls A–C	8 a.m.–noon	
129	B	Synaptic Transmission: Synaptic Integration II	Poster	C44–C60	Halls A–C	8 a.m.–noon	
130	B	Oscillations and Synchrony in Neural Networks	Poster	C61–D3	Halls A–C	8 a.m.–noon	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
131	B	Oligodendrocytes: Cell Biology and Signaling I	Poster	D4–D18	Halls A–C	8 a.m.–noon	
132	C	Brain Wellness	Poster	D19–D44	Halls A–C	8 a.m.–noon	
133	C	Abeta Pathology and Therapeutic Approaches	Poster	D45–D71	Halls A–C	8 a.m.–noon	
134	C	Alzheimer's Disease: APP Abeta *In vivo* Models I	Poster	D72–F9	Halls A–C	8 a.m.–noon	
135	C	Alzheimer's Disease: Experimental Therapeutics II	Poster	F10–H10	Halls A–C	8 a.m.–noon	
136	C	Alzheimer's Disease: Experimental Therapeutics III	Poster	H11–J11	Halls A–C	8 a.m.–noon	
137	C	Parkinson's Disease: Animal Therapies	Poster	J12–M5	Halls A–C	8 a.m.–noon	
138	C	Parkinson's Disease: Neuroprotective Mechanisms	Poster	M6–O6	Halls A–C	8 a.m.–noon	
139	C	Ataxias: Mechanisms and Models	Poster	O7–Q9	Halls A–C	8 a.m.–noon	
140	C	Autism: Physiology and Systems I	Poster	R1–S10	Halls A–C	8 a.m.–noon	
141	C	Autism: Physiology and Systems II	Poster	S11–T10	Halls A–C	8 a.m.–noon	
142	C	Developmental Disorders I	Poster	T11–U22	Halls A–C	8 a.m.–noon	
143	C	Ischemia: Cellular Mechanisms and Neuroprotection I	Poster	U23–V12	Halls A–C	8 a.m.–noon	
144	C	Neuroprotective Mechanisms: Oxidative Stress	Poster	V13–W6	Halls A–C	8 a.m.–noon	
145	C	Environmental Toxins and Toxicity	Poster	W7–W26	Halls A–C	8 a.m.–noon	
146	C	Neurodegeneration I	Poster	W27–X20	Halls A–C	8 a.m.–noon	
147	C	Sensory Disorders: C.13.A. Visual and Auditory	Poster	X21–Y19	Halls A–C	8 a.m.–noon	
148	C	Somatosensation and Pain	Poster	Y20–Z13	Halls A–C	8 a.m.–noon	
149	C	Molecular- and Cellular-Oriented Models of Schizophrenia	Poster	Z14–Z36	Halls A–C	8 a.m.–noon	
150	C	Stress and Drug Abuse: Alcohol and Nicotine	Poster	AA1–AA13	Halls A–C	8 a.m.–noon	
151	C	Amphetamine Reinforcement I	Poster	AA14–BB17	Halls A–C	8 a.m.–noon	
152	C	Food and Addiction Mechanisms	Poster	BB18–BB31	Halls A–C	8 a.m.–noon	
153	C	Mechanisms of Drug Withdrawal and Aversion	Poster	BB32–CC19	Halls A–C	8 a.m.–noon	
154	C	Traumatic Brain Injury: Perinatal and Pediatric	Poster	CC20–CC32	Halls A–C	8 a.m.–noon	
155	D	Striate Cortex: Maps and Their Circuits	Poster	CC33–DD15	Halls A–C	8 a.m.–noon	
156	D	Visual Attention	Poster	DD16–EE2	Halls A–C	8 a.m.–noon	
157	D	Central Physiology and Anatomy	Poster	EE3–EE17	Halls A–C	8 a.m.–noon	
158	D	Spinal Cord Processing: Pharmacology	Poster	EE18–FF9	Halls A–C	8 a.m.–noon	
159	D	Mechanisms of Neuropathic Pain: Inflammatory Mediators and Neurotrophins	Poster	FF10–FF21	Halls A–C	8 a.m.–noon	
160	D	Motor Unit Recordings, Kinematics, and EMG	Poster	FF22–GG8	Halls A–C	8 a.m.–noon	
161	D	Motor Neuron-Muscle Interface	Poster	GG9–GG23	Halls A–C	8 a.m.–noon	
162	D	Finger and Grasp Control: Age, Pathology, and Physiology	Poster	GG24–HH6	Halls A–C	8 a.m.–noon	
163	D	Sensorimotor Learning	Poster	HH7–HH20	Halls A–C	8 a.m.–noon	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
164	D	Stroke and Voluntary Movement	Poster	HH21–II9	Halls A–C	8 a.m.–noon	
165	D	Neural Decoding	Poster	II10–II27	Halls A–C	8 a.m.–noon	
166	E	Neuroimmune Regulators: Microglia	Poster	II28–JJ9	Halls A–C	8 a.m.–noon	
167	E	Female Sexual Behavior	Poster	JJ10–JJ32	Halls A–C	8 a.m.–noon	
168	E	Neural Control of Cardiovascular Function II	Poster	JJ33–KK17	Halls A–C	8 a.m.–noon	
169	E	Autonomic Control of Thermoregulatory, Gastrointestinal, and Reproductive Functions	Poster	KK18–LL2	Halls A–C	8 a.m.–noon	
170	F	Aging of Neural Functions	Poster	LL3–LL18	Halls A–C	8 a.m.–noon	
171	F	Spatial Learning	Poster	LL19–MM7	Halls A–C	8 a.m.–noon	
172	F	Human Long-Term Memory	Poster	MM8–MM33	Halls A–C	8 a.m.–noon	
173	F	Working Memory I	Poster	MM34–NN26	Halls A–C	8 a.m.–noon	
174	F	Human Social Cognition: Behavior and Pharmacology	Poster	NN27–OO3	Halls A–C	8 a.m.–noon	
175	F	Pharmacology for Attention	Poster	OO4–OO14	Halls A–C	8 a.m.–noon	
176	F	Animal Models: Cortical Circuits and Behavioral Tasks	Poster	OO15–PP4	Halls A–C	8 a.m.–noon	
177	F	Learning and Memory: Skill-Learning	Poster	PP5–QQ3	Halls A–C	8 a.m.–noon	
178	F	Motivation	Poster	QQ4–QQ28	Halls A–C	8 a.m.–noon	
179	F	Reward: Neuropharmacology	Poster	QQ29–RR15	Halls A–C	8 a.m.–noon	
180	F	Motivation and Emotions: Risk-Taking	Poster	RR16–RR31	Halls A–C	8 a.m.–noon	
181	F	Neuroethology	Poster	RR32–SS10	Halls A–C	8 a.m.–noon	
182	F	Vocal Communication in Songbirds: Sensory and Motor Mechanisms I	Poster	SS11–SS26	Halls A–C	8 a.m.–noon	
183	F	Social Communication	Poster	SS27–SS45	Halls A–C	8 a.m.–noon	
184	G	Imaging Advances: Human	Poster	SS46–SS59	Halls A–C	8 a.m.–noon	
185	G	Imaging Advances: Silico and High Throughput	Poster	SS60–TT21	Halls A–C	8 a.m.–noon	
186	G	Network Models and Data Simulation	Poster	TT22–TT49	Halls A–C	8 a.m.–noon	
187	G	Computation Tools	Poster	TT50–TT72	Halls A–C	8 a.m.–noon	
188	G	Data Analysis and Statistics I	Poster	TT73–UU6	Halls A–C	8 a.m.–noon	
NANOSYMPOSIA (1–5 P.M.)							
197	C	Molecular and Functional Biomarkers of Neurodegeneration	Nanosymposium		Room 144A	1–2:45 p.m.	
198	C	Neuroinflammation in Alzheimer's Disease	Nanosymposium		Room 143A	1–3:45 p.m.	
199	C	Neuroprotection in Parkinson's Disease: Mechanisms and Therapies	Nanosymposium		Room 206	1–4:30 p.m.	
200	C	Fragile X Syndrome: Molecular Mechanisms and Therapeutic Strategies	Nanosymposium		Room 147B	1–4:15 p.m.	
201	C	Epilepsy: Man and Mouse	Nanosymposium		Room 146C	1–3:15 p.m.	
202	C	Traumatic Brain Injury: Animal and Human Studies	Nanosymposium		Room 152A	1–4:30 p.m.	
203	E	Obstructive Sleep Apnea: Intermittent Oxygenation	Nanosymposium		Room 152B	1–2:30 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
204	F	Language: Spoken and Written	Nanosymposium		Room 150B	1–4:30 p.m.	
205	F	Working Memory	Nanosymposium		Room 147A	1–4:30 p.m.	
206	F	The Neural Basis of Reward-Based Decisions	Nanosymposium		Room 140A	1–4:15 p.m.	
207	G	Imaging the Healthy and the Diseased Brain	Nanosymposium		Room 150A	1–4:15 p.m.	
POSTERS (1–5 P.M.)							
208	A	Neuronal Migration	Poster	A1–A25	Halls A–C	1–5 p.m.	
209	A	Environmental Regulation of PNS Regeneration	Poster	A26–A44	Halls A–C	1–5 p.m.	
210	A	Adolescent Vulnerability: Animal Models	Poster	A45–B6	Halls A–C	1–5 p.m.	
211	B	Neurotransmitter Signaling in Health and Disease	Poster	B7–B32	Halls A–C	1–5 p.m.	
212	B	Calcium Channels: Functions and Regulation of Voltage-Gated Calcium Channels	Poster	B33–C1	Halls A–C	1–5 p.m.	
213	B	Postsynaptic Structure II	Poster	C2–C26	Halls A–C	1–5 p.m.	
214	B	LTP: Pre- and Postsynaptic Mechanisms I	Poster	C27–C40	Halls A–C	1–5 p.m.	
215	B	Oscillations: Mechanisms	Poster	C41–C62	Halls A–C	1–5 p.m.	
216	B	Neural Oscillators and Activity-Dependent Plasticity of Intrinsic Membrane Properties	Poster	C63–D8	Halls A–C	1–5 p.m.	
217	B	Synapse Development, Maintenance, and Aging	Poster	D9–D20	Halls A–C	1–5 p.m.	
218	C	Parkinson's Disease: Neuroprotective Therapies	Poster	D21–D44	Halls A–C	1–5 p.m.	
220	C	Epilepsy: Circuits	Poster	D45–D56	Halls A–C	1–5 p.m.	
221	C	Ischemia: Cellular Mechanisms and Neuroprotection II	Poster	D57–E7	Halls A–C	1–5 p.m.	
222	C	Ischemia: Neuroprotection	Poster	E8–G1	Halls A–C	1–5 p.m.	
223	C	Demyelinating Disorders	Poster	G2–I7	Halls A–C	1–5 p.m.	
224	C	Demyelinating Disorders: Human Studies and Therapeutics	Poster	I8–L2	Halls A–C	1–5 p.m.	
225	C	Traumatic Brain Injury: Animal Studies	Poster	L3–N8	Halls A–C	1–5 p.m.	
226	C	Excitotoxicity and Metabolic Stress	Poster	N9–Q1	Halls A–C	1–5 p.m.	
227	C	Drugs, Pharmaceuticals, and Toxicity	Poster	Q2–S1	Halls A–C	1–5 p.m.	
228	C	Gene Therapy	Poster	S2–T2	Halls A–C	1–5 p.m.	
229	C	Psychosis: Neuropathology	Poster	T3–U12	Halls A–C	1–5 p.m.	
230	C	Systems-Oriented Models of Schizophrenia	Poster	U13–V2	Halls A–C	1–5 p.m.	
231	C	Nicotine: Reward and Seeking	Poster	V3–V32	Halls A–C	1–5 p.m.	
232	C	Cocaine: Neural Mechanisms I	Poster	W1–W23	Halls A–C	1–5 p.m.	
233	C	Catecholamines and Behavior	Poster	W24–X9	Halls A–C	1–5 p.m.	
234	C	Drug Discovery and Development: Neurodegenerative Diseases I	Poster	X10–Y14	Halls A–C	1–5 p.m.	
235	D	Auditory Processing of Natural Sounds	Poster	Y15–Z2	Halls A–C	1–5 p.m.	
236	D	Extrastriate Cortex: Responses and Coding	Poster	Z3–Z28	Halls A–C	1–5 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
237	D	Eye Movements: Clinical and Behavioral	Poster	Z29–AA2	Halls A–C	1–5 p.m.	
238	D	Eye Movements: Cortex and Superior Colliculus	Poster	AA3–AA19	Halls A–C	1–5 p.m.	
239	D	Pain Behavioral Models	Poster	AA20–BB25	Halls A–C	1–5 p.m.	
240	D	Inflammatory Pain	Poster	BB26–CC18	Halls A–C	1–5 p.m.	
241	D	Pain: Ion Channels and Physiology	Poster	CC19–DD10	Halls A–C	1–5 p.m.	
242	D	Mechanisms of Neuropathic Pain: Signaling Pathways and Models	Poster	DD11–EE4	Halls A–C	1–5 p.m.	
243	D	Pain Imaging and Perception	Poster	EE5–FF4	Halls A–C	1–5 p.m.	
244	D	Opioids and Other Analgesics	Poster	FF5–FF29	Halls A–C	1–5 p.m.	
245	D	Somatosensory Transduction	Poster	FF30–GG14	Halls A–C	1–5 p.m.	
246	D	Neocortical Plasticity	Poster	GG15–HH2	Halls A–C	1–5 p.m.	
247	D	Motor Neurons: Development, Identification, Intrinsic Properties, and Modulation	Poster	HH3–HH20	Halls A–C	1–5 p.m.	
248	D	Small Networks and Plasticity	Poster	HH21–II3	Halls A–C	1–5 p.m.	
249	D	Grasping Dexterity	Poster	II4–II24	Halls A–C	1–5 p.m.	
250	D	Reaching Control: Action and Sensation	Poster	II25–JJ10	Halls A–C	1–5 p.m.	
251	D	Reaching Control: Movement Selection and Strategy	Poster	JJ11–KK3	Halls A–C	1–5 p.m.	
252	D	Neuroprosthetics	Poster	KK4–LL1	Halls A–C	1–5 p.m.	
253	D	Brain–Machine Interface	Poster	LL2–LL13	Halls A–C	1–5 p.m.	
254	E	Neuroimmune System Pathways and Regulators	Poster	LL14–MM15	Halls A–C	1–5 p.m.	
255	E	Thirst and Water Balance	Poster	MM16–MM26	Halls A–C	1–5 p.m.	
256	E	Central Pathways: Anatomy and Development	Poster	MM27–NN13	Halls A–C	1–5 p.m.	
257	E	Sleep	Poster	NN14–OO5	Halls A–C	1–5 p.m.	
258	E	Sleep: Systems and Behavior	Poster	OO6–PP1	Halls A–C	1–5 p.m.	
259	E	Functional Neuroimaging: Neurovascular Mechanisms	Poster	PP2–PP18	Halls A–C	1–5 p.m.	
260	F	Sequence Learning	Poster	PP19–QQ17	Halls A–C	1–5 p.m.	
261	F	Consciousness and Neural Networks	Poster	QQ18–QQ27	Halls A–C	1–5 p.m.	
262	F	Human Decision-Making and Learning: Individual Differences and Disorders	Poster	QQ28–RR15	Halls A–C	1–5 p.m.	
263	F	Functional Mechanisms of Attention I	Poster	RR16–RR40	Halls A–C	1–5 p.m.	
264	F	Hippocampal and Cortical Circuits I	Poster	RR41–SS9	Halls A–C	1–5 p.m.	
265	F	Learning and Memory: Pharmacology I	Poster	SS10–SS34	Halls A–C	1–5 p.m.	
266	F	Invertebrate Learning and Memory I	Poster	SS35–SS51	Halls A–C	1–5 p.m.	
267	F	Motivation and Reward	Poster	SS52–TT13	Halls A–C	1–5 p.m.	
268	F	Motivation and Emotions: Negative Emotional States	Poster	TT14–TT39	Halls A–C	1–5 p.m.	
269	G	Optical Methods I	Poster	TT40–TT58	Halls A–C	1–5 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
270	G	Optical Methods II	Poster	TT59–TT75	Halls A–C	1–5 p.m.	
271	G	Optogenetics: Tool Development	Poster	TT76–TT92	Halls A–C	1–5 p.m.	
272	G	Data Analysis and Statistics II	Poster	UU1–UU20	Halls A–C	1–5 p.m.	
PROFESSIONAL DEVELOPMENT WORKSHOPS							
PDW13		A Guide to Publishing and Responsible Conduct	Professional Development Workshop		Room 207A	9–11 a.m.	
PDW14		Successful Career Advancement Through Networking: Is It Who You Know?	Professional Development Workshop		Room 207B	11:30 a.m.–1 p.m.	
PDW15		Internationalizing Your Research, Training, and Funding Experience	Professional Development Workshop		Room 207B	2–5 p.m.	
PDW16		News You Can Use: Funding Opportunities for Neuroscience Research and Training at the NSF	Professional Development Workshop		Room 207A	2–4 p.m.	
MEETINGS AND EVENTS							
ME06		Chapters Workshop: Chapter Value-Engaging Members and the Community	Meetings and Events		Room 103A	11:30 a.m.–1 p.m.	
ME07		Graduate School Fair	Meetings and Events		Hall E	noon–2 p.m.	
ME08		The Neuroscience of Gaming	Social Issues Roundtable		Room 201	1–3 p.m.	
SfN-SPONSORED SOCIALS (6:45–8:30 P.M.)							
SOC01		Cajal Club Social	SfN-Sponsored Social		Renaissance Washington, DC: Renaissance Ballroom East	6:45–8:45 p.m.	
SOC02		Cell Death and Cell Stress Social	SfN-Sponsored Social		Renaissance Washington, DC: Meeting Rooms 10 & 11	6:45–8:45 p.m.	
SOC03		Clinical Neurosciences Social: What Is Clinical Neuroscience and How Do I Get There?	SfN-Sponsored Social		Renaissance Washington, DC: Congressional Ballrooms A & C	6:45–8:45 p.m.	
SOC04		Hearing and Balance Social	SfN-Sponsored Social		Renaissance Washington, DC: Meeting Rooms 12, 13 & 14	6:45–8:45 p.m.	
SOC05		Neuroethology/Invertebrate Neurobiology Social	SfN-Sponsored Social		Renaissance Washington, DC: Meeting Rooms 8 & 9	6:45–8:45 p.m.	
SOC06		Spinal Cord Injury Social	SfN-Sponsored Social		Renaissance Washington, DC: Mount Vernon Square A & B	6:45–8:45 p.m.	
SOC07		Synapses and Excitatory Amino Acids Social	SfN-Sponsored Social		Renaissance Washington, DC: Renaissance Ballroom West B	6:45–8:45 p.m.	

Dynamic Posters — Sunday AM/PM

Sunday'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 B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms	Gamma oscillations can be generated independently in hippocampal region CA1	Michael Craig	DP1	C34	128.07
Theme C: Disorders of the Nervous System	The combined effects of neurofeedback and biofeedback training for treating children with autism spectrum disorder	Rita Sharma	DP2	R2	140.02
Theme C: Disorders of the Nervous System	Hippocampal area CA1 pyramidal cells show disrupted place cell activity in the Df(16)A mouse model of schizophrenia	Jeff Zaremba	DP3	Z35	149.22
Theme D: Sensory and Motor Systems	Novel somatosensory contact–less brain–computer interface paradigm based on airborne ultrasonic tactile display stimuli	Tomasz Rutkowski	DP4	1120	165.11
Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge	Regional innervation of the heart in the zebrafish	Matthew Stoyek	DP5	JJ33	168.01
Theme F: Cognition and Behavior	Rapid encoding of new memories by single neurons in the human brain	Matias Ison	DP6	OO26	176.12
Theme F: Cognition and Behavior	Balance between repetition and variation governs birdsong structure — can birds match variability levels in song and movement patterns?	Eathan Janney	DP7	SS15	182.05
Theme G: Novel Methods and Technology Development	Imaging spines and synapses: A High Content Platform to advance target validation for neurological disorders	Nikisha Carty	DP8	TT12	185.21
Theme G: Novel Methods and Technology Development	An improved computational method for high–throughput datasets analysis	Benedetta Bigio	DP9	TT55	187.06
Theme H: History, Teaching, Public Awareness, and Societal Impacts in Neuroscience	Early anesthetic theorizing: Between biology, chemistry and experimental pharmacology	Misha Perouansky	DP10	UU26	21.06SA
DYNAMIC POSTERS (1–5 P.M.)					
Theme A: Development	A growth factor-dependent Ca2+ signaling network during stem cell proliferation and neuronal migration in the developing neocortex	Brian Rash	DP1	A12	208.12
Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms	Measuring synaptic and perisynaptic activity at the developing, neonatal and adult mouse neuromuscular junction using electrophysiological and optical methods	Dante Heredia	DP2	D20	217.12
Theme C: Disorders of the Nervous System	Hyperexcitability of presubicular neurons in a rat model of Temporal Lobe Epilepsy	Saad Abbasi	DP3	D55	220.11
Theme C: Disorders of the Nervous System	Early exposure to general anesthesia alters developmental synaptic transmission and excitability	Nadia Lunardi	DP4	R11	227.19
Theme D: Sensory and Motor Systems	LFP's in the superior colliculus of an echolocating bat are timed with ongoing behaviors	Melville Wohlgemuth	DP5	Y29	235.15
Theme D: Sensory and Motor Systems	Simultaneous multichannel microelectrode recording from macaque primary motor cortex and primary somatosensory cortex during an intuitive reach to grasp task	Sharlene Flesher	DP6	II27	250.03
Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge	The underlying neural network of proopiomelanocortin (POMC)–mediated regulation in food intake	Chia Li	DP7	NN6	256.16
Theme F: Cognition and Behavior	Risk-taking behaviors relate to functional connectivity in striatal and fronto–parietal networks in adolescence	Angelica Bato	DP8	QQ28	262.01
Theme G: Novel Methods and Technology Development	Development of a portable optical system for *in vivo* deep–brain neuronal imaging	Baris Ozbay	DP9	TT71	270.13
Theme H: History, Teaching, Public Awareness, and Societal Impacts in Neuroscience	Manufacturing a neural interface — a summary of the published cochlear implant manufacturing processes	Roger Calixto	DP10	UU22	21.02SA

Sunday Workshops, Meetings & Events

Preregistration Required	Course Fee
Professional Development	Networking
Public Outreach	Online Content

Professional Development, Advocacy, and Networking Resources

Sunday, Nov. 16

A Guide to Publishing and Responsible Conduct

Organizers: Verity Brown, PhD; Shamus O'Reilly, PhD
Panelists: Vincenzo Crunelli, PhD; Valina Dawson, PhD
9–11 a.m.
Walter E. Washington Convention Center: 207A

Journals form a core part of the process of scholarly communication and are an integral part of scientific research itself. Journals exist to disseminate new research findings and the latest new thinking to scholarly and professional communities worldwide. During this workshop, presenters will provide a rare opportunity to gain insight into journal publishing from publishing staff and editors. This session covers a myriad of topics, including authorship, reviewing, open–access publishing, ethics, and innovation. There will be ample opportunity for questions.

Chapters Workshop

Chapter Value: Engaging Members and the Community

Organizer: James W. Geddes, PhD
Panelists: Cecilia M. Fox, PhD; Adam O. Ghoweri; Jordan Trecki, PhD
11:30 a.m.–1 p.m.
Walter E. Washington Convention Center: 103AB

Learn from your peers who have proven success in reaching and engaging their community in neuroscience learning and events year–round. Hear from chapter representatives and student leaders on initiatives that helped make their chapter consistently successful in outreach. Also hear about successfully leveraging local resources to carry out chapter events on a limited budget and finding additional funding. After these short presentations, attendees will hold roundtable discussions about member and community engagement. Don't miss this opportunity to unlock the value in your community and, in turn, heighten the value of your chapter for members and the public.

Successful Career Advancement Through Networking: Is It Who You Know?

Organizers: Mark Baxter, PhD; Rebecca Shansky, PhD
Panelists: Kathleen Anderson, PhD; Joanne Berger–Sweeney, PhD; Liisa Galea, PhD; Matthew Hill, PhD; Benjamin Saunders, PhD
11:30 a.m.–1 p.m.
Walter E. Washington Convention Center: 207B

Networking can have a powerful effect on a scientist's career trajectory. Presenters will share tips and advice for successful networking, as well as vignettes from their own careers about where networking has been key to their success. They will highlight different venues for networking (conferences, social media, intradepartmental, etc.). Discussion time will allow workshop participants to learn from each other's networking successes (and failures).

Social Issues Roundtable

The Neuroscience of Gaming

Organizer: Jonathan Moreno, PhD
Speakers: Martha J. Farah, PhD; Adam Gazzaley, MD, PhD; Daniel Greenberg; Mark Griffiths, PhD
1–3 p.m.
Walter E. Washington Convention Center: 201

A countless number of people from all demographics use electronic games daily, but are mostly unaware how programmers use neuroscience concepts in the game designs. Organized by the Institute of Medicine Neuroscience Forum, this roundtable explores the use of neuroscience in gaming, with an emphasis on scientific, ethical, and societal issues. Participants will explore design features derived from neuroscience concepts while considering both the positive and negative implications of the use of neuroscience in design. Finally, the roundtable will discuss potential ethical implications and policy outcomes that may protect gamers from design features that may have negative outcomes.

News You Can Use: Funding Opportunities for Neuroscience Research and Training at the NSF

Organizer: Jim Deshler, PhD
Panelists: Mary Ann Asson-Batres, PhD; David Coppola, PhD; Mary Ann Horn, PhD; Bill Miller, PhD; Sri Raghavachari, PhD; Edda Thiels, PhD; Betty Tuller, PhD; Ken Whang, PhD; Terry Woodin, PhD
2–4 p.m.
Walter E. Washington Convention Center: 207A

Hear the latest word from NSF program officers and deputy/division directors on funding opportunities for neuroscientists, including all areas of fundamental neuroscience research and networking, education and training, career development opportunities, and large–scale multidisciplinary funding mechanisms. Talk with neuroscientists who have been successful in receiving NSF funding and gain general information about the agency, its role in the BRAIN Initiative, the review process, and tips for writing successful proposals, including guidance for developing a Data Management Plan and a Broader Impacts description, both of which are required for all NSF proposals. NSF maintains an exhibit booth featuring relevant publications and video presentations. Program officers will be available on–site for extended conversation.

Internationalizing Your Research, Training, and Funding Experience

Organizers: Laura Colgin, PhD; Ketema Paul, PhD; Michael Zigmond, PhD
Panelists: Beth Fischer, PhD; Shigang He, PhD; Yuan Lin, PhD; Kathy Michels, PhD; Vijayalakshmi Ravindranath, PhD; Gonzalo Torres, PhD; Desire Tshala-Katumbay, PhD
2–5 p.m.
Walter E. Washington Convention Center: 207B

This workshop focuses on several topics of direct relevance to anyone wishing to internationalize their training and research. Topics include the value of an international research experience and advice for selecting a lab and obtaining funding. The workshop includes speaker presentations and a panel. Representatives from public and private funding agencies will be available for discussion.

Sunday Socials

Sunday, Nov. 16, 6:45–8:45 p.m.

Cajal Club Social

Social with Brief Presentation

Chair: Christopher A. Walsh, MD, PhD

Co-chair: Dennis D. O'Leary, PhD

Guests: V. Casagrande; P. Hof; J. Kaas; C. A. Mason; P. Rakic; C. Ribak; J. Rubenstein; L. Shapiro; G. M. Shepherd; L. Swanson; H. Zeng

Renaissance Washington, DC: Renaissance Ballroom East

Join us for informal socializing along with the presentation of Krieg Cortical Kudos Awards to deserving neuroscientists at senior, middle, and early career stages. The Palay Award also will be presented. There will be a brief presentation by Hongkui Zeng (Allen Institute for Brain Science) and Jon Kaas (Vanderbilt University) on high–throughput cerebral cortical connectomics and its importance in how we think about cerebral cortical areas and cortical function.

Cell Death and Cell Stress Social

Purely Social

Chair: Jochen H. Prehn, PhD

Guests: C. Culmsee, V. Dawson, M. Deshmukh, R. Freeman, L. Greene, J. Ham, E. Jonas, E. Mandelkow, B. McLaughlin, N. Plesnila, B. Polster, R. Ratan, R. Swanson, C. Troy, B. Wolozin

Renaissance Washington, DC: Meeting Rooms 10 and 11

During their life time, neurons are often exposed to different types of stress. While moderate stress often boosts neuronal function, severe stress may be detrimental and lead to degenerative changes and, ultimately, the death of the neuron. Join experts in the field discussing how stress signaling leads to survival or cell death, and the mechanisms and differences of the multiple forms of cell death such as apoptosis, necroptosis, pyroptosis, and necrosis, to name a few.

Clinical Neurosciences Social: What Is Clinical Neuroscience and How Do I Get There?

Purely Social

Chair: David G. Standaert, MD, PhD

Guests: T. Dawson, H. Federoff, D. Fink, W. Koroshetz, J. Meador-Woodruff, S. Przedborski, A. Young

Renaissance Washington, DC: Congressional Ballroom A and C

There will be brief introductions of the guests but no presentations. The goal is to provide an opportunity for those at early–and mid–career stages to meet established and senior clinical investigators and discuss the joys and challenges of a career in clinical neuroscience.

Hearing and Balance Social

Purely Social

Chair: Stephen Lomber, PhD

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

Join your fellow hearing and balance colleagues for an informal evening. We also welcome all alumni from the first four Gordon Research Conferences and Seminars on the Auditory System for an informal reunion.

Neuroethology/Invertebrate Neurobiology Social

Purely Social

Chair: Wolfgang Stein, PhD

Renaissance Washington, DC: Meeting Rooms 8 and 9

Celebrate neuroethology, invertebrate neuroscience research, and the role of the nervous system in producing behavior. Come meet old friends and make new ones. Postdocs and students are encouraged to drop in to socialize and network.

Spinal Cord Injury Social

Social with Brief Presentation

Chair: Jane Roskams, PhD

Co-chair: Moses Chao, PhD

Guests: P.J. Brophy, M.B. Bunge, P. Casaccia, S. Firestein, Z. He, C. Henderson, C.A. Mason, R.H. Miller, R. Ratan, J.D. Rothstein, J. Salzer, M.E. Schwab, J. Silver, O. Steward, M.T. Tessier-Lavigne, M.H. Tuszynski, F. Walsh

Renaissance Washington, DC: Mount Vernon Square A and B

Join us for our annual SCI social. Meet and network with scientists across the globe. Also, celebrate the life of Marie Filbin, who lost her fight with cancer on January 15, 2014. Her findings indelibly changed the field of central nervous system regeneration and influenced scores of investigators who studied the effects of myelin on axonal regeneration. Graduate students, postdoctoral fellows, and her colleagues from around the world are invited. There will be short speeches and presentations. Join your colleagues in a relaxed and social atmosphere.

Synapses and Excitatory Amino Acids Social

Purely Social

Chair: Jeffrey Diamond, PhD

Renaissance Washington, DC: Renaissance Ballroom West B

Pre vs. post? That is so 1990s. Come have a drink, and let's find something new to fight about.

Complete Session Listing

Sunday AM

SPECIAL LECTURE *Walter E. Washington Convention Center*

100. What Drives Sleep - Wake Cycles: Identification of Molecules and Circuits in *Drosophila* — CME

Sun. 8:30 AM - 9:40 AM — Hall D

Speaker: A. SEHGAL, *Perelman Sch. of Med. at the Univ. of Pennsylvania, Howard Hughes Med. Institute.*

This lecture will focus on the cellular and molecular mechanisms that regulate sleep. The 24-hour rhythm of sleep is driven by a circadian clock, while the need to sleep comes from a homeostatic system, which ensures adequate sleep levels. The lecture will show how the use of *Drosophila* has led to the identification of mechanisms that generate a circadian clock and to some of the downstream circuitry required for circadian timing of behavior. It will also highlight recent developments in identifying molecular components and cellular circuits that underlie homeostatic regulation.

SYMPOSIUM *Walter E. Washington Convention Center*

101. Advances in Studying Human Cortical Development — CME

Sun. 8:30 AM - 11:00 AM — Ballroom C

Chair: A. KRIEGSTEIN

Our concepts of human cortical development are evolving rapidly, with many advances coming from studies of primary tissue, *in vitro* cerebral organoids, and human cortical mutations. These findings are not only relevant to a wide range of neurodevelopment disorders, but also shed light on brain evolution, particularly in cortical expansion among primates.

8:30 **101.01** Introduction.

8:35 **101.02** Identification of primary progenitor cells in the developing human cerebral cortex. A. KRIEGSTEIN. *Univ. of California, San Francisco.*

9:10 **101.03** Somatic mutation and genomic diversity in the human cerebral cortex. C. WALSH. *Children's Hosp. Boston.*

9:45 **101.04** Modeling human cortical development with iPSC to study autism. F. VACCARINO. *Yale Univ.*

10:20 **101.05** Modeling human brain development in 3D culture. J. 'KNOBLICH. *Inst. of Mol. Biotech.*

10:55 **101.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

102. Implicit Processes in Action Control — CME

Sun. 8:30 AM - 11:00 AM — Ballroom B

Chair: P. HAGGARD
Co-Chair: H. GOMI

Neural circuits that control action show a broadly hierarchical organization: movement details are delegated to low-level implicit processes. However, the relations between these processes and higher cortical centers for action programming remain poorly understood. This symposium shows how low-level implicit processes are integrated into action control across the full motor range, extending from spinal reflexes to orienting behaviors, manual reaching, and initiation of volitional action.

8:30 **102.01** Introduction.

8:35 **102.02** Contributions of parietal cortex in implicit and explicit multisensory processing and calibration. D. ANGELAKI. *Baylor Col. of Med.*

9:10 **102.03** Reflex movement control and perceptual awareness. A. GHOSH. *ETH-UZH.*

9:45 **102.04** Implicit visual and motor processing in manual following responses. H. GOMI. *NTT Communication Sci. Labs.*

10:20 **102.05** Basic association processes in neural circuits for human volition. P. HAGGARD. *Inst. of Cognitive Neurosci.*

10:55 **102.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

103. Enhancing Reproducibility of Neuroscience Studies — CME

Sun. 8:30 AM - 11:00 AM — Ballroom A

Chair: S. LANDIS
Co-Chair: T. INSEL

There are growing concerns about the reproducibility of life science research results and the impact that these concerns could have on neuroscience. The presentations in this symposium will summarize common causes of poor reproducibility, describe actions taken by NIH and journals to improve reliability, offer investigator perspectives, and address relevance for training. A panel discussion will follow that will take questions from the audience.

8:30 **103.01** Introduction.

8:35 **103.02** Irreproducible results? NIH perspectives on the causes and solutions. F. COLLINS. *Natl. Inst. of Hlth.*

9:10 **103.03** The role of journals in tackling irreproducibility. V. KIERMER. *Nature Publications.*

9:45 **103.04** Approaches to enhance disease-related research. H. ZOGHBI. *Jan and Dan Duncan Neurolog. Res. Inst.*

10:20 **103.05** Addressing irreproducibility through strategies for better training. J. MORRISON. *Icahn Sch. of Med. at Mount Sinai.*

10:55 **103.06** Closing Remarks.

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

MINISYMPOSIUM *Walter E. Washington Convention Center*

104. Activity-Dependent Regulation of Synapse Organization and Function by Palmitoylation — CME

Sun. 8:30 AM - 11:00 AM — 151AB

Chair: E. DIAZ
Co-Chair: S. BAMJI

Palmitoylation is a reversible posttranslational modification to cysteine residues in target proteins. In recent years, a large number of synaptic proteins, including glutamate receptors, auxiliary factors, signaling molecules, and scaffolds, have been shown to be regulated by palmitoylation in an activity-dependent manner to modulate synapse organization and function. This minisymposium highlights recent discoveries in this newly emerging fundamental phenomenon of synapse biology.

8:30 **104.01** Introduction.

8:35 **104.02** Palmitoylation-dependent regulation of the actin cytoskeleton in dendritic spines. G. THOMAS. *Temple Univ. Sch. of Med.*

8:55 **104.03** Activity-dependent palmitoylation regulates SynDIG1 stability, localization, and function. E. DIAZ. *UC Davis Sch. of Med.*

9:15 **104.04** Synaptic organization regulated by palmitoylating and depalmitoylating enzymes of PSD-95. M. FUKATA. *Natl. Inst. for Physiological Sci.*

9:35 **104.05** Palmitoylation-dependent PSD95-CDKL5 interaction and synaptic plasticity. Z. XIONG. *Inst. of Neurosci.*

9:55 **104.06** Regulation of postsynaptic membrane trafficking by DHHC2-mediated palmitoylation of the scaffold protein AKAP79/150. M. DELL'ACQUA. *Univ. Colorado, Denver-Pharmacology.*

10:15 **104.07** Regulation of synaptic plasticity through activity-mediated protein palmitoylation. S. BAMJI. *Univ. of British Columbia.*

10:35 **104.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

105. Lipidomics and Lipid Signaling in Neurodegeneration — CME

Sun. 8:30 AM - 11:00 AM — 145B

Chair: K. B. KEGEL-GLEASON

In addition to forming the structural barrier that encompasses cells and organelles, lipids are an integral part of diverse signaling pathways critical to neuronal function and survival. This minisymposium provides a comprehensive introduction to new methods of impartial identification of lipid changes in brain dysfunction and the current status of hypothesis-driven research on lipid modifying enzymes and neuronal function.

8:30 **105.01** Introduction.

8:35 **105.02** Towards the understanding of neurodegenerative disorders through lipidomic approaches. G. DI PAOLO. *Columbia Univ.*

8:55 **105.03** Huntingtin phospholipids interactions in Huntington's disease. K. KEGEL-GLEASON. *Mass Gen. Hosp.*

9:15 **105.04** Phosphatidylinositol 5-phosphate/phosphatidylinositol 3,5-bisphosphate metabolism and signaling: Role in neurodegenerative disorders. A. SHISHEVA. *Wayne State Univ. Sch. of Med.*

9:35 **105.05** Phosphatidylinositol 3,5-bisphosphate: Roles in synaptic function and in neurodegeneration. A. MCCARTNEY. *Univ. of Michigan.*

9:55 **105.06** Diacylglycerol kinase zeta regulates protein kinase C alpha and synaptic functions in cerebellar Purkinje cells. K. TANAKA YAMAMOTO. *Korea Inst. of Sci. and Technol.*

10:15 **105.07** Signaling death via selective mitochondrial phospholipid oxidation: Implications for drug discovery in traumatic brain injury. H. BAYIR. *Univ. of Pittsburgh.*

10:35 **105.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

106. Advances in Understanding Mechanisms of Cortico-Thalamic Interactions in Cognition and Behavior — CME

Sun. 8:30 AM - 11:00 AM — 146AB

Chair: Y. CHUDASAMA
Co-Chair: A. S. MITCHELL

Although it is customary to think of the thalamus as a relay that enables corticocortical communication, converging methods of neuroanatomy, neurophysiology, and optogenetics have highlighted the important contribution of the thalamus as a structure whose activities regulate cognitive behavior. This minisymposium presents an exciting array of findings that are making seminal contributions to our understanding of systems-level mechanisms affording new insight and perspectives into the so-called cognitive thalamus.

8:30 **106.01** Introduction.

8:35 **106.02** Functional organization of cortico-thalamic relays. M. S. SHERMAN. *The Univ. of Chicago.*

8:55 **106.03** Thalamic control of prefrontal visuomotor function. M. A. SOMMER. *Duke Univ.*

9:15 **106.04** Thalamic influence on memory coding properties of neurons in the prefrontal cortex. R. G. MAIR. *Univ. New Hampshire.*

9:35 **106.05** Mediodorsal thalamus-prefrontal cortex interactions in primate learning, memory and decision-making. A. S. MITCHELL. *Oxford Univ.*

9:55 **106.06** Limbic circuitry of the midline thalamus. R. P. VERTES. *Florida Atlanta Univ.*

10:15 **106.07** Thalamic control of prefrontal executive function. Y. CHUDASAMA. *McGill Univ.*

10:35 **106.08** Closing Remarks.

SPECIAL LECTURE *Walter E. Washington Convention Center*

107. The Glymphatic System and Its Possible Roles in CNS Diseases — CME

Sun. 10:00 AM - 11:10 AM — Hall D

Speaker: M. NEDERGAARD, *Univ. of Rochester.*

Past work has focused on cellular recycling of proteins involved in neurodegeneration. This lecture will expand the traditional framework to include a macroscopic clearance system - the glymphatic system - by which the brain exports waste products of neural metabolism. Glymphatic clearance is driven by convective CSF influx and is especially active during sleep. Macromolecules, such as amyloid beta, are literally swept out of CNS for ultimate degradation in the liver. As such, the glymphatic system represents a novel and unexplored target for treatment of neurological diseases.

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

DAVID KOPF LECTURE ON NEUROETHICS

Walter E. Washington Convention Center

108. Mind, Brain, and the Ethics of Intergroup Behavior

Sun. 11:30 AM - 12:40 PM — Hall D

Speaker: M. Banaji, *Harvard Univ.*

Support contributed by: David Kopf Instruments

From the moment of birth, every human is a member of many groups. Group memberships create affiliations of "us" and "them" and sensitivity to status in social hierarchies. Human minds reflect these in a myriad attitudes and beliefs that contain deep knowledge about the hidden presence or surprising absense of group love. Unveiling them by observing brain activity and behavior allows understanding of the natural and cultivated ways in which the meanings of in-group and out-group (self and other) are represented and group love is elusively tuned up and down.

NANOSYMPOSIUM

109. Astrocyte Action in CNS Disorders

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

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

8:00 **109.01** ● Astrocytes orchestrate early granulocyte responses in neuromyelitis optica. M. CAULFIELD*; T. KAPTZAN; R. LAFRANCE-COREY; Y. GUO; C. HOWE; C. LUCCHINETTI. *Mayo Clin.*

8:15 **109.02** Sustained downregulation of β-dystroglycan in astrocytic endfeet in epileptic cerebral cortex. A. GONDOU*; T. SHINOTSUKA; A. MORITA; M. YASUI; M. NURIYA. *Keio Univ.*

8:30 **109.03** Optogenetic stimulation of astrocytes promotes neuronal differentiation of mesenchymal stem cells and improves the neurological deficit in stroke rats. J. TU*; F. YANG; Y. LIU; P. WEI; L. WANG. *Shenzhen Inst. of Advanced Technol.*

8:45 **109.04** Are astrocytes the hypoxia sensors of the central nervous system? I. N. CHRISTIE*; P. R. ANGELOVA; V. KASYMOV; A. Y. ABRAMOV; A. V. GOURINE. *Univ. Col. London, Univ. Col. London, Univ. Col. London.*

9:00 **109.05** Reduced glutamate uptake in astrocytes expressing the Na,K-ATPase α2 mutation G301R. Implications for Familial Hemiplegic Migraine type 2. E. GUNNARSON*; N. ILLARIONOVA; P. BØTTGER; Y. SONG; A. APERIA; K. LYKKE-HARTMANN. *Karolinska Institutet, Aarhus Univ., Shanghai Clin. Res. Ctr.*

9:15 **109.06** Increased amplitude of spontaneous Ca^{2+} events in astrocytic endfeet underlies inversion of neurovascular coupling after subarachnoid hemorrhage. A. C. PAPPAS*; M. KOIDE; G. C. WELLMAN. *Univ. of Vermont.*

9:30 **109.07** ● Astrocytic ALDH7A1 pathophysiology in neuropsychiatric disorders. T. E. FAUST*; H. HIYAMA; S. ZOUBOVSKY; H. JAARO-PELED; K. NI; A. SAWA. *Johns Hopkins Univ. SOM, Johns Hopkins Univ. SOM, Astellas Pharma Inc.*

9:45 **109.08** Branched chain amino acids in post stroke epileptogenesis. E. C. DAMISAH*; E. PEREZ; H. ZAVERI; D. SPENCER; T. EID. *Yale Univ., Yale Univ.*

10:00 **109.09** Astrocyte regulation of ethanol tolerance. S. PARKHURST*; P. ADHIKARI; F. W. WOLF. *Univ. of California, Merced.*

10:15 **109.10** Astrocytic swelling-mediated increases in neuronal excitability: implications for cerebral edema and epilepsy. K. LAUDERDALE*; T. R. MURPHY; D. K. BINDER; T. A. FIACCO. *Univ. of California Riverside.*

10:30 **109.11** Neuron- astrocyte interactions in synaptic activities in spinal muscular atrophy. C. ZHOU*; Z. FENG; C. KO. *University Of Southern California.*

10:45 **109.12** The role of astrocytes impairment in the etiology of Alzheimer's disease. D. FRENKEL*; D. FARFARA; V. LIFSHITZ; T. IRAM; S. AMRAM. *Tel Aviv Univ., Tel Aviv Univ.*

NANOSYMPOSIUM

110. Alzheimer's Disease: Genetics and Biology I

Theme C: Disorders of the Nervous System

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

8:00 **110.01** ▲ Translating CD33 genetics to an Alzheimer's disease prophylactic. M. MALIK; J. SIMPSON; S. ESTUS*. *Sanders-Brown Ctr. Aging.*

8:15 **110.02** A Novel SNP in Tmp21 in the Patients with Alzheimer's disease. X. ZHANG*; K. XIA; Y. WU; C. FANG; K. BROMLEY-BRITS; W. SONG. *Univ. of British Columbia, Central South Univ.*

8:30 **110.03** The role of the tripartite glutamatergic synapse in the pathophysiology of Alzheimer's disease. M. N. REED*; H. HUNSBERGER; D. WEITZNER; C. RUDY. *West Virginia Univ., West Virginia Univ.*

8:45 **110.04** Circular RNA (circRNA) ciRS-7 mediates microRNA-7 (miRNA-7) trafficking in Alzheimer's disease (AD). W. J. LUKIW*; Y. ZHAO; S. BHATTACHARJEE; M. PERCY; A. POGUE; P. DUA. *Louisiana State Univ. Sch. Med., Univ. of Toronto, Alchem Biotek, Bioinformatics and Hlth. Sci. Managment.*

9:00 **110.05** Whole-exome sequencing identifies the genetic causes in a family with idiopathic progressive cognitive decline. L. SHI*; K. WANG. *Jinan Univ., Guangdong Med. Key Lab. of Brain Function and Diseases, Jinan Univ., GHM Collaboration and Innovation Ctr. for Tissue Regeneration and Repair, Jinan Univ., Zilkha Neurogenetic Institute, Keck Sch. of Medicine, Univ. of Southern California, Dept. of Psychiatry, Keck Sch. of Medicine, Univ. of Southern California.*

9:15 **110.06** ● A genome-wide siRNA screen to identify novel targets and pathways regulating apoE secretion in human astrocytes. S. HASSON*; Z. WENZEL; R. YANG; M. LIU; L. LANYON; R. SINGLETON; C. STEPPAN; M. KUHN; S. XI; N. BODYCOMBE; M. GLICKSMAN; J. CONCANNON; K. BALES; G. RAMASWAMY. *Pfizer, Inc., Pfizer, Inc., Harvard NeuroDiscovery Ctr.*

9:30 **110.07** Identification of Alzheimer's disease protective genetic variants in non-demented elderly individuals with APOE ε4/ε4 genotype. A. N'SONGO*; M. M. CARRASQUILLO; Y. ASMANN; S. BAHETI; G. ZHANG; T. NGUYEN; R. J. CASELLI; N. R. GRAFF-RADFORD; R. C. PETERSEN; G. BU; N. ERTEKIN-TANER. *Mayo Clin., Mayo Grad. Sch., Mayo Clin. Florida, Mayo Clin. Florida, Mayo Clin. Minnesota, Mayo Clin. Arizona, Mayo Clin. Florida, Mayo Clin. Minnesota.*

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9:45 **110.08** Effects of Alzheimer's disease-associated risk loci on cerebrospinal fluid biomarkers and disease progression: A polygenic risk score approach. H. MARTISKAINEN; S. HELISALMI; J. VISWANATHAN; M. KURKI; A. HALL; S. HERUKKA; T. SARAJÄRVI; T. NATUNEN; K. M. KURKINEN*; J. HUOVINEN; A. M. REMES; A. M. KOIVISTO; K. M. MATTILA; T. LEHTIMÄKI; M. LAITINEN; P. MÄKINEN; V. LEINONEN; A. HAAPASALO; H. SOININEN; M. HILTUNEN. *Univ. of Eastern Finland, Univ. of Eastern Finland, Univ. of Eastern Finland, Univ. of Tampere.*

10:00 **110.09** Exploring a genetic link between Alzheimer's disease and Type 2 Diabetes Mellitus: The AD-associated SNP in CELF1 is co-inherited with the T2DM-associated SNP in MADD. J. VASQUEZ*; S. ESTUS; J. SIMPSON. *Univ. of Kentucky, Univ. of Kentucky.*

10:15 **110.10** Homeostatic role of nitric oxide signaling maintains synaptic plasticity expression in Alzheimer's disease mice. S. CHAKROBORTY; C. BRIGGS; J. KIM; C. SCHNEIDER; A. WEST; G. E. STUTZMANN*. *Rosalind Franklin Univ. / Chicago Med. Sch., Univ. of Pittsburgh Sch. of Med., Rosalind Franklin Univ. /Chicago Med. Sch.*

10:30 **110.11** nELAVL binding shifts to non-coding Y RNAs during Alzheimer's disease progression and stress. C. SCHECKEL*; E. DRAPEAU; M. FRIAS; J. D. BUXBAUM; R. B. DARNELL. *The Rockefeller Univ., Mount Sinai Hosp.*

10:45 **110.12** Amyloid plaques preferentially deposit in VIP interneuron rich brain regions. A. MITRA*; M. S. GOYAL; A. Z. SNYDER; A. W. BERO; T. M. BLAZEY; D. M. HOLTZMAN; M. E. RAICHLE. *Washington Univ. Sch. of Med., MIT.*

11:00 **110.13** ● A rare mutation in UNC5C predisposes to Alzheimer's disease and increases neuronal cell death. M. K. WETZEL*. *Genentech.*

11:15 **110.14** Altered membrane lipids, reduced synaptic responses, and increased vulnerability to Aβ oligomers in CNS synapses from transgenic mice with peripheral insulin resistance. G. TAGLIALATELA*; F. TEMPIA; Z. WENRU; D. TUVDENDORJ; H. SALLAM; B. TUMURBAATAR; F. LAEZZA; N. ABATE. *Univ. Texas Med. Br., Univ. Texas Med. Br., Univ. Texas Med. Br.*

NANOSYMPOSIUM

111. Motor Neuron Disease Mechanisms and Models

Theme C: Disorders of the Nervous System

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

8:00 **111.01** A 3-D co-culture system of peripheral motor neurons and Schwann cells demonstrates the myelination process *in vitro.* S. HYUNG*. *The Korea Inst. of Sci. and Technol.*

8:15 **111.02** Imbalance in genomic damage and their repair as a common basis for neurodegenerative diseases. M. L. HEGDE*. *Houston Methodist.*

8:30 **111.03** ER-mitochondria associations are regulated by the VAPB-PTPIP51 interaction and are disrupted by ALS/FTD-associated TDP-43. C. C. MILLER*; R. STOICA; K. DE VOS; S. PAILLUSSON; K. LAU; R. SANCHO. *Inst. of Psychiatry, King's Col. London, Univ. of Sheffield, Inst. of Psychiatry, King's Col. London, Chinese Univ. of Hong Kong, ARUK.*

8:45 **111.04** Astrocyte mediated toxicity leads to motor neuron death in Spinal Muscular Atrophy. S. PHANI; A. JACQUIER; D. PAPADIMITRIOU; V. LEVERCHE; R. PRADHAN; S. KARIYA; U. MONANI; D. B. RE*; S. PRZEDBORSKI. *Columbia Univ., Columbia Univ.*

9:00 **111.05** The role of nuclear transport defects in the pathogenesis of amyotrophic lateral sclerosis. K. ZHANG*; C. DONNELLY; A. HAEUSLER; J. WANG; R. SATTLER; J. ROTHSTEIN; T. LLOYD. *Dept. of Neurol. and Brain Sci. Inst., Dept. of Biochem. and Mol. Biol. Johns Hopkins University, Bloomberg Sch. of Publ. Hlth.*

9:15 **111.06** The tau tubulin kinases TTBK1/2 promote accumulation of pathological TDP-43. B. C. KRAEMER*; N. LIACHKO; P. MCMILLAN; T. STROVAS. *Veterans Affairs Puget Sound Hlth. Care Syst., VA PSHCS.*

9:30 **111.07** Development of mouse model for a newly discovered mutant profilin1 in fALS patients. M. KIAEI*; S. YADAV. *Univ. of Arkansas for Med. Sci.*

9:45 **111.08** Optineurin is an autophagy receptor for damaged mitochondria in parkin-mediated mitophagy that is disrupted by an ALS-linked mutation. Y. C. WONG*; E. HOLZBAUR. *Univ. of Pennsylvania.*

10:00 **111.09** Inhibition of dynein-mediated retrograde transport reduces aggregation of misfolded protein responsible for motoneuron diseases. A. POLETTI*; R. CRISTOFANI; P. RUSMINI; V. CRIPPA; E. GIORGETTI; A. BONCORAGLIO; M. E. CICARDI. *Univ. Degli Studi Di Milano.*

10:15 **111.10** Defining spinal muscular atrophy gene networks in *Drosophila.* E. M. MCNEILL*; T. YOKOKURA; J. YELICK; T. CHOBANYAN; D. VAN VACTOR. *Harvard Med. Sch., Okinawa Inst. of Sci. and Technol.*

10:30 **111.11** Differential roles of RNA-binding, self-assembly and familial ALS mutations of FUS in the retinal degeneration of transgenic *Drosophila melanogaster* overexpressing human FUS. T. HASHIMOTO*; T. MATSUMOTO; H. KUNUGI; K. MATSUKAWA; H. UCHIGAMI; T. CHIHARA; M. MIURA; T. WAKABAYASHI; T. IWATSUBO. *The Univ. of Tokyo, The Univ. of Tokyo, The Univ. of Tokyo.*

10:45 **111.12** Characterization of innate and adaptive immune responses in the hSOD1G93A-MCP1-CCR2 triple transgenic ALS mouse. P. OZDINLER*; J. H. JARA; C. FARRIS; R. MILLER; J. TRIMARCHI. *Northwestern University, Feinberg Sch. of Med., Northwestern University, Feinberg Sch. of Med., Iowa State Univ.*

11:00 **111.13** Gnx4728, a small molecule drug modulator of mitochondrial permeability transition, is therapeutic in a mouse model of amyotrophic lateral sclerosis. L. J. MARTIN*; M. WONG; F. DRAGHI; S. PLYTE; Q. CHANG. *Johns Hopkins Univ. Sch. of Med., Congenia Srl-Cenextra.*

NANOSYMPOSIUM

112. Autism: Physiology and Systems III

Theme C: Disorders of the Nervous System

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

8:00 **112.01** Cerebellar grey matter correlates with early language delay in autism. A. M. D'MELLO*; D. M. MOORE; D. CROCETTI; S. H. MOSTOFSKY; C. J. STOODLEY. *American Univ., Kennedy Krieger Inst.*

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8:15 **112.02** Deficits in cerebellar plasticity and motor learning in a copy number variation mouse model of autism spectrum disorder. C. PIOCHON*; D. H. SIMMONS; A. D. KLOTH; G. GRASSELLI; H. K. TITLEY; H. NAKAYAMA; K. HASHIMOTO; V. WAN; T. EISSA; J. NAKATANI; A. CHERSKOV; T. MIYAZAKI; M. WATANABE; T. TAKUMI; M. KANO; S. S. H. WANG; C. HANSEL. *Univ. of Chicago, Princeton Univ., Hiroshima Univ., Hiroshima Univ., Shiga Univ., Hokkaido Univ., RIKEN Brain Sci. Inst., The Univ. of Tokyo.*

8:30 **112.03** Cerebellar involvement in autism spectrum disorders and cognitive ability. M. M. PARK*; J. P. LERCH; A. N. VOINESKOS; M. CHAKRAVARTY. *Ctr. for Addiction and Mental Hlth., Hosp. for Sick Children.*

8:45 **112.04** Developmental diaschisis: A sensitive-period framework for understanding the cerebellum's role in autism. S. S. WANG*; A. D. KLOTH; A. BADURA. *Princeton Univ.*

9:00 **112.05** Cortical-cerebellar abnormalities underlying visuomotor control deficits in autism spectrum disorder. M. W. MOSCONI*; D. E. VAILLANCOURT; S. A. COOMBES; J. A. SWEENEY. *Univ. of Texas Southwestern Med. Ctr., Univ. of Florida, Univ. of Texas Southwestern.*

9:15 **112.06** Striatal volumes in autism spectrum disorder (ASD). M. SCHUETZE; I. CHO; S. VINETTE; M. T. M. PARK; M. CHAKRAVARTY; S. L. BRAY*. *Univ. of Calgary, Ctr. for Addiction and Mental Hlth.*

9:30 **112.07** White matter compromise accompanies functional overconnectivity within the imitation network in children with autism. M. DATKO*; I. FISHMAN; Y. CABRERA; R. CARPER; R. MÜLLER. *UC San Diego, San Diego State Univ.*

9:45 **112.08** Cerebellar neuroinflammation can modulate sociability in mice. A. M. DEPINO*; L. LUCCHINA; N. KAZLAUSKAS; M. CAMPOLONGO. *Inst. For Physiology, Mol. Biol. and Ne, DFBMC, FCEyN, Univ. of Buenos Aires.*

10:00 **112.09** Peripheral noise provides a new conceptual framework for the mirror neuron systems theory. P. YANOVICH*; E. B. TORRES. *Rutgers Univ., Rutgers Univ.*

NANOSYMPOSIUM

113. Traumatic Brain Injury: Exploring Mechanisms and Interventions

Theme C: Disorders of the Nervous System

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

8:00 **113.01** Time course of brain vulnerability following closed-head concussion in rats: A global metabolomics analysis. Y. D. BRYANT*; L. LEUNG; R. D. READNOWER; D. A. SHEAR; F. C. TORTELLA. *Walter Reed Army Inst. of Res.*

8:15 **113.02** Injury timing alters metabolic, inflammatory and functional outcomes following repeated mild traumatic brain injury. Z. M. WEIL*; K. R. GAIER; E. KARELINA. *Ohio State Univ. Med. Ctr.*

8:30 **113.03** Neuronal calcium regulation and function are affected by the rate of injury to the brain. A. A. ADAMS; G. C. MAGOU; J. R. BERLIN; B. J. PFISTER*. *New Jersey Inst. Technol., New Jersey Med. School, Rutgers Univ.*

8:45 **113.04** Critical role of sphingosine in mitochondrial dysfunction after brain injury. T. I. GUDZ*; J. YU; M. KINDY; S. NOVGORODOV. *Med. Univ. South Carolina, Ralph H Johnson VA Med. Ctr.*

9:00 **113.05** Impaired autophagy due to lysosomal dysfunction is associated with neuronal cell death after TBI. C. SARKAR*; Z. ZHAO; S. AUNGST; B. SABIRZHANOV; A. I. FADEN; M. M. LIPINSKI. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

9:15 **113.06** Circulating miRNA as biomarkers for mild traumatic brain injury: implications in neurological regulations. D. L. DOBBINS*; X. PAN. *East Carolina Univ.*

9:30 **113.07** The influence of APOE genotype on dendritic spine levels following mild TBI. C. WINSTON*; M. PARASADANIAN; D. J. BARTON; A. NEUSTADTL; D. ZAPPLE; M. P. BURNS. *Georgetown Univ.*

9:45 **113.08** *In vivo* hippocampal neuronal oscillations are altered after traumatic brain injury and restored by dietary therapy. R. PATERNÒ*; B. JOHNSON; J. ELKIND; C. SMITH; G. XION; A. COHEN. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

10:00 **113.09** Layer specific alterations in synaptic transmission in prefrontal cortex following mild traumatic brain injury. C. SMITH*; G. XIONG; J. ELKIND; C. CRUZ; C. PALMER; A. COHEN. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

10:15 **113.10** Nanowired Cerebrolysin potentiates mesenchymal stem cells induced neuroprotection and neurorepair following concussive head injury. H. S. SHARMA*; D. F. MURESANU; H. MOESSLER; A. SHARMA. *Uppsala Univ., Univ. of Med. & Pharm., Ever Neuro Pharma, Uppsala Univ. Hosp.*

10:30 **113.11** CX3CR1 deficiency ameliorates TBI-induced inflammatory response and cognitive dysfunction. J. M. MORGANTI*; T. D. JOPSON; L. K. RIPARIP; S. ROSI. *Univ. of California San Francisco.*

NANOSYMPOSIUM

114. Gene Therapy

Theme C: Disorders of the Nervous System

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

8:00 **114.01** Site specific labelling of AAV9 to investigate viral entry into the central nervous system. J. CHANDRAN*; P. SHARP; M. AZZOUZ. *Univ. of Sheffield.*

8:15 **114.02** Gene therapy improves motor function in early to moderate stages of Pompe disease. D. J. FALK*; A. G. TODD; G. A. WALTER; S. LEE; L. NOTTERPEK; D. D. FULLER; B. J. BYRNE. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

8:30 **114.03** Design of AAV-mediated CNS-targeted gene delivery system using neuronal promoters. V. LUKASHCHUK*; I. COLDICOTT; P. J. MULCAHY; B. MUSZYNSKI; K. NING; M. AZZOUZ. *Univ. of Sheffield.*

8:45 **114.04** Adeno-associated virus serotype 9-mediated gene therapy for x-linked adrenoleukodystrophy. Y. GONG; C. A. MAGUIRE; D. MU; A. MOSER; J. REN; F. EICHLER*. *Massachusetts Gen. Hosp. | Harvard Med. Sch., Kennedy Krieger Inst. / Johns Hopkins, Massachusetts Gen. Hosptial | Harvard Med. Sch.*

9:00 **114.05** Receptor-mediated siRNA delivery to the central nervous system with surface functionalized cyclodextrin nanoparticles. M. MALHOTRA; D. J. MCCARTHY; M. GOODING; B. M. D. C. GODINHO; R. DARCY; J. CRYAN*; C. M. O'DRISCOLL. *Univ. Coll Cork, Univ. Col. Dublin.*

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9:15 **114.06** Promoting a targeted neuroprotective immune response. W. M. BAILEY*; K. D. FOUST; J. B. FOSTER; J. C. GENSEL. *Univ. of Kentucky, The Ohio State Univ. Wexner Med. Ctr.*

9:30 **114.07** Gene and cell therapy: Two approachs to promote neuroprotection and neuroregeneration in a model of CNS injury. G. NASCIMENTO DOS SANTOS*; L. TEIXEIRA-PINHEIRO; A. SILVA-JUNIOR; R. MENDEZ-OTERO; H. PETRS-SILVA; M. SANTIAGO. *Univ. Federal Do Rio De Janeiro.*

9:45 **114.08** AAV-based neonatal gene therapy in the hyperargininemic mouse prevents cortical dendritic atrophy and stimulates neuronal maturation. R. F. MERVIS*; S. K. FOLEY; N. BHATIA; S. PATEL; A. PENA; N. MUTHAVARAPU; M. DANG; G. C. NIETO; C. HU; G. S. LIPSHUTZ. *Neurostructural Res. Labs, Univ. of South Florida Morsani Sch. of Medicine, Ctr. of Excellence for Aging and Brain Repair, Univ. of South Florida, David Geffen Sch. of Med. at Univ. of California (UCLA), David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

10:00 **114.09** Targeting alternative splicing to modulate nucleus REST: Potential implication for Huntington's disease. G. CHEN*; Q. MA; D. GOSWAMI; H. YANG; G. MILLER. *Harvard Med. Sch/NEPRC.*

NANOSYMPOSIUM

115. Spinal Cord Injury: Repair and Rehabilitation

Theme D: Sensory and Motor Systems

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

8:00 **115.01** Progressive cervical spinal cord compression injury leads to compensatory neuroplasticity of the spinal respiratory circuitry. K. SATKUNENDRARAJAH*; S. K. KARADIMAS; M. G. FEHLINGS. *Toronto Western Res. Inst., Univ. of Toronto.*

8:15 **115.02** Reticulospinal plasticity promotes skilled hand function recovery in rats with spinal cord injury. G. GARCIA-ALIAS*; K. TRUONG; P. SHAH; H. ZHONG; R. R. ROY; V. R. EDGERTON. *UCLA.*

8:30 **115.03** Pediatric constraint induced movement therapy for brachial plexus injury: Short and long term effcts of a randomized study. T. KARAKOSTAS*; E. C. KING; S. HSIANG. *Rehabil. Inst. of Chicago, Feinberg Sch. of Med., Lurie Childrens Hosp. of Chicago, Texas Tech. Univ.*

8:45 **115.04** The integration of vision and proprioception on obstacle crossing strategies in people with motor-incomplete spinal cord injury. R. N. MALIK; T. LAM*. *Univ. British Columbia.*

9:00 **115.05** Mechanisms underlying the interactive effects of multi-site epidural spinal cord stimulation in spinal rats. P. SHAH*; S. SUREDDI; M. ALAM; P. GAD; H. ZHONG; R. ROY; V. R. EDGERTON; Y. GERASIMENKO. *UCLA, Pavlol Inst. of Physiol.*

9:15 **115.06** Stimulation-induced pendulate tail: Evidence exposure to fixed spaced shock engages a spinal oscillator. M. M. STRAIN*; B. S. PESEK; Y. HUANG; C. R. STUMP; J. D. TURTLE; K. H. LEE; J. W. GRAU. *Texas A&M.*

9:30 **115.07** Immediate and sustained effects of high-intensity locomotor practice on gait performance in individuals with incomplete spinal cord injury. K. A. LEECH*; C. L. HOLLERAN; C. R. KINNAIRD; T. G. HORNBY. *Northwestern Univ. / Rehabil. Inst. of Chicago, Rehabil. Inst. of Chicago, Univ. of Illinois at Chicago.*

NANOSYMPOSIUM

116. Consequences and Mechanisms of Exposure to Stressors

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

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

8:00 **116.01** Adverse early life environment suppresses neurogenesis and induces oligodendrogenesis in the hippocampus. K. TARAVOSH-LAHN*; S. Y. KIM; K. LONG; D. MILIKOVSKY; D. FRANCIS; D. KAUFER. *Univ. of California, Berkeley, Ben-Gurion Univ. of the Negev, Univ. of California, Berkeley.*

8:15 **116.02** Exaggerated changes in REM and transition to REM sleep states in response to fear conditioning following traumatic stress exposure. W. M. VANDERHEYDEN*; L. M. URPA; G. R. POE. *Univ. of Michigan.*

8:30 **116.03** Effects of chronic social defeat stress on sleep, body temperature, and motor activity in mice. A. M. WELLS*; H. PANTAZOPOULOS; R. J. DONAHUE; C. J. WEBBER; W. A. CARLEZON, Jr. *Harvard Med. School, McLean Hosp.*

8:45 **116.04** Role of DNA methylation in the synaptic and behavioral effects of long-term severe stress. J. CHENG*; J. WEI; Z. YAN. *UB.*

9:00 **116.05** The epigenetic mechanism of repeated stress in prefrontal cortex. J. WEI*; Z. XIONG; J. B. LEE; J. CHENG; L. J. DUFFNEY; E. R. MATAS; Z. YAN. *State Univ. of New York at Buffalo.*

9:15 **116.06** microRNA and consolidation of cued fear memory. B. G. DIAS*; J. GOODMAN; R. AHLUWALIA; A. E. EASTON; R. A. GALI; K. RESSLER. *Emory Univ.*

9:30 **116.07** Unbiased comprehensive analysis of neural activity in response to fear with *in vivo* MR imaging of animal models of PTSD. A. GONZALES*; A. DELORA; R. E. JACOBS; E. L. BEARER. *The Univ. of New Mexico, Caltech.*

9:45 **116.08** ● 3,4-methylenedioxy-N-methylamphetamine (MDMA, 'ecstasy') enhances the extinction of cued fear memory in mice. M. YOUNG*; L. L. HOWELL. *Yerkes Natl. Primate Res. Ctr.*

NANOSYMPOSIUM

117. Functional Mechanisms of Attention

Theme F: Cognition and Behavior

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

8:00 **117.01** Facilitation and inhibition in attention: Functional dissociation of pre-stimulus alpha activity, P1 and N1 components. H. A. SLAGTER*; S. PRINSSEN; L. C. RETEIG; M. X. COHEN; A. MAZAHERI. *Univ. of Amsterdam, Univ. of Amsterdam.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:15 **117.02** Viewing the real-world: The effect of semantic and syntactic object properties on visual attention. G. L. MALCOLM*; S. SHOMSTEIN. *The George Washington Univ.*

8:30 **117.03** ● Eeg auditory oddball tone processing as a predictor of cognitive workload states: The attenuating effect of task boredom. K. VANBENTHEM*; S. CEBULSKI; C. M. HERDMAN; J. KEILLOR. *Carleton Univ., Natl. Res. Council of Canada.*

8:45 **117.04** Age-related changes in frontal cortex during high task demands. K. BROWNING*; S. PATEL; C. HUMPHRIES; M. SABRI. *Med. Col. of Wisconsin.*

9:00 **117.05** Attentional modulation of repetition suppression effects in human face- and voice-sensitive cortex. Y. KIKUCHI*; J. IP; J. C. MOSSOM; N. BARRACLOUGH; C. I. PETKOV; Q. C. VUONG. *Newcastle Univ. Med. Sch., Univ. of York.*

9:15 **117.06** Computational modeling of the neural and behavioral correlates of mind-wandering and meditation. M. K. VAN VUGT*; N. A. TAATGEN; D. E. MEYER. *Univ. of Groningen, Univ. of Groningen, Univ. of Michigan.*

9:30 **117.07** Directed functional connectivity of prestimulus alpha relates to performance in a driving task. A. D. PASSARO*; J. BROOKS; J. VETTEL; S. KERICK; P. FRANASZCZUK. *DCS Corp, Univ. of Maryland Med. Ctr., US Army Res. Lab.*

9:45 **117.08** Intersensory attention and temporal orientation are reflected in distinct patterns of cortical oscillations and neural connectivity. J. KEIL*; U. POMPER; D. SENKOWSKI. *Charité Med. Sch.*

10:00 **117.09** Visual selective attention is driven by competition between task-relevant and task-irrelevant features at early stages of visual processing. M. MACLEAN*; B. GIESBRECHT. *Inst. for Collaborative Biotechnologies, Univ. of California Santa Barbara.*

10:15 **117.10** Separate neuroanatomical correlates for orthographic working memory and orthographic long term memory. J. J. PURCELL*; R. CAPASSO; G. MICELI; B. RAPP. *Johns Hopkins Univ., IRCCS Fondazione Santa Lucia and SCA Associates, Univ. di Trento.*

10:30 **117.11** Speaker identity judgments in humans can be predicted by patterns of hemodynamic activity in the right Temporal Voice Area. M. WOLMETZ*; A. M. LEAVER; M. A. CHEVILLET. *Johns Hopkins Applied Physics Lab., Ahmason-Lovelace Brain Mapping Center, UCLA.*

10:45 **117.12** The Conditions of Cross-Hemispheric Communication: The role of structural and functional connectivity in mediating perceptual and conceptual processing. S. W. DAVIS*; R. CABEZA. *Duke Univ.*

NANOSYMPOSIUM

118. Attentional Networks in Humans

Theme F: Cognition and Behavior

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

8:00 **118.01** Frontal networks for visual and auditory attention: Mining functional connectivity in the Human Connectome Project. S. M. TOBYNE*; D. E. OSHER; S. W. MICHALKA; D. C. SOMERS. *Boston Univ., Boston Univ., Ctr. for Computat. Neurosci. and Neural Technol. (CompNet).*

8:15 **118.02** Frontal networks for visual and auditory attention: Mining structural connectivity in the Human Connectome Project. D. E. OSHER*; S. M. TOBYNE; S. W. MICHALKA; D. C. SOMERS. *Boston Univ., Boston Univ., Boston Univ.*

8:30 **118.03** Sensory processing with varying degrees of attention - Lessons from parietal lobe damage. S. S. SHOMSTEIN*; F. UYAR; A. S. GREENBERG; M. BEHRMANN. *George Washington Univ., Univ. of Pittsburgh, Univ. of Wisconsin - Milwaukee, Carnegie Mellon Univ.*

8:45 **118.04** The strength of a pupil-associated resting-state functional network relates to trait-level attention. A. BREEDEN*; M. NORR; G. SIEGLE; C. J. VAIDYA. *Georgetown Univ., Univ. of California, Berkeley, Univ. of Pittsburgh, Sch. of Med.*

9:00 **118.05** The cingulo-opercular network supports word recognition in noise for older adults. K. VADEN*, JR; S. E. KUCHINSKY; S. L. CUTE; J. B. AHLSTROM; J. R. DUBNO; M. A. ECKERT. *Med. Univ. of South Carolina.*

9:15 **118.06** Simultaneous TMS and fMRI to study brain connectivity, adaptive plasticity and therapeutic neuromodulation of attentional networks. J. A. CAMPRODON*; A. SACK; A. PASCUAL-LEONE. *Massachusetts Gen. Hospital, Harvard Med. Sch., Maastricht Univ., Beth Israel Deaconess Med. Center, Harvard Med. Sch.*

9:30 **118.07** The role of intact right superior temporal gyrus in object-centered spatial processing. K. CAULFIELD; P. P. SHAH*; F. GERVITS; P. CHEN; R. H. HAMILTON. *Univ. Col. London, UNIVERSITY OF PENNSYLVANIA, Univ. of Pennsylvania, Kessler Fndn.*

9:45 **118.08** Functional connectivity of the right temporoparietal junction is modulated by the relevance of unattended stimuli. C. LYNCH*; X. YOU; M. NORR; E. GORDON; C. VAIDYA. *Georgetown Univ., Children's Natl. Med. Ctr.*

10:00 **118.09** Topographic subunits of the attentional control network are differentially modulated by cue validity. M. SCOLARI*; S. KASTNER. *Princeton Univ.*

10:15 **118.10** The role of visuo-spatial attention in bottom-up salience coding. R. WEIDNER*; S. BERTLEFF; G. R. FINK. *Res. Ctr. Juelich, Univ. Hosp. Cologne.*

NANOSYMPOSIUM

119. Corticolimbic Circuits and Decision-Making

Theme F: Cognition and Behavior

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

8:00 **119.01** Decision making requires interaction of the nucleus accumbens with ventral hippocampus, not with orbitofrontal cortex. A. R. ABELA*; Y. CHUDASAMA. *McGill Univ.*

8:15 **119.02** The ventral hippocampus is critical for approach-avoidance conflict resolution: Introducing a novel rodent paradigm. R. ITO*; A. SCHUMACHER. *Univ. of Toronto Scarborough.*

8:30 **119.03** Bilateral prefrontal traumatic brain injury causes severity-dependent, chronic deficits in attention, motivation, motor impulsivity and response latency in rats. C. VONDER HAAR*; C. A. WINSTANLEY. *Univ. of British Columbia.*

8:45 **119.04** Spatiotemporal distribution of ventral striatal local field potentials revealed by high-density silicon probes. J. E. CARMICHAEL*; M. A. A. VAN DER MEER. *Univ. of Waterloo.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 **119.05** Prefrontal cortical inactivations decrease willingness to expend cognitive effort on a rodent cost/benefit decision-making task. C. A. WINSTANLEY*; P. J. COCKER; J. G. HOSKING. *Univ. British Columbia, Univ. of British Columbia.*

9:15 **119.06** Cortico-striatal and striato-cortical flow of information are associated with high and low gamma oscillations respectively. J. CATANESE*; M. A. A. VAN DER MEER. *Univ. of Waterloo.*

9:30 **119.07** Rho-kinase inhibition augments goal-directed decision-making and blocks habitual responding for cocaine. A. M. SWANSON*; L. M. DEPOY; S. L. GOURLEY. *Emory Univ., Yerkes Natl. Primate Res. Ctr.*

9:45 **119.08** The role of the nucleus accumbens core in approach avoidance conflict resolution. L. M. HAMEL*; R. ITO. *Univ. of Toronto Scarborough, Univ. of Toronto.*

10:00 **119.09** Population encoding of value and choice signals as separable, dynamic neural ensembles in macaque orbitofrontal cortex. D. L. KIMMEL*; A. RANGEL; W. T. NEWSOME, III. *Columbia Univ., Caltech, Stanford.*

10:15 **119.10** Parsing the role of the hippocampus in avoidance and exploration. E. LOH*; M. GUITART-MASIP; D. BACH; E. DUZEL; R. J. DOLAN. *Univ. Col. London, Wellcome Trust Ctr. for Neuroimaging, Karolinska Institutet, Zurich Univ. Hosp. for Psychiatry, Inst. of Cognitive Neurosci.*

10:30 **119.11** Primary visual cortex engenders timed actions. V. K. NAMBOODIRI*; M. HUERTAS; K. J. MONK; H. Z. SHOUVAL; M. G. HUSSAIN SHULER. *Johns Hopkins Univ., Univ. of Texas.*

10:45 **119.12** Dynamic encoding of errors by the anterior and posterior cingulate cortex in a changing world. Y. LI*; M. R. NASSAR; J. I. GOLD. *Univ. of Pennsylvania, Brown Univ.*

THEME H POSTER

021. History of Neuroscience

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 UU21 **21.01SA** ▲ Sir William Osler and the evolving neurological sciences. D. BERGERON; A. TURMEL; A. PARENT. *Psychiat & Neurosci Dept, Univ. Laval, Neurosurg. Dept, CHA.*

2:00 UU22 **21.02SA** Manufacturing a neural interface - a summary of the published cochlear implant manufacturing processes. R. CALIXTO. *Advanced Bionics.*

3:00 UU23 **21.03SA** An analysis of the poisons acting nervous system mentioned in The Canon of Medicine by Avicenna. Z. EBRAHIMIAN; Z. KARIMI; M. RAZA. *Shiraz Univ. of Med. Sci., Tarbiat Modares Univ., Baqiyatallah Univ. of Med. Sci.*

4:00 UU24 **21.04SA** Leonardo Da Vinci and the search for the anatomical basis of the soul. R. E. BROWN. *Dept. of Psychology and Neurosci.*

1:00 UU25 **21.05SA** Present status of pathological autopsy in the oldest psychiatric hospital in Japan, including its association with neuroscience. K. NIIZATO. *Tokyo Metropolitan Matsuzawa Hosp.*

2:00 UU26 **21.06SA** Early anesthetic theorizing: Between biology, chemistry and experimental pharmacology. M. PEROUANSKY. *Univ. Wisconsin Madison.*

3:00 UU27 **21.07SA** The Vater-Pacini corpuscle - how many times did it need to be “discovered?”. B. W. BAKKUM. *Illinois Coll Optometry.*

4:00 UU28 **21.08SA** *In vivo* pharmacological profile of S 38093, a novel inverse agonist at histamine H_3 receptors. F. PANAYI; A. SORS; L. BERT; B. MARTIN; G. ROLLIN-JEGO; R. BILLIRAS; I. CARRIE; K. ALBINET; L. DANOBER; N. ROGEZ; J. THOMAS; P. LESTAGE; L. PIRA; V. BERTAINA-ANGLADE. *Idr SERVIER, Pharmaness, Biotrial.*

1:00 UU29 **21.09SA** Camillo Golgi and the Black Reaction. N. E. KINNEY. *Southeast Missouri State Univ.*

2:00 UU30 **21.10SA** An historiographic survey of the failed queries of brain research and the search for the role of the brain in cognition and the superiority of the human brain. L. KRUGER. *UCLA Geffen Sch. of Med.*

3:00 UU31 **21.11SA** Compound 4560 RP and the Birth of Psychopharmacology. L. T. MOISA; T. J. DONAHUE; J. H. PORTER1. *Virginia Commonwealth Univ.*

4:00 UU32 **21.12SA** Phase-reversal in the oscillatory entrainment of neural interactions is a general principal of learning. Z. WILLIAMS; R. HASLINGER; M. ESCOLIA. *Harvard Med. Sch. (MGH), Harvard Med. Sch.*

1:00 UU33 **21.13SA** Revisiting William James, automata, and thoughts about ‘free will’: Entorhinal/Hippocampal and Prefrontal dynamics contributing to repetitive behavior and the possibility of new behavior. S. CURTIS. *True North, LLC.*

2:00 UU34 **21.14SA** Ubiquitin and CNS: An historical perspective. T. R. BUTT. *Progenra Inc.*

3:00 UU35 **21.15SA** Toward a richer understanding of neuronal process in aesthetic appreciation: Neuroaesthetics history. V. ESTRADA GONZALEZ. *UNAM.*

4:00 UU36 **21.16SA** The Italian Physiologist Pietro Tullio and the origin of the research on vestibular responses to sound. D. TROIANI; A. R. FETONI; P. M. PICCIOTTI; E. MANNI. *Inst. Physiol. Univ. Cattolica Sch. of Med., Inst. of Otolaryngology Catholic Unifersity of Rome, Inst. of Human Physiol. Catholic Unifersity of Rome.*

1:00 UU37 **21.17SA** 25 years of the Mouse Genome Informatics resource: Integrating genetic, genomic, expression, functional and phenotypic data for the neuroscience research community. J. BERGHOUT; C. J. BULT; J. A. BLAKE; M. RINGWALD; J. A. KADIN; J. E. RICHARDSON; J. T. EPPIG; &. THE MOUSE GENOME INFORMATICS STAFF 1989-2014. *Mouse Genome Informatics / The Jackson Lab.*

2:00 UU38 **21.18SA** A mexican women dedicated to the study of the brain. J. VILLEDA, SR; J. VILLEDA, SR; F. FERNÁNDEZ-VALVERDE; V. CAMPOS PEÑA. *Home, Inst. Nacional de Neurología y Neurocirugía, INSTITUTO NACIONAL DE NEUROLOGIA Y NEUROCIRUGIA.*

3:00 UU39 **21.19SA** Corrections in neuroscience: the vision of the past and the future. K. V. KHACHATRYAN, SR; K. V. KHACHATRYAN, SR; A. AYDINYAN; M. KHACHATRYAN; T. KHACHATRYAN. *Mikayelyan Surgical Inst., Mikayelyan Surgucal Inst., N1 Univ. Hosp. of the Yerevan State Med. Univ.*

4:00 UU40 **21.20SA** ▲ Is ignorance of methodological details bliss? Fundamental differences in the interpretation of Libet’s 1983 experiment revealed by a large scale quantitative review of 463 citing papers. J. DREO; J. DREO; S. SKUBIC; S. KNEZ; R. PANTZAKIS; Z. PIRTOŠEK. *Lab. For Cognitive Neurosci.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

THEME H POSTER

022. K-12

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

8:00 UU41 **22.01SU** UCLA neuroscience outreach to LA schools. N. F. HARDY; D. ALEXANDER; M. DESALVO; R. ROMERO-CALDERON; C. A. GHIANI; W. GE; C. E. EVANS; J. B. WATSON; E. M. CARPENTER. *UCLA Sch. Med., UCLA Sch. Med.*

9:00 UU42 **22.02SU** Sowing the seeds of neuroscience: a new curriculum for middle school students. E. H. CHUDLER; K. STRAUS; L. COLLINS. *Ctr. For Sensorimotor Neural Engin., Univ. of Washington, Ctr. for Res. and Learning.*

10:00 UU43 **22.03SU** Brain camp for Brianiacs: Neuroelectrophysiology as a tool for teaching scientific process to gifted upper middle and high school students. L. G. MORRIS; J. L. PECORE; W. D. THOMPSON; S. B. FELDMAN; M. K. DEMETRIKOPOULOS. *Inst. Biomed Philosophy, Piedmont Tech. Col., Univ. of West Florida.*

11:00 UU44 **22.04SU** ▲ Biological research through independent investigations in a high school setting. J. GLEKLEN; N. KUMAR; A. HOOVER; M. FIELDS; A. PARSEGIAN. *Sidwell Friends Sch., The Mol. & Behavioral Neurosci. Inst.*

8:00 UU45 **22.05SU** Student Knowledge Gains From Neuroscience Teacher Professional Development. J. M. DUBINSKY; M. MICHLIN; M. HOELSCHER; C. ELLINGSON; G. ROEHRIG. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

9:00 UU46 **22.06SU** Citizen science with high school students and adults from around the world participating in analysis of synaptic transmission. R. L. COOPER; Z. R. MAJEED; C. MALLOY; D. POTTS; K. ZEIDLER-WATTERS; R. M. KRALL; D. JOHNSON; S. MAYO; G. ZWANZIG; H. ANDERSON; W. COLGAN, III; W. CHUNG; A. MEGIGHIAN; E. E. DUPONT-VERSTEEGDEN. *Univ. Kentucky, Univ. of Salahaddin, Univ. Kentucky, Univ. Kentucky, duPont Manual High Sch., Paul Laurence Dunbar High Sch., ADInstruments Inc., Korea Military Acad., Univ. of Padova, Univ. Kentucky.*

10:00 UU47 **22.07SU** Neurological Disorders in the High School Classroom: Creating both a novel biomedical curriculum and an innovative teacher mentoring program to facilitate implementation. K. F. MEIRI; K. F. MEIRI. *Tufts Univ. Sch. of Med.*

11:00 UU48 **22.08SU** Developing a neuroscience high school summer camp. J. S. SHUMSKY. *Drexel Univ. Col. of Med.*

8:00 UU49 **22.09SU** The Institute On Neuroscience (ION) summer research program for outstanding high school students and teachers. C. T. GOODE; G. DE VRIES; D. L. MANEY; K. J. FRANTZ. *Georgia State Univ., Georgia State Univ., Emory Univ., Georgia State Univ.*

9:00 UU50 **22.10SU** ▲ Divergent Thinking: Using Roth's dystopian trilogy as a neuroscience teaching tool. K. KELLY; K. VASILOFF; L. M. FREEMAN. *Mary Baldwin Col.*

10:00 UU51 **22.11SU** Muscles Alive! A novel, experiential neuroscience education outreach program for elementary, secondary, and university students. B. L. TRACY. *Colorado State Univ.*

11:00 UU52 **22.12SU** Biomedical Research Academy in Neuroscience (BRAiN): An educational model to engage middle-schoolers in stem fields. C. C. SWANWICK; C. B. FAVERO; J. HEITZ; R. HEITZ. *Ideaventions, Ursinus Col.*

8:00 UU53 **22.13SU** The 2014 International Brain Bee championship. N. MYSLINKSI; D. SEMINOWICZ. *Univ. of Maryland, Baltimore.*

9:00 UU54 **22.14SU** The american national brain bee championship 2014. N. R. MYSLINSKI; J. RO. *Univ. Maryland Sch. Dent.*

10:00 UU55 **22.15SU** Inaugural San Bernardino County brain bee. C. RAY; P. LORENZO; N. MISTRY; R. HARTMAN. *Loma Linda Univ.*

11:00 UU56 **22.16SU** ▲ Ready, set, grow: Utilizing physical exercise to teach k-12 students about an anti-obesity vaccine. A. BEARD; D. CHAPPELL; A. PLAYER; G. D. GRIFFIN. *Tuskegee Univ.*

8:00 UU57 **22.17SU** ▲ Think outside the blocks: Hands-on education in substance abuse related behavior using LEGO robotics. A. GALLUP; P. E. DICKSON; K. LONG; K. FUNKHOUSER@GMAIL.COM; M. MCOSKAR; J. KADIN; E. J. CHESLER. *Mount Desert Island High Sch., The Jackson Lab.*

9:00 UU58 **22.18SU** Genes, brain, and behavior in your pet worm: an interactive, inquiry-based neuroscience workshop for K-12 students. A. J. JASINSKA. *NIDA-IRP, NIH.*

10:00 UU59 **22.19SU** Engaging students in brain awareness through hands on science. L. HARRIS; A. GONZALES; J. J. FAUST; I. SINAKEVITCH; D. P. BALUCH. *Arizona State Univ.*

11:00 UU60 **22.20SU** More than meets the eye: Introducing neuroscience through optical illusions. S. WILLIAMS; C. WEICHSELBAUM. *NIMH.*

8:00 UU61 **22.21SU** Authentic research experiences for public high school teachers and students in puerto rico: University-High school partnership. S. TORRES-RUIZ; C. OJEDA-REYES; R. BROWN; J. APONTE-RAMIREZ; J. AGOSTO-RIVERA; N. CRUZ-BERMUDEZ. *Univ. De Puerto Rico, Univ. De Puerto Rico, Univ. De Puerto Rico.*

9:00 UU62 **22.22SU** ▲ The University of New England's K-12 neuroscience outreach program. A. D'AMBRUOSO; K. SCHWARZ; A. DEAL; K. ERICKSON; E. BILSKY; M. A. BURMAN. *Univ. of New England, Univ. of New England.*

THEME H POSTER

023. College Experiences

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 UU63 **23.01SA** Nu Rho Psi, the national honor society in neuroscience. G. MICKLEY; E. P. WIERTELAK; G. COUSENS; L. J. ACHOR. *Nu Rho Psi, Macalester Col., Drew Univ., Baylor Univ.*

2:00 UU64 **23.02SA** Faculty for Undergraduate Neuroscience (FUN): Multiple mechanisms for supporting the development of undergraduate students and faculty in the neurosciences. J. S. SMITH; L. A. GABEL; N. J. SANDSTROM. *Saginaw Valley State Univ., Lafayette Col., Williams Col.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 UU65 **23.03SA** Transforming the academy with transdisciplinarity: Neuroscience as the model. K. L. HAIK; R. L. GARNS. *Northern Kentucky Univ., Northern Kentucky Univ.*

4:00 UU66 **23.04SA** Flow dynamics of classroom seating positions may predict achievement outcome in dental hygiene college students. S. HIRANO; T. FUJIMOTO; H. INOUE; K. UCHIHASHI; Y. NISHIKAWA. *Osaka Dent. Univ.*

1:00 UU67 **23.05SA** UNTRAC: A partnership between two universities to bring underrepresented minorities to neuroscience. K. LACK; M. BHAT; A. AILERU; S. SETARO; A. D. JOHNSON; W. SILVER. *Wake Forest Univ., Winston Salem State Univ.*

2:00 UU68 **23.06SA** Teaching resources for neuroscience content in the 2015 Medical College Admissions Test®. J. R. PRICHARD; J. PAGE. *Univ. St. Thomas, Assn. of American Med. Col.*

3:00 UU69 **23.07SA** The 25th northeast under/graduate research organization for neuroscience (NEURON) conference held at Quinnipiac University in Hamden, CT. A. J. BETZ; T. H. AHERN; C. FRYE. *Quinnipiac Univ., Univ. of Albany.*

4:00 UU70 **23.08SA** MidBrains 2013: The 7th annual undergraduate neuroscience research conference of the Midwest. S. D. DICKINSON; J. J. NEIWORTH; E. P. WIERTELAK; J. DEMAS; J. L. LOEBACH; S. MEERTS; G. M. MUIR; J. STRAND; L. WICHLINSKI; J. WOLFF. *St. Olaf Col., Carleton Col., Macalester Col., St. Olaf Col., Carleton Col.*

1:00 UU71 **23.09SA** The 26th northeast under/graduate research organization for neuroscience program at the 42nd Hunter College psychology convention. A. A. WALF; C. A. FRYE; J. YOUNG. *Rensselaer Polytechnic Institute,, Univ. Albany, Hunter Col.*

2:00 UU72 **23.10SA** Spreading the word about neuroscience education, one pdf at a time: The Journal of Undergraduate Neuroscience Education. E. P. WIERTELAK; G. DUNBAR; B. JOHNSON. *Macalester Col., Central Michigan Univ., Cornell Univ.*

3:00 UU73 **23.11SA** Choose Development! - A long-term and continuing mentoring program to increase the diversity of undergraduates entering research careers in developmental biology. I. CHOW; K. BENNETT; G. UNGUEZ. *Soc For Developmental Biol., Univ. of Missouri-Columbia, New Mexico State Univ.*

4:00 UU74 **23.12SA** A tale of two research students: A perspective on the mentoring of undergraduate research students at a predominantly undergraduate institution. V. G. MARTINEZ ACOSTA. *Univ. of the Incarnate Word.*

1:00 UU75 **23.13SA** The prevalence of brain myths among undergraduates interested in neuroscience. P. WALLISCH. *New York Univ.*

2:00 UU76 **23.14SA** Enriching critical thinking in community college students through animal research. L. A. SCHIMANSKI. *Glendale Community Col.*

3:00 UU77 **23.15SA** Research education for novice and underserved student populations: Removing traditional barriers with modern technology and pedagogy. S. FROMHERZ; K. S. RENZAGLIA; A. A. SHARP. *SIU Sch. Med., SIU.*

4:00 UU78 **23.16SA** Learning about the brain in a funny way. J. VAZQUEZ RAMIREZ; J. VAZQUEZ RAMIREZ; A. RUIZ-GARCIA; I. ROSEMBERG GARCIA; P. ZARATE GONZALEZ; D. SOLTERO DE LA ROSA; D. PAZ TREJO; H. SANCHEZ CASTILLO; K. DELGADO SALTIJERAL. *Clave Consultora Para La Ciudadania, Univ. Nacional Autonoma de Mexico, Asociación Mexicana de Psicotraumatología.*

1:00 UU79 **23.17SA** The Wicking Dementia Research and Education Centre - paving the way forward in online dementia education. A. CANTY; C. KING; A. CARR; J. KELDER; A. PRICE; A. GIBSON; T. CAREW; J. O'REILLY; C. O'MARA; J. WALLS; F. MCINERNEY; A. ROBINSON; J. VICKERS. *Univ. of Tasmania, Univ. of Tasmania, Univ. of Tasmania, Australian Catholic Univ.*

2:00 UU80 **23.18SA** Enhancing online neuroscience education. T. H. GILBERT. *Athabasca Univ.*

3:00 UU81 **23.19SA** Descriptors for cortical and social networks might be self-similar: Cortical graphs for hyperscanning and social impact of individualistic vs. collective education and therapy. A. L. GOMEZ-MOLINA; F. LOPERA, BA; A. A. RESTREPO; J. F. GOMEZ-MOLINA. *Intl. Group of Neurosci. (Col, USA member), Intl. Group of Neurosci., EAFIT Univ., Intnal Group of Neuro.*

4:00 UU82 **23.20SA** Promoting excellence in undergraduate and graduate research presentations at NEURON, a regional Faculty for Undergraduate Neuroscience conference. D. B. MCQUADE; A. A. WALF; C. A. FRYE; T. H. AHERN; A. J. BETZ. *Skidmore Col., Rensselaer Polytechnic Inst., The Univ. at Albany, Quinnipiac Univ.*

THEME H POSTER

024. Teaching Neuroscience: College Courses

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 UU83 **24.01SA** Implementation of active pedagogies in an undergraduate neuroscience course for non-science majors. L. ROESCH; K. FRENZEL. *Emory Univ., Emory Univ.*

2:00 UU84 **24.02SA** Teaching freshmen and non-majors with primary scientific literature. D. BRASIER. *Carnegie Mellon.*

3:00 UU85 **24.03SA** Using simulations and a wiki to create a virtual laboratory for neurobiology. J. P. GILL; K. M. SHAW; L. GLAIT; H. J. CHIEL. *Case Western Reserve Univ., Case Western Reserve Univ.*

4:00 UU86 **24.04SA** BREWERS: An active learning course using beer and coffee as a mechanism to learn neuroscience. O. P. KEIFER, JR; P. MARSTELLER; K. J. RESSLER. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Yerkes Natl. Primate Res. Ctr., Emory Univ., Emory Univ., Emory Univ., Howard Hughes Med. Inst.*

1:00 UU87 **24.05SA** The value of the IMPULSE experience for non-neuroscience majors. L. JONES; E. A. ARTZ; D. E. COBB; C. D. ESTER; H. JOHNSON; A. J. ROSSI; T. K. SASSER; D. E. RUSSELL; R. A. SLEDGE; W. C. STEVENS. *Appalachian State Univ.*

2:00 UU88 **24.06SA** The tech sandbox: Learning through play. L. A. JOHNSON; J. WANDER; D. SARMA; J. VOLDMAN. *The Ctr. For Sensorimotor Neural Engin., Univ. of Washington, MIT.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 UU89 **24.07SA** Challenges and rewards of an undergraduate computational neuroscience program. S. OPRISAN. *Col. of Charleston.*

4:00 UU90 **24.08SA** Neuroscience-based research projects as engagement exercises in a summer bridge program at an HBCU. M. A. HARRINGTON; T. G. SMOLINSKI; A. LLOYD; M. VELA-SIANJINA. *Delaware State Univ., Delaware State Univ., Delaware State Univ.*

1:00 UU91 **24.09SA** Undergraduate laboratory research projects suitable for courses with a hormones and behavior module. M. T. KERCHNER; C. CER; Y. DARWISH; A. DAVIS; E. DUENAS; C. ELIADES; A. LEGARD; Z. LEPPERT; K. MCEVOY; W. MOULDEN; A. NISONGER; M. WILSON. *Washington Col.*

2:00 UU92 **24.10SA** Graduate admissions in clinical neuropsychology: the importance of undergraduate training. A. STAVNEZER; J. W. REEVES; B. T. KARAZSIA. *Col. of Wooster, Col. of Wooster, Col. of Wooster.*

3:00 VV1 **24.11SA** Neuroscience of exercise: An undergraduate course examining how physical activity influences the brain and behavior. B. LOM. *Davidson Col.*

4:00 VV2 **24.12SA** The effects of teratogens on gene regulation and whole cell currents: A collaborative research project utilizing Real-time q-RT-PCR, PCR arrays, and automated electrophysiology. A. J. ETTINGER; K. J. KARNAS. *Cedar Crest Col., Cedar Crest Col.*

1:00 VV3 **24.13SA** Understanding the role of neuroeconomics in an undergraduate curriculum. G. S. LOWRY; C. L. FRANSSEN; S. M. HOLLENBECK; A. FRANSSEN. *Randolph-Macon Col., Longwood Univ., James Madison Univ., Longwood Univ.*

2:00 VV4 **24.14SA** Undergraduate laboratory course in physiological psychology. H. H. LOPEZ; M. SPRING. *Skidmore Col., Skidmore Col.*

3:00 VV5 **24.15SA** Project PNEURAL: Simulating neurophysiology using physical computing. J. R. BURDO. *Boston Col.*

4:00 VV6 **24.16SA** An in class small group exercise that helps illustrate the basics of syanptic transmission and drug action at the synapse. D. S. ALBECK. *UC Denver.*

1:00 VV7 **24.17SA** Manipulating synaptic transmission in Helisoma trivolvis embryos: A laboratory exercise for undergraduate students. E. F. FIELD; K. ATKINSON-LEADBEATER. *Mount Royal Univ., Mount Royal Univ.*

2:00 VV8 **24.18SA** ▲ Neuroscience integrated into practices: Proposal for undergraduate students in teaching-learning, research on health and social awareness. R. M. AGUIAR, SR; J. H. SATO; F. E. B. PEREIRA; A. A. J. QUADROS; M. R. DA CUNHA; R. N. ISAYAMA. *UNASP, Faculdade de Medicina de Jundiaí (FMJ), UNASP.*

3:00 VV9 **24.19SA** Teaching university-level psychology and neuroscience in the 21st century. A. J. WINTINK. *Ctr. For Applied Neurosci.*

4:00 VV10 **24.20SA** Cross-cultural neuroscience education: Teaching neuroscience in Tibetan Buddhist monasteries. M. R. ROMANO; C. M. WORTHMAN; G. DESBORDES; B. G. DIAS; W. HASENKAMP; P. M. IUVONE; G. D. NAMGYAL; L. T. NEGI; L. A. ROESCH; T. SAMPHEL; L. H. TING. *Emory Univ., Harvard Med. Sch., Mind & Life Inst., Georgia Tech.*

1:00 VV11 **24.21SA** Incorporating MRI scans into undergraduate instruction using free web-based resources FSL, OpenfMRI, and NITRC. N. SUTHANA; W. E. GRISHAM. *UCLA, UCLA.*

2:00 VV12 **24.22SA** Use of the bean beetle, Callosobruchus maculatus, as a model system for studying circadian activity in the college classroom. T. M. REED. *Col. Mount St. Joseph.*

3:00 VV13 **24.23SA** A public speaking challenge causes undergraduates to have an acute stress response. H. VIEM; J. C. NEILL. *Long Island Univ.*

4:00 VV14 **24.24SA** Department of Anatomy at the Ege University Faculty of Medicine and the Neuroscience Society of Turkey have developed and now propose a unique teaching-learning model: A multi-mediatic neuromorphology tour from cadavers to molecules. G. O. PEKER; G. SENGUL; R. ERZURUMLU; E. ULUPINAR; S. CELIK; A. KESER; L. OZTURK. *Ege Univ. Fac. of Med., Ege Univ. Fac. of Med., Maryland Univ. Col. of Med., Osmangazi Univ.*

1:00 VV15 **24.25SA** Visualizing the morphology of *Drosophila* dendritic arborization neurons: An undergraduate laboratory exercise. S. M. WEBSTER; F. ANGGORO. *Col. of the Holy Cross, Col. of the Holy Cross.*

2:00 VV16 **24.26SA** Improving critical thinking skill and learning outcomes an undergraduate brain and behavior course using backwards design. N. STAFFEND; C. SISK; J. LIBARKIN. *Michigan State Univ., Michigan State Univ.*

3:00 VV17 **24.27SA** Methods of heat sensory phenotyping: Why results of examine by QST and co2 LEP are different from diode laser QST and Nd:YAP LEP. M. I. NEMENOV; M. J. IADAROLA; D. C. YEOMANS. *Lasmed LLC, Dept. of Perioperative Med., Stanford Univ. Sch. of Med.*

THEME H POSTER

025. Graduate and Professional Education

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 VV18 **25.01SA** Positive evaluation of the importance of neuroscience education by Pharm.D students. G. M. KHAN. *Appalachian Col. of Pharm.*

2:00 VV19 **25.02SA** Brainstem 101: An Interactive iOS application for graduate and medical students. O. ZABARJADI; B. PUDER. *Touro Univ. California, Samuel Merritt Univ.*

3:00 VV20 **25.03SA** Enhancing graduate and post-doctoral training: Insights from the neural systems & behavior course at mbl in woods hole. A. A. FENTON; R. M. HARRIS; H. A. HOFMANN. *New York Univ., Univ. of Texas at Austin, Univ. of Texas at Austin.*

4:00 VV21 **25.04SA** From ion currents to compound action potentials with the Virtual Physiology teaching tools SimNeuron and SimNerv. H. A. BRAUN; A. TCHAPTCHET; D. HÖHL; U. THOMAS. *Univ. Marburg, Thomas Recording.*

1:00 VV22 **25.05SA** A simple logical perspective for students of neuroscience to learn, understand, and memorize major trends of mapping time (past, present, and future) in the CNS -- incline toward assigning past to future points of the real world as posterior to anterior zones of the brain? A. BISWAS. *Edinboro Univ.*

2:00 VV23 **25.06SA** An examination of publication bias in neuroimaging research of autism spectrum disorder. J. DAY; B. K. CARR; K. N. DAY; M. VASSAR. *Oklahoma State Univ. Ctr. For Hlth. Scienc.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 VV24 **25.07SA** Using network geometry to display regions of brain activity across neuroimaging studies of post-traumatic stress disorder. G. COOK; B. K. CARR; J. M. DAY; M. VASSAR. *Oklahoma State Univ. - Ctr. For Hlth. Sci.*

4:00 VV25 **25.08SA** Preparing for academic careers through the Tufts TEACRS Program. L. C. MELON; K. K. O'TOOLE; C. MOORE; M. MCVEY. *Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med.*

1:00 VV26 **25.09SA** Build your STEM career: Accelerating student degree progression and professional achievement. E. E. SERRANO. *New Mexico State Univ.*

2:00 VV27 **25.10SA** Tutorial contents on the INCF Japan Node platforms. Y. YAMAGUCHI; S. SATOH; T. IIJIMA; R. KANZAKI; T. FURUICHI; Y. SHINODA; S. KAKEI; S. MASAKI; H. WAGATSUMA; T. MIYAKAWA; K. TAKAO; H. IKENO; K. TANAKA; Y. OKAMURA-OHO; Y. OKUMURA; S. KAMAKURA; Y. ISONO; Y. MORII; S. SUENAGA; S. USUI. *NIJC, RIKEN BSI, Univ. of Electro-Communications, Tohoku Univ., Univ. of Tokyo, Tokyo Univ. of Sci., Tokyo Metropolitan Inst. of Med. Sci., ATR-Promotions, Kyusyu Inst. of Technol., Fujita Hlth. Univ., Natl. Inst. for Physiological Sci., Univ. of Hyogo, CBM Lab, RIKEN BSI, RIKEN BReNt, Toyohashi Univ. of Technol.*

3:00 VV28 **25.11SA** Examining the use of post-hoc procedures in neuroimaging research. J. REDMOND; M. VASSAR; B. K. CARR. *Oklahoma State Univ. Ctr. For Hlth. Scienc.*

4:00 VV29 **25.12SA** Using course objectives and the Learning Through Discussion Method to establish instructional validity in a small-group graduate neuroscience class. S. O. AHMAD. *St. Louis Univ.*

1:00 VV30 **25.13SA** A Social Network analysis of scientific collaborations in neuroimaging research. B. K. CARR; J. M. DAY; M. HOLZMANN; M. VASSAR. *Oklahoma State Univ. Ctr. For Hlth. Sci.*

2:00 VV31 **25.14SA** Training activities of the international neuroinformatics coordinating facility. M. LINNE; G. EGEN; G. EINEVOLL; A. KUMAR; B. RICHMOND; T. WACHTLER; M. SUNDSTRÖM; M. B. ABRAMS; D. WILLSHAW. *Tampere Univ. of Technol., Monash Univ., Norwegian Univ. of Life Sci., Bernstein Ctr. Freiburg, NIMH/NIH/DHHS, Ludwig-Maximilians-Universität München, Intl. Neuroinformatics Coordinating Facility, Karolinska Inst., Univ. of Edinburgh.*

3:00 VV32 **25.15SA** Case-based active learning as a method of introducing the neurosciences within a medical school curriculum. B. D. FISCHER; R. J. BUONO; C. C. CAGANDE; M. A. CARRAN. *Cooper Med. Sch. of Rowan Univ.*

4:00 VV33 **25.16SA** Retrieval of grey literature in neuroimaging research. K. N. DAY; H. D. MUCKELRATH; J. M. DAY; B. K. CARR; M. HOLZMANN; M. VASSAR. *Oklahoma State Univ. CHS.*

1:00 VV34 **25.17SA** The international, interdisciplinary research training program cinacs. J. ZHANG. *Univ. of Hamburg.*

2:00 VV35 **25.18SA** Integrating neuroscience into graduate education in social work. J. BLACK. *Boston Col. Grad. Sch. of Social Work.*

3:00 VV36 **25.19SA** A new model for teaching advanced neuroscientific methods to graduate students. M. EINSTEIN; S. BONANNO; C. CHING; T. HARRISON; A. M. ANDREWS. *UCLA, UCLA, Semel Inst. for Neurosci. & Human Behavior and California NanoSystems Institute, UCLA.*

THEME H POSTER

026. Public Outreach I

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

8:00 VV37 **26.01SU** The homunculus mapper: An interactive experiment for educators and outreach groups. T. WALKER; R. CORLEW; O. ZHOVNIR. *Max Planck Florida Inst. For Neurosci., Max Planck Florida Inst. for Neurosci., Max Planck Florida Inst. for Neurosci.*

9:00 VV38 **26.02SU** Outreach + advocacy = a public encouraged and equipped to advocate for basic science funding. R. CORLEW. *Max Planck Florida Inst.*

10:00 VV39 **26.03SU** Growing public awareness and enthusiasm for neuroscience locally: Outreach activities of the palm beach chapter of the society for neuroscience. S. A. SANGUINETTI; R. CORLEW; W. BOSKING; V. HOKE; K. C. DIAH; D. J. CASCIATO; C. P. JOHNSON; A. L. JACOB; N. A. BUILES; S. MARSH; J. C. SAHAGIAN; Y. CHEN; S. SWARNKAR; L. RIOS; J. LORA; L. LEE; C. DUHANEY; K. ARRIZZA. *Florida Atlantic Univ., Max Planck Florida Inst. for Neurosci., Harriet L. Wilkes Honors Col. of Florida Atlantic Univ., Max Planck Florida Inst. for Neurosci., The Scripps Res. Inst., South Florida Sci. Ctr.*

11:00 VV40 **26.04SU** A history of cognitive enhancement use makes people less desirable as employees. N. FITZ; L. CABRERA; P. REINER. *Univ. of British Columbia.*

8:00 VV41 **26.05SU** Neuromodulation of virtue circuits: Ethical considerations of modulating positive character traits via neuroplasticity. D. C. LARRIVEE; A. GINI. *Roman Catholic Diocese of Charleston Educational Outreach Office, San Camillo Forlanini Med. Ctr.*

9:00 VV42 **26.06SU** The role of the national science foundation office of the inspector general in research misconduct investigations. E. RUNKO. *Natl. Sci. Fndn.*

10:00 VV43 **26.07SU** The integration of mentorship and outreach: Creating a community of young scientists sharing neuroscience research with people across the lifespan. K. A. BENNION. *Boston Col.*

11:00 VV44 **26.08SU** 2014 regional brain awareness program in Eastern Kentucky. I. M. WHITE; J. L. HUFF; W. WHITE. *Morehead State Univ.*

8:00 VV45 **26.09SU** ▲ Cogsci connects: It's just brain science!. T. L. VENKATESAN, Y; D. PURVES. *Yale Univ., Duke Univ. Inst. For Brain Sci.*

9:00 VV46 **26.10SU** Graduate-led outreach initiatives: improving neuroscience literacy in children and adults. M. TAYLOR; K. L. CHRISTISON-LAGAY; I. J. PERRON; D. J. REINER; J. GOLD. *Perelman Sch. of Med., Univ. of Pennsylvania.*

10:00 VV47 **26.11SU** Bloomsburg university's 4th annual Brain Awareness Week: outreach to preschool, elementary, middle, high school, and university students in central pennsylvania. J. A. JOHNSON; L. E. GANEY; A. A. MODICA; N. C. UPDEGROVE. *Bloomsburg Univ., Bloomsburg Univ. of Pennsylvania.*

11:00 VV48 **26.12SU** The Northwestern University Brain Awareness Outreach organization shares excitement for neuroscience with the Chicago community. N. M. FREDERICK; L. K. SHANAHAN; S. HATTORI; S. R. MCIVER. *Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 VV49 **26.13SU** Utah Brain Awareness Week 2014: Brain storm. S. N. REDMON; T. DAHL; J. M. CAHOON; P. PARKER; K. CHANDLER; G. SMITH; S. LUKS-MORGAN; P. MALDONADO; J. BARRIOS; A. D. IUSO; A. TAIBI; A. HAACK; R. DORSKY; A. DAVIS. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

9:00 VV50 **26.14SU** The impact of Brain Awareness Week in southern Puerto Rico. E. A. CRUZ TORRES; O. SOLER-CEDEÑO; M. CRIADO-MARRERO; A. HERNÁNDEZ; M. COLÓN; B. VELÁZQUEZ; L. MALDONADO; G. NEGRÓN; E. RUIZ; A. TORRES; D. FONTANEZ-NUIN; R. LORENZI; J. T. PORTER. *Ponce Sch. of Med. and Hlth. Sci.*

10:00 VV51 **26.15SU** Electric muscles! interactive exhibit for Brain Awareness Week and the north carolina science festival. D. L. ROBINSON. *Univ. of North Carolina.*

11:00 VV52 **26.16SU** Using Gromphadorhina portentosa, the Giant Madagascar Hissing Cockroach, as a model organism in the neurobiology laboratory. K. G. SOSSA. *Notre Dame of Maryland Univ.*

8:00 VV53 **26.17SU** ▲ Customizing 3D printed models from MRI data: Creating educational anatomy models of neurologic disease. B. GARDINER; S. ROBISON; J. WISCO. *Brigham Young Univ., Univ. of Utah Sch. of Med.*

9:00 VV54 **26.18SU** Three years of the brain & mental health art show in Ottawa: Carleton University's Brain Awareness Week. H. A. MACKAY; V. ST-ONGE; R. GABRYS; R. MCQUAID; O. MCINNIS; N. RUSTOM; S. HUDSON; L. FRIBERG; S. KING JOHNSON; B. WARTMAN; T. PARNO; S. SYED; K. FARMER; C. RUDYK; C. SMITH; M. WELLMAN; A. ABIZAID. *Carleton Univ.*

10:00 VV55 **26.19SU** NW Noggin: Collaborative neuroscience outreach in Portland and Vancouver - Undergraduates, graduates, scientists, middle and high school students work together to learn about the brain. W. GRIESAR; J. LEAKE; S. HADENFELD; L. MILLER; M. MILLER; M. L. SMITH; E. TREMAINE; R. WESCOM; M. WIRTHLIN. *Washington State Univ. Vancouver, Washington State Univ. Vancouver, Portland State Univ., Oregon Hlth. & Sci. Univ., Washington State Univ. Vancouver.*

THEME H POSTER

027. Public Outreach II

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

8:00 VV56 **27.01SU** Neuroscience outreach project: Do alaskan blueberries positively affect health? C. A. FRYE; V. F. LEMBO; J. F. LEMBO; L. F. LEMBO; J. K. LEMBO. *Univ. Albany, Anne Wein Elementary Sch., Anne Wien Elementary Sch., Anne Wien Elementary Sch.*

9:00 VV57 **27.02SU** Digital Dementia: The impact of lifetime information technology use on mental functioning. M. SPITZER. *Dept. of Psychiatry, Univ. of Ulm.*

10:00 VV58 **27.03SU** Bridging two worlds: Creating a science policy seminar to generate lines of communication between scientists and policymakers. M. L. ANDERSON. *Rutgers Univ., Rutgers Univ. Neurosci.*

11:00 VV59 **27.04SU** ▲ Providing a new focus for neuroscience popularization. B. J. CORDY; J. T. MILES. *Seattle VA Puget Sound Hlth. Care Syst., The Univ. of Washington.*

8:00 VV60 **27.05SU** The role of the interaction between medical scientific community and public organizations of parents on rare diseases (based on materials of Rett Syndrome Association, Russia). O. V. TIMUTSA, ESQ; L. MURTAZINA. *Kazan State Med. Univ. / Assn. For Assistance To Rettsyndrome Pati, Assn. For Assistance to Rettsyndrome Patients.*

9:00 VV61 **27.06SU** Crowdsourcing the Evaluation of Journal Articles. D. A. BENDOR; S. DAVID. *UCL, Oregon Hlth. & Sci. Univ.*

10:00 VV62 **27.07SU** Embracing autism and neurological difference at the College of William & Mary: A novel neurodiversity initiative. J. A. BURK; J. L. ZEMAN; K. A. WULF; J. E. ROBISON; C. L. DICKTER. *Col. of William & Mary, Col. of William & Mary.*

11:00 VV63 **27.08SU** Neural engineering in the classroom: Interactive workshops for high school students and teachers. S. SEEMAN; B. R. KONDILES; K. E. M. MANBECK. *Univ. of Washington.*

8:00 VV64 **27.09SU** Institute for Healthcare Improvement (IHI) Open School Online Leadership Course combined with community-based proposals for unmet needs in the clinical neurosciences: From medical student professionalism to underserved middle school students, teen depression/suicide conferences, Alzheimer's support groups, and statewide conferences on science education, social work, elder abuse, and guardianship. P. F. ARAVICH; L. L. WELLMAN; D. A. COHEN. *Eastern Virginia Med. Sch., Eastern Virginia Med. Sch., Sentara Neurol. Specialists & Eastern Virginia Med. Sch.*

9:00 VV65 **27.10SU** Annual international conference on biologically inspired cognitive architectures. A. V. SAMSONOVICH. *George Mason Univ.*

10:00 VV66 **27.11SU** Combination therapy with hematopoietic growth factors enhances angiogenic factor and transcriptional activator in hypoxic-ischemic brain injury. J. YU; J. SEO; M. KIM; S. CHO. *Brain Korea 21 PLUS Project for Med. Science, Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med., Res. Inst. of Rehabil. Med.*

11:00 VV67 **27.12SU** Exploring neuroendocrine mechanisms of sexual dimorphism in early stress response. J. CAICEDO M; Z. DUENAS. *Univ. Nacional De Colombia.*

8:00 VV68 **27.13SU** The ninds repository: A public collection of biomaterials for disease modeling, gene and biomarkers discovery in neurological research. C. TARN; G. BALABURSKI; S. HEIL; K. REEVES; J. SANTANA; J. GILROY; M. SELF; C. PÉREZ; M. SUTHERLAND; K. GWINN; R. CORRIVEAU. *Coriell Inst. For Med. Res., Natl. Inst. for Neurolog. Disorders and Stroke.*

9:00 VV69 **27.14SU** Biogenesis of fatty acid ethanolamides: Structural insights. G. GARAU; P. MAGOTTI; S. PONTIS; D. PIOMELLI. *Inst. Italiano Di Tecnologia.*

10:00 VV70 **27.15SU** (Re)Habilitar- a multidisciplinary group focusing on spinal cord injury awareness in south of Brazil. A. C. MARTINI; S. D. SCHOELLER; A. R. S. GRUMANN; B. D. HORONGOZO; K. S. TRIERVEILER; D. L. DA SILVA; N. R. DRABOWSKI; E. KINOSHITA; D. LIMA; C. OLIVEIRA; S. FORNER. *UFSC, UFSC, UFSC.*

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▲ Indicates a high school or undergraduate student presenter.

11:00 VV71 **27.16SU** Risk factors for ischemic stroke, about 442 cases. A. CHAHIDI; M. CHRAA; N. KISSANI. *Sorbonne Univ., 3- Basic & Clin. Neurosciences Res. Laboratory, UCAM, Mohamed VI Univ. hospital.*

8:00 VV72 **27.17SU** Neuroscience for sale: Scientific knowledge at a local mall. S. FORNER; A. P. R. COSTA; K. N. SOBOTA; C. H. DE PIERI; J. D. C. VAZ; G. M. GOMES; T. C. M. DE LIMA. *Univ. Federal De Santa Catarina, Univ. Federal de Santa Catarina.*

9:00 VV73 **27.18SU** ALD Connect, an all-inclusive consortium with the goal to eradicate X-linked adrenoleukodystrophy. G. RAYMOND; I. TSVANG; B. LENAIL; K. VAN HAREN; K. ZACKOWSKI; A. PAKER; F. EICHLER; L. JAMAL; J. BONKOWSKY; J. K. FINK; A. SALZMAN; P. AUBOURG; K. FORTIN; A. SHERMAN; A. FATEMI. *Univ. of Minnesota, Massachusetts Gen. Hosp. | Harvard Med. Sch., ALD Connect, Stanford, Kennedy Krieger Inst. / Johns Hopkins, bluebird bio, Massachusetts Gen. Hosptial | Harvard Med. Sch., Univ. of Utah, Univ. of Michigan, STOP ALD, INSERM, ALD Connect.*

10:00 VV74 **27.19SU** Expand your mind! educational outreach by florida state university neuroscience. A. M. STATHOPOULOS; S. B. OGDEN; M. J. BASISTA; M. T. ROSS; M. TABBAA; K. S. KOSHUNOV; S. TERRILL; C. L. ROBISON. *Florida State Univ., Florida State Univ.*

11:00 VV75 **27.20SU** Neuroscience contribution for perception of pain and discomfort in clinical trials. R. N. ISAYAMA; R. B. LOPES; S. M. TAGAMI; J. H. SATO; E. J. CALDEIRA; M. R. DA CUNHA. *UNASP-SP, UNIANCHIETA-Jundai, Faculdade de Medicina de Jundiaí (FMJ).*

THEME H POSTER

028. Ethical and Policy Issues

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 VV76 **28.01SA** Promoting awareness of and access to sex and gender differences research. M. E. EDWARDS; H. NORTON; N. SCHAEFER; M. R. TENNANT; L. NOTTERPEK. *Univ. of Florida, Univ. of Florida, Univ. of Florida, McKnight Brain Inst, Univ. Florida.*

2:00 VV77 **28.02SA** Cardiac arrest and spinal cord damage. A. K. PANDEY; A. SHARMA; A. NOZARI; D. F. MURESANU; J. V. LAFUENTE; R. PATNAIK; H. MOESSLER; H. S. SHARMA. *Senior Res. Fellow, IIT-BHU, Uppsala Univ. Hosp., Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Med. & Pharm., Univ. of Basque Country, Indian Inst. of Technology, Banaras Hindu Univ., Ever Neuro Pharma.*

3:00 VV78 **28.03SA** Leveling the playing field: Using an integrative translational neurodevelopmental model to optimize substance abuse intervention and reduce disparities. E. J. ROSE; D. FISHBEIN. *Univ. of Maryland Sch. of Med.*

4:00 VV79 **28.04SA** The liberating dimension of habit: Breaking free from the stimulus-response model. F. J. GUELL, SR; L. NÚÑEZ. *Inst. For Culture and Society, Ctr. Médico Pamplona.*

1:00 VV80 **28.05SA** Oxidative stress and co-morbidity factors are the key for brain pathology. Antioxidants are helpful in neurodegeneration. D. F. MURESANU; A. SHARMA; J. V. LAFUENTE; R. J. CASTELLANI; P. SJÖQUIST; H. MOESSLER; Z. TIAN; H. S. SHARMA. *Romanian Society For The Study Of Neuroprotection And Neuroplasticity, Uppsala Univ. Hosp., Univ. of Basque Country, Univ. of Maryland Hosp., Karolinska Institute, Karolinska Univ. Hosp., Ever Neuro Pharma, Univ. of Arkansas.*

2:00 VV81 **28.06SA** Pathologies of psychological classification: History and new directions. G. Y. RYU; A. LAM; E. OHAYON. *The Green Neurosci. Lab., The Green Neurosci. Laboratory; Neurolinx Resea.*

3:00 VV82 **28.07SA** A longitudinal study of practices and perspectives on authorship in a neuroscience graduate program. B. AGUILAR; M. FAMA; L. ULLRICH; L. MALKOVA; K. GALE; P. A. FORCELLI. *Georgetown Univ., Georgetown Univ.*

4:00 VV83 **28.08SA** Histaminergic drugs are not well considered for the treatment of Central Nervous System dysfunction. New approach and policy required. R. PATNAIK; A. SHARMA; D. F. MURESANU; J. V. LAFUENTE; H. S. SHARMA. *Indian Inst. of Technology,Banaras Hindu Univ., Uppsala Univ. Hosp., Univ. of Med. & Pharm., Univ. of Basque Country, Uppsala Univ. Hosp.*

1:00 VV84 **28.09SA** It's pleasant and heavy: Convergence of visual contents in tobacco, alcohol, and food marketing. K. R. VIACAVA; G. WEYDMANN; M. VASCONCELOS; J. JABOINSKI; R. DE ALMEIDA; L. BIZARRO. *Federal Univ. of Rio Grande Do Sul - UFRGS, Univ. do Vale do Rio dos Sinos.*

2:00 VV85 **28.10SA** ▲ Choosing animal models for biomedical neuroscience. A. LARSON; J. ROBERT. *Arizona State Univ., Arizona State Univ.*

3:00 VV86 **28.11SA** Science advocacy in the heartland. N. I. CILZ; E. MURPHY. *Univ. of North Dakota.*

4:00 VV87 **28.12SA** ▲ Biomarkers for sex and gender: A medical jurisprudence approach. S. KIMMICH. *UNIVERSITY OF CALIFORNIA, SAN DIEGO.*

1:00 VV88 **28.13SA** Innovative knowledge exchange for neuroscience and neuroethics: Using graphic recordings to build engagement at conferences. J. M. ROBILLARD; P. B. REINER; J. ILLES. *Univ. British Columb, Univ. of British Columbia.*

POSTER

120. Mechanisms of Neuronal Cell Fate Acquisition

Theme A: Development

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

8:00 A1 **120.01** Control of hypothalamic neuronal specification and survival by the LIM homeodomain factor Lhx6. K. LIU*; H. WANG; S. BLACKSHAW. *Johns Hopkins Med. Inst.*

9:00 A2 **120.02** Deep sequencing of the developing mouse retina revealed shifts in cell-intrinsic molecular programs augmented by alternative splicing. R. KANADIA*. *Univ. of Connecticut.*

10:00 A3 **120.03** The molecular mechanisms of cortical interneuron fate determination. D. TISCHFIELD*. *Univ. of Pennsylvania/Chop.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 A4 **120.04** Functional role of microRNA-7 in neural development. L. ADUSUMILLI*; N. TISO; C. TEH; V. KORZH; L. BING. *GENOME INSTITUTE OF SINGAPORE, Univ. of Padova, Inst. of molecular and cell biology, Genome Inst. of Singapore.*

8:00 A5 **120.05** The specification of cortical subcerebral projection neurons depends on the direct repression of TBR1 by CTIP1. J. CÁNOVAS; A. BERNDT; H. SEPÚLVEDA; R. AGUILAR; F. A. VELOSO; M. MONTECINO; C. OLIVA; J. C. MAASS; J. SIERRALTA; M. KUKULJAN*. *Univ. de Chile, Univ. Andrés Bello.*

9:00 A6 **120.06** The zinc finger transcription factor Tshz1 is necessary for development of the intercalated cells of the amygdala. J. KUERBITZ*; S. EHRMAN; A. N. GARRATT; R. R. WACLAW; K. CAMPBELL. *Cincinnati Children's Hosp., Max-Delbrück-Center for Mol. Med. (MDC), Charité Univ. Hosp., Cincinnati Children's Hosp. Med. Ctr.*

10:00 A7 **120.07** Splice variants differentially regulate gene regulatory networks required for neural differentiation of GABAergic motor neurons in Caenorhabditis elegans. R. CAMPBELL*; W. W. WALTHALL. *Georgia State Univ.*

11:00 A8 **120.08** Novel molecular mechanism in regulating tyrosine hydroxylase transcription. M. WANG*; K. BANERJEE; E. CAI; N. FUJIWARA; H. BAKER; J. W. CAVE. *Burke Med. Res. Inst., Weill Cornell Med. Col.*

8:00 A9 **120.09** Math5 functional specificity in the developing retina resides within the basic helix-loop-helix domain. T. J. KACZYNSKI*; R. RUONALA; X. MU. *SUNY Buffalo, Ross Eye Inst., SUNY Buffalo, Ctr. of Excellence in Bioinformatics and Life Sci., SUNY Eye Inst., SUNY Buffalo.*

9:00 A10 **120.10** Role of Dnmt1, Dnmt3a and Dnmt3b methyltransferases in mammalian retinal development. R. MALLELA; P. K. CORNUET; L. CARLSSON; I. O. NASONKIN*. *Univ. of Pittsburgh, Umeå Univ., Univ. of Pittsburg, Univ. of Pittsburgh, McGowan Inst. for Regenerative Med.*

10:00 A11 **120.11** Isl1 directly controls a cholinergic neuronal identity in the developing forebrain and spinal cord by forming cell type-specific complexes. S. LEE*; H. CHO; F. CARGNIN; Y. KIM; B. LEE; H. NAM; R. SHEN; A. BARNES; J. LEE; S. LEE. *Seoul Natl. Univ., Chonnam Natl. Univ. Med. Sch., Oregon Hlth. & Sci. Univ.*

POSTER

121. Neurotrophins

Theme A: Development

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

8:00 A12 **121.01** Delayed developmental trajectory of cortical inhibition by BDNF val66met polymorphism. M. D. CAIATI*; F. S. LEE; T. K. HENSCH. *Harvard Univ., Weill Cornell Med. Col.*

9:00 A13 **121.02** Molecular mechanisms of BDNF Met66 prodomain affecting cued fear extinction circuitry. J. GIZA*; J. KIM; A. ANASTASIA; D. JING; I. DINCHEVA; I. NINAN; B. L. HEMPSTEAD; F. S. LEE. *Weill Cornell Med. Col., Albert Einstein Col. of Med., New York Univ.*

10:00 A14 **121.03** Postnatal removal of BDNF increases terminal field volumes of taste nerves in the gustatory NTS. C. SUN*; S. ZHENG; D. L. HILL. *Univ. Virginia.*

11:00 A15 **121.04** WITHDRAWN.

8:00 A16 **121.05** Cellular and subcellular distribution of Neuregulin 2 reveals a novel mechanism of Neuregulin/ErbB4 signaling in central neurons. D. VULLHORST*; C. KEATING; I. KARAVANOVA; R. MITCHELL; A. BUONANNO. *NICHD, NIH.*

9:00 A17 **121.06** Intracellular P75NTR: A gateway to TrkB-mediated JAK/STAT signaling in neurons. K. HOKENSON*; R. BENHAM; A. R. BROOKS-KAYAL; S. J. RUSSEK. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Univ. of Colorado Denver - Anschutz Med. Campus.*

10:00 A18 **121.07** Polyubiquitination is essential for akt activation in nerve growth factor signaling. C. ZHENG; S. MATHEWS; G. THANGIAH; R. B. JEGANATHAN*. *Auburn Univ., Auburn Univ. Montgomery.*

11:00 A19 **121.08** Pro-Brain-Derived Neurotrophic Factor (proBDNF) inhibits GABAergic neurotransmission by activating endocytosis and repression of GABAA receptors. B. RIFFAULT*; I. MEDINA; C. DUMON; P. FRIEDEL; J. GAIARSA; C. PORCHER. *INMED.*

8:00 A20 **121.09** BDNF and proBDNF regulate persistent activity in the entorhinal cortex. J. GIBON*; N. UNSAIN; S. M. BUCKLEY; V. KAARTINEN; P. A. BARKER; P. SEGUELA. *McGill Univ., Univ. of Michigan.*

9:00 A21 **121.10** Deletion of the BDNF receptor TRKB. T1 rescues hippocampal parvalbumin positive interneurons in a mouse model of Amyotrophic Lateral Sclerosis. E. QUARTA*; S. YANPALLEWAR; D. MINCIACCHI; L. TESSAROLLO. *Univ. of Florence, Natl. Cancer Inst.*

10:00 A22 **121.11** BDNF-endocannabinoid interactions at cortical excitatory synapses. M. L. YEH*; X. M. MA; E. S. LEVINE. *Univ. of Connecticut Hlth. Ctr.*

11:00 A23 **121.12** Layer specific requirements for ERK/MAPK signaling in the developing neocortex. L. XING*; R. LARSEN; X. LI; Y. WU; B. PHILPOT; W. D. SNIDER; J. M. NEWBERN. *UNC Chapel Hill, Sch. of Life Sciences, Arizona State Univ.*

8:00 A24 **121.13** Ntrk2b expression and function in developing zebrafish. M. PRIYADARSHINI*; C. ÖZKAN; P. A. J. PANULA; E. CASTRÉN. *Univ. of Helsinki, Univ. of Helsinki.*

9:00 A25 **121.14** Brain-derived neurotrophic factor mediates selective neuroprotection of hippocampal mossy fiber-CA3 synapses against oxygen-glucose deprivation. E. J. GALVAN*; A. VILLANUEVA-CASTILLO; M. A. AVILA; P. GUTIERREZ; S. G. WEBER; G. BARRIONUEVO. *CINVESTAV / IPN, Univ. of Pittsburgh, Univ. of Pittsburgh.*

10:00 A26 **121.15** BDNF modulates presynaptic functions via calcium channels at a central synapse. M. BAYDYUK*; X. WU; J. SHENG; L. HE; L. WU. *NIH/NINDS.*

11:00 A27 **121.16** Effect of long-term ovariectomy and estrogen supplementation on the expression of glial cell line-derived neurotrophic factor and the receptor GFRα-1 in paravaginal ganglia from rabbits. V. GARCIA VILLAMAR*; A. ORTEGA; P. PACHECO; M. MARTÍNEZ GÓMEZ; F. CASTELÁN. *Univ. Autonoma De Tlaxcaña, Ctr. de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional, Univ. Nacional Autónoma de México, Univ. Autonoma De Tlaxcala, Univ. Nacional Autónoma de México, Univ. Autonoma De Tlaxcala.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 A28 **121.17** Early responses of TrkA and P75NTR receptors to neurotrophin binding: Single-Molecule imaging and tracking. L. MARCHETTI*; F. BONSIGNORE; F. BELTRAM; A. CATTANEO; S. LUIN. *Scuola Normale Superiore.*

9:00 A29 **121.18** Kalirin modulates BDNF TRK**B** signaling in neurite outgrowth and branching. Y. YAN*; Y. WANG; T. ABBOTT; T. LAM; B. EIPPER; R. MAINS. *Univ. of Connecticut Hlth. Ctr., Univ. of Connecticut Hlth. Ctr., Yale Univ.*

10:00 A30 **121.19** ● Interrogating the TrkA and $P75^{NTR}$ signaling pathway by comparing agonists and different inhibitors. A. KRASOWSKA-ZOLADEK; R. ERNST; M. FRALEY; H. MITCHELL; S. STACHEL; A. HOUGHTON; C. SALVATORE; D. A. HENZE*. *Merck & Co. Inc., Merck & Co. Inc.*

11:00 A31 **121.20** Pyramidal cells and interneurons in hippocampal area ca3 exhibit increase spontaneous synaptic activity during exposure to oxygen and glucose deprivation. G. HERRERA-LOPEZ*; E. J. GALVAN; G. BARRIONUEVO; S. G. WEBER. *CINVESTAV SUR, Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 A32 **121.21** Activity- and cAMP-dependent BDNF and TRKB function are necessary for the transsynaptic trophic effect of teststosterone in an adult cortical circuit. E. A. BRENOWITZ*. *Univ. of Washington.*

9:00 A33 **121.22** Characterization of the presence and functionality of neurotrophin receptors in the superior cervical ganglion of the rat. P. VALLE*; Á. CANCINO-RODEZNO; M. SÁNCHEZ; E. ARIAS; D. ELINOS; J. FERIA; F. CIFUENTES; M. MORALES. *Inst. De Investigaciones Biomédicas, UNAM, Facultad de Ciencias, UNAM.*

10:00 A34 **121.23** Analysis of brain-derived neurotrophic factor levels and receptors in an animal model of schizophrenia: The spontaneously hypertensive rats strain. C. M. SANTOS*; A. ANASTASIA; M. C. DIANA; F. F. PERES; D. A. GOUVÊA; B. L. HEMPSTEAD; V. C. ABÍLIO. *Unifesp, Weill Cornell Med. Col.*

11:00 A35 **121.24** Low dose of imipramine ameliorates pain-related negative emotion via induction of brain-derived neurotrophic factor. S. OKUYAMA*; S. YASUDA; H. YAMAGATA; K. FUKUHARA; Y. IWANAGA; M. NAKANO; K. ISHIKAWA; Y. FURUKAWA; Y. WATANABE; T. ISHIKAWA. *Col. of Pharmaceut. Sciences, Matsuyama Univ., Yamaguchi Univ. Grad. Sch. of Med., Yamaguchi Univ. Grad. Sch. of Med., Ube Frontier Col., Sapporo Med. Univ., Col. of Pharmaceut. Sciences, Matsuyama Univ., Yamaguchi Univ. Grad. Sch. of Med.*

8:00 A36 **121.25** Neuroprotection by nerve growth factor (ngf) involves modulation of neuronal autophagy. M. BERBENNI; M. PIZZOCRI; M. R. BIANCO; V. M. IPPOLITO; P. MOSCARIELLO; M. FORMENTI; V. RIGANTI; C. MILIA; L. ALBERGHINA; M. PAPA; A. COLANGELO*. *Univ. of Milano-Bicocca, Second Univ. of Napoli, Univ. of Milano-Bicocca.*

9:00 A37 **121.26** ● MM201, a novel orally active hepatocyte growth factor mimetic with a clinical potential for the treatment of neurodegenerative diseases, Parkinson's and Alzheimer's. L. H. KAWAS*; J. W. HARDING; J. W. WRIGHT; Z. WARMENHOVEN; J. LEVALLEY; H. A. QAYOUM; A. N. NILSON. *Washington State Univ., M3 Biotech. Inc.*

10:00 A38 **121.27** Mesocortical and nigrostriatal dopamine function in parvalbumin and tyrosine hydroxylase-ErbB4 restricted mutant mice. M. SKIRZEWSKI*; I. KARAVANOVA; A. BUONANNO. *NIH/NICHD.*

11:00 A39 **121.28** Neuregulin-1 promotes formation of bioactive vitamin b12 in human neuronal cells in a redox-dependent manner. Y. LI*; N. HODGSON; R. DETH. *Northeastern Univ., Boston Children's Hosp.*

8:00 A40 **121.29** BDNF/TRKB signaling is required for maintenance of neuronal identity. C. S. KNOECKEL*; A. B. RIBERA. *Univ. of Colorado Anschutz Med. Campus.*

POSTER

122. Development and Age-Related Changes in Cognition

Theme A: Development

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

8:00 A41 **122.01** Age-related human brain tissue change as measured by T1-weighted/T2-weighted magnetic resonance ratio image. T. ISHIDA; Y. KANEOKE*; J. IWATANI; K. SHINOSAKI; T. DONISHI; M. TERADA. *Wakayama Med. Univ., Wakayama Med. Univ., Wakayama Med. Univ., Wakayama-Minami Radiology Clin.*

9:00 A42 **122.02** Investigating changes in white matter BOLD contrast through childhood and adolescence. S. K. BAILEY*; Z. DING; S. S. BURNS; A. ANDERSON; J. C. GORE; L. E. CUTTING. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

10:00 A43 **122.03** Developmental trajectories of gray matter density from childhood to young adulthood. E. D. GENNATAS*; T. D. SATTERTHWAITE; D. H. WOLF; K. RUPAREL; S. VANDEKAR; H. HAKONARSON; R. E. GUR; R. C. GUR. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

11:00 A44 **122.04** Socioeconomic status predicts the neural bases of cognitive regulation of emotion. P. FRANZ*; J. SILVERS; C. INSEL; A. POWERS; W. MISCHEL; B. CASEY; K. OCHSNER. *Columbia Univ., Harvard Univ., Long Island Univ., Weill Cornell Med. Col.*

8:00 A45 **122.05** The neural correlates of deliberate self-harm and self-appraisal in depressed adolescents. H. L. SCOTT; J. BATRES; G. SMYDA; K. QUEVEDO*. *Univ. of Minnesota, Univ. of Pittsburgh.*

9:00 A46 **122.06** Relationship between structural brain network pattern and gestational age of preadolescent children. D. KIM*; E. P. DAVIS; C. A. SANDMAN; O. SPORNS; B. F. O'DONNELL; C. BUSS; W. P. HETRICK. *Indiana Univ., Univ. of Denver, Univ. of California, Charité Universitätsmedizin.*

10:00 A47 **122.07** WITHDRAWN.

11:00 A48 **122.08** Environment influence on adolescent brain and behavior: Association with thickness of the developing adolescent brain. A. ARAKELIAN*; Y. YANG. *Univ. of Southern California/Childrens Hosp. Los Angeles.*

8:00 A49 **122.09** The influence of pubertal status, testosterone, and sex on relationships between risk taking and brain structure. C. CHEN*; M. M. HERTING; E. R. SOWELL. *Children's Hosp. of Los Angeles, Children's Hosp. of Los Angeles.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 A50 **122.10** Age related changes of MEG alpha and gamma-band activity reflect the late maturation of distractor-inhibition during adolesscence. F. ROUX*; M. WIBRAL; W. SINGER; P. J. UHLHAAS. *Basque Ctr. on Cognition, Brain and Language (BCBL), MEG Unit, Brain Imaging Ctr. (BIC), Goethe Univ. Frankfurt, Ernst Struengmann Inst. (ESI), Frankfurt am Main, Max-Planck Inst. (MPI) for Brain Res., Frankfurt Inst. for Advanced Sci. (FIAS), Inst. for Neurosci. and Psychology.*

10:00 A51 **122.11** Precuneus activity during face perception in preadolescent children. J. F. O'RAWE*; A. HUANG; A. SMALL; I. VOGIATZIS; D. KLEIN; H. LEUNG. *Stony Brook Univ.*

11:00 A52 **122.12** Spatial integration and development of top-down and interhemispheric connections in children. M. G. KNYAZEVA*; R. MEULI; E. FORNARI. *Ctr. Hospitalier Universitaire Vaudois (CHUV), Ctr. Hospitalier Universitaire Vaudois (CHUV), Ctr. Hospitalier Universitaire Vaudois (CHUV).*

8:00 A53 **122.13** Dynamic developmental patterns of integration in human functional brain networks. S. MAREK*; K. HWANG; W. FORAN; B. LUNA. *Univ. of Pittsburgh.*

9:00 A54 **122.14** Visual-motor function relates to surface area and connectivity in young adults born preterm with very low birth weight: DTI and morphometric analysis. K. SRIPADA*; G. C. LØHAUGEN; L. EIKENES; K. J. BJULAND; A. HÅBERG; A. BRUBAKK; J. SKRANES; L. M. RIMOL. *Norwegian Univ. of Sci. and Technol., Sørlandet Hosp., Norwegian Univ. of Sci. and Technol., Norwegian Univ. of Sci. and Technol., St Olavs Univ. Hosp.*

10:00 A55 **122.15** ● Peer victimization in childhood associated with cortical thinning and enlarged amygdala in adolescence. Y. YANG*; A. ARAKELIAN; C. TUVBLAD; N. JACKSON; L. A. BAKER. *Children's Hosp. Los Angeles/Usc Keck Sch. of, USC, USC.*

11:00 A56 **122.16** The development of ventral striatal resting-state functional connectivity over adolescence. B. LARSEN*; B. LUNA. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 A57 **122.17** ▲ Multi-modal analyses of changes in brain structure and function during adolescence: A focus on the frontal and cingulate cortices. A. MADURKAR*; A. BURGESS; V. DIWADKAR. *Wayne State Univ., Wayne State Univ. Sch. of Med.*

9:00 A58 **122.18** Developmental changes in the cerebral network of proprioceptive processing from adolescence to adulthood. C. ASSAIANTE*; F. CIGNETTI; A. FONTAN; B. NAZARIAN; M. ROTH; J. ANTON; O. COULON; M. VAUGOYEAU. *CNRS-AMU.*

10:00 A59 **122.19** Functional connectivity between the insula and anterior cingulate predict impulsivity in adolescents at risk for alcohol misuse. B. W. STEVENS*; V. L. DARCEY; D. L. ESTEFAN; T. N. CLARKE; S. D. WASHINGTON; E. J. ROSE; D. H. FISHBEIN; J. W. VANMETER. *Georgetown Univ. Med. Ctr., Univ. of Maryland Sch. of Med.*

11:00 A60 **122.20** Evidence of reduced executive cognitive functioning in adolescents at risk for developing an alcohol use disorder. T. N. CLARKE*; S. D. WASHINGTON; X. YOU; V. L. DARCEY; B. E. ELTMAN; D. L. ESTEFAN; B. W. STEVENS; E. J. ROSE; J. W. VANMETER; D. H. FISHBEIN. *Georgetown Univ. Med. Ctr., Georgetown Univ., Univ. of Maryland Sch. of Med.*

8:00 A61 **122.21** Steroid hormone levels and physical maturation are associated with distinct parameters of pubertal white matter development. H. A. RAAB; T. NGUYEN; G. HANSEN; M. GREGORY; T. NASH; N. TURNER; D. E. BOYLE; S. BRADY; S. WEI; P. MARTINEZ; J. S. KIPPENHAN; E. B. TURKBEY; J. GU; S. SOLDIN; S. MARENCO; P. J. SCHMIDT*; K. F. BERMAN. *NIMH, NIMH, NIH, NICHD, NIMH.*

9:00 A62 **122.22** Relationship between DHA intake and activation of impulse control circuitry in early adolescents. V. L. DARCEY*; D. ESTEFAN; E. J. ROSE; B. W. STEVENS; T. CLARKE; S. WASHINGTON; D. FISHBEIN; J. VANMETER. *Georgetown Univ., Georgetown Univ. Med. Ctr., Univ. of Maryland Sch. of Med.*

10:00 A63 **122.23** Relationship between sugar intake, impulsivity, and increased sensitivity to immediate rewards in adolescents. D. ESTEFAN*; V. DARCEY; E. J. ROSE; B. STEVENS; T. CLARKE; S. WASHINGTON; J. VANMETER; D. FISHBEIN. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr., Univ. of Maryland Sch. of Med.*

11:00 A64 **122.24** Distinct visual attention brain response during anticipation of high risk monetary reward in overweight and obese adolescents. G. ALARCON*; R. BARNETT; B. J. NAGEL. *Oregon Hlth. & Sci. Univ.*

8:00 A65 **122.25** Behavioral and neural measures of risky decision making in youth with Neurofibromatosis type 1 (NF1). R. K. JONAS*; C. A. MONTOJO; E. L. CONGDON; N. E. ENRIQUE; T. ROSSER; A. J. SILVA; C. E. BEARDEN. *UCLA, Children's Hosp. of Los Angeles, UCLA.*

POSTER

123. Diversity of Glutamate Receptors

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

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

8:00 A66 **123.01** Neto proteins: Exploring the structural basis of kainate receptor modulation. T. N. GRIFFITH*; G. T. SWANSON. *Northwestern Univ.*

9:00 A67 **123.02** Pathological roles of autoantibodies to synaptic proteins in encephalitis. Y. FUKATA*; T. OHKAWA; S. SATAKE; N. YOKOI; O. WATANABE; M. FUKATA. *Natl. Inst. For Physiological Sci., Natl. Inst. for Physiological Sci., Kagoshima Univ. Grad. Sch. of Med. and Dent. Sci.*

10:00 A68 **123.03** GluRδ2 receptors (GluD2) gating is triggered by the metabotropic glutamate receptors mGluR1 (mGlu1). C. LEVENES*; V. ADY; J. PERROY; L. TRICOIRE; I. DUSART; S. DADAK; L. FAGNI; B. LAMBOLEZ; C. PIOCHON. *CNRS, Cerebral Dynamics Plasticity and Learning, UMR 8119, CNRS Univ. Paris Descartes, CNRS, UMR-5203, Inst. de Génomique Fonctionnelle, INSERM, U661, UPMC, Ctr. Natl. de la Recherche Scientifique (CNRS), UMR 7102 Lab. Neurobiologie des Processus Adaptifs, Chicago Univ.*

11:00 B1 **123.04** STIM1 determines intracellular Ca^{2+} signaling and mGluR1-dependent synaptic transmission in cerebellar Purkinje cells. J. HARTMANN*; R. M. KARL; R. P. D. ALEXANDER; H. ADELSBERGER; M. S. BRILL; C. RÜHLMANN; A. ANSEL; K. SAKIMURA; Y. BABA; T. KUROSAKI; T. MISGELD; A. KONNERTH. *TUM, Inst. For Neurosci., TUM, Chair for Biomolecular Sensors, Niigata University, Brain Res. Inst., Osaka University, Immunol. Frontier Res. Ctr.*

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▲ Indicates a high school or undergraduate student presenter.

8:00 B2 **123.05** Kainate receptor mediated neurotransmission and subunit expression is reduced at the mossy fiber - CA3 synapse in epilepsy. D. K. GROSENBAUGH*; D. D. MOTT. *Univ. of South Carolina.*

9:00 B3 **123.06** Glutamate receptors of the delta family are widely expressed in the adult brain. L. TRICOIRE*; Y. A. HAY; N. BENAMER; C. AGUADO; R. LUJAN; S. NOMURA; L. DAUPHINOT; M. POTIER; O. POIREL; S. EL MESTIKAWY; B. LAMBOLEZ; R. HEPP. *Cnrs-inserm-upmc-Umr8246 U1130, Inst. de Investigación en Discapacidades Neurológicas (IDINE), Inst. du cerveau et de la moelle, Douglas Hosp. Res. Ctr.*

10:00 B4 **123.07** A Novel class of positive allosteric modulators of KA receptors. G. PUIA*; F. RAVAZZINI; G. CANNAZZA; G. LOSI. *Universty of I Modena E Reggio Emilia, Neurosci. Institute, CNR.*

11:00 B5 **123.08** Differences in PSD-95 and SAP97 conformation and orientation correlate with different roles in glutamate receptor organization at post-synaptic densities. O. B. JEYIFOUS*; E. I. LIN; X. CHEN; R. DRISDEL; R. MASTRO; T. S. REESE; W. N. GREEN. *The Univ. of Chicago, NINDS.*

8:00 B6 **123.09** The influence of Neto protein interactions on interneuron kainate receptor function. M. S. WYETH*; K. A. PELKEY; X. YUAN; M. SALTER; R. MCINNES; C. J. MCBAIN. *NIH, NIH, Hosp. for Sick Children, Jewish Gen. Hosp.*

9:00 B7 **123.10** Non-canonical signaling of NMDARs to pannexin-1 in ischemia. N. L. WEILINGER*; B. D. RAKAI; J. BIALECKI; N. IKUTA; L. SCOTT; M. A. COLICOS; G. C. TESKEY; I. R. WINSHIP; R. J. THOMPSON. *Hotchkiss Brain Inst., Ctr. for Neurosci.*

10:00 B8 **123.11** The dynamics and function of two glutamate receptor delta subunits. C. NAKAMOTO*; I. WATANABE; R. NATSUME; E. NAKATSUKASA; K. KONNO; M. ABE; M. WATANABE; K. SAKIMURA. *Brain Res. Institute, Niigata Univ., Dept. of Anat., Hokkaido Univ. Grad. Sch. Med., CREST, JST, Chiyoda-ku.*

11:00 B9 **123.12** Subunit dependent pharmacology of kainate receptors. C. P. BARKER*; L. LIU; M. ALEXEEV; J. L. FISHER; D. D. MOTT. *Univ. of South Carolina, Sch. of Med.*

8:00 B10 **123.13** Identification of novel GluN2C-containing NMDA receptor binding site on 14-3-3 isoforms critical for regulation of trafficking mechanisms. C. CHUNG*; B. CHEN. *Georgia Regents Univ.*

9:00 B11 **123.14** Molecular determinants for targeting of glutamate receptors at hippocampal mossy fiber synapses. S. K. FIÈVRE*; M. CARTA; A. GORLEWICZ; F. COUSSEN; C. MULLE. *Interdisciplinary Inst. For Neurosci.*

10:00 B12 **123.15** Effects of NMDA receptor-modulating neurosteroids on excitatory synaptic transmission in rat hippocampal microisland cultures. T. SMEJKALOVA*; V. VYKLICKY; L. VYKLICKY. *Inst. of Physiology, AS CR.*

11:00 B13 **123.16** Alteration of the NMDA receptor surface dynamics in presence of encephalitic and psychotic patients' autoantibodies. J. JEZEQUEL*; E. JOHANSSON; V. ROGEMOND; H. GRÉA; D. BOUCHET; R. TAMOUZA; J. HONNORAT; M. LEBOYER; L. GROC. *Interdisciplinary Inst. of Neurosci. - IINS, Lyon Neurosci. Res. Ctr. INSERM U1028/CNRS UMR 5292, IMRB - Inserm U955, Psychiatry Genet., Fondation FondaMental, French Natl. Sci. Fndn.*

8:00 B14 **123.17** Enriched expression of GluD1 in higher brain regions and its involvement in parallel fiber-interneuron synapse formation in the cerebellum. K. KOHTAROU*; K. MATSUDA; C. NAKAMOTO; K. SAKIMURA; M. YUZAKI; M. WATANABE. *Hokkaido Univ., Keio Univ., Niigata Univ.*

9:00 B15 **123.18** Changes in FMRP phosphorylation mediate ethanol-induced translational changes in Kv4.2, KChIP3, and GluN1. K. SPENCER*; P. MULHOLLAND; L. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

POSTER

124. Glycine and GABAA Receptors

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

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

8:00 B16 **124.01** Evidence for functional glycinergic transmission in the paraventricular nucleus of the hypothalamus. V. VAVRA*; E. FARKAS; O. CAPRARU; M. WATANABE; C. FEKETE; J. S. BAINS. *Hotchkiss Brain Institute, Univ. of Calgary, Inst. of Exptl. Medicine, HAS, Univ. of Med. and Pharm., Sch. of Medicine, Hokkaido Univ.*

9:00 B17 **124.02** Ethanol potentiates non-synaptic glycine receptors in the nucleus accumbens. B. MUÑOZ*; P. MURATH; B. FÖRSTERA; D. M. LOVINGER; G. E. HOMANICS; L. G. AGUAYO. *Univ. of Concepcion, Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. of Hlth., Univ. of Pittsburgh.*

10:00 B18 **124.03** A novel model to study Cys-loop receptors in a pentameric state. N. GRUENEWALD; N. HAVARUSHKA; G. SCHWARZ*. *Univ. of Cologne, Univ. of Cologne.*

11:00 B19 **124.04** Synthesis of ircinianin analogues as a potent and selective modulators of α3 glycine receptor. S. TALWAR*; X. XIAO; Y. ZHANG; C. VAUGHAN; R. J. CAPON; J. W. LYNCH. *Queensland Brain Inst., Inst. of Mol. Bioscience, The Univ. of Queensland, Queensland Brain Institute, The Univ. of Queensland, Pain Mgmt. Res. Institute, Kolling Inst. of Med. Research, Northern Clin. School, Univ. of Sydney, Sch. of Biomed. Sci.*

8:00 B20 **124.05** Structural basis for hyperekplexia allosteric mutant phenotypes in the human α1 glycine receptor. G. MORAGA-CID*; L. SAUGUET; C. HUON; L. MALHERBE; C. GIRARD-BLANC; S. PETRES; S. MURAIL; A. TALY; M. BAADEN; M. DELARUE; P. CORRINGER. *Inst. Pasteur, Inst. Pasteur, Inst. Pasteur, Inst. Pasteur, Univ. Paris Diderot Sorbonne, Inst. de Biologie Physico-Chimique, Inst. Pasteur.*

9:00 B21 **124.06** A proline rich stretch influences functional ion channel properties of the human glycine receptor. G. LANGLHOFER; P. BAUMANN; D. JANZEN; C. VILLMANN*. *Univ. Wuerzburg.*

10:00 B22 **124.07** Glycine receptor loop D - a major determinant in neuronal trafficking and receptor biogenesis. N. SCHAEFER*; C. KLUCK; C. VILLMANN. *Univ. Wuerzburg, Friedrich-Alexander-Universität.*

11:00 B23 **124.08** Modulation of the function of glycine receptors in rat hippocampal pyramidal neurons by amyloid β peptide (25-35) in picomolar concentrations. V. G. SKREBITSKY*; J. V. BUKANOVA; I. N. SHARONOVA. *Res. Ctr. of Neurology, Russian Acad. of Med. Sciens.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 B24 **124.09** Short intermittent ethanol exposure alters biochemical and behavioral indices of cerebral cortical GABAA receptor function. S. L. CARLSON*; T. K. O'BUCKLEY; A. L. MORROW. *UNC Chapel Hill.*

9:00 B25 **124.10** 2'-Methoxy-6-methylflavone activity reveals multiple possible stoichiometric forms of $\beta3\gamma2$L GABA(A)Rs expressed in Xenopus oocytes. H. C. CHUA*; N. ABSALOM; M. CHEBIB. *Univ. of Sydney.*

10:00 B26 **124.11** Functional analyses of the palmitoyltransferase GODZ *in vivo.* C. L. KILPATRICK; S. MURAKAMI; X. WU; G. CHEN; B. LUSCHER*. *Penn State Univ., Penn State Univ., Penn State Univ.*

11:00 B27 **124.12** The role of specificity protein 4 (Sp4) in the transcriptional regulation of inhibitory neurotransmitter receptors in neurons. M. T. WONG-RILEY*; B. A. NAIR. *Med. Col. Wisconsin.*

8:00 B28 **124.13** Characterizing the amiloride potentiation site in GABAA rho1 receptors. H. D. SNELL*; E. B. GONZALES. *Univ. of North Texas Hlth. Sci. Ctr., Univ. of North Texas Hlth. Sci. Ctr., Inst. for Aging and Alzheimer's Dis., American Heart Assn.*

9:00 B29 **124.14** Differential regulation of synaptic versus extrasynaptic $\alpha4$ GABAA-receptors by protein kinase C and protein kinase A. J. P. BOHNSACK*; S. L. CARLSON; A. L. MORROW. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill.*

10:00 B30 **124.15** Replacing the M2-M3 linker of GABAA receptor subunits with that from GABAC $\rho1$ subunit altered the channel properties toward GABAC receptor. D. ROBERTS*; Y. CHANG. *Barrow Neurolog. Inst.*

11:00 B31 **124.16** Distinct amino acid domains confer direct gating, allosteric modulation and blocking properties of carisoprodol on GABAA receptors. M. KUMAR*; G. H. DILLON. *West Virginia Univ. Hlth. Sci. Ctr., West Virginia Univ. Hlth. Sci. Ctr.*

8:00 B32 **124.17** Experiment-guided virtual screening provides new high affinity ligands for the benzodiazepine site on GABAA receptors. M. C. MALDIFASSI*; S. J. MIDDENDORP; R. PUTHENKALAM; R. BAUR; M. ERNST; E. SIGEL. *Univ. of Bern, Univ. of Bern, Med. Univ. of Vienna.*

9:00 B33 **124.18** $GABA_A$ receptor activation in newborn rat modifies the protein expression profile of NKCC1, KCC2 and $\alpha1$ and $\gamma2$ $GABA_A$ receptor subunits during postnatal development of the hippocampus. M. E. URENA-GUERRERO*; J. MURGUÍA-CASTILLO; S. OROZCO-SUÁREZ; C. BEAS-ZÁRATE; A. I. FERIA-VELASCO. *Univ. De Guadalajara (CUCBA), Unidad de Investigación Medica en Enfermedades Neurologicas, Hosp. de Especialidades, CMN-Siglo XXI, IMSS.*

10:00 B34 **124.19** Loop G and loop D residues in GABAA receptor function. D. BAPTISTA-HON*; T. G. HALES. *Inst. of Academic Anaesthesia.*

11:00 B35 **124.20** Modulation of GABAa receptor ($\alpha1\beta2\gamma2$) gating by protons involves changes in flipping transitions. J. W. MOZRZYMAS*; M. KISIEL; M. JATCZAK. *Wroclaw Med. Univ.*

8:00 B36 **124.21** ● A pharmacological characterization of novel neuroactive steroid modulators of GABAA receptors. M. A. ACKLEY*; G. MARTINEZ-BOTELLA; C. M. LOYA; F. G. SALITURO; A. J. ROBICHAUD; J. J. DOHERTY. *SAGE Therapeut.*

9:00 B37 **124.22** Identifying propofol binding sites in alpha1 beta3 gamma2 GABA-A receptors and nicotinic acetylcholine receptors (nAChRs) with a photoreactive propofol analog. S. S. JAYAKAR*; D. C. CHIARA; P. Y. SAVECHENKOV; X. ZHOU; K. S. BRUZIK; K. W. MILLER; J. B. COHEN. *Harvard Med. Sch., Univ. of Illinois at Chicago, Massachusetts Gen. Hosp., Harvard Med. Sch.*

10:00 B38 **124.23** GABAA receptors containing $\alpha2$ and $\alpha3$ subunits show distinct subcellular distribution patterns on cultured primary mouse neurons. Y. GAO*; S. HELDT. *Univ. of Tennessee Hlth. Sci. Ctr.*

11:00 B39 **124.24** Comparison of molecular mechanism of action of carbamate meprobamate and barbiturate pentobarbital on GABAA receptor. M. KUMAR*; G. H. DILLON. *WEST VIRGINIA UNIVERSITY, MORGANTOWN.*

8:00 B40 **124.25** Regulation of alpha5 GABAAR synaptic levels via association with gephyrin contributes to neuronal development. M. BRADY*; T. C. JACOB. *Univ. of Pittsburgh.*

9:00 B41 **124.26** On the role of $\beta2/3$-subunit-selective GABAA receptor modulation in mediating anxiolytic and anticonvulsant effects of valerenic acid derivatives. S. KHOM*; D. LUGER; J. HINTERSTEINER; M. HAIDER; C. SCHWARZER; M. D. MIHOVILOVIC; S. HERING. *Univ. of Vienna, Vienna Univ. of Technol., Innsbruck Med. Univ.*

10:00 B42 **124.27** ▲ Modularity of alcohol binding sites in pentameric ligand-gated ion channels. H. A. BRAUN; T. B. VOIGT; S. HORANI; G. E. JOYCE; J. M. FACEY; A. E. PLANTE; E. P. STATER; J. R. TRUDELL; R. A. HARRIS; R. J. HOWARD*. *Skidmore Col., The Univ. of Texas at Austin, Stanford Univ. Sch. of Med.*

POSTER

125. TRP Channels

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

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

8:00 B43 **125.01** ● Identification of sites critical for general anesthetic modulation of TRPA1. G. AHERN*; H. TON; M. PAIGE; M. BROWN. *Georgetown Univ.*

9:00 B44 **125.02** Anatomical and behavioral assessment of the transient receptor potential vanilloid type 1 role in the dentate gyrus of a kainate-induced seizures mouse model. P. GRANDES*; M. CANDUELA; J. MENDIZABAL-ZUBIAGA; A. SIERRA; N. ROYO; S. PEÑASCO; I. ELEZGARAI; L. REGUERO; N. PUENTE. *Basque Country Univ., Achucarro Basque Ctr. for Neuroscience, Bizkaia Sci. and Technol. Park.*

10:00 B45 **125.03** TRPV1 regulates innervation in hippocampal neurons. J. I. HURTADO ZAVALA*; S. AHMED; B. RAMACHANDRAN; E. AVENDAÑO GUZMÁN; C. DEAN. *European Neurosci. Inst., Univ. Med. Goettingen.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 B46 **125.04** RT-PCR and Ca^{2+} imaging analyses of osmoreceptor molecules in the rat SON. T. MORIYA*; R. SHIBASAKI; T. KAYANO; N. TAKEBUCHI; M. ICHIMURA; N. KITAMURA; A. ASANO; Y. Z. HOSAKA; O. FOROSTYAK; A. VERKHRATSKY; G. DAYANITHI; I. SHIBUYA. *Lab. of Vet. Physiol., Fac. of Agr., Tottori Univ., The Unit. Grad. Sch. of Vet. Sci., Yamaguchi Univ., Lab. of Vet. Biochem., Fac. of Agr., Tottori Univ., Lab. of Vet. Anat., Fac. of Agr., Tottori Univ., Dept. of Mol. Neurophysiol., Inst. of Exptl. Medicine, Acad. of Sci. of the Czech Republic, Dept. of Neurosci., Inst. of Exptl. Medicine, Acad. of Sci. of the Czech Republic, Univ. of Manchester, Sch. of Biol. Sci., Inst. Natl. de la Santé et de la Recherche Médicale, U710, Univ. Montpellier.*

8:00 B47 **125.05** *In vivo* patch-clamp analysis of the pain mechanism by TRPA1 and TRPM8 activation on substantia gelatinosa neurons in the spinal cord. M. YAMANAKA; W. TANIGUCHI*; M. SONEKATSU; N. NISHIO; T. ABE; N. MINE; N. MIYAZAKI; T. NAKATSUKA; M. YOSHIDA. *Wakayama Med. Univ., Pain Res. Center, Kansai Univ. of Hlth. Sci.*

9:00 B48 **125.06** TRPC3 channels contributes to BDNF mediated neuritogenesis of postnatal mouse cochlear neuron explants. A. C. WONG*; A. NG; L. BIRNBAUMER; G. HOUSLEY. *Translational Neurosci. Facility, 2 Lab. of Neurobiology, Natl. Inst. of Envrn. Hlth. Sciences, NIH.*

10:00 B49 **125.07** A pain-enhancing mechanism through TRPV1-ANO1 interaction, and its inhibition effect by drag. Y. TAKAYAMA*; D. UTA; H. FURUE; M. TOMINAGA. *Okazaki Inst. For Integrative Biosci., Natl. Inst. for Physiological Sci., Univ. of Toyama, the Graduated Univ. for Advanced Studies.*

11:00 B50 **125.08** Interneuron TRPV1 channels inhibit GABA release onto layer II/III principal neurons in the entorhinal cortex. T. G. BANKE*. *Aarhus Univ.*

8:00 B51 **125.09** Neurokinin 1 receptor and capsaicin receptor in mouse histaminergic neurons. R. DE LUCA*; O. A. SERGEEVA. *Heinrich-Heine Univ. Duesseldorf, Med. Fac.*

9:00 B52 **125.10** N-terminus lacking Trpv1 transcript encodes a central osmoreceptor and thermoreceptor channel. C. A. ZAELZER*; P. HUA; M. PRAGER-KHOUTORSKY; S. CIURA; D. L. VOISIN; W. LIEDTKE; C. W. BOURQUE. *McGill Univ. Hlth. Ctr., Duke Univ.*

10:00 B53 **125.11** Evodiamine activates transient receptor potential V1 as a partial agonist. S. WANG*; E. IWAOKA; Y. KOGURE; S. AOKI; S. YAMAMOTO; K. NOGUCHI; Y. DAI. *Hyogo Univ. of Hlth. Sci., Traditional Med. Res. Center, Chinese Med. Confucius Inst. at Hyogo Col. of Med., Hyogo Col. Of Med.*

11:00 B54 **125.12** Activation of mGluR induces TRP-mediated Ca^{2+} influx in midbrain dopamine neurons. U. KIBUM*; M. PARK. *Sungkyunkwan Univ.Sch of Medi.*

POSTER

126. Ion Channels and Disease States I

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

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

8:00 B55 **126.01** Molecular overlap in the regulation of SK channels by small molecules and phosphoinositides. M. ZHANG*; J. ZHANG; M. CUI; D. LOGOTHETIS. *Virginia Commonwealth Univ., Thomas Jefferson Univ.*

9:00 B56 **126.02** Regulation of channel protein levels by the schizophrenia associated microRNA miR-137. K. THOMAS*; B. R. ANDERSON; G. J. BASSELL. *Emory Univ., Emory Univ.*

10:00 B57 **126.03** Src mediates endocytosis of TWIK-related acid-sensitive K+ channels in PC12 cells in response to nerve growth factor. H. MATSUOKA; M. INOUE*. *UOEH Sch. of Med., UOEH Sch. of Med.*

11:00 B58 **126.04** Positive modulators of Kv3.1 channels regulate firing rate and temporal accuracy of auditory brainstem neurons in a mouse model of Fragile X syndrome. L. EL-HASSAR*; C. H. LARGE; G. ALVARO; L. K. KACZMAREK. *Yale Univ. Sch. of Med., Autifony Therapetics Limited.*

8:00 B59 **126.05** Proteomic analyses of the K+ channel microenvironments in the brain. S. SHIN*; M. SONG; K. PARK. *Kyung Hee Univ. Sch. of Med.*

9:00 B60 **126.06** Potassium channels regulating action potential repolarization in nociceptive sensory neurons. P. LIU*; B. P. BEAN. *Harvard Med. Sch.*

10:00 C1 **126.07** Activation of SK channels prevents brefeldin A-induced ER stress and neuronal cell death. M. RICHTER*; A. DOLGA; R. DODEL; C. CULMSEE. *Dept. of Neurology, Univ. Marburg, Pharmacol. and Clin. Pharmacy, Philipps-University.*

11:00 C2 **126.08** Mutations in FMRP prevent FMRP-Slack potassium channel interactions on the plasma membrane. L. K. KACZMAREK*; J. KRONENGOLD; A. A. SURGUCHEV; M. R. BROWN. *Yale Univ. Sch. Med.*

8:00 C3 **126.09** Upregulation of KCNQ1 after ischemia leads to neuronal death. K. A. AROMOLARAN*; J. HWANG; T. V. MCDONALD; R. S. ZUKIN. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

9:00 C4 **126.10** Seizure-induced KCNQ upregulation alters the functional properties of hippocampal M currents in the pilocarpine model of temporal lobe epilepsy. C. TAYLOR*; D. B. JAFFE; M. S. SHAPIRO. *Univ. of Texas Hlth. Sci. Ctr. At San A, Univ. of Texas at San Antonio.*

POSTER

127. Glutamate and Glutamate Transporters

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

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

8:00 C5 **127.01** Inhibition of neuronal GLT-1 attenuates Akt signaling. K. D. MEEKER*; J. S. MEABON; B. R. HUBER; D. G. COOK. *VA Med. Ctr., Univ. of Washington, Univ. of Washington, VA Med. Ctr., Univ. of Washington.*

9:00 C6 **127.02** A novel purely glutamate pathway from substantia nigra to globus pallidus and caudate putamen. E. SOTO*; J. MENDEZ. *Univ. Autonoma De San Luis Potosi, Univ. Autonoma De San Luis Potosi.*

10:00 C7 **127.03** Loss of system xc- protects against proteasomal inhibition-induced neurodegeneration in aged mice. A. MASSIE*; E. BENTEA; J. VAN LIEFFERINGE; G. ALBERTINI; T. DEMUYSER; E. MERCKX; A. EL ARFANI; Y. MICHOTTE; H. SATO; I. SMOLDERS. *Vrije Univ. Brussel, Yamagata Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 C8 **127.04** Pathogenic roles of astroglia glutamate transporter GLT1 in Fragile X Syndrome. H. HIGASHIMORI*; Y. YANG. *Tufts Univ.*

8:00 C9 **127.05** NFκB is required for the IL-1β-mediated transcriptional regulation of astrocytic expression of the system x_c^- light chain, xCT. Y. HE*; J. SHI; S. J. HEWETT. *Syracuse Univ., Upstate Med. Univ.*

9:00 C10 **127.06** IL-1β Regulation of the system x_c^- substrate-specific subunit, xCT, in primary mouse astrocytes involves the RNA-binding protein HuR. J. SHI; J. HEWETT; S. J. HEWETT*. *Syracuse Univ., Upstate Med. Univ.*

10:00 C11 **127.07** Tumor-associated excitotoxicity and seizures caused by System xc- (SXC)-mediated glutamate release. S. M. ROBERT*; S. C. BUCKINGHAM; S. L. CAMPBELL; S. ROBEL; K. T. HOLT; T. OGUNRINU-BABARINDE; P. PROVINCE WARREN; D. M. WHITE; M. A. REID; M. A. REID; J. M. ESCHBACHER; M. E. BERENS; A. C. LAHTI; L. B. NABORS; H. SONTHEIMER. *Univ. of Alabama At Birmingham, Barrow Neurolog. Inst., TGen.*

11:00 C12 **127.08** Structural comparisons of isoxazole-based non-competitive and competitive inhibitors of the system xc- antiporter. S. A. PATEL*; J. L. NEWELL; M. BRADEN; P. J. DIAZ; N. N. NATALE; R. J. BRIDGES. *Univ. Montana.*

8:00 C13 **127.09** Glial glutamate transporter GLT-1 determines sensitivity to the cortical spreading depression. H. AIZAWA*; W. SUN; Y. ITOU; S. TOYODA; W. CUI; T. AIDA; M. NOMURA; M. YANAGISAWA; R. TAKAYANAGI; K. TANAKA. *Med. Res. Inst, Tokyo Med. Dent. Univ., Grad. Sch. of Med. Science, Kyushu Univ., Japan Sci. and Technol. Agency, Ctr. for Brain Integration Research, Tokyo Med. and Dent. Univ.*

9:00 C14 **127.10** Protein interactions of the vesicular glutamate transporter VGLUT1. M. SANTOS*; S. M. FOSS; C. PARK; S. M. VOGLMAIER. *UCSF.*

10:00 C15 **127.11** Plasticity of glutamate transport in glioma cells: Cell density and culture conditions regulate the balance between glutamate release and uptake. R. LIN*; Y. ZHOU; W. WANG; B. R. RANSOM; Z. YE. *Fujian Med. Univ., Fujian Med. Univ., Univ. of Washington.*

11:00 C16 **127.12** Investigating the mechanisms by which increased EAAT2 restores synaptic plasticity and function in a mouse model of Alzheimer's disease. K. TAKAHASHI*; Q. KONG; Y. LIN; S. DOMINGUEZ; L. LAI; C. LIN. *The Ohio State Univ.*

8:00 C17 **127.13** Swip-10/mblac1: conserved regulators of extracellular glutamate homeostasis. C. L. SNARRENBERG*; J. A. HARDAWAY; C. L. RETZLAFF; S. M. WHITAKER; Z. LI; S. XU; K. D. MICHEVA; S. J. SMITH; Y. XIAO; F. P. GUENGERICH; R. D. BLAKELY. *Vanderbilt Univ., Vanderbilt Univ., Univ. of Michigan, Stanford Univ. Sch. of Med., Vanderbilt Univ., Vanderbilt Univ.*

9:00 C18 **127.14** Role of astrocyte glutamate transporters in ocular dominance plasticity and response properties of visual cortex. J. C. PETRAVICZ*; N. MELLIOS; S. EL-BOUSTANI; C. LE; M. SUR. *MIT.*

10:00 C19 **127.15** ● Activation of toll like receptor 4 attenuates GABAergic synaptic activities in the spinal dorsal horn through suppressing GABA synthesis and postsynaptic GABA receptor activities. X. YAN*. *Univ. of Georgia, Col. of Pharm.*

11:00 C20 **127.16** Anatomical characterization of VGLUT3-positive GABAergic basket-cell terminals in the hippocampus. C. FASANO*; D. Y. SAKAE; J. ZANDER; E. VIGNEAULT; V. BERNARD; J. ROCCHETTI; M. MARCUS-SELLS; B. GIROS; G. AHNERT-HILGER; S. WILLIAMS; S. EL MESTIKAWY. *Douglas Res. Ctr., Univ. Pierre et Marie Curie, Inst. fur Integrative Neuroanatomie Res. Ctr.*

8:00 C21 **127.17** Behavioral phenotyping of the neuronal GLT-1 knockout mouse. K. D. FISCHER*; E. A. BEDOYA; J. BERGLASS; J. BERKNER; R. MANNIX; Y. SUN; A. ROTENBERG; S. C. DHAMME; M. Q. HAMEED; P. A. ROSENBERG. *Boston Children's Hosp., F.M. Kirby Neurobio. Ctr., Harvard Med. Sch., Boston Children's Hosp., Boston Children's Hosp.*

9:00 C22 **127.18** Identification of glutamate transporter activators using an in silico approach. A. C. FONTANA*; S. KORTAGERE; W. F. SANTOS; O. V. MORTENSEN. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med., Univ. of São Paulo.*

10:00 C23 **127.19** Oligodendrocytes support axon function via glutamate signaling through glutamate transporters (GLT-1) in a gender and age-specific manner. P. A. ROSENBERG*; C. LANDEFELD; C. BASTIAN; M. MAKINODAN; G. CORFAS; S. BALTAN. *Children's Hosp., Cleveland Clin. Fndn.*

11:00 C24 **127.20** Regulation of neural signaling by swip-10/mblac1: Following the scent of glutamate. C. RETZLAFF*; C. L. SNARRENBERG; J. A. HARDAWAY; S. M. WHITAKER; M. GHOSH; H. GU; Q. ZHANG; J. J. BALCITA-PEDICINO; C. POTAMSETTY; S. R. SESACK; M. B. ROBINSON; R. D. BLAKELY. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Univ. of Pittsburgh, Vanderbilt Univ.*

8:00 C25 **127.21** Cocaine impairs aspartate transport in mouse prefrontal cortex via dopamine D1-receptor dependent mechanisms. M. F. SATHLER*; B. STUTZ; N. R. PECINALLI; F. G. DE MELLO; R. A. M. REIS; P. BHIDE; R. C. C. KUBRUSLY. *Federal Fluminense Univ., Federal Univ. of Rio de Janeiro, The Florida State Univ.*

9:00 C26 **127.22** ● High multiplicity of neuronal glutamine transporters; why so many? S. BAGCHI*; R. FREDRIKSSON. *Uppsala Univ.*

10:00 C27 **127.23** Differential maturation of neocortical and hippocampal astrocytes. E. HANSON*; M. ARMBRUSTER; L. ANDRESEN; D. CANTU; A. TAYLOR; N. C. DANBOLT; C. DULLA. *Tufts Univ., Inst. of Basic Med. Sciences, Univ. of Oslo.*

POSTER

128. Synaptic Transmission: Synaptic Integration I

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

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

8:00 C28 **128.01** Does axon initial segment plasticity regulate neuronal excitability? A. T. GULLEDGE*; J. J. BRAVO. *Geisel Sch. of Med. at Dartmouth, Dartmouth Col.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 C29 **128.02** High bandwidth synaptic transmission in human neocortex. G. TESTA-SILVA*; M. B. VERHOOG; D. LINARO; J. C. BAAYEN; R. MEREDITH; C. P. J. DE KOCK; C. I. DE ZEEUW; M. GIUGLIANO; H. D. MANSVELDER. *Netherlands Inst. For Neurosci., Erasmus Med. Ctr., Vrije Univ., Univ. of Antwerp, Vrije Univ. Med. Ctr., Univ. of Sheffield, Swiss Federal Inst. of Technol.*

10:00 C30 **128.03** Conserved dimensional properties of dendritic trees of cortical pyramidal cell. Y. KUBOTA*; A. A. MOHAMED; S. T. AHMED; N. YAMAGUCHI; S. HATADA; J. LÜBKE; Y. KAWAGUCHI. *Natl. Inst. Physiol Sci. (NIPS), SOKENDAI, JST-CREST, South Valley Univ., Inst. Neurosci. & Med.*

11:00 C31 **128.04** Diversity of synaptic dynamics enables temporal coding of coincident sensory events in single neurons. F. P. CHABROL; A. ARENZ; T. W. MARGRIE; D. A. DIGREGORIO*. *Inst. Pasteur, CNRS, Max Plank Inst. of Neurobio., MRC Natl. Inst. for Med. Res., Univ. Col. London.*

8:00 C32 **128.05** The consequence of dysfunctional myelin on neural processing. K. MAHERAS*; S. A. PERRINE; F. GHODDOUSSI; M. P. GALLOWAY; A. GOW. *Wayne State Univ., Wayne State Univ., Wayne State Univ.*

9:00 C33 **128.06** ● A mechanism of modulating dopamine release in the striatum by smoking-level nicotine. Z. ZHOU*; L. WANG; S. TENG; F. ZHU; B. LIU; Q. WU; M. LI; W. LIU; H. XU; L. ZHOU; R. JIAO; P. ZUO; C. WANG. *Inst. Mol. Med, Peking Univ.*

10:00 C34 **128.07** Gamma oscillations can be generated independently in hippocampal region CA1. M. T. CRAIG*; B. J. LIANG; C. J. MCBAIN. *NIH.*

11:00 C35 **128.08** Short-term sustained hypoxia affects the NTS transmission and the processing of baro- and chemoreflexes in rats. D. ACCORSI-MENDONCA*; C. E. L. ALMADO; D. J. A. MORAES; B. H. MACHADO. *Univ. São Paulo.*

8:00 C36 **128.09** Assessing spine EPSPs and spine neck resistance using voltage-senstivite dyes. C. D. ACKER*; E. HOYOS; L. LOEW. *UConn Hlth. Ctr., UConn Hlth. Ctr.*

9:00 C37 **128.10** Diurnal variation in excitatory spontaneous neurotransmission on to second-order NTS neurons. S. WU*; J. H. PETERS. *Washington State Univ.*

10:00 C38 **128.11** Synaptic responses exhibit steep membrane potential dependence in hippocampal CA1 pyramidal neurons. C. HSU*; N. SPRUSTON. *Janelia Farm Res. Campus, Howard Hughes Med. Inst.*

11:00 C39 **128.12** NMDAR-dependent dendritic calcium release encodes spatiotemporal input coincidence during clustered synapse development. K. F. LEE*; C. SOARES; J. THIVIERGE; J. BEIQUE. *Univ. of Ottawa, Univ. of Ottawa.*

8:00 C40 **128.13** The efficacy of cAMP signaling to the nucleus depends on the geometry of dendrites. N. GERVASI*; L. LI; J. GIRAULT. *Inst. Du Fer À Moulin INSERM U839, INSERM UMRs 839.*

9:00 C41 **128.14** Calcium signals underlying synaptic transmission and plasticity in the hippocampal CA3 area. K. ALVINA*; P. E. CASTILLO. *Albert Einstein Col. of Med.*

10:00 C42 **128.15** Role of Ih in the axon initial segment of MSO neurons revealed with light-dependent channel blockers. K. KO*; R. H. KRAMER; N. L. GOLDING. *Dept. of Neurosci., Univ. of California Berkeley.*

11:00 C43 **128.16** Synaptic transmission: Effects of intracellular and intravacuolar pH. R. L. COOPER*; Z. R. MAJEED; C. MALLOY; S. L. E. BLÜMICH; R. W. PUTNAM. *Univ. Kentucky, Univ. of Salahaddin, Univ. Leipzig, Wright State Univ.*

POSTER

129. Synaptic Transmission: Synaptic Integration II

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

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

8:00 C44 **129.01** Integration of non-spatial information and spatial information in hippocampal granule cells. H. HAYAKAWA; K. C. TADANOBU; T. SAMURA; T. AIHARA*. *Grad. Sch. of Brain Sciences, Tamagawa Univ., Dept. of Cell Physiol., NIPS, NINS, Grad. Sch. of Med., Yamaguchi Univ., Tamagawa Univ.*

9:00 C45 **129.02** Functional mapping of excitatory inputs to layer V neurons of the medial entorhinal cortex. S. GASPARINI*. *Neurosci. Ctr. LSUHSC.*

10:00 C46 **129.03** Subcelluar input organization of cell-type specific inhibitory inputs to CA1 pyramidal neuron dendrites. E. BLOSS*; B. KARSH; J. COLONELL; S. VISWANATHAN; R. FETTER; N. SPRUSTON. *Janelia Farms Res. Campus.*

11:00 C47 **129.04** Unique role of NMDARs in processing of retinal Direction Selectivity. A. POLEG-POLSKY*; J. S. DIAMOND. *NIH/NINDS.*

8:00 C48 **129.05** Postnatal development of synaptic connectivity between inhibitory interneurons and excitatory pyramidal cells in the hippocampus. J. C. WESTER*; C. J. MCBAIN. *NIH.*

9:00 C49 **129.06** ● Local postsynaptic sodium channel activation in dendritic spines of olfactory bulb granule cells. W. G. BYWALEZ; B. RÓZSA; G. KATONA; V. EGGER*. *LMU, Inst. of Exptl. Med., Regensburg Univ.*

10:00 C50 **129.07** Abelson non-receptor tyrosine kinases mediate the effect of amyloid beta on spontaneous presynaptic release. M. REICHENSTEIN*; A. SHEININ; N. BOROVOK; I. MICHAELEVSKI. *Tel Aviv Univ.*

11:00 C51 **129.08** Dendritic Integration in Thalamocortical Neurons II: Dual voltage dependent amplification mechanisms and network consequences. W. M. CONNELLY*; V. CRUNELLI; A. C. ERRINGTON. *Cardiff Sch. of Biosci., Cardiff Univ.*

8:00 C52 **129.09** Hyperactivation of mTOR signaling in a two-neuron microcircuit alters the dynamics of synaptic transmission. M. C. WESTON*; H. CHEN; J. SWANN. *Baylor Col. of Med., Jan and Dan Duncan Neurolog. Res. Institiute.*

9:00 C53 **129.10** Attenuating TSP/ $\alpha 2\delta$-1 signaling decreases pathologies associated with a model of developmental cortical malformation. L. ANDRESEN*; D. HAMPTON; A. TAYLOR; L. MOREL; Y. YANG; J. MAGUIRE; C. DULLA. *Tufts Univ., Broad Inst.*

10:00 C54 **129.11** KCNQ channel participation in the dendritic corticostriatal response of direct and indirect striatal projection neurons. M. B. PEREZ-RAMIREZ*; J. A. LAVILLE; E. LARA-GONZALES; M. DUHNE; D. TAPIA; J. BARGAS; E. GALARRAGA. *Instituto De Fisiologia Celular.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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11:00 C55 **129.12** Elfn1 recruits presynaptic mGluR7 in trans and its loss cause epilepsy, hyperactivity, and attention deficits. J. ARUGA*; N. H. TOMIOKA; H. YASUDA; H. MIYAMOTO. *Nagasaki Univ. Sch. of Med., RIKEN BSI, Gunma Univ.*

8:00 C56 **129.13** Monosynaptic inhibitory transmission between layer 2 GABA-ergic non-fast spiking interneurons *in vivo.* A. L. DORRN*; J. F. A. POULET. *Max-Delbrueck-Center For Mol. Med., NeuroCure - Neurosci. Res. Center, Charité-Universitaetsmedizin.*

9:00 C57 **129.14** Acute ethanol exposure increases GABAA receptor-mediated synaptic transmission at developing cerebellar Golgi cells. K. JOTTY*; Y. YANAGAWA; C. F. VALENZUELA. *Univ. of New Mexico, Gunma Univ.*

10:00 C58 **129.15** Dynamic characteristics of synaptic noise in neurons of the barrel cortex are layer-specific. O. REVAH; T. TCHUMACHENKO; F. WOLF; A. BINSHTOK; M. J. GUTNICK*. *Sch. of Vet Med, Hebrew Univ. Jerusalem, Max Planck Inst. for Brain Res., (3) Max Planck Inst. for Dynamics and Self-Organization, The Hebrew Univ. of Jerusalem.*

11:00 C59 **129.16** Fast signaling properties of parvalbumin-expressing interneurons in the hippocampus *in vivo.* J. GAN*; A. PERNÍA-ANDRADE; P. JONAS. *IST Austria.*

8:00 C60 **129.17** Optical vs electrical stimulation of dopamine release in nucleus accumbens slices: Regulation by local circuitry. J. R. MELCHIOR*; S. R. JONES. *Wake Forest Sch. of Med.*

POSTER

130. Oscillations and Synchrony in Neural Networks

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

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

8:00 C61 **130.01** Cell-type specific hippocampal output during fast oscillations arises from the local synaptic wiring scheme. C. BÖHM*; Y. PENG; N. MAIER; J. F. A. POULET; J. R. P. GEIGER; D. SCHMITZ. *Neurowissenschaftliches Forschungszentrum, Charité Universitätsmedizin Berlin, Inst. für Neurophysiologie, Charité Universitätsmedizin Berlin, Cluster of Excellence NeuroCure, Max-Delbrück Ctr. for Mol. Med., Bernstein Ctr. for Computat. Neurosci., Ctr. for Neurodegenerative Dis. Berlin (DZNE).*

9:00 C62 **130.02** Interactions between network state, thalamic activity and the duration of sleep spindles. L. ACSADY*; A. SLÉZIA; F. MÁTYÁS; L. FARADZS-ZADE; K. D. HARRIS; P. BARTHÓ. *Inst. Exp. Med. Hung Acad Sci., UCL Inst. of Neurol.*

10:00 C63 **130.03** Studying hippocampal theta oscillation in a reduced septal-entorhinal-hippocampal system. Z. GU*; J. L. YAKEL. *NIEHS/NIH.*

11:00 C64 **130.04** Thermodynamic and statistical-mechanical measures for synchronization of bursting neurons. W. LIM*; S. KIM. *Daegu Natl. Univ. of Educ., Computat. Neurosci. Lab.*

8:00 C65 **130.05** Variability and constraints in spontaneous neuronal network remodeling. D. PANAS; H. AMIN; A. MACCIONE; L. BERDONDINI; M. H. HENNIG*. *Univ. of Edinburgh, IIT Inst. Italiano di Tecnologia, Edinburgh Univ.*

9:00 C66 **130.06** Stochastic occurrence of silent periods causes noise correlations in cortical circuits across different brain states. G. MOCHOL*; A. HERMOSO-MENDIZABAL; S. SAKATA; K. D. HARRIS; J. DE LA ROCHA. *IDIBAPS, Nencki Inst. of Exptl. Biol., Univ. of Strathclyde, Univ. Col. London.*

10:00 C67 **130.07** Sleep restores variability in synchronization and neuronal avalanche dynamics after sustained wakefulness in rats. C. MEISEL*; A. KLAUS; D. PLENZ. *NIMH.*

11:00 C68 **130.08** Fast-spiking inhibitory neuronal control of rhythmic dynamics during sensory processing, sleep and seizures in humans. O. J. AHMED*; J. S. NAFTULIN; E. N. ESKANDAR; L. R. HOCHBERG; S. S. CASH. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Brown Univ.*

8:00 C69 **130.09** Gamma oscillations in barrel cortex: Cell-class specific synchronization and relation with connected structures. C. M. PENNARTZ*; J. J. BOS; J. C. JACKSON; L. B. VAN MOURIK-DONGA; L. J. GENTET; M. VINCK. *Univ. of Amsterdam, Univ. of St. Thomas, Yale Univ.*

9:00 C70 **130.10** Spiking patterns of cannabinoid type I receptor expressing dendrite targeting hippocampal interneurons in awake mice. G. G. SZABO*; C. VARGA; I. SOLTESZ. *UC Irvine.*

10:00 C71 **130.11** Phase predictors of synchrony in noise-dominated neuron networks. J. BAUER*; F. R. FERNANDEZ; J. A. WHITE. *Univ. of Utah.*

11:00 C72 **130.12** Response variability in large scale networks of cortical neurons. N. HAROUSH*; S. MAROM. *Technion – Israel Inst. of Technol.*

8:00 D1 **130.13** Firings of interneurons modulated by short DBS trains in the hippocampal CA1 region of rat. J. CAO*; Z. FENG; Y. YU; Z. GUO. *Zhejiang Univerisity.*

9:00 D2 **130.14** Dendritic spikes induce ripples in parvalbumin interneurons during hippocampal sharp waves. Z. SZADAI*; B. CHIOVINI; G. F. TURI; D. PÁLFI; G. KATONA; A. KASZÁS; P. MAÁK; G. SZALAY; G. SZABÓ; M. MADARÁSZ; S. KÁLI; B. RÓZSA. *IEM-HAS, Pázmány Péter Catholic Univ., Columbia Univ., Budapest Univ. of Technol. and Econ.*

10:00 D3 **130.15** Prenatal stress produces persistence of remote memory and disrupts functional connectivity in the hippocampal-prefrontal cortex axis. I. NEGRON*; D. NEIRA; N. ESPINOSA; P. FUENTALBA; F. ABOITIZ. *Pontificia Univ. Católica De Chile, Fundación San Juan de Dios.*

POSTER

131. Oligodendrocytes: Cell Biology and Signaling I

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

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

8:00 D4 **131.01** Downregulation of the microtubule associated protein tau impairs oligodendroglia differentiation and the process of early myelination in culture. V. SEIBERLICH*; N. G. BAUER; L. SCHWARZ; C. FFRENCH-CONSTANT; O. GOLDBAUM; C. RICHTER-LANDSBERG. *Univ. of Oldenburg, MRC Ctr. for Regenerative Med.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 D5 **131.02** Distinct profiles of myelin distribution along single axons of pyramidal neurons in the neocortex. G. SRUBEK TOMASSY*; D. R. BERGER; H. CHEN; N. KASTHURI; K. J. HAYWORTH; A. VERCELLI; S. SEUNG; J. W. LICHTMAN; P. ARLOTTA. *Harvard Univ., Harvard Univ., Janelia Farm Res. Campus, Neurosci. Inst. Cavalieri Ottolenghi, Princeton Univ.*

10:00 D6 **131.03** Actin dynamics drive CNS myelination. J. ZUCHERO*; B. A. BARRES. *Stanford Univ. Sch. of Med., Stanford Univ.*

11:00 D7 **131.04** Alterations of synaptic connectivity of oligodendrocyte progenitor cells following central nervous system demyelination. F. C. ORTIZ; A. SAHEL; C. KERNINON; E. AUDINAT*; P. P. MALDONADO; M. ANGULO; B. NAIT OUMESMAR. *Inserm U1128, Univ. Paris Descartes, Inst. du Cerveau et de la Moelle Epinière, Inserm U.1127, UPMC UMR-S1127, CNRS UMR 7225, Inserm U1128, Paris, France; Univ. Paris Desc.*

8:00 D8 **131.05** Role of myelin plasticity in oscillations and synchrony of neuronal activity. S. PAJEVIC*; P. J. BASSER; R. D. FIELDS. *NIH, NIH.*

9:00 D9 **131.06** Oligodendrocytes beyond OPCs are capable to fire Na^+ current- induced action potentials in the rat brainstem. E. BERRET*; J. KIM. *UTHSCSA.*

10:00 D10 **131.07** Age and serum affect glutamate-evoked currents in oligodendrocyte precursor cells. S. O. SPITZER; S. SITNIKOV; K. A. EVANS; R. T. KARADOTTIR*. *Univ. of Cambridge.*

11:00 D11 **131.08** Regulation of oligodendrocyte progenitors through AMPA receptor signaling. A. AGARWAL*; L. CHAKRAVARTI; K. SPARKS; A. HURTADO; D. E. BERGLES. *Johns Hopkins Univ.*

8:00 D12 **131.09** Fyn kinase mediates the promyelinating effect of brain-derived neurotrophic factor (BDNF) and may compensate for the loss of TrkB in oligodendrocytes. H. PECKHAM; L. GIUFFRIDA; A. W. WONG; A. H. FERNER; T. KILPATRICK; S. S. MURRAY*; J. XIAO. *Dept. of Anat. and Neurosci., Ctr. for Neurosci.*

9:00 D13 **131.10** BDNF is localized to secretory vesicles in oligodendrocytes and astrocytes. C. F. DREYFUS*; N. SUBRAMANIAN; L. LERCHER; B. L. HEMPSTEAD; T. A. MILNER. *Rutgers Robert Wood Johnson Med. Sch., Brain and Mind Res. Institute, Weill Cornell Med. Col., Lab. Neuroendocrinology,The Rockefeller Univ.*

10:00 D14 **131.11** Age-dependent redistribution and hypersialylation of the central myelin loop membrane protein Opalin in the mouse brain. T. FURUICHI*; Y. SATO; F. YOSHIKAWA; T. SADAKATA; Y. SHINODA; M. KOEBIS. *Tokyo Univ. of Science, Fac. of Sci. and Technol., RIKEN Brain Sci. Inst., Kanazawa Univ., Gunma Univ.*

11:00 D15 **131.12** MicroRNA-21 expression analysis in the adult mouse central nervous system. J. J. MIGUEL-HIDALGO*; W. GRAY; B. ANEIRYN; M. SYED; D. G. ROMERO. *Univ. Mississippi Med. Ctr., Univ. Mississippi Med. Ctr.*

8:00 D16 **131.13** The prostaglandin F2α receptor (FP) increases oligodendrocyte precursor cell susceptibility to death. N. G. CARLSON*; L. SCHMIDT; S. BELLAMKONDA; J. DEWEY; B. WOOD; J. W. ROSE. *Univ. Utah, VASLCHCS.*

9:00 D17 **131.14** Discovering dendritic modulators of oligodendrocyte myelination. S. REDMOND*; Y. E. EISENBACH; S. Y. C. CHONG; A. TAUBES; E. PELES; J. R. CHAN. *Univ. of California, San Francisco, Weizmann Inst. of Sci.*

10:00 D18 **131.15** The generation and characterization of oligodendroglia-specific MCT1 conditional knockout mice. Y. LEE*; T. PHILIPS; L. JIN; B. M. MORRISON; J. D. ROTHSTEIN. *Johns Hopkins Sch. of Med., Brain Sci. Inst.*

POSTER

132. Brain Wellness

Theme C: Disorders of the Nervous System

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

8:00 D19 **132.01** Green tea supplement rescues working memory deficits induced by chronic stress. M. C. BUHUSI*; B. BOGOEV; A. R. MATTHEWS; B. Z. YANG; C. V. BUHUSI. *Utah State Univ.*

9:00 D20 **132.02** Insight into the molecular mechanisms of post-chemotherapy cognitive impairment. C. N. BAGNALL-MOREAU*; N. MARMOLEJO-CARMONA; T. AHLES; K. SALAS-RAMIREZ; K. HUBBARD. *CUNY City Col., Queensborough Community Col., Mem. Sloan Kettering Cancer Ctr., The Sophie Davis Sch. of Biomed. Educ.*

10:00 D21 **132.03** Electrophysiological response to the thermal environment in human brain varies with season. T. OKAMOTO*; N. MIYAMOTO; T. FUTAEDA. *Kyushu Univ., Anny Group.*

11:00 D22 **132.04** Metabolic factors mediate age-related declines in cerebral white matter: A longitudinal diffusion tensor imaging study. A. R. BENDER*; N. RAZ. *Wayne State Univ., Wayne State Univ.*

8:00 D23 **132.05** ▲ Effects of catechol-O-methyl transferase and dopamine receptor D2 genotypes on performance on computerized neurocognitive task performance in collegiate student athletes. G. COCHRANE*; M. C. KOSTEK; C. J. KETCHAM; E. E. HALL; K. P. BARNES; K. PATEL. *Elon Univ., Duquesne Univ., Kernodle Clin., Elon Univ.*

9:00 D24 **132.06** Decrease in functional brain connectivity following orthopedic surgery. H. HUANG*; P. NGUYEN; J. J. TANNER; N. SCHWAB; H. K. PARVATANENI; M. J. RICE; I. M. SCHMALFUSS; A. L. HORGAS; T. H. MARECI; C. C. PRICE; M. DING. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida Col. of Med., Univ. of Florida Col. of Med., Univ. of Florida Col. of Nursing, Univ. of Florida Col. of Nursing, Univ. of Florida, Univ. of Florida, Univesity of Florida.*

10:00 D25 **132.07** Running in the cold augments exercise-driven neurogenesis. M. E. MAYNARD*; C. CHUNG; A. L. COMER; K. NELSON; J. TRAN; N. WERRIES; E. A. BARTON; J. L. LEASURE. *Univ. of Houston.*

11:00 D26 **132.08** ▲ Changes in gait are more sensitive to current symptoms than history of concussion among varsity athletes. E. L. MESSERSCHMIDT*; S. VALLABHAJOSULA; C. J. KETCHAM; E. E. HALL; K. P. BARNES; K. PATEL. *Elon Univ.*

8:00 D27 **132.09** The effects of exercise on cognitive impairments in a translational animal model of pediatric radiotherapy. I. SAHNOUNE*; K. H. NELSON; S. P. RODGERS; M. W. GABER; J. L. LEASURE. *Univ. of Houston, Baylor Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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9:00 D28 **132.10** ▲ Neurocognitive performance and concussions: Influence of headaches, migraines, depression, anxiety, attention deficit disorders and exercise. J. E. COTTLE; E. HALL*; C. J. KETCHAM; K. P. BARNES; K. PATEL. *Elon Universtiy, Elon Universtiy.*

10:00 D29 **132.11** Avoiding the pituitary/hypothalamic region and fractionating the dose during cranial radiotherapy mitigates radiation-induced growth retardation. S. P. RODGERS*; J. A. ZAWASKI; K. H. NELSON; J. L. LEASURE; M. W. GABER. *Univ. of Houston, Baylor Col. of Med., Univ. of Houston.*

11:00 D30 **132.12** Dynamic modeling of cerebral hemodynamics in neonates after cardiac surgery. S. MOGHIMI*; C. CALDARONE; S. MERKLINGER; D. KIM; H. HOLTBY; S. SCHWARTZ; G. VAN ARSDELL; A. GUERGUERIAN. *Saba Moghimi, Hosp. for Sick Children, Res. Inst., Hosp. for Sick Children, Hosp. for Sick Children, Hosp. for Sick Children, Hosp. for Sick Children.*

8:00 D31 **132.13** Rheb inhibits protein synthesis by activating the PERK-eIF2α signaling cascade. R. TYAGI*; N. SHAHANI; L. GORGEN; W. PRYOR; P. F. WORLEY; P. Y. CHEN; S. SWARNKAR; S. H. SNYDER; S. SUBRAMANIAM. *Johns Hopkins Univ. Sch. of Med., The Scripps Res. Institute, Florida.*

9:00 D32 **132.14** Immediate and delayed impacts of fat consumption on attention and inhibitory control. T. M. REYES*; N. M. GRISSOM; K. HERSHEY; R. GEORGE. *Univ. Pennsylvania, Sch. of Med.*

10:00 D33 **132.15** Prenatal protein malnutrition decreases metabolic activity in prefrontal regions during sustained attention task. A. C. AMARAL*; J. A. MCGAUGHY; D. J. MOKLER; J. R. GALLER; D. L. ROSENE; J. J. RUSHMORE. *Boston Univ. Sch. of Med., Univ. of New Hampshire, Univ. of New England, Harvard Med. Sch.*

11:00 D34 **132.16** ● Neuroinflammation is possibly involved in prolonged suppression of rat spontaneous activity induced by monofluoroacetate, an inhibitor for TCA cycle. M. YAMATO*; S. KUME; G. JIN; Y. MIYASHIGE; M. NAKANO; Y. TAMURA; A. EGUCHI; Y. KATAOKA. *RIKEN Ctr. for Life Sci. Technologies.*

8:00 D35 **132.17** Cholesterol (CED) or Lipid enriched diet (LED) affect amyloid precursor protein (APP) metabolism and Amyloid beta (AB) production in Wistar rats. M. CORTÉS-ORTIZ; M. CARDENAS-AGUAYO; K. LIRA-DE LEON*; M. MERAZ-RÍOS. *Ctr. de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional (CINVESTAV-IPN), CICATA-IPN.*

9:00 D36 **132.18** Interactive actions of BDNF methylation and cell metabolism for building "epigenetic memory" under the influence of diet. E. TYAGI*; Y. ZHUANG; Z. YING; F. GOMEZ-PINILLA. *Univ. of California Los Angeles (UCLA), UCLA Brain Injury Research Center.*

10:00 D37 **132.19** Different metabolic gene expression profiles from laser captured hippocampal pyramidal neurons versus whole hippocampi from Alzheimer and control post-mortem tissue. A. C. RICE*; J. P. BENNETT, Jr. *Virginia Commonwealth Univ., Virginia Commonwealth Univ.*

11:00 D38 **132.20** The activation of the Wnt signaling modulates the function and mitochondrial dynamics in hippocampal neurons. C. SILVA-ALVAREZ*; N. C. INESTROSA. *Pontifical Catholic Univ. of Chile, Univ. of New South Wales.*

8:00 D39 **132.21** Effect of a single bout of exhaustive exercise on different isoforms of PGC1α in postmitotic tissues of young and old mice. R. R. THOMAS*; T. LOCHMANN; S. M. TAYLOR; J. P. BENNETT. *VCU, VCU.*

9:00 D40 **132.22** Epigenetic regulation of the BDNF gene in psychiatric diseases. S. F. SLEIMAN; J. A. KESSNA-HENRY; H. VAN PRAAG; M. V. CHAO*. *NYU Sch. Med., NIH.*

10:00 D41 **132.23** Fluoxetine treatment in neonates improves antioxidant enzymes later in postnatal life. G. FEITOZA*; A. A. PEDROZA; M. V. INTERAMINENSE; C. M. FREITAS; M. P. FERNANDES; A. I. DA SILVA; C. LAGRANHA. *CAV-UFPE, CAV-UFPE, UFPE.*

11:00 D42 **132.24** Caloric restriction affects brain energy metabolism and memory in young adult mice. N. STEINER*; C. FAVROD; L. PELLERIN. *Dept. of Physiol.*

8:00 D43 **132.25** O-GlcNAcylation of PKA catalytic subunitsenhances its kinase activity. S. XIE*; Y. WANG; N. JIN; J. GU; J. SUN; C. GONG; K. IQBAL; F. LIU. *Jiangsu Key Lab. of Neuroregeneration, New York State Inst. for Basic Res. in Developmental Disabilities.*

9:00 D44 **132.26** Changes in the cajal bodies and speckles of neurons in the hippocampus of rats exposed to low doses of ozone. J. MÉNDEZ*, SR; L. F. HERNANDEZ-ZIMBRON; S. RIVAS-ARANCIBIA. *UNAM, UNAM.*

POSTER

133. Abeta Pathology and Therapeutic Approaches

Theme C: Disorders of the Nervous System

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

8:00 D45 **133.01** Cilostazol reduces Aβ accumulation in cultured brain pericytes in an autophagy-dependent manner. H. KIM*; J. LIM; H. BYUN; J. KOH. *Asan Inst. For Life Sci., Asan Med. Ctr.*

9:00 D46 **133.02** Amyloid beta inhibition of long-term potentiation may involve block of Eg5 motor protein. R. K. FREUND*; H. POTTER; M. L. DELL'ACQUA. *Univ. Colorado, Sch. of Med., Univ. Colorado, Denver, Univ. Colorado, Anschutz Med. Campus, Univ. Colorado, Anschutz Med. Campus, Univ. Colorado, Denver, Univ. Colorado, Anschutz Med. Campus.*

10:00 D47 **133.03** Role of Scavenger Receptor Class A in glial cell activation in Alzheimer's disease. F. A. CORNEJO*; M. VRUWINK; C. METZ; G. RAMÍREZ; R. VON BERNHARDI. *Pontificia Univ. Católica De Chile, Pontificia Univ. Católica De Chile.*

11:00 D48 **133.04** ● A novel predictive *in vitro* assay for Alzheimer: Functional and phenotypic rescue of acute sub-toxic amyloid beta effects on hippocampal network cultures grown on microelectrode array chips. B. M. BADER*; C. EHNERT; K. JÜGELT; O. H. SCHROEDER; A. VOSS. *NeuroProof GmbH.*

8:00 D49 **133.05** Drug inhibition of Rho Kinase alters amyloid-β production in brain. E. GENTRY; Y. FENG; A. L. MATTHEYSES; J. H. HERSKOWITZ*. *The Univ. of Alabama At Birmingham, The Scripps Res. Inst., Emory Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 D50 **133.06** Facilitated production of amyloid-β in neuronal cells under high glucose conditions. T. TEZUKA; K. KASUGA; K. SAITO; T. TOKUTAKE; M. NISHIZAWA; T. IKEUCHI*. *Niigata University, Brain Res. Inst.*

10:00 D51 **133.07** JIP1 is required for the efficient anterograde transport of APP in neuronal axon driven by kinesin-1. Y. OKUMURA*; K. CHIBA; A. NAIRN; R. DAVIS; M. KINJO; T. SUZUKI. *Lab. of Neuroscience, Grad. Sch. of Pharm. Sci., Dept. of Psychiatry, Yale Univ. Sch. of Med., Program in Mol. Medicine, UMASS Med. Sch., Lab. of Mol. Cell Dynamics, Grad. Sch. of Advanced Life Sci.*

11:00 D52 **133.08** Down-regulation of basal autophagy in familial Alzheimer disease-associated presenilin mutants via decreased TRPM7 channel activity. H. OH*; O. KWON; Y. CHUN; Y. CHO; S. CHUNG. *Sungkyunkwan Univ. Sch. of Med.*

8:00 D53 **133.09** Clioquinol reduces β-amyloid oligomer formation through lysosomal pH regulation in CHO-7W cells. B. SEO*; S. LEE; K. CHO; Y. H. YOON; J. KOH. *Asan Inst. For Life Sciences, Univ. of Ulsan, Kyung Hee Univ. Hosp. at Gang Dong, Kyung Hee Univ. Sch. of Med., Asan Med. Center, Univ. of Ulsan, Asan Med. Ctr.*

9:00 D54 **133.10** ● Internalization of key surface receptor involved in Alzheimer's disease. K. MOZZONI*; N. IZZO; C. REHAK; C. SILKY; R. YURKO; G. RISHTON; G. LOOK; H. SAFFERSTEIN; S. CATALANO. *Cognition Therapeut.*

10:00 D55 **133.11** Effect of docosahexaenoic acid (DHA) and epigallocatechin gallate (EGCG) on amyloid-precursor protein (APP) processing. H. AZIZI; B. E. KALISCH*. *Univ. Guelph.*

11:00 D56 **133.12** Developing an ips disease-in-a-dish model of familial Alzheimer's disease. R. A. LOPEZ LEAL*; J. C. BIANCOTTI; T. C. TOWN. *USC.*

8:00 D57 **133.13** Analysis of cell proliferation, death and differentiation of neural precursor cells using an *in vitro* model for Alzheimer's disease. D. D. PAIVA*; S. A. A. ROMARIZ; B. M. LONGO. *Unifesp.*

9:00 D58 **133.14** Inhibitory interneuron transplants restore brain functions in an Alzheimer mouse model. M. M. MARTINEZ-LOSA; A. KHAN*; A. CLEMENTE; L. VERRET; T. E. TRACY; I. COBOS; K. HO; L. GAN; L. MUCKE; M. ALVAREZ-DOLADO; J. J. PALOP. *Gladstone Institutes, UCSF, Sara Borrell, ISCIII, CABIMER, CSIC, Gladstone Inst. and UCSF, Neurosci. Grad. Program, UCSF, Gladstone Institutes, UCSF, Massachusetts Gen. Hospital, Harvard, Gladstone Inst., CABIMER, CSIC, UPO.*

10:00 D59 **133.15** Identification of mitochondrial structure in the brain of Alzheimer's disease mice using 3D EM reconstruction. E. TRUSHINA*; T. CHRISTENSEN; L. ZHANG; S. TRUSHIN; A. SCHROEDER; J. L. SALISBURY. *Mayo Clin., Mayo Clin.*

11:00 D60 **133.16** WITHDRAWN.

8:00 D61 **133.17** Enhanced exosome secretion in the brain of Down's syndrome patients with endosomal-lysosomal dysfunction. R. PEREZ-GONZALEZ*; S. A. GAUTHIER; A. SHARMA; G. KAUR; E. LEVY. *Nathan S. Kline Inst., NYU Langone Med. Ctr.*

9:00 D62 **133.18** ▲ Enhanced amyloidogenic processing of APP and cell death under prolonged ER stress in brain endothelial cells. A. I. PLÁCIDO*; P. I. MOREIRA; C. R. OLIVEIRA; C. M. F. PEREIRA. *Ctr. for Neurosci. and Cell Biol., Fac. of Medicine, Univ. of Coimbra.*

10:00 D63 **133.19** Clathrin-mediated endocytosis is a key target for amyloid β-induced axonal degeneration and memory impairment. T. KUBOYAMA*; Y. LEE; H. NISHIKO; C. TOHDA. *Instit of Natural Medicine, Univ. of Toyama.*

11:00 D64 **133.20** A Rac1-mTOR pathway controls amyloid-β induced, tau dependent, ectopic cell cycle re-entry, a major cause of neuron death in Alzheimer's disease. A. NORAMBUENA*; E. KODIS; L. MCMAHON; E. M. SWANSON; S. THOMAS; D. BAERTHLEIN; L. ROY; S. ODDO; G. S. BLOOM. *Univ. of Virginia, Banner Sun Hlth. Res. Inst. and Dept. of Basic Med. Sciences, Univ. of Arizona Col. of Medicine-Phoenix.*

8:00 D65 **133.21** p53 in neurodegeneration: Impact of beta-amyloid/p53 interference on Alzheimer pathogenesis. A. PINTO; M. M. SERAFINI; D. NECCHI; L. POLITO; A. DAVIN; A. GUAITA; M. RACCHI*; C. LANNI. *Univ. Pavia, Fondazione Golgi Cenci.*

9:00 D66 **133.22** Mechanisms for neuron-to-neuron transmission of neurodegenerative proteins. M. HALLBECK*; M. S. SINHA; A. ANSELL; A. FALK; C. SACKMANN; E. SEVERINSSON; M. INGELSSON; J. BERGSTRÖM; J. MARCUSSON. *Linkoping Univ., Karolinska Institutet, Uppsala Univ.*

10:00 D67 **133.23** APP facilitates the RCAN1-mediated apoptosis. Y. WU*; Y. DENG; F. CAI; W. SONG; W. ZHOU; T. LI. *The Univ. of British Columbia, Chongqing Med. Univ.*

11:00 D68 **133.24** The neuroprotective role of caffeine in LDL-treated human neuroblastoma cell line. M. L. SOLIMAN; J. D. GEIGER; X. CHEN*. *Univ. of North Dakota.*

8:00 D69 **133.25** Nanowired delivery of cerebrolysin reduces exacerbation of brain pathology in Alzheimer's disease complicated with diabetes. J. V. LAFUENTE*; A. SHARMA; D. F. MURESANU; R. PATNAIK; R. J. CASTELLANI; M. A. SMITH; Z. TIAN; H. MOESSLER; H. S. SHARMA. *Univ. of Basque Country, Uppsala Univ. Hosp., Univ. of Med. & Pharm., Indian Inst. of Technology, Banaras Hindu Univ., Univ. of Maryland Hosp., Case Western Reserve Univ., Univ. of Arkansas, Ever Neuro Pharma.*

9:00 D70 **133.26** ● Characterization of an isogenic disease model of Alzheimer's disease from human iPS cell-derived neurons. C. B. CARLSON*; K. P. MANGAN; J. WANG; N. AOYAMA; M. MCLACHLAN; T. BURKE; S. DELAURA; E. JONES. *Cell. Dynamics Intl., Cell. Dynamics Intl.*

10:00 D71 **133.27** Heparan sulfate fragmentation lowers amyloid burden in Alzheimer's disease transgenic mice. L. N. NILSSON*; C. JENDRESEN; H. CUI; X. ZHANG; J. LI. *Univ. of Oslo and Oslo Univ. Hosp., Uppsala Univ., Uppsala Univ.*

POSTER

134. Alzheimer's Disease: APP Abeta *In Vivo* Models I

Theme C: Disorders of the Nervous System

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

8:00 D72 **134.01** Painless NGF rescues behavioral deficits and amyloidogenic phenotype in 5xFAD mice by acting on glial cells. S. CAPSONI*; C. CRISCUOLO; N. M. CARUCCI; C. RIZZI; N. ORIGLIA; M. FABBRI; M. CALVELLO; A. VIEGI; G. TESTA; L. DOMENICI; A. CATTANEO. *Scuola Normale Superiore, Univ. of L'Aquila, Inst. of Neuroscience, CNR, European Brain Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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9:00 E1 **134.02** Memory and cholinergic impairment using a new approach of bilateral lesion of rat cholinergic basal forebrain. I. MANUEL; A. LLORENTE; E. GONZÁLEZ DE SAN ROMÁN; L. MERINO; M. GIRALT; R. RODRIGUEZ-PUERTAS*. *Fac. Medicina, Univ. Pais Vasco, Fac. Medicina, Univ. Pais Vasco.*

10:00 E2 **134.03** ▲ Long-term central pathology in a mixed model of Alzheimer's disease and type 2 diabetes. C. INFANTE-GARCIA; J. RAMOS-RODRIGUEZ; L. GALINDO-GONZALEZ; M. GARCIA ALLOZA*. *Div. of Physiology, Sch. of Med.*

11:00 E3 **134.04** Co-expression of Nurr1 and Aβ and age-dependent neuronal degeneration in the 5XFAD mouse: A potential therapeutic target for Alzheimer's disease? P. K. LEE*; M. MOON; I. JEONG; C. KIM; I. MOOK-JUNG; P. LEBLANC; K. KIM. *McLean Hospital/Harvard Med. Sch., Seoul Natl. Univ. Col. of Med.*

8:00 E4 **134.05** Infusion of the cyclooxygenase product of inflammation prostaglandin J2 into mouse hippocampi induces Alzheimer-like pathology in an age dependent manner. M. J. KIPROWSKA*; T. JEAN-LOUIS; J. AVILA; D. MUSHEYEV; P. SERRANO; P. ROCKWELL; M. FIGUEIREDO-PEREIRA. *Hunter College, CUNY, Hunter College, CUNY, Hunter College, CUNY.*

9:00 E5 **134.06** ● Systemic administration of a novel fusion protein bivalent for a General Amyloid Interaction Motif (GAIM) reduces β-amyloid and phospho-Tau in transgenic mice. J. M. LEVENSON*; J. C. CARROLL; V. CULLEN; S. SCHROETER; E. ASP; M. PROSCHITSKY; E. J. MUFSON; M. NADEEM; H. B. DODIYA; S. SHOAGA; H. TSUBERY; R. KRISHNAN; B. SOLOMON; R. FISHER; K. S. GANNON. *NeuroPhage Pharmaceuticals, Inc., NeuroPhage Pharmaceuticals, Inc., Rush Univ. Med. Ctr., Rush Univ. Grad. Col., NeuroPhage Pharmaceuticals, Inc., Tel Aviv Univ.*

10:00 E6 **134.07** Western diet effects on the rat brain: Evidence for cognitive impairment linked with changes in brain structure and elevated AT-8 expression. A. LEDREUX*; X. WANG; M. SCHULTZBERG; D. ROSENBERGER; M. F. FALANGOLA; A. GRANHOLM. *Med. Univ. of South Carolina, Karolinska Institutet, Univ. of Utah, Med. Univ. of South Carolina.*

11:00 E7 **134.08** Fus1-knockout mice as a model for sporadic Alzheimer's disease have olfactory-mediated behavioral and cognitive dysfunction rescued by N-acetyl cysteine. G. CORONAS-SAMANO*; P. KANDUKURU; A. V. IVANOVA; J. V. VERHAGEN. *The John B Pierce Lab., Yale Sch. of Med., Yale Sch. of Med.*

8:00 E8 **134.09** Aging alters the gene expression profile in the choroid plexus of wild-type and PDGFB-APPSwInd mice. S. D. MESQUITA; A. C. FERREIRA; J. C. SOUSA; G. COPPOLA; D. GESCHWIND; F. GAO; M. CORREIA-NEVES; N. SOUSA; J. A. PALHA; F. MARQUES*. *Life and Hlth. Sci. Res. Inst. (ICVS), ICVS/3B's - PT Government Associate Lab., Program in Neurogenetics, Dept. of Neurology, David Geffen Sch. of Medicine-UCLA,.*

9:00 E9 **134.10** Hydrogen sulfide mitigates synapse remodeling in okadaic acid induced neurotoxicity. P. K. KAMAT; A. KALANI; N. TYAGI*. *Univ. of louisville, Univ. of louisville, Univ. Of Louisville.*

10:00 E10 **134.11** Genetic reduction of mTOR ameliorates Alzheimer's disease-like cognitive and pathological deficits by restoring hippocampal gene expression signature. A. CACCAMO*; V. DE PINTO; A. MESSINA; C. BRANCA; S. ODDO. *Banner Sun Hlth. Res. Inst., Dept. of Biological, Geological and Envrn. Sciences, Univ. of Catania, Dept. of Basic Med. Sciences, Univ. of Arizona Col. of Medicine-Phoenix, Dept. of Mol. and Translational Medicine, Univ. of Brescia.*

11:00 E11 **134.12** Dissecting the critical period of estrogen replacement therapy: Brain proteomic analysis. J. CUI*; J. REED; G. CRYNEN; F. CRAWFORD; R. LI. *Roskamp Inst.*

8:00 E12 **134.13** Default mode network functional connectivity strength is reduced in a mouse model of Alzheimer's disease. D. LIU*; H. LU; J. BANKS; E. A. STEIN; Y. YANG; M. P. MATTSON. *National Institute On Aging/ National Institutes Of Health, Natl. Inst. on Drug Abuse.*

9:00 E13 **134.14** Rescue of brain aging and cognitive impairment with a neurogenic/neurotrophic compound in aged Fisher rats. K. IQBAL*; S. BOLOGNIN; S. KHATOON; J. PUOLIVÄLI. *NYS Inst/Basic Res., Charles River Discovery Res. Services.*

10:00 E14 **134.15** Ameliorating effect of spinosin on Aβ oligomer-induced cognitive impairment in a mouse model of Alzheimer's disease. H. LEE*; S. KO; Q. GAO; Y. LEE; B. KIM; S. PARK; S. JEON; D. JANG; J. RYU. *Kyung Hee Univ., Kyung Hee East-West Pharmaceut. Res. Institute, Col. of Pharmacy, Kyung Hee Univ.*

11:00 E15 **134.16** A common pathway regulating synaptic plasticity and beta amyloid mediated synaptic toxicity. J. SEO*; P. GIUSTI-RODRIGUEZ; Y. ZHOU; A. RUDENKO; S. CHO; K. T. OTA; C. PARK; H. PATZKE; R. MADABHUSHI; L. PAN; A. E. MUNGENAST; J. GUAN; I. DELALLE; L. TSAI. *MIT, Univ. of North Carolina at Chapel Hill, Univ. of Massachusetts Med. Sch., Yale Univ. Sch. of Med., EnVivo Pharmaceuticals, Tsinghua Univ., Boston Univ. Sch. of Med.*

8:00 F1 **134.17** Epigenetic control of tip60 neuroprotective gene targets in Alzheimer's disease. P. PANIKKER*; F. ELEFANT. *Drexel Univ.*

9:00 F2 **134.18** RNS60, physically modified saline with charge stabilized oxygen based nanostructures, protects learning and memory in 5XFAD model of Alzheimer's disease. K. MODI*; A. JANA; S. B. RANGASAMY; S. GHOSH; R. WATSON; K. PAHAN. *Rush Univ., Rush Univ. Med. center, Revalesio Corp., Rush Univ. Med. center.*

10:00 F3 **134.19** Altered proteolytic processing of APP upon chronic inflammation: Relevance to Alzheimer's disease. T. JEAN-LOUIS*; M. FIGUEIREDO-PEREIRA. *Hunter Col.*

11:00 F4 **134.20** The role of amyloid precursor protein and its derivatives in the development of insulin resistance. R. D. HENDRIX*; S. W. BARGER; B. PHANAVANH; J. WALTERS. *Univ. of Arkansas for Med. Sci., Univ. of Arkansas for Med. Sci.*

8:00 F5 **134.21** Administration of a selective β2 adrenergic receptor antagonist exacerbates neuropathology and cognitive deficits in a mouse model of Alzheimer's disease. C. BRANCA*; E. W. WISELY; L. K. HARTMAN; A. CACCAMO; S. ODDO. *Univ. of Arizona, Univ. of Brescia, Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Banner Sun Hlth. Res. Inst., Univ. of Catania.*

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9:00 F6 **134.22** Genetic suppression of β2-adrenergic receptors ameliorates tau pathology in a mouse model of tauopathies. E. WISELY*; Y. K. XIANG; S. ODDO. *UTHSCSA - Physiol. Dept., Univ. of California at Davis, Banner Sun Hlth. Res. Inst., Univ. of Arizona Col. of Med.*

10:00 F7 **134.23** Transverse relaxation and spatial memory changes in Alzheimer's disease mouse model with altered iron diets. D. PETERS*; J. CONNOR; Q. YANG; M. MEADOWCROFT. *Penn State Hershey, Col. of Med., Penn State Hershey, The Ctr. for NMR Res.*

11:00 F8 **134.24** Amyloid reductions by AAV-mediated CD74 gene delivery in an Alzheimer's disease mouse model. T. KIYOTA*; G. ZHANG; C. M. MORRISON; M. E. BOSCH; R. A. WEIR; E. E. HIGGINS; H. E. GENDELMAN. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

8:00 F9 **134.25** A Novel compound from Antartic lichen restores cognition via suppression of inflammasome and BACE1 expression in Alzheimer's disease mice. U. YUN*; J. JEONG; Y. JANG; Y. CHOI. *Sungkyunkwan Univ.*

POSTER

135. Alzheimer's Disease: Experimental Therapeutics II

Theme C: Disorders of the Nervous System

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

8:00 F10 **135.01** Beta-amyloid tetramers (AβT) for quantitative studies of Aβ oligomer binding and signaling. T. KIM*; M. E. BIRNBAUM; G. S. VIDAL; K. C. GARCIA; C. J. SHATZ. *Stanford Univ., Stanford Univ.*

9:00 F11 **135.02** Accelerated Alzheimer's disease pathology in APPswe/PS1dE9 mice treated with streptozotocin. J. RAMOS RODRÍGUEZ*; L. GALINDO-GONZALEZ; C. INFANTE-GARCIA; E. BERROCOSO; A. M. LECHUGA-SANCHO; M. GARCIA-ALLOZA. *Col. of Medicine. Univ. of Cadiz, Col. of Medicine. Univ. of Cadiz, Sch. of Medicine., Ciber of Mental Hlth., Hosp. Universitario Puerta del Mar.*

10:00 F12 **135.03** Chronic suppression of monoacylglycerol lipase (MAGL) improves behavior and neural properties in aged Ts65Dn mice, a model of Alzheimer's disease in Down Syndrome. L. V. LYSENKO; J. KIM; C. HENRY; R. A. KOHNZ; F. MADAMBA; G. M. SIMON; N. E. KLESCHEVNIKOVA; D. K. NOMURA; R. B. EZEKOWITZ; W. MOBLEY; A. M. KLESCHEVNIKOV*. *Univ. of California San Diego, Abide Therapeutics, Inc, Univ. of California, Berkeley.*

11:00 G1 **135.04** ● Passive immunization with the anti-Aβ oligomer antibody ACU-3B3 improves behavioral deficits in hAPPSL transgenic mice. J. DODART; S. NAY; M. MONBUREAU; F. F. HEFTI*; J. JERECIC; M. SHAMLOO. *Acumen Pharmaceuticals, Inc., Stanford Behavioral and Functional Neurosci. Laboratory, Stanford Univ., Dept. of Neurosurgery, Stanford Univ.*

8:00 G2 **135.05** ● An Abeta oligomer receptor antagonist and antibodies to specific target receptor epitopes displace Abeta oligomers in Alzheimer's patient brain tissue sections. N. J. IZZO*, JR; C. REHAK; K. MOZZONI; C. SILKY; R. YURKO; G. LOOK; G. RISHTON; H. SAFFERSTEIN; T. SPIRES-JONES; S. M. CATALANO. *Cognition Therapeut., Universtity of Edinburgh.*

9:00 G3 **135.06** Mechanistic characterization of S 38093, a novel inverse agonist at histamine H_3 receptors. F. PANAYI*; A. SORS; L. BERT; P. LESTAGE; D. FAVALE; O. NOSJEAN; V. AUDINOT; J. DELBOS; A. CHOLLET; P. CASARA; J. ARRANG; E. STEIDL; B. BUISSON; T. HUHTALA; O. KONTKANEN. *Idr SERVIER, INSERM U894, Neuroservice, Charles River Discovery Res. Services.*

10:00 G4 **135.07** The interaction of Munc 18 (p67) with the p10 domain of p35 protects Cdk5/p35 activity from inhibition by TFP5. N. D. AMIN*; Y. ZHENG; V. SHUKLA; B. B.K.; Y. HU; Z. JI; P. GRANT; H. C. PANT. *NIH, NIH.*

11:00 G5 **135.08** ● Protein disulfide isomerase P5-immunopositive inclusions in patients with Alzheimer's disease. Y. HONJO*; T. HORIBE; A. TORISAWA; H. ITO; A. NAKANISHI; H. MORI; T. KOMIYA; R. TAKAHASHI; K. KAWAKAMI. *Kyoto Univ., Kyoto Univ., Nagaokakyo Hosp., Wakayama Med. Univ., Osaka City Kosaiin Hosp., Osaka City Univ., Nagahama Inst. of Biosci. and Technol.*

8:00 G6 **135.09** Preoperative MMSE predicts risk of delirium after orthopedic surgery in older adults. Y. SHEN*; Z. SHI; Y. WU; E. MARCANTONIO; Z. XIE. *Tenth People's Hosp. of Tongji Univerisity, Beth Israel Deaconess Med. Ctr. and Harvard Med. Sch., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

9:00 G7 **135.10** Anatomical compartmentation of prion pathology in the mouse cerebellum. A. M. RAGAGNIN*; M. PIETRI; A. GUILLEMAIN; A. ALLEAUME-BUTAUX; A. HAEBERLÉ; V. DEMAIS; N. J. GRANT; C. VIDAL; O. KELLERMANN; B. SCHNEIDER; Y. BAILLY. *INCI CNRS UPR-3212, Univ. Paris-Descartes, INSERM UMR-S747, Plateforme Imagerie in vitro, CNRS UPS-3156, Univ. de Strasbourg, Inst. Pasteur.*

10:00 G8 **135.11** ● siRNA mediated knockdown of putative receptor target reduces binding of Abeta oligomers to DIV21 hippocampal neurons. C. REHAK*; N. IZZO; C. SILKY; K. MOZZONI; R. YURKO; H. SAFFERSTEIN; G. RISHTON; G. LOOK; S. CATALANO. *Cognition Therapeut.*

11:00 G9 **135.12** Constitutive expression of the secreted amyloid precursor protein ectodomain fails to rescue the deficiency of structural spine plasticity in APP knockout mice *in vivo*. C. ZOU*; M. DOROSTKAR; U. C. MÜLLER; J. HERMS. *Ctr. For Neurodegenerative Dis. (DZNE), Ludwig-Maximilians-University, Ludwig-Maximilians-University, Inst. for Pharm. and Mol. Biotech.*

8:00 G10 **135.13** Cerebrospinal fluid levels of Tau determine neurophysiological heterogeneity in Alzheimer's disease patients. F. DI LORENZO*; A. MARTORANA; S. BONNÌ; V. GIACOBBE; D. VENIERO; G. KOCH. *Fondazione Santa Lucia.*

9:00 G11 **135.14** Motor and cognitive deficits in the 6 month old 3xTg-AD mouse model of Alzheimer's disease. K. R. STOVER*; M. A. CAMPBELL; C. M. VAN WINSSEN; R. E. BROWN. *Dalhousie Univ.*

10:00 G12 **135.15** Thalidomide regulates cerebral vessel normalization through a specific signal transduction in a mouse model of Alzheimer's disease. H. YAO*; P. HE; R. LI; Y. SHEN. *Roskamp Inst., Roskamp Inst.*

11:00 H1 **135.16** High manganese, a risk for Alzheimer's disease: High manganese induces amyloid- beta related cognitive impairment. D. CHUI*. *Neurosci. Res. Institute,Peking Univ.*

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▲ Indicates a high school or undergraduate student presenter.

8:00 H2 **135.17** ● Widespread brain distribution and robust BACE1 inhibition following intracerebroventricular infusion of anti-BACE1 antibody in non-human primates. K. HILDEBRAND*; D. BUMBACA; K. WILDSMITH; R. FUJI; K. SCEARCE-LEVIE; J. MALONEY; W. MEILANDT; H. SOLANOY; Y. LU; K. PENG; B. WILSON; P. CHAN; A. KOSKY; A. DAUGHERTY; J. COUCH; T. KEENE; K. HAYES; L. JUNGBAUER-NIKOLAS; D. LANE; R. SWITZER; E. ADAMS; R. WATTS; S. PRABHU; L. SHAFER; D. THAKKER; J. ATWAL. *Medtronic, Inc., Genentech, Inc., NeuroScience Associates, Northern Biomed. Res.*

9:00 H3 **135.18** Clinical concordance between *in vivo* cortical atrophy and postmortem histopathology in Primary Progressive Aphasia with Alzheimer pathology: A case report. D. T. OHM*; G. KIM; T. GEFEN; M. PETERSON; A. MARTERSTECK; S. WEINTRAUB; E. ROGALSKI; E. BIGIO; M. M. MESULAM; C. GEULA. *Northwestern Univ. / CNADC.*

10:00 H4 **135.19** Anti-Aß immunotherapy for Alzheimer´s disease worsens neuronal dysfunction in a mouse model of AD *in vivo.* M. A. BUSCHE*; C. GRIENBERGER; H. FÖRSTL; A. KONNERTH. *Inst. of Neuroscience, Tech. Univ. Munich, Dept. of Psychiatry and Psychotherapy.*

11:00 H5 **135.20** ▲ Levels of CSF and plasma p3-Alcα35, a major product of alcadeinα by γ-secretase cleavages, in elder subjects with or without dementia. C. OMORI*; S. HATA; T. SUZUKI. *Lab. of Neuroscience, Graduated Sch. of Pharmace.*

8:00 H6 **135.21** ApoJ/Clusterin mimetic peptide as a potential therapeutic for Alzheimer's disease. D. S. CHERNICK*; D. CAO; M. PARENT; W. ZHANG; D. HOTTMAN; S. CHENG; R. OMTRI; K. KANDIMALLA; L. LI. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

9:00 H7 **135.22** A novel Presenilin 1 mutation causes Alzheimer's disease. F. CAI*; S. ZHANG; W. SONG. *Univ. of British Colu.*

10:00 H8 **135.23** ● Novel curcumin derivative with C-4 substituent inhibits amyloid pathology in APPswe/PS1dE9 mice. D. YANAGISAWA*; H. TAGUCHI; N. IBRAHIM; L. DURANI; S. MORIKAWA; K. HIRAO; N. SHIRAI; T. SOGABE; I. TOOYAMA. *Shiga Univ. of Med. Sci., Northeastern Industrial Res. Ctr. of Shiga Prefecture, Otsuka Pharmaceut. Co., Ltd.*

11:00 H9 **135.24** Mild metabolic deficits in mitochondrial metabolism cause large changes in cell signaling - Relation to autophagy / mitophagy. K. BANERJEE*; D. FRANK; J. YANG; S. CHO; T. T. DENTON; G. E. GIBSON. *Weill-Cornell Med. Col. at Burke Med. Res. Inst., Washington State Univ.*

8:00 H10 **135.25** ● Soluble Aβ-oligomer-selective antibody ACU-3B3 reduces amyloid pathology and improves multiple behavioral domains in a mouse model of Alzheimer's disease. A. KHAN; M. M. MARTINEZ-LOSA; K. HO; J. C. DODART; J. JERECIC; J. J. PALOP*. *Gladstone Inst., Gladstone Inst. and UCSF, Acumen Pharmaceuticals Inc.*

POSTER

136. Alzheimer's Disease: Experimental Therapeutics III

Theme C: Disorders of the Nervous System

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

8:00 H11 **136.01** White matter hyperintensities and neurodegeneration in ADNI. S. VAISHNAVI*; D. WOLK. *Univ. of Pennsylvania.*

9:00 H12 **136.02** Effectiveness of Small Amyloid β Binding Agents and anti-amyloid β immunotherapy on memory deficits and pathology in PS1/APP mice. V. PIVTORAIKO; E. ABRAHAMSON; A. COHEN; W. PALJUG; L. SHAO; M. DEBNATH; W. E. KLUNK; M. D. IKONOMOVIC*. *Univ. of Pittsburgh.*

10:00 I1 **136.03** Soluble prion protein prevents amyloid-β-induced inhibition of long-term potentiation. J. J. SCOTT-MCKEAN*; K. SUREWICZ; A. C. S. COSTA; W. K. SUREWICZ. *Case Western Reserve Univ., Case Western Reserve Univ.*

11:00 I2 **136.04** Characterization of Tg4510 mouse model for Alzheimer's disease by MR Imaging and Spectroscopy. K. LEHTIMÄKI*; T. LAITINEN; X. WANG; F. HESS; S. SMITH; C. SUR; A. NURMI. *Charles River Discovery Res. Services Finland, 2Merck & Co., Inc.*

8:00 I3 **136.05** Amyloid-Aβ peptide in olfactory mucosa and mesenchymal stromal cells of mild cognitive impairment and Alzheimer's disease patients. C. A. AYALA-GROSSO*; R. PIERUZZINI; D. DIAZ-SOLANO; O. WITTIG; J. CARDIER. *Unidad de Terapia Celular, Inst. de Neurorinologia.*

9:00 I4 **136.06** Differences in telomere length in the progression of Alzheimer's disease. K. L. MARTINEZ-GONZALEZ*; P. GARCIA-DELATORRE. *Univ. Nacional Autonoma De Mexico, Inst. Mexicano del Seguro Social.*

10:00 I5 **136.07** ● 201TlDDC-SPECT imaging of alterations in CNS K+-metabolism in neurodegenerative diseases. A. M. OELSCHLEGEL; F. STÖBER; H. LISON; R. RÖNICKE; H. SCHEICH; H. AMTHAUER; K. G. REYMANN; J. GOLDSCHMIDT*. *Leibniz-Institute for Neurobio., Univ. Hosp. Magdeburg, Med. School, Otto-von-Guericke Univ.*

11:00 I6 **136.08** Increased Aromatase expression in hippocampus of subjects with Alzheimer's disease. J. DHAWAN*; E. KRAVITZ; A. BIEGON. *Stony Brook Univ., The Joseph Sagol Neurosci.Ctr., Sheba Med.Ctr., Tel Hashomer, Israel, Stony Brook Univ.*

8:00 I7 **136.09** ● Development of sensitive assays for specific detection of phosphorylated Tau in human tissue. K. PIORKOWSKA; K. ANTONIELLO; A. DAVRANCHE; P. PAGANETTI; M. PIHLGREN; O. ADOLFSSON; V. GAFNER; D. DI CARA; I. HOTZEL; G. AYALON; A. PFEIFER; A. MUHS*. *AC Immune SA, Neurocentro della Svizzera Italiana, c/o SIRM, Genentech.*

9:00 I8 **136.10** Screening and characterization of chemicals regulating ß-secretase expression. J. JEONG*; U. YUN; Y. JANG; Y. CHOI. *Sungkyunkwan University.*

10:00 I9 **136.11** Alteration in neuroactive kynurenines levels and oxidative markers in serum of Alzheimer patients. V. PEREZ DE LA CRUZ*; R. LUGO HUITRON; D. GONZALEZ ESQUIVEL; G. PEREZ DE LA CRUZ; C. RIOS; V. CAMPOS PEÑA. *Inst. Nacional De Neurologia Y Neurocirugia, Facultad De Ciencias, UNAM.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 I10 **136.12** Validation of novel calcium channel stabilizers as a therapeutic strategy for Alzheimer's disease. R. DAHL*; G. STUTZMANN; C. SCHNEIDER; N. KAPECKI; C. BRIGGS; R. HELFRICH; T. MARKETKAR. *Rosalind Franklin Univ., Rosalind Franklin Univ. of Med. and Sci.*

8:00 I11 **136.13** Levodopa treatment in alzheimer mice restores dopaminergic neurotransmission and memory function. P. MORENO-CASTILLA*; M. F. LOPEZ-GUTIERREZ; L. LANDA-NAVARRO; F. BERMÚDEZ-RATTONI. *Universidad Nacional Autonoma De Mexico.*

9:00 I12 **136.14** White matter integrity in adults with Down syndrome with and without dementia is associated with behavioral changes. E. HEAD*; D. POWELL; A. CABAN-HOLT; G. JICHA; W. ROBERTSON; R. DAVIS; B. T. GOLD; E. ABNER; F. A. SCHMITT. *Univ. of Kentucky.*

10:00 J1 **136.15** ● Positron emission tomography (PET) imaging using [18F]GE-180 detects reduced microglia activation after LM11A-31 therapy in a mouse model of Alzheimer's disease. M. L. JAMES*; N. P. BELICHENKO; A. HOEHNE; L. E. ANDREWS; C. J. CONDON; A. J. SHUHENDLER; S. S. GAMBHIR; F. M. LONGO. *Stanford Univ., Stanford Univ.*

11:00 J2 **136.16** ● A small molecule p75NTR ligand prevents amyloid-β induced synaptic loss and neuritic degeneration, and inhibits fyn activation and tau missorting. T. YANG*; A. Y. ZENG; K. C. TRAN; D. A. SIMMONS; S. M. MASSA; F. M. LONGO. *Stanford Univ., San Francisco Veterans Affairs Med. Ctr., Neurol., Univ. of California.*

8:00 J3 **136.17** Regional Fluid-Attenuated Inversion Recovery (FLAIR) at 7 Tesla is associated with Amyloid beta load in hippocampus and brain-stem of cognitively normal elderly subjects. S. J. SCHREINER*; X. LIU; A. GIETL; M. WYSS; S. STEININGER; E. GRUBER; V. TREYER; I. B. MEIER; S. E. LEH; F. BUCK; R. NITSCH; K. PRÜSSMANN; C. HOCK; P. G. UNSCHULD. *Univ. of Zürich, Harvard Med. School, Brigham and Women's Hosp., Swiss Federal Inst. of Technol. (ETH Zürich), Univ. of Zürich, Col. of Physicians and Surgeons, Columbia Univ.*

9:00 J4 **136.18** Seizure susceptibility and hippocampal network hypersynchrony in a triple transgenic mouse model of Alzheimer's disease. S. FARAZ KAZIM*; S. CHUANG; W. ZHAO; K. IQBAL; R. BIANCHI. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., New York State Inst. for Basic Res., New York State Inst. for Basic Res.*

10:00 J5 **136.19** Evaluating the impact of a family history of Alzheimer's disease on neural correlates of context memory at midlife. L. WALLACE*; D. KWON; D. MAILLET; S. PASVANIS; A. S. SWIERKOT; E. ANKUDOWICH; M. N. RAJAH. *Douglas Institute, McGill Univ.*

11:00 J6 **136.20** Decreased O-GlcNAc links with tau pathological phosphorylation in 3xTg-AD mice. J. MAIRESSE*; E. GATTA; T. CASSANO; S. GAETANI; J. MARROCCO; T. LEFÈBVRE; F. NICOLETTI; S. MACCARI. *Univ. of Lille 1/CNRS, LIA (International Associated Laboratory: Univ. of Lille1/CNRS, France; IRCCS Neuromed and Sapienza Univ. of Rome, Italy), Univ. of Foggia, Sapienza Univ. of Rome, IRCCS Ctr. Neurolesi "Bonino Pulejo", IRCCS, Neuromed.*

8:00 J7 **136.21** A mouse model with both amyloid beta and tau pathology for Alzheimer's disease research. D. KIM*; Y. KIM; I. MOOK-JUNG. *Seoul Natl. University, Grad. Sch.*

9:00 J8 **136.22** Functional brain networks in the differential diagnosis of dementia syndromes. A. NAZEM; W. SAKO; P. MATTIS; C. C. TANG; D. EIDELBERG*. *Feinstein Inst. for Med. Rsrch, Feinstein Inst. for Med. Rsrch.*

10:00 J9 **136.23** Are reductions in the mitochondrial enzyme α-ketoglutarate dehydrogenase complex in neurodegenerative disease beneficial or detrimental? H. CHEN; T. DENTON; G. E. GIBSON*. *Weill Cornell Med. College/Burke Med. Res. Inst., Washington State Univ.*

11:00 J10 **136.24** ● Abeta oligomer receptors are upregulated *in vitro* and in Alzheimer's disease patients. S. M. CATALANO*; K. MOZZONI; C. REHAK; R. YURKO; N. IZZO; C. SILKY; G. RISHTON; G. LOOK; H. SAFFERSTEIN; R. MACH; C. ZENG; J. XU. *Cognition Therapeutics, Inc., Univ. of Pennsylvania, Washington Univ.*

8:00 J11 **136.25** Disrupted resting state functional connectivity within and outside of cingulate and its subregions in individuals with MCI or mild AD. S. ASHBURN*; A. DIBATTISTA; J. VANMETER; G. REBECK; J. H. HOWARD; R. TURNER; X. JIANG. *Georgetown Univesity, Georgetown Univesity, The Catholic Univ. of America.*

POSTER

137. Parkinson's Disease: Animal Therapies

Theme C: Disorders of the Nervous System

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

8:00 J12 **137.01** ● Preclinical development of a neural stem cell based therapy for Parkinson's disease. R. A. SEMECHKIN*; R. GONZALEZ; I. GARITAONANDIA; T. ABRAMIHINA; M. POUSTOVOITOV; G. K. WAMBUA; A. NOSKOV; A. CRAIN; C. MCENTIRE; L. LAURENT; E. Y. SNYDER; D. REDMOND. *Intl. Stem Cell Corp, Sanford-Burnham Med. Res. Inst., Yale Univ. Sch. of Med., Univ. of California San Diego.*

9:00 K1 **137.02** Neural stem cell transplantation rescues cognitive and motor dysfunction in Parkinson's disease transgenic mice by elevating BDNF and enhancing dopaminergic, glutamatergic, and neurogenic systems. N. R. GOLDBERG*; J. CAESAR-BENNETT; A. PARK; S. SEDGH; G. FINOGENOV; J. DAVIS; E. MASLIAH; M. M. BLURTON-JONES. *Univ. of California Irvine, Univ. of California, Irvine, Univ. of California Irvine, Univ. of California Irvine, UCSD, Univ. of California, Irvine.*

10:00 K2 **137.03** ▲ Use of induced-pluripotent stem cells as a potential therapy for Parkinson's disease. M. MENOSKI; S. DECKER; G. SHALL; R. WELCHKO; X. LEVEQUE; J. ROSSIGNOL*; G. DUNBAR. *Field Neurosciences Inst. Lab. for Restotative Neurol., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst.*

11:00 K3 **137.04** Chromosphere grafts survive and improve motor function in an animal model of Parkinson's disease. A. BORONAT-GARCÍA*; D. MILLAN-ALDACO; M. PALOMERO-RIVERO; M. GUERRA-CRESPO; R. DRUCKER-COLIN. *Inst. de Fisiologia Celular, Inst. de Fisiologia Celular.*

8:00 K4 **137.05** Mechanism of protection of selective vesicular GABA transporter (Vgat) gene deletion in the motor cortex in an MPTP model of Parkinson's disease. R. HOOD*; C. MOORE; P. M. FULLER; C. K. MESHUL. *Behavioral Neuroscience, Oregon Hlth. & Sci. U, Portland VA Med. Ctr., Harvard Med. Sch. and Beth Israel Deaconess Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 K5 **137.06** A piece of the black box of GDNF impact: Attenuation of nigral tyrosine hydroxylase loss after 6-OHDA lesion with soluble GFRα-1 receptor. M. F. SALVATORE*; C. OWENS; B. S. PRUETT; V. FIELDS. *LSU Hlth. Sci. Cntr.*

10:00 K6 **137.07** Selective inactivation of FosB expressing neurons in the Lateral Habenula decreases L-Dopa induced dyskinesia. M. BASTIDE*; B. DE LA CROMPE; M. BOURDENX; P. FERNAGUT; C. E. GROSS; T. BORAUD; E. BEZARD. *Instute of Neurodegenerative Dis.*

11:00 K7 **137.08** ● Preclinical profiling of mglur4 positive allosteric modulators and efficacy in rodent models of Parkinson's disease motor dysfunction. R. DROLET*; M. COSDEN; S. SUON; S. GRAUER; S. POLSKY-FISHER; M. MARINO; J. RENGER. *Merck, Merck.*

8:00 K8 **137.09** ● Intranasal delivery of DNSP-11 in rodent and non-human primate models of Parkinson's disease. M. J. STENSLIK*; L. F. POTTS; J. W. H. SONNE; F. POMERLEAU; W. A. CASS; A. K. EVANS; E. S. FORMAN; A. LEMONS, III; R. M. WEEKS; D. T. LUNDEEN; P. HUETTL; J. TURCHAN-CHOLEWO; Y. AI; Z. ZANG; R. GRONDIN; D. M. GASH; G. A. GERHARDT; L. H. BRADLEY. *Univ. of Kentucky, Univ. of Kentucky.*

9:00 K9 **137.10** Characterization of a new non-human primate model of Parkinson's disease based on viral vector delivery of alpha-synuclein, update on in-life behavioural and imaging measures. J. B. KOPRICH*; T. H. JOHNSTON; J. SEIBYL; K. MAREK; Y. MA; D. EIDELBERG; C. ZUO; Y. GUAN; S. H. FOX; J. M. BROTCHIE. *Atuka Inc., Mol. Neuroimaging, Feinstein Inst. for Med. Res., Huashan Hospital, Fudan Univ., Univ. Hlth. Network.*

10:00 L1 **137.11** ● Potential of AZD1446, a novel nicotinic agonist, for the treatment of L-DOPA-induced dyskinesia in Parkinson's disease. J. MATHER; D. BURDETTE; G. CEBERS; J. POSENER; R. ALEXANDER; S. LEVENTER; N. YE; M. POOLE; J. DUNLOP; S. H. FOX; P. RAVENSCROFT; T. H. JOHNSTON; M. P. HILL*; J. M. BROTCHIE. *AstraZeneca Neurosci. iMED, Toronto Western Hosp., Atuka Inc.*

11:00 L2 **137.12** L-745,870, a selective D4 receptor antagonist with potential for the treatment of L-DOPA-induced dyskinesia. T. H. JOHNSTON; S. H. FOX; P. A. HOWSON; J. M. BROTCHIE*. *Atuka Inc., Univ. Hlth. Network, Toronto Western Hosp.*

8:00 L3 **137.13** ● Potential of DPI-289, a novel small molecule with dual delta agonist / mu antagonist properties, for the treatment of Parkinson's disease. T. H. JOHNSTON*; R. COREY; E. VERSI; M. P. HILL; P. HOWSON; J. M. BROTCHIE. *Atuka Inc., Eboo Pharmaceuticals Inc.*

9:00 L4 **137.14** Targeting beta-arrestins in the treatment of Parkinson's disease. N. URS*; S. BIDO; T. DAIGLE; J. TING; E. BEZARD; M. CARON. *Duke Univ., Univ. Victor Segalen-Bordeaux, Duke Univ.*

10:00 L5 **137.15** Opioid glycopeptides with mu-antagonism or delta-agonism properties: Analysis in a preclinical model of L-DOPA-induced dyskinesia. T. FALK*; M. J. BARTLETT; L. SZABÒ; O. S. MABROUK; D. P. SKINNER; F. PORRECA; T. W. VANDERAH; R. T. KENNEDY; R. POLT; S. J. SHERMAN. *Univ. Arizona Col. Med., Univ. of Arizona, Univ. of Michigan, Univ. of Arizona, Univ. Arizona Col. Med.*

11:00 L6 **137.16** ▲ Targeting multiple serotonin receptors for the reduction of L-DOPA and dopamine agonist-induced dyskinesia. J. HALLMARK*; N. BHIDE; K. C. RICE; C. BISHOP. *Psychology Dept. Binghamton Univ., Natl. Inst. on Drug Abuse.*

8:00 L7 **137.17** ▲ Effects of a novel D3 receptor agonist on the expression of L-DOPA induced dyskinesia in the hemi-parkinsonian rat. N. PALUMBO*; S. MEADOWS; D. LINDENBACH; M. JOHNSON; A. K. DUTTA; C. R. BISHOP. *Binghamton Univ., Wayne State Univ.*

9:00 L8 **137.18** ● Effects of istradefylline in combination with L-DOPA on parkinsonian and dyskinetic symptoms in the 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) macaque model of Parkinson's disease. W. D. KO; Q. LI; A. R. CROSSMAN; G. PORRAS*; E. BEZARD; E. PIOLI. *Motac Holdings Ltd, Inst. of Neurodegenerative Dis.*

10:00 L9 **137.19** Ras-GRF1 but not Ras-GRF2 striatal manipulation attenuates L-DOPA induced dyskinesia. S. FASANO*; N. SOLARI; S. BIDO; M. INDRIGO; R. BRAMBILLA; M. MORARI. *San Raffaele Scientific Inst., Inst. di Ricerche Farmacologiche "Mario Negri", Univ. de Bordeaux, Neurosci. Ctr. and Natl. Inst. of Neurosci.*

11:00 L10 **137.20** ● Cognitive effects of atomoxetine in the chronic low-dose (CLD) 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-treated macaque model of Parkinson's disease. E. Y. PIOLI*; J. SCHNEIDER; J. YANG; Q. LI; A. R. CROSSMAN; E. BEZARD; W. MARTIN. *MOTAC, Thomas Jefferson Univ., CNRS UMR 5293, Theravance Inc.*

8:00 L11 **137.21** The intrastriatal injection of the carboxi-terminal domain of heavy chain of tetanus toxin reduces the loss of dopaminergic neurons, BDNF and TrkB receptor, but not enhance the motor behavior in hemiparkinsonian rats. A. SÁNCHEZ GONZÁLEZ*; A. PATRICIO; A. CANDALIJA; J. AGUILERA; D. LIMON. *Lab. De Neurofarmacología/Benemerita Univ. Autonoma De Puebla, Inst. de Neurociències, Departament de Bioquimica i de Biologia Molecular, Univ. Autònoma de Barcelona., Ctr. de Investigaciones Biomédicas en Red sobre Enfermedades Neurodegenerativas (CIBERNET)).*

9:00 L12 **137.22** The impact of daily methylene blue administration on performance in a five-choice serial reaction time task in a rat model of Parkinson's disease. E. S. SMITH*; G. A. HARDY; M. E. CLARK; H. J. LEE. *The Univ. of Texas At Austin, The Univ. of Texas at Austin.*

10:00 M1 **137.23** The partial glycine agonist D-cycloserine decreases dyskinesias and extends levodopa on time in Parkinsonian nonhuman primates and Parkinson's disease patients. J. S. SCHNEIDER*; D. W. ANDERSON. *Thomas Jefferson Univ.*

11:00 M2 **137.24** ● NPT088, a novel fusion protein bivalent for a General Amyloid Interaction Motif (GAIM), reduces α-synuclein and increases tyrosine hydroxylase in α-synuclein overexpressing transgenic mice. K. S. GANNON*; J. C. CARROLL; J. M. LEVENSON; V. CULLEN; S. SCHROETER; R. FISHER; M. MANTE; E. ROCKENSTEIN; E. MASLIAH. *NeuroPhage Pharmaceuticals, UCSD.*

8:00 M3 **137.25** ▲ Neuroanatomical evaluation of a BDNF-gene therapy in striatum of hemiparkinsonian rats by the use of Diolistic labeling combined with immunohistochemistry. S. ZAPATA MONDRAGÓN*; J. I. ACOSTA GARCÍA; Y. M. FLORES MARTÍNEZ; D. MARTÍNEZ FONG; C. PEREZ CRUZ. *CINVESTAV.*

9:00 M4 **137.26** The α7 nicotinic receptor agonist ABT-107 decreases L-dopa-induced dyskinesias in parkinsonian monkeys. D. ZHANG*; M. MCGREGOR; M. W. DECKER; M. QUIK. *SRI Intl., AbbVie Inc.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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10:00 M5 **137.27** Serotonin neurons influence the striatum during L-Dopa induced dyskinesias. S. L. ALBERICO*; L. P. SOWERS; Y. KIM; A. D. MILLER; N. S. NARAYANAN; G. B. RICHERSON. *Univ. of Iowa, Univ. of Iowa.*

POSTER

138. Parkinson's Disease: Neuroprotective Mechanisms

Theme C: Disorders of the Nervous System

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

8:00 M6 **138.01** Salmeterol enhances the shift from an M1 to M2-like phenotype in microglia through a b-arrestin-2 dependent pathway. P. FLOOD*; L. QIAN; L. J. PETERSON. *Univ. of Alberta, The Univ. of North Carolina, Theralogics, Inc.*

9:00 M7 **138.02** Novel role for glia in the selective protection of VTA dopaminergic neurons from Parkinson's disease toxins in culture. E. W. KOSTUK*; J. CAI; X. WEI; L. IACOVITTI. *Thomas Jefferson Univ.*

10:00 M8 **138.03** Aged rats display a lack of both nigral neuroprotection and striatal BDNF upregulation following subthalamic nucleus deep brain stimulation. C. E. SORTWELL*; C. J. KEMP; K. STEECE-COLLIER; D. L. FISCHER; K. L. PAUMIER; A. COLE-STRAUSS; C. LE; J. W. LIPTON; T. J. COLLIER. *Michigan State Univ.*

11:00 M9 **138.04** TrkB signaling contributes to functional efficacy and neuroprotection provided by subthalamic nucleus deep brain stimulation in the rat 6-hydroxydopamine model. D. FISCHER*; C. J. KEMP; A. COLE-STRAUSS; N. K. POLINSKI; K. L. PAUMIER; J. W. LIPTON; K. STEECE-COLLIER; T. J. COLLIER; C. E. SORTWELL. *Translational Sci. & Mol. Medicine, Michigan State Univ., Michigan State Univ.*

8:00 M10 **138.05** Mechanisms of the neuroprotective effects of VEGF-B against a mitochondrial toxin in a culture model of Parkinson's disease. M. J. BARTLETT*; B. CABALLERO; D. W. MOUNT; S. J. SHERMAN; T. FALK. *The Univ. of Arizona Col. of Med., The Univ. of Arizona Col. of Med.*

9:00 M11 **138.06** Protection of the nigrostriatal dopaminergic projection by naringin treatment in a neurotoxin model of Parkinson's disease. E. LEEM*; H. KIM; U. JUNG; S. KIM. *Kyungpook Natl. Univ., Kyungpook Natl. Univ., Kyungpook Natl. Univ., Kyungpook Natl. Univ., Brain Sci. and Engin. Institute, Kyungpook Natl. Univ.*

10:00 M12 **138.07** Lack of neuroprotective properties of glucagon-like peptide-1 (GLP-1) receptor stimulation in rat 6-OHDA lesion models of Parkinson's disease. K. FABRICIUS; P. BARKHOLT; J. D. MIKKELSEN; J. JELSING*; N. VRANG; C. PYKE; L. B. KNUDSEN; H. H. HANSEN. *Gubra, Rigshospitalet, Novo Nordisk.*

11:00 N1 **138.08** Ghrelin mediates the neuroprotective effects of Calorie Restriction in Parkinson's disease. J. BAYLISS; B. J. OLDFIELD*; Z. B. ANDREWS. *Monash Univ., Monash Univ.*

8:00 N2 **138.09** ● Rasagiline suppresses calcium release from mitochondria and prevents apoptosis induced by opening mitochondrial permeability transition pore using a novel assay method of cytoplasmic calcium. M. NAOI*; Y. WU; K. KAZUMURA; T. OSAWA; W. MARUYAMA. *Aichi Gakuin Univ., Aichi Gakuin Univ., Hamamatsu Photonics, Aichi Gakuin Univ., Nat'L Ctr. Geriatric. Gerontol.*

9:00 N3 **138.10** Graphene scaffolds facilitate *in vitro* cell viability and proliferation of dopaminergic SN4741 cells. N. RODRIGUEZ-LOSADA; R. WENDELBO; M. GARCIA-FERNANDEZ; J. PAVIA; E. MARTIN-MONTANEZ; J. P. LARA; E. ARENAS; J. A. AGUIRRE*, SR. *Sch. of Med., Abalonyx AS, Sch. of Med., Karolinska Institutet, Sch. of Med.*

10:00 N4 **138.11** Protective effects of PACAP against inflammatory-mediated toxicity in SH-SY5Y cells: Implications for Parkinson's disease. D. BROWN; A. TAMAS; D. REGLODI; Y. TIZABI*. *Howard Univ. Col. Med., Univ. of Pecs.*

11:00 N5 **138.12** Cav1.3-deficiency is not neuroprotective in a mouse 6-hydroxydopamine model of Parkinson's disease. G. BOCK; N. STEFANOVA; E. DRAGICEVIC; C. POETSCHKE; M. KHARITONOVA; A. LIEB; J. DUDA; S. B. SARTORI; F. PITTERL; H. OBERACHER; T. P. SNUTCH; G. K. WENNING; B. LISS; J. STRIESSNIG*. *Univ. of Innsbruck, Innsbruck Med. Univ., Univ. of Ulm, Innsbruck Med. Univ., Univ. of British Columbia.*

8:00 N6 **138.13** Regulation of LRRK2 by 14-3-3θ in Parkinson's disease. N. LAVALLEY*; T. A. YACOUBIAN. *Univ. of Alabama At Birmingham.*

9:00 N7 **138.14** Modulation of neuroinflammatory pathogenesis in an animal model of Parkinson's disease. S. BECCHI*; A. BUSON; W. JAROLIMEK; B. W. BALLEINE. *Brain and Mind Res. Inst., Pharmaxis Ltd.*

10:00 N8 **138.15** TFP5, a peptide derived from p35, a cdk5 activator, attenuates 1-methyl-4-phenylpyridinium toxicity in primary cultures of mesencephalic dopaminergic neurons. B. BALACHANDRAN KRISHNAMMA*; N. AMIN; V. SHUKLA; P. GRANT; H. PANT. *NIH.*

11:00 N9 **138.16** Exercise protects age-related dopaminergic neuron loss in the substantia nigra. S. WU*; Y. KUO. *The Dept. of Cell Biol. and Anat., Basic Med. Sci. of Natl. Cheng Kung Univ.*

8:00 N10 **138.17** Study the effects of microglial activation on dopaminergic neuron loss in the substantia nigra and ventral tegmental area. Y. CHIANG*; Y. KUO. *The Inst. of Basic Med. Sci.*

9:00 N11 **138.18** ● Increased chemical stability, brain bio-distribution and decreased immunogenicity of an engineered variant of GDNF. M. J. ONEILL*; L. M. O'BRYAN; D. LEUNG; M. GHANEM; J. WILSON; J. HANSON; S. SOSSICK; J. COOPER; L. HUANG; K. M. MERCHANT; J. LU; R. C. SMITH. *Eli Lilly & Co. Ltd, Eli Lilly & Co., Eli Lilly & Co., Eli Lilly & Co., Eli Lilly & Co., Eli Lilly & Co. Ltd., Eli Lilly & Co.*

10:00 N12 **138.19** ● Reduction of heparin binding of GDNF improves brain bio-distribution while maintaining *in vitro* and *in vivo* activity. R. C. SMITH; L. M. O'BRYAN; P. MITCHELL; D. LEUNG; M. GHANEM; J. WILSON; J. HANSON; S. SOSSICK; J. COOPER; K. MERCHANT*; J. LU; M. J. O'NEILL. *Eli Lilly & Co.*

11:00 O1 **138.20** The effects of treadmill exercise in the motor cortex of parkinsonism rats. C. C. REAL*; R. S. PIRES; L. R. G. BRITTO. *ICB - Univ. of São Paulo (USP), City Univ. of São Paulo - UNICID.*

8:00 O2 **138.21** Impact of muscle fatigue on stretch reflex and related mechanical changes in Parkinson's disease. C. KALRA*; A. MCEWAN; J. BURNE; J. HUANG. *Univ. of Sydney.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 O3 **138.22** ▲ Expression of the small heat shock protein HSPB5 in the striatum of rats with experimental Parkinson's disease. S. E. KARLSSON; Å. FEX-SVENNINGSEN; M. E. ANDERSSON*. *Neurotoxicology, Drug Safety and Tox., Dept. Pharm. Biosci, Uppsala Univ., Univ. of Southern Denmark.*

10:00 O4 **138.23** Effects of N-acetyl cysteine in dopaminergic cells in an *in vitro* model of Parkinson's disease. J. D. JAUMOTTE*; M. J. ZIGMOND. *Univ. of Pittsburgh.*

11:00 O5 **138.24** Neuroprotective effect of Metformin in MPTP induced Parkinsonism in mice. S. SATHAYE*; S. PATIL. *Inst. of Chem. Technol., Inst. of Chem. Technol.*

8:00 O6 **138.25** Tricyclic antidepressants reduce alpha-synuclein accumulation in two distinct animal models of Parkinsonism. K. L. PAUMIER*; C. JUSTMAN; K. LUK; V. LEE; J. TROJANOSWKI; C. SORTWELL; S. CELANO; T. RAMNARINE; P. LANSBURY; T. COLLIER. *Michigan State Universtiy, Harvard Med. Sch., Univ. of Pennsylvania Perelman Sch. of Med.*

POSTER

139. Ataxias: Mechanisms and Models

Theme C: Disorders of the Nervous System

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

8:00 O7 **139.01** Scanning the genome for common modifier genes of Spinocerebellar ataxias. J. DIAZ*; T. GALLEGO; A. PEREZ; K. ZHU; M. DE HARO; I. AL-RAMAHI; J. BOTAS. *Baylor Col. of Med., The Jan and Dan Duncan Neurolog. Res. Inst., MD Anderson Cancer Ctr.*

9:00 O8 **139.02** Waddles mice experience altered calcium signaling within cerebellar granule cells which contributes to a pronounced ataxic phenotype. M. G. LAMONT*; J. T. WEBER. *Mem. Univ. of Newfoundland.*

10:00 O9 **139.03** Multimodal and exclusive pathology between ALS and FTLD caused by TDP-43 mutations. C. HARA-MIYAUCHI*; Y. DATÉ; M. HASEGAWA; R. KOBAYASHI; J. TAKAHASHI-FUJIGASAKI; N. KOGO; C. SANO; Y. KOBAYASHI; N. SUZUKI; S. ITOHARA; H. OKANO; H. J. OKANO. *Jikei Univ. Sch. of Med., Keio Univ. Sch. of Med., Keio Univ. Sch. of Med., The Jikei Univ., RIKEN Brain Sci. Inst.*

11:00 O10 **139.04** Impaired axonal transport in Purkinje cells of HuC knockout mice. H. J. OKANO*. *Jikei Univ. Sch. of Med.*

8:00 O11 **139.05** Parallel fiber to Purkinje cell synaptic impairment in a mouse model of spinocerebellar ataxia type 27. F. TEMPIA*; G. NEGRO; M. A. D. ALSHAMMARI; T. K. R. ALSHAMMARI; F. LAEZZA. *Univ. of Texas Med. Br., Neurosci. Inst. Cavalieri Ottolenghi, Univ. of Torino.*

9:00 O12 **139.06** ▲ Mitochondrial OXPHOS dysfunction and treatment in spinocerebellar Ataxia Type 1. A. FERRO; E. CARBONE; S. LAGALWAR*. *Skidmore Col.*

10:00 P1 **139.07** Developmental abnormalities in the cerebellum of spinocerebellar ataxia type 6 mice. S. JAYABAL*; A. J. WATT. *McGill Univ., McGill Univ.*

11:00 P2 **139.08** ▲ Nuclear to cytoplasmic transfer of ataxin-1 aggregates. N. TOKER*; M. MOOG; S. LAGALWAR. *Skidmore Col.*

8:00 P3 **139.09** ▲ The genetic ablation of homeodomain interacting protein kinase 2, hipk2, downregulates gabaergic purkinje neuron expression in the cerebellum and impairs short-term memory. G. PIGNATARO*; S. ANZILOTTI; M. TORNINCASA; G. PIERANTONI; F. ALFREDO; L. ANNUNZIATO. *Fondazione IRCCS SDN, Federico Ii University Of Naples.*

9:00 P4 **139.10** ▲ Application of the rotarod to monitor progressive Purkinje cell death exhibited in an animal model of cerebellar ataxia. K. L. JEW*; B. H. RODRIGUEZ; R. W. COHEN. *California State University, Northridge.*

10:00 P5 **139.11** Interactive brainwide atlas of tetracycline responsive trans-activator promoter mouse lines. T. B. LEERGAARD*; S. LILLEHAUG; M. J. YETMAN; J. L. JANKOWSKY; J. G. BJAALIE. *Inst. of Basic Med. Sciences, Univ. of Oslo, Neurosci. Baylor Col. of Med.*

11:00 P6 **139.12** Expression of the α1ACT transcription factor by the CACNA1A gene requires a functioning IRES to mediate neural development and cellular toxicity. X. DU*; K. ROBINSON; C. WEI; C. GOMEZ. *Univ. Chicago, University Of Chicago.*

8:00 P7 **139.13** Epigenetic mechanisms in neuronal cultures derived from ataxia-telangiectasia induced pluripotent stem cells. R. P. HART*; A. J. TORO-RAMOS; K. GARG; M. LAZAROPOULOS; H. M. LEDERMAN; J. C. MOORE. *Rutgers Univ., Rutgers Univ., Johns Hopkins Hosp.*

9:00 P8 **139.14** Visualization of the axonal transport dysfunction in HuC KO mouse. Y. OGAWA*; M. HASEGAWA; C. HARA-MIYAUCHI; H. J. OKANO. *Jikei Univ. Sch. of Med.*

10:00 P9 **139.15** Induction of nuclear ataxin-3 inclusions in Machado-Joseph disease-specific neurons. J. JUNGVERDORBEN*; P. BREUER; P. KOCH; U. WÜLLNER; M. PEITZ; O. BRÜSTLE. *Univ. of Bonn, Reconstructive Neurobio., Univ. of Bonn.*

11:00 P10 **139.16** Neurobehavioral and molecular analyses of sensory neurons in two mouse models of Friedriech's ataxia. M. Z. MCMACKIN*; G. CORTOPASSI. *Univ. of California, Davis, UC Davis.*

8:00 P11 **139.17** Calpain-1 knockout causes degeneration of cerebellar granule cells during development and ataxia. Y. WANG*; D. LOPEZ; V. PINTO; Y. LIU; J. SEINFELD; N. BAUDRY; X. BI; M. BAUDRY. *Western Univ. of Hlth. Sci.*

9:00 P12 **139.18** Towards factors influencing the intracellular localization of ataxin-3. T. SCHMIDT*; Z. WANG; A. SOWA; M. I. MARTINS; A. TEIXEIRA DE CASTRO; P. MACIEL; N. BETTAGA; P. ANTONY; O. RIESS. *Med. Genetics, Univ. Tuebingen, Ctr. for Rare Dis. (ZSE Tübingen), Med. Genetics, Univ. of Tuebingen, Life and Hlth. Sci. Res. Institute, Univ. of Minho.*

10:00 Q1 **139.19** Neuroprotective advantages of aerobic exercise are diminished by a high-fat diet in the spastic Han-Wistar rat, a model of Ataxia. S. YOUNESI*; T. L. UHLENDORF; K. L. JEW; B. D. GRIESS; R. W. COHEN. *California State University, Northridge.*

11:00 Q2 **139.20** Development of biomarkers in peripheral blood cells of ALS model mice. M. HASEGAWA*; C. HARA-MIYAUCHI; H. J. OKANO. *Jikei Univ. Sch. of Med.*

8:00 Q3 **139.21** Neuroinflammatory Parp-1 is more inducible in cell and animal models of Friedreich's ataxia, and implications for therapy. Y. SHEN*; Y. SHAN; G. A. CORTOPASSI. *Univ. of California.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 Q4 **139.22** Classification of Spinocerebellar ataxia type 7 using Whole-brain functional connectivity. C. R. HERNANDEZ-CASTILLO; J. FERNANDEZ-RUIZ*; V. GALVEZ; C. MORGADO-VALLE. *Univ. Nacional Autonoma Mexico, Univ. Veracruzana, Univ. Veracruzana.*

10:00 Q5 **139.23** P/Q-type Ca^{2+} channelopathy results in low frequency oscillations in the cerebral cortex of the tottering mouse. R. CARTER*; S. W. CRAMER; G. CHEN; L. S. POPA; T. J. EBNER. *Univ. of Minnesota.*

11:00 Q6 **139.24** ▲ GABA receptor activation diminishes excitotoxic damage in the spastic Han-Wistar rat, an animal model of ataxia. C. OPLAND*; A. CRUZ; R. W. COHEN. *California State University, Northridge.*

8:00 Q7 **139.25** Ataxin-1 amyloid oligomer complexes correlate with disease progression and promote pathology propagation in spinocerebellar ataxia type 1. C. A. LASAGNA-REEVES*; M. W. C. ROUSSEAUX; M. J. GUERRERO-MUNOZ; P. JAFAR-NEJAD; R. RICHMAN; N. LU; U. SENGUPTA; A. LITVINCHUK; H. T. ORR; R. KAYED; H. Y. ZOGHBI. *Baylor Col. of Med., Jan and Dan Duncan Neurolog. Res. Inst. at Texas Children's Hosp., UTMB, Univ. of Minnesota, Howard Hughes Med. Inst.*

9:00 Q8 **139.26** Elevation of mitochondrial oxidative stress in sca1. D. I. DRYANOVSKI*; P. T. SCHUMACKER; P. OPAL. *Northwestern Univ., Northwestern Univ.*

10:00 Q9 **139.27** Skeletal muscle atrophy in SCA17 knock-in mice. S. YANG*; S. HUANG; X. LI; S. LI. *Emory Univ.*

POSTER

140. Autism: Physiology and Systems I

Theme C: Disorders of the Nervous System

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

8:00 R1 **140.01** Autonomic and behavioral responses in active sensory processing in children with autism spectrum disorder. C. Y. Y. LAI; C. C. CHAN*. *The Hong Kong Polytechnic Univ., The Hong Kong Polytechnic Univ.*

9:00 R2 **140.02** The combined effects of neurofeedback and biofeedback training for treating children with autism spectrum disorder. R. SHARMA*; M. GOODMAN; J. PINEDA; L. FRIEDRICH; A. TONNESEN; N. CASTRO; A. COURELLIS; H. COURELLIS. *Univ. of California San Diego, California Sch. of Professional Psychology.*

10:00 R3 **140.03** Robust disruptions in EEG cortical oscillations and large-scale functional networks in autism. S. D. MATLIS*; C. J. CHU; M. A. KRAMER. *Boston University, Grad. Program In Neurosci., Massachusetts Gen. Hosp., Harvard Med. Sch., Boston Univ.*

11:00 R4 **140.04** Behavior bests brain as an Autism Spectrum Disorder biomarker. M. PLITT*; G. L. WALLACE; S. J. GOTTS; S. MILLEVILLE; B. ORIONZI; I. W. EISENBERG; E. BAL; L. KENWORTHY; A. MARTIN; K. A. BARNES. *Lab. of Brain and Cognition, Natl. Instit, Children's Natl. Med. Ctr.*

8:00 R5 **140.05** Detecting cortical excitatory-inhibitory circuit imbalance by visual-evoked potentials. H. H. LEE*; Y. KOBAYASHI; R. HATTORI; V. VOGEL; C. A. NELSON; M. FAGIOLINI; T. K. HENSCH. *Boston Children's Hosp., Boston Children's Hosp., Boston Children's Hosp.*

9:00 R6 **140.06** Correlation between regional brain volume and motor dysfunction in children with autism spectrum disorder: A voxel-based morphometry study. R. HANAIE*; I. MOHRI; K. KAGITANI-SHIMONO; M. TACHIBANA; I. HIRATA; J. MATSUZAKI; M. TANIIKE. *United Grad. Sch. of Child Development, Osaka Univ., Dept. of Pediatrics, Osaka Univ. Grad. Sch. of Med.*

10:00 R7 **140.07** Family nurture intervention significantly lowers MCHAT scores at 18 months: Possible EEG screen for autism. M. G. WELCH*; M. M. MYERS; R. J. LUDWIG; R. I. STARK; P. G. GRIEVE. *Columbia Univ. Col. of Physicians & Surgeons, Columbia Univ. Col. of Physicians & Surgeons, Columbia Univ. Col. of Physicians & Surgeons, Columbia Univ. Col. of Physicians & Surgeons, Columbia Univ.*

11:00 R8 **140.08** Atypical effects of age on cortical thickness and surface area in children and adolescents with Autism Spectrum Disorder. R. A. CARPER*; S. SOLDERS; A. EILL; R. MÜLLER. *San Diego State Univ.*

8:00 R9 **140.09** Sex differences in Autism: An fMRI investigation on the functional circuitry of the posterior superior temporal sulcus. K. ALAERTS*; N. WENDEROTH. *KU Leuven, ETH Zurich.*

9:00 R10 **140.10** Oxytocin's neurochemical effects in the medial prefrontal cortex underlie recovery of task-specific brain activity in autism spectrum disorder: A randomized controlled trial. Y. AOKI*; T. WATANABE; Y. TAKANO; N. IWASHIRO; T. NATSUBORI; H. TAKAO; Y. KAWAKUBO; K. KASAI; H. YAMASUE. *Dept. of Neuropsychiatry, The Univ. of Tokyo.*

10:00 R11 **140.11** Increased resting-state functional connectivity with reward circuitry in high-functioning adolescents with autism spectrum disorder. J. MANNING*; E. REDCAY; J. D. E. GABRIELI; S. WHITFIELD-GABRIELI. *MIT, Univ. of Maryland, Col. Park.*

11:00 R12 **140.12** Network coherence and autism spectrum disorder: The effects of beta-adrenergic antagonists. J. P. HEGARTY II*; B. J. FERGUSON; B. KILLE; S. E. CHRIST; D. Q. BEVERSDORF. *Univ. of Missouri, Univ. of Missouri-Columbia.*

8:00 S1 **140.13** Altered resting state functional network topology in autism, phenylketonuria, and traumatic brain injury. R. M. ZAMZOW*; J. D. JOHNSON; J. P. HEGARTY II; G. YAO; D. Q. BEVERSDORF; S. E. CHRIST. *Univ. of Missouri-Columbia.*

9:00 S2 **140.14** Neural mechanisms of behavioral response to virtual reality social cognition training in young adults with high-functioning autism. D. YANG*; B. VANDER WYK; J. MCPARTLAND; T. ALLEN; S. CHAPMAN; K. PELPHREY. *Yale Univ., Univ. of Texas at Dallas.*

10:00 S3 **140.15** Altered long and short-range effective functional connectivity in autism spectrum disorder. I. M.REZAZADEH*; S. K. LOO; M. C. GRABB; B. H. KING; C. J. MCDOUGLE; L. SCAHILL; G. FRISHKOFF; T. KENET; M. MODY; S. J. WEBB; J. T. MCCRACKEN. *UCLA, UCLA David Geffen Sch. of Med. Semel Inst. for Neurosci. and Human Behavior, Los Angeles, CA, United State, UCLA David Geffen Sch. of Med. Semel Inst. for Neurosci. and Human Behavior, Natl. Inst. of Mental Health, Natl. Inst. of Hlth., Seattle Children's Hosp., Massachusetts Gen. Hospital, Harvard Med. School,, Emory Univ., Georgia State Univ.*

11:00 S4 **140.16** Longitudinal changes in cortical thickness in young children with autism. E. SMITH; A. RAZNAHAN; A. THURM*; D. GREENSTEIN; S. SWEDO; J. GIEDD. *Natl. Inst. of Mental Hlth.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 S5 **140.17** ● Complex local connectivity patterns in large low-motion autism sample: A resting state fMRI study of regional homogeneity. S. NAIR*; C. P. CHEN; O. MAXIMO; C. L. KEOWN; R. A. MÜLLER. *San Diego State Univ., Univ. of Alabama, Burmingham, UCSD.*

9:00 S6 **140.18** Mapping of transcriptome dysfunction in the young autistic cortex. H. J. CLEMONS; T. PRAMPARO; G. W. YEO; E. COURCHESNE*. *Univ. of California San Diego, Univ. California San Diego.*

10:00 S7 **140.19** Disruption of grey matter covariance organization in ASD: Decreased centrality of brain regions implicated in social communication and sensorimotor processing in the context of the large-scale brain network. J. BALARDIN*; M. AIMS CONSORTIUM; D. MURPHY; C. ECKER; J. R. SATO. *Federal Univ. of ABC, Inst. of Psychiatry, King's Col.*

11:00 S8 **140.20** Trajectory of frequency stability in typical development. J. FROHLICH*; A. IRIMIA; K. MCEVOY; S. S. JESTE. *UCLA, USC.*

8:00 S9 **140.21** Peripheral micro-movements statistics leads to new biomarkers of autism severity and parental similarity. D. WU*; E. TORRES; J. V. JOSÉ. *Indiana Univ., Rutgers Univ., Indiana Univ.*

9:00 S10 **140.22** Using the plasticity of peripheral micro-movements to characterize and treat subtypes of autism-spectrum disorders. E. B. TORRES*. *Rutgers Univ.*

POSTER

141. Autism: Physiology and Systems II

Theme C: Disorders of the Nervous System

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

8:00 S11 **141.01** Decreased relative cortical GABA & gamma-band activity in ASD, though the biological coupling is conserved. R. G. PORT*; W. GAETZ; J. EDGAR; L. BLOY; G. C. CARLSON; T. P. L. ROBERTS. *Univ. Of Pennsylvania, The Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

9:00 S12 **141.02** PLS regression using resting state power and coherence predicts behavioral measures in ASD. C. HORTON*; R. SRINIVASAN; P. NUNEZ; M. WESTERFIELD; M. ZINNI; B. KEEHN; R. MÜLLER; J. TOWNSEND. *Univ. of California, Irvine, Cognitive Dissonance, LLC, UCSD, UCSD, Boston Children's Hosp., San Diego State Univ.*

10:00 T1 **141.03** Unreliable odorant-evoked response in the olfactory bulb of CNTNAP2 autistic mice. J. A. WEN*; N. URBAN. *Carnegie Mellon Uni, Ctr. for the Neural Basis of Cognition.*

11:00 T2 **141.04** Hippocampal circuit deficits in two mouse models of intellectual disability. S. KEE*; H. Y. ZOGHBI; D. JI. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

8:00 T3 **141.05** ● Sleep/wake regulation and cortical EEG are disturbed in the neuroligin-3 rat model of autism. A. M. THOMAS*; M. D. SCHWARTZ; M. D. SAXE; T. S. KILDUFF. *SRI Intl., F. Hoffmann-La Roche Ltd.*

9:00 T4 **141.06** Autism-associated neuroligin-3 mutations impair striatal circuits underlying repetitive behaviors. P. E. ROTHWELL*; M. V. FUCCILLO; S. MAXEINER; S. HAYTON; O. GOKCE; B. LIM; S. FOWLER; R. C. MALENKA; T. C. SUDHOF. *Stanford Univ., Stanford Univ., UC - San Diego, Univ. of Kansas.*

10:00 T5 **141.07** Mapping developing subplate microcircuits in a mouse model of autism. D. NAGODE*; X. MENG; P. O. KANOLD. *Univ. of Maryland.*

11:00 T6 **141.08** Altered serotonin neuron function in a mouse model of autism. A. SILBERSTEIN*; Y. GUO; K. COMMONS. *Boston Children's Hosp., Second Affiliated Hospital, Harbin Med. Univ., Boston Children's Hospital, Harvard Med.*

8:00 T7 **141.09** Impaired connection between medial and lateral nuclei of the amygdala is associated with abnormal socio-emotional behavior in rats. R. C. TWINING*; J. A. ROSENKRANZ. *Marquette Univ., Rosalind Franklin Univ. of Med. and Sci.*

9:00 T8 **141.10** ● Imaging dose-dependent changes in brain activity in awake rats following intraperitoneal oxytocin. C. F. FERRIS*; J. YEE; W. KENKEL; P. KULKARNI. *Northeastern University, Ctr. for Translational NeuroImaging.*

10:00 T9 **141.11** ▲ Sex differences in microglial expression of adult rodents following perinatal exposure to antidepressants. A. GARGIULO*; J. M. SCHILLING; R. D. DARLING; M. A. LEA; K. L. SIMPSON; I. A. PAUL; R. C. S. LIN. *Millsaps Col., Univ. of Mississippi Med. Ctr., Millsaps Col., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

11:00 T10 **141.12** ALDH1A and FOXN1 regulation via retinoic acid receptor Beta in an ASD patient. M. LATTIG*; N. HAIDER; A. OLIVARES; O. MORENO. *Univ. De Los Andes, Harvard Med. Sch.*

POSTER

142. Developmental Disorders I

Theme C: Disorders of the Nervous System

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

8:00 T11 **142.01** Structural brain alterations in children with abnormalities of the Williams syndrome genetic region (7q11.23) and normal IQs. R. PRABHAKARAN; J. S. KIPPENHAN*; M. SOTTILE; C. MERVIS; K. ROE; D. EISENBERG; M. GREGORY; L. YANKOWITZ; T. NASH; C. INSEL; T. NGUYEN; J. MASDEU; P. KOHN; J. CZARAPATA; K. F. BERMAN. *NIH, NIH, Univ. of Louisville.*

9:00 T12 **142.02** Brain and behavior in 48, XXYY syndrome: A neurodevelopmental disorder resulting from sex chromosome aneuploidy. A. P. HANLEY; F. M. LALONDE*; J. D. BLUMENTHAL; N. R. LEE; E. H. BAKER; L. S. CLASEN; J. N. GIEDD. *NIMH, NIH.*

10:00 U1 **142.03** PP1 and PP2a inhibition depresses the magnitude of CaMKII activation, but, surprisingly, does not slow its initial deactivation kinetics: Implications for Angelman syndrome. S. REGMI; N. OTMAKHOV; J. E. LISMAN*. *Brandeis Univ.*

11:00 U2 **142.04** Minocycline recovers the synaptic plasticity defect in the UBE3A-deficient mouse and improves adaptive behaviors in children with Angelman syndrome. J. C. GRIECO*; S. L. BLANKENSHIP; M. GIERON-KORTHALS; M. R. SCHOENBERG; A. G. SMITH; R. M. PHILPOT; H. S. HEUSSLER; E. J. WEEBER. *Univ. of South Florida Morsani Col. of Med., Univ. of South Florida Morsani Col. of Med., Univ. of South Florida Morsani Col. of Med., USF Health's Byrd Alzheimer's Res. Inst., Mater Res. Institute, Univ. of Queensland.*

● Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 U3 **142.05** Characterization and implications of X-chromosome inactivation-linked mosaic neuropathology in heterozygous Slc9a6 female knockout mice. J. LEDDY; J. SIKORA; M. GULINELLO; S. U. WALKLEY*. *Albert Einstein Col. Med., Albert Einstein Col. Med., Albert Einstein Col. Med.*

9:00 U4 **142.06** Stimulus-driven circuit dysfunction in visual cortex of a mouse model of Angelman syndrome. L. B. TOWNSEND*; K. A. JONES; I. T. SMITH; B. D. PHILPOT; S. L. SMITH. *Univ. of North Carolina At Chapel Hill.*

10:00 U5 **142.07** Whole exome sequencing identifies rare mutations in children with undiagnosed neurological disorders. K. RAMSEY*; M. DE BOTH; J. J. CORNEVEAUX; A. KURDOGLU; S. RANGASAMY; R. RICHHOLT; I. SCHRAUWEN; A. L. SINIARD; S. SWAMINATHAN; S. SZELINGER; D. W. CRAIG; M. J. HUENTELMAN; V. NARAYANAN. *Translational Genomics Res. Inst., Translational Genomics Res. Inst., Univ. of Antwerp.*

11:00 U6 **142.08** A ketone ester supplement improves specific phenotypes of the Angelman syndrome mouse model. S. L. BLANKENSHIP*; J. C. GRIECO; D. P. D'AGOSTINO; E. J. WEEBER. *Univ. of South Florida Morsani Col. of Med., USF Health's Byrd Alzheimer's Res. Inst.*

8:00 U7 **142.09** Abnormal mTOR activation in cerebellum contributes to motor dysfunction in Angelman syndrome mice. J. SUN*; Y. LIU; S. MORENO; M. BAUDRY; X. BI. *Western Univ. of Hlth. Sci.*

9:00 U8 **142.10** Hippocampal glutamatergic dysfunction underlies learning and memory deficits in the cereblon knockout mouse model of intellectual disability. R. C. RICE; M. E. BYRNE; A. K. FAKIRA; J. A. MORON-CONCEPCION; J. J. HIGGINS; A. M. RAJADHYAKSHA*. *Weill Cornell Med. College, Cornell Univ., Col. of Physicians and Surgeons, Columbia Univ., Weill Med. Coll, Cornell Univ.*

10:00 U9 **142.11** Contribution of LOAD risk genes to synapse pathology. B. SCHÜRMANN; C. ASHFORD; K. J. KOPEIKINA; M. MARTINA*; P. PENZES. *Northwestern Univ., Northwestern Univ. Med. Sch.*

11:00 U10 **142.12** Neuronal phenotypes of 16p11.2-like copy number variations. K. D. BLIZINSKY; B. DIAZ CASTRO; M. MARTIN DE SAAVEDRA; B. SCHURMANN; J. M. FAWCETT-PATEL; T. A. RUSSELL; R. GAO; J. DUAN; P. V. GEJMAN; L. WANG*; P. PENZES. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., UCLA, Univ. of Chicago.*

8:00 U11 **142.13** The psychiatric risk factor Ank3/ankyrin-G regulates glutamatergic synaptic structure, function and plasticity. K. R. SMITH*; K. J. KOPEIKINA; J. M. FAWCETT-PATEL; K. LEADERBRAND; R. GAO; J. RADULOVIC; G. T. SWANSON; P. PENZES. *Northwestern Univ.*

9:00 U12 **142.14** Synaptic processing of the mental disorder susceptibility molecule Cntnap2. D. MARTIN DE SAAVEDRA*; O. VAREA; K. J. KOPEIKINA; R. GAO; P. PENZES. *Northwestern Univ.*

10:00 U13 **142.15** A sequence variant in human KALRN impairs protein function and coincides with reduced cortical thickness. T. A. RUSSELL; K. D. BLIZINSKY; D. J. COBIA; M. E. CAHILL; Z. XIE; R. A. SWEET; J. DUAN; P. V. GEJMAN; L. WANG; J. G. CSERNANSKY; P. PENZES*. *Nothwestern Univ. Feinberg Sch. Med., Nothwestern Univ. Feinberg Sch. Med., Mt. Sinai Icahn Sch. of Med., U of Pittsburgh Sch. of Med., Univ. of Chicago.*

11:00 U14 **142.16** Developmental abnormalities in synapsin ii deficient hippocampal neurons may be responsible for enhanced synaptic transmission and overexcitability. H. Y. MATOS*; R. ANDRADE; M. BYKHOVSKAIA. *Univ. Central Del Caribe, Wayne State Univ.*

8:00 U15 **142.17** Characterization of NMDARs containing mutations implicated in human diseases. S. LIU*; A. SANZ-CLEMENTE; S. TRAYNELIS; H. YUAN; K. W. ROCHE. *NIH, Emory Univ. Sch. of Med.*

9:00 U16 **142.18** Molecular changes to chronic ethanol in mice expressing ethanol-resistant NMDA receptors. C. R. DEN HARTOG; M. J. GILSTRAP; N. N. NEW; H. FEDAROVICH; D. LENCH; C. T. SMOTHERS*; G. E. HOMANICS; J. J. WOODWARD. *Med. Univ. South Carolina, Univ. Pittsburgh.*

10:00 U17 **142.19** Valproic acid-induced neurodevelopmental deficits are linked to its histone deacetylase inhibitor activity. E. J. JAMES*; C. RAMIREZ; M. HASAN; A. KHAKHALIN; C. AIZENMAN. *Brown Univ., Bard Col.*

11:00 U18 **142.20** MicroRNA-34a is a novel target of late-onset Alzheimer's disease. S. N. SARKAR*; S. JUN; D. D. QUINTANA; J. W. SIMPKINS. *WEST VIRGINIA UNIVERSITY, WVU, wvu.*

8:00 U19 **142.21** Cerebrovascular and tau pathology in a novel mouse model of vascular dementia. T. BECKETT*; T. PLATT; V. REEVES; A. HELMAN; K. KOHLER; D. NIEDOWICZ; M. MURPHY. *Univ. of Kentucky, Univ. of Pittsburgh.*

9:00 U20 **142.22** The effects of APOE on subregional funcitonal connecivity of hippocampus in Alzheimer's disease and mild cognitive impairment. Y. FAN*; L. LIU. *Inst. of Automation, Chinese Acad. of Sci.*

10:00 U21 **142.23** Insulin-like growth factor 2 (IGF2) ameliorates amyloidosis, increases cholinergic marker expression and raises BMP9 and neurotrophin levels in the hippocampus of the APPswePS1dE9 Alzheimer's disease model mice. T. J. MELLOTT; S. M. PENDER; R. M. BURKE; E. A. LANGLEY; J. K. BLUSZTAJN*. *Boston Univ. Sch. Med.*

11:00 U22 **142.24** Doublecortin family proteins regulate dynein motors and retrograde transport through JIP3. X. FU*; J. S. LIU. *Children's Natl. Med. Ctr.*

POSTER

143. Ischemia: Cellular Mechanisms and Neuroprotection I

Theme C: Disorders of the Nervous System

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

8:00 U23 **143.01** Matrix metalloproteinase-12 silencing after focal cerebral ischemia reduces brain damage by inhibiting apoptosis. B. CHELLUBOINA; J. D. KLOPFENSTEIN; D. M. PINSON; D. Z. WANG; K. VEERAVALLI*. *Univ. of Illinois Col. of Med. At Peoria, Univ. of Illinois Col. of Med. At Peoria, Univ. of Illinois Col. of Med. At Peoria, Univ. of Illinois Col. of Med. At Peoria.*

9:00 U24 **143.02** Burst-predicting neurons survive an *in vitro* excitotoxic injury model of cerebral ischemia. J. THIVIERGE*; E. S. KUEBLER; J. S. TAUSKELA; A. AYLSWORTH; X. ZHAO. *Univ. of Ottawa, Natl. Res. Council Canada.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 U25 **143.03** Interferon-Beta provides protective effects in ischemic stroke through its anti-inflammatory properties. P. KUO*; B. A. SCOFIELD; J. YEN. *Indiana Univ. Sch. of Med. - Fort Wayne.*

11:00 U26 **143.04** Evaluation of the glutathione system associated to enzymes in brain ischaemia. P. AGUILAR-ALONSO*; N. J. CRUZ-ORTEGA; S. TREVIÑO-MORA; G. FLORES; E. M. BRAMBILA-COLOMBRES; A. R. NAVARRO-CRUZ; O. VERA-LÓPEZ; H. A. RUBIO-ZAPATA; A. DÍAZ; D. ESTRELLA-CASTILLO. *BUAP, BUAP, BUAP, BUAP, Univ. Autónoma de Yucatán, BUAP.*

8:00 U27 **143.05** Effect of endothelin-1 induced focal cerebral ischemia on motivation and overall activity in rats. K. MEADOWS*; F. VASSOLER; E. BYRNES. *Tufts Univ.*

9:00 U28 **143.06** Apoptotic and necrotic processes in a postnatal rat hippocampal cell culture model of ischemic stroke without reperfusion. A. I. MARTIN*; R. D. SWEAZEY; B. C. HONG-GOKA; F. F. CHANG. *Indiana Univ. Sch. of Med. - Fort Wayne, UCSF - Fresno Alzheimer's & Memory Ctr.*

10:00 U29 **143.07** Perinatal hypoxia affects axon-oligodendrocyte progenitor communication in mouse white matter. P. LI*; V. GALLO. *Children's Natl. Med. Ctr.*

11:00 U30 **143.08** Downregulation of MIF facilitates neuronal loss during stroke. S. ZHANG*; O. ZIS; R. BUCALA; W. SHYU; W. SONG. *The Univ. of British Columbia, Yale Univ., China Med. Univ. and Hosp.*

8:00 U31 **143.09** Exacerbation by hyperglycemia of lesion growth after focal cerebral ischemia is not due to greater severity of the initial cerebral blood flow deficit. L. A. ROY*; W. M. HOLMES; K. W. MUIR; I. M. MACRAE; D. DEWAR. *Univ. of Glasgow.*

9:00 U32 **143.10** Systemic lps challenge exacerbates infarct area after experimental stroke. D. N. DOLL*; S. E. LEWIS; X. REN; H. HU; J. W. SIMPKINS. *West Virginia Univ.*

10:00 U33 **143.11** Mechanism of changes in the postsynaptic ultrastructure after ischemic conditions. Y. FUKUNAGA*; S. ITOH; E. NAKAJIMA; E. HATANO; A. MIYAZAWA. *Univ. of Hyogo, RSC-University of Hyogo Leading Program Ctr.*

11:00 U34 **143.12** Effects of exercise speed and duration on neurotransmitter concentrations and angiogenesis-related factors following cerebral ischemia in rats. J. KIM*; B. OH; S. LEE. *Dankook Univ. Hosp., Seoul Natl. Univ. Hospital, Seoul Natl. Univ. Col. of Med., Seoul Metropolitan Boramae Med. Center, Seoul Natl. Univ. Col. of Med.*

8:00 U35 **143.13** The role of PINK1/Drp1 in transient global ischemia-induced hippocampal neuronal injury. S. CHEN*; T. LIN; D. YANG; S. LEE; C. LIOU; F. SHAW; Y. CHUANG. *Chang Gung Mem. Hospital, Chang Gung University, Neurol., Ctr. for Translational Res. in Biomed. Sci., Chang Gung Mem. Hosp.,, Inst. of Brain Sci., Natl. Yang-Ming Univ., Natl. Cheng Kung Univ.,.*

9:00 U36 **143.14** Transcriptional regulation of inflammatory cell-death following a model of cerebral ischemia. M. C. SURLES-ZEIGLER*; Y. LI; A. GATES; B. FORD. *Morehouse Sch. of Med.*

10:00 V1 **143.15** Therapeutic potential of intravenous administration of induced pluripotent stem cells in cerebral ischemia. T. SOBRINO*; E. LÓPEZ-ARIAS; A. FERREIRÓS; S. DA SILVA-ÁLVAREZ; F. CAMPOS; M. COLLADO; J. CASTILLO. *Univ. Clin. Hosp., Hlth. Res. Inst. of Santiago de Compostela, Hlth. Res. Inst. of Santiago de Compostela, Hlth. Res. Inst. of Santiago de Compostela.*

11:00 V2 **143.16** Sirt3 mediated neuroprotection of beta-hydroxybutyrate in ischemia stroke. J. YIN*; P. HAN; Z. TANG; Q. LIU; M. MAALOUF; J. SHI. *Barrow Neurolog. Institute, St.Joseph Hosp., Barrow Neurolog. Institute, St.Joseph Hosp.*

8:00 V3 **143.17** Receptor for complement peptide C3a stimulates neural plasticity after experimental brain ischemia. A. STOKOWSKA*; A. L. ATKINS; S. R. BARNUM; R. A. WETSEL; M. DRAGUNOW; M. PEKNA. *Univ. of Gothenburg, Univ. of Alabama, Univ. of Texas-Houston, Univ. of Auckland.*

9:00 V4 **143.18** Neuroprotective effects of Z-ajoene, an organosulfur compound derived from oil-macerated garlic, in the gerbil hippocampal CA1 region after transient forebrain ischemia. J. KIM*; J. CHOI; S. NAM; I. HWANG; Y. YOON. *Seoul Natl. Univ. / Col. of Vet. Med., 3Department of Anatomy, Col. of Vet. Medicine, Kangwon Natl. Univ., Seoul Natl. Univ.*

10:00 V5 **143.19** Ceruloplasmin knock-out mice have a worse infarct outcome after middle cerebral artery occlusion. J. G. ZARRUK*; R. PASOS DOS SANTOS; S. DAVID. *McGill Univ. Hlth. Ctr.*

11:00 V6 **143.20** Idebenone consumption and its neuroprotective effect in a female rat model of transient cerebral ischemia. H. A. RUBIO-ZAPATA*; D. E. LOPEZ-CARDEÑA; D. F. ESTRELLA-CASTILLO; P. AGUILAR-ALONSO; C. A. RUBI-MORALES. *Facultad De Medicina-UADY, Benemérita Univ. Autónoma de Puebla.*

8:00 V7 **143.21** MKEY, a peptide inhibitor of CCL5-CXCL4 heterodimer formation, protects against focal cerebral ischemia in mice. X. XIONG*; Y. FAN; Z. JIAN; Y. ZHANG; D. YAN; B. XU; H. ZHAO. *Stanford Univ., Stanford Univ.*

9:00 V8 **143.22** Inhibition of microRNA-210 produces neuroprotection via up-regulation of glucocorticoid receptor in neonatal rat hypoxic-ischemic brain injury. Q. MA*; C. DASGUPTA; Y. LI; F. XIONG; L. ZHANG. *Loma Linda Univ.*

10:00 V9 **143.23** Neonatal hypoxia-ischemia induces attention deficit hyperactivity disorder-like behavior in rats. P. M. MIGUEL*; C. SCHUCH; J. ROJAS; J. CARLETTI; I. DECKMANN; L. MARTINATO; A. PIRES; L. BIZARRO; L. ORLANDI. *Univ. Federal Do Rio Grande Do Sul (UFRGS), Univ. Federal Do Rio Grande Do Sul (UFRGS).*

8:00 V11 **143.24** ● Genetic analysis of hypoxia tolerance using *Drosophila melanogaster* as a model system. K. DASGUPTA*; P. AZAD; S. GANGULY; G. HADDAD. *UCSD, The Rady Children's Hosp., Univ. of California-San Diego, Univ. of California-San Diego, Univ. of California-San Diego, The Rady Children's Hosp.*

11:00 V10 **143.25** Acidosis contributes to parthanatos cell death signaling in piglet cortex after hypoxia-ischemia and in cortical neuronal cultures. Z. YANG*; B. WANG; J. ARMSTRONG; E. LEE; G. HONG; V. L. DAWSON; T. M. DAWSON; R. C. KOEHLER. *Johns Hopkins Univ., Johns Hopkins Univ.*

9:00 V12 **143.26** Inhibition of DNA methylation increased neonatal rat brain hypoxic-ischemic injury and subsequent neurobehavioral defects. Y. LI*; Q. MA; S. HALAVI; R. HARTMAN; A. OBENAUS; L. ZHANG. *Loma Linda Univ., Loma Linda Univ., Loma Linda Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

144. Neuroprotective Mechanisms: Oxidative Stress

Theme C: Disorders of the Nervous System

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

8:00 V13 **144.01** Neuroprotective effects of resveratrol on dopaminergic systems after prolonged exposure to rotenone, a mitochondrial toxin. Z. K. BINIENDA*; B. GOUGH; M. A. BEAUDOIN; S. SARKAR; S. F. ALI; A. VIRMANI. *Natl. Ctr. Toxicological Res/Food and Drug Adm., NCTR/FDA, Sigma-tau, S.p.A.*

9:00 V14 **144.02** Effect of sigma-1 receptor agonists on oxidative stress-induced neuronal cell death. Y. HIRATA*; K. OH-HASHI; K. KIUCHI. *Gifu Univ.*

10:00 V15 **144.03** Sirt3 as a pivotal regulator of mitochondrial function under NO-mediated neuronal injury. S. KIM*; S. DARWISH; C. ALANO. *VAMC.*

11:00 V16 **144.04** Akt mediated phosphorylation of Histone H2A contributes the functional regulation of H2A. J. PARK*; K. LEE; J. AHN. *Dept. of Mol. Cell Biol., Sungkyunkwan Univ. Sch. of Med., Sungkyunkwan Univ. Sch. of Med.*

8:00 V17 **144.05** Physiologically relevant oxy-radical formation of neuromelanin by photostimulation: Effects of iron and calcium. D. HEDGES*; N. D. SCHILATY; A. W. PEREZ; R. K. WATT; S. C. STEFFENSEN. *Brigham Young Univ.*

9:00 V18 **144.06** Identification of stress-sensitive sites in differentiated human neuronal cells by intracellular localization of HSP70 heat shock proteins. S. KHALOUEI; A. M. CHOW; I. R. BROWN*. *Ctr. for the Neurobio. of Stress, Univ. Toronto Scarborough.*

10:00 V19 **144.07** Activation of the A_{2A} adenosine receptor protects PC12 cells from the H2O2-induced DNA damage by TRAX. T. CHIEN*; S. CHANG; Y. CHERN. *Inst. of Biomed. Sciences, Academia Sinica, Inst. of Life Sciences, Natl. Def. Med. Ctr., Inst. of Neuroscience, Natl. Yang-Ming Univ.*

11:00 V20 **144.08** Beneficial effects of (-)-epigallocatechin-3-gallate on sciatic nerve crush injury is antioxidant-independent. W. M. RENNO*; L. BENOV; K. KHAN. *Kuwait Univ., Kuwait Univ. - Fac. of Med., Kuwait Univ. - Fac. of Med.*

8:00 V21 **144.09** Longterm Minocycline administration alleviates Paraquat mediated oxidative stress in *Drosophila melanogaster*. E. M. BONILLA*; S. MEDINA-LEENDERTZ; M. MORA; Y. BRAVO; J. L. ARCAYA; J. R. VIELMA. *Univ. Del Zulia, Inst. Venezolano de Investigaciones Científicas, Inst. de Investigaciones Clínicas "Dr. Américo Negrette".*

9:00 V22 **144.10** Naringenin attenuates experimentally induced diabetic neuropathy: Role of oxidative stress and inflammatory mediators. S. ALSHARARI*; S. S. ALREJAIE; K. A. AL-HOSAINI; A. S. ALROUJAYEE; M. M. AHMED; F. S. ARREJAIE; H. M. ABUOHASHISH; M. Y. PARMAR. *1217 E. Marshall St, King Saud Univ., King Saud Univ., Al Imam Mohammad Ibn Saud Islamic Univ., Almaarefa Col.*

10:00 V23 **144.11** NHEJ and BER concurrently repair oxidative DNA damage via initiation of APE1 in rat cortical neurons. J. YANG*; Y. LIN; P. LAI. *Kaohsiung Chang Gung Mem. Hosp.*

11:00 V24 **144.12** Mitochondrial function and energy metabolism in neuronal HT22 cells resistant to oxidative stress. A. METHNER*; A. PFEIFFER; M. JAECKEL; J. WINTER; S. SCHWEIGER; M. K. E. SCHÄFER. *Johannes Gutenberg Univ. Mainz, Johannes Gutenberg Univ. Mainz, Johannes Gutenberg Univ. Mainz.*

8:00 V25 **144.13** Inhibition of 6-Hydroxydopamine toxicity by nitrosamines: Redox sensing in the mitochondria. C. T. DOOLEY*; M. CAZARES; A. GIOSEFFI. *Torrey Pines Inst. For Mol. Studies.*

9:00 V26 **144.14** Sedative, anticonvulsive and neuroprotective effects of a new flavonoid: Acacetin-7-O-glucoside. A possible involvement in the GABAergic system. E. CALIXTO*; J. GALVEZ; G. ARAUJO; M. MARTÍNEZ; S. OROZCO; R. FERNANDEZ MAS; R. ESTRADA. *Inst. Nac de Psiquiatria Ramon de la Fuente, Inst. Nac de Psiquiatria Ramon de la Fuente, Inst. Nac de Psiquiatria Ramon de la Fuente, Inst. de Química, UNAM., Unidad de Investigación Médica en Enfermedades Neurológicas. Ctr. Médico Nacional "Siglo XXI". IMSS, Inst. Nac de Psiquiatria Ramon de la Fuente.*

10:00 V27 **144.15** ▲ Neuroprotective effect of functional food in an animal model of metabolic syndrome. L. LEONHARDT AVALOS*; J. ACOSTA GARCIA; A. AVILA NAVA; M. T. C. SANCHEZ TAPIA; N. TORRES Y TORRES; C. PEREZ CRUZ. *CINVESTAV, INNSZ.*

11:00 V28 **144.16** ● Serum metabolites from blueberry-supplemented older adults attenuate stress-induced neurotoxicity in HAPI microglial cells dependent on baseline cognitive status. B. SHUKITT-HALE*; M. G. MILLER; D. R. FISHER. *Human Nutrit Res. Ctr. On Aging.*

8:00 V29 **144.17** ● Walnut extracts protect cultured microglia against LPS-induced neurotoxicity via modulation of intracellular calcium concentration. N. THANGTHAENG*; S. POULOSE; D. FISHER; B. SHUKITT-HALE. *Jean Mayer USDA Human Nutr. Res. Ctr. On Aging At Tufts Univ.*

9:00 V30 **144.18** ● Tart Cherry extracts reduce inflammatory stress signaling and enhance calcium buffering in microglial and neuronal cell lines. D. R. FISHER; D. F. BIELINSKI*; M. E. KELLY; B. SHUKITT-HALE. *USDA Human Nutr. Res. Ctr, Tufts Univ.*

10:00 V31 **144.19** Effects of dietary blueberry supplementation on older adults. M. G. MILLER*; J. A. JOSEPH; B. SHUKITT-HALE. *HNRCA.*

11:00 V32 **144.20** Neuroprotective effects of blueberry polyphenols in cellular models of Parkinson's disease. M. A. TAMBE*; K. E. STRATHEARN; M. H. GRACE; M. LILA; J. ROCHET. *Purdue Univ., North Carolina State Univ.*

8:00 W1 **144.21** Combinatorial preconditioning of brain cultures with low ethanol and resveratrol concentrations: Synergistic antioxidant-based neuroprotection? M. A. COLLINS*; N. KHODAIE; N. F. TAJUDDIN; E. J. NEAFSEY; R. M. MITCHELL. *Loyola Univ. Chicago, NIH, NICHD.*

9:00 W2 **144.22** Ketone-induced neuroprotection against oxidative stress in hippocampus is mediated through ATP-sensitive potassium channels. D. O'NEILL; J. RHO; D. KIM*. *Barrow Neurolog. Institute, St. Joseph's Hosp. & Med. Ctr., Alberta Children's Hosp.*

10:00 W3 **144.23** The effects of β-estradiol on H_2O_2 or SNP-induced oxidative stress in rat mixed glial cultures. J. WANG*; C. CHEN; S. CHEN. *Dept Nursing (Basic Med. Sci), Hungkuang Univ., Li-Shin Hosp.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 W4 **144.24** Effect of oxidative damage on serotonergic system in the animal model Caenorhabditis elegans. G. CAMARGO HERNÁNDEZ*; R. RODRÍGUEZ MACIAS; P. M. GARCÍA LÓPEZ; M. L. MENDOZA MAGAÑA; G. DÍAZ VEGA; R. SOTELO RIVERA; L. HERNÁNDEZ. *Univ. de Guadalajara, Univ. de Guadalajara, CUCEI Univ. de Guadalajara.*

8:00 W5 **144.25** Distinct mechanism of neuroprotection by medical gas in Parkinson's disease model animal. M. NODA*; A. MATSUMOTO; M. YAMAFUJI; T. INOUE; T. TACHIBANA; H. NAKAYA; Y. NAKABEPPU. *Kyushu Univ., Kyushu Univ., Chiba Univ., Kyushu Univ., Kyushu University,.*

9:00 W6 **144.26** Effect of IF diet on cuprizone induced neurotoxicity in C57BL/6 mice- A behavioral and histological study. Z. KARIMI; B. DARAEE; M. RAZA*. *Tarbiat Modares Univ., Baqiyatallah Univ. of Med. Sci.*

POSTER

145. Environmental Toxins and Toxicity

Theme C: Disorders of the Nervous System

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

8:00 W7 **145.01** Air Pollution interacts with apoE alleles in AD pathogenesis. M. CACCIOTTOLO*; S. HASHEMINASSAB; A. SAFFARI; C. SIOUTAS; T. MORGAN; C. FINCH. *USC Davis Sch. of Gerontology, USC Viterbi Sch. of Engin.*

9:00 W8 **145.02** Acute nanoscale urban air pollutant exposure induces markers of oxidative stress and inflammation in olfactory epithelium and brain. H. CHENG*; S. HASHEMINASSAB; A. SAFFARI; C. SIOUTAS; T. MORGAN; C. FINCH. *USC, USC Viterbi Sch. of Engin.*

10:00 W9 **145.03** The nicotinic cholinergic system is affected in rats with delayed carbon monoxide encephalopathy. S. OCHI*; M. ABE; C. LI; Y. MORI; Y. YOSHINO; K. YAMAZAKI; T. MORI; R. FUKUHARA; S. TANIMUKAI; S. MATSUDA; K. YOSHIDA; S. UENO. *Ehime Univ. Grad. Sch. of Med., Kumamoto Univ., Tokyo Med. Univ.*

11:00 W10 **145.04** Comparing monocyte and astroglial activation by particles derived from combined construction, vehicle, and train station sources. K. I. TRAN*; E. GARCIA; A. CAMPBELL. *Western Univ. of Hlth. Sci.*

8:00 W11 **145.05** IFNAR1 signaling regulates the microglial phenotype in response to peripheral LPS challenge. *J. M. TAYLOR, K. M. BRODY, P. J. CRACK. *Univ. of Melbourne.*

9:00 W12 **145.06** Paternal Bisphenol A diet provokes endoplasmic reticulum stress and myelin destruction, a potential mechanism for neuropsychiatric disorders. J. WANG*; G. LUO; J. ZHANG; R. NIU; C. WANG; M. HUO; B. ZHOU; Z. LI; S. WANG. *Shanxi Agirculture Univ., Univ. of Virginia.*

10:00 W13 **145.07** ▲ The combined effects of lead exposure during early brain development and enriched vs. isolated rearing conditions on spatial learning and memory performance and hippocampal NeuN expression. V. SVYSTUN*; G. R. GAVLIN; C. N. LOUIS; J. W. PICKEL; J. A. SCHROEDER. *Connectucut Col., Connecticut Col.*

11:00 W14 **145.08** Evaluation of perfluoroalkyl exposure on neuronal cells. S. RELLICK*; K. YI; J. SIMPKINS. *West Virginia Univ., Sygenta Crop Protection.*

8:00 W15 **145.09** ▲ Methyl parathion induced neurotoxity in primary neuron-glial co-cultures. J. R. BEAN; K. R. SHEPHERD*. *Morehouse Col., Morehouse Sch. of Med.*

9:00 W16 **145.10** Comparison of the effects to rotenone-exposure on rats during development and in adulthood. M. GÓMEZ-CHAVARÍN*; G. PEREZ-SOTO; C. TORNER. *UNAM-Biomedical Res. Institutute, UNAM Med. Fac. Physiol. Dpt, UNAM Med. Fac. Publ. Hlth. Dpt, UAM Biol. Sci. and Hlth. Dpt.*

10:00 W17 **145.11** Herbicide glyphosate causes hypoactivity and reduction of accumbal D1 dopamine receptors and striatal dopamine levels in the albine rat. I. HERNÁNDEZ*; M. GIORDANO; M. DÍAZ-MUÑOZ; V. RODRÍGUEZ CÓRDOVA. *Inst. De Neurobiologia, UNAM, Juriquilla.*

11:00 W18 **145.12** Single exposure to pesticides during brain development causes neurotoxic effects manifested as persistent behavior aberrations and neuroprotein alterations in mice. I. LEE; P. ERIKSSON; A. FREDRIKSSON; S. BURATOVIC; S. M. LASLEY*; H. VIBERG. *Uppsala Univ., Univ. Illinois Col. Med.*

8:00 W19 **145.13** ▲ Effect of environmental toxin "piericidin" on 3D neurosphere culture; *in vitro* study. M. ELHAWARY*; M. A. RAKHA; A. LOTFY; M. SALAMA; M. SOBH. *Med. Exptl. Res. Ctr. (MERC), Med. Exptl. Res. Ctr. (MERC), Med. Exptl. Res. Ctr. (MERC).*

9:00 W20 **145.14** Ethylene glycol ethers induce oxidative stress in the rat brain. B. POMIERNY*; W. KRZYZANOWSKA; B. BUDZISZEWSKA. *Jagiellonian Univ. Fac. of Pharm. Depart, Jagiellonian University, Fac. of Pharm., Inst. of Pharmacology, Polish Acad. of Sci.*

10:00 W21 **145.15** Comparative effects of methylmercury on cerebellar and cortical astrocytes of neonatal and young mice. R. JAIMAN*; W. D. ATCHISON. *Michigan State Univ., Michigan State Univ.*

11:00 W22 **145.16** Methylmercury-induced changes in locomotor behaviors, biomarkers of oxidative stress and neuronal DNA oxidation in adult mice. M. KIRKPATRICK*; J. BENOIT; W. EVERETT; J. GIBSON; M. RIST. *Wheaton Col., Wheaton Col., Wheaton Col., Wheaton Col.*

8:00 W23 **145.17** Role of extracellular calcium in methylmercury-induced dopamine dysregulation of PC12 cells. M. KHALID*; W. D. ATCHISON. *Michigan State Univ.*

9:00 W24 **145.18** Quantification of functional and cytotoxicity of 4-Methylcyclohexanemethanol (4-MCHM). J. R. GIBSON*; G. W. GROSS. *Ctr. For Network Neurosci., Univ. of North Texas.*

10:00 W25 **145.19** Locomotor hyperactivity caused by developmental exposure to low dose tobacco smoke extract in rats. M. CAULEY; B. J. HALL; D. BURKE; A. K. LEE; R. D. SCHWARTZ-BLOOM*; E. D. LEVIN. *Duke Univ. Med. Ctr.*

11:00 W26 **145.20** Perinatal exposure to PCBs alters cocaine behavioral sensitization and dopamine transporter (DAT) expression in the medial prefrontal cortex and striatum of Long-Evans rats. M. M. MILLER; A. E. MEYER; J. L. NELMS; J. N. VOELLER; A. L. COX; H. J. SABLE*. *Univ. of Memphis.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

146. Neurodegeneration I

Theme C: Disorders of the Nervous System

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

8:00 W27 **146.01** Supervised parcellation of resting-state fMRI data in macaque monkeys recovers cytoarchitectonic cortical regions. E. GULTEPE*; J. P. GALLIVAN; R. M. HUTCHISON; S. EVERLING; I. S. JOHNSRUDE. *Western Univ., Queen's Univ., Harvard Univ., Western Univ.*

9:00 W28 **146.02** ● S1P3 antagonism by small molecules is able to revert neurodegeneration and neuroinflammation *in vivo.* D. FRANCESCHINI; C. SCALI*; G. POLLIO; R. REMELLI; D. DIAMANTI; M. CAMARRI; V. PORCARI; H. BOTHMANN; C. CASTALDO; G. LAZZERONI; C. FEDERICO; L. MAGNONI; I. MICCO; M. VALACCHI; A. CHIUMIENTO; S. CONIGLIO; L. CESARI; A. NENCINI; M. TRAVAGLI; P. PERFETTI; N. CARADONNA; R. THOMAS. *Siena Biotech SpA.*

10:00 W29 **146.03** Alteration of protein expression levels in an *in vitro* blood-brain barrier model following exposures to silver-nanoparticles: Apoptosis signaling proteins. Q. GU*; S. M. LANTZ-MCPEAK; E. CUEVAS; S. F. ALI; M. G. PAULE; V. KRAUTHAMER; Y. ZHANG. *Div. of Neurotoxicology, NCTR/FDA, Ctr. for Devices and Radiological Health/FDA, NCTR/FDA.*

11:00 W30 **146.04** Comparison of muscarinic modulation of KCNQ2/3 channel activity and phosphoinositide metabolism between superior cervical ganglion neurons and tsA-201 cells. M. KRUSE*; O. VIVAS; B. HILLE. *Univ. of Washington.*

8:00 W31 **146.05** Proton-dependent zinc release from intracellular ligands. L. KIEDROWSKI*. *Univ. Illinois At Chicago.*

9:00 W32 **146.06** Nicotine-induced behavioral sensitization is enhanced in the HIV-1 transgenic rat. T. NESIL*; J. CAO; Z. YANG; S. L. CHANG; M. D. LI. *Univ. of Virginia, Seton Hall Univ., Seton Hall Univ.*

10:00 W33 **146.07** Nerve growth factor sensitizes adult sympathetic neurons to the proinflammatory peptide bradykinin. O. VIVAS*; M. KRUSE; B. HILLE. *Univ. of Washington.*

11:00 W34 **146.08** Expression of addiction related genes in the brain of the HIV-1 transgenic and F344 rats treated with nicotine. M. D. LI*; Z. YANG; T. NESIL; J. CAO; G. SONG; S. L. CHANG. *Univ. of Virginia, Seton Hall Univ., Shanxi Med. Univ., Seton Hall Univ.*

8:00 W35 **146.09** High concentrations of ascorbic acid increase cell death in undifferentiated, but not differentiated, SH-SY5Y cells. P. E. HATHWAY; W. H. CHURCH*. *Trinity Col.*

9:00 W36 **146.10** Naringenin suppresses neuroinflammatory responses through inducing suppressor of cytokine signaling 3 in microglia. L. WU*; H. LIN; D. LU. *China Med. Univ.*

10:00 X1 **146.11** Nicotine modulates stress responses in HIV-1 transgenic rats. J. CAO*; T. NESIL; Z. YANG; S. L. CHANG; M. D. LI. *Dept. of Psychiatry & Neurobehavioral Sciences, Univ. of Virginia, Inst. of NeuroImmune Pharmacology, Seton Hall Univ., 3Department of Biol. Sciences, Seton Hall Univ.*

11:00 X2 **146.12** ● Distinct microglia gene expression profiles induced by aging and neurodegenerative conditions: A co-expression meta-analysis. I. R. HOLTMAN; D. D. A. RAJ; J. MILLER; W. SCHAAFSMA; N. BROUWER; M. ORRE; W. KAMPHUIS; E. M. HOL; E. H. BODDEKE*; B. J. L. EGGEN. *Dept. of Neuroscience, Section Med. Physiol., Allen Inst. for Brain Sci., Netherlands Inst. for Neuroscience, - an Inst. of the Royal Netherlands Acad. of Arts and Sci. (KNAW),, Univ. Med. Ctr. Gron.*

8:00 X3 **146.13** Chronic phosphodiesterase 7 inhibitor treatment improves clinical signs of experimental autoimmune encephalomyelitis: evidence for underlying mechanisms. G. MENGOD*; R. MARTIN-ALVAREZ; N. PAUL-FERNANDEZ; V. PALOMO; C. GIL; A. MARTINEZ. *IIBB-CSIC, IDIBAPS, CIBERNED, CIB-CSIC.*

9:00 X4 **146.14** Smooth muscle cell- specific peroxisome proliferator activated receptor-γ (SMC-PPARy) protects against formation and rupture of cerebral aneurysms. H. GU*; K. WILSON; Y. CHU; C. D. SIGMUND; D. M. HASAN. *Univ. of Iowa.*

10:00 X5 **146.15** Can cognitive decline be correlated with Chlamydia pneumoniae infection, inflammatory markers and amyloid in human blood? C. J. HAMMOND; A. B. CADER; J. R. BRANDT; M. VELEZ; L. E. SEMLER; M. D. MARRUSO; M. G. BELL; J. L. SMITH; N. E. JOSEPH; K. E. GALLUZZI; D. M. APPELT; B. J. BALIN*. *Philadephia Col. Osteo. Med., Philadephia Col. Osteo. Med., Philadephia Col. Osteo. Med., Philadephia Col. Osteo. Med., Philadephia Col. Osteo. Med.*

11:00 X6 **146.16** Nicotine mediated expression of genes related to antioxidant capacity and oxidative stress response in HIV-1 transgenic rats brain. G. SONG; J. CAO; T. NESIL; Z. YANG*; M. D. LI. *Univ. of Virginia, Univ. of Virginia.*

8:00 X7 **146.17** Hypocretin promotes neuroprotective processes in the hippocampus that result from an increase in GABAergic inhibition. M. XI; S. FUNG; M. H. CHASE*. *Websciences Intl., VA Greater Los Angeles Healthcare Syst., UCLA Sch. of Med.*

9:00 X8 **146.18** ● MAGL inhibition promotes blood-brain barrier integrity in a pre-clinical LPS model. G. L. SUIDAN*; J. R. PIRO; A. N. CAMERON; T. NGUYEN; M. C. ILARDI; T. A. SAMAD; T. A. SAMAD; R. D. BELL. *Pfizer, Inc.*

10:00 X9 **146.19** Sarin exposure across the estrous cycle: Hormone-dependent protection. C. D. SMITH*; L. K. WRIGHT; A. R. FURMAN; S. SANJAKDAR; A. R. BOURNE; L. A. LUMLEY. *US Army Med. Res. Inst. of Chem. Def.*

11:00 X10 **146.20** Modulation of MAPK pathway signaling in a model of striatal neurodegeneration with quinolinic acid and the effect of curcumin. R. A. SANTANA MARTINEZ*; D. BARRERA OVIEDO; P. D. MALDONADO JIMÉNEZ. *Natl. Inst. of Neurol. and Neurosurg., Univ. Nacional Autónoma de México, Inst. Natl. of Neurol. and Neurosurg.*

8:00 X11 **146.21** ▲ Effect of 3-Nitropropionic acid on electron transport chain: Role of cod liver oil. F. CALVO-SILVA; J. GARCÍA-MORALES; N. SERRANO-GARCÍA; M. OROZCO-IBARRA*. *Inst. Nacional De Neurología Y Neurocirugía Manuel Velasco Suárez.*

9:00 X12 **146.22** Nrf2 factor induction is oxidative stress independent in an experimental excitotoxicity model at early times. C. A. SILVA*, SR; R. A. SANTANA-MARÍNEZ; M. CHÁNEZ-CÁRDENAS; D. BARRERA-OVIEDO; P. D. MALDONADO-JIMÉNEZ. *Natl. Inst. of Neurol. and Neurosurg., Inst. Nacional de Neurología y Neurocirgía, Inst. Nacional de Nuerología y Neurocirugía, Univ. Nacional Autónoma de México, Inst. Nacional de Neurología y Neurocirugía.*

● Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 X13 **146.23** MSCs recover neuronal loss and local inflammation induced by stereotaxic injection in memory-deficient model rats. Y. M. KIM; Y. J. JUNG; Y. K. KWON*. *Kyung Hee Univ., kyung hee university.*

11:00 X14 **146.24** Inhibitors of HIF-proly-4-hydroxylases (HIF-PHD) mediate mitochondrial protection and prevent oxytosis in neuronal cells. S. NEITEMEIER*; A. DOLGA; S. KARUPPAGOUNDER; R. RATAN; C. CULMSEE. *Inst. For Pharmacol. and Clin. Pharm. U, Burke-Cornell Med. Res. Institute, White Plains, New York, USA; Dept. of Neurol. and Neuroscience, Weill Med. College, Cornell University, New York, USA.*

8:00 X15 **146.25** On the dual actions of 3-Hydroxykynurenine in the rat striatum. A. L. COLÍN GONZÁLEZ*; J. PEDRAZA-CHAVERRÍ; P. D. MALDONADO JIMÉNEZ; A. SANTAMARÍA DEL ÁNGEL. *Inst. Nacional De Neurologia Y Neurocirugia, Univ. Nacional Autónoma de México, Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Neurocirugía y Neurocirugía.*

9:00 X16 **146.26** Surgery contributes to changes in dorsal root ganglia and spinal cord in a mouse model of postoperative cognitive decline. N. TERRANDO*; M. ZHANG; T. G. M. HÖKFELT. *Karolinska Institutet, Karolinska Institutet.*

10:00 X17 **146.27** Comparing the neurotoxic effects of propofol and ketamine in rat embryonic neural stem cells. F. LIU*; N. SADOVOA; C. FOGLE; T. A. PATTERSON; M. G. PAULE; C. WANG; W. SLIKKER, JR. *Natl. Ctr. For Toxicological Research/FDA, Toxicologic Pathology Associates.*

11:00 X18 **146.28** The effects of insulin in the brain in influencing the neuroinflammatory response and the memory in young and aged rats. L. ADZOVIC*; A. E. LYNN; H. M. D'ANGELO; A. M. CROCKETT; R. M. KAERCHER; S. C. HOPP; S. E. ROYER; G. L. WENK. *Ohio State Univ., Ohio State Univ.*

8:00 X19 **146.29** Phytanic acid induces Neuro2a cell death via histone deacetylase activation. K. NAGAI*; T. NATORI. *Univ. Yamanashi, Yamanashi Gakuin Univ.*

9:00 X20 **146.30** ▲ Effects of 3-hidroxykynurenine and 3-hidroxyanthranilic acid in mitochondrial energy metabolism in primary astrocytes cultures and isolated mitocondria. J. G. REYES OCAMPO*; P. MONTES DE OCA-BALDERAS; B. PINEDA; R. LUGO-HUITRON; D. RAMÍREZ-ORTEGA; D. GONZÁLEZ-ESQUIVEL; L. SÁNCHEZ-CHAPUL; A. JIMÉNEZ-ANGUIANO; C. RÍOS; V. PÉREZ-DE LA CRUZ. *Inst. Nacional de Neurología y Neurocirugía, Univ. Autónoma Metropolitana-Unidad Iztapalapa, Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Rehabilitación.*

POSTER

147. Sensory Disorders; C.13.A. Visual and Auditory

Theme C: Disorders of the Nervous System

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

8:00 X21 **147.01** The miR-183/96/182 cluster is required for normal functions of multi-sensory domains. S. XU*; S. LUMAYAG; C. HALDIN; S. TURTURRO; R. GENG; N. J. CORBETT; K. J. WAHLIN; S. PATEL; J. ZHANG; C. COWAN; P. LARSEN; B. KOVACS; D. J. ZACK; D. NICHOLSON; D. VALLE; P. D. WITMER. *Wayne State Univ., Rush Univ. Med. Ctr., The Johns Hopkins Univ., Wayne State Univ., Argonne Natl. Lab.*

9:00 X22 **147.02** Alterations in mitophagy related proteins PINK1 and Parkin in optic nerve in the DBA/2J mouse model of glaucoma. L. L. COUGHLIN*; D. M. INMAN. *Northeast Ohio Med. Univ., Kent State Univ.*

10:00 X23 **147.03** Three-dimensional ultrastructure of retinal ganglion cell synapses in the dba/2j mouse model of glaucoma. M. A. SMITH*; K. T. NAKAMOTO; C. M. DENGLER-CRISH; B. R. SCHOFIELD; S. D. CRISH. *Northeast Ohio Med. Univ.*

11:00 X24 **147.04** ● Neuroprotection of degenerating rod photoreceptors by pharmacological interference with cyclic nucleotide-gated (CNG) channels and the cGMP-protein kinase (PKG). P. VEIGA CRESPO; A. RENTSCH; F. SCHWEDE; P. A. EKSTRÖM*. *Div. Ophthalmol., Dept. Clin. Sci., Lund, Univ. Lund, BIOLOG Life Sci. Inst.*

8:00 Y1 **147.05** Characterization of cytokine levels in the DBA/2J mouse model of glaucoma. G. N. WILSON*; M. A. SMITH; C. M. DENGLER-CRISH; S. D. CRISH. *Kent State Univ., Northeast Ohio Med. Univ.*

9:00 Y2 **147.06** Enhanced EphB/ephrinB reverse signaling-induced GluR2 trafficking contributes to retinal ganglion cell apoptosis in a rat chronic ocular hypertension model. Z. WANG*; L. DONG; Y. WU; Y. MIAO; X. WANG; S. WANG; X. YANG. *Fudan Univ.*

10:00 Y3 **147.07** Spontaneous GABAergic signaling in the retinal OFF pathway is reduced in diabetes. J. MOORE-DOTSON*; J. J. BECKMAN; R. E. MAZADE; A. S. BERNSTEIN; M. J. ROMERO-ALESHIRE; H. L. BROOKS; E. D. EGGERS. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

11:00 Y4 **147.08** Trans-synaptic changes in central white matter pathways in retinitis pigmentosa. S. OGAWA*; B. A. WANDELL; H. TAKEMURA; F. PESTILLI; J. D. YEATMAN; A. ROKEM; H. HORIGUCHI; M. TERAO; T. TOMOKI HAJI; Y. MASUDA. *Dept. of Psychology, Stanford Univ., The Jikei Univ. Sch. of Med., The Japan Society for the Promotion of Sci., The Jikei Univ. Sch. of Med., The Univ. of Tokyo, ATR-Promotions.*

8:00 Y5 **147.09** Breakdown of cortical synchronization in blindness. M. BOLA; C. GALL; H. HINRICHS; B. A. SABEL*. *Univ. Magdeburg Med. Sch.*

9:00 Y6 **147.10** Abnormal brain connectivity in the primary visual pathway in human albinism. A. GRIGORIAN*; L. MCKETTON; K. SCHNEIDER. *York Univ.*

10:00 Y7 **147.11** ● Interocular fixation instability may be a sensitive marker for amblyopia. H. S. YING*; R. GEARY; J. TIAN; D. L. GUYTON; K. IRSCH. *Johns Hopkins Hosp., Wilmer Eye Inst.*

11:00 Y8 **147.12** PSA-NCAM promotes recovery of visual acuity in amblyopic mice. P. LUKE*; R. BROWN; U. RUTISHAUSER; D. CLARKE. *Dalhousie Univ., Mem. Sloan Kettering Cancer Ctr.*

8:00 Y9 **147.13** De Novo mutations in TEAD1 and OCEL1 are associated with non-X linked Aicardi syndrome. I. SCHRAUWEN*; S. SZELINGER; A. L. SINIARD; J. J. CORNEVEAUX; A. KURDOGLU; R. RICHHOLT; M. DE BOTH; S. SWAMINATHAN; K. RAMSEY; S. RANGASAMY; D. W. CRAIG; V. NARAYANAN; M. HUENTELMAN. *Translational Genomics Res. Inst.*

9:00 Y10 **147.14** Progressive hearing loss in mice with a mutation affecting the ubiquitin-proteasome pathway. M. KAźMIERCZAK; S. HARRIS; U. MUELLER; M. SCHWANDER*. *Rutgers Univ., The Scripps Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 Y11 **147.15** An objective neural assay for detecting tinnitus in animal models. A. S. LOWE*; J. P. WALTON. *Univ. of South Florida, Univ. of South Florida, Univ. of South Florida.*

11:00 Y12 **147.16** Direct mapping of the cortical tinnitus network. W. SEDLEY*; P. E. GANDER; S. KUMAR; H. OYA; C. K. KOVACH; K. V. NOURSKI; H. KAWASAKI; M. A. HOWARD, III; T. D. GRIFFITHS. *Newcastle Univ., Univ. of Iowa, Univ. Col. London.*

8:00 Y13 **147.17** Altered executive functions and increased sensitivity to cross-modal interference in tinnitus patients: Evidences from auditory and visual spatial Stroop and go/no-go tasks. R. ARANEDA; A. G. DE VOLDER; N. DEGGOUJ; A. HEEREN; E. LACROIX; P. PHILIPPOT; L. RENIER*. *Univ. Catholique Louvain.*

9:00 Y14 **147.18** ● Administration of AUT3, a Kv3.1 positive modulator, improves rate and temporal coding in the ICc while suppressing responsiveness in A1 of awake mice with profound Type I spiral ganglion neuron degeneration. D. B. POLLEY*; J. P. WHITTON; C. H. LARGE; C. LIBERMAN; A. R. CHAMBERS. *Massachusetts Eye and Ear Infirmary, Harvard Med. Sch., MIT, Autifony Therapeut. Limited.*

10:00 Y15 **147.19** Effect of unilateral sound damage on metabolic activity in rat cochlear nuclei. A. NUCKOLLS; C. KATZER; S. KENNON-MCGILL; H. STAECKER; T. IMIG; D. DURHAM*. *Univ. Kansas Med. Ctr.*

11:00 Y16 **147.20** ● High-field functional MRI (7 Tesla) mapping of Tonotopy in Human primary auditory cortex in patients with unilateral hearing loss and tinnitus. N. GHAZALEH*; W. VAN DER ZWAAG; R. MAIRE; M. SAENZ. *École Polytechnique Fédérale De Lausanne (EPFL), École Polytechnique Fédérale De Lausanne (EPFL), Lausanne Univ. Hosp., Lausanne Univ. Hosp.*

8:00 Y17 **147.21** White and gray matter disintegrity in patients with sensorineural hearing loss. P. SU*; F. YANG. *Mackay Med. Col., Mackay Med. Hosp., Dept. of Foreign Language and Literature, Natl. Tsinghua Univ.*

9:00 Y18 **147.22** The effect of sodium salicylate on rat exploratory and anxiety-like behaviors. M. J. FERRAGAMO*; M. R. BAKER; S. A. BANKS; J. W. ELIASON; L. M. ORTLIP; J. M. WOTTON. *Gustavus Adolphus Col.*

10:00 Y19 **147.23** Compensated hearing loss predicts generation of auditory evoked potentials. E. B. PETERSEN*; J. OBLESER; M. WÖSTMANN; S. STENFELT; T. LUNNER. *Eriksholm Res. Ctr., Linköping Univ., Linnaeus Ctr. HEAD, Linköping Univ., Max Planck Res. Group "Auditory Cognition", Intl. Max Planck Res. Sch. (IMPRS) on Neurosci. of of Communication, Dept. of Behavioural Sci. and Learning, Linnaeus Ctr. HEAD, Linköping Univ.*

POSTER

148. Somatosensation and Pain

Theme C: Disorders of the Nervous System

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

8:00 Y20 **148.01** Diabetes speed of onset is related to the development of diabetic neuropathic hyperalgesia. F. PRADO*; I. J. M. BONET; C. H. TAMBELI; C. A. PARADA. *State Univ. of Campinas.*

9:00 Y21 **148.02** ▲ B vitamins selectively suppresses thermal hyperalgesia, but not mechanical allodynia, and inhibits hyperexcitability of the small and medium-sized, but not large-sized, dorsal root ganglion neurons. N. XU*; M. WU; Y. ZONG; P. MA; Q. LIU; D. HE; X. SONG. *Neurosci. Res. Institute, Peking Univ., Ctr. for Pain Medicine, Peking Univ., Parker Univ. Res. Inst.*

10:00 Y22 **148.03** ▲ L-serine supplementation reduces neurotoxic deoxysphingolipids and alleviates sensory deficits in diabetic neuropathy. C. XIA*; Y. GONG; M. GLANZ; T. HORNEMANN; F. EICHLER. *Massachusetts Gen. Hosp., Harvard Med. Sch., Univ. Hosp. Zurich.*

11:00 Y23 **148.04** Involvement of Wnt/b-catenin signaling in the development of neuropathic pain. T. ITOKAZU*; Y. HAYANO; T. YAMASHITA. *Osaka Univ.*

8:00 Y24 **148.05** Music-induce analgesia affects the default mode network connectivity in fibromyalgia. E. A. GARZA-VILLARREAL*; P. VUUST; L. VASE; E. BRATTICO; E. PASAYE; T. S. JENSEN; L. CONCHA; Z. JIANG; F. A. BARRIOS. *Univ. Autonoma De Nuevo Leon, Univ. of Aarhus, Univ. Autonoma de Nuevo Leon, The Royal Acad. of Music, Univ. of Aarhus, Univ. of Helsinki, Univ. of Jyväskylä, Aalto Univ. Sch. of Sci., Univ. Nacional Autonoma de Mexico, Aarhus Univ. Hosp., Kessler Fndn., New Jersey Inst. of Technol.*

9:00 Y25 **148.06** Nav 1.8 expressing nociceptive neurons contribute to mechanical allodynia in painful diabetic neuropathy (PDN). B. BHATTACHARYYA*; D. M. MENICELLA; A. BELMADANI; D. REN; R. J. MILLER. *Northwestern Univ., Northwestern Univ.*

10:00 Y26 **148.07** Vesicular glutamate transporter 3 is essential for the proper development of central mechanical pain circuits. C. PEIRS*; S. G. WILLIAMS; C. E. WALSH; N. E. CAGLE; A. C. GOLDRING; H. HIOKI; R. P. SEAL. *Univ. of Pittsburgh, Univ. of Pittsburgh Sch. of Med., Kyoto Univ.*

11:00 Y27 **148.08** Using optogenetic approaches to modulate pain perception in the mouse prefrontal cortex. Z. ZHANG*; V. M. GADOTTI; G. W. ZAMPONI. *Univ. of Calgary.*

8:00 Y28 **148.09** ▲ Analgesic response to intravenous ketamine treatment is linked to circulating microRNA signature in CRPS patients. S. R. DOUGLAS*; B. K. SHENODA; R. A. QURESHI; G. M. ALEXANDER; M. K. MCDONALD; J. E. BARRETT; R. J. SCHWARTZMAN; A. SACAN; S. K. AJIT. *Drexel Univ. Col. of Med., Drexel Univ., Drexel Univ. Col. of Med.*

9:00 Y29 **148.10** ● Early-in-life bladder inflammation results in clinical features of interstitial cystitis. T. J. NESS*; A. RANDICH; M. ROBBINS; M. KAMPE; C. DEWITTE; J. MCNAUGHT; B. CLODFELDER-MILLER. *Univ. Alabama Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

10:00 Y30 **148.11** Magnetic resonance imaging-guided focused ultrasound use for non-invasive gene delivery to the spinal cord. D. WEBER-ADRIAN*; E. THÉVENOT; M. O'REILLY; W. OAKDEN; M. K. AKENS; N. ELLENS; K. MARKHAM; A. BURGESS; J. FINKELSTEIN; A. J. M. YEE; C. M. WHYNE; K. D. FOUST; B. K. KASPAR; G. J. STANISZ; R. CHOPRA; K. HYNYNEN; I. AUBERT. *Sunnybrook Res. Inst., Univ. of Toronto, Sunnybrook Res. Inst., Univ. of Toronto, TECHNA Inst., Sunnybrook Res. Inst., Univ. of Toronto, Ohio State Univ. and The Res. Inst. at Nationwide Children's Hosp., Univ. of Texas Southwestern Med. Ctr.*

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11:00 Y31 **148.12** Protective effect of hHsp27 on chemotherapy induced peripheral neuropathy in mice. V. B. CHINE*; C. H. E. MA. *City Univ. of Hong Kong, City Univ. of Hong Kong.*

8:00 Y32 **148.13** ● Pulsed radiofrequency inhibits nerve injury-induced activation of MAPKs in spinal glial cells and reduces nocifensive behaviors in rats. Y. WEN*; R. HUANG; S. TSAI; W. LIN; C. LIN. *China Med. Univ. Hosp., China Med. Univ., China Med. Univ. Hosp., China Med. Univ., China Med. Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

9:00 Z1 **148.14** Role of X-linked long non-coding RNAs in chronic pain with female predominance. B. B. SHENODA*; G. ALEXANDER; S. DOUGLAS; R. QURESHI; A. SACAN; E. ARADILLAS LOPEZ; M. MANNERS; S. AJIT. *Drexel Univ., Drexel Univ., Drexel Univercity Sch. of Biomed. Engin.*

10:00 Z2 **148.15** Caveolin-1 in the anterior cingulate cortex modulates chronic neuropathic pain via regulation of NMDA receptor 2B subunit trafficking. J. CAO*; J. YANG; L. HUA; Y. LI; D. HAN; C. YIN; L. HAO; P. WU; Y. ZHANG. *Xuzhou Med. Col.*

11:00 Z3 **148.16** Structural brain connectivity fingerprinting as a new pre-surgical tool for deep brain stimulation target discovery. H. M. FERNANDES*; T. J. V. HARTEVELT; S. G. J. BOCCARD; J. CABRAL; G. DECO; A. L. GREEN; J. J. FITZGERALD; T. Z. AZIZ; M. L. KRINGELBACH. *Dept. of Psychiatry, Univ. of Oxford, Aarhus Univ., John Radcliff Hosp., Univ. Pompeu Fabra, Institució Catalana de Recerca i Estudis Avançats (ICREA).*

8:00 Z4 **148.17** Peptidergic AVS innervation expresses estrogen receptor β among a cohort of fibromyalgia patient skin biopsies. P. J. ALBRECHT*; J. R. BOURGEOIS; B. C. RUGGIERO; F. L. RICE; J. P. WYMER; C. E. ARGOFF. *Albany Med. Coll, Integrated Tissue Dynamics, LLC, Albany Med. Coll.*

9:00 Z5 **148.18** Subpopulations of peripheral sensory neurons are differentially sensitive to the microtubule-targeting agent, paclitaxel. P. M. LOCOCO*; T. A. CHAVERA; R. J. JAMSHIDI; S. L. MOOBERRY; K. A. BERG; W. P. CLARKE. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio.*

10:00 Z6 **148.19** Cck antagonist and nsaids combination produces a decrease of allodynia in diabetic rats. D. Y. BERMÚDEZ-OCAÑA*; C. A. TOVILLA-ZÁRATE; J. C. DÍAZ-ZAGOYA; L. LÓPEZ-MERAZ; A. JIMENEZ-SANTOS; V. GRANADOS-SOTO; I. JUÁREZ-ROJOP. *División Académica Multidisciplinaria De Comalcalco, UJAT, UNAM, Univ. Veracruzana, CINVESTAV, División Académica de ciencias de la Salud-UJAT.*

11:00 Z7 **148.20** Diffusion tensor imaging of chronic pain: A white matter problem. J. H. BISHOP*; G. LIEBERMAN; M. SHPANER; T. ANDREWS; R. WATTS; M. DAVIS; C. FILIPPI; M. NAYLOR. *Univ. of Vermont, Univ. of Vermont, Philips Healthcare, Univ. of Vermont, Columbia.*

8:00 Z8 **148.21** The effects of marine-derived compound on neuropathic itch: Therapeutic and functional implication of treatments in atopic dermatitis. H. HUNG*; C. FENG; C. CHEN; S. HUANG; Z. WEN. *Natl. Sun Yat-Sen Univ., Dept. of Marine Biotech. and Resources.*

9:00 Z9 **148.22** Block of dopamine D3 receptors induces hind limb movements during sleep and is accompanied by an increase in spinal D1 receptor protein expression. A. M. JENSEN; A. SALVADÈ; S. SAMIR; G. MORALES; M. MANCONI; S. CLEMENS*. *East Carolina Univ., Exptl. Laboratory, Neurocenter of Southern Switzerland.*

10:00 Z10 **148.23** Why do spinal headaches develop after lumbar puncture? J. A. RIPPLE*; M. RAVINDRAN; S. MERCK; J. ZHU; A. DIBATTISTA; J. N. BARANIUK. *Georgetown Univ.*

11:00 Z11 **148.24** ● Development of a high throughput excitability assay using native mouse sensory neurons. S. LARDELL; A. KARLSSON; M. KARLSSON; C. LINDWALL-BLOM; P. KARILA*. *Cellectricon AB.*

8:00 Z12 **148.25** Analysis of Btbd9 conditional knockout mice as models of restless legs syndrome. Y. LI*; M. DEANDRADE; F. YOKOI. *Univ. of Florida.*

9:00 Z13 **148.26** Transplantation of islet of Langerhans cells in STZ-induced diabetic mice to test for altered neuropathic pain behavior. J. LEE*; N. JOSHI; D. DIAZ. *William Paterson Univ., William Paterson Univ.*

POSTER

149. Molecular- and Cellular-Oriented Models of Schizophrenia

Theme C: Disorders of the Nervous System

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

8:00 Z14 **149.01** Histological correlates of auditory evoked potentials in adult rats after neonatal ventral hippocampal lesion. A. L. ROMERO PIMENTEL*, SR; R. A. VAZQUEZ-ROQUE; I. CAMACHO ABREGO; K. L. HOFFMAN; P. LINARES; G. FLORES; E. MANJARREZ. *Lab. De Neuropsiquiatria, Maestria en Ciencias Biologicas, Univ. Autonoma de Tlaxcala, Ctr. de Investigacion en Reproduccion Animal (CIRA), Inst. de Fisiologia, Benemerita Univ. Autonoma de Puebla, Ctr. de Investigacion en Reproduccion Animal.*

9:00 Z15 **149.02** Molecular and cell biological analysis of FEZ1, a binding partner of DISC1. A. SUMITOMO*; A. SAKA; S. MAUCHI; T. HIKIDA; T. SAKURAI; A. SAWA; T. TOMODA. *MIC, Grad. Sch. of Med., Kyoto Univ., Dept. of Psychiatry, Grad. Sch. of Med., Johns Hopkins Univ.*

10:00 Z16 **149.03** Allosteric effects of g-protein coupled receptor heteromerization: Relevance to psychosis. J. YOUNKIN*; L. BAKI; D. E. LOGOTHETIS. *Virginia Commonwealth Univ.*

11:00 Z17 **149.04** ● Pharmacological characterization of RO5461861, a potent and selective PDE10A inhibitor. H. SCHAFFHAUSER*; E. P. PRINSSEN; M. HONER; T. M. BALLARD; T. L. WALLACE; J. PETERS; L. GOBBI; A. NILLY; T. HARTUNG; R. ALVAREZ SANCHEZ; E. BORRONI; J. W. WETTSTEIN; A. FLOHR. *Hoffmann-La Roche Ltd, SRI Intl.*

8:00 Z18 **149.05** DISC1 interacting protein, Pecanex-like 4, has a specific expression pattern in the cerebral cortex and hippocampus. S. B. NIELSEN*; D. J. JENSEN; E. BENEDIKZ. *Univ. of Southern Denmark.*

9:00 Z19 **149.06** Functional characterization of ZiP8, a zinc transporter with potential relevance for neuropsychiatric disorders. L. MARGER; D. BERTRAND; I. SINGEC; H. S. XI; J. R. WENDLAND; C. R. SCHUBERT*. *HiQScreen, Pfizer, Pfizer, Pfizer.*

10:00 Z20 **149.07** Translational studies from human to animal research - insights into the roles of the ACE in schizophrenia. C. M. YONAMINE*; A. GADELHA; V. OLIVEIRA; R. BRESSAN; V. ABÍLIO; M. HAYASHI. *UNIFESP, UNIFESP, UNIFESP.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 Z21 **149.08** Toward the role of DISC1 in astrocytes. S. ABAZYAN*; E. YANG; B. ABAZYAN; M. XIA; C. YANG; C. ROJAS; B. SLUSHER; R. SATTLER; M. PLETNIKOV. *Johns Hopkins Univ., Johns Hopkins Univ., Guangxi Univ. of Chinese Med., Hubei Univ. for Nationalities, Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Bloomberg Sch. of Publ. Hlth.*

8:00 Z22 **149.09** Overexpression of VPAC2 in hippocampus results in schizophrenia-related phenotypes in mice. S. WANG*; Y. ZHOU; W. LI. *Bio-X Inst.*

9:00 Z23 **149.10** Knockdown B-cell CLL/lymphoma 9 results in neural developmental and behavioral deficits. B. YANG*; Y. ZHOU; Q. FANG; J. WANG; W. LI. *Bio-X Inst., Sch. of life sciences and biotechnology, ZhiYuan Col., Wuxi Mental Hlth. Ctr.*

10:00 Z24 **149.11** ▲ The effects of acute 24-hour restraint Stress on cortex and hippocampus in adult mouse are different. X. CHU*; Z. HU; T. HO; W. SONG; Y. ZHOU; W. D. LI. *Bio-X Institutes, Shanghai Jiao Tong Univ., Sch. of Life Sci. and Biotech., Natl. Tsing-Hua Univ.*

11:00 Z25 **149.12** Evaluation of JL13 in animal models that predict antipsychotic activity. J. RÖPKE*; T. VIANA; Y. ANDRADE; F. MOREIRA. *Univ. Federal De Minas Gerais.*

8:00 Z26 **149.13** Haloperidol promotes the progression of heart failure through inhibition of sigma-1 receptor. S. YASUHARU*; H. TAGASHIRA; K. FUKUNAGA. *Tohoku Univ.*

9:00 Z27 **149.14** Regulation of mitochondrial trafficking in neurons by a DISC1/TRAK/Miro trafficking complex. R. NORKETT*; T. A. ATKIN; N. BIRSA; D. IVANKOVIC; M. PATHANIA; C. KORTH; W. D. HIRST; J. T. KITTLER. *UCL, New York State Psychiatric Inst., Heinrich Heine Univ., Pfizer.*

10:00 Z28 **149.15** ▲ Effects of estradiol on GAD67 in a rodent model of schizophrenia. A. J. RIORDAN; M. E. MARTORELLA; T. A. PAINE*; J. E. THORNTON. *Oberlin Col.*

11:00 Z29 **149.16** Histonedemethylase PHF8 deficient induced cognitive impairment by up-regulating mTOR associated molecular pathway in knockout mouse. W. LI; X. CHEN; Y. ZHOU*; Y. WANG; Q. XU; D. CHEN. *Bio-X Institutes,Shanghai Jiao Tong Univ., Inst. of Biochem. and Cell Biology, Shanghai Inst. for Biol. Sciences, Chinese Acad. of Sci.*

8:00 Z30 **149.17** Characterization of the discriminative stimulus properties of the racemic form of the atypical antipsychotic drug amisulpride in C57BL/6 mice. T. J. DONAHUE*; K. A. WEBSTER; T. M. HILLHOUSE; J. C. KING; L. M. KENNEDY; E. O. DE OLIVEIRA; J. H. PORTER. *Virginia Commonwealth Univ., Georgetown Univ.*

9:00 Z31 **149.18** Effects of vanilloid drugs on schizophrenia-like behavioral deficits presented by Spontaneously Hypertensive Rats (SHR). V. ALMEIDA*; M. A. SUIAMA; F. F. PERES; A. M. VENDRAMINI; V. C. ABÍLIO. *Federal Univ. of Sao Paulo - UNIFESP.*

10:00 Z32 **149.19** DGCR8, a candidate predisposing to schizophrenia in Han Chinese, perturbs cerebral cortex development. S. CHEN*; Y. ZHOU; W. LI; G. HE. *Bio-X Institutes, Shanghai Jiao Tong Univ.*

11:00 Z33 **149.20** Neuregulin 1 overexpression leads to NMDA receptor hypofunction in interneurons expressing either CCK or PV. D. KOTZADIMITRIOU*; W. NISSEN; K. NEWTON; P. HARRISON; O. PAULSEN; K. LAMSA. *Univ. of Oxford, Med. Res. Council, Anatom. Neuropharm. Unit, Dept. of Psychiatry, Warneford Hospital, Univ. of Oxford, Dept. of Physiology, Develop. & Neuroscience, Cambridge Univ.*

8:00 Z34 **149.21** 14-3-3 inhibition reduces dendritic spine density in mice. K. GRAHAM*; M. FOOTE; Y. WU; Y. ZHOU. *Florida State Univ., Florida State Univ.*

9:00 Z35 **149.22** Hippocampal area CA1 pyramidal cells show disrupted place cell activity in the Df(16) A mouse model of schizophrenia. J. ZAREMBA*; A. DIAMANTOPOULOU; N. DANIELSON; P. KAIFOSH; J. GOGOS; A. LOSONCZY. *Columbia Univ.*

10:00 Z36 **149.23** Pharmacological targeting of oxidative stress-induced nuclear GAPDH cascade towards potential treatment for schizophrenia. T. CASH-PADGETT*; F. EMILIANI; H. JAARO-PELED; A. SAWA. *Johns Hopkins Univ.*

POSTER

150. Stress and Drug Abuse: Alcohol and Nicotine

Theme C: Disorders of the Nervous System

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

8:00 AA1 **150.01** CRF binding protein in the ventral tegmental area modulates binge-like ethanol drinking in mice. L. ALBRECHET-SOUZA*; L. S. HWA; X. HAN; J. F. DEBOLD; K. A. MICZEK. *Tufts Univ., Tufts Univ. Sch. of Med.*

9:00 AA2 **150.02** Repeated cycles of chronic intermittant ethanol exposure and forced swim stress reduce BDNF mRNA levels in hippocampus of c57bl/6j mice. M. G. SOLOMON; J. HOPKINS; R. MCCANN; M. OVERSTREET; M. F. LOPEZ*; H. C. BECKER. *Med. Univ. of South Carolina.*

10:00 AA3 **150.03** Regulation of CRH, CRH receptor 1, and CRH-binding protein expression in the stress/reward systems during binge drinking in mice. K. KETCHESIN*; G. S. STINNETT; A. F. SEASHOLTZ. *Univ. of Michigan.*

11:00 AA4 **150.04** ▲ Escalated alcohol drinking in socially stressed mice: role of CRF-R1 and CRF-R2 antagonists. K. J. NORMAN; J. KLICKSTEIN; J. SEIDEN; L. S. HWA; X. HAN; J. F. DEBOLD*; K. A. MICZEK. *Tufts Univ.*

8:00 AA5 **150.05** Synaptic mechanisms of the dysregulated stress response in the paraventricular nucleus of the hypothalamus in alcohol dependent rats. V. N. MARTY*; Y. MULPURI; I. SPIGELMAN. *UCLA.*

9:00 AA6 **150.06** Targeting beta-adrenoceptors for the management of alcohol dependence. P. M. KLENOWSKI*; O. L. PATKAR; J. HOLGATE; M. BELLINGHAM; P. MOLENAAR; S. E. BARTLETT. *Queensland Univ. of Technol., Univ. of Queensland.*

10:00 AA7 **150.07** ▲ The impact of recent stress history on acute ethanol-induced central cytokine expression in Sprague Dawley rats. J. E. PANICCIA*; T. DOREMUS-FITZWATER; A. GANO; T. DEAK. *Binghamton Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 AA8 **150.08** Sex differences in stress-integrative neuronal circuitry following chronic alcohol exposure. T. A. RETSON*; B. A. S. REYES; E. J. VAN BOCKSTAELE. *Thomas Jefferson Univ., Drexel Univ. Col. of Med.*

8:00 AA9 **150.09** The role of glutamatergic inputs to BNST CRF neurons in alcohol drinking behavior. K. E. PLEIL*; A. M. KENDRA; T. L. KASH. *Univ. of North Carolina.*

9:00 AA10 **150.10** Increased CRF signaling in a ventral tegmental area-interpeduncular nucleus-medial habenula circuit induces anxiety during nicotine withdrawal. R. ZHAO-SHEA*; L. LIU; S. DEGROOT; J. NGOLAB; X. PANG; O. GEORGE; P. GARDNER; A. TAPPER. *Univ. of Massachusetts Med. Sch., The Scripps Res. Inst.*

10:00 AA11 **150.11** Differential effects on the sensitization of amphetamine with concurrent exposure to restraint stress in rats. M. PEET; J. WICKWIRE*; L. E. BAKER. *Western Michigan Univ.*

11:00 AA12 **150.12** Proinflammatory signaling regulates voluntary alcohol intake and escalation of consumption after exposure to social defeat stress in mice. F. REHMAN; C. KARLSSON; J. SCHANK; E. BARBIER; J. TAPOCIK; M. SOLOMON; H. C. PANT*; A. THORSELL; M. HEILIG. *NIH, NIH, Linkopings Univ.*

8:00 AA13 **150.13** The effects of gestational restraint stress on maternal corticosterone and maternal behavior in the C57BL/6 and DBA/2 mouse strains: Implications for gene-environment interactions that mediate the phenotype of prenatal stress offspring. J. R. BAGLEY*; G. OLIVARRIA; D. MALINIAK; T. E. KIPPIN. *UC Santa Barbara.*

POSTER

151. Amphetamine Reinforcement I

Theme C: Disorders of the Nervous System

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

8:00 AA14 **151.01** Response to a novel environment predicts amphetamine-induced 50 kHz ultrasonic vocalizations after withdrawal from a low and high dose of amphetamine. E. J. GARCIA*; T. J. MCCOWAN; K. C. JOHNS; M. E. CAIN. *Kansas State Univ.*

9:00 AA15 **151.02** Methamphetamine decreases calcium current density and alters paired-pulse facilitation of glutamate release in the mouse prefrontal cortex. V. BISAGNO*; J. A. MUÑIZ; C. RIVERO-ECHETO; J. CADET; E. GARCIA-RILL; F. J. URBANO; B. GONZALEZ. *ININFA-CONICET, Natl. Inst. on Drug Abuse, Univ. of Arkansas for Med. Sci., IFIBYNE-CONICET.*

10:00 AA16 **151.03** Mu-opioid receptor knockdown in the rat ventral tegmental area prevents intermittent social defeat stress-induced changes in nucleus accumbens ΔFosB and TrkB receptor expression. C. E. JOHNSTON*; A. PRATT; A. W. LASEK; R. P. HAMMER, Jr.; E. M. NIKULINA. *Arizona State Univ. - Neurosci. Program, Univ. of Illinois, Univ. of Arizona Col. of Med.*

11:00 AA17 **151.04** methamphetamine, mdma and the "bath salts" constituent mdpv induce cytotoxic effects in bovine brain microvessel endothelial cells. S. F. ALI*; H. ROSAS-HERNANDEZ; E. CUEVAS; S. M. LANTZ-MCPEAK; B. L. ROBINSON; S. Z. IMAM; M. G. PAULE; C. GONZALEZ; K. C. RICE; B. G. GANNON; W. E. FANTEGROSSI. *Neurochemistry Lab, Div. of Neurotoxicology, Natl. Ctr. Toxicological Res/Fda, Lab. de Fisiologia Celular,, Lab. de Fisiologia Celular, Drug Design & Synthesis Section, Chem. Biol. research Br., UAMS.*

8:00 AA18 **151.05** Amphetamine sensitization alters neuronal morphology and oxide nitric markers on hippocampus and memory and learning behaviors. L. ARROYO GARCÍA*, SR; E. E. JURADO; P. AGUILAR-ALONSO; E. BRAMBILA; G. FLORES; F. DE LA CRUZ. *Benemerita Univ. Autonoma De Puebla, Inst. Politécnico Nacional.*

9:00 AA19 **151.06** Amphetamine withdrawal alters the expression of organic cation transporter-3 in several limbic brain regions. R. R. SOLANKI*; J. SCHOLL; M. WATT; K. RENNER; G. FORSTER. *Univ. of South Dakota, Univ. of South Dakota.*

10:00 AA20 **151.07** Anxiety-like behavior in rats undergoing amphetamine withdrawal is modulated by serotonin in the ventral hippocampus. J. L. SCHOLL*; W. TU; A. COOK; M. MEARS; M. J. WATT; K. J. RENNER; G. L. FORSTER. *Univ. of South Dakota, Univ. of South Dakota.*

11:00 AA21 **151.08** Differential effects of amphetamine withdrawal on central and peripheral corticosterone levels in response to stress. B. BRAY*; J. SCHOLL; W. TU; M. WATT; K. RENNER; G. FORSTER. *Sanford Sch. of Medicine, Univ. of South Dakota, Univ. of South Dakota.*

8:00 AA22 **151.09** Histone deacetylase 2 regulates methamphetamine-induced immediate early gene expression in the nucleus accumbens. O. V. TORRES*; M. MCCOY; S. JAYANTHI; B. LADENHEIM; J. L. CADET. *Natl. Inst. On Drug Abuse (NIDA).*

9:00 AA23 **151.10** Modafinil and methamphetamine induce differential effects on mRNA expression of epigenetic regulators in the mouse prefrontal cortex. B. GONZALEZ*; J. A. MUÑIZ; S. JAYANTHI; J. CADET; E. GARCIA-RILL; F. J. URBANO; V. BISAGNO. *ININFA - Pharmacol. Res. Inst., ININFA - Pharmacol. Res. Inst., Natl. Inst. on Drug Abuse, Univ. of Arkansas for Med. Sci., IFIByNE-CONICET.*

10:00 AA24 **151.11** Methamphetamine differentially affects brain-derived neurotrophic factor and cell death factors in the dorsal and ventral hippocampus: A new risk factor for methamphetamine abuse. M. H. GALINATO*; L. O. ORTIZ; C. D. MANDYAM. *UCSD, The Scripps Res. Inst., Univ. Complutense Madrid, Campus Somosaguas.*

11:00 BB1 **151.12** Kappa opioids receptors blockade attenuates the expression of locomotor amphetamine sensitization. J. A. FUENTEALBA*; L. NARANJO; R. I. GATICA. *Pontificia Univ. Catolica De Chile, Pontificia Univ. Catolica de Chile, Pontificia Univ. Catolica de Chile.*

8:00 BB2 **151.13** The role of differential rearing and mGluR5 inactivation on amphetamine self-administration in male rats. D. ARNDT*; Z. DIETZ; K. JOHNS; M. E. CAIN. *Kansas State Univ.*

9:00 BB3 **151.14** Inhibiting cyclin-dependent kinase 5 in the nucleus accumbens differentially affects the induction and expression of locomotor conditioning by amphetamine. P. VEZINA*; B. F. SINGER. *The Univ. of Chicago, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 BB4 **151.15** Aberrant Akt signaling disrupts central DA homeostasis and alters amphetamine induced behaviors. O. DADALKO; M. SIUTA; A. POE; K. NISWENDER; K. ERREGER; H. MATTHIES; A. GALLI*. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

11:00 BB5 **151.16** Impact of homotypic stress exposure on methamphetamine self-administration in rats. C. D'ARCY; J. N. HAMDAN; M. MIRANDA-ARANGO; L. E. O'DELL; K. L. GOSSELINK*. *The Univ. of Texas at El Paso, The Univ. of Texas at El Paso, Univ. Texas at El Paso.*

8:00 BB6 **151.17** Effects of methamphetamine on neural substrates of inhibition of sexual behavior in the male rat. L. M. COOLEN*; L. M. BISHOP; K. S. FROHMADER. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Michigan.*

9:00 BB7 **151.18** Methamphetamine accelerates cellular senescence through stimulation of de novo ceramide biosynthesis. N. REALINI*; A. AVANESIAN; G. ASTARITA; B. GRIMALDI; A. BASIT; Z. JUSTINOVA; L. PANLILIO; S. GOLDBERG; D. PIOMELLI. *Italian Inst. of Technol., Univ. of California, Natl. Inst. on Drug Abuse.*

10:00 BB8 **151.19** Resolving the contribution of nucleus accumbens glutamatergic afferents during amphetamine sensitization using Gi/o-coupled DREADDs. A. M. WUNSCH*; E. A. DONCKELS; J. F. NEUMAIER; S. M. FERGUSON. *Univ. of Washington, Seattle Children's Res. Inst.*

11:00 BB9 **151.20** Concurrent self-administration of methamphetamine and sexual behavior increases vulnerability for methamphetamine abuse in male rats. L. M. BISHOP*; L. N. BELOATE; K. B. FREEMAN; T. C. NAPIER; L. M. COOLEN. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Rush Univ., Univ. of Mississippi Med. Ctr.*

8:00 BB10 **151.21** Activation of NMDA receptors in the nucleus accumbens regulates natural reward-induced ΔFosB expression and increased d-amphetamine reward seeking in male rats. L. N. BELOATE*; P. W. WEEMS; G. CASEY; I. C. WEBB; L. M. COOLEN. *Univ. of Mississippi Med. Center, Program In Neurosci., Millsaps Col., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

9:00 BB11 **151.22** Incubation of methamphetamine and palatable food craving after punishment-induced abstinence. I. N. KRASNOVA*; N. J. MARCHANT; B. LADENHEIM; M. T. MCCOY; L. V. PANLILIO; J. M. BOSSERT; Y. SHAHAM; J. L. CADET. *NIDA, NIH, DHHS, NIDA, NIH, DHHS.*

10:00 BB12 **151.23** Estradiol exacerbates anxiety during acute methamphetamine withdrawal in female mice. A. S. RAUHUT*; M. STREITZ; A. TRAPPANESE; C. WOODY; M. A. CURRAN-RAUHUT. *Dickinson Col., Dickinson Col.*

11:00 BB13 **151.24** Methamphetamine-induced hyperactivity and reinforcement learning in rats selectively-bred for high- and low-voluntary running. A. SAGE*; N. P. JACKSON; J. M. JUDD; E. I. FULLERTON; M. J. WILL; F. W. BOOTH; D. K. MILLER. *Univ. of Missouri.*

8:00 BB14 **151.25** Role of the ventral tegmental area in methamphetamine extinction: AMPA receptor-mediated neuroplasticity. H. CHEN*; J. CHEN. *Chang-Gung Univ.*

9:00 BB15 **151.26** Anti-craving effects of environmental enrichment after methamphetamine self-administration. N. THIRIET*; C. NICOLAS; R. S. HOFFORD; M. ISTIN; A. LAFRAGETTE; M. T. BARDO; M. SOLINAS. *LNEC, INSERM U 1084, Univ. of Kentucky.*

10:00 BB16 **151.27** Food- and methamphetamine-induced reward is expressed during the day but not at night in C3H/HeN mice. S. J. CLOUGH*; R. L. HUDSON; M. L. DUBOCOVICH. *Univ. At Buffalo Sch. of Med. and Biomed. Sci., Univ. At Buffalo Sch. of Med. and Biomed. Sci.*

11:00 BB17 **151.28** Age- and sex-dependent differences in methamphetamine and saccharin self-administration. E. R. HANKOSKY*; R. M. HAAKE; C. HONG; A. R. GOLD; J. M. GULLEY. *Univ. of Illinois, Univ. of Illinois.*

POSTER

152. Food and Addiction Mechanisms

Theme C: Disorders of the Nervous System

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

8:00 BB18 **152.01** Are all rewards the same? Old question, new evidence. M. MINHAS*; S. DANIELS; F. LERI. *Univ. of Guelph.*

9:00 BB19 **152.02** Behavioral calories? A comparison between high fructose corn syrup and sucrose. A. LEVY*; G. COLANGELO; M. EL-BABA; F. LERI. *Univ. of Guelph.*

10:00 BB20 **152.03** Does the ratio of fructose-glucose matter? a study of reinforcement and neural correlates. F. LERI*; P. MARSHALL; K. KENT; A. SHORE; T. DOWNS. *Univ. Guelph.*

11:00 BB21 **152.04** Pharmacological modulation of fructose/glucose seeking: Role of opioid systems. J. FERDINAND*; P. MARSHALL; F. LERI. *Psychology.*

8:00 BB22 **152.05** Anhedonic behavior during acute withdrawal from high fructose corn syrup. S. DANIELS*; F. LERI. *Univ. of Guelph.*

9:00 BB23 **152.06** High trait impulsivity predicts food addiction-like behavior in the rat. C. VELAZQUEZ*; A. FERRAGUD; C. MOORE; B. EVERITT; V. SABINO; P. COTTONE. *Boston Univ., Univ. of Cambridge.*

10:00 BB24 **152.07** Essential oil of angelicae gigantis radix, dang qui, regulates expression profiles of appetite-related hypothalamic neurohormones in high fat diet-induced obesity mice via stat3 signaling pathway. S. JEON; J. PARK; S. KIM; C. PARK; M. R. KIM*. *Daegu Haany Univ., Daegu Haany Univ., Korean Med. Industry Support Center, Daegu Technopark.*

11:00 BB25 **152.08** Sucrose reward-induced decrease in glutamate release probability in the basolateral amygdala. S. DI*; Y. M. ULRICH-LAI; J. G. TASKER. *Tulane Univ., Univ. of Cincinnati.*

8:00 BB26 **152.09** Sex differences in demand for highly palatable food rewards: Role of orexin neurons. L. R. FREEMAN*; B. S. BENTZLEY; G. ASTON-JONES. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

9:00 BB27 **152.10** Influence of orexin system on drug seeking in binge eating prone and binge eating resistant rats. K. A. RICHARDSON*; S. UTHAYATHAS; T. ZERIC; R. ST. LAURENT. *Howard Univ. Col. of Med., NIDA-Intramural Res. Program.*

10:00 BB28 **152.11** Leptin directly inhibits the excitability of putative ventral tegmental area dopaminergic neurons through activation of K^+ conductance. S. KOYAMA*; T. MURAKAMI; M. ENJOJI. *Fukuoka Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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11:00 BB29 **152.12** Sugar and the regulation of hypothalamic anorectic peptides. C. ZHAO; E. CAMPBELL; A. SCHLAPPAL; T. W. CASTONGUAY*. *Univ. of Maryland, Univ. Maryland.*

8:00 BB30 **152.13** A forward genetic mouse model of compulsive eating: Implications for genome-wide studies of eating disorder traits. S. L. KIRKPATRICK; A. BOLGIONI; M. K. MULLIGAN; P. COTTONE; C. D. BRYANT*. *Boston Univ. Sch. of Med., Univ. of Tennessee Hlth. Sci. Ctr.*

9:00 BB31 **152.14** High fat diet and food restriction differentially modify the behavioral effects of pramipexole in high-yawning and low-yawning sublines of Sprague-Dawley rats. M. HUBIERNA CORDERO*; M. CORTES; J. EGUIBAR; M. MARTÍNEZ-GÓMEZ; F. CASTELÁN. *Inst. of Physiology, BUAP, Univ. Autónoma de Tlaxcala, Univ. Autónoma de Tlaxcala, Univ. Nacional Autónoma de México.*

POSTER

153. Mechanisms of Drug Withdrawal and Aversion

Theme C: Disorders of the Nervous System

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

8:00 BB32 **153.01** Similarities in withdrawal-related hypoactivity produced by amphetamine and morphine in rats. W. WHITE*; I. M. WHITE. *Morehead State Univ.*

9:00 BB33 **153.02** Dopaminergic adaptations in striatal brain regions in ethanol dependent and non-dependent mice. W. C. GRIFFIN*, III; H. L. HAUN; C. E. MAY; L. N. LUDERMAN; K. E. KOCH; H. C. BECKER. *Med. Univ. South Carolina, Med. Univ. South Carolina and VAMC.*

10:00 CC1 **153.03** Kappa-opioid receptor antagonism in the central amygdala attenuates escalated alcohol self-administration but not physiological withdrawal symptoms in alcohol dependent rats. J. KISSLER*; B. WALKER. *Washington State Univ., Washington State Univ.*

11:00 CC2 **153.04** A role for T-type calcium channels in alcohol withdrawal-induced anxiety. M. L. MAFFEO MASICAMPO*; M. A. RIEGLE; E. CARTER; J. L. WEINER; D. W. GODWIN. *Wake Forest Med. Ctr.*

8:00 CC3 **153.05** Alcohol withdrawal enhances the activity of protein kinase A and C in rat inferior colliculus neurons. L. R. AKINFIRESOYE; P. N'GOUEMO*. *Georgetown University Medical Center.*

9:00 CC4 **153.06** Acute ethanol enhanced glutamatergic transmission via dopamine 1 receptor in rat lateral habenula mediated ethanol aversion. W. ZUO*; R. FU; Y. ZHANG; G. XIE; W. HUANG; F. HOPF; J. YE. *Rutgers NJMS, Ernest Gallo Clin. and Res. Ctr.*

10:00 CC5 **153.07** Nicotinic Acetylcholine Receptors (nAChRs) control the release of acetylcholine and noradrenaline in the rodent habenulo-interpeduncular complex. P. SCHOLZE*; F. BEIRANVAND; C. ZLABINGER; S. HUCK. *Med. Univ. Vienna.*

11:00 CC6 **153.08** Mouse model of OPRM1 (A118G) polymorphism: Effects on weight gain and negative affect following western diet and withdrawal from nicotine. B. G. LEE*; S. DOSHI; J. A. BLENDY. *Univ. of Pennsylvania, Perelman Sch. of Med., Univ. of Pennsylvania.*

8:00 CC7 **153.09** Withdrawal following nicotine self-administration produces hyperphagia and increases body weight gain in rats. H. D. SCHMIDT*; E. G. MIETLICKI-BAASE; A. C. ARREOLA; M. R. HAYES. *Univ. of Pennsylvania Sch. of Med., Univ. of Pennsylvania.*

9:00 CC8 **153.10** FAAH inhibitor promotes depressive-like behaviors in nicotine abstinent rats that correlate with the alteration of CB1 receptor expression and activity in the habenula. S. CAILLE*; E. ZAMBERLETTI; M. CADOR; T. RUBINO; A. SIMONNET. *CNRS UMR 5287, Univ. of Insubria.*

10:00 CC9 **153.11** Cellular and synaptic mechanisms of nicotine aversion. S. L. WOLFMAN; R. AL-HASANI; J. G. MCCALL; M. R. BRUCHAS; D. S. MCGEHEE*. *Univ. of Chicago, Washington Univ., Washington Univ., Univ. Chicago.*

11:00 CC10 **153.12** Varenicline enhances dopamine release facilitation after long-term nicotine treatment and withdrawal. X. A. PEREZ*; T. KHROYAN; J. M. MCINTOSH; M. QUIK. *SRI Intl., Univ. of Utah and George E. Wahlen Veterans Affairs Med. Ctr.*

8:00 CC11 **153.13** ● Mice lacking alpha 7 nicotinic receptors have low hit rate-driven inattention but remain subject to nicotine withdrawal-induced inattention via response disinhibition. K. K. HIGA*; A. GRIM; M. KAMENSKI; J. VAN ENKHUIZEN; X. ZHOU; K. LI; J. C. NAVIAUX; L. WANG; R. K. NAVIAUX; A. MARKOU; J. W. YOUNG. *UC San Diego, Res. Services, VA San Diego Healthcare Syst., Dept. of Medicine, UCSD Sch. of Med.*

9:00 CC12 **153.14** Interoception and alcohol addiction: Vagotomy suppresses the alcohol deprivation effect. S. VICENCIO*; C. IBAÑEZ; M. E. QUINTANILLA; P. E. MALDONADO. *ICBM, Fac. of Medicine, Univ. De Chile., BNI, CENEM, Fac. of Medicine, Univ. de Chile., Hosp. Clinico, Fac. of Medicine, Univ. de Chile.*

10:00 CC13 **153.15** Smoking and limbic circuit inhibition: Inhibition for reward versus inhibition to avoid a punishment. F. MUELLERKLEIN*; E. HONG. *MPRC.*

11:00 CC14 **153.16** PACAP signaling enhances BNST neuronal excitability and increases circulating corticosterone. K. R. LEZAK*; E. ROELKE; O. HARRIS; G. COCCHIARO; G. MISSIG; C. W. ROMAN; D. J. TOUFEXIS; K. M. BRAAS; V. MAY. *Univ. of Vermont, Univ. of Vermont Col. of Med.*

8:00 CC15 **153.17** Activation of ventral midbrain neurotensin type 2 receptors sensitizes to amphetamine-induced locomotor activity. D. LEVESQUE*; C. BOUCHARD; P. ROMPRE. *Univ. of Montreal, Fac. of Pharm., Univ. of Montreal.*

9:00 CC16 **153.18** Selective NPY Y2 receptor activation excites Basolateral Amygdala pyramidal neurons by suppressing powerful dendritic GABA inhibition. J. P. MACKAY*; W. F. COLMERS; J. H. URBAN. *Universty of Alberta, Univ. of Alberta, Chicago Med. School/Rosalind Franklin Univ. of Med. & Sci.*

10:00 CC17 **153.19** Assessing the role of CRHR2 in the raphe nuclei and UCN2 in the locus coeruleus on anxiety- and depression-related behavior. A. KOLARZ*; N. DEDIC; M. SCHIEVEN; R. BECKERVORDERSANDFORTH; D. KUMAR; C. FLACHSKAMM; M. KIMURA; C. D. LIE; C. T. WOTJAK; W. WURST; J. M. DEUSSING. *Max Planck Inst. of Psychiatry, Max Planck Inst. of Psychiatry, Univ. of Erlangen-Nuremberg, Helmholtz Zentrum München.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 CC18 **153.20** Neurotensin and anxiety-related behaviour in the oval bed nucleus of the stria terminalis. C. P. NORMANDEAU*; A. P. VENTURA-SILVA; M. H. NAUGHTON; J. M. PÊGO; É. C. DUMONT. *Queen's Univ., Univ. of Minho, Queen's Univ.*

8:00 CC19 **153.21** ● Spotlight on the role of ventral midbrain neurotensin receptors and extracellular signal regulated kinase in reward and anxiety-like behavior. K. A. ROUIBI*; E. NEFF; C. BOUCHARD; P. ROMPRE. *Univ. De Montréal.*

POSTER

154. Traumatic Brain Injury: Perinatal and Pediatric

Theme C: Disorders of the Nervous System

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

8:00 CC20 **154.01** Effects of *in utero* exposure to low and high doses of magnesium sulfate on the cortical angiogenesis. M. LECUYER*; M. RUBIO; M. LECOINTRE; S. JEGOU; I. LEROUX-NICOLLET; C. ALI; C. CHOLLAT; S. MARRET; D. VIVIEN; B. GONZALEZ. *Neovasc ERI 28, INSERM U919 unit "Serine proteases and Pathophysiology of the neurovascular Unit", INSERM U919 unit "Serine proteases and Pathophysiology of the neurovascular Unit, Dept. of Neonatal Pediatrics and Intensive Care, Rouen Hosp.*

9:00 CC21 **154.02** Patterns of brain growth following HI and therapeutic hypothermia in a neonatal mouse model. J. BURNSED; R. CHAVEZ-VALDEZ; K. KESAVAN; M. HOSSAIN; L. MARTIN; J. ZHANG; F. J. NORTHINGTON*. *Johns Hopkins Univ. SOM, Johns Hopkins Univ. SOM, Johns Hopkins Univ. SOM, Johns Hopkins Univ. Sch. of Med.*

10:00 CC22 **154.03** Modeling preterm brain injury and "neuroplacentology" in a dish. M. AGRAWAL*; A. A. PENN. *Children's Natl. Med. Ctr., Children's Natl. Med. Ctr.*

11:00 CC23 **154.04** Preclinical testing of neurosteroids for neural injury caused by premature birth. W. A. KOSS*; A. A. PENN. *Children's Natl. Med. Ctr., Children's Natl. Med. Ctr.*

8:00 CC24 **154.05** Altered fractional anisotropy in developing white matter after congenital heart surgery. N. ISHIBASHI; A. V. KOROTCOV; L. KOROTCOVA; S. LIN; K. AGEMATSU; P. WANG; R. A. JONAS*. *Children's Natl. Med. Ctr., Howard Univ., Children's Natl. Med. Ctr.*

9:00 CC25 **154.06** Sexual differences in neurotrophic patterns after HI injury and in response to hypothermia. R. CHAVEZ-VALDEZ*; L. MARTIN; J. BURNSED; E. GAUDA; F. NORTHINGTON. *Johns Hopkins University- Sch. of Med., Johns Hopkins University- Sch. of Med., Johns Hopkins University- Sch. of Med.*

10:00 CC26 **154.07** Neuroprotective effects of levetiracetam in a murine model of periventricular leukomalacia. A. CHAN*; C. CHEN; S. DEHGHAN; W. DENG; D. E. PLEASURE. *UC Davis, UC Davis, UC Davis.*

11:00 CC27 **154.08** Spinal monoamine neurotransmitters after antenatal hypoxia-ischemia in rabbit cerebral palsy model. A. DROBYSHEVSKY*; S. TAKADA; K. LUO; L. YU; K. QUINLAN; J. VASQUEZ-VIVAR; M. NOGUEIRA; S. TAN. *Northshore Univ. Hlth. Syst. Res. Inst., Univ. de São Paulo, Northwestern Univ., Med. Col. of Wisconsin.*

8:00 CC28 **154.09** Hypothermia prevents synaptic actin cytoskeletal modifications induced by perinatal asphyxia. I. HERRERA; M. AON BERTOLINO; J. ROMERO; R. KOLLIKER-FRERS; M. HOLUBIEC; L. GIRALDEZ; G. SANTOS; F. CAPANI*. *Inst. Inv. Cardiológicas Prof. Dr. Alberto C. Taquini, UBA-CONICET, Univ. Catolica Argentina, Univ. Estadual do Sudoeste da Bahia, Univ. Kennedy.*

9:00 CC29 **154.10** Modulation of vasculogenesis due to rh erythropoietin in the hypoxic developing mouse brain. R. TROLLMANN*; S. JUNG; F. BRACKMANN; M. RICHTER-KRAUS. *Univ. of Erlangen.*

10:00 CC30 **154.11** Perinatal hyperoxia alters the developmental time-course of hippocampal cells. J. ABBAH*; L. CHEW; V. GALLO. *Children's Natl. Med. Ctr.*

11:00 CC31 **154.12** Prenatal exposure to ketamine impairs the cortical integration of gabaergic interneurons and induces long-term sex-dependent behavioral deficits in transgenic gad67gfp mice. B. GONZALEZ*; C. ALIGNY; C. ROUX; N. DOURMAP; Y. RAMDANI; S. JÉGOU; P. LEROUX; I. LEROUX; S. MARRET. *Inserm ERI28, Rouen Hosp.*

8:00 CC32 **154.13** Basal and stimulated dopamine/DOPAC extracellular content in frontal cortex of rats perinatally asphyxiated and treated with carbamazepine. S. J. LOPEZ-PEREZ*; J. CASILLAS-BARBA; A. MORALES-VILLAGRÁN. *Univ. of Guadalajara.*

POSTER

155. Striate Cortex: Maps and Their Circuits

Theme D: Sensory and Motor Systems

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

8:00 CC33 **155.01** Visualizing cortical maps with synaptic resolution. D. E. WILSON*; D. E. WHITNEY; D. FITZPATRICK. *Max Planck Florida Inst. For Neurosci.*

9:00 CC34 **155.02** Weakly coherent neuronal interactions are sufficient to explain highly coherent orientation preference maps. B. HEIN*; M. KASCHUBE. *FIAS Frankfurt, Frankfurt Inst. for Advanced Studies.*

10:00 CC35 **155.03** Large and small scale structure of functional maps in primary visual cortex. S. P. DUARTE*; J. SCHUMMERS. *Max Planck Florida Inst.*

11:00 CC36 **155.04** The influence of patchy interhemispheric circuits on intrinsically generated maps in early visual areas. T. S. ALTAVINI*; D. ERIKSSON; S. CONDE-OCAZIONEZ; T. WUNDERLE; K. E. SCHMIDT. *Federal Univ. of Rio Grande Do Norte, Ernst Strüngmann Inst. (ESI).*

8:00 DD1 **155.05** A functional theory of ocular dominance columns. A. C. DOBBINS*. *Univ. Alabama Birmingham.*

9:00 DD2 **155.06** Visual pathways in humans with ephrin-B1 deficiency. M. B. HOFFMANN*; H. THIEME; K. LIEDECKE; S. MELTENDORF; J. REUPSCH; M. ZENKER; I. WIELAND. *Ophthalmology, Otto-von-Guericke Univ., Ctr. for Behavioural Brain Sci., Otto-von-Guericke Univ.*

10:00 DD3 **155.07** The spatial precision of contextual feedback to V1 using 3T and 7T fMRI. L. S. PETRO*; F. W. SMITH; J. ZIMMERMANN; F. DE MARTINO; L. MUCKLI. *Univ. of Glasgow, Univ. of East Anglia, Maastricht Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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11:00 DD4 **155.08** The development of visual orientation selectivity: a model. A. W. FREEMAN*; J. JEGANATHAN; B. J. SEGULA; J. ALONSO. *Univ. of Sydney, Univ. of Sydney, State Univ. of New York.*

8:00 DD5 **155.09** Emergence of ON - OFF maps precedes orientation maps in ferret visual cortex. G. B. SMITH*; D. E. WHITNEY; M. KASCHUBE; D. FITZPATRICK. *Max Planck Florida Inst. For Neurosci., Frankfurt Inst. for Advanced Studies.*

9:00 DD6 **155.10** ON - OFF maps in supragranular layers of ferret visual cortex. D. E. WHITNEY*; G. B. SMITH; M. KASCHUBE; D. FITZPATRICK. *Max Planck Inst., Frankfurt Inst. for Advanced Studies.*

10:00 DD7 **155.11** Chronic imaging of GCaMP6 population activity in ferret visual cortex reveals spontaneous modular patterns of activity prior to eye opening. M. KASCHUBE*; B. HEIN; K. NEUSCHWANDER; G. B. SMITH; D. E. WHITNEY; D. FITZPATRICK. *Frankfurt Inst. For Advanced Studies, Max Planck Inst.*

11:00 DD8 **155.12** Local correlations between the representations of visual space and orientation in primary visual cortex. J. JIN*; J. KREMKOW; Y. WANG; J. S. KOMBAN; R. LASHGARI; J. M. ALONSO. *SUNY-Optometry.*

8:00 DD9 **155.13** Cortical maps for ON/OFF spatial phase explain the geometry of orientation maps in primary visual cortex. J. KREMKOW*; J. JIN; S. J. KOMBAN; Y. WANG; R. LASHGARI; J. ALONSO. *State Univ. of New York.*

9:00 DD10 **155.14** Comparing enfant and powerdiva sweep visual evoked potential (svep) acuity assessments. W. RIDDER*; B. WAITE; T. MELTON. *SCCO.*

10:00 DD11 **155.15** ● Time-course of orientation tuning and stimulus discriminability for neurons in tree shrew primary visual cortex examined by two photon calcium imaging. X. HUANG*; W. H. BOSKING; D. E. WILSON; B. RÓZSA; D. FITZPATRICK. *Max Planck Florida Inst. for Neurosci., Inst. of Exptl. Medicine, Hungarian Acad. of Sci., Pázmány Péter Catholic Univ.*

11:00 DD12 **155.16** Relating the diversity of interneuronal subtypes to their functional roles in development, homeostasis and sensory processing. P. RUDIGER*; J. A. BEDNAR. *Inst. For Adaptive and Neural Computation.*

8:00 DD13 **155.17** A class of computational models for orientation selectivity in mouse primary visual cortex. K. MERGENTHALER*; D. ROY; C. RUNYAN; J. PETRAVICZ; M. SUR; K. OBERMAYER. *Technische Univ. Berlin, Charite, Harvard Med. Sch., MIT.*

9:00 DD14 **155.18** A two stage, cascade model of electrocorticographic signals in human visual cortex. D. HERMES*; K. KAY; J. WINAWER. *Stanford Univ., NYU, Stanford Human Intracranial Cognitive Electrophysiology Program (SHICEP), Washington Univ. in St. Louis.*

10:00 DD15 **155.19** A model relating temporal processing across spatial and temporal scales using electrophysiological and optical imaging data in primate V1. J. R. STEVENS*; S. CHEMLA; G. BENVENUTI; F. CHAVANE; J. A. BEDNAR. *Inst. for Adaptive and Neural Computation, Inst. de Neurosciences de la Timone.*

POSTER

156. Visual Attention

Theme D: Sensory and Motor Systems

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

8:00 DD16 **156.01** Feature-based attentional modulation of macaque area MT in a match-to-sample task. P. SCHWEDHELM*; S. TREUE. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci.*

9:00 DD17 **156.02** Attention sharpens the tuning curves of MT neurons during the on-response to moving stimuli. V. MEHRPOUR*; J. C. MARTINEZ-TRUJILLO; S. TREUE. *German Primate Ctr. (DPZ), Bernstein Ctr. for Computat. Neurosci., McGill Univ.*

10:00 DD18 **156.03** Emergence of functional clustering in optimized neural populations. W. HUANG*; K. ZHANG. *Johns Hopkins Univ. Sch. of Med.*

11:00 DD19 **156.04** Neural correlates of change blindness in human early visual cortex. L. YEH*; J. L. GARDNER. *RIKEN Brain Sci. Inst., Stanford Univ.*

8:00 DD20 **156.05** Early visually-evoked potentials, alpha, and beta band activities in low- and high-functioning individuals with autism and healthy controls. K. SUNG; B. GORDON*. *Johns Hopkins Univ. Sch. of Med.*

9:00 DD21 **156.06** Parts-based processing in autism. T. A. LAZAR*; S. SHOMSTEIN; J. J. MAROTTA. *Univ. of Manitoba, George Washington Univ., Univ. of Manitoba.*

10:00 DD22 **156.07** The impact of graded spatial attention and motion coherence on human direction discrimination thresholds for linear visual motion. V. K. VEITH*; S. TREUE. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci.*

11:00 DD23 **156.08** Visual search for action categories alters semantic representation in the human brain. T. CUKUR*; S. NISHIMOTO; A. G. HUTH; J. L. GALLANT. *Bilkent Univ., Bilkent Univ., Natl. Inst. of Information and Communications Technol., Univ. of California, Berkeley.*

8:00 DD24 **156.09** Neuronal activity in caudate nucleus during a covert spatial attention task. F. ARCIZET*; R. KRAUZLIS. *LSR-NIH, Lab. of Sensorimotor Res.*

9:00 DD25 **156.10** ▲ Saccadic and perceptual biases as proxies for attention. J. J. MAIER*; E. L. CHU; P. J. KOHLER; A. SOLTANI. *Dartmouth Col., Stanford Univ., Dartmouth Col.*

10:00 DD26 **156.11** Emotional attention: Ocular behavior and pupil size modulation during free viewing of arrays of natural images with different emotional valence. C. I. ASTUDILLO*; K. MUÑOZ; C. DEVIA; E. BRUNETTI; J. VELASQUEZ; P. E. MALDONADO. *Univ. De Chile - ICBM BNI, CENEM, Fac. of, Univ. De Chile - Dept. of Electrical Engineering. Fac. of Physical and Mathematical Sci., Univ. de Chile - Dept. of Industrial Engineering. Fac. of Physical and Mathematical Sci.*

11:00 DD27 **156.12** The effects of spatial attention on voxel-level population receptive fields and spatial information content. V. A. VO*; T. C. SPRAGUE; J. T. SERENCES. *UCSD.*

8:00 DD28 **156.13** Cell-class specific attentional modulation of neuronal responses and synchronization in the frontal eye field and area V4. P. SAPOUNTZIS; S. J. GOTTS; R. DESIMONE; G. G. GREGORIOU*. *FORTH, NIH, MIT, Univ. of Crete.*

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9:00 DD29 **156.14** Electrofunctional and behavioral indexes of the influence of hypoxia on the activation of neural networks of visuospatial attention. A. ZANI*; G. MARSILI; E. RIZZI; A. SENERCHIA; A. M. PROVERBIO. *Inst. Molecul Bioimaging & Physiol_ibfm_National Council Res. (CNR), Univ. of Milan Bicocca.*

10:00 DD30 **156.15** The multifaceted interaction between attention and luminance contrast in macaque area v4. I. SANI*; E. SANTANDREA; A. GOLZAR; M. C. MORRONE; L. CHELAZZI. *Rockefeller Univerisity, Univ. of Verona, McGill Univ., Univ. of Pisa.*

11:00 DD31 **156.16** ● Decreasing trend of the alpha-peak-frequency during flicker stimulation. G. GARCIA MOLINA*. *Univ. Wisconsin Dept. of Psychiatry, Philips Group Innovation.*

8:00 DD32 **156.17** Task-dependent attentional modulation of initial afferent activity in human primary visual cortex. M. I. VANEGAS-ARROYAVE*; A. BLANGERO; N. GEBODH; A. AZEEZ; S. P. KELLY. *The City Col. of New York, The City Col. of New York.*

9:00 EE1 **156.18** Invariant representations of sought objects are enhanced in IT via a mechanism that is more effective than multiplicative scaling. N. ROTH*; N. C. RUST. *Univ. of Pennsylvania.*

10:00 EE2 **156.19** Effects of learned rank-order rules: Attentional modulation of steady-state visual evoked potentials in human visual cortex during target selection. S. SZUKALSKI*; S. WALTER; M. M. MUELLER. *Univ. of Leipzig.*

POSTER

157. Central Physiology and Anatomy

Theme D: Sensory and Motor Systems

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

8:00 EE3 **157.01** Glutamatergic transmission in the vestibular nucleus is critical to the formation of spatial topography and acquisition of spatial navigation in rats. Y. CHAN*; C. W. MA; K. P. NG; L. HAN; D. K. Y. SHUM. *Univ. Hong Kong Fac Med., Univ. Hong Kong Fac Med.*

9:00 EE4 **157.02** Functional identification of GABAergic medial vestibular neurons in VGAT-Venus transgenic mice. L. HAN*; Y. YANAGAWA; Y. S. CHAN. *The Univ. of Hong Kong, Gunma Univ.*

10:00 EE5 **157.03** Neonatal perturbation of KCC2 and NKCC1 co-transporters in the developing vestibular nucleus impairs vestibular functions. K. S. LAM*; C. W. MA; F. P. BOTELHO; C. H. LAI; D. K. Y. SHUM; Y. S. CHAN. *The Univ. of Hong Kong Fac Med., The Univ. of Hong Kong Fac Med.*

11:00 EE6 **157.04** PACAP immunolocalization in vestibular nuclear neurons of young and aged rats. G. R. HOLSTEIN*; V. L. FRIEDRICH, Jr.; G. P. MARTINELLI. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

8:00 EE7 **157.05** Central vestibular neurons of the vestibulo-sympathetic reflex pathway. G. P. MARTINELLI*; V. L. FRIEDRICH, Jr.; G. R. HOLSTEIN. *Mount Sinai Sch. of Med., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

9:00 EE8 **157.06** The directional sensitivity of the vestibulo-sympathetic reflex in the rat. S. B. YAKUSHIN; G. P. MARTINELLI; Y. XIANG; T. RAPHAN; B. COHEN*. *Mt Sinai Sch. Med., Brooklyn Col. of CUNY.*

10:00 EE9 **157.07** Modeling vestibular control of blood pressure and heart rate and its role in generating vaso-vagal responses. T. RAPHAN*; Y. XIANG; S. B. YAKUSHIN; B. COHEN. *Brooklyn Col. of the City Univ. of New York, Brooklyn Col. of the City Univ. of New York, Icahn Sch. of Med. at Mount Sinai.*

11:00 EE10 **157.08** Activation of blood pressure and heart rate by the vestibulo-sympathetic reflex. S. B. YAKUSHIN*; G. P. MARTINELLI; T. RAPHAN; B. COHEN. *Mount Sinai Med. Ctr., Brooklyn Col. of CUNY.*

8:00 EE11 **157.09** ● Prosthetic vestibular stimulation modulates synchrony and firing frequency of secondary vestibular neurons involved in VOR. C. PHILLIPS*; L. LING; K. NIE; A. NOWACK; J. T. RUBINSTEIN; J. O. PHILLIPS. *Univ. of Washington, Univ. of Washington.*

9:00 EE12 **157.10** Plasticity at the vestibular afferent to central neuron synapse: Effects of vestibular prosthetic stimulation. D. E. MITCHELL*; C. C. DELLA SANTINA; K. E. CULLEN. *McGill Univ., Johns Hopkins Univ. Sch. of Med.*

10:00 EE13 **157.11** Engram of adaptation in the vestibular nuclei following visuo-vestibular mismatch. J. CARCAUD; E. IDOUX; D. EUGENE; M. BERANECK*. *UMR 8119, Univ. Paris Descartes - CNRS, Univ. Paris Descartes.*

11:00 EE14 **157.12** Central nervous system neurons that process vestibular afferent information respond to hindlimb movement: Rostral fastigial nucleus and medial reticular formation neurons. A. MCCALL; D. J. MILLER; M. F. CATANZARO; L. A. COTTER; B. J. YATES*. *Univ. Pittsburgh.*

8:00 EE15 **157.13** Reference frames for encoding self-motion in the posterior cerebellar vermis. J. X. BROOKS; C. Z. MARTIN; A. M. GREEN*. *Univ. Montreal, Univ. Montreal.*

9:00 EE16 **157.14** Compensatory changes of synaptic transmission at different layers of hippocampal CA1 region after bilateral vestibular deafferentation in rats. J. N. ERON*; S. S. UZAKOV; V. A. KORSHUNOV. *Inst. of Higher Nervous Activity and Neurophysiol.*

10:00 EE17 **157.15** Insular vestibular cortex in humans: Intracortical responses to saccular stimulation (VEMPs). S. COLNAGHI*; V. PELLICCIA; F. CARDINALE; I. SARTORI; M. TERZAGHI; M. VERSINO. *Univ. Di Pavia, Ospedale Niguarda-Cà Granda, Ospedale Niguarda-Cà Granda, Natl. Neurolog. Inst. C. Mondino, Univ. of Pavia.*

POSTER

158. Spinal Cord Processing: Pharmacology

Theme D: Sensory and Motor Systems

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

8:00 EE18 **158.01** HDAC and HAT inhibitors differently affect analgesia mediated by group II metabotropic glutamate receptors. M. ZAMMATARO; M. A. SORTINO; C. PARENTI; R. W. GEREAU IV; S. CHIECHIO*. *Univ. of Catania, Univ. of Catania, Washington Univ. Sch. of Med., Univ. of Catania.*

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9:00 EE19 **158.02** Spinal antinociceptive effect of gastrin releasing peptide (GRP) via GABAergic inhibitory interneurons expressing the GRP receptor (GRPR). T. AKIYAMA*; M. TOMINAGA; A. DAVOODI; M. NAGAMINE; K. TAKAMORI; M. I. CARSTENS; E. CARSTENS; E. CARSTENS. *Temple Univ., Juntendo Univ., UC Davis.*

10:00 EE20 **158.03** Descending dopaminergic control of hyperalgesic priming. J. KIM*; D. TILU; T. L. QUINN; G. L. MEJIA; A. SHY; M. N. K. ASIEDU; E. MURAD; R. E. SORGE; P. W. MANTYH; G. DUSSOR; T. J. PRICE. *Univ. of Arizona, Univ. of Taxas at Dallas, Univ. of Alabama at Birmingham.*

11:00 EE21 **158.04** Effects of pregabalin on D-serine content and NMDA receptor-mediated synaptic transmission in the mouse spinal dorsal horn. R. MATSUZAWA; K. KANEKO; T. ASAKAWA; E. KATO; T. FUKUSHIMA; T. TAKASUSUKI; M. MAEKAWA; S. YAMAGUCHI; Y. HORI*. *Dokkyo Univ. Sch. Med.*

8:00 EE22 **158.05** ● Suppression of early microglial interleukin-1β in the ipsilateral dorsal horn facilitates the development of contralateral mechanical allodynia via astrocyte modulation in peripheral inflammatory mirror-image pain rats. H. CHOI; D. ROH; J. MOON; S. CHOI; S. KWON; H. HAN; A. J. BEITZ; S. OH; J. LEE*. *Seoul Natl. Univ., Kyung Hee Univ., Univ. of Minnesota, Dent. Res. Inst. and Dept. of Neurobiol. and Physiol., Sch. of Dentistry, Seoul Nat'l Univ.*

9:00 EE23 **158.06** ▲ Hemokinin-1 mediates pruriceptive processing in the rat spinal cord. H. FUNAHASHI; R. NAONO-NAKAYAMA; H. ABE*; K. EBIHARA; T. NISHIMORI; Y. ISHIDA. *Univ. of Miyazaki, Univ. of Miyazaki.*

10:00 EE24 **158.07** The spinal effects of vgf peptides are mediated in part by the complement 3a receptor. L. VULCHANOVA*; P. D. BRAUN; K. F. KITTO; C. A. FAIRBANKS. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

11:00 EE25 **158.08** Specific modulation of M- and N-type channels alters spinal nociceptive transmission. C. ROZA; J. VICENTE-BAZ; A. GARCIA-ALDEA; I. RIVERA-ARCONADA; J. A. LOPEZ-GARCIA*. *Univ. Alcala.*

8:00 EE26 **158.09** D2 and D3 receptors participate in the antialgesic effect mediated by dopaminergic system activation at spinal cord level. A. ALMANZA-GUTIÉRREZ; F. PELLICER; F. S. MERCADO*. *Inst. Nacional De Psiquiatría.*

9:00 EE27 **158.10** ▲ Role of glutamate receptors in the dorsal reticular nucleus in formalin-induced secondary allodynia. M. RAMIREZ LOPEZ*; M. AMBRIZ-TUTUTI; M. PALOMERO-RIVERO; D. MILLAN-ALDACO; R. DRUCKER-COLIN. *Instituto De Fisiologia Celular.*

10:00 EE28 **158.11** Hemokinin-1 (1-5) elicits the inhibitory effect on pruritic processing. R. NAONO-NAKAYAMA; H. FUNAHASHI; K. TAKAMIYA*; T. NISHIMORI. *Univ. of Miyazaki, JSPS Res. Fellow, Univ. of Miyazaki, Univ. Miyazaki, Grad Sch. Med.*

11:00 FF1 **158.12** Phospho-specific potentiation of synaptic heteromeric alpha3-glycine receptors by 2,6-di-tert-butylphenol. M. A. ACUNA*; G. E. YÉVENES; A. DI LIO; H. U. ZEILHOFER. *Univ. of Zurich, Neurosci. Ctr. Zurich ZNZ, Univ. of Concepción, ETH Zurich.*

8:00 FF2 **158.13** Minocycline inhibits hyperpolarization-activated current Ih in rat substantia gelatinosa neurons. T. LIU*; M. ZHU; X. WANG; D. ZHANG; S. LUO. *The First Affiliated Hosp. of Nanchang Univ., The First Affiliated Hosp. of Nanchang Univ.*

9:00 FF3 **158.14** α2A-adrenergic and delta-opioid receptors act presynaptically to inhibit release of excitatory neurotransmitter from nociceptive afferents. G. L. WILCOX*; C. A. FAIRBANKS; J. J. WAATAJA. *Univ. Minnesota Med. Sch., Univ. Minnesota Med. Sch., Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

10:00 FF4 **158.15** Losartan (Angiotensin II-Receptor 1 antagonist) modulates neuroinflammation in the spinal cord evoked by paclitaxel treatment in rats. M. S. DIALLO*; N. KALYNOVSKA; D. KASPAROVA; J. PALECEK. *Acad. of Sci. of Czech Republic, Charles Univ.*

11:00 FF5 **158.16** mTOR controls dorsal horn protein translation during morphine exposure. S. WU*; L. LIANG; L. SUN; X. GU; B. M. LUTZ; A. Y. BEKKER; Y. TAO. *Rutgers, The State Univ. of New Jersey, Rutgers Grad. Sch. of Biomed. Sciences, New Jersey Med. School, Rutgers, The State Univ. of New Jersey.*

8:00 FF6 **158.17** Losartan attenuates development of neuropathic pain induced by spinal nerve ligation in rats. N. KALYNOVSKA; M. DIALLO; J. PALECEK*. *Inst. of Physiol., Fac. of Sci.*

9:00 FF7 **158.18** ● Modulation of monoamines and antioxidant effect in brain and spinal cord: A potential antinociceptive-antidepressant mechanism of Lutein and Zeaxanthin. L. B. BADGUJAR*; B. SUTARIA; M. SARAF. *Bombay Col. of Pharm., Bombay Col. of Pharm.*

10:00 FF8 **158.19** PI3K/Akt mediates μ opioid receptor-triggered dorsal horn mTOR activation during chronic morphine exposure. X. GU*; L. LIANG; L. SUN; S. WU; B. LUTZ; A. BEKKER; Y. TAO. *NJMS.*

11:00 FF9 **158.20** Inhibiting spinal mTOR attenuates the development and maintenance of morphine-induced tolerance and hyperalgesia. L. LIANG*; L. SUN; S. WU; X. GU; B. LUTZ; A. BEKKER; Y. TAO. *Rutgers, New Jersey Med. Sch.*

POSTER

159. Mechanisms of Neuropathic Pain: Inflammatory Mediators and Neurotrophins

Theme D: Sensory and Motor Systems

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

8:00 FF10 **159.01** Toll-like receptor gene is expressed in neural cells. J. CUI*; D. ERASSO; G. TENDER; E. FU. *Univ. of Miami, Univ. of Miami, Louisiana State Univ.*

9:00 FF11 **159.02** Expression of the Prostaglandin E2 synthases and receptors in spinal cord following peripheral nerve injury. H. KANDA; K. KOBAYASHI; H. YAMANAKA; M. OKUBO*; K. NOGUCHI. *Hyogo Col. of Med.*

10:00 FF12 **159.03** Impact of SIV and subsequent immunological response on cutaneous innervation, epidermal keratinocytes, and dermal vasculature in a non-human primate model. J. R. BOURGEOIS*; P. J. ALBRECHT. *Albany Med. Col.*

11:00 FF13 **159.04** Virtual reality for neurons: Using dynamic clamp to quantify the transition to pathological excitability in cutaneous primary afferent neurons. P. TAKKALA*; S. A. PRESCOTT. *Univ. of Toronto.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 FF14 **159.05** Glial TNF alpha induces Cox-2 expression and PGI2 synthesis in the spinal endothelial cell in neuropathic pain. K. KOBAYASHI*; H. KANDA; H. YAMANAKA; H. YAGI; K. NOGUCHI. *Hyogo Col. of Med.*

9:00 FF15 **159.06** 4-Methylcatechol, an inducer of brain derived neurotrophic factor, ameliorates pain-related negative emotion by preventing the ERK/CREB signaling pathway anterior cingulate cortex. D. MITSUSHIMA*; Y. IWANAGA; K. FUKUHARA; S. YASUDA; T. ARIYOSHI; T. IBUKI; S. OKUYAMA; Y. FURUKAWA; J. ISHIKAWA; T. ISHIKAWA. *Yamaguchi Univ. Grad Sch. Med., Yamaguchi Univ. Grad Sch. Med., Grad. Sch. of Med. Science, Kyoto Prefectural, Col. of Pharmaceut. Sciences,, Yamaguchi Univ. Grad. Sch. of Med., Yamaguchi Univ. Grad. Sch. of Med.*

10:00 FF16 **159.07** Investigating the role of p75NTR in nociception using conditional knockout mice. S. M. BUCKLEY*; N. UNSAIN; L. OSSO; K. BELLEVILLE; D. BARRIERE; J. LONGPRE; J. S. MOGIL; P. SARRET; P. SEGUELA; P. BARKER. *McGill Univ., Univ. de Sherbrooke.*

11:00 FF17 **159.08** BDNF Val66Met polymorphism prevents the development of chronic postsurgical pain. X. LIU*; Y. TIAN; T. GIN; C. CHENG; M. CHAN. *The Chinese Univ. of Hong Kong.*

8:00 FF18 **159.09** Selective contribution of BDNF-TRKB signaling in the anterior cingulate cortex to the maintenance of secondary hyperalgesia and emotional component of neuropathic pain after nerve injury. M. LI; J. LIU; W. GUO; S. ZOU; K. REN; R. DUBNER*; F. WEI. *Univ. Maryland Dent. Sch.*

9:00 FF19 **159.10** Mesolimbic reward circuit mediates chronic neuropathic pain via BDNF signaling. C. LI*; H. ZHANG; Y. QIAN; S. ZHANG; X. GUO; D. LIU; H. DING; M. LIU; H. LIU; M. HAN; J. CAO. *Xuzhou Med. Col., Icahn Sch. of Med. at Mount Sinai.*

10:00 FF20 **159.11** Sex differences in the involvement of spinal P2X4 receptors and BDNF in pain hypersensitivity induced by peripheral nerve injury. J. C. S. MAPPLEBECK; M. W. SALTER*. *Hosp. for Sick Children, Hosp. For Sick Children.*

11:00 FF21 **159.12** Lipoxin A4 role in neuropathic pain following spinal cord injury. A. C. MARTINI*; S. FORNER; A. F. BENTO; G. A. RAE. *UFSC.*

POSTER

160. Motor Unit Recordings, Kinematics, and EMG

Theme D: Sensory and Motor Systems

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

8:00 FF22 **160.01** The effects of elbow flexor motor-point block on upper limb muscle coordination. J. ROH*; A. LAI; A. NADER; M. KENDALL; K. KARVELAS; W. Z. RYMER; R. F. BEER. *Rehabil. Inst. of Chicago, Feinberg Sch. of Medicine, Northwestern Univ., Northwestern Univ., Feinberg Sch. of Medicine, Northwestern Univ., Rehabil. Inst. of Chicago.*

9:00 FF23 **160.02** The impact of segmental trunk support on a reach-to-grasp task while sitting. V. SANTAMARIA*; J. RACHWANI; W. MANSELLE; S. SAAVEDRA; M. WOOLLACOTT. *Univ. of Oregon (UO), Human Physiol. Department: Motor Control and Cognition Lab., Univ. of Hartford.*

10:00 FF24 **160.03** A kinematic model of the *Aplysia* odontophore from high resolution mri data. C. E. KEHL*; D. M. NEUSTADTER; H. J. CHIEL. *Case Western Reserve Univ., Calore LTD, Case Western Reserve Univ.*

11:00 FF25 **160.04** Analysis of joint-angle kinematics of grasping in Rhesus macaque. A. K. SURESH*; G. A. TABOT; A. T. RAJAN; N. G. HATSOPOULOS; S. J. BENSMAIA. *Univ. of Chicago.*

8:00 FF26 **160.05** The effect of the gonadal hormones on the micturition and temporal coordination of pelvic and perineal muscle in female rabbits. O. SANCHEZ GARCIA*; D. L. CORONA-QUINTANILLA; M. MARTÍNEZ-GOMEZ; F. CASTELAN. *Univ. Autonoma De Tlaxcala, Univ. Veracruzana, Inst. de Investigaciones Biomedicas, Univ. Nacional Autónoma de México.*

9:00 FF27 **160.06** Does the surface electromyographic representation of muscle regions change with the joint angle? An investigation with high-density surface electromyography and intramuscular stimulation. A. GALLINA*; T. IVANOVA; J. S. GARLAND. *Univ. of British Columbia.*

10:00 FF28 **160.07** ● Transposed activation of motor units during oscillatory contractions. P. CONTESSA*; J. C. KLINE; C. J. DE LUCA. *NeuroMuscular Res. Center, Boston Univ., Boston Univ., Boston Univ., Boston Univ., Boston Univ.*

11:00 FF29 **160.08** Locomotor synergies in intact, neonatal spinalized and adult spinalized rats- similarities and relationships. Q. YANG*; K. ANKUDOVICH; A. RAMAKRISHNAN; T. KIM; J. VANLOOZEN; S. GISZTER. *Drexel Univ. Col. of Med., Drexel Univ.*

8:00 FF30 **160.09** Influence of metabolite accumulation on motor unit firing rates during fatigue. E. EDWARDS*; L. MAYNARD; A. YASEN; A. CHRISTIE. *Univ. of Oregon, Univ. of Oregon.*

9:00 FF31 **160.10** Motor unit coherence is stable between the follicular and luteal phases of the human menstrual cycle. M. S. TENAN*; A. C. HACKNEY; L. GRIFFIN. *Univ. of Texas - Austin, Univ. of North Carolina - Chapel Hill.*

10:00 FF32 **160.11** Estimation of muscle activity from chronic single unit ventral root recordings. M. J. BAUMAN*; R. A. GAUNT; D. J. WEBER. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

11:00 GG1 **160.12** Analysis of varying excitability in the post-spike period of motoneurons recorded from spastic and non-spastic muscle. N. L. SURESH*; W. Z. RYMER. *Rehabil. of Chicago, Rehablitation Inst. of Chicago, Northwestern Univ.*

8:00 GG2 **160.13** ▲ Muscular endurance training and motor unit firing patterns during fatigue. B. HUYNH*; L. GRIFFIN; J. METTLER. *The Univ. of Texas At Austin, Texas State Univ.*

9:00 GG3 **160.14** Differential activation of the vastus medialis and the vastus medialis oblique. Y. PENG; M. TENAN; L. GRIFFIN*. *Univ. Texas Austin.*

10:00 GG4 **160.15** ● Dynamic adaptation of functional brain network during muscle fatigue. Z. JIANG*; B. YAO; G. H. YUE. *Kessler Fndn., New Jersey Inst. of Technol., Rutgers Univ.*

11:00 GG5 **160.16** ● Statistically sound calculations do not support Common Input and Long-Term synchronization of motor unit firings. J. C. KLINE*; C. J. DE LUCA. *Boston Univ., Boston Univ., Boston Univ., Boston Univ., Boston Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 GG6 **160.17** Neurofunctional differences between power and endurance athletes in the peripheral nervous system? U. WENZEL*; M. WITT; A. VILLRINGER. *Inst. of Training Sci. and Gen. Kinesiology, Max Planck Inst. for Human Cognitive and Brain Sci.*

9:00 GG7 **160.18** ● Advantages of the onion-skin scheme of motor unit firing during voluntary contractions. C. J. DELUCA*; P. CONTESSA. *Boston Univ., Boston Univ., Boston Univ., Boston Univ., Boston Univ.*

10:00 GG8 **160.19** Steadiness and motor unit activity of the elbow flexor muscles with cognitive demand. H. M. PEREIRA*; B. SCHLINDER-DELAP; F. NEGRO; D. FARINA; A. S. HYNGSTROM; K. G. KEENAN; S. K. HUNTER. *Marquette Univ., Georg-August Univ. of Göttingen, Univ. of Wisconsin – Milwaukee.*

POSTER

161. Motor Neuron–Muscle Interface

Theme D: Sensory and Motor Systems

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

8:00 GG9 **161.01** An integrated neural interface for the peripheral nervous system. B. KIM; E. IBARRA; B. GARZA; R. LUNA; Y. CHO; Y. CHOI*. *Univ. of Texas - Pan American, Gangneung-Wonju Natl. Univ.*

9:00 GG10 **161.02** 3-Aminoquiniclidines active at the human $\alpha 3\beta 2$ nAChRs a promise to fight sarcopenia. S. BERTRAND*; J. BÜRGI; G. GIUFFREDI; J. REYMOND; D. BERTRAND. *Hiqscreen, Univ. Bern, HiQscreen.*

10:00 GG11 **161.03** Alterations in the microanatomy at neuromotor synapses of children with spastic cerebral palsy. S. K. YEAGER*; D. L. BENNETT; K. G. ROBINSON; J. L. WATSON; M. C. THEROUX; J. R. CONNOR; K. W. DABNEY; P. G. GABOS; F. MILLER; S. A. SHAH; R. E. AKINS. *Nemours Alfred I. Dupont Hosp. For Children, Nemours Alfred I. duPont Hosp. For Children, Nemours Alfred I. Dupont Hosp. For Children, Nemours Alfred I. Dupont Hosp. For Children, Nemours Alfred I. Dupont Hosp. For Children.*

11:00 GG12 **161.04** Longitudinal expression of gadd45b in developing mammalian skeletal muscle. L. COPES*; R. E. AKINS. *Delaware State Univ., A.I. duPont Hospital/Nemours Hosp. for Children.*

8:00 GG13 **161.05** Changes in the peripheral target and extent of motoneuronal survival across the lifespan of the rat. V. KATHARESAN; I. P. JOHNSON*; Q. ONG. *Univ. of Adelaide.*

9:00 GG14 **161.06** Glial influences on acetylcholine receptor distribution at the developing neuromuscular junction. I. W. SMITH*; Y. LEE; W. J. THOMPSON. *Texas A&M Inst. For Neurosci., Texas A&M Univ., Texas A&M Univ.*

10:00 GG15 **161.07** Construction of *in vitro* human neuromuscular junction with pluripotent stem cell-derived neurons and myotubes. M. YOSHIDA*; M. YAMANE; R. IKEDA; H. SAKURAI; T. NAKAHATA; M. SAITO. *Ctr. For iPS Cell Res. and Application.*

11:00 GG16 **161.08** ● Cellular internalisation of botulinum neurotoxin-based targeted secretion inhibitors (TSI). E. FONFRIA*; V. A. CADD; J. J. KRUPP. *Ipsen Ltd, Ipsen Ltd.*

8:00 GG17 **161.09** Muscle derived nitric oxide mediates homeostatic control of transmitter release in the neuromuscular junction through presynaptic miRNAs. C. M. GOMEZ*; C. WEI; B. BHATTACHARYYA; X. DU. *Univ. Chicago, university of chicago, northwestern university.*

9:00 GG18 **161.10** Association of GADD45β expression and gene methylation patterning in skeletal muscle of patients with spastic cerebral palsy. D. T. BARNES*; K. ROBINSON; S. YEAGER; R. E. AKINS. *Univ. of Delaware, Nemours/ Alfred I. duPont Hosp. for Children.*

10:00 GG19 **161.11** Regulation of NMJ structure by pJNK depends on ubiquitin levels and the catalytic activity of USP14. J. J. HALLENGREN*; J. A. WATSON; A. D. HOWARD; P. CHEN; J. A. WILSON; S. WILSON. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, St. Jude Children's Res. Hosp.*

11:00 GG20 **161.12** Motor neuron secreted Sonic Hedgehog regulates muscle differentiation and maintenance. L. STARIKOV*; M. J. PÉREZ-GARCÍA; A. H. KOTTMANN. *Sophie Davis Sch. of Biomed. Education, CUNY, Vall d´hebron Res. Inst., Columbia Univ.*

8:00 GG21 **161.13** A unique adult skeletal muscle in the moth Manduca sexta does not require innervation for its development. R. J. BAYLINE*, Ph.D.; A. N. GARDNER; E. M. LUEPTOW; A. S. FARIAS ALVES; P. J. MAJURSKI. *Washington and Jefferson Coll.*

9:00 GG22 **161.14** Time course of posttraumatic plasticity in a rat spinal motor nucleus. D. M. WEINERT*. *Vogtland Clin.*

10:00 GG23 **161.15** Enzymatic activity of Damage-induced neuronal endopeptidase/Endothelin-converting enzyme-like 1 (DINE/ECEL1) is crucial for neuromuscular junction formation during development. S. MATSUMOTO*; S. KIRYU-SEO; H. KIYAMA. *Nagoya Univ. Grad. Sch. of Med.*

POSTER

162. Finger and Grasp Control: Age, Pathology, and Physiology

Theme D: Sensory and Motor Systems

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

8:00 GG24 **162.01** The role of visual feedback in mediating adaptations in the ipsilateral cortex during unilateral motor training: implications for cross-limb transfer across the lifespan. P. REISSIG*; M. I. GARRY; J. J. SUMMERS; M. R. HINDER. *Univ. of Tasmania, Human Motor Control Lab., Univ. of Tasmania.*

9:00 GG25 **162.02** ● Visually blind behavioural assessment of functional recovery of manual dexterity from motor cortex lesion in macaque monkeys. E. ROUILLER*; A. GINDRAT; M. KAESER; A. F. WYSS; C. LEUTHARD. *Univ. of Fribourg.*

10:00 GG26 **162.03** Grip force adaptation during long-term object holding in young and older adults. B. CUNHA*; S. PEDÃO; S. FREITAS; P. DE FREITAS. *Cruzeiro Do Sul Univ., Cruzeiro do Sul Univ., São Paulo City Univ.*

11:00 GG27 **162.04** Effects of carpal tunnel release surgery on recovery of sensorimotor hand function. M. SANTELLO*; M. ROSS; J. LIGHT; P. PARIKH. *Arizona State Univ., Mayo Clin.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 GG28 **162.05** Reach-to-grasp deficits following left-hemispheric stroke are accentuated in an everyday-like context. B. BAAK*; O. BOCK; A. DOVERN; J. SALIGER; H. KARBE; P. H. WEISS-BLANKENHORN. *German Sport Univ. Cologne, Univ. Hosp. Cologne, Neurolog. Rehabil. Ctr. Godeshöhe, Res. Ctr. Jülich.*

9:00 GG29 **162.06** Support for the muscle force-grip force compatibility hypothesis: Upper extremity artificial limb control in a congenital amputee. M. MITCHELL*; M. TRUJILLO; D. I. ANDERSON. *San Francisco State Univ., Alpha MED Scientific Inc., San Francisco State Univ.*

10:00 GG30 **162.07** Using electromyography (EMG) to gain insights into upper limb motor control in people with spinal cord injury. D. LEE*; C. KANDILAKIS; S. WOODWORTH; J. JARRELL; M. SWEATMAN; M. SABATIER; L. WHEATON; D. BACKUS. *Georgia Inst. of Technol., Shepherd Ctr., Emory Univ.*

11:00 GG31 **162.08** Investigating effects of concussion on fine motor control in isometric pinch force tracking. M. M. LEWIS; M. E. DUNN; E. N. SHIREMAN; R. T. EAKIN; W. W. SPIRDUSO; L. D. ABRAHAM*. *The Univ. of Texas at Austin, Univ. Texas Austin.*

8:00 GG32 **162.09** Bimanual dexterity and gait relate to functional and structural brain differences between progressive supranuclear palsy and Parkinson's disease. R. G. BURCIU*; P. SHUKLA; E. OFORI; A. SNYDER; P. PLANETTA; C. HASS; M. OKUN; N. MCFARLAND; D. VAILLANCOURT. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

9:00 GG33 **162.10** Contrasting roles of spinal and cortical premotor neurons for control of grasping. T. TAKEI*; T. OYA; K. SEKI. *Queen's Univ., Natl. Inst. of Neurosci., Natl. Inst. for Physiological Sci., JST.*

10:00 GG34 **162.11** Tracking spontaneous recovery of digit representations after stroke with multivariate functional imaging. J. XU*; N. EJAZ; B. HERTLER; M. BRANSCHEIDT; N. KIM; M. HARRAN; J. CORTÉS; T. KITAGO; P. A. CELNIK; A. LUFT; J. W. KRAKAUER; J. DIEDRICHSEN. *Johns Hopkins Univ., Univ. Col. London, Univ. of Zurich, Columbia Univ., Johns Hopkins Univ.*

11:00 GG35 **162.12** An fMRI study on motor control in the developing brain. T. TURESKY*; O. OLULADE; M. LUETJE; G. EDEN. *Georgetown Univ., Georgetown Univ.*

8:00 GG36 **162.13** Grip force for holding a light object by elderly people. Y. HIRAMATSU*; D. KIMURA; T. ITO; K. KADOTA; H. KINOSHITA. *Osaka Univ., Mukogawa Women's Univ.*

9:00 HH1 **162.14** Recovery of ipsilesional dexterous movements after fronto-parietal lesions in Macaca mulatta. W. G. DARLING*; S. M. HYNES; M. A. PIZZIMENTI; D. L. ROTELLA; J. GE; K. S. STILWELL-MORECRAFT; R. J. MORECRAFT. *Univ. Iowa, Univ. Iowa, Univ. of South Dakota.*

10:00 HH2 **162.15** Grip force adaptation in a long holding task during one night of sleep deprivation. S. T. PEDÃO*; B. P. CUNHA; P. DE FREITAS. *Cruzeiro Do Sul Univ.*

11:00 HH3 **162.16** The influence of transcranial direct current stimulation intensity on motor skill acquisition in older adults. B. J. POSTON*; R. R. WALSH; A. K. JACKSON; E. L. HEISLER; J. L. ALBERTS. *Cleveland Clin. Lou Ruvo Ctr. For Brain Hlth., Cleveland Clin. Fndn.*

8:00 HH4 **162.17** Abnormal cerebellar activity and connectivity in pianists with focal hand dystonia: an fMRI study. K. KITA*; R. OSU; S. FURUYA; T. SAKAMOTO; T. HANAKAWA. *Chiba Univ., Natl. Ctr. for Neurol. and Psychiatry, ATR, Sophia Univ.*

9:00 HH5 **162.18** Grip force control in individuals with diabetic peripheral neuropathy while holding an object. K. C. LIMA*; L. C. ROLIM; P. B. DE FREITAS. *Univ. Cruzeiro Do Sul, Escola Paulista de Medicina Univ. Federal de São Paulo.*

10:00 HH6 **162.19** Age-related changes in intracortical inhibition assessed with paired- and triple-pulse transcranial magnetic stimulation. G. M. OPIE; M. C. RIDDING; J. G. SEMMLER*. *Univ. of Adelaide.*

POSTER

163. Sensorimotor Learning

Theme D: Sensory and Motor Systems

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

8:00 HH7 **163.01** Learning vs. minding: How subjective efforts may mask motor learning. C. M. HEALY*; A. A. AHMED; M. BERNIKER. *Univ. of Colorado, Univ. of Colorado Boulder, Northwestern Univ.*

9:00 HH8 **163.02** Medication effects on explicit motor sequence learning in Parkinson's disease. N. S. MILLER*; K. L. CHOU; N. BOHNEN; M. L. T. M. MÜLLER; R. D. SEIDLER. *Univ. of Michigan-Flint, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

10:00 HH9 **163.03** Aftereffect size in visuomotor adaptation is dependent on the learning context. R. MOREHEAD*; D. B. SILVERSMITH; R. B. IVRY. *UC Berkeley, UC Berkeley, UCSF.*

11:00 HH10 **163.04** Force field detection and adaption in deafferented participants. R. C. MIALL*; N. KITCHEN; S. NAM; F. SARLEGNA; J. COLE. *Univ. of Birmingham, Univ. de la Mediterranee (Aix-Marseille II), Poole Hosp.*

8:00 HH11 **163.05** Formation of model-free motor memories during motor adaptation depends on perturbation statistics. J. ORBAN DE XIVRY*; P. LEFÈVRE. *Univ. Catholique De Louvain.*

9:00 HH12 **163.06** What's in an error signal for sensorimotor adaptation? P. A. BUTCHER*; J. A. TAYLOR. *Princeton Univ.*

10:00 HH13 **163.07** Generalization of context-dependent motor memories: A mixed reference frame model. L. P. J. SELEN; A. SARWARY; W. MEDENDORP*. *Radboud Univ. Nijmegen.*

11:00 HH14 **163.08** Encoding of spatial information at the level of single units in the human posterior parietal cortex. T. AFLALO*; S. KELLIS; C. KLAES; Y. SHI; B. LEE; K. PEJSA; K. SHANFIELD; S. HAYES-JACKSON; M. AISEN; C. HECK; C. LIU; R. ANDERSEN. *Caltech, USC, Rancho Los Amigos Natl. Rehabil. Ctr., USC.*

8:00 HH15 **163.09** Learning view invariant object recognition transfers across visual cues. M. TIAN*; K. GRILL-SPECTOR. *Stanford Univ., Stanford Univ.*

9:00 HH16 **163.10** Instability in time of motor plan representation in monkey premotor cortex. M. MATTIA; P. PANI; E. BRUNAMONTI; S. FERRAINA*. *Inst. Superiore di Sanità, Sapienza Univ. Rome, Sapienza Univ. Rome.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 HH17 **163.11** The contribution of somatosensory perceptual learning to human motor skill acquisition. N. F. BERNARDI*; M. DARAINY; A. SIDARTA; D. J. OSTRY. *McGill Univ., Haskins Labs.*

11:00 HH18 **163.12** Somatosensory signals influence motor imagery of a complex tool-using action. N. MIZUGUCHI*; H. NAKATA; K. KANOSUE. *Waseda Univ., Nara Women's Univ.*

8:00 HH19 **163.13** Effect of vibrotactile kinematic feedback on learning to control a myoelectrically controlled virtual arm. C. J. HASSON*; J. MANCZUROWSKY; M. ROGAZZO. *Northeastern Univ.*

9:00 HH20 **163.14** Emergence of coordinated reach-to-grasp behavior in a long-term BMI experiment. M. VAIDYA*; K. BALASUBRAMANIAN; J. SOUTHERLAND; A. ELERYAN; I. BADRELDIN; A. FAGG; K. OWEISS; N. HATSOPOULOS. *Univ. of Chicago, Univ. of Chicago, Univ. of Oklahoma, Michigan State Univ.*

POSTER

164. Stroke and Voluntary Movement:

Theme D: Sensory and Motor Systems

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

8:00 HH21 **164.01** Protective stepping responses to lateral perturbations of standing balance in persons post-stroke. V. L. GRAY*; M. FUJIMOTO; S. MCCOMBE WALLER; M. W. ROGERS. *Univ. of Maryland Baltimore, Ritsumeikan Univ., Univ. of Maryland Baltimore.*

9:00 HH22 **164.02** Reliability of TMS measures of corticospinal pathway excitability early after stroke. K. COLLINS*; V. POMEROY; N. KENNEDY; A. CLARK. *Univ. of East Anglia, Univ. of East Anglia, Univ. of East Anglia.*

10:00 HH23 **164.03** Functional and structural connectivity: Relationship to mirror visual feedback in stroke patients. T. MANUWEERA*; S. SALEH; M. YAROSSI; S. ADAMOVICH; E. TUNIK. *Rutgers Biomed. Hlth. Sci., New Jersey Inst. of Technol.*

11:00 HH24 **164.04** Associated reactions in paretic wrist and finger flexors are greater in response to proximal vs. distal activation of the non-paretic limb in individuals with chronic stroke. L. C. MILLER*; J. P. A. DEWALD. *Northwestern Univ., Northwestern Univ.*

8:00 HH25 **164.05** Can inertial sensors characterize treatment-induced skill acquisition in chronic stroke? C. A. MARTINEZ*; H. BACON; J. M. FINLEY; N. SCHWEIGHOFER; C. J. WINSTEIN. *UNIVERSITY OF SOUTHERN CALIFORNIA.*

9:00 HH26 **164.06** Repairing lesions via microstimulation in a spiking network model driving a virtual arm. S. DURA-BERNAL*; K. LI; A. BROCKMEIER; C. C. KERR; S. A. NEYMOTIN; J. C. PRINCIPE; J. T. FRANCIS; W. W. LYTTON. *SUNY Downstate Med. Ctr., Univ. of Florida.*

10:00 HH27 **164.07** Repetitive transcranial magnetic stimulation to modulate cortical excitability after stroke:Effect of participant characteristics. Y. CHUNG*; L. YIN; C. J. WINSTEIN; N. SANOSSIAN; B. LIU; B. E. FISHER. *USC, USC, USC.*

11:00 HH28 **164.08** Transcallosal inhibition is associated with improved paretic arm function after continuous theta burst stimulation over contralesional motor cortex and skill learning following stroke. J. L. NEVA*; K. E. BROWN; K. P. WADDEN; C. S. MANG; N. J. SNOW; S. K. MEEHAN; L. A. BOYD. *Univ. of British Columbia, Univ. of Michigan.*

8:00 HH29 **164.09** Declines in the efficiency of action selection across adulthood and following stroke are associated with decreases in the proficiency of visual search. T. M. HERTER*; T. SINGH; C. PERRY; A. ROSS; G. HERTER. *Univ. of South Carolina.*

9:00 HH30 **164.10** Declines of performance in trail making tests across adulthood and following stroke reflect multifaceted deficits in visuomotor and cognitive function. T. SINGH*; A. ROSS; C. PERRY; T. HERTER. *Univ. of South Carolina.*

10:00 HH31 **164.11** Motor lateralization after stroke: A functional near-infrared spectroscopy study. K. TAKEDA*; H. KATO. *Nanakuri Inst, Fujita Hlth. Univ., Intl. Univ. of Hlth. and Welfare Hosp.*

11:00 HH32 **164.12** Eye-hand coordination is flexibly modulated by predictability of target location during reaching movements in healthy adults and individuals with stroke. C. PERRY*; A. ROSS; T. SINGH; T. HERTER. *Univ. of South Carolina.*

8:00 II1 **164.13** Bilateral coordination during virtual object manipulations in healthy subjects and patients with unilateral stroke. H. BELANI*; D. C. GOOD; A. PRZYBYLA; R. L. SAINBURG. *Pennsylvania State Univ., Milton Hershey Med. Ctr., Pennsylvania State Univ.*

9:00 II2 **164.14** Adaptive reach training induces motor learning in post-stroke and young healthy individuals. H. PARK*; C. WANG; C. WINSTEIN; J. GORDON; N. SCHWEIGHOFER. *USC.*

10:00 II3 **164.15** Short-term virtual reality arm supported training transfers to unsupported 3D movements in chronic stroke patients with severe hemiparesis. A. PRZYBYLA*; D. C. GOOD; C. CHOPICK; R. L. SAINBURG. *The Pennsylvania State Univ., Penn State Hershey Med. Ctr., The Pennsylvania State Univ.*

11:00 II4 **164.16** Effects of movement duration on use of the affected limb in individuals post-stroke. S. KIM*; H. PARK; C. WINSTEIN; N. SCHWEIGHOFER. *USC.*

8:00 II5 **164.17** Differential effects of cortical stimulation on abnormal across-joint coupling post stroke. A. Q. TAN*; Y. Y. DHAHER. *Northwestern Univ., Rehabil. Inst. of Chicago.*

9:00 II6 **164.18** tDCS combined with training using a Muscle Computer Interface improves upper limb function in severely to moderately affected chronic stroke patients. X. ZHANG; R. MEESEN; S. SWINNEN; H. FEYS; D. WOOLLEY; N. WENDEROTH*. *KU Leuven, Motor Control Laboratory, Dept. of Kinesiology, REVAL Rehabil. Res. Centre, Biomed. Res. Inst., KU Leuven, Neuromotor Rehabil. Res. Group, Dept. of Rehabil. Sci., Neural Control of Movement Lab, ETH Zurich.*

10:00 II7 **164.19** Assessment of EMG-force relations in patients with chronic stroke using high-density EMG recordings. M. BHADANE; J. LIU; P. ZHOU; W. Z. RYMER; S. LI*. *Univ. of Texas Hlth. Sci. Ctr. - Houston, Rehabil. Inst. of Chicago.*

11:00 II8 **164.20** Muscle contributions to ballistic reaching kinematics in individuals with chronic stroke. M. D. ELLIS*; I. SCHUT; J. P. A. DEWALD. *Northwestern Univ., Univ. of Twente.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 II9 **164.21** Influence of continuous theta burst stimulation (cTBS) and short-term training on cortical excitability in learners and non-learners with chronic stroke. K. E. BROWN*; C. S. MANG; K. P. WADDEN; J. L. NEVA; M. R. BORICH; S. K. MEEHAN; L. A. BOYD. *Univ. of British Columbia, Univ. of British Columbia, Emory Univ., Univ. of Michigan.*

POSTER

165. Neural Decoding

Theme D: Sensory and Motor Systems

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

8:00 II10 **165.01** Use of a P300 BCI speller by people with amyotrophic lateral sclerosis (ALS): Does the increased workload of a BCI application affect performance? L. MCCANE*; S. M. HECKMAN; T. M. VAUGHAN; D. J. MCFARLAND; C. S. CARMACK; S. WINDEN; E. W. SELLERS; R. S. BEDLACK; R. J. RINGER; D. J. REDA; H. SHI; R. J. RUFF; J. R. WOLPAW. *Wadsworth Center, NYS Dep. Hlth., Helen Hayes Hosp., East Tennessee State Univ., Durham VA Med. Ctr., Duke Univ. Sch. of Med., Veterans Affairs Cooperative Studies Program, Univ. of New Mexico, Dept of Veterans Affairs Cooperative Studies Program Coordinating Ctr., Louis V. Stokes VA Med. Ctr., Case Western Reserve Univ. Sch. of Med., Stratton VA Med. Ctr.*

9:00 II11 **165.02** On the edge of useful P300 BCI speller performance: A case study of optimization in a subject severely disabled by amyotrophic lateral sclerosis (ALS) with a vision impairment. T. M. VAUGHAN*; L. M. MCCANE; S. M. HECKMAN; C. S. CARMACK; S. WINDEN; K. HINMAN; D. ZEITLIN; J. R. WOLPAW. *Wadsworth Ctr, NYS Dept Hlth. & SUNY, Helen Hayes Hosp., Columbia Univ.*

10:00 II12 **165.03** Independent home use of a brain-computer interface (BCI) by people with amyotrophic lateral sclerosis (ALS). S. M. HECKMAN*; J. R. WOLPAW; R. S. BEDLACK; R. J. RINGER; D. J. REDA; K. J. HILL; T. M. VAUGHAN; C. S. CARMACK; S. WINDEN; L. M. MCCANE; P. BANKS; R. J. RUFF. *Wadsworth Ctr. NYSDOH, Stratton VA Med. Ctr., Durham VA Med. Ctr., Duke Univ. Sch. of Med., Veterans Affairs Cooperative Studies Program Clin. Res. Pharm. Coordinating Ctr., Univ. of New Mexico, Dept. of Veterans Affairs Cooperative Studies Program Coordinating Ctr., VA Pittsburgh Healthcare Syst., Univ. of Pittsburgh, Helen Hayes Hosp., Louis B. Stokes VA Med. Ctr., Case Western Reserve Univ. Sch. of Med.*

11:00 II13 **165.04** Personalized brain-computer interfaces as communication tools in amyotrophic lateral sclerosis. A. GERONIMO*; S. J. SCHIFF; Z. SIMMONS. *Penn State Univ., Penn State Univ., Penn State Univ.*

8:00 II14 **165.05** Use of a multi-degree-of-freedom myoelectric human-computer interface in the home: A pediatric case study. I. SKAVHAUG*; C. J. DAO; K. R. LYONS; A. J. POWELL; L. DAVIDSON; S. S. JOSHI. *Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis.*

9:00 II15 **165.06** Towards EEG for home monitoring purposes. F. B. GRUNDLEHNER*; V. MIHAJLOVIć. *Holst Ctr. / Imec.*

10:00 II16 **165.07** Comparison of dry and gel based wireless EEG electrodes for brain-computer interfaces. C. GUGER*; G. EDLINGER. *g.tec Guger Technologies OG, g.tec medical engineering GmbH/Guger Technologies OG.*

11:00 II17 **165.08** Toward multi-brain communication with a P300 BCI for collaborative spelling. G. EDLINGER*; C. KAPELLER; C. GUGER. *G.Tec Med. Engin. Gmbh, Guger Technologies OG.*

8:00 II18 **165.09** Towards brain machine interfaces operating with spike-based models of neurons. M. KOCATURK*; H. O. GULCUR; R. CANBEYLI. *Bogazici Univ., Bogazici Univ.*

9:00 II19 **165.10** Hemicraniectomy as a platform for low risk investigations of brain machine interfaces in patients with brain injuries. R. D. FLINT*, III; Z. A. WRIGHT; E. M. MUGLER; J. P. A. DEWALD; N. N. BRKIC; D. L. RIPLEY; M. W. SLUTZKY. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Rehabil. Inst. of Chicago, Northwestern Univ.*

10:00 II20 **165.11** Novel somatosensory contact-less brain-computer interface paradigm based on airborne ultrasonic tactile display stimuli. T. M. RUTKOWSKI*; K. HAMADA; H. MORI; H. SHINODA. *Univ. of Tsukuba, RIKEN, The Univ. of Tokyo.*

11:00 II21 **165.12** Use of MEG-based neuroprosthetic arm increased the deafferentation pain due to brachial plexus root avulsion. T. YANAGISAWA*; R. FUKUMA; T. SHIMIZU; R. KATO; T. SEKI; Y. KAMITANI; H. YOKOI; M. HIRATA; T. YOSHIMINE; Y. SAITOH. *Osaka Univ., Osaka Univ. Grad. Sch. of Med., ATR Computat. Neurosci. Labs., Nara Inst. of Sci. and Technol., Osaka Univ. Grad. Sch. of Med., Yokohama Natl. Univ., The Univ. of Electro-Communications.*

8:00 II22 **165.13** Processing multi-unit information recorded from the median nerve using an intrafascicular electrode. J. WRIGHT*; P. BREEN; A. VAN SCHAIK; V. G. MACEFIELD; J. TAPSON. *Univ. of Western Sydney, Univ. of Western Sydney.*

9:00 II23 **165.14** Texture discrimination using intraneural stimulation in healthy and disabled subjects. S. MICERA*; C. ODDO; S. RASPOPOVIC; F. ARTONI; G. SPIEGLER; G. SPIEGLER; F. GIAMBATTISTELLI; F. PETRINI; L. ZOLLO; G. DI PINO; D. CAMBONI; M. CARROZZA; E. GUGLIELMELLI; P. ROSSINI; U. FARAGUNA. *Ecole Polytechnique Federale De Lausanne, Scuola Superiore Sant'Anna, Universita' Campus Biomedico, Universita' Cattolica Sacro Cuore, Univesita' di Pisa.*

10:00 II24 **165.15** Sources of the brain activation in visual attention: A novel feature for electroencephalography-based brain-computer interface. M. ORDIKHANI-SEYEDLAR*; H. B. D. SORENSEN; T. W. KJAER; S. PUTHUSSERYPADY. *Tech. Univ. of Denmark, Copenhagen Univ. Hosp. Hvidovre, Roskilde Univ. Hosp.*

11:00 II25 **165.16** A P300-based brain-computer interface is sensitive to personal context of test images. A. KAPLAN*; A. KOCHETOVA. *Moscow State Univ. Biol. Fac.*

8:00 II26 **165.17** A novel c-VEP brain-computer interface paradigm using peripheral stimulation. N. R. WAYTOWICH*; D. J. KRUSIENSKI. *Old Dominion Univ.*

9:00 II27 **165.18** Decoding upcoming movements from preparatory brain signals. G. ARIANI*; M. F. WURM; A. LINGNAU. *CIMeC - Ctr. for Mind/Brain Sci., Univ. of Trento.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

166. Neuroimmune Regulators: Microglia

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

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

8:00 II28 **166.01** Translational evidence for inflammation-induced production of estradiol in the cerebellum of human infants and toddlers. C. L. WRIGHT*; J. F. HOFFMAN; M. M. MCCARTHY. *Univ. of Maryland, Univ. of Maryland, Baltimore, Univ. of Maryland, Sch. of Med.*

9:00 II29 **166.02** Mast cells contribute to early life programming of sex differences in brain and behavior. L. A. PICKETT*; C. ROSINSKY; A. GALAN; M. M. MCCARTHY; K. M. LENZ. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med., The Ohio State Univ.*

10:00 II30 **166.03** Developmental profile of microglia and evidence of phagocytic activity in the postnatal developing rat cerebellum. M. PEREZ-POUCHOULEN*; J. W. VANRYZIN; L. A. PICKETT; M. M. MCCARTHY. *Univ. of Maryland, Univ. of Maryland.*

11:00 JJ1 **166.04** MMP-14/MT1-MMP sheds cell-surface CSPG4/NG2 in NG2-expressing macrophages infiltrating the injured PNS in rats. T. NISHIHARA*; A. G. REMACLE; M. ANGERT; H. LIU; J. DOLKAS; T. NAGARO; A. V. CHERNOV; W. B. STALLCUP; A. Y. STRONGIN; V. I. SHUBAYEV. *Univ. of California San Diego, VA San Diego Healthcare Syst., Ehime Univ. Grad. Sch. of Med., Sanford-Burnham Med. Res. Inst., Univ. of California San Diego.*

8:00 JJ2 **166.05** Mice recovered from influenza infection have heightened brain inflammatory response to systemic lipopolysaccharide challenge. M. LAWSON*; T. E. GIBBONS; R. W. JOHNSON. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

9:00 JJ3 **166.06** Minocycline, a commonly used inhibitor of microglia, triggers massive cell death in the neonatal mouse brain. J. A. STRAHAN*; W. H. WALKER, II; N. FORGER. *Georgia State Univ., Georgia State Univ.*

10:00 JJ4 **166.07** CD40 mediated microglial phenotypic changes and chemokine responses in murine model of neuropathic pain. L. CAO*; J. MALON; A. EURICH. *Univ. New England.*

11:00 JJ5 **166.08** An alpha-melanocyte-stimulating hormone analogue drives microglial cells towards an alternative activation profile. L. CARNIGLIA; D. RAMIREZ; D. DURAND; J. SABA; C. CARUSO; M. I. LASAGA*. *INBIOMED-School of Med. Univ. of Buenos Aires.*

8:00 JJ6 **166.09** IL-4 signaling on niche microglia as a regulator of adult subventricular zone neurogenesis. G. NORRIS*; J. KIPNIS. *Univ. of Virginia, Univ. of Virginia.*

9:00 JJ7 **166.10** The metabolite GnRH-(1-5) inhibits LPS-induced activation of microglia cells. T. WU; B. ZAHN; R. J. HANDA*; D. O. LARCO. *Uniformed Services Univ., Univ. Arizona.*

10:00 JJ8 **166.11** Microglia are key regulators of energy expenditure. C. BAUFELD*; K. MILLER; F. L. HEPPNER. *Charité Universitätsmedizin Berlin.*

11:00 JJ9 **166.12** Calorie restriction alters lipopolysaccharide (LPS)-induced fever and microglial morphology in the arcuate nucleus of the hypothalamus via a neuropeptide Y mediated mechanism. S. KENT*; M. E. RADLER; B. J. WRIGHT; F. R. WALKER; M. W. HALE. *La Trobe Univ., The Univ. of Newcastle.*

POSTER

167. Female Sexual Behavior

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

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

8:00 JJ10 **167.01** Ovarian hormones modulate MAPK in the nucleus accumbens but not the amygdala. K. WILLIAMS*; J. A. MONG. *Univ. of Maryland, Univ. of Maryland.*

9:00 JJ11 **167.02** Progestin receptor isoforms are differentially expressed and colocalize with steroid receptor coactivator-1 (SRC-1) and SRC-2 in the female mouse hypothalamus. K. D. ACHARYA*; S. D. FINKELSTEIN; E. P. BLESS; S. A. NETTLES; B. MULAC-JERICEVIC; O. M. CONNEELY; S. K. MANI; M. J. TETEL. *Wellesley Col., Baylor Col. of Med.*

10:00 JJ12 **167.03** Opioids and neurogenesis in the olfactory bulb of the female rat. M. SANTOYO ZEDILLO*; W. PORTILLO MARTINEZ; R. PAREDES GUERRERO. *Inst. de Neurobiologia, INB-UNAM.*

11:00 JJ13 **167.04** Survival of new neurons in the olfactory bulb after paced mating by the female rat. M. G. ORTIZ; A. MORA; R. G. PAREDES*. *Inst. De Neurobiologia UNAM, Benemérita Univ. Autónoma de Puebla.*

8:00 JJ14 **167.05** Opposite effects of two phytoestrogens on proceptive, receptive and pacing behavior in the female rat after their neonatal administration. J. OLAYO-LORTIA*; A. FERREIRA-NUÑO; R. TARRAGÓ-CASTELLANOS; A. CRUZ-BENITES; F. SOLANO-SILVA; A. BRIONES-ESPÍNDOLA; A. MORALES-OTAL. *Univ. Autónoma Metropolitana - Iztapalapa.*

9:00 JJ15 **167.06** Methamphetamine mediates increased female sexual motivation in response to relevant cues. S. RUDZINSKAS*; J. MONG. *Univ. of Maryland Baltimore.*

10:00 JJ16 **167.07** Regulation of gene expression by 17beta-estradiol in the arcuate nucleus of the mouse through ERE-dependent and ERE-independent mechanisms. J. A. YANG*; K. MAMOUNIS; A. YASREBI; T. A. ROEPKE. *Rutgers Univ.*

11:00 JJ17 **167.08** G protein coupled estrogen receptor 1 is co-localized with progesterone receptor in the arcuate nucleus of the hypothalamus in estradiol treated ovariectomized rats. N. P. LONG*; D. LE; L. NGUYEN; K. SINCHAK. *California State Univ. Long Beach.*

8:00 JJ18 **167.09** ▲ The signaling pathways of progesterone receptor, Src kinase, and dopamine D1 receptor converge in the arcuate nucleus of the hypothalamus to facilitate lordosis. C. S. SEREY*; B. HUSS; T. CHUON; M. MAHAVONGTRAKUL; K. SINCHAK. *California State University, Long Beach.*

9:00 JJ19 **167.10** ▲ Progesterone receptor-B and Src kinase complex in the plasma membrane of the arcuate nucleus of the hypothalamus of female rats. J. PHAN*; M. MAHAVONGTRAKUL; K. SINCHAK. *California State University, Long Beach.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 JJ20 **167.11** Estradiol increases colocalization of D1 Dopamine receptors and progesterone receptor in the arcuate nucleus of the hypothalamus associated with facilitation of lordosis. K. SINCHAK*; M. MACIEL; V. THACH; P. TEA; H. SENG; C. SEREY; M. MAHAVONGTRAKUL; J. PHAN. *California State University, Long Beach.*

11:00 JJ21 **167.12** Estradiol rapidly attenuates inhibitory ORL-1 signaling in proopiomelanocortin neurons regulating reproductive behavior. K. M. CONDE*; C. MEZA; M. J. KELLY; K. SINCHAK; E. J. WAGNER. *Western Univ. of Hlth. Sci., Western Univ. of Hlth. Sci., Oregon Hlth. and Sci. Univ., California State University, Long Beach.*

8:00 JJ22 **167.13** Beta-arrestin-1 knockdown inhibits estrogen-mediated signaling by disrupting membrane ERα and mGluR1a interactions. A. M. WONG*; M. C. ABRAMS; P. MICEVYCH. *UCLA.*

9:00 JJ23 **167.14** Endocannabinoid influence on sexual motivation in female rats. F. A. GUARRACI*; N. K. MEMOS; R. N. VELA. *Southwestern Univ.*

10:00 JJ24 **167.15** Neurotransmitter measurement during sexual behavior in female Syrian hamsters. K. M. MOORE*; L. E. BEEN; R. L. MEISEL. *Univ. of Minnesota.*

11:00 JJ25 **167.16** Concurrent inhibition of female sexual behavior produced by progesterone and 5α and 5β pregnandione in the rat. M. GARCIA-JUÁREZ*, SR; P. GÓMORA-ARRATI; F. LIMA- HERNÁNDEZ; O. GONZÁLEZ -FLORES. *Ctr. De Investigación En Reproducción Animal.*

8:00 JJ26 **167.17** ▲ Conditioned object preference as a task to measure reward in adult female rats. T. MCNAMARA*; G. C. KLUMPP; S. GUTERL; S. H. MEERTS. *Carleton Col.*

9:00 JJ27 **167.18** ▲ Strain differences and similarities in motivation and reward for mating and amphetamine. S. H. MEERTS*; H. K. STRNAD; T. A. MCNAMARA; A. C. PURITZ. *Carleton Col.*

10:00 JJ28 **167.19** Breeding status and social environment differentially affect the expression of sex steroid receptor and aromatase mRNA in the brain of female Damaraland mole-rats. C. VOIGT*; M. GAHR; S. LEITNER; H. LUTERMANN; N. BENNETT. *Univ. of Pretoria, Max Planck Inst. for Ornithology.*

11:00 JJ29 **167.20** ● Effects of neonatal ethyntl estradiol to female rats on partner preference, territorial and sexual behavior. C. KOMINE*; M. KAMISHIMA; M. YOSHIDA; Y. KONDO; M. KAWAGUCHI. *Sch. of Agriculture, Meiji Univ., Natl. Inst. of Hlth. Sci., Dept. of Animal Sciences, Teikyo Univ. of Sci.*

8:00 JJ30 **167.21** Administration of a LSD1 demethylase inhibitor blocks the development of conditioned mate-guarding behavior and enhancement of bonding circuits in the female rat. A. HOLLEY*; L. JOULAKIAN; K. WENZEL; B. GONZALEZ; S. ROORDA, JR; J. G. PFAUS. *Concordia Univ.*

9:00 JJ31 **167.22** Testosterone levels in conditioned same-sex partner preference in female rats. M. B. TECAMACHALTZI-SILVARAN; V. X. DÍAZ-ESTRADA; M. BARRADAS-MOCTEZUMA; T. CIBRIAN-LLANDERAL; L. I. GARCÍA; P. CARRILLO; J. MANZO; G. A. CORIA-AVILA*. *Univ. Veracruzana.*

10:00 JJ32 **167.23** Fos expression in olfactory conditioned same-sex partner preference in male rats. I. T. CIBRIÁN-LLANDERAL*; V. DIAZ-ESTRADA; M. B. TECAMACHALTZI-SILVARAN; J. MANZO; L. I. GARCIA; P. CARRILLO; J. G. PFAUS; G. A. CORIA-AVILA. *Inst. De Neuroetología, Ctr. de Investigaciones Cerebrales, Concordia Univ.*

POSTER

168. Neural Control of Cardiovascular Function II

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

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

8:00 JJ33 **168.01** Regional innervation of the heart in the zebrafish. M. R. STOYEK*. *Dalhousie Univ.*

9:00 JJ34 **168.02** Sodium depletion facilitates respiratory responses to baroreceptor activation. K. C. BORSARI*; J. V. MENANI; P. M. DE PAULA. *UNESP - Araraquara, UNESP - Araraquara.*

10:00 JJ35 **168.03** ▲ Evaluation of the cardiovascular responses in nicotinamide+streptozotocin diabetic pithed rats. A. SACHEZ-LOPEZ*; M. TORREZ-GUTIÉRREZ; E. J. GUTIÉRREZ-LARA; D. CENTURIÓN. *Cinvestav-Coapa.*

11:00 JJ36 **168.04** Blockade of dorsal hindbrain mineralocorticoid receptors attenuates chronic variable stress-induced hypertension and ΔFosB expression in the central and basolateral amygdala. R. R. CLIFTON*; I. M. BACKES; D. A. SCHEUER. *Univ. of Florida.*

8:00 KK1 **168.05** ▲ Role of nitric oxide in the morphological changes of intrinsic cardiac nervous system in experimental models of right ventricular hypertrophy. G. D. FLORES-GOMEZ*; M. GÓMEZ-VILLALOBOS. *Univ. De Las Américas Puebla, Univ. Autónoma de Puebla.*

9:00 KK2 **168.06** Extracellular ATP attenuates hypoxia-induced excitation of the sympathetic premotor neurons via facilitation of glycinergic transmission in the *in situ* arterially perfused preparation of rats. T. KOGANEZAWA*; A. HOKI. *Fac. of Medicine, Univ. of Tsukuba.*

10:00 KK3 **168.07** C1 neurons excite A5 noradrenergic neurons during hypoxia condition. T. L. BORELLA*; A. C. TAKAKURA; T. S. MOREIRA. *Inst. of Biomed. Sci., Inst. of Biomed. Sci.*

11:00 KK4 **168.08** Chronic intermittent hypoxia/ hypercapnia diminishes excitatory glutamatergic and increases inhibitory GABA neurotransmission to pre-motor cardiac vagal neurons. J. DYAVANAPALLI*; O. DERGACHEVA; D. MENDELOWITZ. *The George Washington Univ.*

8:00 KK5 **168.09** Differential effects of ageing and training (T) on preautonomic neurons within the hypothalamic paraventricular nucleus (PVN). C. R. SANTOS*; A. RUGGERI; A. CERONI; L. C. MICHELINI. *Inst. Biomed. Sciencies (USP).*

9:00 KK6 **168.10** Reduced baroreceptor-cardiac coupling in congenital central hypoventilation syndrome is not correlated with chemosensory response. M. S. CARROLL*; C. M. RAND; D. E. WEESE-MAYER. *Ann & Robert H. Lurie Children'S Hosp. of Chicago.*

10:00 KK7 **168.11** ▲ NMDA receptors in the raphe pallidus mediate the tachycardia evoked by activation of dorsomedial hypothalamic neurons. N. L. MACHADO*; M. FONTES. *Univ. Federal De Minas Gerais, Univ. Federal de Minas Gerais.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 KK8 **168.12** Chronic administration of catalase inhibitor reduces blood pressure in rats with renovascular hypertension. M. R. LAUAR*; L. A. DE LUCA JR; P. M. DE PAULA; D. S. A. COLOMBARI; E. COLOMBARI; J. V. MENANI. *Dent. School, UNESP.*

8:00 KK9 **168.13** NOP receptors in prelimbic cortex modulates cardiovascular responses caused by restraint stress in rats. A. FASSINI*; A. SCOPINHO; L. RESSTEL; F. CORREA. *Univ. of Sao Paulo.*

9:00 KK10 **168.14** Sod1 overexpression alters aortic depressor nerve function in mice without significant effect on baroreflex control of heart rate. J. T. HATCHER; Z. CHENG*. *Univ. of Central Florida.*

10:00 KK11 **168.15** Differential effects of dorsal and ventral hippocampal reversible inactivation on the modulation of cardiovascular and ventilatory responses to peripheral chemoreflex activation. L. B. KUNTZE*; N. C. FERREIRA-JÚNIOR; D. C. LAGATTA; L. B. M. RESSTEL. *Univ. of São Paulo.*

11:00 KK12 **168.16** Recruitment of serotonergic responses in cardiac vagal neurons during hypoxia and hypercapnia. X. WANG*; P. BYRNE; L. WEIGAND; D. MENDELOWITZ. *George Washington Univ., George Washington Univ.*

8:00 KK13 **168.17** Sympathetic neurons regulate the developmental transition from hyperplasia to hypertrophy in neonatal rat cardiomyocytes via beta-adrenergic signaling. R. E. KREIPKE; S. J. BIRREN*. *Brandeis Univ., Brandeis Univ.*

9:00 KK14 **168.18** Role for angiotensin II in the blood pressure control of rats fed high salt diet. P. MAGALHÃES GOMES*; R. W. MARTINS SÁ; A. CARVALHO ALZAMORA; L. BRANDINO OLIVEIRA; L. MAXIMO CARDOSO. *Univ. Federal De Ouro Preto, Federal Univ. of Ouro Preto.*

10:00 KK15 **168.19** Hypothalamic paraventricular nucleus modulates cardiovascular responses evoked by osmotic stimulus in unanesthetized rats. E. T. FORTALEZA*, SR; C. BUSNARDO; F. CORRÊA. *Sch. of Med. of Ribeirão Preto.*

11:00 KK16 **168.20** Ghrelin inhibits GABAergic neurotransmission to cardiac vagal neurons in the nucleus ambiguus. V. C. AMANN*; J. DYAVANAPALLI; R. BATEMAN; N. CAULEY; X. WANG; D. MENDELOWITZ. *George Washington Univ.*

8:00 KK17 **168.21** ▲ Cardiovascular effect caused by the microinjection of l-proline into the dorsal hippocampus of unanesthetized rat. S. LOPES AZEVEDO*; C. BUSNARDO; F. M. A. CORREA. *Univ. of Sao Paulo/FMRP.*

POSTER

169. Autonomic Control of Thermoregulatory, Gastrointestinal, and Reproductive Functions

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

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

8:00 KK18 **169.01** Changes in monoaminergic neurotransmitters and physiological responses of rats with continuous heat exposure. T. ISHIWATA*; T. MATSUMURA; H. NAKAGAWA; K. SUZUKI; C. NINOMIYA; S. YANAGITA; H. HASEGAWA. *Rikkyo University, Dept. of Sport and Wellness, Rikkyo Univ., Tokyo Univ. of Sci., Hiroshima Univ.*

9:00 KK19 **169.02** Histaminergic arousal system is involved in thermoregulatory response to an acute psychological stress. B. LKHAGVASUREN*; T. OKA. *Hlth. Sci. Univ., Kyushu Univ.*

10:00 KK20 **169.03** ● Dietary N-methylserotonin from Japanese pepper (Zanthoxylum piperitum) regulates skin temperature in a female rat model of menopause-related hot flash. M. J. WEISER*; M. H. MOHAJERI; C. M. BUTT. *DSM.*

11:00 KK21 **169.04** ● c-Fos activation in mouse parabrachial nucleus after changes in ambient temperature. M. KIM; J. C. GEERLING*; L. J. AGOSTINELLI; T. E. SCAMMELL. *BIDMC, Harvard Med. Sch.*

8:00 KK22 **169.05** High energy expenditure and sympathetic nervous system-mediated trabecular bone loss after administration of the second generation antipsychotic risperidone. K. J. MOTYL*; D. OLSHAN; V. DEMAMBRO; D. BARLOW; K. NAGANO; R. BARON; K. L. HOUSKNECHT; C. J. ROSEN. *Maine Med. Ctr. Res. Inst., Univ. of New England, Harvard Univ.*

9:00 KK23 **169.06** Brain endothelial PGE2 synthesis mediates fever. E. MIRRASEKHIAN*; D. BJÖRK WILHELMS; M. KIRILOV; A. ESKILSSON; U. KUGELBERG ÖRTEGREN; C. KLAR; D. RIDDER; H. R. HERSCHMAN; M. SCHWANINGER; A. BLOMQVIST; D. ENGBLOM. *Linköping Universitet, German Cancer Res. Ctr. (DKFZ), Univ. of Lübeck, Univ. of California.*

10:00 KK24 **169.07** Patterns of neuronal activity in thermoregulatory pathways during food deprivation-induced hypothermic states in mice. S. B. ABBOTT*; C. B. SAPER. *Beth Israel Deaconess Med. Cntr, Univ. of New South Wales.*

11:00 KK25 **169.08** MTII-induced hypothermia is mediated by dopaminergic neurotransmission. R. A. PINOL*; B. LUTE; O. GAVRILOVA; M. L. REITMAN. *NIDDK-NIH.*

8:00 KK26 **169.09** Hypothalamic leptin receptor expressing neuronal circuits in energy homeostasis. Y. JIANG*; K. P. REZAI-ZADEH; H. MUNZBERG; A. V. DERBENEV; A. ZSOMBOK. *Tulane Univ., Pennington Biomed. Res. Ctr.*

9:00 KK27 **169.10** Modeling core body temperature during exercise. Y. YOO*; A. BEHROUZVAZIRI; M. ZARETSKAIA; D. ZARETSKY; Y. MOLKOV. *Indiana Univ. Purdue Univ. Indianapolis, Indiana University-Purdue Univ. Indianapolis, Indiana Univ. Sch. of Med.*

10:00 KK28 **169.11** Inhibitory synaptic quantal and variability analysis in the dorsal motor nucleus of the vagus: Can a disease state alter synaptic release? C. R. BOYCHUK*; K. C. HALMOS; B. N. SMITH. *Univ. of Kentucky.*

11:00 KK29 **169.12** Development of first viral probe expressing calcium sensitive red fluorescent protein. S. N. SHINDE; K. L. LEMON; I. ZABBAROVA; Y. IKEDA; L. BIRDER; A. J. KANAI*. *Univ. of Pittsburgh, Univ. Pittsburgh Sch. Med.*

8:00 KK30 **169.13** Acupuncture modulates gastrointestinal motility in C57BL/6 and beta1/2 adrenergic receptor knockout mice. K. LIU*; D. XU; Y. ZHANG; H. LIU; M. ZHANG; X. GAO*; B. ZHU*. *Acupuncture and Moxibustion Inst., Shandong Univ. of Traditional Chinese Med.*

9:00 KK31 **169.14** ▲ Identification of 17-β-estradiol receptor in celiac ganglion neurons during the estrous cycle of the rat. J. M. BRAVO*; P. CRUZ; C. MORÁN; C. PASTELÍN. *Benemerita Universidad Autonoma De Puebla.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 KK32 **169.15** Participation of the ovarian plexus nerve in the relationship between the ovary and autonomic and sensory ganglia, during the estrous cycle. P. A. CRUZ MARTÍNEZ*; C. PASTELIN; E. RIVERA; R. GOMEZ; Y. CRUZ; C. MORAN; A. HANDALL. *Univerisdad Autónoma De Tlaxcala, Benemérita Univ. Autónoma de Puebla, Univ. Autónoma de Tlaxcala.*

11:00 LL1 **169.16** Expression of calcium-binding proteins in intramural ganglionic neurons during postnatal development. P. M. MASLYUKOV*; M. KONSTANTIN. *Yaroslavl Med. Acad.*

8:00 LL2 **169.17** Involvement of NMDA and non-NMDA glutamate receptors in the nTS on the initiation of swallows in anesthetized guinea pigs. T. TSUJIMURA*; K. TSUJI; M. INOUE; B. J. CANNING. *Niigata Univ. Grad. Sch. of Med. and Dent. Sci., Johns Hopkins Asthma and Allergy Ctr.*

POSTER

170. Aging of Neural Functions

Theme F: Cognition and Behavior

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

8:00 LL3 **170.01** Assessment of virtual Morris Water Task performance and white matter microstructural integrity in middle age. L. E. KORTHAUER*; N. T. NOWAK; E. AWE; I. DRISCOLL. *Univ. of Wisconsin-Milwaukee.*

9:00 LL4 **170.02** Associations between reversal learning and regional brain volumes in middle age. E. I. GRACIAN*; N. T. NOWAK; E. AWE; I. DRISCOLL. *Univ. of Wisconsin-Milwaukee.*

10:00 LL5 **170.03** ▲ Relationships between sex steroid hormones and cognition in men and women. M. FRAHMAND*; N. T. NOWAK; I. DRISCOLL; S. D. MOFFAT. *Univ. of Wisconsin-Milwaukee, Georgia Inst. of Technol.*

11:00 LL6 **170.04** Factors contributing to successful navigation of men and women in a computerized maze. N. T. NOWAK*; A. MURALI; I. DRISCOLL. *Univ. of Wisconsin - Milwaukee.*

8:00 LL7 **170.05** Exploring the correlation of behavioural scores and resting state functional MRI connectivity in young adult and aged rats, in a permanent distal middle cerebral artery occlusion model of stroke. D. A. DURICKI*; C. C. WAYMAN; D. CASH; R. R. WESTPHAL; M. B. MESQUITA; T. C. WOOD; L. D. F. MOON. *King's Col. London, Inst. of Psychiatry, King's Col. London.*

9:00 LL8 **170.06** ▲ Different patterns of fronto-parietal coherence mediate successful navigation in young and elderly individuals: An EEG study. S. LITHFOUS*; A. DUFOUR; T. PEBAYLE; O. DESPRÉS. *Lab. De Neurosciences Cognitives Et Adaptat, CI2N.*

10:00 LL9 **170.07** ▲ A novel method for evaluating the motor performance of elderly people using their handwriting characteristics. Y. OHWADA; K. TOKUTAKE; T. WATANABE; E. TANAKA; T. ANME; H. KAWAGUCHI*. *Toyo Univ., Univ. of Tsukuba.*

11:00 LL10 **170.08** The variability of TMS measurements in healthy older adults and stroke patients. H. M. SCHAMBRA*; I. E. MARTÍNEZ-HERNÁNDEZ; X. LIN; R. OGDEN; D. J. EDWARDS; J. W. KRAKAUER. *Columbia Univ., Columbia Univ., Columbia Univ., Burke Med. Res. Inst., Johns Hopkins Univ.*

8:00 LL11 **170.09** Brain activation is greater in older women during a fatiguing contraction with imposed cognitive demand. T. YOON*; H. M. PEREIRA; K. A. NIELSON; R. PROST; P. A. NELSON; S. K. HUNTER. *Michigan Tech., Marquette Univ., Med. Colledge of Wisconsin.*

9:00 LL12 **170.10** Does a history of adolescent binge drinking influence performance on manipulatory-scale spatial tasks. P. A. BLANKENSHIP*; A. A. BLACKWELL; A. R. SHIRAR; M. PARKER; D. G. WALLACE. *Northern Illinois Univ.*

10:00 LL13 **170.11** Complex whole body motor skill learning: A comparison between young and old individuals. E. KAMINSKI*; M. HOFF; B. SEHM; C. STEELE; V. RJOSK; A. VILLRINGER; P. RAGERT. *Max-planck-Institute For Human Cognitive and Brain.*

11:00 LL14 **170.12** ▲ The effects of age on spatial interference in a bimanual coordination task. K. M. HICKEY; Z. PAN; B. A. SIMON; K. S. THIBODEAUX; A. W. VAN GEMMERT*. *Louisiana State Univ.*

8:00 LL15 **170.13** Effects of heavy-resistance strength and balance training on mono- and bilateral strength performance in old adults. R. BEURSKENS*; T. MUEHLBAUER; M. CARDINALE; U. GRANACHER. *Univ. of Potsdam, ASPIRE - Acad. for Sports Excellence, Univ. Col. London.*

9:00 LL16 **170.14** The effects of diurnal and subsequent nocturnal sleep on motor sequence memory consolidation in older adults. B. R. KING*; P. SAUCIER; G. ALBOUY; S. FOGEL; J. DOYON. *Unité De Neuroimagerie Fonctionnelle; CRIUGM, Western Univ.*

10:00 LL17 **170.15** Sequence structure has a differential effect in typically aging adults. S. PRASHAD*; Y. DU; J. E. CLARK. *Univ. of Maryland.*

11:00 LL18 **170.16** The effects of aging and cognitive decline on adaptive processes for motor learning. K. TREWARTHA*; A. GARCIA; D. M. WOLPERT; J. R. FLANAGAN. *Queen's Univ., Univ. of Cambridge.*

POSTER

171. Spatial Learning

Theme F: Cognition and Behavior

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

8:00 LL19 **171.01** The effect of interference on temporal order memory in individuals with Parkinson's disease. N. E. DEFORD*; K. M. LANDY; E. PIROGOVSKY; E. J. VAN ETTEN; D. P. SALMON; V. FILOTEO; P. E. GILBERT. *San Diego State Univ., Univ. of California San Diego, Univ. of California San Diego, Veterans Affairs, San Diego Hlth. Care Syst.*

9:00 LL20 **171.02** Domain-specific networks from contrasting mental travels in time and space. B. MARTIN*; B. GAUTHIER; V. VAN WASSENHOVE. *INSERM-CEA Cognitive Neuroimaging Unit U992, Cea/dsv/i2bm/Neurospin Center/Cognitive Neuroimaging Unit.*

10:00 LL21 **171.03** A computational investigation of the optimal task difficulty in perceptual learning. X. YUAN*. *Peking Univ., Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 LL22 **171.04** Effects of a single bout of intense endurance exercise on the adaptation and retention of a perceptual-motor task. B. FERRER-URIS; A. BUSQUETS; V. LÓPEZ-ALONSO; M. FERNANDEZ-DEL-OLMO; R. ANGULO-BARROSO*. *INEFC, INEF Galicia, Univ. da Coruña, California Sate Univ.*

8:00 LL23 **171.05** Extensive practice of a visual categorization task leads to the learning of category-selective representations in anterior temporal cortex. C. A. SCHOLL*; P. H. COX; N. JAIMES; X. JIANG; M. RIESENHUBER. *Georgetown Univ. Med. Ctr.*

9:00 LL24 **171.06** Parallel learning mechanisms support spatial navigation. A. CLEMENTS-STEPHENS*; B. D. NELLIGAN; A. L. SHELTON. *Johns Hopkins Univ.*

10:00 LL25 **171.07** The occipital place area is causally involved in representing environmental boundaries during navigation. J. RYAN; J. B. JULIAN; R. H. HAMILTON; R. A. EPSTEIN*. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

11:00 LL26 **171.08** Neural efficiency similarities between engineering students solving statics and spatial ability problems. W. GOODRIDGE*; I. VILLANUEVA; N. J. A. WAN; B. J. CALL; M. M. VALLADARES; B. S. ROBINSON; K. JORDAN. *Utah State Univ., Utah State Univ., Utah State Univ.*

8:00 LL27 **171.09** Toward an algorithmic description of statistical learning. F. SIMARD*; C. PACK. *Montreal Neurolog. Inst.*

9:00 LL28 **171.10** Background connectivity in human visual cortex during perceptual learning. V. R. BEJJANKI*; N. B. TURK-BROWNE. *Princeton Univ.*

10:00 MM1 **171.11** The mechanisms underlying orientation specificity in perceptual learning. J. ZHANG*; Y. XIONG; C. YU. *Peking Univ.*

11:00 MM2 **171.12** Variable brains learn faster. Z. FATIMA*; N. KOVACEVIC; B. MISIC; A. R. MCINTOSH. *Baycrest Ctr.*

8:00 MM3 **171.13** Changes in neural activity accompany changes in perceptual sensitivity and bias in visual perceptual learning. M. J. WENGER*; S. E. RHOTEN. *The Univ. of Oklahoma, Cornell Univ.*

9:00 MM4 **171.14** Attention modulates the relationship between summary statistics and incidental learning of regularities. M. G. HALL; J. B. MATTINGLEY; P. E. DUX*. *The Univ. of Queensland.*

10:00 MM5 **171.15** Dissociation of alpha erd and p300 measures of categorization with continuously varying stimuli. S. JELLINEK; J. FISER*. *Central European Univ., Central European Univ.*

11:00 MM6 **171.16** Is spatial information encoded during conditional discriminations? A new cross-species search task with landmarks. C. M. RUPRECHT*; C. SULLIVAN; K. LEISING. *Texas Christian Univ.*

8:00 MM7 **171.17** ▲ Effects of memory-dependent and -independent priors on response-time distributions from a simple sensory-motor task. T. D. KIM*; C. M. GLAZE; J. I. GOLD. *Univ. of Pennsylvania.*

POSTER

172. Human Long-Term Memory

Theme F: Cognition and Behavior

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

8:00 MM8 **172.01** Dynamic shifts in oscillatory coupling track the encoding of episodic events. A. C. HEUSSER*; L. DAVACHI. *New York Univ., New York Univ.*

9:00 MM9 **172.02** Modulation of memory processing by top-down attentional goals. L. J. LOHNAS*; L. DAVACHI. *New York Univ.*

10:00 MM10 **172.03** Learning across days leads to differentiated neural representations of learned information following a long delay. Y. EZZYAT*; M. INHOFF; L. DAVACHI. *Univ. of Pennsylvania, Univ. of California, Davis, New York Univ., New York Univ.*

11:00 MM11 **172.04** Contextual boundaries influence neural mechanisms supporting serial recall. S. DUBROW*; L. DAVACHI. *NYU.*

8:00 MM12 **172.05** Decoding route learning from medial temporal and medial parietal activity patterns. A. J. CHANALES*; B. A. KUHL. *New York Univ.*

9:00 MM13 **172.06** Hippocampal high frequency activity at retrieval predicts recognition memory performance. M. B. MERKOW*; J. F. BURKE; A. G. RAMAYYA; M. J. KAHANA. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:00 MM14 **172.07** Spectral correlates of contextual processing during memory encoding. N. M. LONG*; M. J. KAHANA. *Univ. of Pennsylvania.*

11:00 MM15 **172.08** Covert cued recall exhibits retrieval success effects similar to those in recognition memory. A. W. GILMORE*; S. M. NELSON; F. NAAZ; K. B. MCDERMOTT. *Washington Univ.*

8:00 MM16 **172.09** Are there multiple kinds of episodic memory? An fMRI investigation comparing autobiographical and recognition memory tasks. H. CHEN*; A. W. GILMORE; S. NELSON; K. B. MCDERMOTT. *Washington Univ. In St. Louis.*

9:00 MM17 **172.10** Right amygdala and hippocampal activity during immediate cued-recall feedback predicts learning: An fMRI investigation using a partial-trial design. S. M. NELSON*; F. NAAZ; A. W. GILMORE; K. B. MCDERMOTT. *Washington Univ. in St. Louis.*

10:00 MM18 **172.11** The lateral distribution of recollection effects in posterior parietal cortex. R. ELWARD*; M. D. RUGG. *Univ. of Texas At Dallas.*

11:00 MM19 **172.12** MVPA dissociation of recollection effects according to their temporal properties. K. L. VILBERG*; M. D. RUGG. *Univ. of Texas, Dallas.*

8:00 MM20 **172.13** Multi-voxel pattern classification differentiates personally experienced event memories from second-hand event knowledge. T. E. CHOW*; A. J. WESTPHAL; L. A. STOROZUK; B. V. MEDINA; C. D. NGOY; J. RISSMAN. *UCLA.*

9:00 MM21 **172.14** Decoding the temporal structure of experience during perception and memory. S. A. GUERIN; S. D. UDDENBERG; M. K. JOHNSON; M. M. CHUN*. *Yale Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 MM22 **172.15** Parametrically scalable memory cueing using multiple object tracking. J. POPPENK*; K. A. NORMAN. *Princeton Univ.*

11:00 MM23 **172.16** Reinstatement of contextual information from episodic memory alters decisions for reward. A. M. BORNSTEIN*; K. A. NORMAN. *Princeton Neurosci. Inst.*

8:00 MM24 **172.17** Getting into a rhythm to remember to remember: Demystifying the oscillatory dynamics of prospective memory retrieval. A. M. BOBILEV*; J. B. KNIGHT; B. A. CLEMENTZ. *The Univ. of Georgia, The Univ. of Georgia.*

9:00 MM25 **172.18** Multiple interacting brain areas underlie successful spatiotemporal memory retrieval in humans. A. SCHEDLBAUER*; M. COPARA; A. WATROUS; A. EKSTROM. *Univ. of California, Davis, Univ. of Bonn.*

10:00 MM26 **172.19** Isolating differences in brain activity related to item and context memory over the lifespan. P. MEYER*; M. HOPPSTÄDTER; R. BADER; H. FLOR. *CIMH, Heidelberg Univ., Bernstein Ctr. for Computat. Neurosci. Heidelberg-Mannheim.*

11:00 MM27 **172.20** Fronto-temporal mechanisms involved in rapid formation of pair-association memory. K. JIMURA*; S. HIROSE; H. WADA; Y. YOSHIZAWA; Y. IMAI; M. AKAHANE; T. MACHIDA; I. SHIROUZU; Y. KOIKE; Y. MIYASHITA; S. KONISHI. *Tokyo Inst. of Technol., Univ. Tokyo Sch. Med., Juntendo Univ. Sch. Med., NTT Med. Ctr., Intl. Univ. Hlth. Welf.*

8:00 MM28 **172.21** Functional connectivity of the angular gyrus during rest and recall: Laterality effects in the recollection network. B. BELLANA*; Z. LIU; J. A. E. ANDERSON; M. MOSCOVITCH; C. L. GRADY. *Univ. of Toronto, Rotman Res. Inst. at Baycrest Hosp., Univ. of Toronto.*

9:00 MM29 **172.22** A neurocomputational model of memory search links distinct large-scale cortical networks to the maintenance and retrieval of mnemonic information. J. E. KRAGEL*; S. M. POLYN. *Vanderbilt Univ.*

10:00 MM30 **172.23** The influence of dopamine polymorphisms on ERP amplitudes and reaction time during recognition memory. P. MEDRANO; E. NYHUS; T. CURRAN; R. S. ROSS*. *Univ. of New Hampshire, Bowdoin Col., Univ. of Colorado, Boulder, Univ. of New Hampshire.*

11:00 MM31 **172.24** Transcranial direct current stimulation enhanced episodic memory by increasing spatiotemporal neural pattern similarity. G. XUE*; Y. LU; C. WANG. *Natl. Key Lab. of Cognitive Neurosci. and Learning.*

8:00 MM32 **172.25** Neural pattern similarity predicts subsequent source memory. P. P. THAKRAL*; M. D. RUGG. *Univ. of Texas at Dallas.*

9:00 MM33 **172.26** Pre-stimulus low frequency power and synchrony predicts paired associates memory retrieval. R. HAQUE*; S. DAMERA; S. INATI; K. ZAGHLOUL. *Natl. Inst. of Hlth.*

POSTER

173. Working Memory I

Theme F: Cognition and Behavior

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

8:00 MM34 **173.01** Behavioral and EEG effects of rTMS on recall of items inside versus outside the focus of attention. M. J. STARRETT*; N. S. ROSE; A. C. RIGGALL; B. R. POSTLE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

9:00 MM35 **173.02** Real-time neurofeedback of working memory usage during prospective remembering. A. MUKERJI*; M. DEBETTENCOURT; J. A. LEWIS-PEACOCK. *Univ. of Texas at Austin, Princeton Univ., Imaging Res. Center, Univ. of Texas at Austin.*

10:00 MM36 **173.03** A dynamic neural field model of visual working memory development: Strengthening connectivity predicts increases in precision, capacity, and stability during early childhood. V. SIMMERING*. *Univ. of Wisconsin - Madison.*

11:00 NN1 **173.04** Theta burst stimulation to MT+ versus IPS: effect on behavioral and neural fidelity in short-term memory. O. GOSSERIES*; J. J. LAROCQUE; A. C. RIGGALL; M. J. STARRETT; B. R. POSTLE. *Univ. of Wisconsin.*

8:00 NN2 **173.05** Encoding, maintenance and retrieval dynamics during visuo-spatial working memory: An EEG investigation of workload. S. CEBULSKI*; K. VAN BENTHEM; C. M. HERDMAN; J. KEILLOR. *Carleton Univ., Natl. Res. Council.*

9:00 NN3 **173.06** Reduced activation within the frontoparietal network and increased inter-network connectivity accompany working memory training improvements. T. THOMPSON*; M. L. WASKOM; J. D. E. GABRIELI. *MIT, Stanford Univ.*

10:00 NN4 **173.07** Physical fitness predicts working memory brain activity in late adulthood. R. L. CESARO*; W. RAO; J. M. JAKICIC; K. DEMOS; R. R. WING; T. A. WADDEN; N. BRYAN; L. DESIDERIO; P. LAURIENTI, MD, PhD; M. A. ESPELAND; K. I. ERICKSON. *Univ. of Pittsburgh, Brown Univ., Univ. of Pennsylvania, Wake Forest Univ.*

11:00 NN5 **173.08** Electrocorticographic correlates of high-precision working memory maintenance. K. K. SREENIVASAN*; J. VYTLACIL; R. T. KNIGHT; M. D'ESPOSITO. *New York Univ. Abu Dhabi, Univ. of California, Berkeley.*

8:00 NN6 **173.09** Fronto-parietal interactions support working memory capacity in a hierarchical cortical model. D. STANDAGE*; M. PARÉ. *Queen's Univ.*

9:00 NN7 **173.10** Low working memory in attention-deficit hyperactivity disorder is associated with difficulties in math but not reading achievement. A. N. SIMONE*; A. BEDARD; D. J. MARKS; J. M. HALPERIN. *Queens College, CUNY, The Grad. Center, CUNY, Mount Sinai Hosp., New York Univ.*

10:00 NN8 **173.11** Neural activity concretizes load effects in visual short-term memory. L. WANG*; Y. PAN; Z. TAN; K. ZHAO. *Inst. of Psychology, Chinese Acad. of Sci.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 NN9 **173.12** Frequency-Band specific changes in cortical MEG activation during a working memory task: A comparison to BOLD fMRI. F. CARVER; R. ALFARRA; D. Y. RUBINSTEIN; T. HOLROYD; J. CALLICOTT; R. COPPOLA*. *NIMH, NIMH.*

8:00 NN10 **173.13** The role of impulsivity and working memory on reward-based attentional capture in HIV and addiction. S. I. KRONEMER*; B. A. ANDERSON; J. J. RILEE; N. SACKTOR; C. L. MARVEL. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med.*

9:00 NN11 **173.14** The association between eye movements and cerebellar activation in a verbal working memory task. J. PETERBURS*; D. T. CHENG; J. E. DESMOND. *Johns Hopkins Sch. of Med., Univ. of Muenster.*

10:00 NN12 **173.15** Conscious level required for working memory and long-term memory functions: An anesthesia study in humans. M. OSAKA*; K. ENDO; T. IKEDA; T. MINAMOTO; A. NAKAE; S. HAGIHIRA; Y. FUJINO; T. MASHIMO. *Osaka Univ., Osaka Univ., Osaka Univ., Toyonaka Municipal Hosp.*

11:00 NN13 **173.16** A comparison between musicians and non-musicians in tonal working memory capacity. Y. DING; J. HUANG; K. GRAY; Y. ZHANG; X. WANG*. *Tsinghua Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ. Sch. Med.*

8:00 NN14 **173.17** Cerebro-cerebellar contributions to verbal and non-verbal working memory. J. RILEE*; M. L. FAULKNER; D. A. LIAO; S. I. KRONEMER; C. L. MARVEL. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

9:00 NN15 **173.18** Functional dissociation of verbal and spatial working memory in human dorsolateral prefrontal cortex. P. J. FRIED*; R. J. RUSHMORE, III; M. B. MOSS; A. VALERO-CABRE; A. PASCUAL-LEONE. *Beth Israel Deaconess Med. Ctr., Boston Univ. Sch. of Med., Univ. Pierre et Marie Curie, Open Univ. of Catalonia.*

10:00 NN16 **173.19** Prediction of individual learning plateau of a working memory training from whole-brain resting state functional connectivity patterns. M. YAMASHITA*; M. KAWATO; H. IMAMIZU. *ATR, NAIST, NICT Ctr. for Information and Neural Networks.*

11:00 NN17 **173.20** ● ▲ Study on the related regions of working memory using reading span test. N. MASHIMA*; U. YAMAMOTO; T. HIROYASU. *Doshisha Univ.*

8:00 NN18 **173.21** Long range Fronto-temporal coupling and glutamate levels predict accuracy during modified auditory working memory in schizophrenia. N. KRISHNA*; M. DU; S. YU; A. T. SUMMERFELT; J. CHIAPPELLI; K. NUGENT; P. KOCHUNOV; L. ROWLAND; E. L. HONG. *Univ. of Maryland Sch. of Medicine,.*

9:00 NN19 **173.22** When working memory load increases, the COMT Met allele does not confer a performance advantage. J. L. IHNE*; J. H. CALLICOTT; A. E. GREEN. *Georgetown Univ., Natl. Inst. of Mental Hlth.*

10:00 NN20 **173.23** Verbal and non-verbal working memory in spinocerebellar ataxia. C. L. MARVEL*; S. I. KRONEMER; J. J. RILEE. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

11:00 NN21 **173.24** Rethinking the contribution of the dorsolateral prefrontal cortex to spatial working memory. W. MACKEY*; C. E. CURTIS. *New York Univ., New York Univ.*

8:00 NN22 **173.25** Decreased retinotopic representation during maintenance of abstract spatial relations in working memory. K. J. BLACKER*; A. VERGARA; N. CANTOR; S. M. COURTNEY. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Kennedy Krieger Inst.*

9:00 NN23 **173.26** Memory span reveals differences between short-term memory and working memory in young men. E. I. CRUZ-PANIAGUA*; I. K. SANDOVAL; M. L. ALMANZA-SEPÚLVEDA; E. E. VELARDE; M. HERNÁNDEZ-GOZÁLEZ; M. A. GUEVARA. *Inst. De Neurociencias.*

10:00 NN24 **173.27** Verbal working memory recruits distinct manipulation and maintenance neural processes. G. B. COGAN*; A. IYER; T. THESEN; D. FRIEDMAN; W. DOYLE; O. DEVINSKY; B. PESARAN. *CNS - NYU, Icahn Sch. of Med. at Mount Sinai, New York Univ. Sch. of Med., New York Univ. Sch. of Med., New York Univ. Sch. of Med.*

11:00 NN25 **173.28** ▲ Diffusion-weighted MRI measures of hippocampal integrity and connectivity predict variance in working memory performance. C. E. KOMMERS*; N. REGGENTE; O. RACCAH; J. RISSMAN. *UCLA.*

8:00 NN26 **173.29** Working memory in expert video game players: Prefrontal-parietal eeg correlation. J. C. LLAMAS*; M. L. ALMANZA-SEPÚLVEDA; M. A. GUEVARA; M. HERNÁNDEZ-GONZALEZ. *Inst. of Neurosci., Inst. de Neurociencias.*

POSTER

174. Human Social Cognition: Behavior and Pharmacology

Theme F: Cognition and Behavior

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

8:00 NN27 **174.01** Emotional Response during human-virtual partner interaction. M. ZHANG*; G. DUMAS; J. KELSO; E. TOGNOLI. *Florida Atlantic Univ., Univ. of Ulster.*

9:00 NN28 **174.02** Probing self~other coordination dynamics with the human dynamic clamp. G. DUMAS*; E. TOGNOLI; J. KELSO. *Florida Atlantic Univ., Univ. of Ulster.*

10:00 NN29 **174.03** Kinematic indices of attraction. D. ROSA-LEYRA*; M. MCQUIRE; S. A. JAX; A. CHATTERJEE. *Mossrehab, Univ. of Pennsylvania, Univ. of Pennsylvania, Moss Rehab Res. Inst., Univ. of Pennsylvania.*

11:00 NN30 **174.04** Oxytocin makes females, but not males, less forgiving following betrayal of trust. S. YAO*; W. ZHAO; R. CHENG; Y. GENG; L. LUO; K. KENDRICK. *Univ. of Electronic Sci. and Technol.*

8:00 NN31 **174.05** Modeling the complex neurodynamics of teams. R. STEVENS*. *UCLA Sch. of Med.*

9:00 NN32 **174.06** The price of pain: A novel method for investigating the neural and computational mechanisms of moral decision-making. M. J. CROCKETT*; Z. KURTH-NELSON; J. Z. SIEGEL; P. DAYAN; R. J. DOLAN. *Univ. of Oxford, Univ. Col. London, Univ. Col. London.*

10:00 NN33 **174.07** Predicting choice behaviour in action observation. A. F. REICHELT*; P. CHAN; J. R. FLANAGAN. *Queen's Univ.*

11:00 NN34 **174.08** Vasopressin effects on responses to same- and other-sex faces in men and women. R. R. THOMPSON*; D. PRICE; J. K. RILLING. *Bowdoin Col., Maine Med. Ctr., Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 NN35 **174.09** Does minocycline, a microglial inhibitor, reduce the bias in cheater-detection in social/economic exchange? M. WATABE*; T. A. KATO; H. HORIKAWA; M. SHINADA; T. YAMAGISHI; S. KANBA. *Monash Univ., Kyushu Univ., Kyushu Univ., Tokyo Gakugei Univ., Hitotsubashi Univ.*

9:00 NN36 **174.10** The effect of difficulty of motor actions on mirror neuron system activity during imitation learning. S. OHASHI*; S. SHIMADA. *Meiji Univ.*

10:00 OO1 **174.11** Entrainment of speech rhythms in a dyadic story-telling task. T. I. HIMBERG*; L. HIRVENKARI; R. K. HARI. *Aalto Univ.*

11:00 OO2 **174.12** Relationship between mood and cost of transport during human locomotion: Examining a dual-valence model of affect. M. P. REARICK*; A. J. SHRECKHISE. *Roanoke Coll.*

8:00 OO3 **174.13** RGB ratio of background light influences the arousal factor of emotion. S. OH; B. MIN*. *Korea Univ. (Science Campus).*

POSTER

175. Pharmacology for Attention

Theme F: Cognition and Behavior

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

8:00 OO4 **175.01** ● Profiling attention and cognition enhancing drugs in a rat touchscreen-based Continuous Performance task. E. G. MOHLER*; Z. DING; J. W. BROWN; L. E. RUETER. *AbbVie.*

9:00 OO5 **175.02** Amphetamine improves cognitive performance on a rodent continuous detection task. K. M. TURNER*; J. PEAK; T. H. J. BURNE. *Queensland Brain Inst., Queensland Ctr. for Mental Hlth. Res.*

10:00 OO6 **175.03** A G protein-coupled receptor mechanism of action distinguishes methamphetamine from cocaine. D. K. GRANDY*. *Oregon Hlth. & Sci. Univ.*

11:00 OO7 **175.04** Strain-specific properties of locus coeruleus projection neurons in normal and inattentive rats. D. J. CHANDLER*; E. W. PROUTY; W. GAO; B. D. WATERHOUSE. *Univ. of Pennsylvania, Drexel Univ. Col. of Med.*

8:00 OO8 **175.05** The role of the cholinergic system in attentional modulation in area MT of the primate visual cortex. C. QUIGLEY*; V. K. VEITH; S. TREUE. *German Primate Ctr., German Primate Ctr., Bernstein Ctr. for Computat. Neurosci.*

9:00 OO9 **175.06** ▲ Increasing noradrenaline transmission affects different facets of our attention. C. GUEDJ; A. REYNAUD; A. PLANTÉ; E. MONFARDINI; A. FARNÈ; M. MEUNIER; F. HADJ-BOUZIANE*. *INSERM U1028, CNRS UMR5292, Inst. de Médecine Environnementale.*

10:00 OO10 **175.07** Psychostimulant-induced modulation of early sensory signal processing in the rat visual thalamus is mediated by enhanced noradrenergic transmission. R. L. NAVARRA*; B. D. CLARK; B. D. WATERHOUSE. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

11:00 OO11 **175.08** The gut metabolite S-equol provides protection from sustained attention deficits in the HIV-1 transgenic rat. L. M. MORAN; C. F. MACTUTUS*; R. M. BOOZE. *Univ. South Carolina.*

8:00 OO12 **175.09** Prepuberal intranasal dopamine treatment in an animal model of ADHD alleviates spatial attention, working memory, amino acid transmitters and synaptic markers in prefrontal cortex, ventral and dorsal striatum. L. A. RUOCCO; C. TRENO; A. GIRONI CARNEVALE; C. MATTERN; J. P. HUSTON; M. DE SOUZA SILVA; S. NIKOLAUS; G. BOATTO; A. TINO; A. G. SADILE*. *Second Univ. of Naples, Sch. of Medicine, Dept. Expt. Med., M et P Pharma AG, Emmetten, 2Center for Behavioral Neuroscience, Inst. of Exptl. Psychology, Univ. of Düsseldorf, Ctr. for Behavioral Neuroscience, Inst. of Exptl. Psychology, Univ. of Düsseldorf, Clin. of Nuclear Medicine, Univ. Hosp. Düsseldorf, Dept. of Chem. and Pharmacy, Sassari Univ., Inst. di Cibernetica "Eduardo Caianiello" ICIB CNR.*

9:00 OO13 **175.10** Long withdrawal of methylphenidate induces hyper-responsiveness of dopaminergic system in Spontaneously Hypertensive Rats. R. C. KUBRUSLY*; M. S. PEREIRA; M. F. SATHLER; R. S. MARQUES; M. FEISTEL; T. VALLI; D. RODRIGUES-SILVA; R. MARTINS; N. PECINALLI; A. C. MANHÃES. *Univ. Federal Fluminense, Univ. Estadual do Rio de Janeiro.*

10:00 OO14 **175.11** Effects of tonic and phasic norepinephrine release on layer-specific activity in the prefrontal cortex in anesthetized and awake rat. N. K. TOTAH*; R. NEVES; S. PANZERI; N. K. LOGOTHETIS; O. ESCHENKO. *Max Planck Inst. for Biol. Cybernetics, Italian Inst. of Technol.*

POSTER

176. Animal Models: Cortical Circuits and Behavioral Tasks

Theme F: Cognition and Behavior

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

8:00 OO15 **176.01** Visual recognition memory, manifest behaviorally as long-term habituation, requires synaptic plasticity in V1. S. F. COOKE*; R. W. KOMOROWSKI; E. S. KAPLAN; J. P. GAVORNIK; M. F. BEAR. *MIT.*

9:00 OO16 **176.02** Differential involvement of parvalbumin positive (PV+) interneurons in distinct forms of experience-dependent plasticity in the visual cortex of the adult mouse. E. S. KAPLAN*; S. F. COOKE; A. A. CHUBYKIN; M. F. BEAR. *MIT.*

10:00 OO17 **176.03** Phase-amplitude coupling across cortical oscillations during a visual associative memory task in the monkey medial temporal lobe. K. ADACHI; K. KAWASAKI; H. SAWAHATA; T. MATSUO; T. SUZUKI; H. TANIGAWA; A. IIJIMA; I. HASEGAWA; K. NAKAHARA*. *Niigata Univ., Niigata Univ. Grad Sch. of Med. and Dent. Sci., Toyohashi Univ. of Tech., The Univ. of Tokyo Sch. of Med., CiNet, NICT, Niigata Univ., Res. Inst. of Kochi Univ. of Technol.*

11:00 OO18 **176.04** Optogenetic modulation of the postrhinal cortex during performance on a visuospatial attention task. T. K. JACOBSON*; R. D. BURWELL. *Brown Univ., Brown Univ.*

8:00 OO19 **176.05** Neuronal correlates in rat posterior parietal cortex and lateral posterior thalamic nucleus during performance on a visuospatial attention task. F. YANG*; T. K. JACOBSON; R. D. BURWELL. *Brown Univ., Brown Univ.*

9:00 OO20 **176.06** Perirhinal contributions to postrhinal representations of context. V. R. HEIMER-MCGINN*; D. L. POETA; R. D. BURWELL. *Brown Univ., Brown Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 OO21 **176.07** Neuronal activity in the perirhinal and postrhinal cortex during performance on a contextual spontaneous object recognition task. I. TOMAS PEREIRA*; R. D. BURWELL. *Brown Univ., Brown Univ.*

11:00 OO22 **176.08** Anterior cingulate cortex-hippocampal interactions during goal-driven behaviors. J. Y. YU*; A. R. LOBACK; I. GROSSRUBATCHER; D. LIU; L. M. FRANK. *UCSF, Princeton Univ.*

8:00 OO23 **176.09** Clusterless decoding of position from multiunit activity using a marked point process filter. X. DENG*; D. F. LIU; K. KAY; L. M. FRANK; U. T. EDEN. *Boston Univ., UCSF, UCSF.*

9:00 OO24 **176.10** Modulation of motor cortex multi-unit activity by spindles during skill learning: A pilot study. M. J. ECKERT*; M. TATSUNO. *Univ. of Lethbridge.*

10:00 OO25 **176.11** Memory consolidation and mental schemas: A restricted Boltzmann machine model. N. DUPUY*; A. LANSNER; M. VAN ROSSUM. *Univ. of Edinburgh, KTH Royal Inst. of Technol.*

11:00 OO26 **176.12** Rapid encoding of new memories by single neurons in the human brain. M. J. ISON*; R. QUIAN QUIROGA; I. FRIED. *Univ. of Leicester, Univ. of Leicester, Univ. of California Los Angeles, Tel-Aviv Univ.*

8:00 OO27 **176.13** Long-term memory and flexible learning in a prefrontal- and cerebellar-dependent trace eyeblink conditioning task in mice. J. J. SIEGEL*; W. TAYLOR; R. GRAY; B. V. ZEMELMAN; D. JOHNSTON; R. A. CHITWOOD. *Univ. of Texas at Austin.*

9:00 OO28 **176.14** Neural activity in retrosplenial cortex during retrieval of remote fear memories. A. PIZZO*; D. CAMP; D. J. BUCCI. *Dartmouth Col.*

10:00 OO29 **176.15** Circuit reconstruction of layer 2 pyramidal cell modules in rat medial entorhinal cortex. H. SCHMIDT*; K. BOERGENS; M. BRECHT; M. HELMSTAEDTER. *BCCN, Humboldt Univ. Berlin, Max Planck Inst. of Neurobio.*

11:00 OO30 **176.16** Lateral entorhinal cortex lesions impair egocentric more than allocentric spatial memory. J. A. AINGE*; M. KURUVILLA; D. I. G. WILSON. *Univ. of St Andrews, Univ. of St Andrews.*

8:00 OO31 **176.17** Novelty and familiarity processing in perirhinal cortex. M. H. SIVAKUMARAN*; A. R. O'CONNOR; J. A. AINGE. *Univ. of St Andrews, Univ. of St Andrews.*

9:00 OO32 **176.18** Remembering to learn again: Medial prefrontal cortex is required to learn a familiar task in a novel context. J. S. RICEBERG*; P. MARTIN; M. SHAPIRO. *Mount Sinai Sch. of Med., Friedman Brain Inst.*

10:00 PP1 **176.19** The prefrontal cortex supports the attainment of fear memory accuracy. E. KORZUS*; P. A. VIEIRA; A. CORCHES; J. W. LOVELACE. *Univ. of California Riverside.*

11:00 PP2 **176.20** A simple proposed probe of population patterning and network topology in the grid cell system. J. WIDLOSKI*; I. FIETE. *Univ. of Texas, Austin.*

8:00 PP3 **176.21** Statistical framework for encoding and decoding grid cell population activity. K. YOON*; I. FIETE. *The Univ. of Texas At Austin.*

9:00 PP4 **176.22** Time encoding neurons in the rat granular retrosplenial cortex. T. KUROTANI*; K. NIXIMA; K. OKANOYA. *Grad Sch. of Arts and Sci, The Univ. of Tokyo, JST, ERATO, Okanoya Emotional Information Project, Cognition and Behavior Joint Res. Lab. BSI, RIKEN.*

POSTER

177. Learning and Memory: Skill-Learning

Theme F: Cognition and Behavior

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

8:00 PP5 **177.01** Skilled motor learning results in increased replay of task-related neural ensembles during subsequent slow-wave sleep. D. RAMANATHAN*; T. GULATI; C. WONG; K. GANGULY. *Univ. California, San Francisco, San Francisco VA Med. Ctr., San Francisco VA Med. Ctr., UC San Francisco, San Francisco VA Med. Ctr.*

9:00 PP6 **177.02** An automated reach box to assess forelimb function in healthy and injured rodents. C. WONG*; T. GULATI; D. RAMANATHAN; S. WON; R. SWANSON; K. GANGULY. *San Francisco VA Med. Center/ UCSF.*

10:00 PP7 **177.03** Reactivation of emergent task-related ensembles during slow-wave sleep after neuroprosthetic learning. T. GULATI*; D. S. RAMANATHAN; C. C. WONG; K. GANGULY. *San Francisco VA Med. Center/ UCSF, San Francisco VA Med. Center/ UCSF.*

11:00 PP8 **177.04** What motivates a zebrafish? Assessing associative learning in a two choice discrimination task in the zebrafish (Danio rerio). J. M. DAGGETT*; M. O. PARKER; V. J. BROWN; C. H. BRENNAN. *Univ. of St Andrews, Univ. of London, Queen Mary.*

8:00 PP9 **177.05** Neural correlates of implicit serial learning in posterior parietal cortex of monkeys. B. KENNEDY*; G. JENSEN; J. JOINER; F. MUNOZ; H. S. TERRACE; V. FERRERA. *Columbia Univ.*

9:00 PP10 **177.06** Implicit learning of serial order in humans and monkeys. G. G. JENSEN*; J. JOINER; B. KENNEDY; F. MUÑOZ; S. KRISHNAN; V. FERRERA; H. TERRACE. *Columbia Univ., Columbia Univ., Barnard Col.*

10:00 PP11 **177.07** Prefrontal code for physical and relational stimulus information is differentially modulated by the rhinal cortex and ventral hippocampus. M. D. MORRISSEY*; K. TAKEHARA-NISHIUCHI. *Univ. of Toronto.*

11:00 PP12 **177.08** Eyeblink classical conditioning contingent on hippocampal fissure theta phase. M. S. NOKIA*; M. PENTTONEN. *Univ. of Jyvaskyla.*

8:00 PP13 **177.09** Age-related cognitive performance correlates with L-type channel protein expression in CA1 of dorsal hippocampus. D. M. CURLIK, II*; X. YU; F. NUNEZ; M. D. ANTION; M. M. OH; J. F. DISTERHOFT. *Northwestern Univ. Feinberg Sch. of Med.*

9:00 PP14 **177.10** The role of acetylcholine in learning: Cholinergic MSDB lesions retard trace eyeblink conditioning and decrease adult neurogenesis. M. L. ANDERSON*; M. S. NOKIA; T. J. SHORS. *Rutgers Univ., Rutgers Univ., Univ. of Jyvaskyla, Rutgers Univ.*

10:00 PP15 **177.11** Rats with temporal lobe epilepsy exhibit high aggressive and dominant behaviors and increased oxytocin expression in hypothalamus. M. G. TOBIAS*; M. NEJM; A. HAIDAR; A. HIRATA; R. CYSNEIROS; E. CAVALHEIRO; F. SCORZA. *UNIFESP, Mackenzie presbyterian Univ.*

11:00 PP16 **177.12** Mechanisms of specific pavlovian-to-instrumental transfer. K. E. GILROY*; K. N. SCHNEIDER; A. R. DELAMATER. *Brooklyn Col. - Psychology Dept, Brooklyn Col. - CUNY.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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8:00 PP17 **177.13** Striatal cholinergic interneurons and habit formation. G. J. MARTINS*; M. A. M. PRADO; R. M. COSTA. *Champalimaud Neurosci. Programme, Robarts Res. Inst.*

9:00 PP18 **177.14** ▲ Age-related changes in object recognition memory in adult male domestic rabbits (Oryctolagus cuniculus). E. BASURTO*; K. L. HOFFMAN. *Univ. Autónoma de Tlaxcala - CINVESTAV.*

10:00 PP19 **177.15** Hippocampal cannabinoid transmission modulates mesolimbic dopaminergic neurons activity: impact on opiate memory formation and social interaction. M. LOUREIRO*; J. RENARD; J. ZUNDER; S. R. LAVIOLETTE. *Univ. of Western Ontario.*

11:00 PP20 **177.16** Monitoring and reinforcing social and cooperative behaviors in group-housed laboratory animals. M. ZIONS*; T. DZEDZITS; L. OVEREEM; M. KRESS; S. IMBERMAN; D. MCCLOSKEY. *CUNY CSI.*

8:00 PP21 **177.17** Expression de c-Fos in rats with abstinence syndrome to midazolam evaluated in the EPM. S. E. CRUZ-MORALES*; D. J. GONZÁLEZ-SÁNCHEZ; G. CASTILLO-ROBERTO; C. ESTRADA; C. MORÁN. *FES-Iztacala UNAM México, UNAM, FES-Iztacala, BUAP.*

9:00 PP22 **177.18** ▲ Striatal activation of STEP61 by PKA inhibition compromised the encoding of motor memories in mice. L. CHAGNIEL; G. BUREAU*; Y. BERGERON; G. MASSICOTTE; M. CYR. *UQTR.*

10:00 PP23 **177.19** RNA-Seq reveals molecular correlates of divergent cognitive abilities in two sister species of wild birds. J. AUDET*; L. KAYELLO; S. DUCATEZ; E. D. JARVIS; L. A. O'CONNELL; L. LEFEBVRE. *McGill Univ., Duke Univ. and Howard Hughes Med. Inst., Harvard Univ.*

11:00 PP24 **177.20** Investigating cholinergic function of the pedunculopontine tegmental nucleus in sensorimotor filtering. E. AZZOPARDI; S. SCHMID*. *Univ. of Western Ontario, Univ. of Western Ontario.*

8:00 QQ1 **177.21** Tool-use learning in rats. A. NAGANO; K. AOYAMA*. *Doshisha Univ., Doshisha Univ.*

9:00 QQ2 **177.22** Motor memory deficiency after chronic lithium treatment is not associated with GSK3 inhibition in mice. Y. BERGERON*; L. CHAGNIEL; G. BUREAU; M. CYR. *Univ. Du Quebec A Trois-Rivieres.*

10:00 QQ3 **177.23** Backward blocking and delay eyeblink conditioning in the head-fixed mouse. A. D. KLOTH*; B. C. CAMPBELL; R. D. JONES; S. S. WANG. *Princeton Univ., Princeton Univ., Rockefeller Univ.*

POSTER

178. Motivation

Theme F: Cognition and Behavior

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

8:00 QQ4 **178.01** Optogenetic activation of accumbal fast-spiking interneurons is reinforcing. J. M. IRVING*; K. H. GLUSKIN; J. F. CHEER. *Univ. of Maryland Sch. of Med.*

9:00 QQ5 **178.02** Voluntary control of saccadic peak velocity and its modulation by rewards: A novel metric of motivation. K. MUHAMMED*; E. DALMAIJER; S. MANOHAR; M. HUSAIN. *Univ. of Oxford, Univ. of Oxford.*

10:00 QQ6 **178.03** Effect of cafeteria diet history on cue-, pellet-priming-, and stress-induced reinstatement of food seeking in female rats. K. FISCELLA*; Y. CHEN; S. Z. BACHARACH; D. J. CALU. *Natl. Inst. On Drug Abuse.*

11:00 QQ7 **178.04** Altered striatal oscillatory responses to cortical optogenetic stimulation in a rat model of Huntington's disease. T. SESIA*; E. COLE; I. GILDISH; W. GOVE; R. CACHOPE; J. F. CHEER. *Univ. of Maryland Baltimore, CHDI Foundation, Inc.*

8:00 QQ8 **178.05** Motivational deficits and subsecond accumbal dopamine release in a rat model of Huntington's disease. I. GILDISH*; W. GOVE; R. CACHOPE; J. F. CHEER. *Univ. of Maryland Sch. of Med., CHDI Fndn.*

9:00 QQ9 **178.06** BALB/c and SWR inbred mice display differential preferences for nutritive and non-nutritive sweeteners. D. HUANG*; T. T. KRAFT; M. LOLIER; E. NATANOVA; S. LAMAGNA; D. WARSHAW; O. VAKNIN; A. SCLAFANI; R. J. BODNAR. *Queens College, CUNY, Brooklyn College, CUNY.*

10:00 QQ10 **178.07** Promotion of patience by dorsal raphe serotonin neuron activation depends on the certainty of future rewards. K. MIYAZAKI*; K. W. MIYAZAKI; K. F. TANAKA; A. YAMANAKA; A. TAKAHASHI; K. DOYA. *Okinawa Inst. Sci. and Tech. (OIST), Keio Univ., Nagoya Univ., Natl. Inst. of Genet.*

11:00 QQ11 **178.08** MK-801-induced elevation in appetitive operant extinction responding and reduced Delta FosB labeling in the nucleus accumbens. E. W. TUPLIN*; E. PATRICK; M. R. HOLAHAN. *Carleton Univ.*

8:00 QQ12 **178.09** Deep-brain calcium imaging of distinct lateral hypothalamic neuronal ensembles reveals a precise neural signature for motivation. J. H. JENNINGS; R. L. UNG; A. M. STAMATAKIS; K. VELETA; K. SHILLING-SCRIVO; W. GAO; K. DEISSEROTH; C. RAMAKRISHNAN; S. OTTE; G. D. STUBER*. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Stanford Univ., Stanford Univ., Inscopix.*

9:00 QQ13 **178.10** Starvation-Sensitive AGRP neurons transmit a negative reinforcement signal and motivate feeding behavior. J. BETLEY*; Z. HUANG CAO; S. M. STERNSON. *Janelia Farm Res. Campus.*

10:00 QQ14 **178.11** A novel paradigm to evaluate the neural mechanisms of cooperation in non-human primates. W. S. ONG*; M. L. PLATT. *Duke Univ.*

11:00 QQ15 **178.12** Effects of aging on motivated cognitive control: A cross-species approach. M. VAN HOLSTEIN*; E. AARTS; B. BALLEINE; R. COOLS. *Radboud Univ. Nijmegen, Radboud Univ. Nijmegen, Brain and Mind Res. Institute, Univ. of Sydney, Radboud Univ. Nijmegen Med. Ctr.*

8:00 QQ16 **178.13** NMDA antagonism and acquisition of fructose- and sucrose-conditioned flavor preferences in BALB/c and SWR mice. M. LOLIER*; T. T. KRAFT, MA; D. HUANG; E. NATANOVA; S. LAMAGNA; O. VAKNIN; D. WARSHAW; A. SCLAFANI; R. J. BODNAR. *Queens College, CUNY, Brooklyn College, CUNY.*

9:00 QQ17 **178.14** Expression of fructose-conditioned flavor preferences: Roles of acetylcholine and GABA signaling in rats. F. M. ROTELLA*; I. YENKO; K. B. OLSSON; T. DINDYAL; V. VIG; R. J. BODNAR. *Queens College, CUNY.*

10:00 QQ18 **178.15** Medial orbitofrontal cortex dopamine antagonism reduces rat fructose-conditioned flavor expression. I. YENKO*; F. M. ROTELLA; D. C. MALKUSZ; K. OLSSON; T. DINDYAL; V. VIG; T. COKE; D. HUANG; R. J. BODNAR. *Queens College, CUNY.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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11:00 QQ19 **178.16** Early adversity leads to sucrose bingeing and compulsive responding in female rats. A. C. MARACLE*; M. M. WILKIN; S. J. LAMONTAGNE; J. L. MENARD; M. C. OLMSTEAD. *Queens Univ., Queens Univ.*

8:00 QQ20 **178.17** TMS disruption of reward modulation in right dorsolateral prefrontal cortex impairs incentivized motor performance and modifies choking under pressure. T. LEE*; S. T. GRAFTON. *UC Santa Barbara, Univ. of California Santa Barbara.*

9:00 QQ21 **178.18** Melanocortin-3 receptors (Mc3rs) in the ventral tegmental area (VTA) regulate motivation for food. M. MAVRIKAKI*; C. GIRARDET; C. MILLER; A. BUTLER. *The Scripps Res. Institute, Scripps Florida, St. Louis Univ. Sch. of Med., Scripps Florida, St. Louis Univ. Sch. of Med.*

10:00 QQ22 **178.19** The effect of VTA microstimulation on trial-by-trial cue selection behavior. J. T. ARSENAULT*; W. VANDUFFEL. *K.U. Leuven, Mass. Gen. Hosp., Athinoula A. Martinos Ctr. for Biomed. Imaging, Harvard Med. Sch.*

11:00 QQ23 **178.20** Nucleus accumbens opioids drive conditioned approach to high calorie reward only in the absence of homeostatic drive. K. CAREF*; S. M. NICOLA. *Albert Einstein Col. of Med.*

8:00 QQ24 **178.21** Involvement of glutamatergic and cholinergic modulations of mesolimbic dopamine neurotransmission in a visual stimulus-reinforced instrumental behavior. X. XIE*; M. SPANOS; J. GRAS-NAJJAR; S. C. HUGHES; L. A. SOMBERS. *North Carolina State Univ.*

9:00 QQ25 **178.22** Selective stimulation of serotonin 1A, 1B, or 3 receptors of the ventral tegmentum inhibits food intake in the hungry rat. W. E. PRATT*; A. F. CIESINSKI; A. O. ILESANMI; Z. J. PIERCE-MESSICK; D. S. POWELL; I. A. ROSNER. *Wake Forest Univ.*

10:00 QQ26 **178.23** Taste reactivity: Role of kappa-opioid receptors in the basolateral amygdala. H. S. FERREIRA*; A. I. R. NASCIMENTO; D. R. CERQUEIRA; A. L. MOITEIRO; E. S. ARAÚJO; D. O. M. BRITO; J. B. FREGONEZE. *State Univ. of Bahia, State Univ. of Southwest Bahia, Federal Univ. of Bahia.*

11:00 QQ27 **178.24** ▲ Maternal care deprivation modifies CB1R expression and nicotine seeking behavior. A. FAJARDO*; N. M. REYES-PRIETO; M. MENDEZ DIAZ; A. E. RUIZ-CONTRERAS; O. PROSPERO-GARCÍA. *Grupo De Neurociencias, UNAM: Depto. De Fisiología, Grupo de Neurociencias, UNAM: Coord. De Psicofisiología, Facultad de Psicología.*

8:00 QQ28 **178.25** Amygdala modulation of compulsive responding for ethanol. L. R. HALLADAY*; A. HOLMES. *Natl. Inst. on Alcohol Abuse and Alcoholism.*

POSTER

179. Reward: Neuropharmacology

Theme F: Cognition and Behavior

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

8:00 QQ29 **179.01** Individual differences in voluntary alcohol intake in rats: Relationship with impulsivity and decision making. M. SPOELDER*; J. P. FLORES DOUROJEANNI; C. G. DE GIT; A. M. BAARS; J. G. LOZEMAN-VAN T KLOOSTER; H. M. B. LESSCHER; L. J. M. J. VANDERSCHUREN. *Utrecht Univ., Univ. Med. Ctr. Utrecht.*

9:00 QQ30 **179.02** 14-3-3 zeta and MAPK in the central nucleus of the amygdala contribute to escalation of alcohol intake. H. M. LESSCHER*; M. SPOELDER; A. M. BAARS; P. HESSELING; L. J. M. J. VANDERSCHUREN. *Utrecht Univ. / Fac. of Vet. Med.*

10:00 QQ31 **179.03** The relationship between social play behavior and substances of abuse: effects of cocaine and alcohol in rats. L. J. VANDERSCHUREN*; E. J. M. ACHTERBERG; P. J. J. BAARENDSE; H. M. B. LESSCHER; J. H. W. LIMPENS; M. SPOELDER; V. TREZZA. *Utrecht Univ., Univ. Med. Ctr. Utrecht, Univ. Roma Tre.*

11:00 QQ32 **179.04** ● Measuring motivation and performance of social play behavior in rats: role of dopamine and noradrenaline. M. ACHTERBERG*; L. W. M. VAN KERKHOF; R. DAMSTEEGT; M. SERVADIO; M. M. H. VAN SWIETEN; D. H. HOUWING; V. TREZZA; L. J. M. J. VANDERSCHUREN. *Fac. of Vet. Med., Brain Ctr. Rudolf Magnus, Univ. 'Roma Tre'.*

8:00 QQ33 **179.05** ▲ Social defeat stress decreases clustering of synaptic markers and alters spine morphology in the hippocampus of adolescent c57BL/6 mice. S. J. NIETO*; D. MUSHEYEV; G. DAYRIT; A. AUBRY; J. AVILA; S. D. IÑIGUEZ; P. A. SERRANO. *California State Univ. San Bernardino, Hunter Col.*

9:00 QQ34 **179.06** Chronic opioid exposure during adolescence results in persistent behavioral and neurochemical changes into adulthood. M. A. GREENWOOD*; S. VOLPE; O. K. SIAL; L. F. ALCANTARA; E. M. PARISE; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ.*

10:00 QQ35 **179.07** One-trial methamphetamine-induced behavioral sensitization in adolescent rats. D. COLLIN; S. JANÉ; T. BIN; S. SENG; A. R. ZAVALA*. *California State Univ.*

11:00 QQ36 **179.08** Reduction in ventral midbrain NMDA receptors reveals two opposite modulatory roles for glutamate on reward. P. ROMPRE*; G. HERNANDEZ; A. KHODAMI-POUR; D. LEVESQUE. *Univ. De Montreal, Concordia Univ., Univ. De Montreal.*

8:00 RR1 **179.09** ▲ Early-life methylphenidate alters the rewarding effects of low, but not high, doses of methamphetamine in male and female rats. R. J. FLORES GARCIA*; J. GIANG; D. COLLIN; A. SU; M. BOWMAN; R. LESYSHYN; A. R. ZAVALA. *California State University, Long Beach, California State University, Long Beach.*

9:00 RR2 **179.10** Ketamine reverses social defeat stress-induced depression-like behavior in adolescent mice. L. M. RIGGS*; K. L. SHAWHAN; V. CAO; J. B. ALIPIO; S. D. IÑIGUEZ. *California State Univ.*

10:00 RR3 **179.11** Repeated Ketamine treatment produces a stress-resistant phenotype in adult male mice. O. K. SIAL*; E. M. PARISE; L. F. ALCANTARA; R. HADAD; S. VOLPE; C. AYENI; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ.*

11:00 RR4 **179.12** Depression-like state and deficits in granule cells induced by witnessing social defeat of other animals can be rescued by chronic fluoxetine treatment. S. VOLPE*; B. WARREN; O. K. SIAL; E. M. PARISE; L. F. ALCANTARA; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ., Natl. Inst. on Drug Abuse, Behavior Neurosciencce Reseach Br.*

8:00 RR5 **179.13** Decreased dopamine release correlated with increased reward seeking: A case for depolarization block. G. A. HERNANDEZ*; M. COSSETTE; P. SHIZGAL; P. ROMPRÉ. *Univ. de Montreal, CSBN/ Concordia Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 RR6 **179.14** Nicotine treatment buffers the negative functional consequences induced by exposure to physical and emotional stress in adolescent male mice. L. F. ALCANTARA*; B. L. WARREN; C. R. SATTLER; J. C. DUPERROUZEL; E. M. PARISE; O. K. SIAL; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ., Natl. Inst. on Drug Abuse.*

10:00 RR7 **179.15** ▲ Inhibitory action of 5-hydroxytryptaminergic and glucagon-like peptide-1 (GLP-1) signaling on ghrelin-stimulated appetitive behavior. J. A. SELVA; E. T. BROCKWAY; L. C. S. CEPKO; E. B. MERFELD; C. B. MOCTEZUMA; P. J. CURRIE*. *Reed Col.*

11:00 RR8 **179.16** Akt signaling within the nucleus accumbens regulates functional reactivity to chronic social defeat stress in male mice. E. M. PARISE*; L. F. ALCANTARA; O. K. SIAL; C. AYENI; S. VOLPE; E. J. NESTLER; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ., Mount Sinai Sch. of Med.*

8:00 RR9 **179.17** Oxycodone-induced conditioned place preference in male and female adolescent rats. K. S. OJALA*; M. A. ESQUEDA; J. GIANG; A. R. ZAVALA. *California State Univ. Long Beach.*

9:00 RR10 **179.18** ▲ Adolescent antidepressant treatment induces an enduring anxiogenic behavioral phenotype in adulthood. B. CRUZ*; K. L. SHAWHAN; R. RODRIGUEZ; N. N. ZAMORA; R. AHMED; M. HERNANDEZ; L. MOTLEY; S. D. IÑIGUEZ. *California State Univ., California State Univ.*

10:00 RR11 **179.19** The effects of ketamine exposure during periadolescence on the rewarding effects of nicotine in male and female adolescent rats. M. A. BOWMAN*; M. VINCENT; K. HERNANDEZ; S. D. IÑIGUEZ; A. R. ZAVALA. *California State University, Long Beach, California State University, San Bernadino.*

11:00 RR12 **179.20** The serotonin 2C receptor agonist lorcaserin attenuates intracranial self-stimulation of the dorsal raphe nucleus or medial forebrain bundle. F. D. ZEEB*; G. A. HIGGINS; P. J. FLETCHER. *CAMH, InterVivo Solutions Inc, Univ. of Toronto.*

8:00 RR13 **179.21** Intranasal oxytocin and vasopressin attenuate sex differences in the neural response to cooperative social interactions. C. FENG*; P. D. HACKETT; A. C. DEMARCO; X. CHEN; J. K. RILLING. *Dept. of Anthropology, Emory Univ., Dept. of Psychology, Univ. of Kansas, Dept. of Psychiatry and Behavioral Sciences, Emory Univ., Ctr. for Behavioral Neuroscience, Emory Univ., Yerkes Natl. Primate Res. Center, Emory Univ., Ctr. for Translational Social Neuroscience, Emory Univ.*

9:00 RR14 **179.22** ▲ Characterization of the rewarding and reinforcing effects of the mixed-action delta/mu opioid agonist MMP-2200 in rats. K. CONE; D. GIUVELIS; J. LAVIGNE; A. LUGINBUHL; C. DUNBAR; P. ATHERTON; J. STREICHER; R. POLT; E. J. BILSKY*; G. W. STEVENSON. *Univ. of New England, Univ. of New England, Univ. of Arizona.*

10:00 RR15 **179.23** Gastrin releasing peptide at the nucleus accumbens elicits dopamine release and a conditioned place preference: Implications for major depression. P. KENT*; C. CAYER; J. S. JAMES; T. BRAID; Z. MERALI. *uOttawa Inst. of Mental Hlth. Res. Instit, Univ. of Ottawa Inst. of Mental Hlth. Res.*

POSTER

180. Motivation and Emotions: Risk-Taking

Theme F: Cognition and Behavior

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

8:00 RR16 **180.01** Risky decision-making behavior modulates the epigenetic factor MeCP2 in prefrontal cortex. J. V. DENG*; C. A. ORSINI; K. G. SHIMP; J. L. BIZON; B. SETLOW. *Univ. of Florida, Univ. of Florida.*

9:00 RR17 **180.02** The role of the bed nucleus of the stria terminalis in behavioral adaptation to an aversively uncertain environment. B. A. PELLMAN*; E. S. KIM; J. J. KIM. *Univ. of Washington.*

10:00 RR18 **180.03** Sex differences in a rat model of risky decision making. K. SHIMP*; C. A. ORSINI; R. J. GILBERT; M. WILLIS; J. L. BIZON; B. SETLOW. *Univ. of Florida, Univ. of Florida.*

11:00 RR19 **180.04** The basolateral amygdala and the orbitofrontal cortex have functionally dissociable roles in a rodent model of risky decision-making. C. A. ORSINI*; R. TROTTA; J. L. BIZON; B. SETLOW. *UNIVERSITY OF FLORIDA, Univ. of Florda.*

8:00 RR20 **180.05** Hippocampal lesioned rats exhibit increased variability in risky foraging behavior. M. KONG*; E. J. KIM; J. J. KIM. *Univ. of Washington, Univ. of Washington.*

9:00 RR21 **180.06** Fear-associated food and locomotor anticipatory behavior. E. S. KIM*; B. A. PELLMAN; J. KASHIMA; O. MOTCH; H. O. DE LA IGLESIA; J. J. KIM. *Univ. of Washington, Oregon Hlth. Sci. Univ., Univ. of Washington, Univ. of Washington.*

10:00 RR22 **180.07** ▲ Environmental enrichment during adolescence reduces affinity for novelty in young adult rats. D. E. COBB*; M. C. ZRULL. *Appalachian State Univ., Appalachian State Univ.*

11:00 RR23 **180.08** Representation of Economic Values in monkey ventromedial prefrontal cortex neurons. H. YAMADA*; K. LOUIE; A. TYMULA; P. W. GLIMCHER. *Tsukuba Univ., New York Univ., Tsukuba Univ., Univ. of Sydney.*

8:00 RR24 **180.09** ● Subgenual cingulate cortex tracks incurred cost but not forgone reward. A. THOME*; T. BLANCHARD; B. HAYDEN. *Univ. of Rochester, Univ. of Rochester.*

9:00 RR25 **180.10** Maintaining homeostasis by decision-making. C. W. KORN*; D. R. BACH. *Univ. of Zurich.*

10:00 RR26 **180.11** Association of insula to accumbens tract integrity with risky choice. J. K. LEONG*; F. PESTILLI; C. C. WU; B. KNUTSON. *Stanford Univ.*

11:00 RR27 **180.12** Individual differences in preference for economic risk in cocaine addiction. A. B. KONOVA*; S. J. MOELLER; M. MISYRLIS; M. A. PARVAZ; F. D'OLEIRE UQUILLAS; K. SCHNEIDER; G. HORGA; N. ALIA-KLEIN; R. Z. GOLDSTEIN. *Icahn Sch. of Med. At Mount Sinai, Stony Brook Univ., Columbia Univ.*

8:00 RR28 **180.13** Neural correlates of romantic partner influence on risky decision-making. D. M. SHORE*; E. C. THURSTON; T. J. DISHION. *Arizona State Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 RR29 **180.14** Personality, emotion, and decision-making: Personality factors and induced-mood influence iowa gambling task scores and deck selections. E. C. RASMUSSEN*; P. G. NESTOR; M. SHUKLA; D. NEWELL. *The Cognitive Aging Lab/ Georgetown Univ., Univ. of Massachusetts Boston.*

10:00 RR30 **180.15** Watch out! Quantifying approach-avoidance conflict and resolution in humans: effects of instructed threat, loss and effort. M. W. SCHLUND*; S. MAGEE; S. DYMOND. *Univ. of North Texas, Univ. of North Texas, Swansea Univ.*

11:00 RR31 **180.16** Acute stress and perceived control influence persistence after failure. J. P. BHANJI*; E. S. KIM; M. R. DELGADO. *Rutgers Univ.*

POSTER

181. Neuroethology

Theme F: Cognition and Behavior

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

8:00 RR32 **181.01** ▲ Corollary discharge in embodied nervous system simulation. J. M. RATLIFF*; D. BLUSTEIN; A. WESTPHAL; J. AYERS. *Northeastern Univ. Marine Sci. Ctr., Schlumberger.*

9:00 RR33 **181.02** Electroretinogram analysis of light sensitivity in four species of frogs from habitats with different ambient light levels. R. ROSENCRANS; S. FELLNER; D. VUMBACO; C. RICHARDS-ZAWACKI; H. E. FARRIS*. *Louisiana St. Univ. Hlth. Sci. Ctr., Tulane Univ., Louisiana State Univ. HSC.*

10:00 RR34 **181.03** Neural correlates of vision in jumping spiders. R. R. HOY*. *Cornell Univ.*

11:00 RR35 **181.04** Parallel processing of naturally occurring second order features of electrosensory stimuli. C. HUANG*; M. J. CHACRON. *McGill Univ.*

8:00 RR36 **181.05** *In vivo* two-photon calcium imaging of subcellular input retinotopy in an identified visual interneuron. Y. ZHU*; F. GABBIANI. *Baylor Col. of Med.*

9:00 RR37 **181.06** Dynamics of 5-HT release in the electrosensory system of weakly electric fish, Apteronotus leptorhynchus, evoked by sensory stimuli. H. FOTOWAT*; E. HARVEY-GIRARD; L. MALER; R. KRAHE. *McGill Univ., Univ. of Ottawa, Univ. of Ottawa.*

10:00 RR38 **181.07** Flow navigation in larval zebrafish. P. OTEIZA*; I. ODSTRCIL; G. LAUDER; F. ENGERT. *Harvard Univ.*

11:00 RR39 **181.08** The neural substrate of stationary object recognition in the leopard frog. E. W. RECKTENWALD; L. SKORINA; E. A. DUDKIN; E. R. GRUBERG*; W.M. Saidel. *Temple Univ., Pennsylvania State Univ. Brandywine, Temple Univ., Rutgers, The State University of New Jersey.*

8:00 RR40 **181.09** Neuronal connections of lateral anterior thalamus in leopard frogs. E. A. DUDKIN*; E. W. RECKTENWALD; L. SKORINA; E. R. GRUBERG. *Penn State Univ., Temple Univ.*

9:00 RR41 **181.10** A neural network mediating regulation of brain state by light. R. CHENG*; Q. LIN; S. KRISHNAN; S. JESUTHASAN. *IMCB, A*STAR, Natl. Univ. of Singapore, IMCB, A*STAR, Duke-NUS Grad. Med. Sch., Natl. Univ. of Singapore.*

10:00 RR42 **181.11** Natural stimulus statistics of electric fish communication. J. HENNINGER; J. PLANCK; H. POLDER*; J. BENDA. *Eberhard Karls Univ., npi electronic GMBH, Bernstein Ctr. for Comput. Neurosci.*

11:00 RR43 **181.12** Behavioral measurement of Mauthner cell excitability using rapid escape responses directly triggered by electric field pulses. H. A. BURGESS*; K. M. TABOR; S. A. BERGERON; E. J. HORSTICK; T. YOKOGAWA; D. C. JORDAN; V. AHO; T. PORKKA-HEISKANEN; G. HASPEL. *NIH/NICHD, Univ. of Helsinki, New Jersey Inst. of Technol.*

8:00 RR44 **181.13** Temperature representation in the *Drosophila* brain. D. D. FRANK, III; J. JOUANDET; P. KEARNEY; M. GALLIO*. *Northwestern Univ.*

9:00 RR45 **181.14** Extraocular spectral photosensitivity in the primitive nervous system of hydra vulgaris. S. L. GUERTIN*; G. KASS-SIMON. *Univ. of Rhode Island.*

10:00 RR46 **181.15** The effect of silver nanoparticles on behavior and synaptic responses of crayfish. S. N. ADKINS*; A. C. LEFEVRE; B. L. ANTONSEN. *Marshall Univ.*

11:00 RR47 **181.16** Interactions between social status and alcohol intoxication in crayfish. J. HERBERHOLZ*; M. E. SWIERZBINSKI; A. R. LAZARCHIK. *Univ. of Maryland, Univ. of Maryland.*

8:00 RR48 **181.17** Monoaminergic modulation of sensory inputs to the crayfish medial giant escape neurons. R. HU*; M. E. MURPHY; J. HERBERHOLZ. *Univ. of Maryland, Univ. of Maryland, Univ. of Maryland.*

9:00 RR49 **181.18** Inhibitory properties of the medial giant escape circuit in crayfish. M. E. SWIERZBINSKI*; J. HERBERHOLZ. *Univ. of Maryland, Univ. of Maryland.*

10:00 RR50 **181.19** Investigation of fast autoinhibition in the lateral giant circuit of crayfish. L. S. VENUTI*; M. E. SWIERZBINSKI; J. HERBERHOLZ. *Univ. of Maryland, Univ. of Maryland.*

11:00 SS1 **181.20** Heterogeneous response properties in a population of sensory neurons are structured to efficiently code naturalistic stimuli. G. MARSAT*; G. J. HUPÉ; K. M. ALLEN. *West Virginia Univ.*

8:00 SS2 **181.21** ● Quantitative behavioral differences in visual acuity between three-spined stickleback populations measured using the optokinetic response. A. A. BHANDIWAD*; M. E. ARNEGARD; C. L. PEICHEL; J. A. SISNEROS. *Univ. of Washington, Fred Hutchinson Cancer Res. Inst.*

9:00 SS3 **181.22** Belly-up or belly-down: Spectral comparisons across body surface may contribute to dorso-ventral orientation in an amphibious leech. J. A. JELLIES*. *Western Michigan Univ.*

10:00 SS4 **181.23** Changes in stimulus envelope reveal two classes of peripheral electrosensory neurons. M. G. METZEN*; M. J. CHACRON. *McGill Univ., McGill Univ.*

11:00 SS5 **181.24** The claustrum of Tursiops truncatus, and example of distinctive cetacean brain brain morphology. J. I. JOHNSON*; B. A. FENSKE; J. A. MORRIS. *Michigan State Univ., SNBL USA.*

8:00 SS6 **181.25** Neural coding strategies for extracting motion estimates from sensory contrast. S. CLARKE*; R. NAUD; A. LONGTIN; L. MALER. *Univ. of Ottawa, Univ. of Ottawa, Univ. of Ottawa.*

9:00 SS7 **181.26** WITHDRAWN.

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 SS8 **181.27** Possible origins of human-like pitch perception mechanisms. X. SONG*; M. S. OSMANSKI; Y. GUO; X. WANG. *Johns Hopkins University. Dept. of Biomed. Engin.*

11:00 SS9 **181.28** Developmental characterization of the full repertoire of tail movements in the appendicularian urochordate Oikopleura dioica. O. KRENEISZ*; J. C. GLOVER. *Univ. of Oslo, Sars Intl. Ctr. for Marine Mol. Biol., Sars Intl. Ctr. for Marine Mol. Bioogy.*

8:00 SS10 **181.29** Neurobehavioral and ecophysiological correlates of brain structure in sympatrically evolving elephants and humans. L. N. IRWIN*. *Univ. Texas at El Paso.*

POSTER

182. Vocal Communication in Songbirds: Sensory and Motor Mechanisms I

Theme F: Cognition and Behavior

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

8:00 SS11 **182.01** Adaptation of auditory feedback can shape the dynamics of repetition in variable vocal sequences. J. WITTENBACH*; K. E. BOUCHARD; M. S. BRAINARD; D. Z. JIN. *Pennsylvania State Univ., Lawrence Berkeley Natl. Lab., Univ. of California at San Francisco.*

9:00 SS12 **182.02** An inverse relationship between syllable duration and most probable repeat number in birdsong. S. SURENDRALAL*; J. WITTENBACH; J. E. MARKOWITZ; T. J. GARDNER; D. L. MOSELEY; J. PODOS; D. Z. JIN. *The Pennsylvania State Univ., Boston Univ., Univ. of Massachusetts Amherst.*

10:00 SS13 **182.03** Negative correlation between gap length and sequence transition probability in the Bengalese finch. T. W. TROYER*; K. E. BOUCHARD; A. S. KULKARNI; M. S. BRAINARD. *Univ. Texas San Antonio, UTSA, UCSF, UCSF, LBNL, HHMI.*

11:00 SS14 **182.04** Optimizing real-time detection of specific vocalizations using spectral templates. A. S. KULKARNI*; T. W. TROYER. *Univ. of Texas At San Antonio, Univ. of Texas At San Antonio.*

8:00 SS15 **182.05** Balance between repetition and variation governs birdsong structure -- can birds match variability levels in song and movement patterns? E. JANNEY*; H. TAYLOR; L. PARRA; O. TCHERNICHOVSKI. *CUNY, Univ. of Technol., CUNY.*

9:00 SS16 **182.06** ● Practical classification method for birdsong with variable note sequences and its application to the whole day recordings. T. KOUMURA*; K. OKANOYA. *The Univ. of Tokyo.*

10:00 SS17 **182.07** A procedure for song similarity calculation using sub-space angles. A. BHARADWAJ; S. KOLLMORGEN; J. A. HERBST; R. H. HAHNLOSER*. *Inst. of Neuroinformatics, Univ. of Zurich/ETH Zurich.*

11:00 SS18 **182.08** Mechanisms of vocal coordination in zebra finches: Using a vocal robot to study call interactions and the coupling of behavioral states. J. BENICHOV*; O. TCHERNICHOVSKI. *Hunter Col., CUNY Grad. Ctr.*

8:00 SS19 **182.09** Independent processing of the sequence and structure of birdsong in avian pre-motor cortex. M. J. BASISTA*; K. C. ELLIOTT; W. WU; R. L. HYSON; R. BERTRAM; F. JOHNSON. *Florida State Univ., Florida State Univ., Florida State Univ.*

9:00 SS20 **182.10** Changes in phenotypic firing patterns and ion channel expression across developmental learning stages in the HVC of juvenile songbirds. M. T. ROSS*; D. FLORES; R. BERTRAM; F. JOHNSON; R. L. HYSON. *Florida State Univ. Psychology Building, Florida State Univ. Mathematics.*

10:00 SS21 **182.11** Basal ganglia disconnection attenuates the physiological development of a cortical pre-motor region that encodes learned birdsong. K. C. ELLIOTT*; W. WU; R. BERTRAM; R. HYSON; F. JOHNSON. *Florida State Univ.*

11:00 SS22 **182.12** Millisecond-scale encoding in a cortical motor area in songbirds. C. TANG*; K. SRIVASTAVA; D. CHEHAYEB; I. NEMENMAN; S. SOBER. *Univ. of California, San Francisco, Georgia Inst. of Technol., Emory Univ.*

8:00 SS23 **182.13** A micro-scale, flexible electrode array for performing multi- and single motor unit electromyographic recordings of vocal muscles in songbirds. K. H. SRIVASTAVA*; S. J. SOBER. *Emory Univ., Georgia Inst. of Technol.*

9:00 SS24 **182.14** Projections of the lateral deep cerebellar nuclei in Bengalese Finches. D. A. NICHOLSON*; S. J. SOBER. *Emory Univ.*

10:00 SS25 **182.15** Developing zebra finch HVC network models. A. DAOU*; P. ROZDEBA; M. ELDRIDGE; U. MORONE; H. D. I. ABARBANEL; D. MARGOLIASH. *Univ. Chicago, Univ. of California, Univ. of California.*

11:00 SS26 **182.16** Population gesture dynamics in the zebra finch vocal motor song system. K. J. BROWN*; B. K. YOUNG; F. GOLLER; D. MARGOLIASH. *Univ. of Chicago, Univ. of Utah, Univ. of Chicago.*

POSTER

183. Social Communication

Theme F: Cognition and Behavior

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

8:00 SS27 **183.01** Daily and seasonal gene expression patterns in a hindbrain vocal motor nucleus: Insights into the molecular basis of vocal patterning. N. FENG*; D. J. FERGUS; A. H. BASS. *Cornell Univ.*

9:00 SS28 **183.02** Gene expression patterns in auditory hair cell epithelium: Insights into the molecular basis of seasonal plasticity in frequency sensitivity. D. J. FERGUS; N. FENG; A. H. BASS*. *Cornell Univ., North Carolina Museum of Natural Sci.*

10:00 SS29 **183.03** Audio-vocal activity of single neurons in the monkey prefrontal cortex. S. R. HAGE*; A. NIEDER. *Tuebingen Univ.*

11:00 SS30 **183.04** Neurons in the macaque's anterior cingulate cortex encode volitional initiation of vocalization. N. GAVRILOV; S. R. HAGE; A. NIEDER*. *Univ. Tuebingen.*

8:00 SS31 **183.05** A functional role of the motor cortex in mouse ultrasonic songs. C. CHEN*; M. LO; J. CHABOUT; K. DEISSEROTH; E. D. JARVIS. *Duke Univ., Stanford Univ., Duke Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

9:00 SS32 **183.06** Psychophysical examination of sound localization in Alligator Mississippiensis. C. M. BOUSLOG; G. ZHANG; A. STREETS; H. S. BIERMAN*; C. E. CARR. *Univ. of Maryland, Col. Park.*

10:00 SS33 **183.07** A 3D atlas of a lizard brain. D. HOOPS*; J. ULLMANN; A. JANKE; T. STAIT-GARDNER; S. KEOGH. *The Australian Natl. Univ., Univ. of Queensland, Univ. of Western Sydney.*

11:00 SS34 **183.08** Social context modification of mouse song. J. CHABOUT*; E. D. JARVIS. *Howard Hughes Med. Inst., Duke Univ. Med. center.*

8:00 SS35 **183.09** Inter- and intra-individual acoustic variation of vocalizations in macaque monkeys. A. M. DOYLE; M. FUKUSHIMA; M. MULLARKEY; M. MISHKIN*. *NIMH.*

9:00 SS36 **183.10** A human FOXP2 splice variant is analogous to one found in rats which is modulated by androgens. M. BOWERS*; C. ROBY; C. WRIGHT; J. HOFFMAN; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

10:00 SS37 **183.11** ● FoxP1, FoxP2 and Srpx2 levels are impacted by social isolation during adolescence and correlated with Ultrasonic Vocalizations profile in agonistic interactions in rats. P. PAREDES-RAMOS*; M. PÉREZ-POUCHOULÉN; M. MCCARTHY; M. J. BOWERS. *Ctr. De Investigaciones Cerebrales, University Of Maryland, University Of Maryland, University Of Maryland.*

11:00 SS38 **183.12** Specificity of behaviorally regulated Reelin-signaling in vocal learners and non-learners. E. FRALEY*; P. PHELPS; S. WHITE. *UCLA.*

8:00 SS39 **183.13** Motor cortex mediates vocal sequences in Neotropical singing mice. D. E. OKOBI*, JR; S. M. PHELPS; M. A. LONG. *NYU Sch. of Med., Univ. of Texas.*

9:00 SS40 **183.14** Cortical ensemble coding of mammalian syllable production. S. TRENT*; M. SMOTHERMAN. *Texas A&M Univ.*

10:00 SS41 **183.15** 50-kHz Ultrasonic vocalizations as play signals in rats. T. M. KISKO*; B. T. HIMMLER; S. M. HIMMLER; D. R. EUSTON; S. M. PELLIS. *Univ. of Lethbridge.*

11:00 SS42 **183.16** Brain activation patterns in response to complex auditory stimuli in a vocal fish. R. A. MOHR*; A. A. BHANDIWAD; P. M. FORLANO; J. A. SISNEROS. *Univ. of Washington, Brooklyn Col.*

8:00 SS43 **183.17** Network mechanisms of corollary discharge in the songbird. J. E. MARKOWITZ*; W. LIBERTI; G. GUITCHOUNTS; T. J. GARDNER. *Boston Univ., Boston Univ., Harvard Univ.*

9:00 SS44 **183.18** The role of the amygdala in the generation of different vocal patterns in Xenopus. I. C. HALL*; D. B. KELLEY. *Columbia Univ.*

10:00 SS45 **183.19** No effect of devocalization on sexual behavior in rats. E. M. SNOEREN*; A. ÅGMO. *The Arctic Univ. of Norway, Dept. of Psychology.*

POSTER

184. Imaging Advances: Human

Theme G: Novel Methods and Technology Development

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

8:00 SS46 **184.01** New perspectives into atomic neuroscience in post-mortem, post-surgical human tissue and cell cultures using synchrotron x-ray fluorescence imaging. A. LAM*; L. K. FRUTOS; A. R. MUNOZ; P. V. CHU; E. L. OHAYON. *Neurolinx Res. Inst., Univ. of Toronto Epilepsy Res. Program.*

9:00 SS47 **184.02** Human fetal brain connectivity: Atlas of short axons and radial glial fibers. H. HUANG*; V. MISHRA; T. JEON; M. PLETIKOS; N. SESTAN. *Univ. of Texas, Southwestern Med. Ctr., Yale Univ.*

10:00 SS48 **184.03** New versatile clearing method for human brain imaging. I. COSTANTINI; A. P. DI GIOVANNA; V. CONTI; A. ALLEGRA MASCARO*; L. SILVESTRI; L. SACCONI; R. GUERRINI; F. S. PAVONE. *European Lab. for Non-linear Spectroscopy, Univ. of Florence, NEUROFARBA, Univ. of Florence, Natl. Res. Council, Dept. of Physics, Univ. of Florence.*

11:00 SS49 **184.04** Double mismatch between cortical and callosal myelination assessed with T1/T2-weighted MRI and histology. S. SANDRONE*; M. THIEBAUT DE SCHOTTEN; D. MURPHY; F. DELL'ACQUA; M. CATANI. *King's Col. London.*

8:00 SS50 **184.05** Quantifying interhemispheric motor cortical structural connectivity using constrained spherical deconvolution. K. L. RUDDY*; A. LEEMANS; R. G. CARSON. *Neural Control of Movement Lab, ETH Zurich, Trinity Col. Dublin, Queens Univ. Belfast, Univ. Med. Ctr.*

9:00 SS51 **184.06** ● Anatomical labeling with probabilistic inference for diffusion tensor imaging of human brain. U. YAMAMOTO*; M. OHZEKI; T. HIROYASU. *Doshisha Univ., Kyoto Univ.*

10:00 SS52 **184.07** Reliability of ipsilateral silent period to measure interhemispheric inhibition: Preliminary results in non-disabled young adults. Y. KUO*; C. A. MARTINEZ; T. DUBUC; C. J. WINSTEIN; N. SCHWEIGHOFER; K. KULIG; B. E. FISHER. *USC.*

11:00 SS53 **184.08** Correlations in ultraslow fMRI fluctuations with simultaneous EEG. J. W. EVANS*; P. KUNDU; Z. LIU; S. HOROVITZ; P. BANDETTINI. *NIH, NIH, Purdue Univ.*

8:00 SS54 **184.09** ● Exploring neuroanatomical variation in a large database of manually-labeled human MRI scans. A. J. WORTH*; J. A. TOURVILLE. *Neuromorphometrics, Inc., Boston Univ.*

9:00 SS55 **184.10** Optimized compressed sensing reconstruction with parallel computation for high spatial resolution functional magnetic resonance imaging. Z. FANG*; N. LE; M. CHOY; J. H. LEE. *Stanford Univ.*

10:00 SS56 **184.11** ▲ Positron emission tomography radiotracer development to image new synapses in the brain. J. E. SMITH*; G. VAN DE BITTNER; M. RILEY; F. A. SCHROEDER; R. NEELAMEGAM; J. M. HOOKER. *North Carolina State Univ., Harvard Med. Sch.*

11:00 SS57 **184.12** First hdac pet radiotracer ready for human translation. C. WANG*; F. A. SCHROEDER; H. WEY; S. J. HAGGARTY; J. M. HOOKER. *Mass Gen. Hospital/ Harvard Med. Sch., Ctr. for Human Genet. Research, Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

8:00 SS58 **184.13** [^{18}F] FP-CIT PET three dimensional study in Parkinson's disease. S. PARK*; Y. PARK. *Chungbuk Natl. University, Sch. of Med.*

9:00 SS59 **184.14** Impact of hematocrit levels on cerebral blood flow in bariatric surgery patients and weight-stable obese controls. R. D. HOPSON; M. A. ELLIOT; K. RUPAREL; K. PRABHAKARAN; L. F. FAULCONBRIDGE; K. C. ALLISON; E. YODH; R. S. GALLAGHER; J. A. DETRE; T. A. WADDEN; R. C. GUR*. *Univ. Pennsylvania.*

POSTER

185. Imaging Advances: Silico and High Throughput

Theme G: Novel Methods and Technology Development

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

8:00 SS60 **185.01** The inner workings of NeuroMorpho. Org. R. PAREKH*; R. ARMANANZAS; S. POLAVARAM; S. NANDA; G. A. ASCOLI. *George Mason Univ.*

9:00 SS61 **185.02** ● Open web atlas for high-resolution 3d mouse brain data. Y. CHOE*; C. SUNG; J. CHOI; M. SRIVASTAVA; M. R. PRIOUR; J. KEYSER; L. C. ABBOTT. *Texas A&M Univ., IBM.*

10:00 SS62 **185.03** NeuroGPS: software for automated localization and digital reconstruction of single neuron in the mouse brain. T. QUAN; S. ZENG; A. LI; H. GONG; Q. LUO; X. HANQING*. *Huazhong Univ. of Sci. and Technol., Wuhan Natl. Lab. for Optoelectronics, Huazhong Univ. of Sicience & Technol.*

11:00 SS63 **185.04** A next generation common coordinate framework of the adult mouse brain for data integration and discovery. L. NG; Q. WANG; Y. LI; C. LAU; L. KUAN; D. FENG; J. ROYALL; B. FACER; A. HO; C. WHITE; S. CALDEJON; S. M. SUNKIN*; A. SZAFER; W. WAKEMAN; J. HOHMANN; A. BERNARD; M. HAWRYLYCZ; H. ZENG; C. DANG. *Allen Inst. for Brain Sci.*

8:00 SS64 **185.05** ● Rodent brain Waxholm Space atlas templates enriched with serial two-photon and histological data. T. B. LEERGAARD; S. LILLEHAUG; E. A. PAPP; C. COELLO; T. RAGAN; J. G. BJAALIE*. *Univ. Oslo, TissueVision, Inc.*

9:00 SS65 **185.06** ● Automated creation of aligned 3D data from multi-section whole slide imaging. J. KORICH*; B. S. EASTWOOD; M. J. FAY; S. J. TAPPAN; N. J. O'CONNOR; C. GERFEN; P. J. ANGSTMAN; J. R. GLASER. *MBF Biosci., NIMH.*

10:00 SS66 **185.07** ● Whole brain reconstruction algorithm for serial optical coherence tomography imaging. A. VAVILIN*; J. LEE; E. MIN; S. JUNG; T. KIM; W. JUNG. *Ulsan Natl. Inst. of Sci. and Technol., Futurist.*

11:00 SS67 **185.08** Cross-platform software neuTube enables efficient reconstruction and user-friendly editing of neuronal structures from 3D fluorescence microscope images. L. FENG*; T. ZHAO; J. KIM. *Korea Inst. of Sci. and Technol., Janelia Farm Res. Campus HHMI.*

8:00 SS68 **185.09** NeuTu: An open source software tool for semi-automatic reconstruction of neurons from bright-field microscopic images. D. Z. JIN*; T. ZHAO; D. HUNT; N. SPRUSTON. *Pennsylvania State Univ., Howard Hughes Med. Inst.*

9:00 TT1 **185.10** Automated, label-free cell body detection for multi-modal characterization of neurons in brain slice. B. LONG*; J. T. TING; M. HAWRYLYCZ; C. KOCH; E. LEIN; H. PENG. *Allen Inst. For Brain Sci.*

10:00 TT2 **185.11** ● A new standalone software for interactive filtering of movement artifacts generated during multiphoton intravital imaging of neuroinflammation. D. SOULET*; B. AUBÉ; C. FONTAINE - LAVALLÉE; A. PARÉ; S. LACROIX. *CHUQ Res. Ctr., Laval University, Med. Fac., Laval University, Med. Fac.*

11:00 TT3 **185.12** Repairing spherical aberration during *in vivo* two-photon imaging. G. ESTRADA; J. M. SCHUMMERS*. *Florida Atlantic Univ., Max Planck Florida Inst.*

8:00 TT4 **185.13** High throughput light sheet fluorescent imaging of transparent neural tissue. A. FROSTELL*; P. A. KHALILI; B. MEIJER; L. BRUNDIN; P. MATTSSON; M. SVENSSON. *Karolinska Institutet.*

9:00 TT5 **185.14** ● Integrated optical coherence tomography and microscopy for *ex vivo* multi-scale visualization of mouse brain. E. MIN*; J. LEE; S. JUNG; A. VAVILIN; S. SHIN; J. KIM; W. JUNG. *UNIST, Kyungpook Natl. Univ.*

10:00 TT6 **185.15** High-throughput and high-resolution 3d tissue scanner with internet connected 3d virtual microscope for large-scale automated histology. J. KWON*; J. LIM; S. LEE; D. MAYERICH; J. KEYSER; L. ABBOTT; Y. CHOE. *Kettering Univ., Beckman Inst. for Advanced Sci. and Technol., Texas A&M Univ., Texas A&M Univ.*

11:00 TT7 **185.16** ● Enhanced knife edge scanning microscopy for reliable sub micrometer imaging of whole small animal brains. T. HUFFMAN*; M. GOODMAN; J. KEYSER; L. C. ABBOTT; D. E. MILLER; W. ZHANG; R. S. SHAH; J. YOO; C. DANIEL; Y. CHOE. *3scan, Texas A&M.*

8:00 TT8 **185.17** Workflows for the automatic segmentation and characterization of organelle morphology and distribution in electron microscopy image stacks. A. J. PEREZ*; M. SEYEDHOSSEINI; C. CHURAS; K. KIM; M. HATORI; E. A. BUSHONG; T. J. DEERINCK; H. LE; S. PANDA; T. TASDIZEN; M. H. ELLISMAN. *UCSD, The Univ. of Utah, The Salk Inst.*

9:00 TT9 **185.18** ● Catching up with technology: Development of immunostaining assays of large tissue samples for 3D microscopy. H. DIMANT*; P. KNODLE; P. KAMELIN; T. RAGAN. *TissueVision Inc.*

10:00 TT10 **185.19** Wavefront control for *in vivo* deep tissue imaging. L. KONG*; M. CUI. *HHMI/JFRC.*

11:00 TT11 **185.20** Progress toward reconstruction of the *C. elegans* connectome across development. S. J. COOK*; K. C. Q. NGUYEN; D. H. HALL; S. W. EMMONS. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

8:00 TT12 **185.21** Imaging spines and synapses: A High Content Platform to advance target validation for neurological disorders. N. C. CARTY*; K. KOTTIG; K. TILLACK; C. SAWALLISCH; A. FELS; C. GABRYSIAK; L. SCHMIDT; G. BURSOVA; V. MACK; M. GEMKOW; H. VON DER KAMMER. *Evotec AG.*

9:00 TT13 **185.22** Multimodal stereotactic atlas of gray short-tailed opossum's brain. P. MAJKA; N. CHLODZINSKA; T. BANASIK; R. L. DJAVADIAN; W. WEGLARZ; K. TURLEJSKI; D. K. WOJCIK*. *Nencki Inst. of Exptl. Biol., Nencki Inst. of Exptl. Biol., H. Niewodniczański Inst. of Nuclear Physics PAS.*

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10:00 TT14 **185.23** ● High fidelity measurements of excitability, pharmacology and transmitter release with novel sensor dyes and applications from Molecular Probes. D. W. BEACHAM*; W. ZHAO; K. GEE. *Mol. Probes, Thermo Fisher Scientific, Mol. Probes, Life Technologies.*

11:00 TT15 **185.24** ● ▲ 3D drawing system to combine MRI data of nerve fibers and fNIRS data of activated brain regions. S. OHTANI*; U. YAMAMOTO; T. HIROYASU. *Doshisha Univ., DOSHISHA Univ.*

8:00 TT16 **185.25** Multi-shell diffusion MRI allows benefits from higher b-values but also compensates for some of the costs. K. R. VAN DIJK*; M. K. DREWS; Q. FAN; A. NUMMENMAA; R. ZANZONICO; T. WITZEL; B. KIEL; J. R. POLIMENI; K. SETSEMPOP; V. RENVALL; L. L. WALD; B. FISCHL; V. J. WEDEEN; B. R. ROSEN; R. L. BUCKNER. *Massachusetts Gen. Hosp., Harvard Univ.*

9:00 TT17 **185.26** Anatomical accuracy of diffusion mri tractography: Testing the fundamental limits. C. P. THOMAS*; F. Q. YE; M. IRFANOGLU; P. MODI; K. SALEEM; D. A. LEOPOLD; C. PIERPAOLI. *NICHD, NIMH, NICHD.*

10:00 TT18 **185.27** ▲ Modeling the light propagation in brain tissues using Monte Carlo simulation with a dynamic and heterogeneous tissue model. T. J. SAUER; P. TIAN*; A. DEVOR; Q. FANG; H. UHLIROVA; P. A. SAISAN; A. M. DALE; D. A. BOAS; S. SAKADZIC. *John Carroll Univ., UCSD, UCSD, MGH, Harvard Med. Sch.*

11:00 TT19 **185.28** ● Whole brain vasculature maps in mice . T. RAGAN*; H. DIMANT. *Tissuevision, TissueVision.*

8:00 TT20 **185.29** Quantitative whole-brain mapping of neuronal activity with cellular resolution. L. SILVESTRI*; N. RUDINSKIY; M. PACISCOPI; I. COSTANTINI; L. SACCONI; P. FRASCONI; B. T. HYMAN; F. S. PAVONE. *LENS - Univ. of Florence, Massachussets Gen. Hosp., Univ. of Florence, Natl. Inst. of Optics (INO-CNR), Massachussets Gen. Hosp.*

9:00 TT21 **185.30** Imaging of TSPO using [18F]DPA-714 PET in an animal model of acute neuroinflammation. G. M. BORMANS*; D. ORY; A. POSTNOV; A. PLANAS; M. KASSIOU; K. VAN LAERE; A. VERBRUGGEN. *KU Leuven, KU Leuven, Inst. for Biomed. Res. Spanish Res. Council, IDIBAPS, Univ. of Sydney.*

POSTER

186. Network Models and Data Simulation

Theme G: Novel Methods and Technology Development

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

8:00 TT22 **186.01** Using multi-electrode array (MEA) to probe neuronal network activity defects in a dish. C. LU; T. ZHOU; Q. CHEN; Z. FU; G. FENG*; J. PAN. *MIT, Stanley Ctr. for Psychiatric Research, Broad Inst.*

9:00 TT23 **186.02** Progress report on emulating and reverse-engineering nervous system function in Caenorhabditis elegans in the context of the European Si elegans project. A. BLAU*; F. CALLALY; S. CAWLEY; A. COFFEY; A. DE MAURO; G. EPELDE; L. FERRARA; F. KREWER; C. LIBERALE; P. MACHADO; G. MACLAIR; M. MCGINNITY; F. MORGAN; A. MUJIKA; A. PETRUSHIN; J. WADE; (Si Elegans Consortium Members In Alphab. Order.). *The Italian Inst. of Technol. (IIT), Natl. Univ. of Ireland, Vicomtech, Univ. of Ulster.*

10:00 TT24 **186.03** Vulnerability study of *C. elegans* connectome based on single neuron and synapse attacks. S. KIM; H. KIM; J. JEONG*. *KAIST.*

11:00 TT25 **186.04** Construct validation of DCM for resting state fMRI. A. RAZI*; J. KAHAN; G. REES; K. J. FRISTON. *NED Univ. of Engin. & Technol., Univ. Col. London, Univ. Col. London.*

8:00 TT26 **186.05** Changes in structural and functional connectivity among resting-state networks across the human lifespan. R. F. BETZEL*; L. BYRGE; Y. HE; J. GOÑI; X. ZUO; O. SPORNS. *Indiana Univ., Key Lab. of Behavioral Science, Magnetic Resonance Imaging Center, Inst. of Psychology, Chinese Acad. of Sci.*

9:00 TT27 **186.06** Mapping connectivity in mice through anatomical volume covariance. Y. YEE*; J. ELLEGOOD; J. SCHOLZ; M. C. VAN EEDE; R. M. HENKELMAN; J. P. LERCH. *Mouse Imaging Centre, Hosp. For Sick Children, Univ. of Toronto.*

10:00 TT28 **186.07** Spatial embedding of similarity structure in the cerebral cortex. F. SONG*; H. KENNEDY; X. WANG. *New York Univ., Stem Cell and Brain Res. Inst.*

11:00 TT29 **186.08** Computational models of posterior parietal cortex. J. G. MAKIN*; P. SABES. *Univ. of California, San Francisco.*

8:00 TT30 **186.09** Neuromusculoskeletal modelling and the gain transition of a quadruped according to its speed in rats. M. TOEDA*; S. AOI; T. FUNATO; K. TSUCHIYA; D. YANAGIHARA. *The Univ. of Tokyo , Graduated Sch. of Art, Kyoto Universitiy, Graduated school of Engin., Japan Sci. and Technol. Corp., Grad. Sch. of Informatics and Engineering, The Univ. of Electro-Communications.*

9:00 TT31 **186.10** Large-scale spiking neuron simulations of spatio-temporal dynamics in superior colliculus. R. VEALE*; T. ISA; M. YOSHIDA. *Indiana Univ., Natl. Inst. for Physiological Sci., Grad. Univ. for Advanced Studies (SOKENDAI).*

10:00 TT32 **186.11** A computational study on the network dynamics and synchronization of cerebellar granular layer to different input patterns. S. SUDHAKAR*; S. HONG; E. DESCHUTTER. *OIST, OIST.*

11:00 TT33 **186.12** Canonical correlation analysis for collective activity of recurrent neural networks in reaching movement generation based on force-learning. H. SUETANI*. *Kagoshima Univ.*

8:00 TT34 **186.13** A computational multi-channel model of the basal ganglia for action selection. R. BORISYUK*; R. MERRISON-HORT. *Plymouth Univ.*

9:00 TT35 **186.14** A biologically plausible temporal winner take all model. O. ZOHAR*; M. SHAMIR. *Ben Gurion University, Ben Gurion University.*

10:00 TT36 **186.15** A reservoir model for prefrontal activity during sensory-guided probabilistic decision-making. T. KURIKAWA*; T. FUKAI. *RIKEN, Brain Sci. Inst.*

11:00 TT37 **186.16** Variable length Markov chains elucidate temporal structure of burst firing in the hippocampus in temporal lobe epilepsy. M. MAHONEY*; R. SCOTT; A. TITIZ. *Univ. of Vermont, Geisel Sch. of Med. at Dartmouth.*

8:00 TT38 **186.17** Computational models as a bridge from epileptic spikes and HFOs to hyperexcitability mechanisms. F. WENDLING*; B. MARTIN; A. BIRABEN; G. DIEUSET; P. BENQUET. *Inserm.*

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9:00 TT39 **186.18** A realistic computer model of cortical stimulation. P. KUDELA*; W. ANDERSON. *Johns Hopkins Univ., Inst. for Clin. and Translational Res.*

10:00 TT40 **186.19** Utilising dynamic causal models to explore neuronal network dynamics of genetic ion channelopathies. J. R. GILBERT*; M. SYMMONDS; R. J. MORAN. *Virginia Tech. Carilion Res. Inst., Univ. of Oxford, Virginia Tech.*

11:00 TT41 **186.20** Simulating MEG data in a large-scale neural model of a delayed match to sample task. P. S. DECKER; A. S. PILLAI; T. CHEN; A. ULLOA; B. HORWITZ*. *NIDCD, NIH, Neural Bytes LLC.*

8:00 TT42 **186.21** A spiking network model of ongoing activity in gustatory cortex. L. MAZZUCATO*; A. FONTANINI; G. LA CAMERA. *Stony Brook Univ.*

9:00 TT43 **186.22** A spiking multi-area network model of the macaque visual cortex. M. SCHMIDT*; S. J. VAN ALBADA; R. BAKKER; M. DIESMANN. *Inst. of Neurosci. and Med. (INM-6) and Inst. for Advanced Simulation (IAS-6), Jülich Res. Ctr. and JARA, Inst. of Neurosci. and Med. (INM-6) and Inst. for Advanced Simulation (IAS-6), Jülich Res. Ctr. and JARA, Donders Inst. for Brain, Cognition and Behavior, Radboud Univ., Dept. Biol. II, Ludwig-Maximilians-Universität München,, Med. Faculty, RWTH Aachen Univ.*

10:00 TT44 **186.23** Refining local cortical circuit models using optogenetic modulation. J. LEE*; S. R. OLSEN; N. CAIN; A. ARKHIPOV; M. HAWRYLYCZ; C. KOCH; S. MIHALAS. *Boston Univ., Allen Inst. for Brain Sci.*

11:00 TT45 **186.24** Independent component analysis reveals the anterior cingulate as a network hub for efficient task-switching, as applied to single-subject eeg data. K. BURKE STEELE*; J. S. BUTLER; J. J. FOXE. *Albert Einstein Col. of Med., Trinity Col., Albert Einstein Col. of Med.*

8:00 TT46 **186.25** Frontotemporal networks for hierarchical predictive coding: Convergent evidence from dynamic causal modelling of human electrocorticography and magnetoencephalography. H. PHILLIPS*; A. BLENKMANN; L. HUGHES; T. BEKINSCHTEIN; S. KOCHEN; J. ROWE. *Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge, Sch. of Medicine, Univ. of Buenos Aires, Ramos Mejía Hosp., Natl. Scientific and Tech. Res. Council (CONICET).*

9:00 TT47 **186.26** ▲ Greater physiological realism leads to gamma rhythm models robust to individual variability in signaling strength. S. C. HAUSER*; M. REIMERS. *Uva, Virginia Commonwealth Univ.*

10:00 TT48 **186.27** Networks of theta neurons with time-varying excitability: Macroscopic chaos, multistability, and final-state uncertainty. P. SO*; T. LUKE; E. BARRETO. *George Mason Univ., George Mason Univ.*

11:00 TT49 **186.28** Complete classification of the macroscopic behavior of a heterogeneous network of theta neurons. E. BARRETO*; T. B. LUKE; P. SO. *George Mason Univ.*

POSTER

187. Computation Tools

Theme G: Novel Methods and Technology Development

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

8:00 TT50 **187.01** High performance computing in neuroscience via the Neuroscience Gateway Portal. N. T. CARNEVALE*; A. MAJUMDAR; S. SIVAGNANAM; K. YOSHIMOTO; V. ASTAKHOV; A. BANDROWSKI; M. MARTONE. *Yale Univ. Sch. Med., UCSD.*

9:00 TT51 **187.02** ● Myriad: A transparently parallel GPU-based simulator for densely integrated biophysical models. P. RITTNER; T. A. CLELAND*. *Cornell Univ., Cornell Univ.*

10:00 TT52 **187.03** OntoSearch - Using formal ontologies to enable concept-based searches in NeuroMorpho.Org. S. POLAVARAM*; R. PAREKH; R. ARMAÑANZAS; S. NANDA; G. ASCOLI. *George Mason Univ.*

11:00 TT53 **187.04** Neuron identity in the digital era: Knowledge flow optimization and automatic classification. R. ARMANANZAS*; R. PAREKH; S. POLAVARAM; S. NANDA; G. A. ASCOLI. *George Mason Univ.*

8:00 TT54 **187.05** SimManager - A MATLAB simulation management engine for neural simulation. D. B. STOCKTON*; F. SANTAMARIA. *UTSA.*

9:00 TT55 **187.06** An improved computational method for high-throughput datasets analysis. B. BIGIO*; C. NASCA; J. G. KRUEGER; K. M. WITTKOWSKI. *The Rockefeller Univ., The Rockefeller Univ.*

10:00 TT56 **187.07** Modeling and analysis of extracellular potentials in multielectrode arrays. C. CHINTALURI*; T. B. NESS; J. POTWOROWSKI; S. ŁĘSKI; H. GŁĄBSKA; G. T. EINEVOLL; D. WÓJCIK. *Nencki Inst. of Exptl. Biol., Norwegian Univ. of Life Sci., Univ. of Oslo.*

11:00 TT57 **187.08** ● Architectonic and functional cortical areas registered to the "Atlas of the Human Brain" in MNI/ICBM space. J. K. MAI*; M. MAJTANIK. *H-Heine-Univ Dusseldorf, MR-X-Brain Gmbh.*

8:00 TT58 **187.09** Finite element method (FEM) studies of spinal current flow in spinal stimulation. A. MOURDOUKOUTAS*; M. BIKSON. *The City Col. of New York of the City Universit.*

9:00 TT59 **187.10** LABSENS - a neural simulator with application to MRI, MEG and TCS. B. J. TRAVIS*. *Los Alamos Natl. Lab.*

10:00 TT60 **187.11** Optimization and reliability of Logan graphical analysis to gauge binding potential of [11] C-DTBZ in rat striatum using dynamical positron emission tomography. A. AVENDAÑO*; M. ÁVILA-RODRÍGUEZ. *UNAM.*

11:00 TT61 **187.12** Integrating multiple measures in the study of cognition. B. M. TURNER*; C. RODRIGUEZ; M. STEYVERS; A. NORCIA; S. MCCLURE. *Stanford Univ., Stanford Univ., Univ. of California, Irvine.*

8:00 TT62 **187.13** Testing the repetition stability of ICA decompositions of EEG data: An empirical study. V. LAWHERN*; W. HAIRSTON. *U.S. Army Res. Lab.*

9:00 TT63 **187.14** Injection of fully-defined signal mixtures: A novel high-throughput paradigm to study neuronal encoding and computations. V. ILIN*; I. H. STEVENSON; M. VOLGUSHEV. *Univ. of Connecticut.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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10:00 TT64 **187.15** Automated and non-biased quantification of functional neuroimaging data. J. G. PARKER*; B. SPEIDEL. *Wright State Univ., Siemens Med. Solutions USA, Univ. of Illinois at Urbana-Champaign.*

11:00 TT65 **187.16** ▲ Characterization of the brain attractors in focal cerebral ischemic rat model using EEG time series data analysis. S. PAUL*; P. BHATTACHARYA; T. K. SINHA; R. PATNAIK. *ASSISTANT PROFESSOR, Indian Inst. of Technology, BHU, Univ. of Miami Miller Sch. of Medicine,, Associate Professor.*

8:00 TT66 **187.17** Automated neuronal graph creation using the open connectome project. D. KLEISSAS*; W. GRAY RONCAL; P. MANAVALAN; K. LILLANEY; A. SINHA; J. T. VOGELSTEIN; G. D. HAGER; R. BURNS; M. A. CHEVILLET; R. J. VOGELSTEIN. *Johns Hopkins Univ. Applied Physics Lab., Johns Hopkins Univ., Duke Univ.*

9:00 TT67 **187.18** Images to graphs: A new conceptual framework to guide computer vision in (EM) connectomics. W. R. GRAY RONCAL*; O. M. AKMAL; M. ENCARNACION; T. LATCHMAN; J. T. VOGELSTEIN; D. DEMENTHON; N. KASTHURI; R. BURNS; C. E. PRIEBE; G. D. HAGER. *Johns Hopkins Univ., JHU Applied Physics Lab., Duke Univ., Harvard Univ.*

10:00 TT68 **187.19** Head impact sensors in college football players: Effects on tackling performance and results of crash tests. J. G. TURNER*; A. KJELLANDER; B. LURKINS. *Illinois Col., Southern Illinois Univ. Sch. of Med., Illinois Col.*

11:00 TT69 **187.20** Phase resetting curve and multistability. S. OPRISAN*; D. VANDERWEYEN. *Col. of Charleston.*

8:00 TT70 **187.21** A combinatorial approach for mapping the interactions of multiple inputs to a biological system in a tractable number of experiments. B. E. FULTON-HOWARD*; V. BREZINA. *Mount Sinai Sch. of Med., Mount Sinai Sch. of Med.*

9:00 TT71 **187.22** Optimizing tDCS and HD-tDCS for clinical trials through computational models (and trial design). D. Q. TRUONG*; M. ALAM; M. BIKSON. *City Col. of New York, CUNY, City Col. of New York.*

10:00 TT72 **187.23** Interactive learning for multi-sensory object recognition and categorization. J. ZHANG*; H. GUAN. *Univ. of Hamburg.*

POSTER

188. Data Analysis and Statistics I

Theme G: Novel Methods and Technology Development

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

8:00 TT73 **188.01** Linking cinematic features to fMRI data collected in free-viewing condition. J. KAUTTONEN; Y. HLUSHCHUK; P. TIKKA*. *Aalto Univ. Sch. of Sci., Aalto Univ. Sch. of Arts, Design and Architecture.*

9:00 TT74 **188.02** Hyperalignment for multivariate group analysis of high-resolution, 7-Tesla fMRI data from auditory cortex. M. HANKE; J. GUNTUPALLI; J. STADLER; J. V. HAXBY*. *Univ. of Magdeburg, Ctr. for Behavioral Brain Sci., Dartmouth Col., Leibniz Inst. for Neurobio.*

10:00 TT75 **188.03** Global signal regression improves fMRI prediction of language outcome after left anterior temporal lobectomy. W. L. GROSS*; Y. Q. ZHOU; J. R. BINDER. *Med. Col. of Wisconsin, Med. Col. of Wisconsin, Med. Col. of Wisconsin.*

11:00 TT76 **188.04** Large-scale analytics for mapping brain activity. J. FREEMAN*; N. VLADIMIROV; T. KAWASHIMA; Y. MU; N. J. SOFRONIEW; D. V. BENNETT; J. ROSEN; C. YANG; L. L. LOOGER; M. B. AHRENS. *Janelia Farm Res. Campus, HHMI, UC Berkeley.*

8:00 TT77 **188.05** Rating based inter-subject similarity analysis: Estimating a mapping between dynamic responses of fMRI activities and ex-post ratings of videos. Y. SAWAHATA*; K. KOMINE; T. MORITA; K. AIZAWA. *NHK (Japan Broadcasting Corporation), The Univ. of Tokyo.*

9:00 TT78 **188.06** Estimation of cortical and extra-brain source currents from real MEG data using hierarchical Bayesian method. K. MORISHIGE*; N. HIROE; M. SATO; M. KAWATO. *Toyama Prefectural Univ., ATR Cognitive Mechanisms Labs., ATR Neural Information Analysis Labs., ATR Brain Information Communication Res. Lab. Group.*

10:00 TT79 **188.07** A novel high-throughput multivariate spike train analysis method for drug neurotoxicity and method of action identification using Multiwell Microelectrode Array data. H. LUITHARDT; J. BRADLEY; C. STROCK*. *Cyprotex.*

11:00 TT80 **188.08** A fiber orientation distribution function (fODF) atlas of the healthy human brain. F. YEH*; T. VERSTYNEN. *Carnegie Mellon Univ.*

8:00 TT81 **188.09** Improved quality assurance and preprocessing of diffusion tensor imaging data in a large-scale adolescent cohort. D. R. ROALF*; M. A. ELLIOTT; M. QUARMLEY; S. VANDEKAR; T. D. SATTERTHWAITE; K. RUPAREL; K. PRABHAKARAN; C. T. JACKSON; R. VERMA; R. C. GUR; R. E. GUR; H. HAKONARSON. *Univ. of Pennsylvania, Univ. of Pennsylvania, Children's Hosp. of the Univ. of Pennsylvania.*

9:00 TT82 **188.10** Latent variable structural equation modeling reveals the importance of MTL and parieto-occipital connections for successful encoding of source memory. K. JUNG*; H. HWANG; H. PARK. *Univ. of Texas Hlth. Sci. Ctr. at Houston, McGill Univ., Univ. of Texas at Arlington.*

10:00 TT83 **188.11** Phase shifts in alpha-frequency rhythms in electroencephalograms affect reaction times. Y. NARUSE*; K. TAKIYAMA; M. OKADA; H. UMEHARA; Y. SAKAGUCHI. *Cinet, NICT and Osaka Univ., Japan Society for the Promotion of Sci., Tamagawa Univ., The Univ. of Tokyo, RIKEN BSI, Univ. of Electro-Communications.*

11:00 TT84 **188.12** State-space analysis of behaviour- and layer-dependent synchrony in motor cortex during volitional arm movement. T. SHARP*; H. SHIMAZAKI; Y. ISOMURA; T. FUKAI. *RIKEN Brain Sci. Inst., Tamagawa Univ. Brain Sci. Inst.*

8:00 TT85 **188.13** Voltage imaging of waking mouse cortex reveals emergence of critical neuronal dynamics. E. D. FAGERHOLM*; G. SCOTT; H. MUTOH; R. LEECH; D. J. SHARP; W. L. SHEW; T. KNOPFEL. *Imperial Col. London, Imperial Col. London, RIKEN Brain Sci. Inst., Univ. of Arkansas.*

9:00 TT86 **188.14** Resting state in rats: Comparing a new automatic multi seed analysis to ICA. S. KREITZ; B. DE CELIS ALONSO; C. HEINDL-ERDMANN*; A. HESS. *Friedrich-Alexander-University, Meritorious Autonomous Univ. of Puebla.*

10:00 TT87 **188.15** Estimating head and neck dimensions of dendritic spines using ball-and-stalk model. S. LESKI*; Z. MIJAKOWSKA; K. RADWANSKA. *Nencki Inst. of Exptl. Biol.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

11:00 TT88 **188.16** ▲ A sample size optimization tool for quantitative comparisons of synaptic circuitry using serial blockface electron microscopy image stacks. A. COFFIN; K. BERNE; D. WOOD; K. SCHMIDT; A. ERISIR*. *Univ. of Virginia.*

8:00 TT89 **188.17** Single molecule dynamics on live cell membrane. W. HE*; H. SONG; L. GENG; H. PENG; P. TONG. *The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol.*

9:00 TT90 **188.18** ▲ Distinct burst-suppression patterns are induced by propofol and sevoflurane in rat. J. D. KENNY; M. B. WESTOVER; S. CHING; E. N. BROWN; K. SOLT*. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

10:00 TT91 **188.19** Distinct functional roles of neuronal types in synchronous network bursts of dissociated cultures. M. J. JANG*; Y. NAM. *KAIST.*

11:00 TT92 **188.20** Estimating excitatory and inhibitory synaptic input from a single voltage trace. R. KOBAYASHI*; J. HE; P. LANSKY. *Natl. Inst. of Informatics, Grad. Univ. for Advanced Studies (Sokendai), City Univ. of Hong Kong, Acad. of Sci. of Czech Republic.*

8:00 UU1 **188.21** Blind source separation performed by dissociated culture of rat cortical neurons is consistent with the free-energy principle. T. ISOMURA*; K. KOTANI; Y. JIMBO. *The Univ. of Tokyo, JSPS, The Univ. of Tokyo.*

9:00 UU2 **188.22** Brain-to-brain coherence revealed by wireless EEG headsets. L. WAN*; S. DIKKER; D. POEPPEL; M. DING. *Univ. of Florida, New York Univ.*

10:00 UU3 **188.23** Mutual influence of mice in social context. J. WATANABE; S. KOMAI*. *Nara Inst. Sci. and Technol.*

11:00 UU4 **188.24** Decoding subject performance at natural tasks in realistic virtual worlds. A. FLOREN*; B. NAYLOR; R. MIIKKULAINEN; D. RESS. *Univ. of Texas at Austin, Baylor Col. of Med.*

8:00 UU5 **188.25** Should one collect more trials, more neurons, or more conditions: a statistical solution to the experimentalist's dilemma. J. S. SEELY*; J. P. CUNNINGHAM; A. H. LARA; M. M. CHURCHLAND. *Columbia Univ.*

9:00 UU6 **188.26** ● Evaluation of research trends and impacts using large scale analysis of neuroscience literature. T. A. VERDOORN*; B. VERDOORN. *Intuitive Quantitation.*

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SPECIAL LECTURE *Walter E. Washington Convention Center*

189. Surprising Origins of Sex Differences in the Brain — CME

Sun. 1:00 PM - 2:10 PM — Hall D

Speaker: M. M. MCCARTHY*, Univ. of Maryland Sch. of Med.*

Brain sex differences are established early by genes, hormones, environment, and experience. Animal models reveal multiple endpoints modified by steroid hormones in a region-specific manner and that these changes underlie sex differences in adult behavior. This talk reviews the cellular and molecular mechanisms mediating masculinization involving inflammatory molecules, immune signaling, endocannabinoids, and epigenetic changes. Illuminating the biological origins of brain and behavior sex differences is essential for enhancing health and preventing disease.

SYMPOSIUM *Walter E. Washington Convention Center*

190. Oligodendrocyte and Myelin Plasticity and Its Impact on the Function of Neural Circuits and Behavior — CME

Sun. 1:30 PM - 4:00 PM — Ballroom A

Chair: G. CORFAS

Proper myelination is necessary for the effective function of neuronal circuits. Oligodendrocytes and the myelin they generate have been considered static components of the nervous system. This symposium discusses new findings that show oligodendrocytes and their precursors are dynamic and plastic cells whose generation, morphology, and function can be regulated by experience, and that this plasticity has an impact on cognitive function and behavior.

1:30 **190.01** Introduction.

1:35 **190.02** Juvenile social experience and prefrontal cortex myelin maturation. G. CORFAS. *Children's Hosp. Boston.*

2:10 **190.03** Environmental control of gene expression in myelinating cells. P. CASACCIA-BONNEFIL. *Mount Sinai Sch. Med.*

2:45 **190.04** Oligodendrocyte dynamics in cortical gray matter. D. E. BERGLES. *Johns Hopkins Univ. Sch. Med.*

3:20 **190.05** Adult myelination and motor skills learning. W. D. RICHARDSON. *Univ. Col. London.*

3:55 **190.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

191. Peripheral Gating of Pain Signals by Endogenous Lipid Mediators — CME

Sun. 1:30 PM - 4:00 PM — Ballroom B

Chair: ● D. PIOMELLI
Co-Chair: A. HOHMANN

Peripheral pain signals are subject to a dynamic filtering process before they reach the spinal cord. Lipid-derived mediators are emerging as key players in this peripheral gating mechanism. The symposium will present new data showing that bioactive lipids produced at sites of nerve injury or inflammation modulate nociception by interacting with receptors on sensory afferents and neighboring host-defense cells (e.g. macrophages, keratinocytes). The clinical significance of these advances and their contribution to the discovery of safer pain medicines will be discussed.

1:30 **191.01** Introduction.

1:35 **191.02** Control of peripheral pain by endogenous lipid-amide agonists of PPAR-alpha. V. SEYBOLD. *Univ. Minnesota.*

2:10 **191.03** Endocannabinoid lipids in the peripheral regulation of inflammatory and neuropathic pain. A. G. HOHMANN. *Indiana Univ.*

2:45 **191.04** ● Epoxy fatty acids as regulators of pain and inflammation. B. D. HAMMOCK. *Univ. of California Davis.*

3:20 **191.05** ● Analgesic lipid mediators as a source of new therapies. D. PIOMELLI. *Univ. of California, Irvine.*

3:55 **191.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

192. Studying Human Cognition with Intracranial EEG and Electrical Brain Stimulation — CME

Sun. 1:30 PM - 4:00 PM — Ballroom C

Chair: J. PARVIZI
Co-Chair: R. T. KNIGHT

Speakers at this symposium will highlight some of the latest breakthroughs in human intracranial EEG and electrical stimulation research that has given rise to new waves of discoveries in cognitive neuroscience.

1:30 **192.01** Introduction.

1:35 **192.02** Convergence of evidence from intracranial EEG, fMRI, and electrical brain stimulation in conscious human subjects. J. PARVIZI. *Stanford Univ.*

2:10 **192.03** The dynamics and informational content of spontaneous electrophysiological fluctuations recorded intracranially from the human cortex. R. MALACH. *Weizmann Institute, Neurobio. Dept.*

2:45 **192.04** ECOG signature of large-scale functional connectivity in the human brain. J. O. LACHAUX. *Lyon Neurosci. Res. Center- INSERM.*

3:20 **192.05** Comparative electrophysiology in primate posterior parietal cortex. S. KASTNER. *Princeton Neurosci. Inst.*

3:55 **192.06** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

193. Mitochondria in the Development and Plasticity of Neurons — CME

Sun. 1:30 PM - 4:00 PM — 146AB

Chair: Z. LI

Mitochondria participate in cell metabolism, apoptosis, and Ca^{2+} buffering, and due to strong needs for ATP and Ca^{2+} handling in neurons, are key for neuronal function. Mitochondrial dysfunction also is implicated in the pathophysiology of brain disorders. This minisymposium discusses new findings about mitochondria, including their roles in neuronal development and plasticity, how their trafficking is regulated in different neuronal compartments, and their abnormalities observed in diseased brains.

● Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:30 **193.01** Introduction.

1:35 **193.02** Non-apoptotic functions of the mitochondria-caspase cascade at pre- and post-synaptic sites. Z. LI. *NIH.*

1:55 **193.03** Connecting the dots: Mitochondrial bioenergetic efficiency, endosomal trafficking, and synaptic plasticity. E. JONAS. *Yale Univ. Sch. Med.*

2:15 **193.04** Regulation and misregulation of mitochondrial movement and removal. T. SCHWARZ. *FM Kirby Neurobio. Ctr. CLS12-130.*

2:35 **193.05** LKB1 controls axon morphogenesis and presynaptic development through regulation of mitochondria localization and function. F. POLLEUX. *Columbia Univ.*

2:55 **193.06** Mitochondrial dysfunction is a common cause of peripheral neuropathy. J. MILBRANDT. *Washington Univ. Sch. Med.*

3:15 **193.07** Regulation of mitochondrial trafficking by Miro proteins in health and disease. J. KITTLER. *Univ. Col. London.*

3:35 **193.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

194. Emerging Roles of Extracellular Vesicles in the Nervous System — CME

Sun. 1:30 PM - 4:00 PM — 151AB

Chair: X. O. BREAKEFIELD
Co-Chair: L. RAJENDRAN

Exosomes, or extracellular vesicles, have emerged as a new form of intercellular communication in the nervous system's physiology and pathology. These vesicles contain signaling proteins, coding, and regulatory RNAs. They play a critical role in normal function such as regeneration and plasticity. They also have a more sinister role in the propagation of toxic amyloids in neurodegeneration, which is present in Alzheimer's disease, neuroinflammation, and brain tumors.

1:30 **194.01** Introduction.

1:35 **194.02** Vesicular transfer from glia to neurons during regeneration. F. COURT. *Pontificia Univ. Catolica de Chile.*

1:55 **194.03** Delivery on call: Neurotransmitter-triggered transfer of exosomes from oligodendrocytes to neurons. E. KRÄMER-ALBERS. *Johannes Gutenberg Univ. Mainz.*

2:15 **194.04** Role of exosomes in Alzheimer's disease. L. RAJENDRAN. *Univ. of Zurich.*

2:35 **194.05** Study of exosomes shed new light on physiological amyloidogenesis. G. VAN NIEL. *Inst. Curie.*

2:55 **194.06** Extracellular vesicles as tactics in brain tumor invasion. X. O. BREAKEFIELD. *Massachusetts Gen Hosp.*

3:15 **194.07** Cilia and extracellular vesicles are signaling organelles. M. BARR. *Rutgers University, Genet. Dept.*

3:35 **194.08** Closing Remarks.

PETER AND PATRICIA GRUBER LECTURE *Walter E. Washington Convention Center*

195. Circuits and Strategies for Skilled Motor Behavior

Sun. 2:30 PM - 3:40 PM — Hall D

Speaker: T. JESSELL, *Columbia University, Howard Hughes Med. Inst.*

Support contributed by: The Gruber Foundation

The capacity to generate movement on demand is a reflection of neural computations that integrate internal command and external feedback for the purpose of patterned motor output. Advances in deciphering the logic of motor systems have not yet resolved the strategies and mechanisms through which neural circuits direct motor behavior. This lecture will probe this issue through an analysis of motor circuits in the mammalian spinal cord, focusing on the functions of interneurons assigned to two feedback circuits, one that evaluates the fidelity of intended motor acts and a second that filters external sensory reports.

PRESIDENTIAL SPECIAL LECTURE *Walter E. Washington Convention Center*

196. The Integration of Interneurons Into Cortical Circuits: Both Nurture and Nature — CME

Sun. 5:15 PM - 6:25 PM — Hall D

Speaker: G. J. FISHELL, *New York Univ. Neurosci. Inst.*

Since the seminal finding that cortical GABAergic interneurons originate within the subpallium, extraordinary mechanisms must exist to ensure they are precisely and reliably embedded into cortical circuitry. Considerable efforts indicate that genetic programs initiated within progenitors assign interneurons into specific cardinal classes. It is less clear whether their synaptic specificity also is intrinsically determined. Fishell will discuss recent evidence concerning how intrinsic genetic programs within interneurons are shaped by local activity-dependent cues. These results suggest that sensory information complements earlier established genetic programs to shape the way interneuronal subtypes integrate into nascent cortical circuits.

NANOSYMPOSIUM

197. Molecular and Functional Biomarkers of Neurodegeneration

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 144A

1:00 **197.01** Long-term changes in cleavage processing of Alzheimer's disease related factors APP and Tau following penetrating TBI. C. M. CARTAGENA*; A. MOUNTNEY; Z. RAMMELKAMP; A. SWIERCZ; D. A. SHEAR; F. C. TORTELLA; K. E. SCHMID. *Walter Reed Army Inst. of Res.*

1:15 **197.02** ● Absolute quantitation of Apolipoprotein E isoforms in human cerebrospinal fluid and brain. A. T. BAKER-NIGH*; K. G. MAWUENYEGA; V. OVOD; H. ZAKERI; T. KASTEN; R. J. BATEMAN. *Washington Univ. Sch. of Med., Charles F. and Joanne Knight Alzheimer's Dis. Res. Ctr., Hope Ctr. for Neurolog. Disorders.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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1:30 **197.03** ● Neural origin plasma exosomes provide novel biomarkers for brain insulin resistance in Alzheimer's disease. D. KAPOGIANNIS*; A. BOXER; E. L. ABNER; A. BIRAGYN; U. MASHARANI; L. FRASSETTO; R. C. PETERSEN; B. L. MILLER; E. J. GOETZL. *Natl. Inst. on Aging (NIA/NIH), Johns Hopkins Univ., UCSF, Univ. of Kentucky, UCSF, Mayo Clin.*

1:45 **197.04** Stress-induced changes in tau proteins and catecholamines in a rat model of Alzheimer´s neurodegeneration. R. KVETNANSKY*; K. LEJAVOVA; P. NOVAK; A. OPATTOVA; K. ONDICOVA; L. HORVATHOVA; P. VARGOVIC; G. MANZ; B. MRAVEC; P. FILIPCIK; M. NOVAK. *Inst. Exp. Endocrinology, Slovak Acad. Sci., Inst. Exp. Endocrinology, Slovak Acad. Sci,, Inst. of Neuroimmunology, LDN.*

2:00 **197.05** Super-resolution microscopy of cerebrospinal fluid biomarkers: a novel tool for diagnostic research in Alzheimer's disease. W. I. ZHANG*; G. ANTONIOS; A. RABANO; T. PENA-CENTENO; T. A. BAYER; S. BONN; A. SCHNEIDER; S. O. RIZZOLI. *Univ. Med. Ctr. Göttingen, Ctr. for Nanoscale Microscopy and Mol. Physiol. of the Brain (CNMPB), Div. of Mol. Psychiatry, Dept. of Psychiatry, Univ. Med. Ctr. Göttingen, Dept. of Neuropathology and Tissue Bank, Fundación CIEN, Inst. de Salud Carlos III, German Ctr. for Neurodegenerative Diseases, DZNE, Dept. of Psychiatry, Univ. Med. Ctr. Göttingen.*

2:15 **197.06** Neural correlates of verbal memory and lexical retrieval in Logopenic Variant of Primary Progressive Aphasia. K. WIN*; J. PLUTA; P. YUSHKEVICH; D. WOLK; M. GROSSMAN. *Penn Frontotemporal Degeneration Ctr., Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:30 **197.07** Role of entorhinal cortex - hippocampal circuit in Alzheimer's disease mouse model. S. A. HUSSAINI*; K. DUFF. *Columbia Univ. Med. Ctr.*

NANOSYMPOSIUM

198. Neuroinflammation in Alzheimer's Disease

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 143A

1:00 **198.01** ▲ Oxidative stress blocks hippocampal LTP and it is rescue by cGMP, a link to AD. L. BUITRAGO-SOTO*; S. ANGULO; F. CARDOZO-PELAEZ; H. MORENO. *Univ. Nacional De Colombia, SUNY Downstate Med. Ctr., Univ. of Montana.*

1:15 **198.02** Microglial priming with interferon γ is essential for toll-like receptor 4-mediated neurotoxicity. I. PAPAGEORGIOU*; A. LEWEN; T. REGEN; U. HANISCH; O. KANN. *Med. Fac. Univ. of Heidelberg, Med. Ctr. of Georg-August-University.*

1:30 **198.03** TREM2 mutations linked to neurodegeneration impair cell surface transport and phagocytosis. C. HAASS*. *DZNE (German Ctr. for Neurodegenerative Diseases).*

1:45 **198.04** Alzheimer's disease risk variant in TREM2 affects ventricular expansion patterns in dementia and normal aging. F. F. ROUSSOTTE*; B. A. GUTMAN; D. P. HIBAR; S. K. MADSEN; P. M. THOMPSON. *UCLA, USC.*

2:00 **198.05** Adult human microglia proliferate in culture to high passage and maintain their response to the amyloid-β peptide. C. GEULA; A. REZVANIAN; M. PETERSON; T. GEFEN; S. WEINTRAUB; E. BIGIO; M. MESULAM*; J. EL KHOURY; L. GUO. *Cognitive Neurol. and Alzheimer's Dis. Ctr., Massachusetts Gen. Hospital, Harvard Med. Sch.*

2:15 **198.06** ● Targeting alzheimer-related innate immune gene expression with available therapeutics. G. M. COLE*; B. TETER; T. MORIHARA; Q. MA; X. ZUO; F. YANG; S. FRAUTSCHY. *UCLA, VA Med. Ctr., Osaka Univ.*

2:30 **198.07** Altered microglial response to Abeta plaques in APPPS1-21 mice heterozygous for TREM2. J. D. ULRICH*; M. FINN; Y. WANG; A. SHEN; T. E. MAHAN; H. JIANG; F. R. STEWART; L. PICCIO; M. COLONNA; D. M. HOLTZMAN. *Washington Univ. of St Louis, Washington Univ. of St Louis.*

2:45 **198.08** Microglial deletion of the PGE2 receptor EP2 restores immune and trophic responses and rescues cognitive function in Alzheimer's disease models. K. I. ANDREASSON*; J. JOHANSSON; N. WOODLING; X. LIANG; Q. WANG; H. BROWN; M. PANCHAL; T. LOUI; A. TRUEBA-SAIZ; S. PRADHAN. *Stanford Univ. Sch. Med., Cajal Inst.*

3:00 **198.09** Determining the role of an M2a phenotype on microglial activity and amyloid deposition using BV2 microglial cells and APP/PS1 transgenic mice. C. H. LATTA*; T. L. SUDDUTH; E. M. WEEKMAN; H. M. BROTHERS; F. GONZALEZ OREGON; K. J. BRAUN; D. M. WILCOCK. *Univ. of Kentucky, Univ. of Kentucky.*

3:15 **198.10** Trem2 expression is upregulated in myeloid cells surrounding plaques in Alzheimer's disease and Trem2 deficiency modulates pathology. T. R. JAY*; C. M. MILLER; L. C. GRAHAM; S. BEMILLER; C. KARLO; G. XU; S. STAUGAITIS; L. BEKRIS; J. LEVERENZ; G. HOWELL; R. RANSOHOFF; G. LANDRETH; B. T. LAMB. *Case Western Reserve Univ., The Cleveland Clin. Lerner Reserach Inst., Jackson Labs., The Cleveland Clin. Lerner Reserach Inst., The Cleveland Clin. Lerner Reserach Inst.*

3:30 **198.11** Trem2 is predominantly expressed by infiltrating monocytes in multiple mouse models of Alzheimer's disease. C. M. MILLER*; T. R. JAY; L. C. GRAHAM; A. COTLEUR; G. LANDRETH; G. HOWELL; R. M. RANSOHOFF; B. T. LAMB. *The Cleveland Clin. Lerner Res. Inst., Case Western Reserve Univ., The Jackson Lab.*

NANOSYMPOSIUM

199. Neuroprotection in Parkinson's Disease: Mechanisms and Therapies

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 206

1:00 **199.01** Cerium oxide nanoparticles as a disease-modifying therapy for Parkinson's disease. A. S. FREY; B. LOCKLER; M. J. BILLINGS; K. S. HOCKEY; C. A. SHOLAR; B. A. RZIGALINSKI*. *Virginia Col. Osteo. Med., Virginia Col. Osteo. Med.*

1:15 **199.02** Transnitrosylation from DJ-1 to PTEN attenuates neuronal cell death in Parkinson's disease models. T. NAKAMURA*; M. CHOI; S. CHO; E. A. HOLLAND; J. QU; G. A. PETSKO; R. C. LIDDINGTON; S. A. LIPTON. *Sanford-Burnham Med. Res. Inst., Sanford-Burnham Med. Res. Inst., Weill Cornell Med. Col.*

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1:30 **199.03** Fractalkine over expression suppresses α-synuclein mediated neurodegeneration. K. R. NASH*; D. MORGAN; P. C. BICKFORD. *Univ. of South Florida, USF.*

1:45 **199.04** MicroRNA-7 targets RelA to improve cellular bioenergetics and protect against MPP+-induced cell death. A. DATTA CHAUDHURI; S. KABARIA; D. CHOI; M. MOURADIAN; E. JUNN*. *Rutgers, The State Univ. of New Jersey, Rutgers, The State Univ. of New Jersey, Rutgers-Robert Wood Johnson Med. Sch.*

2:00 **199.05** Influence of the Ca^{2+}-independent phospholipase A2 (iPLA2) and docosahexaenoic acid on the electron-transport-chain dependent ROS generation in brain mitochondria. G. REISER*; C. NORDMANN; P. SCHÖNFELD. *Otto-von-Guericke Univ.*

2:15 **199.06** Exploring the effects of nicotine on NADH dehydrogenase activity and mitochondrial morphology in a *Drosophila* model of Parkinson's disease. L. M. BUHLMAN*; M. ODUMOSU; G. B. CALL. *Midwestern Univ., Midwestern Univ.*

2:30 **199.07** Neuroprotective effects induced by focused ultrasound-facilitated AAV-GDNF delivery in a Parkinson's-disease mouse model. S. WANG*; O. OLUMOLADE; V. JACKSON-LEWIS; J. BLESA; T. SUN; G. SAMIOTAKI; S. PRZEDBORSKI; E. KONOFAGOU. *Columbia Univ., Columbia Univ., Columbia Univ.*

2:45 **199.08** ● 14-3-3s regulate alpha-synuclein release and toxicity. T. A. YACOUBIAN*; B. WANG. *Univ. Alabama Birmingham.*

3:00 **199.09** Prodromal anti-inflammatory intervention blocks leukocyte infiltration and the progression of Parkinsonism in rotenone treated mice. M. C. HAVRDA*. *Geisel Sch. of Med. at Dartmouth.*

3:15 **199.10** Caspase inhibition mitigates alpha-synuclein cytotoxicity and mitochondrial demise in human dopaminergic neurons. G. K. GANJAM*; A. M. DOLGA; K. BOLTE; S. NEITEMEIER; M. HÖLLERHAGE; W. E. OERTEL; G. U. HOEGLINGER; C. CULMSEE. *Philipps Univ. of Marburg, Dept. of Biol., German center for Neurodegenerative Dis., Dept. of Neurol.*

3:30 **199.11** Rab11 modulates alpha-synuclein mediated defects in synaptic transmission and behaviour. F. GIORGINI*; C. BREDA; M. L. NUGENT; J. G. ESTRANERO; C. P. KYRIACOU; T. F. OUTEIRO; J. R. STEINERT. *Univ. of Leicester, MRC Toxicology Unit, Univ. of Goettingen.*

3:45 **199.12** MicroRNA-124 loaded nanoparticles modulate neurogenesis in the subventricular zone. C. M. SARAIVA*; J. M. PAIVA; L. FERREIRA; L. I. BERNARDINO. *Hlth. Sci. Res. Ctr. - Univ. of Be, Biocant, Ctr. of Innovation in Biotech., Ctr. for Neurosci. and Cell Biol., Hlth. Sci. Res. Ctr.*

4:00 **199.13** Towards a novel therapy for synucleinopathies: Candesartan cilexetil inhibits oligomeric alpha-synuclein-induced neuroinflammation. S. G. DANIELE*; K. MAGUIRE-ZEISS. *Georgetown Univ. Med. Ctr.*

4:15 **199.14** Hybrid nanostructures for exclusive inhibition of extrasynaptic NMDA receptors. E. MOLOKANOVA; G. H. BRAUN; A. SAVTCHENKO*. *Nanotools Biosci., Sanford Burnahm Med. Res. Inst., Univ. of California - San Diego.*

NANOSYMPOSIUM

200. Fragile X Syndrome: Molecular Mechanisms and Therapeutic Strategies

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 147B

1:00 **200.01** Involvement of FMR4, a trans-active noncoding RNA associated with Fragile X, in neural development. V. J. PESCHANSKY*; C. PASTORI; Z. ZEIER; D. MOTTI; J. L. BIXBY; V. P. LEMMON; J. P. SILVA; C. WAHLESTEDT. *Univ. of Miami, Miller Sch. of Med., Univ. of Miami, Miller Sch. of Med., Univ. of Miami, Miller Sch. of Med.*

1:15 **200.02** Neuronal dysfunction in Fragile X premutation model mice. A. RENOUX*; A. J. ILIFF; K. J. SALA-HAMRICK; N. M. CARDUCCI; P. K. TODD; M. A. SUTTON. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

1:30 **200.03** The study of ubiquitin E3 ligase Mdm2 in MEF2- and FMRP-dependent synapse elimination. N. TSAI*; K. HUBER. *Univ. of Illinois At Urbana-Champaign, UT Southwestern Med. Ctr.*

1:45 **200.04** FMRP associates with MOV10 to modulate AGO2 function in the 3'UTR. S. CEMAN*; P. J. KENNY; H. ZHOU; M. KIM; G. SKARIAH; R. KHETANI; J. DRNEVICH; M. LUZ ARCILA; K. S. KOSIK. *Univ. Illinois, Univ. of California-Santa Barbara, Univ. of Illinois-Urbana Champaign, Univ. of Illinois-Urbana Champaign.*

2:00 **200.05** Fragile X mental retardation protein regulates cocaine-induced behavioral and synaptic plasticity. L. N. SMITH*; J. P. JEDYNAK; M. R. FONTENOT; C. F. HALE; K. C. DIETZ; M. TANIGUCHI; F. S. THOMAS; B. C. ZIRLIN; S. G. BIRNBAUM; K. M. HUBER; M. J. THOMAS; C. W. COWAN. *Harvard Med. School, McLean Hosp., The Univ. of Texas Southwestern Med. Ctr., Univ. of Minnesota, The Univ. of Texas Southwestern Med. Ctr., The Univ. of Texas Southwestern Med. Ctr., Univ. of Minnesota.*

2:15 **200.06** Fragile X proteins regulate neuronal differentiation and maturation. X. ZHAO*; W. GUO; Y. LI. *Univ. of Wisconsin-Madison.*

2:30 **200.07** Disrupted mGluR5-Homer scaffolds in a mouse model of fragile X syndrome. W. GUO*. *UT Southwestern Med. Ctr.*

2:45 **200.08** Astroglia-mediated pathogenic mechanisms in fxs. Y. YANG*; H. HIGASHIMORI. *Tufts Univ. Sch. of Med., Tufts Univ.*

3:00 **200.09** Neuronal cell type specific expression of axonal Fragile X granules and associated mRNAs. M. R. AKINS*; M. E. MITCHELL; L. I. TSAI; G. J. WENK. *Drexel Univ.*

3:15 **200.10** Multiple strategies for targeted reduction of PI3K signaling rescue molecular, cellular and cognitive phenotypes in animal models of Fragile X syndrome. C. GROSS*; C. CHANG; S. M. KELLY; N. RAJ; W. GUO; A. J. WHYTE; S. W. DANIELSON; M. Q. JIANG; C. CHAN; K. YE; J. R. GIBSON; K. H. MOBERG; S. L. GOURLEY; K. M. HUBER; G. J. BASSELL. *Emory Univ., Cincinnati Children's Hosp. Med. Ctr., UT Southwestern, The Col. of Wooster, Emory Univ., Emory Univ.*

3:30 **200.11** Testing the therapeutic effects of trifluoperazine on Fragile X syndrome in a mouse model. H. WANG*; F. SETHNA; M. ZHANG; Q. DING; H. KAPHZAN; E. KLANN; W. FENG; Y. FENG. *Michigan State Univ., Michigan State Univ., New York Univ., Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:45 **200.12** Reversing the behavioral phenotypes in fmr1 KO by the reduction of potassium channel, Kv4.2. H. LEE*; L. JAN. *Univ. of California, San Francisco.*

4:00 **200.13** Modulation of eIF4E restores the balance between protein synthesis and actin dynamics in Fragile X Syndrome. E. SANTINI*; T. HUYNH; S. KOO; E. PASCIUTO; C. BAGNI; E. KLANN. *New York Univ., New York Univ., New York Univ., Catholic Univ. of Leuven, Catholic Univ. of Leuven.*

NANOSYMPOSIUM

201. Epilepsy: Man and Mouse

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 146C

1:00 **201.01** Treatment of acute behavioral seizures in the Theiler's murine encephalomyelitis virus model of acquired epilepsy disrupts long-term, but not acute, histopathology. M. L. BARKER-HALISKI*; T. D. HECK; E. DAHLE; T. H. PRUESS; K. S. WILCOX; H. WHITE. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

1:15 **201.02** Large scale meta-analysis of genome wide association data in common forms of human epilepsy. R. J. BUONO*. *Cooper Med. Sch. of Rowan Uniersity, On Behalf of the Intl. League Against Epilepsy.*

1:30 **201.03** ● Pharmacological scavenging of reactive oxygen species improves cognitive function in an experimental model of Temporal Lobe Epilepsy. J. PEARSON*; L. LIANG; B. DAY; M. PATEL. *Univ. of Colorado, Natl. Jewish Hlth.*

1:45 **201.04** Aberrant hippocampal neurogenesis drives epilepsy and associated cognitive decline. K. CHO*; N. ITO; Z. LYBRAND; R. BRULET; L. ZHANG; L. GOOD; K. URE; S. KERNIE; S. BIRNBAUM; H. SCHARFMAN; A. EISCH; J. HSIEH. *UT Southwestern Med. Ctr., The Catholic Univ. of Korea, Kitasato Univ., Baylor Col. of Med., Columbia Univ., The Nathan Kline Inst. for psychiatric research.*

2:00 **201.05** Microelectrode array neuronal recordings from intact larval zebrafish. M. MEYER*; A. PODURI; A. ROTENBERG. *Boston Children's Hosp.*

2:15 **201.06** Age-dependent plasticity of cortical GABAergic innervation lessens seizure severity in Cacna1a mutant mice. E. SAMAROVA; A. LUPIEN-MEILLEUR; X. JIANG; A. M. J. M. VAN DEN MAAGDENBERG; J. LACAILLE; E. ROSSIGNOL*. *CHU Ste-Justine, Univ. de Montréal, Leiden Univ. Med. Ctr.*

2:30 **201.07** Cortico-cortical relationship in the intracranial EEG second spectrum. R. B. JOSHI*; N. GASPARD; I. I. GONCHAROVA; R. B. DUCKROW; D. DUNCAN; J. L. GERRARD; D. D. SPENCER; L. J. HIRSCH; H. P. ZAVERI. *Yale Univ., Univ. of California - Davis, Yale Univ.*

2:45 **201.08** Brain PPARgamma contributes to the anti-seizure efficacy of the ketogenic diet. T. A. SIMEONE*; K. A. SIMEONE; S. MATTHEWS; K. SAMSON. *Creighton Univ.*

3:00 **201.09** PET imaging of translocator protein, a neuroinflammatory biomarker, *in vivo* in patients with temporal lobe epilepsy. L. P. DICKSTEIN; P. ZANOTTI-FREGONARA; I. DUSTIN; J. HONG; J. LIOW; V. W. PIKE; S. S. ZOGHBI; R. B. INNIS*; W. H. THEODORE. *NIH, NIMH, NIH, NIMH, NIH, NINDS, NIH, NIMH, MIB.*

NANOSYMPOSIUM

202. Traumatic Brain Injury: Animal and Human Studies

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 152A

1:00 **202.01** The psychiatric sequelae of concussion. M. D. MCCRADY*; S. RASMUSSEN; P. I. ROSEBUSH; M. F. MAZUREK. *McMaster Univ., McMaster Univ., St. Joseph's Hosp.*

1:15 **202.02** The prevalence and impact of sleep disturbances following traumatic brain injury from blast versus non-blast exposure in an oef/oif veteran population. J. WATSON*; K. L. PANIZZON; N. H. DINH; N. SHAH; G. V. T. WINDMILLER; S. JOO; R. A. WALLIS. *VA Greater Los Angeles Healthcare Syst., David Geffen UCLA Sch. of Med.*

1:30 **202.03** Lifetime PTSD confounds diffusion tensor abnormalities associated with military concussion. N. D. DAVENPORT*; S. R. SPONHEIM; K. O. LIM. *Minneapolis Vahcs/University of Minnesota, Minneapolis VAHCS/ University of Minnesota.*

1:45 **202.04** ▲ Prevalence of mood lability following traumatic brain injury from blast versus non-blast exposure in a veteran population. N. H. DINH*; K. L. PANIZZON; N. SHAH; G. V. T. WINDMILLER; S. JOO; J. WATSON; R. A. WALLIS. *VA Greater Los Angeles Healthcare Syst., UCLA, VA Greater Los Angeles Healthcare Syst., David Geffen UCLA Sch. of Med.*

2:00 **202.05** Peripheral blood inflammatory markers associated with concussion severity and recovery in collegiate athletes. R. SINGH*; K. T. TEAGUE; J. SAVITZ; D. POLANSKI; A. TAYLOR; T. B. MEIER; P. S. F. BELLGOWAN*. *Laureate Inst. For Brain Res., Univ. of Oklahoma Col. of Med., Univ. of Oklahoma Col. of Pharm., Oklahoma State Univ. Ctr. for Hlth. Sci., Univ. of Tulsa, Univ. of Tulsa.*

2:15 **202.06** ● The presence of mild traumatic brain injury is reliably detected with a combination of oculomotor and vestibular measures. R. C. ASHMORE*; S. AKHAVAN; M. R. QUIGLEY; E. D. SNELL; R. SCLABASSI; L. OAKES; A. KIDERMAN; K. M. KELLY. *Neuro Kinetics, Inc., Allegheny Hlth. Network, Computat. Diagnostics, Inc.*

2:30 **202.07** ▲ Post-traumatic headache after blast versus non-blast exposure in an oef/oif veteran population. P. J. WELLS*; K. L. PANIZZON; N. H. DINH; J. WATSON; N. SHAH; G. V. T. WINDMILLER; S. JOO; R. A. WALLIS. *VA Greater Los Angeles Healthcare, David Geffen UCLA Sch. of Med., VA Greater Los Angeles Healthcare Syst., VA Greater Los Angeles Healthcare Syste,, David Geffen UCLA Sch. of Med.*

2:45 **202.08** Disruptions in synaptic plasticity in the hippocampus across a spectrum of mild traumatic brain injury levels in swine. J. A. WOLF*; A. V. ULYANOVA; M. R. GROVOLA; J. P. HARRIS; K. D. BROWNE; V. E. JOHNSON; D. H. SMITH; J. E. DUDA; D. K. CULLEN. *Univ. of Pennsylvania, Philadelphia Veterans Affairs Med. Ctr.*

3:00 **202.09** Transitory, fast changes in theta/alpha band EEG signals, in vegetative state patients during responses to complex stimuli. G. RIVERA*; J. I. EGAÑA; V. DIAZ; P. MALDONADO. *Univ. De Chile, Univ. De Chile, Univ. De Chile, Univ. De Chile.*

3:15 **202.10** Analysis of neuronal trauma and micro-tears in a rodent traumatic brain injury model. G. MLYNARCZYK; D. C. PETERSON*. *Iowa State Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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3:30 **202.11** Two year plasma lipidomic profile in a mouse model of single and repetitive mild Traumatic Brain Injury. F. C. CRAWFORD*; B. MOUZON; T. EMMERICH; L. ABDULLAH; J. EVANS; J. M. REED; G. C. CRYNEN; M. J. MULLAN. *Roskamp Inst., James A. Haley Veterans' Hosp., The Open Univ., James A. Haley Veterns' Hosp.*

3:45 **202.12** Impact of brain injury on high frequency cerebellar oscillations in rat. G. ORDEK*; A. PRODDUTUR; V. SANTHAKUMAR; B. PFISTER; M. SAHIN. *New Jersey Inst. of Technol., Rutgers Biomed. and Hlth. Sci.*

4:00 **202.13** Behavioral outcomes differ between repeated shockwave and head rotational acceleration exposures. B. D. STEMPER*; A. SHAH; M. D. BUDDE; M. MCCREA; S. N. KURPAD; A. GLAVASKI-JOKSOMOVIC; F. A. PINTAR. *Dept. of Neurosurgery, Med. Col. of Wisconsin.*

4:15 **202.14** Traumatic brain injury induces a distinct macrophage response at acute and chronic time points in a mouse model of Alzheimer's disease. O. KOKIKO-COCHRAN*; M. SABER; R. TEKNIPP; R. RANSOHOFF; B. LAMB. *Lerner Res. Inst. Cleveland Clin., Lerner Res. Institute, Cleveland Clin.*

NANOSYMPOSIUM

203. Obstructive Sleep Apnea: Intermittent Oxygenation

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 152B

1:00 **203.01** Association between brain injury and disease severity in patients with obstructive sleep apnea. S. K. YADAV*; J. PALOMARES; M. A. WOO; D. W. KANG; 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.*

1:15 **203.02** Intermittent hypoxia and its role in oxidative stress and inflammation. B. SNYDER*; B. SHELL; J. CUNNINGHAM; R. L. CUNNINGHAM. *Univ. of North Texas Hlth. Sci. Ctr., Univ. of North Texas Hlth. Sci. Ctr.*

1:30 **203.03** Extent of oxygen desaturation affects brain tissue pathology in obstructive sleep apnea. J. PALOMARES; S. K. YADAV; D. W. KANG; M. A. WOO; R. K. HARPER*; 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.*

1:45 **203.04** ▲ The role of adenosine in the hypoxic ventilatory response. N. Y. CHU*; Y. ZHANG; T. S. ALVARES; J. D. YOUNG; C. E. CASS; G. D. FUNK. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

2:00 **203.05** Subventricular zone of the developing gyrencephalic brain under normal physiological conditions and after hypoxia. N. ISHIBASHI*; P. D. MORTON; L. KOROTCOVA; K. AGEMATSU; R. A. JONAS; V. GALLO. *Childrens Natl. Med. Ctr., Children's Natl. Med. Ctr.*

2:15 **203.06** XII inspiratory premotoneurons derive from a subpopulation of Dbx1 neurons in the intermediate reticular formation. A. L. REVILL*; A. KOTTICK; V. T. AKINS; N. C. VANN; P. A. GRAY; C. A. DEL NEGRO; G. D. FUNK. *Univ. of Alberta, Col. of William and Mary, Washington Univ.*

NANOSYMPOSIUM

204. Language: Spoken and Written

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 150B

1:00 **204.01** Processing body-part metaphors recruits the left extrastriate body area (EBA). K. SATHIAN*; S. LACEY; R. STILLA; K. MCCORMICK; M. BHUSHAN; D. KEMMERER. *Emory Univ. Sch. Med., Emory Univ., Purdue Univ.*

1:15 **204.02** Activity in left anterior temporal cortex is modulated by constituent structure of sentences, but only with social/emotional content. M. S. MELLEM*; K. JASMIN; C. PENG; A. MARTIN. *NIH.*

1:30 **204.03** Modulating conceptual combination using focal non-invasive brain stimulation. A. R. PRICE*; M. F. BONNER; J. PEELLE; M. GROSSMAN. *Univ. of Pennsylvania, Washington Univ. in St. Louis.*

1:45 **204.04** Predictive mechanisms and speech perception in progressive non-fluent aphasia (PNFA); a magnetoencephalography (MEG) study. T. E. COPE*; K. PATTERSON; E. SOHOGLU; C. DAWSON; M. GRUBE; M. DAVIS; J. ROWE. *Univ. Neurol. Unit, MRC Cognition and Brain Sci. Unit, Ear Institute, Univ. Col. London, Univ. Neurol. Unit, Newcastle Univ.*

2:00 **204.05** ● Functional response of the language system to increased amyloid load in cognitively intact older adults. K. ADAMCZUK*; A. DE WEER; N. NELISSEN; P. DUPONT; K. VAN LAERE; R. VANDENBERGHE. *KU Leuven, Leuven Inst. of Neurosci. and Dis., KU Leuven, UZ Leuven.*

2:15 **204.06** Neural correlates of response latencies in the picture naming task. N. JANSSEN*; J. A. HERNÁNDEZ-CABRERA; H. A. BARBER. *Univ. De La Laguna, Basque Ctr. on Cognition, Brain and Language.*

2:30 **204.07** ● Longitudinal decline in sentence comprehension in primary progressive aphasia and behavioral variant frontotemporal degeneration. M. GROSSMAN*; E. MORAN; D. CHARLES; S. ASH; K. RASCOVSKY; C. T. MCMILLAN. *Univ. Pennsylvania Sch. Med.*

2:45 **204.08** EEG studies of multi-language comprehension. T. MAHMOOD*; Q. MENG; P. ACHARJEE; E. HONG; F. CHOA. *UMBC, Univ. of Maryland Sch. of Med. and Maryland Psychiatric Res. Ctr.*

3:00 **204.09** Localizing categorical speech representations in perception and production. C. J. JOHNSON*; J. W. BOHLAND. *Boston Univ., Boston Univ.*

3:15 **204.10** Interhemispheric frontal resting connectivity increases in post-stroke aphasia and is associated with worse performance. L. M. SKIPPER*; E. H. LACEY; S. XING; A. DESKO; M. FAMA; X. JIANG; P. TURKELTAUB. *Georgetown Univ., MedStar Natl. Rehabil. Hosp.*

3:30 **204.11** ▲ Music reading in the brain: How musical literacy shapes the ventral cortical visual stream. V. MONGELLI; P. BARTOLOMEO*; F. VINCKIER; S. DEHAENE; I. PERETZ; L. COHEN. *Inserm UMRS 1127, Brain and Spine Inst., CNRS, UMR 7225, Univ. Pierre et Marie Curie-Paris 6, Inserm UMRS 1127, Catholic Univ., AP-HP, Groupe Hospitalier Pitié-Salpêtrière, Pôle des Maladies du Système Nerveux, Inserm U992, Col. de France, Intl. Lab. for Brain , Music and Sound Res. (BRAMS), Ctr. for Res. on Brain, Language and Music (CRBLM), Univ. de Montréal.*

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3:45 **204.12** Unexpected neural correlates of the word-nonword distinction in lexical decision. W. W. GRAVES*; O. BOUKRINA; E. J. ALEXANDER; S. R. SMOLIN; R. LATHIA. *Rutgers Univ.*

4:00 **204.13** Neural specialization for interpersonal communication within dorsolateral prefrontal cortex: A NIRS investigation. J. HIRSCH*; J. A. NOAH; X. ZHANG; S. YAHIL; P. LAPBORISUTH; M. BIRIOTTI. *Yale Sch. of Med., Yale Sch. of Med., Univ. Col. London.*

4:15 **204.14** Cortical dynamics underlying online building of hierarchical structures. N. DING*; H. ZHANG; X. TIAN; L. MELLONI; D. POEPPEL. *New York Univ., Columbia Univ., Max-Planck Inst. for Brain Res.*

NANOSYMPOSIUM

205. Working Memory

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 147A

1:00 **205.01** Dissociable effects of frontal cortex stimulation during selection from working memory. C. CHATHAM*; D. BADRE. *Brown Univ., Brown Univ.*

1:15 **205.02** Phase-dependent coding of feature-selective population codes during visual working memory storage. D. E. ANDERSON*; J. T. SERENCES; E. K. VOGEL; E. AWH. *Univ. of Oregon, Univ. of Oregon, UCSD, UCSD.*

1:30 **205.03** Mnemonic representations in human occipital, parietal and frontal cortex index visuospatial working memory acuity. T. C. SPRAGUE*; E. F. ESTER; J. T. SERENCES. *UCSD, UCSD.*

1:45 **205.04** Alpha band activity in the dorsal and ventral stream reflect a double dissociation between feature specific networks during working memory maintenance. M. LESZCZYNSKI*; A. JAHANBEKAM; J. FELL; O. JENSEN; N. AXMACHER. *Univ. of Bonn, Radboud Univ., German Ctr. for Neurodegenerative Dis.*

2:00 **205.05** Frontoparietal contributions to the short-term retention of motion and color. A. C. RIGGALL*; N. S. ROSE; M. J. STARRETT; B. R. POSTLE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

2:15 **205.06** Flexibility of representational states in working memory. N. ZOKAEI*; S. MANOHAR; S. NING; E. FEREDOES; M. HUSAIN. *Oxford Univ., Reading university.*

2:30 **205.07** ● Top-down control of working memory in ageing: A magnetoencephalography study. R. M. MOK*; N. E. MYERS; G. WALLIS; A. C. NOBRE. *Univ. of Oxford.*

2:45 **205.08** Divergence and convergence of attention network activity in visual attention and short-term memory. S. L. SHEREMATA*; B. CARTER; D. C. SOMERS; S. SHOMSTEIN. *George Washington Univ., Boston Univ.*

3:00 **205.09** Decoding under distraction reveals distinct occipital and parietal contributions to visual short-term memory representation. K. BETTENCOURT*; Y. XU. *Harvard Univ.*

3:15 **205.10** Frontoparietal structural connectivity predicts ability to top-down modulate alpha and gamma oscillations in visual areas. T. R. MARSHALL*; T. O. BERGMANN; O. JENSEN. *Donders Inst., Christian Albrechts Univ.*

3:30 **205.11** What are the neurophysiological bases of attended and unattended items in short-term memory? An fMRI/EEG/TMS study. N. ROSE*; J. L. LAROCQUE; A. C. RIGGALL; O. GOSSERIES; B. R. POSTLE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

3:45 **205.12** Pre-trial neural indicators of lapses in working memory performance. K. ADAM*; E. K. VOGEL. *Univ. of Oregon.*

4:00 **205.13** Top-down control over the contents of visual working memory is reflected in neural oscillations measured by magnetoencephalography. N. MYERS*; M. G. STOKES; T. WILDEGGER; A. C. NOBRE. *Oxford Univ., Oxford Univ.*

4:15 **205.14** Partially-segregated neural substrates of working memory and attention to visual features in lateral prefrontal cortex neurons. D. MENDOZA-HALLIDAY*; J. C. MARTINEZ-TRUJILLO. *McGill Univ., MIT.*

NANOSYMPOSIUM

206. The Neural Basis of Reward-Based Decisions

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 140A

1:00 **206.01** Do VMPFC neurons really care about outcome value? S. BOURET*; A. SAN GALLI; R. ABITBOL; M. PESSIGLIONE. *Inst. du Cerveau et de la Moelle Epiniere.*

1:15 **206.02** Value comparison through mutual inhibition in a corticostriatal circuit. C. E. STRAIT*; B. J. SLEEZER; T. C. BLANCHARD; B. Y. HAYDEN. *Univ. of Rochester, Univ. of Rochester.*

1:30 **206.03** Information search strategies during multi-attribute choice. L. T. HUNT*; N. MALALASEKERA; D. GRIGAT; R. J. DOLAN; S. W. KENNERLEY. *Univ. Col. London.*

1:45 **206.04** Adaptive value coding and the optimality of choice. K. LOUIE*; M. GRUBB; P. W. GLIMCHER. *New York Univ.*

2:00 **206.05** Coding formats during anticipatory delay reveal regulatory role of anterior cingulate cortex. T. BLANCHARD*; B. HAYDEN. *Univ. of Rochester, Univ. of Rochester.*

2:15 **206.06** Characterizing value-related responses in monkey orbital and medial prefrontal cortices using fMRI. S. COLLETTE*; T. LARSEN; E. LAWLER; N. SCHWEERS; J. P. O'DOHERTY; D. Y. TSAO. *Caltech.*

2:30 **206.07** Neural encoding of the immediate and future value of novel choice options in amygdala, ventral striatum, and orbitofrontal cortex. V. D. COSTA*; L. C. KAKALIOS; B. B. AVERBECK. *NIMH/NIH.*

2:45 **206.08** Competing strategies for reward learning in the orbitofrontal cortex and connected brain regions. A. O. CONSTANTINESCU*; G. JOCHAM; A. M. IANNI; T. E. J. BEHRENS. *Oxford Ctr. for Functional MRI of the Brain, Ctr. for Behavioral Brain Sci. and Fac. of Economics, Otto-von-Guericke-University Magdeburg, Natl. Inst. of Mental Health, NIH, The Wellcome Trust Ctr. for Neuroimaging, Univ. Col. London.*

3:00 **206.09** Neuronal correlates of value depend on information gathering and comparison strategies. N. MALALASEKERA*; L. T. HUNT; B. MIRANDA; T. E. BEHRENS; S. W. KENNERLEY. *Sobell Dept. of Motor Neurosci. and Movement Disorders, Wellcome Trust Ctr. for Neuroimaging, Inst. of Neurol.*

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3:15 **206.10** The role of the macaque orbital prefrontal cortex in learning and reversing probabilistic reward associations. P. H. RUDEBECK*; E. A. MURRAY. *Icahn Sch. of Med. at Mount Sinai, Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*

3:30 **206.11** Evidence for directionality in OFC high-frequency oscillations. E. L. RICH*; J. D. WALLIS. *UC Berkeley.*

3:45 **206.12** Neuronal encoding of rewards and penalties in the primate amygdala: Strong and consistent reward signals versus weak and inconsistent penalty signals. M. L. LEATHERS*; C. R. OLSON. *Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ., Univ. of Pittsburgh.*

4:00 **206.13** Deletion of α5 nicotine receptor subunits abolishes nicotinic aversive motivational effects in a manner that matches dopamine receptor antagonism. T. E. GRIEDER*; H. VARGAS-PEREZ; M. CHWALEK; G. MAAL-BARED; D. VAN DER KOOY. *Univ. Toronto, Univ. Toronto, Univ. Toronto, Univ. Toronto.*

NANOSYMPOSIUM

207. Imaging the Healthy and the Diseased Brain

Theme G: Novel Methods and Technology Development

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 150A

1:00 **207.01** Performance evaluation of 3d automatic neuron reconstruction approaches. Z. ZHOU*; S. SORENSEN; M. FISHER; D. SANDMAN; A. HENRY; K. JOINES; T. DESTA; J. HOHMANN; W. WAKEMAN; N. DA COSTA; L. LI; S. SUNKIN; E. LEIN; H. ZENG; M. HAWRYLYCZ; C. KOCH; H. PENG. *Allen Inst. For Brain Sci.*

1:15 **207.02** *In vivo* voltage-sensitive dye optical imaging of the subcortical brain structures. Q. TANG*; V. TSYTSAREV; C. LIANG; R. S. ERZURUMLU; Y. CHEN. *Univ. of Maryland-College Park, Univ. of Maryland Sch. of Med.*

1:30 **207.03** ● Zolpidem reduces neuronal activity in hippocampus of freely behaving mice: A large-scale calcium imaging study using miniaturized fluorescence microscope. T. BERDYYEVA*; S. OTTE; L. ALUISIO; L. D. BURNS; Y. ZIV; C. DUGOVIC; K. K. GHOSH; M. J. SCHNITZER; T. LOVENBERG; P. BONAVENTURE. *Janssen LLC (Johnson & Johnson PRD), Inscopix, Weizmann Inst. of Sci., Stanford Univ.*

1:45 **207.04** Eliminating EPI signal drop out in insular and amygdala area in rat functional MR study- a step toward true whole brain functional imaging. R. LI*; X. LIU; P. BISHOP; J. SIDABRAS; H. S. MATLOUB; J. S. HYDE. *Med. Col. of Wisconsin, Med. Col. of Wisconsin, Med. Col. of Wisconsin.*

2:00 **207.05** ● Cerebral Oxygen Extraction Fraction (OEF) measurements obtained by MR and PET in patients with brain tumors. P. MASSOUMZADEH*; S. NAJMI; H. ANN; R. DHANASHREE; J. MCCONATHY; A. G. VLASSENKO; Y. SU; D. MARCUS; S. J. FOUKE; K. RICH; T. BENZINGER. *Washington Univ. In St. Louis, Sch. of Medi, Washington Univ. In St. Louis, Sch. of Medi, Univ. of North Carolina, Swedish Neurosci. Specialists Ivy Brain Tumor Ctr.*

2:15 **207.06** Identification and characterization of a novel small molecule phosphodiesterase 10A PET-tracer, AMG580. H. CHEN*; E. HARRINGTON; D. LESTER-ZEINER; J. SHI; J. WONG; J. ABLE; C. BIORN; S. RUMFELT; R. KUNZ; T. NIEXY; S. MILLER; C. DAVIS; D. HWANG; Z. YU; G. VARGAS; D. IMMKE; J. ALLEN; J. TREANOR. *Amgen, INC., Amgen, Amgen, Amgen, Amgen, Amgen.*

2:30 **207.07** Comparison of two fluorine-18-labeled pet tracers for imaging pde10a. H. JIN*; J. LI; X. ZHANG; H. FLORES; Y. SU; J. S. PERLMUTTER; Z. TU; J. FAN. *Washington Univ., Washington Univ., Washington Univ., Univ. of Alabama at Birmingham.*

2:45 **207.08** ● Predictive statistical modeling of beta-amyloid progression in APP transgenic mice. B. J. BEDELL*; K. DEDUCK; Y. ITURRIA-MEDINA; A. C. EVANS. *McGill Univ.*

3:00 **207.09** Development of neuroimaging biomarkers for Parkinson disease: Pitfalls & potential. J. S. PERLMUTTER; S. M. MOERLEIN*. *Washington Univ.*

3:15 **207.10** Utilization of different molecular weight magnetic resonance tracers for tracking GDNF distribution following convection enhanced delivery. L. H. BRADLEY*; C. ROSS; P. MARGAIRAZ; R. VENUGOPALAN; Z. ZHANG; P. A. HARDY. *Univ. of Kentucky, Univ. of Kentucky, Engin. Resources Group, Inc., Medos Intl., Animas Corp., Univ. of Kentucky.*

3:30 **207.11** ● Interrogating non-dopaminergic striatal systems in parkinson's: Pet imaging of pde10 and adenosine 2a. J. P. SEIBYL; G. D. TAMAGNAN*; D. JENNINGS; K. MAREK. *IND.*

3:45 **207.12** Imaging neurodegeneration in Parkinson's disease: Dopamine and beyond. A. STOESSL*. *Univ. of British Columbia.*

4:00 **207.13** Alpha-synuclein SMART Molecule: a novel blood-brain barrier permeable diagnostic ligand for Parkinson's disease. A. CARTIER*; R. BHATT. *ICB International, Inc.*

POSTER

208. Neuronal Migration

Theme A: Development

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A1 **208.01** EphA4 signaling regulates tangential migration of neuronal precursors. M. B. EASTMAN; K. A. BAKER; N. B. GALLO; J. C. CONOVER*. *Univ. Connecticut.*

2:00 A2 **208.02** Synapsin III acts downstream Semaphorin 3A to regulate radial migration and orientation of pyramidal neurons *in vivo*. L. CANCEDDA*; L. PERLINI; J. SZCZURKOWSKA; B. A. BALLIF; A. PICCINI; S. GIOVEDÌ; F. BENFENATI. *Inst. Italiano di Tecnologia, Univ. of Vermont, Univ. degli studi di Genova.*

3:00 A3 **208.03** ▲ Neural Crest Micro array after Slit2 gain of function. D. MARTINEZ; M. Y. REYES; N. ZUHDI; H. RA; M. E. DE BELLARD*. *Cal State Univ. Northridge.*

4:00 A4 **208.04** Autism-related protein Negr1 is required for transition of migrating pyramidal neurons from layer V to layer II/III of the mouse cerebral cortex. J. SZCZURKOWSKA*; F. PISCHEDDA; F. MANAGO; C. HAAS; F. PAPALEO; M. SCHÄFER; G. PICCOLI*; L. CANCEDDA*. *Inst. Italiano Di Tecnologia, Univ. of Milan, Univ. of Freiburg, Univ. Med. Ctr. of Mainz.*

1:00 A5 **208.05** Co-regulated gene expression downstream of Fezf2 selects axon guidance choices of corticospinal motor neurons. S. LODATO*; B. MOLYNEAUX; E. ZUCCARO; L. GOFF; H. CHEN; W. YUAN; S. MAHONY; J. L. RINN; D. GIFFORD; P. ARLOTTA. *Harvard Univ., Massachusetts Inst. of Technology,, Massachusetts Inst. of Technol.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 A6 **208.06** Prox1 regulates the migration and maturation of caudal ganglionic eminence-derived cortical interneurons. G. MIYOSHI*; A. YOUNG; T. PETROS; T. KARAYANNIS; M. MCKENZIE CHANG; D. VAN VERSENDAAL; A. LAVADO; T. IWANO; M. NAKAJIMA; H. TANIGUCHI; J. Z. HUANG; N. HEINTZ; G. OLIVER; F. MATSUZAKI; R. P. MACHOLD; G. FISHELL. *New York Univ. SoM, St. Jude Children's Res. Hosp., RIKEN Ctr. for Developmental Biol, The Rockefeller Univ., Cold Spring Harbor Lab.*

3:00 A7 **208.07** The anti-epileptic drug valproic acid alters neuroprogenitor trajectories. E. M. POWELL*; R. F. MARTIN. *Univ. Maryland, Baltimore.*

4:00 A8 **208.08** The miR379-410 cluster miRNA miR-543 regulates neurogenesis and neuronal migration *in vivo.* J. WINTER*; L. RAGO. *Univ. Med. Ctr. Mainz, Max Planck Inst. of Immunobiology and Epigenetics.*

1:00 A9 **208.09** Cortical interneurons require c-Jun N-terminal kinase (JNK) signaling to preserve migratory stream integrity during corticogenesis. A. K. MYERS; K. BAKER; J. P. SNOW; C. A. SMITH; E. S. TUCKER*. *West Virginia Univ., West Virginia Univ.*

2:00 A10 **208.10** Effects of optogenetic stimulation on motility of differentiating neural stem cells. K. MARKO*; N. PAPP; T. KOHIDI; A. JADY; Z. KORNYEI; T. ANDRASI; D. MARIC; E. MADARASZ. *NIH, Inst. of Exptl. Medicine, Hungarian Acad. of Sci., NIH.*

3:00 A11 **208.11** Characterizing the role of VEGFR1 in GnRH neuronal migration. E. FLANNERY*; D. DONOHUE; S. WRAY. *NINDS, NIH, US Army Med. Res. and Material Command, USACEHR.*

4:00 A12 **208.12** A growth factor-dependent Ca^{2+} signaling network during stem cell proliferation and neuronal migration in the developing neocortex. B. G. RASH*; J. B. ACKMAN; P. RAKIC. *Yale Univ., Yale Univ.*

1:00 A13 **208.13** AGO61, a causative gene for dystroglycanopathy, is required for the maintenance of the basement membrane integrity and neuronal migration. N. NAKAGAWA*; H. YAGI; K. KATO; S. OKA. *Kyoto Univ., Nagoya City Univ.*

2:00 A14 **208.14** Regulation of neuronal cell migration by sphingomyelin synthase 1 is mediated through modulation of the key cell cycle protein p27 and matrix metalloproteinase. U. V. WESLEY; J. HATCHER; R. J. DEMPSEY*. *Univ. of Wisconsin SMPH.*

3:00 A15 **208.15** Roles of MACF1 in pyramidal neuron migration during brain development. M. KA*; E. JUNG; M. LATNER; W. KIM. *Univ. of Nebraska Med. Ctr.*

4:00 A16 **208.16** Impaired mitral cell migration due to TAG-1/CNTN2 deficiency leads to olfactory dysfunction. D. KARAGOGEOS*; G. G. BASTAKIS; M. SAVVAKI; A. STAMATAKIS; M. VIDAKI. *Inst. Molec Biol & Biotech, FORTH, Inst. of Mol. Biol. &Biotech-FoRTH and Fac. of Medicine, Univ. of Crete, Fac. of Nursing, Univ. of Athens.*

1:00 A17 **208.17** Epigenetic modifications alter the expression pattern of KCC2 in a ferret model of cortical dysplasia. F. T. DJANKPA*; O. B. AKINOLA; S. POLUCH; D. BORST; C. DALGARD; S. L. JULIANO. *Univ. of Cape Coast, Univ. of Ilorin, USUHS, APG and Neurosci.*

2:00 A18 **208.18** Cdk5-mediated phosphorylation of RapGEF2 is required for neuronal migration during cerebral cortex development. T. YE*; J. P. IP; A. K. 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.*

3:00 A19 **208.19** Galectin-3 decreases subventricular zone cell migration to the demyelinated corpus callosum. J. M. HILLIS*; J. SEVERS; R. E. JAMES; F. G. SZELE. *Univ. of Oxford, Imperial Col. London.*

4:00 A20 **208.20** Identification of a functional role of Laminin alpha 1 in the developing brain. C. HENG-KISSENBERGER*; C. GAMPE; A. KLEIN; D. BAGNARD; J. BOLZ. *Allgemeine Zoologie Und Tierphysiologie, Inserm 1109 - MN3t Lab.*

1:00 A21 **208.21** Specific proteolytic cleavage of Reelin regulates duration and range of its signaling. K. OKUMURA*; A. HISANAGA; M. KOIE; T. KOHNO; M. HATTORI. *Nagoya City Univ.*

2:00 A22 **208.22** The novel function of Reelin in the dendrite development and layer formation in the postnatal brain. T. KOHNO*; T. HONDA; K. KUBO; Y. NAKANO; A. TSUCHIYA; T. MURAKAMI; H. BANNO; K. NAKAJIMA; M. HATTORI. *Nagoya City Univ., Keio Univ., Sch. of Med.*

3:00 A23 **208.23** Involvement of nucleotides in glial growth following scratch injury in avian retinal cell monolayer cultures. A. VENTURA*; T. M. SILVA; G. R. FRANÇA; I. M. ORNELAS. *Federal Fluminense Univ.*

4:00 A24 **208.24** Cellular dynamics underlying the generation of linear arrays of oligodendrocytes in CNS white matter. T. D. MERSON*; B. H. A. CHUANG; T. J. KILPATRICK; P. T. RÖTH. *Florey Inst. of Neurosci. and Mental Hlth., The Univ. of Melbourne.*

1:00 A25 **208.25** Label-free quantification of the emergent behavior of human neuron networks. T. KIM*; M. MIR; A. MAJUMDER; M. XIANG; R. WANG; C. LIU; M. U. GILLETTE; S. STICE; G. POPESCU. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Georgia.*

POSTER

209. Environmental Regulation of PNS Regeneration

Theme A: Development

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A26 **209.01** Antrodia cinnamomea promotes neuritogenesis in mouse primary dorsal root ganglia neurons. C. RAZA*; K. S. Y. LEUNG; C. H. E. MA. *City Univ. of Hong Kong, Hong Kong Baptist Univ., City Univ. of Hong Kong.*

2:00 A27 **209.02** Effects of extra-cellular matrix proteins on neurite extension in isolated neuronal cultures of dorsal root ganglia. A. HIM*; Y. UREN; G. OZTURK; E. K. OGUZ. *Ondokuz Mayis Univ., Yuzuncu Yil Univ., Istanbul Medipol Univ.*

3:00 A28 **209.03** Regenerating sensory and motor neurons preferentially reinnervate modality-specific trophic environments. N. RAHBIN; C. LI; A. VYAS; A. O'DALY; R. SKOLASKY; F. NEAF; R. WOLINSKY; A. HOKE; T. M. BRUSHART*. *Johns Hopkins, Johns Hopkins.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 A29 **209.04** Injury-induced sensory axon regeneration is regulated by oxidative changes in the skin microenvironment. S. RIEGER*; T. LISSE. *Mount Desert Island Biol. Lab.*

1:00 A30 **209.05** Macrophages may not be necessary for axonal and myelin degeneration after peripheral nerve injury in the CCR2-/- mouse. J. LINDBORG*; J. P. NIEMI; A. DEFRANCESCO-LISOWITZ; R. E. ZIGMOND. *Case Western Reserve Univ.*

2:00 A31 **209.06** Neuroinflammation near injured neuronal cell bodies is necessary for peripheral nerve regeneration. J. P. NIEMI*; J. LINDBORG; A. DEFRANCESCO-LISOWITZ; R. E. ZIGMOND. *Case Western Reserve Univ.*

3:00 A32 **209.07** The ErbB2 receptor pathway regulates regeneration following the repair of acute peripheral nerve transection injuries in a rat model. M. HENDRY*; E. PLACHETA; M. ALVAREZ-VERONESI; T. GORDON; G. H. BORSCHEL. *Univ. of Toronto, Med. Univ. of Vienna.*

4:00 A33 **209.08** ● Neuromuscular electrical stimulation following nerve transection and immediate repair enhances reinnervation and functional recovery. M. WILLAND*; C. D. CHIANG; J. J. ZHANG; S. W. P. KEMP; T. GORDON; G. BORSCHEL. *The Hosp. For Sick Children.*

1:00 A34 **209.09** Enhancement of nerve regeneration with N-acetyl cysteine and acetyl-L-carnitine following neonatal nerve injury. J. CATAPANO*; C. CHIANG; M. C. ALVAREZ-VERONESI; T. GORDON; G. H. BORSCHEL. *The Hosp. for Sick Children.*

2:00 A35 **209.10** Improved peripheral motor and sensory nerve regeneration after delayed repair of transected common peroneal (CP) nerve is promoted by prior side-to-side bridging from a donor intact tibial nerve (TIBdonor) to the 3m chronically denervated common peroneal nerve stump (CPden) in an experimental Sprague Dawley rat model. T. GORDON*; J. J. ZHANG; A. LADAK; A. SNYDER WARWICK; J. HENDRY; G. H. BORSCHEL. *Univ. of Toronto, The Hosp. for Sick Children, Univ. of Alberta, Inst. of Med. Sci., Div. of Plastic and Reconstructive Surgery.*

3:00 A36 **209.11** Human umbilical cord perivascular cells (hUC-PVCs) rescue central nervous system and peripheral nervous system axonal degeneration *in vitro.* T. A. BARRETTO; K. PARK; J. FISH; A. S. GAUTHIER*; C. LIBRACH. *Create Fertility Ctr., Create Fertility Ctr.*

4:00 A37 **209.12** ● Neurotrophic effects of nicotine on perivascular adrenergic nerves in rat mesenteric arteries. S. TAKATORI*; H. HINO; F. TAKAYAMA; N. ONO; H. KAWASAKI. *Matsuyama Univ., Okayama Univ., Fukuoka Univ.*

1:00 A38 **209.13** Synergistic effects of neurotrophins and pleiotrophins in stimulating nerve regeneration across long gap peripheral nerve defects. M. I. ROMERO-ORTEGA*; N. Z. ALSMADI; R. GRANJA; B. JOHNSTON; A. KANNEGANTI; G. BENDALE; E. HOR; H. SUMDANI; S. TRINH; M. LE. *Univ. of Texas at Arlington, Univ. of Texas Southwestern Med. Ctr.*

2:00 A39 **209.14** A peripheral nerve regeneration strategy using a combination of bone marrow-derived stem cells transdifferentiated into Schwann-like cells and micropatterned biodegradable polymer conduits. S. ZBARSKA*; A. D. SHARMA; S. K. MALLAPRAGADA; D. S. SAKAGUCHI. *Iowa State Univ., Iowa State Univ., Iowa State Univ.*

3:00 A40 **209.15** Pacific ciguatoxin-1 reduces regenerative capacity of peripheral neuron *in vitro.* N. P. B. AU*; Y. L. MAK; L. L. CHAN; P. K. S. LAM; C. H. E. MA. *City Univ. of Hong Kong, City Univ. of Hong Kong.*

4:00 A41 **209.16** Extracellular Matrix modifications guide pathway selection in peripheral nerve regeneration. J. ISAACMAN-BECK*; M. GRANATO. *Univ. of Pennsylvania.*

1:00 A42 **209.17** ● An implantable electrical interface for *in vivo,* chronic studies of electromyography in canine laryngeal muscles. Y. LI*; S. HUANG; D. ZEALEAR. *Vanderbilt Univ. Med. Center/Oto, Vanderbilt Univ.*

2:00 A43 **209.18** ● Stimulation of a denervated laryngeal muscle promotes selective reinnervation, reduces synkinesis and restores function. D. L. ZEALEAR*; Y. LI; S. HUANG. *Vanderbilt Univ. Med. Ctr.*

3:00 A44 **209.19** Computational modeling of drug release from nerve guide conduit. N. Z. ALSMADI*; L. PATIL; C. CHUONG; M. ROMERO-ORTEGA. *Univ. of Texas at Arlington, Univ. of Texas Southwestern Med. Ctr.*

POSTER

210. Adolescent Vulnerability: Animal Models

Theme A: Development

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A45 **210.01** The role of the D1 receptor in the prefrontal cortex in the emergence and reduction of depressive-like behavior. N. B. FREUND*; R. A. NEVE; S. L. ANDERSEN. *Universitaetsklinikum Tuebingen, McLean Hospital/Harvard Med. Sch., MIT.*

2:00 A46 **210.02** The dynamic changes in adolescent dopamine receptor expression are altered in a model of dcc-haploinsufficiency. A. D. GRANT*; F. SHAHABI; Y. DUMONT; C. MANITT; C. FLORES. *Ctr. De Recherche Du CHUM, Douglas Mental Hlth. Univ. Institute, McGill Univ.*

3:00 A47 **210.03** A subset of pubertally born cells differentiate into astrocytes within the posterior-dorsal medial amygdala. N. STAFFEND*; F. GARCIA; M. M. MOHR; L. DONCARLOS; C. L. SISK. *Michigan State Univ., Loyola Univ. Chicago Stritch Sch. of Med.*

4:00 A48 **210.04** The enduring effects of amphetamine on baseline dopamine function vary by age of drug administration. C. FLORES*; L. YETNIKOFF; M. POKINKO; M. COSSETTE; A. ARVANITOGIANNIS. *McGill Univ., Douglas Mental Hlth. Univ. Inst., St. Louis Univ. Sch. of Med., McGill Univ., Concordia Univ.*

1:00 A49 **210.05** ● Pubertal expression of PSA-NCAM in the medial amygdala of the male Syrian hamster. M. O. JOB*. *GEORGIA STATE UNIVERSITY.*

2:00 A50 **210.06** Exposure to prenatal, adolescent, or combined prenatal and adolescent stress increases contextual fear conditioning in male but not female Sprague-Dawley rats. K. M. SCHULZ*; M. B. BURKE; M. ZAJKOWSKI; I. RAMOS. *Denver Veterans Admin. Med. Ctr., Univ. of Colorado Anschutz Med.*

3:00 A51 **210.07** Mesocortical dopamine depletion reverses the protective phenotype of netrin-1 receptor deficient mice. M. POKINKO*; L. MOQUIN; A. GRATTON; C. FLORES. *McGill Univ., Douglas Univ. Hlth. Inst., McGill Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 A52 **210.08** Impact of dietary omega-3 fatty acid deficiency on DCC and other dopamine related measures. S. LOTFI*; C. MANITT; J. J. BALCITA-PEDICINO; C. O. BONDI; S. R. SESACK; C. FLORES; B. MOGHADDAM. *Univ. of Pittsburgh, McGill Univ., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 A53 **210.09** Sex difference in pubertal cytogenesis in the posterodorsal medial amygdala of mice. J. L. KIM*; M. A. MOHR; N. A. STAFFEND; L. L. DONCARLOS; S. M. BREEDLOVE; C. L. SISK; C. L. JORDAN. *Michigan State Univ., Michigan State Univ., Stritch Sch. of Medicine, Loyola Univ. Chicago.*

2:00 A54 **210.10** ▲ Adolescent Bisphenol A exposure leads to enduring alterations in cognition and dendritic spine density in adult rats. S. C. DEWOLF*; M. FRANKFURT; V. LUINE; H. KHANDAKER; R. BOWMAN. *Sacred Heart Univ., Hofstra North Shore-LIJ Sch. of Med., Hunter Col.*

3:00 A55 **210.11** Long-term effects of adolescent exposure to bisphenol A on neuron and glia number in the rat prefrontal cortex differs between the sexes. L. M. WISE*; R. N. SADOWSKI; T. KIM; S. L. SCHANTZ; J. M. JURASKA. *Univ. of Illinois, Univ. of Illinois, Univ. of Illinois.*

4:00 A56 **210.12** Isolation stress during adolescence in mice: Effects on adult behavior and hippocampal glutamate/GABA. S. LANDER*; I. GAISLER-SALOMON. *Haifa Univ., Haifa Univ.*

1:00 A57 **210.13** The involvement of NMDA receptors in the consolidation and reconsolidation of cocaine place preferences across development. A. R. URUENA*; C. L. KIRSTEIN. *Univ. of South Florida, Univ. of South Florida.*

2:00 A58 **210.14** The effects of chronic unpredictable adolescent stress on fosb expression and anxiety-related behaviors during adulthood. J. GARDNER GREGORY*; M. WILKIN; E. DUMONT; J. MENARD. *Queens Univ., Queens Univ., Queens university.*

3:00 A59 **210.15** Altered sensitivity to cocaine enhancement of reward seeking in DCC haploinsufficient mice. L. M. REYNOLDS*; A. J. GIFUNI; P. SHIZGAL; C. FLORES. *McGill Univ., Douglas Mental Hlth. Univ. Inst., Concordia Univ., McGill Univ.*

4:00 A60 **210.16** Adolescent bisphenol-A exposure leads to enduring decreases in dendritic spine density. R. E. BOWMAN*; V. LUINE; H. KHANDAKER; J. VILLAFANE; M. FRANKFURT. *Sacred Heart Univ., Hunter Col., Hofstra North Shore-LIJ Sch. of Med.*

1:00 A61 **210.17** Toward a mechanism underlying the effects of neonatal sevoflurane on neuropsychiatric-like behavioral changes. D. LIN; J. LIU; J. E. COTTRELL; I. S. KASS*. *SUNY Downstate, SUNY Downstate, SUNY Downstate.*

2:00 A62 **210.18** Developmental regulation of mouse midbrain dopamine neuron excitability by small-conductance calcium-activated potassium (SK) channels. C. FAIRCLOTH; C. BAYER; A. PLACZEK*. *Mercer Univ. Sch. of Med.*

3:00 A63 **210.19** The effects of social isolation in adolescent rats on cognitive function and prefrontal cortex circuitry in adulthood. D. LINDER*; I. GAISLER-SALOMON. *Haifa Univ.*

4:00 A64 **210.20** ● ▲ Antischizophrenic properties of dietary choline supplementation during adolescence: Comparing outcomes in the DISC1 knockout rat and chronic MK-801 models. A. A. BATALLAN; N. K. ZIV; W. YU; J. R. MITCHELL; A. S. MOORE; C. EVANGELISTA; M. J. GLENN*. *Colby Col.*

1:00 A65 **210.21** Adolescent cannabinoid treatment and persistent frontostriatal endocannabinoid signaling gene changes in mice and humans. S. MUKHERJEE*; K. GLEASON; A. SHUKLA; S. BIRNBAUM; S. GHOSE. *UT Southwestern Med. Ctr.*

2:00 A66 **210.22** The timing of neuroanatomical changes across adolescence in the male and female rat medial prefrontal cortex. J. WILLING*; T. KIM; J. M. BRODSKY; L. R. CORTES; J. JURASKA. *Univ. of Illinois, Univ. of Illinois at Urbana Champaign, Univ. of Illinois at Urbana Champaign.*

3:00 A67 **210.23** Sleep deprivation at juvenile age causes alterations in cortical GAD67 levels in juvenile mice and induces prepulse inhibition deficit in adult female mice. C. MONPAYS*; A. TREMEY; J. DESLAURIERS; W. RACINE; K. ASLI; P. SARRET; S. GRIGNON. *Univ. De Sherbrooke.*

4:00 A68 **210.24** Altered female sexual receptive behavior after adolescent social isolation in mice. G. MAJDIC*; J. KERCMAR; S. A. TOBET. *Univ. of Ljubljana, Vet. Fac., Univ. of Ljubljana, Colorado State Univ.*

1:00 B1 **210.25** Developmental fluoxetine affects hippocampal plasticity in juvenile male and female offspring. E. CSÁSZÁROVÁ; L. KNAEPEN; V. HOUBART; M. FILLET; H. STEINBUSCH; J. PAWLUSKI*. *The Inst. of Exptl. Pharmacol. and Toxicology, Maastricht Univ., Univ. of Liege, Ohio Univ.*

2:00 B2 **210.26** Developmental SSRI exposure decreases serotonin and 5-HIAA levels in the PFC, but not the hippocampus, of prenatally stressed juvenile offspring. M. GEMMEL*; I. RAYEN; E. VAN DONKELAAR; H. W. STEINBUSCH; N. KOKRAS; C. DALLA; J. L. PAWLUSKI. *Ohio Univ., Maastricht Univ., Univ. of Athens, Univ. of Liège.*

3:00 B3 **210.27** Gene expression throughout human postnatal development in single cell populations in the prefrontal cortex. E. KOHLBRENNER*; *. WOO. *McLean Hospital; Harvard Med. Sch.*

4:00 B4 **210.28** Chromatin kinetics in the visual system. K. A. CHASE*; C. HASTY; B. M. FEINER; N. H. WRAY; H. GIN; E. HU; R. P. SHARMA. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago.*

1:00 B5 **210.29** ▲ Ontogeny of circadian rhythms in the suprachiasmatic nucleus. A. T. C. SUN; C. L. SIMMS; E. D. HERZOG*. *Washington Univ. in St. Louis, Washington Univ. In St. Louis.*

2:00 B6 **210.30** ▲ The effect of metformin on the developing central nervous system (CNS), using *Drosophila melanogaster*. N. DEWITTE*; T. WILLIAMS; N. LEELANI. *Trinity Univ., Trinity Univ.*

POSTER

211. Neurotransmitter Signaling in Health and Disease

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B7 **211.01** Serotonin suppresses and enhances temporoammonic path-CA1 responses *in vivo.* J. GONZALEZ*; B. E. DERRICK. *U Texas San Antonio, The Neurosciences Res. Inst.*

2:00 B8 **211.02** Nitrosylation of vesicular neurotransmitter transporters. Y. WANG*; H. TAN; Z. ZHOU; Y. SUN; S. ZHU; X. LI; J. WANG. *Univ. of Manitoba, Univ. of Alberta.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 B9 **211.03** Stimulation of glutamate receptors on on- and off-cone bipolar cells leads to increased release of [3h]glycine in rat retina. L. G. HARSING*, Jr.; G. SZENASI; A. HANUSKA; A. SZABO; M. ALBERT. *Semmelweis Univ., Semmelweis Univ., Ceva-Phylaxia.*

4:00 B10 **211.04** Spontaneous depolarization waves in medetomidine sedated Sprague-Dawley rats detected by fMRI. A. SHATILLO*; J. HUTTUNEN; A. AIRAKSINEN; J. NISKANEN; O. GROHN. *Univ. of Eastern Finland, Univ. of Eastern Finland.*

1:00 B11 **211.05** Fast scan cyclic voltammetric recording of dopamine release in the mouse ventral pallidum. K. STOUT*; G. W. MILLER; T. S. GUILLOT, III. *Emory Univ., Emory Univ.*

2:00 B12 **211.06** Neurotransmitter specificity in G-protein signaling cascades revealed by slowed activation of CaV2.2 channels. D. E. GARCIA-DIAZ*; L. DE LA CRUZ; I. ARENAS. *Univ. Nacional Autonoma Mexico.*

3:00 B13 **211.07** Systemic 5-HT7 receptor activation by LP-211 increases LTM and cAMP production in the prefrontal cortex and attenuates scopolamine-induced impairments in rats. A. MENESES*. *Cinvestav - IPN.*

4:00 B14 **211.08** ▲ Characterization of the expression of the synaptic vesicle glycoprotein 2C (SV2C) in the basal ganglia. M. OZAWA; A. R. DUNN; K. A. STOUT; T. S. GUILLOT; M. WANG; Y. LI; G. W. MILLER*. *Emory Univ.*

1:00 B15 **211.09** Two major network domains within the dorsal raphe nucleus. K. G. COMMONS*. *Children's Hosp, Harvard Med.*

2:00 B16 **211.10** Effects of genetic deletion of the synaptic vesicle glycoprotein 2C (SV2C). A. DUNN*; K. A. STOUT; M. OZAWA; M. WANG; Y. LI; T. S. GUILLOT, III; G. W. MILLER. *Emory Univ., Emory Univ.*

3:00 B17 **211.11** Simultaneous assessment of cell type-specific activity through Ca^{2+} imaging in brain slices. N. V. POVYSHEVA*; J. W. JOHNSON. *Univ. Pittsburgh.*

4:00 B18 **211.12** ▲ Homocysteine-induced integral currents, Ca^{2+} responses and changes in mitochondrial membrane potential in cortical and trigeminal ganglion neurons. P. A. ABUSHIK; D. A. SIBAROV; S. M. ANTONOV*; R. GINIATULLIN. *Sechenov Inst. of Evolutionary Physiol. and Biochem., A. I. Virtanen Inst. for Mol. Sciences, Univ. of Eastern Finland.*

1:00 B19 **211.13** Axonal segregation and role of the vesicular glutamate transporter type 3 in neuronal survival of serotonin neurons. A. N. VOISIN*; N. GIGUÈRE; G. M. FORTIN; S. EL MESTIKAWY; L. TRUDEAU. *Univ. De Montréal, Douglas Mental Hlth. Univ. Institute, Univ. McGill.*

2:00 B20 **211.14** miRNAs 29b and 181a down-regulate expression of the norepinephrine transporter in PC12 cells. M. DENG; G. A. ORDWAY*; M. ZHU. *ETSU Quillen Col. of Med.*

3:00 B21 **211.15** ▲ Changes in brain norepinephrine and serotonin levels in an animal model of posttraumatic stress disorder. D. E. POP*; R. J. KOHLER; M. J. LISIESKI; M. BAUER; A. L. EAGLE; S. A. PERRINE; D. E. POP. *Wayne State Univ., Wayne State Univ.*

4:00 B22 **211.16** Kainate receptors mobilize endocannabinoids in striatal spiny projection neurons. J. MARSHALL*; J. XU; A. CONTRACTOR. *Northwestern Univ. - Dept. Of Physiol., Northwestern Univ.*

1:00 B23 **211.17** Relationship between Rearing and Na,K-ATPase. R. ALVES*; A. VASCONCELOS; C. SCAVONE; M. A. C. VENDITTI. *Univ. of Sao Paulo, Marshall Univ., Federal Univ. of Sao Paulo.*

2:00 B24 **211.18** Glutathione: An antioxidant reservoir of synaptic glutamate. T. W. SEDLAK*; M. KOGA; A. KAMIYA; S. SNYDER; A. SAWA. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

3:00 B25 **211.19** Striatin proteins within STRIPAK complex regulate the dephosphorylation of DARPP-32 as B subunits of PP2A. D. LI*; V. MUSANTE; A. C. NAIRN. *Yale Univ.*

4:00 B26 **211.20** ▲ Resveratrol regulates binding activity of specific protein 1 (SP1) and nuclear respiratory factor 1 (NRF1) in an *in vivo* model of cerebral ischemia. I. M. ALQUISIRAS BURGOS*; A. MILLÁN VEGA; A. ORTIZ PLATA; M. I. SALAZAR; M. ESPINOZA ROJO; P. AGUILERA. *Inst. Nacional De Neurologia Y Neurocirugia M, Univ. Autónoma de Guerrero, Inst. Nacional De Neurologia Y Neurocirugia M, Inst. Politécnico Nacional, Univ. Autónoma de Guerrero, Inst. Nacional De Neurologia Y Neurocirugia M.*

1:00 B27 **211.21** The role of presenilin1 in neurogenesis in zebrafish, Danio rerio. J. M. SUNDVIK*; P. PANULA. *Inst. of Biomedicine/ Anatomy, Biomedicum Helsinki.*

2:00 B28 **211.22** Nuclear factor-Y and specificity protein factors act together to regulate the human beta1-adrenergic receptor gene transcription in human neuroblastoma SH-SY5Y cells. Y. NAWA; R. KUWABARA; T. HIROI; R. TAKAHASHI; H. MATSUI*. *St.Marianna Univ. Grad Sch. Med., Toho Univ., Dept Mol Behav Neurosci, St. Marianna Univ. Grad Sch. Med.*

3:00 B29 **211.23** ● Rapid antidepressant response to ketamine in treatment-resistant depression is not dependent on normalising kynurenine pathway metabolism. G. CLARKE*; M. NAUGHTON; R. O'SHEA; J. DOWLING; A. WALSH; F. ISMAIL; G. SHORTEN; L. V. SCOTT; J. F. CRYAN; T. G. DINAN. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork.*

4:00 B30 **211.24** Conditional knockout of gsk-3β in d1 versus d2 receptor-expressing neurons exhibits differential effects on pfc function. Y. LI*; B. XING; N. URS; M. CARON; W. GAO. *Drexel Univ. Col. of Med., Departments of Cell biology, Neurobiology, and Medicine, Duke Univ. Med. Ctr.*

1:00 B31 **211.25** Prefrontal cholinergic overload and attentional capacities in aging. B. YEGLA*; A. KELBAUGH; A. MOOKHTIAR; V. PARIKH. *Temple Univ.*

2:00 B32 **211.26** pH sensitive soluble adenylyl cyclase (sAC) regulates lysosomal pH. N. RAHMAN*; F. R. MAXFIELD; T. A. MILNER; J. BUCK; L. R. LEVIN. *Weill Cornell Med. Col., Weill Cornell Med. Col., Weill Cornell Med. Col., Weill Cornell Med. Col.*

POSTER

212. Calcium Channels: Functions and Regulation of Voltage-Gated Calcium Channels

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B33 **212.01** Development of an assay for inhibitors of the deleterious interaction between wild type and Episodic ataxia-2 mutant CaV2.1 channels. S. DAHIMENE*; K. M. PAGE; J. S. CASSIDY; A. C. DOLPHIN. *UCL.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 B34 **212.02** Regulation of Cav2.2 channel functional expression by the light chain 1 (LC1) of the microtubule associated protein B (MAP1B). M. A. GANDINI; A. SANDOVAL*; R. FELIX. *Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst. (Cinvestav-IPN), FES Iztacala UNAM.*

3:00 B35 **212.03** Dynamics of CaV1.2 L-type voltage-gated calcium channels and β adrenergic receptors signaling complexes in cultured hippocampal neurons. V. DI BIASE*; A. STEINBERGER; M. HEINE; C. RAMPRECHT. *Med. Univ. of Graz, Leibniz Inst. of Neurobio.*

4:00 B36 **212.04** Modulation of CaV2.1 channels by neuronal calcium sensor-1 induces short-term synaptic facilitation. J. YAN*; K. LEAL; V. G. MAGUPALLI; E. NANOU; G. Q. MARTINEZ; T. SCHEUER; W. A. CATTERALL. *Univ. of Washington, Univ. of Washington.*

1:00 B37 **212.05** Substance P inhibits T-type Ca^{2+} channels in sensory neurons via redox-mediated mechanism. D. HUANG; J. SCRAGG; C. PEERS; H. ZHANG; N. GAMPER*. *Hebei Med. Univ., Univ. of leeds, Univ. Leeds.*

2:00 B38 **212.06** A population density and moment-based approach to modeling domain calcium-mediated inactivation of L-type calcium channels. X. WANG*; K. HARDCASTLE; S. H. WEINBERG; G. D. SMITH. *The Col. of William and Mary.*

3:00 B39 **212.07** T-type calcium channels form a calcium-dependent complex with calmodulin. H. ASMARA*; N. C. HEATH; B. SIMMS; T. BARTOLETTI; R. REHAK; I. MICU; F. X. ZHANG; P. STYS; G. W. ZAMPONI; R. W. TURNER. *Univ. of Calgary.*

4:00 B40 **212.08** Differential effect of familial hemiplegic migraine mutations on excitatory and inhibitory synaptic transmission between cortical pyramidal cells and somatostatin-expressing interneurons. N. PILATI*; A. FORLI; M. SESSOLO; D. PIETROBON. *Univ. of Padova, CNR Inst. of Neurosci.*

1:00 B41 **212.09** A non-canonical role for Cav1.4 Ca^{2+} channels in photoreceptor synaptogenesis. V. KEROV*; J. LAIRD; B. WILLIAMS; F. HAESELEER; S. BAKER; A. LEE. *Univ. of Iowa, Univ. of Washington.*

2:00 B42 **212.10** The Ca^{2+} channel:mu opioid receptor signaling pathway in rat sensory neurons is altered following chronic femoral artery occlusion. M. FARRAG; J. KIM; B. HASSAN; M. P. KAUFMAN; K. SEDEEK; V. RUIZ-VELASCO*. *Penn State Col. of Med., Penn State Col. of Med.*

3:00 B43 **212.11** Voltage-dependent inhibition of Ca^{2+} currents mediated by substance P-stimulated neurokinin-1 receptors in rat celiac-superior mesenteric ganglion neurons. S. SUGINO*; M. FARRAG; V. RUIZ-VELASCO. *Penn State Univ.*

4:00 B44 **212.12** Human Cav1.3 (CACNA1D) calcium channel mutations associated with hyperaldosteronism or autism risk. A. PINGGERA*; A. LIEB; S. MONTELEONE; M. J. BROWN; K. R. LIEDL; P. TULUC; J. STRIESSNIG. *Univ. of Innsbruck, Univ. of Innsbruck, Univ. of Cambridge.*

1:00 B45 **212.13** Dual modulation of R-type CaV2.3 currents by M1 muscarinic receptor. J. JEONG; B. SUH*. *Daegu Gyeongbuk Inst. of Sci. and Technol.*

2:00 B46 **212.14** Suppression of peripheral sympathetic outflow underlies agmatine-mediated hypotension. J. JOENG; S. CHUNG*. *Dept. of Physiology, Yonsei Univ. Col. of Med.*

3:00 B47 **212.15** Fragile x mental retardation protein regulates cav2.3 mRNA. E. E. GRAY*; Y. LIU; I. TRANG; J. LEE; D. A. HOFFMAN. *NIH.*

4:00 B48 **212.16** Altered synaptic plasticity and spatial learning in knock-in mice with a mutation that prevents regulation of $Ca_V2.1$ channels by calmodulin and neuronal calcium sensor proteins. E. NANOU*; J. M. SULLIVAN; T. SCHEUER; W. A. CATTERALL. *Univ. of Washington, Univ. of Washington.*

1:00 B49 **212.17** Densin-180 regulates cell-surface density of voltage gated Cav1.2 Ca^{2+} channels. S. WANG*; R. STANIKA; G. OBERMAIR; M. KENNEDY; R. COLBRAN; A. LEE. *Univ. of Iowa, Med. Univ. Innsbruck, Med. Univ. Innsbruck, Caltech, Vanderbilt Univ., Univ. of Iowa.*

2:00 B50 **212.18** Enhanced function of native T-type Calcium Channels in DBA2J mice undergoing alcohol withdrawal. H. SHAN*; M. RIEGLE; M. MASICAMPO; D. MOLINA; D. W. GODWIN. *Wake Forest Univ. Sch. Med.*

3:00 B51 **212.19** Control and plasticity of the presynaptic action potential waveform at small CNS nerve terminals. M. B. HOPPA*; G. GOUZER; M. ARMBRUSTER; T. A. RYAN. *Dartmouth Col., Weill Cornell Med. Col., Tufts Univ.*

4:00 B52 **212.20** Role of voltage-gated calcium channels in spontaneous recurrent cortical activity. C. CAPUANI; A. TOTTENE; D. PIETROBON*. *Univ. Padova, CNR Inst. of Neurosci.*

1:00 B53 **212.21** $Ca_V1.3$ C-terminal interaction with PDZ-domain scaffold proteins regulates channel membrane expression and dendritic spine morphology in hippocampal neurons. R. I. STANIKA*; M. CAMPIGLIO; A. LEE; J. STRIESSNIG; B. E. FLUCHER; G. J. OBERMAIR. *Med. Univ. Innsbruck, Univ. of Iowa, Ctr. for Mol. Biosciences, Univ. of Innsbruck.*

2:00 B54 **212.22** ▲ Investigating the role of various types of Ca^{2+} channels on dopamine neuron firing patterns and their variability. V. A. J. DE VRIND; F. PHILIPPART; G. DRION; J. J. MOREAU*; D. ENGEL; V. SEUTIN. *Univ. Liege, Univ. of Utrecht.*

3:00 B55 **212.23** Differential mechanisms in trafficking of N-type voltage-gated calcium ion channel (Cav2.2) alternative splice variants. N. MACABUAG*; J. S. CASSIDY; W. PRATT; A. C. DOLPHIN. *Univ. Col. London.*

4:00 B56 **212.24** Suppression of N-type Ca^{2+} current by protease-activated receptor 2 activation in rat coeliac ganglia neurons. Y. KIM*; J. JOENG; S. CHUNG. *Yonsei Univ. Col. of Med.*

1:00 B57 **212.25** LVA Calcium channels regulate excitability of cultured hypothalamic POMC+ neurons and indirectly affect sensitivity to leptin. P. P. PERISSINOTTI; Y. HE; E. A. ETHINGTON; M. D. KOOB; E. S. PIEDRAS-RENTERIA*. *Loyola Univ. Chicago, Univ. of Minnesota, Loyola Univ. Chicago.*

2:00 B58 **212.26** Single channel and whole cell analysis of an exonic mutation in human CACNA1B linked to Myoclonus Dystonia syndrome. A. S. ANDRADE*; J. GROEN; K. RITZ; M. HAAGMANS; T. BRADLEY; H. JALALZADEH; P. NUERNBERG; F. BAAS; D. VERBEEK; M. AJ TIJSSEN; S. DENOME; D. LIPSCOMBE. *Brown Univ., Dept. of Neurol., Univ. Med. Ctr. Groningen.*

3:00 B59 **212.27** Functional analyses of human CaV3.3 calcium channel variants corresponding to rare disruptive mutations in CACNA1I in schizophrenia. J. Q. PAN*; A. ANDRADE; A. ALLEN; J. HOPE; D. LIPSCOMBE. *Broad Inst., Brown Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 B60 **212.28** Modulation of CaV3.2 T-type calcium channels by GM1. G. M. KEELING; S. S. SHANKARAPPA; C. WEISSMANN; P. P. PERISSINOTTI; L. L. DONCARLOS*; L. CRIBBS; E. B. STUBBS, Jr.; E. S. PIEDRAS-RENTERÍA. *Loyola Univ. Chicago, Amrita Ctr. for Nanosciences and Mol. Med., Loyola Univ. Chicago, Edward Hines Jr. VA Hosp.*

1:00 C1 **212.29** Differential contribution of S4 voltage sensors to the low-voltage activation of CaV3.3 channel. A. L. SANCHEZ-SANDOVAL; Z. HERRERA-CARRILLO; C. E. DIAZ-VELASQUEZ; J. F. HIGUELDO-GARCIA; H. M. RIVERA; J. GOMORA*. *Inst. de Fisiología Celular, UNAM, Facultad de Medicina, Univ. Autónoma del Estado de Morelos, Inst. Fisiología Celular-UNAM.*

POSTER

213. Postsynaptic Structure II

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C2 **213.01** Differential distribution of Shank and GKAP at postsynaptic density. J. TAO-CHENG*; Y. YANG; T. S. REESE; A. DOSEMECI. *NIH.*

2:00 C3 **213.02** Palmitoylation-dependent CDKL5-PSD95 interaction regulates synaptic targeting and function of CDKL5. Z. XIONG*. *Inst. Neurosci.*

3:00 C4 **213.03** Neuronal pentraxins coordinate excitatory synapse maturation of parvalbumin expressing interneurons. K. A. PELKEY*; E. BARKSDALE; M. T. CRAIG; X. YUAN; M. SUKUMARAN; G. A. VARGISH; P. F. WORLEY; C. J. MCBAIN. *NIH, NIH, JHU.*

4:00 C5 **213.04** Activity-dependent ubiquitination of GluA1 and GluA2 regulates AMPA receptor intracellular trafficking and degradation. V. ANGGONO*; J. WIDAGDO; Y. CHAI; M. RIDDER; P. SAH; R. L. HUGANIR. *The Univ. of Queensland, The Univ. of Queensland, The Johns Hopkins Univ. Sch. of Med.*

1:00 C6 **213.05** The de-ubiquitinating enzyme, USP8, is regulated distinctly by NMDA receptor signaling. M. GOO*; S. SCUDDER; A. MOLTENI; G. PATRICK. *UCSD.*

2:00 C7 **213.06** The rho-family gtpase cdc-42 mediates trafficking of α7 nachrs. A. J. KALLARACKAL*; M. JENSEN; D. M. MADSEN; A. V. MARICQ. *Univ. of Utah.*

3:00 C8 **213.07** CKAMP44 and TARP γ-8 modulate AMPA receptor-mediated currents in dentate gyrus granule cells. E. JACOBI*; P. FARROW; K. KHODOSEVICH; H. MONYER; J. V. ENGELHARDT. *DZNE & DKFZ, Univ. Hosp. and DKFZ Heidelberg.*

4:00 C9 **213.08** Arc regulates AMPA receptor-mediated synaptic transmission via direct interaction with the endocytic machinery. S. A. CORREA*; J. MULLER; M. J. WALL; S. C. WAUTERS; Y. JANUARIO; L. P. DE ALMEIDA; L. L. DASILVA. *Univ. Warwick, Univ. of Sao Paulo.*

1:00 C10 **213.09** Cognitive flexibility and LTD are impaired following β-catenin stabilization *in vivo.* F. MILLS*; T. BARTLETT; L. DISSING-OLESSEN; M. WISNIEWSKA; J. KUZNICKI; B. MACVICAR; Y. WANG; S. BAMJI. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia, Intl. Inst. of Mol. and Cell Biol.*

2:00 C11 **213.10** Aggressive experience increases PSD-95 in the nucleus accumbens of female hamsters via the Fragile X Mental Retardation Protein Signaling Pathway. L. E. BEEN*; K. M. MOORE; B. C. KENNEDY; R. L. MEISEL. *Univ. of Minnesota.*

3:00 C12 **213.11** ● Triad3A regulates synaptic strength by ubiquitination of Arc. A. M. MABB*; H. S. JE; M. J. WALL; C. G. ROBINSON; R. S. LARSEN; Y. QIANG; S. A. L. CORREA; M. D. EHLERS. *Univ. of North Carolina, Duke NUS Grad. Med. Sch., Univ. of Warwick, Howard Hughes Med. Inst., Univ. of North Carolina, Chapel Hill, Pfizer Worldwide Res. and Develop.*

4:00 C13 **213.12** Systematic analysis of purification process of postsynaptic densities (PSDs) and postsynaptic membrane rafts (PSRs) by solubilization of synaptic plasma membrane with different types of detergents. T. SUZUKI*; L. ZHAO; G. WEIHENG; H. SAKAGAMI. *Shinshu Univ. Grad. Sch. Med., Kitasato Univ. Sch. Med.*

1:00 C14 **213.13** Confined diffusion of AMPA receptors in the postsynaptic density. Y. SONG; T. LI; T. A. BLANPIED; S. RAGHAVACHARI*. *Duke Univ., Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med., Duke Univ. Med. Ctr.*

2:00 C15 **213.14** Tomosyn participates in synaptic plasticity and is subject to activity-dependent proteasomal regulation. J. J. SALDATE*; V. A. CAZARES; A. J. MANLY; E. L. STUENKEL. *Univ. of Michigan.*

3:00 C16 **213.15** Synaptic protein distribution organized by a PSD nanocolumn. A. TANG*; H. D. MACGILLAVRY; T. A. BLANPIED. *Univ. of Maryland Sch. of Med., Utrecht Univ.*

4:00 C17 **213.16** Epigenetic editing of the PSD95 gene promoter impacts neuronal architecture. F. J. BUSTOS*; L. VARELA-NALLAR; R. AGUILAR; B. HENRIQUEZ; F. FALAHI; M. G. ROTS; M. MONTECINO; B. VAN ZUNDERT. *MIT, FONDAP CGR, Univ. Andres Bello, Univ. of Groningen.*

1:00 C18 **213.17** Developmental regulation of Kalrn promoter usage alters protein localization, lipid binding and intracellular trafficking at the PSD. M. B. MILLER*; K. S. VISHWANATHA; R. E. MAINS; B. A. EIPPER. *Univ. of Connecticut Hlth. Ctr.*

2:00 C19 **213.18** Immunoisolation and characterization of the PSD-95 interactome from postmortem human tissue with LC MS/MS. A. FUNK*; S. O'DONOVAN; J. MEADOR-WOODRUFF; R. MCCULLUMSMITH. *Univ. of Cincinnati, UAB.*

3:00 C20 **213.19** Activity-mediated synaptic trafficking of the palmitoyl-acyl transferase DHHC5. S. BRIGIDI*; B. SANTYR; J. SHIMELL; S. X. BAMJI. *Univ. of British Columbia.*

4:00 C21 **213.20** Dynamic developmental changes and gender differences in the abundance of postsynaptic NMDA signaling proteins in the mouse frontal cortex. D. SINCLAIR*; M. MCMULLEN; J. CESARE; G. C. CARLSON; C. HAHN; K. BORGMANN-WINTER. *Neuropsychiatric Signaling Program, Univ. of Pennsylvania, Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

1:00 C22 **213.21** AC5-PKA signaling pathways are required for a stress-induced AMPA receptor switch in cerebellar stellate cells. Q. YANG*; S. LIU; Y. ISHIKAWA. *Louisiana State Univisity Hlth. Sicence Ctr., New Jersey Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 C23 **213.22** NMDA receptor-mediated signaling regulates NeuroD2 expression in developing cortex to control neuronal excitability and synaptic E/I balance. F. CHEN*; J. T. MORAN; K. ATES; Y. ZHANG; P. DAS; F. JONES; B. J. HALL. *Tulane Univ., Tulane Univ.*

3:00 C24 **213.23** Role of ER calcium release in the mechanism of mGluR-LTD. J. PICK*; L. KHATRI; E. ZIFF. *New York Univ. Med. Ctr.*

4:00 C25 **213.24** Subunit-specific regulation of NMDA receptor trafficking by SAP102 splice variants. B. CHEN*; Z. WEI. *Georgia Regents Univ.*

1:00 C26 **213.25** Postsynaptic mGluR5 promotes evoked glutamatergic synaptic transmission in neocortical Layer 2/3 Pyramidal Neurons. K. W. LOERWALD; A. B. PATEL; K. M. HUBER; J. R. GIBSON*. *UT Southwestern.*

POSTER

214. LTP: Pre- and Postsynaptic Mechanisms I

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C27 **214.01** The putative cannabinoid receptor GPR55: Expression, modulation of hippocampal plasticity and behavior. K. M. HURST*; C. BADGLEY; S. BELL; B. PRINCE; J. G. EDWARDS. *BYU.*

2:00 C28 **214.02** Senescence-related impairment in short and long-term potentiation at the Mossy Fiber-CA3 synapse of the hippocampus. A. VILLANUEVA*; E. J. GALVAN. *CINVESTAV SUR.*

3:00 C29 **214.03** Cellular and molecular correlates for neurotrophic and neurotoxic long-term potentiation in networked neurons derived from stem cell populations. A. B. BRADFORD*; P. H. BESKE; M. E. LYMAN; K. S. HUBBARD; I. M. GUT; P. M. MCNUTT. *MRICD, BNBI.*

4:00 C30 **214.04** Electric fields boost long term potentiation *in vitro*. G. KRONBERG*; M. BRIDI; T. ABEL; L. PARRA. *The City Col. of New York, Univ. of Pennsylvania.*

1:00 C31 **214.05** Hippocampal overexpression of tau affects synaptic transmission, plasticity, and network function. F. JOW*; M. LI; S. BROWNE; T. BUSSIERE; M. WITTMANN. *Biogen Idec.*

2:00 C32 **214.06** Evaluation of presynaptic actions using two different fluorescent probes for neurotransmitter release. T. HIKIMA*; G. ARBUTHNOT. *Okinawa Inst. of Sci. and Technol. Grad. Univ.*

3:00 C33 **214.07** Long-term potentiation of glycinergic synapses triggered by interleukin-1β. A. M. CHIRILA*; T. E. BROWN; R. J. STEVENSON; R. A. BISHOP; J. A. KAUER. *Brown Univ., Univ. of Wyoming, Brown Univ.*

4:00 C34 **214.08** Synaptic cooperativity and postsynaptic polarization jointly determine cortical plasticity during DC stimulation. A. RAHMAN*; M. BIKSON. *The City Col. of The City Univ. of New York.*

1:00 C35 **214.09** Hippocampo-prefrontal synaptic plasticity and neuronal firing in the mediodorsal thalamus. L. S. BUENO*, JR; R. N. RUGGIERO; J. P. LEITE. *Univ. of Sao Paulo.*

2:00 C36 **214.10** Layer-specific developmental profile of visual cortex function in the awake mouse. J. L. HOY*; C. M. NIELL. *Univ. Oregon.*

3:00 C37 **214.11** PSD-95 regulates experience-dependent maturation of excitatory synapses in the visual cortex. X. HUANG; Y. DONG*; S. LÖWEL; O. SCHLÜTER. *European Neurosci. Inst., Univ. of Pittsburgh, Univ. of Göttingen.*

4:00 C38 **214.12** Keratan sulfate is involved in ocular dominace plasticity in visual cortex. T. NATORI*; K. NAGAI; K. KADOMATSU; Y. KOMATSU. *Univ. Yamanashigakuin, Dept. of Epigenetic medicine, Univ. of Yamanashi., Dept. of Biochemistry, Nagoya Univ. Grad. Sch. of Medicine., Dept. of Neuroscience, Res. Inst. of Envrn. Medicine, Nagoya University.*

1:00 C39 **214.13** The involvement of Fragile-X related protein-1 (FXR1P) in regulating GluA2 mRNA translation, synaptic plasticity and learning and memory. E. NURO*; D. COOK; E. JONES; H. ALTIMIMI; W. FARMER; E. HANNA; A. BARBON; D. NELSON; J. ROCHFORD; D. STELLWAGEN; J. BÉÏQUE; K. MURAI. *McGill Univ., Dept. of Mol. and Translational Medicine, Natl. Inst. of Neurosci., Dept. of Mol. and Human Genet., Dept. of Psychiatry, Douglas Mental Hlth. Univ. Inst., Univ. of Ottawa.*

2:00 C40 **214.14** Cortical synaptic plasticity requires the production of reactive oxygen species. R. DE PASQUALE*; T. F. BECKHAUSER; M. S HERNANDES; L. R. G BRITTO. *Univ. of São Paulo.*

POSTER

215. Oscillations: Mechanisms

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C41 **215.01** Robust inhibition and gamma oscillations in a cortical area that lacks parvalbumin-expressing inhibitory interneurons. A. U. SUGDEN*; S. L. PATRICK; R. D. BURWELL; B. W. CONNORS. *Brown Univ., Brown Univ., Brown Univ.*

2:00 C42 **215.02** Functional mapping of developing neocortical networks. J. B. ACKMAN*; H. ZENG; M. C. CRAIR. *Yale Univ., Allen Inst. for Brain Sci.*

3:00 C43 **215.03** Cholinergic modulation of gamma oscillations depends on a specific receptor subclass. A. S. BRYANT*; C. GODDARD; J. R. HUGUENARD; E. I. KNUDSEN. *Stanford Univ.*

4:00 C44 **215.04** Optogenetic activation of glutamatergic medial septum neurons drive activity across the hippocampal network. J. ROBINSON; F. MANSEAU; L. K. SRIVASTAVA*; S. WILLIAMS. *Douglas Mental Hlth. Univ. Inst., Douglas Hosp. Res. Ctr.*

1:00 C45 **215.05** Current versus voltage clamp measurements of resonance in neuronal systems: lessons from the response of biophysical models to oscillatory inputs. F. NADIM*; H. G. ROTSTEIN. *Rutgers Univ/Njit, New Jersey Inst. of Technol.*

2:00 C46 **215.06** The role of a persistent inward current in shaping membrane resonance properties of different neuron types in an oscillatory network. D. M. FOX*; H. TSENG; H. G. ROTSTEIN; F. NADIM. *NJIT & Rutgers Univ., Rutgers Univ., NJIT, NJIT & Rutgers Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 C47 **215.07** Dopaminergic modulation of hippocampal sharp wave-ripple *in vitro.* T. MIYAWAKI*; H. NORIMOTO; T. ISHIKAWA; Y. WATANABE; N. UEMURA; N. MATSUKI; Y. IKEGAYA. *The Univ. of Tokyo.*

4:00 C48 **215.08** Somatostatin-positive inhibitory interneurons mediate inter-dentate gyrus inhibition. T. YEN*; C. LIEN. *Inst. of Neurosci., Natl. Yang-Ming Univ.*

1:00 C49 **215.09** A synaptic homogeneity principle for parvalbumin-expressing interneuron synapses in the hippocampal dentate gyrus. C. CHEN*; C. LIEN. *Inst. of Neurosci., Natl. Yang-Ming Univ.*

2:00 C50 **215.10** Afferent-specific recruitment of interneurons in the dorsal hippocampal dentate gyrus. T. HSU*; M. TAI; C. LIEN. *Inst. of Neuroscience, Natl. Yang-Ming Univ., Inst. of Biomed. Sciences, Natl. Sun Yat-Sen Univ.*

3:00 C51 **215.11** Inhibitory control of dynamic range of hippocampal dentate granule cell population. C. LEE*; C. LIEN. *Inst. of Neuroscience, Natl. Yang-Ming Univ.*

4:00 C52 **215.12** Routing information in networks at the edge of synchrony. A. PALMIGIANO*; T. GEISEL; F. WOLF; D. BATTAGLIA. *Max Planck Inst. For Dynamics and Self-Organiz, Bernstein Ctr. for Computat. Neurosci., Max Planck Inst. For Dynamics and Self Organization, Inst. de Neurosciences des Systèmes.*

1:00 C53 **215.13** Contrasting the role of Ih and ICaT currents in post-inhibitory rebound mechanisms of reciprocal-inhibitory networks. J. DETHIER; G. DRION; R. SEPULCHRE*. *Univ. of Liege, Univ. of Cambridge.*

2:00 C54 **215.14** Distinct modulation of low-frequency and high-frequency γ-activity in the barrel cortex by GABAA receptors containing α1- and α2-subunits. J. I. HOFMANN*; C. SCHWARZ; U. RUDOLPH; B. ANTKOWIAK. *Ctr. For Integrative Neurosci., Hertie Inst. for Clin. Brain Research, Eberhard-Karls-University, Lab. of Genet. Neuropharmacology, McLean Hosp. and Dept. of Psychiatry, Harvard Med. Sch., Exptl. Anesthesiol. Section, Dept. of Anesthesiol. and Intensive Care, Eberhard-Karls-University.*

3:00 C55 **215.15** The role of Na^+/K^+ ATPase activity in neuronal oscillations and synchrony. O. GONZALEZ*; G. FILATOV; M. BAZHENOV. *Univ. of California, Riverside.*

4:00 C56 **215.16** Mechanisms of fast ripple generation in a computational model. C. G. FINK*; S. GLISKE; T. ASSAF; W. STACEY. *Ohio Wesleyan Univ., Univ. of Michigan, Univ. of Michigan.*

1:00 C57 **215.17** Circadian oscillations of $[Ca^{2+}]i$ and extracellular glutamate in the suprachiasmatic nucleus reveal a role for neuronal-glial interaction in circadian time-keeping. M. BRANCACCIO*; M. H. HASTINGS. *Med. Res. Council-Lab. of Mol. Biol.*

2:00 C58 **215.18** Contributions of electrical synapses and interneuron subtypes to correlated inhibition during cortical network activity. G. NESKE*; B. W. CONNORS. *Brown Univ.*

3:00 C59 **215.19** Optogenetic investigation of septal GABAergic modulation of hippocampal theta rhythm. R. BOYCE; S. GLASGOW; S. WILLIAMS*; A. ADAMANTIDIS. *McGill Univ., McGill Univ., Bern Univ. Hosp.*

4:00 C60 **215.20** The mechanisms underlying pyramidal cell participation in hippocampal sharp waves. L. A. ATHERTON*; K. TSANEVA-ATANASOVA; J. R. MELLOR. *Univ. of Bristol, Univ. of Exeter.*

1:00 C61 **215.21** Glutamatergic and GABAergic synaptic interplay underlies the theta-gamma network oscillations in the prefrontal cortex of neonatal rats. S. H. BITZENHOFER*; K. SIEBEN; K. SIEBERT; I. L. HANGANU-OPATZ. *Univ. Med. Ctr. Hamburg-Eppendorf.*

2:00 C62 **215.22** Structural irregularity in local neural circuit induces global modulations of neural synchronization. P. SAILAMUL*; J. JANG; S. PAIK. *KAIST.*

POSTER

216. Neural Oscillators and Activity-Dependent Plasticity of Intrinsic Membrane Properties

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C63 **216.01** Homeostatic conductance regulation in multicompartment conductance-based model neurons. A. H. WILLIAMS*; T. O'LEARY; E. MARDER. *Brandeis Univ.*

2:00 C64 **216.02** Modulation of frequency preference by changes in input resistance. J. A. VERA*; U. PEREIRA; B. REYNAERT; J. BACIGALUPO; M. SANHUEZA. *Univ. De Chile, The Univ. of Chicago.*

3:00 C65 **216.03** ● Membrane potential-dependent synaptic integration in entorhinal stellate neurons. J. J. MARTINEZ*; M. ECONOMO; J. A. WHITE. *Univ. of Utah.*

4:00 C66 **216.04** Intrinsic plasticity accompanies synaptic LTD in Purkinje cells. Z. YANG*; F. SANTAMARIA. *UTSA.*

1:00 C67 **216.05** Long lasting depression of intrinsic excitability in fast spiking interneurons decreases inhibition in putative granule cells of the dentate gyrus. D. DASGUPTA*; S. K. SIKDAR. *Indian Inst. of Sci.*

2:00 C68 **216.06** Temperature robust neuronal function from activity-dependent ion channel regulation. T. O'LEARY*; E. MARDER. *Volen Ctr. For Complex Systems, Brandeis Univ.*

3:00 C69 **216.07** Calcium-sensing receptor signaling mediates increases in neocortical neuron excitability following decreased external calcium. B. J. KNIGHT; C. L. WILLIAMS; N. P. VYLETA; S. M. SMITH*. *Portland VA Med. Ctr., Oregon Hlth. & Sci. Univ., Inst. of Sci. and Technol.*

4:00 C70 **216.08** Arx expression is necessary for normal maturation of intrinsic and synaptic properties of parvalbumin expressing inhibitory interneurons. D. J. JOSEPH*; A. J. MCCOY; E. D. MARSH. *Children's Hosp. of Philadelphia, Perelman Sch. of Med. at the Univ. of Pennsylvania.*

1:00 C71 **216.09** Cholinergic receptor induced long-lasting plasticity of hippocampal axonal KV7 channels. K. MARTINELLO; D. A. BROWN; M. M. SHAH*. *Univ. Col. London.*

2:00 C72 **216.10** Low-threshold calcium channel critical for activity oscillations of dopamine neurons in mouse arcuate nucleus. X. ZHANG*; A. N. VAN DEN POL. *Yale Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 D1 **216.11** Cellular mechanisms of firing patterns in synaptically isolated, midbrain dopaminergic neurons. U. COLLIENNE; S. POPOVYCH; S. HESS; M. E. HESS; J. C. BRÜNING; S. DAUN-GRUHN; P. KLOPPENBURG*. *Univ. of Cologne, Excellence Cluster on Cell. Stress Responses in Aging-Associated Dis. (CECAD), Res. Group of Computat. Biol. (DFG-Heisenberg Programme), Max Planck Inst. for Neurolog. Res., Ctr. for Mol. Med. (CMMC), Univ. Hosp. of Cologne, Univ. of Cologne.*

4:00 D2 **216.12** Distinct roles of the soma and proximal dendrites in spontaneous firing activity of the midbrain dopamine neuron. J. JANG*; M. PARK. *Sungkyunkwan Univ.*

1:00 D3 **216.13** Caffeine effects on the intrinsic properties of lumbar ventral horn neurons. M. S. RIVERA OLIVER*; Y. ALVAREZ-BAGNAROL; M. DIAZ-RIOS. *Univ. of Puerto Rico-Institute of Neurobio., Univ. of Puerto Rico- Rio Piedras campus, Univ. of Puerto Rico-Medical Sci. campus, Inst. of Neurobio.*

2:00 D4 **216.14** Energy constraints on neuronal activity. Z. GREGURIC FERENCEK*; M. L. GERTZ; Z. OBAIDA; J. R. CRESSMAN. *George Mason Univ.*

3:00 D5 **216.15** Stimulation-induced ionic effects on neuronal transmission. M. L. GERTZ*; Z. GREGURIC FERENCEK; J. R. CRESSMAN. *George Mason Univ.*

4:00 D6 **216.16** Estimates of persistent inward current in human motor neurons during postural sway. R. C. A. FOLEY; J. M. KALMAR*. *Wilfrid Laurier Univ.*

1:00 D7 **216.17** The effect of focused ultrasonic stimulation on the activity of hippocampal neurons in multi-channel electrode. J. B. CHOI*; K. CHO; D. JANG. *Hanyang Univ.*

2:00 D8 **216.18** ▲ A computational model of collision detection in the optic tectum in Xenopus tadpoles. E. V. JANG; A. S. KHAKHALIN*; C. M. CIARLEGLIO; C. D. AIZENMAN. *Brown Univ., Bard Col.*

POSTER

217. Synapse Development, Maintenance, and Aging

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D9 **217.01** Characterization of pattern recognition receptor expression in cerebellar granule cells and investigating their role in synapse development and maintenance. N. W. DEKORVER*; J. ARIKKATH; S. J. BONASERA. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

2:00 D10 **217.02** Elucidating the functions of gad1 in cranial development and neurotransmission within larval zebrafish. L. JOHNSTON*; A. VANLEUVEN; R. BALL; M. O'CONNOR; T. DORE; J. LAUDERDALE. *Univ. of Georgia, NYU Abu Dhabi.*

3:00 D11 **217.03** Spines with multiple excitatory contacts are sites for axonal competition during synaptic development. W. C. RISHER*; S. PATEL; J. SINGH ALVARADO; O. Y. CALHAN; C. EROGLU. *Duke Univ., Duke Univ., Duke Univ.*

4:00 D12 **217.04** Profiling hippocampal neurons after early preconditioning with certain excitatory amino acids reveals distinct signaling pathways that promote neuronal survival. L. K. FRIEDMAN*; A. M. SLOMKO; S. HU; W. WAN. *New York Med. Col.*

1:00 D13 **217.05** Mechanism for astrocyte-mediated persistent activity. M. DE PITTÀ*; E. BEN-JACOB; H. BERRY. *Dept. of Neurobiology, Univ. of Chicago, INRIA, Tel Aviv Univ., Rice Univ.*

2:00 D14 **217.06** Schwann cell-mediated remodeling of the mouse neuromuscular synapse. Y. LEE*; I. W. SMITH; M. MIKESH; K. NAVE; M. SCHWAB; W. J. THOMPSON. *Texas A&M Univ., The Univ. of Texas, Max-Planck-Institute of Exptl. Med.*

3:00 D15 **217.07** Sonic hedgehog signaling in astrocytes regulates synaptic connectivity. A. GARCIA*; A. AHARON; Y. ZUO. *Drexel Univ., Univ. of California, Santa Cruz.*

4:00 D16 **217.08** Study of the effect of the peptide Aβ25-35 in the neurogenesis and long-term memory. E. RAMIREZ*; A. SANCHEZ; A. PATRICIO; D. LIMON. *Benemérita Univ. Autónoma De Puebla, Benemerita Univ. Autonoma de Puebla.*

1:00 D17 **217.09** Dnmt1 is required for progenitor maintenance during spinal cord development of zebrafish. S. PANAHI*; R. I. DORSKY. *Univ. of Utah.*

2:00 D18 **217.10** Mechanisms underlying endogenous adult neural stem cell behavior during aging. M. A. BONAGUIDI*; R. STADEL; D. BERG; J. PARK; E. PU; M. OGAWA; S. PARK; M. BARADARAN-SHORAKA; G. MING; H. SONG. *Johns Hopkins, Johns Hopkins.*

3:00 D19 **217.11** Parasympathetic neurons originate from nerve-associated peripheral glial precursors cells. A. FURLAN; V. DYACHUK; M. KHATIBI SHAHIDI; M. GIOVINCO; N. KAUKUA; C. KONSTANTINIDOU; V. PACHNIS; F. MEMIC; U. MARKLUND; T. MÜLLER; C. BIRCHMEIER; K. FRIED; P. ERNFORS*; I. ADAMEYKO. *Karolinska Institutet, MRC Natl. Inst. for Med. Res., The Max Delbrück Ctr. for Mol. Med.*

4:00 D20 **217.12** Measuring synaptic and perisynaptic activity at the developing, neonatal and adult mouse neuromuscular junction using electrophysiological and optical methods. D. HEREDIA*; G. HENNIG; A. SCURRY; T. GOULD. *Univ. of Nevada Reno, Sch. of Med.*

POSTER

218. Parkinson's Disease: Neuroprotective Therapies

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D21 **218.01** Neuroprotective mechanisms of the Parkinson's disease-related protein DJ-1. V. MISHRA*; S. L. ROY; F. LIU; J. ROCHET. *Purdue Univ.*

2:00 D22 **218.02** rAAV-mediated knockdown of GD3 synthase protects against MPTP-induced neurodegeneration and executive dysfunction. P. MAITI; T. S. REX; M. P. MCDONALD*. *Univ. of Tennessee Hlth. Sci. Ctr., Vanderbilt Univ., Univ. of Tennessee.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 D23 **218.03** Inhibition of PARIS(ZNF746) by CSU-1806 in model of Parkinson's disease. A. JO*; R. KHANG; H. KANG; J. SHIN; T. DAWSON; Y. LEE; B. LEE; G. JEONG; V. DAWSON; H. KANG; Y. LEE; S. KARUPPAGOUNDER; H. JIANG; S. KANG. *Sungkyunkwan Univ. Sch. of Med., Neuroregeneration and Stem Cell Programs, Inst. for Cell Engin., Dept. of Neurology, Johns Hopkins Univ. Sch. of Med., Neuroregeneration and Stem Cell Programs, Inst. for Cell Engineering, Johns Hopkins Univ. Sch. of Med., Solomon H. Snyder Dept. of Neuroscience, Johns Hopkins Univ. Sch. of Med., Adrienne Helis Malvin Med. Res. Fndn., Well Aging Res. Center, Samsung Advanced Inst. of Technol. (SAIT), Age-Related and Brain Dis. Res. Ctr. Dept. of Neuroscience, Kyung Hee Univ., Solomon H. Snyder Dept. of Neurosci. Johns Hopkins Univ. Sch. of Med., Dept. of Physiol. Johns Hopkins Univ. Sch. of Med., Dept. of Neurol. Johns Hopkins Univ. Sch. of Med., Neuroregeneration and Stem Cell Programs, Inst. for Cell Engin. Johns Hopkins Univ. Sch. of Med., Dept. of Physiology, Ajou Univ. Sch. of Med.*

4:00 D24 **218.04** Small proline-rich repeat 1a protein protects nigrostriatal axons from degeneration in the 6-hydroxydopamine lesion rat model of Parkinson's disease. N. M. KANAAN*; T. GRABINSKI; B. COMBS; A. KNYENSBERG; A. COLE-STRAUSS; Z. MATTINGLY; F. P. MANFREDSSON; T. J. COLLIER; J. W. LIPTON. *Michigan State Univ.*

1:00 D25 **218.05** ● Pyrimidine 2,4,6-triones are a new class of voltage-gated l-type Ca^{2+} channel activators. N. J. ORTNER*; G. BOCK; D. H. F. VANDAEL; R. MAUERSBERGER; H. J. DRAHEIM; R. GUST; E. CARBONE; P. TULUC; J. STRIESSNIG. *Univ. of Innsbruck, Univ. of Torino, Univ. of Innsbruck, Boehringer Ingelheim Pharma GmbH & Co KG.*

2:00 D26 **218.06** Optogenetic rescue of Parkinson's disease symptoms. D. LEE*; S. J. VARGA; C. QI. *Ohio Univ.*

3:00 D27 **218.07** The neuroprotective potential of intranasal dnsp-11 on nigral dopamine neurons against intrastriatal 6-hydroxydopamine neurotoxicity. C. M. FOX*; A. GHOWERI. *Moravian Col., Moravian Col.*

4:00 D28 **218.08** Nrf2 signaling contributes to the neuroprotection of urate to dopaminergic cells. L. HU*. *Soochow Univ.*

1:00 D29 **218.09** Sesamol has capacity to reverse the effect of rotenone-induced Parkinson's disease. P. KUMAR*; S. ANGELINE; R. K. AMBASTA. *Delhi Technological Univ., VIT Univ., Delhi Technological Univ.*

2:00 D30 **218.10** Neuroprotective activities of VPAC receptor agonists in 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) intoxicated mice. K. OLSON*; L. KOSLOSKI-BILEK; R. MOSLEY; J. GLEDHILL; S. SHANDLER; H. GENDELMAN. *UNMC, Longevity Biotech, Inc.*

3:00 D31 **218.11** Effects of intra-cerebral near infra-red illumination on mptp monkeys. F. DARLOT; C. MORO*; N. TORRES-MARTINEZ; C. CHABROL; F. REINHART; D. AGAY; T. COSTECALDE; J. MITROFANIS; A. BENABID. *Cea-Grenoble, Leti-Clinatec, Univ. of Sydney.*

4:00 D32 **218.12** Attenuation of alpha-synuclein-induced neuroinflammation and microgliosis via rho-kinase inhibition: A possible mechanism behind fasudil-mediated neuroprotection. M. F. DUFFY*; J. P. MACKEIGAN; F. P. MANFREDSSON; S. G. LAMPE; N. KUHN; C. J. KEMP; C. E. SORTWELL. *Michigan State Univ., Van Andel Inst.*

1:00 D33 **218.13** Depletion of proinflammatory monocytes/macrophages is neuroprotective in the myenteric plexus but not in the basal ganglia in a mptp mouse model of Parkinson's disease. M. COTE*; C. F. LAVALLÉE; A. POIRIER; B. AUBÉ; S. LACROIX; D. SOULET. *CHUQ Res. Ctr. (CHUL), Univ. Laval, Univ. Laval.*

2:00 D34 **218.14** Targeting dephosphorylation of eukaryotic initiation factor-2a to treat Parkinson's disease. X. SUN*; P. AIME; J. CRARY; L. GREENE; O. LEVY. *Columbia Universtiy, Columbia Univ.*

3:00 D35 **218.15** Developing combination therapies of lithium/L-Dopa and novel AurimMed Compounds for Parkinson's disease. C. A. LAZZARA; A. PESYAN; J. K. ANDERSEN; Y. KIM*. *Delaware State Univ., AurimMed Pharma, Inc., Buck Inst. for research on Aging.*

4:00 D36 **218.16** The beneficial effects of spargel in a *Drosophila* model of Parkinson's disease. K. WU*; Z. QIAN; Y. KE. *The Chinese Univ. of Hong Kong, Lab. of Neuropharmacology, Fudan Univ. Sch. of Pharm.*

1:00 D37 **218.17** Anti-high mobility group box 1 antibody has neuroprotective effects against Parkinson's disease model of rats. T. SASAKI*; T. AGARI; H. TAKEUCHI; A. TOYOSHIMA; S. SASADA; A. SHINKO; A. KONDO; M. KAMEDA; T. YASUHARA; K. LIU; M. NISHIBORI; I. DATE. *Dept. of Neurolog. Surgery, Okayama Univ. Grad. Sc, Dept. of Neurolog. Surgery, Okayama Univ. Grad. Sch. of Medicine, Dent. and Pharmaceut. Sci., Dept. of Pharmacology, Okayama Univ. Grad. Sch. of Medicine, Dent. and Pharmaceut. Sci.*

2:00 D38 **218.18** 7-OH-DPAT induces neuroprotection and attenuate motor deficit in LRRK2 R1441G mice. J. KIM*; J. KIM; S. KANG; J. JANG; H. SEO. *Hanyang Univ.*

3:00 D39 **218.19** ● mGluR3 PAM: Novel neuroprotective therapeutic strategy for Parkinson disease - *in vitro* neuroprotection and neurotrophic factor production. S. SCHANN*; S. MAYER; C. FRANCHET; M. FRAULI; S. SCHEFFLER; T. PILLOT; B. MANTEAU; P. NEUVILLE. *Domain Therapeut., SynAging SAS.*

4:00 D40 **218.20** ● Neuroprotective effect of plasmalogen precursor analogs in a mouse model of Parkinson's disease. E. MIVILLE-GODBOUT*; M. MORISSETTE; M. BOURQUE; S. AL SWEIDI; T. SMITH; A. MOCHIZUKI; V. SENANAYAKE; D. GOODENOWE; T. DI PAOLO. *Ctr. De Recherche Du CHU De Québec, CHUL, Univ. Laval, Phenomenome Discoveries Inc.*

1:00 D41 **218.21** Prokineticin-2 gene therapy strategy shows anti-inflammatory and anti-apoptotic effects in preclinical cell culture and animal models of Parkinson's disease. M. NEAL; D. LUO; D. HARISCHANDRA; R. GORDON; H. JIN; V. ANANTHARAM; A. G. KANTHASAMY*; A. KANTHASAMY. *Iowa State Univ.*

2:00 D42 **218.22** Neuroprotective and neurotrophic effects of Apigenin in MPTP induced Parkinson's disease in mice. S. P. PATIL*, SR; P. JAIN; S. SATHAYE. *Inst. of Chem. Technol.*

3:00 D43 **218.23** Neuroprotective effect of diphenyl diselenide on a rat model of Parkinson's disease induced by 6-hydroxydopamine. A. DE SOUZA*; S. PINTON; T. B. SAMPAIO; J. T. DA ROCHA; B. M. GAI; R. D. S. PREDIGER; C. W. NOGUEIRA. *Univ. Federal De Santa Catarina, Univ. Federal do Pampa, Univ. Federal de Santa Maria, Univ. Federal De Santa Catarina.*

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4:00 D44 **218.24** Nepalese and Native American traditional medicine: What can we learn to treat Parkinson's disease? A. DE RUS JACQUET; R. SUBEDI; S. K. GHIMIRE; J. ROCHET*. *Purdue Univ., Tribhuvan Univ.*

POSTER

220. Epilepsy: Circuits

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D45 **220.01** Functional analysis of the p.A294V hotspot mutation in KCNQ2 reveals that the consequence on IM current is not predictive of disease severity in early onset encephalopathies. A. ABIDI; J. DEVAUX; F. MOLINARI; G. ALCARAZ; J. SUTERA-SARDO; H. BECQ; C. LACOSTE; G. LESCA; C. ALTUZARRA; A. AFENJAR; D. DOUMMAR; B. ISIDOR; S. NGUYEN; E. COLIN; D. HAYE; C. BADENS; L. VILLARD*; M. MILH; L. ANIKSZTEJN. *Inserm U910, Aix Marseille Univ., Aix Marseille Université, CNRS, CRN2M-UMR7286, Aix Marseille Université, Inserm, INMED UMR_S901, APHM, Hôpital de la Timone, service de neurologie pédiatrique, CHU Lyon, Service de génétique et neuropédiatrie, CHU Besançon, Service de neurologie pédiatrique, APHP, Service de neuropédiatrie, Hôpital Armand Trousseau, CHU de Nante, Service de génétique et neuropédiatrie, CHU d'Angers, Service de génétique et neuropédiatrie, CHU Tours, Service de génétique et de neurologie pédiatrique.*

2:00 D46 **220.02** Reorganization of the CA1 hippocampal network in the chronic kainate model of epilepsy. I. KHOURY; Y. SCHILLER*. *Technion Med. Sch., Rambam Med. Ctr.*

3:00 D47 **220.03** ● High-throughput assay of seizurogenic activity using multi-well microelectrode array technology. D. MILLARD; A. NICOLINI; S. CHVATAL; M. BROCK; K. COOK; J. ROSS*. *Axion Biosystems, Axion Biosystems, Inc.*

4:00 D48 **220.04** Circuit changes underlying network synchronization during post-traumatic epileptogenesis. K. P. LILLIS*; Z. WANG; G. Q. ZHAO; B. J. BACSKAI; K. J. STALEY. *Harvard Med. Sch., Stanford Univ.*

1:00 D49 **220.05** Activation of parvalbumin interneurons at the epileptogenic focus facilitates focal seizures generation in a mouse model of temporal lobe epilepsy. I. MARCON; M. SESSOLO; S. BOVETTI; G. LOSI; L. MARIOTTI; T. FELLIN; G. CARMIGNOTO*. *Neurosci. Institute, CNR and Univ. of Padova, Inst. Italiano di Tecnologia.*

2:00 D50 **220.06** Neural field theory of generalized seizures. X. ZHAO*; P. A. ROBINSON. *Univ. of Sydney.*

3:00 D51 **220.07** Thalamic circuit modulation by ATP-sensitive potassium channels. K. A. SALVATI*; D. R. WYSKIEL; R. P. GAYKEMA; M. P. BEENHAKKER. *Univ. of Virginia.*

4:00 D52 **220.08** Exploration of functional connectivity among spiketrains of thalamic and cortical neurons in absence epilepsy. M. V. JONES*. *Univ. Wisconsin-Madison.*

1:00 D53 **220.09** How inhibition shapes interictal dynamics in awake epileptic mice. R. A. COSSART*; S. FELDT-MULDOON; V. VILLETTE; T. TRESSARD. *INSERM U901, Univ. of Pennsylvania.*

2:00 D54 **220.10** Optogenetic activation of parvalbumin interneurons synchronizes afterdischarges of seizures in a mouse model of temporal lobe epilepsy. M. SESSOLO; I. MARCON; G. LOSI; L. MARIOTTI; S. BOVETTI; N. BERARDI*; T. FELLIN; G. CARMIGNOTO. *Neurosci. Institute, CNR and Univ. of Padua, Inst. Italiano di Tecnologia, Inst. Neurosci. del CNR.*

3:00 D55 **220.11** Hyperexcitability of presubicular neurons in a rat model of Temporal Lobe Epilepsy. S. ABBASI*; S. KUMAR. *Florida State Univ.*

4:00 D56 **220.12** The effect of oral administration of thymoquinone on an experimental model of temporal lobe epilepsy in rat: Electrophysiological, behavioral and histochemichal study. S. -. DARIANI SAEED*; T. BALUCHNEJADMOJARAD; M. ROGHANI. *Tehran Univ. of Med. Sci., Egectrophysiology research center, Physiol., Iran university of medical sciences, Shahed university.*

POSTER

221. Ischemia: Cellular Mechanisms and Neuroprotection II

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D57 **221.01** Early capillary constriction impedes collateral blood flow to the acute stroke penumbra. Z. J. TAYLOR*; A. N. WATSON; A. Y. SHIH. *Med. Univ. of South Carolina.*

2:00 D58 **221.02** Cofilin: A new target for the treatment of ischemic stroke. Q. M. ALHADIDI*; Z. A. SHAH. *Univ. of Toledo.*

3:00 D59 **221.03** The effect of age on the immune cohort in the ischemic cortex of female Sprague-Dawley rats at 48 hours post-stroke. A. O'KOREEH; S. BAKE; R. C. ALANIZ; F. SOHRABJI*. *Texas A&M Syst. HSC, Texas A&M Hlth. Sci. Ctr., Texas A&M Syst. HSC.*

4:00 D60 **221.04** An experimental model of ischemic stroke in transgenic mouse: Assessment of histological and functional impairments. S. MARASINI*; S. PARK; G. KIM; T. KU; Y. LEE; H. SUH-KIM*; S. KIM. *Sch. of Medicine, Ajou Univ., Sch. of Medicine, Ajou Univ., KAIST.*

1:00 D61 **221.05** Role of autophagy in cerebral ischemia-reperfusion injury in adult rats. P. S. BHARTI*; T. K. DAS. *All India Inst. of Med. Sci.*

2:00 D62 **221.06** The beneficial effect of cooling on male and female rats with experimentally induced hypoxia ischemia. A. L. SMITH*; H. GARBUS; T. S. ROSENKRANTZ; R. H. FITCH. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut Heath Ctr.*

3:00 D63 **221.07** Time-course response of miR-34a, miR-132 and miR-146 to ischemic stroke. S. JUN*; S. N. SARKAR; C. S. TENNANT; H. HU; D. D. QUINTANA; D. N. DOLL; X. REN; T. L. BARR; J. W. SIMPKINS. *West Virginia Univ. Hlth. Sci. Ctr., Ctr. for Basic and Translational Stroke Res., West Virginia Univ. Sch. of Nursing.*

4:00 D64 **221.08** Diet-induced obesity induces angiogenesis and worsens post-ischemic recovery following permanent ischemia. J. TULSULKAR*; S. NADA; B. SLOTTERBECK; M. MCINERNEY; Z. SHAH. *Univ. of Toledo.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 D65 **221.09** Pin1-mediated Notch activation worsens brain damage and functional outcome in ischemic stroke. S. BAIK*; Y. CHOI; U. YUN; Y. JANG; J. JEONG; D. JO. *Sungkyunkwan Univ.*

2:00 D66 **221.10** ● Effects of anoxia or post mortem changes? K. SKOLD*; H. ALM; M. BORÉN; B. SCHOLZ. *Denator AB, Dept. of Med. Sciences, Cancer Pharmacol. and Computat. Med., Leibniz Res. Inst. for Envrn. Med., Dept. of Pharmaceut. Biosciences, Drug Safety and Toxicology.*

3:00 D67 **221.11** ▲ Proteomics of hypothalamus and pituitary in brain ischemia. J. RICE; L. CAO; T. YANG; R. SIMON; A. ZHOU*. *Morehouse Sch. of Med., Spelman Col.*

4:00 D68 **221.12** Splenic monocytes contribute to cerebral ischemic tolerance induced by LPS. C. BENAKIS*; L. GARCIA-BONILLA; D. BREA; J. MOORE; C. IADECOLA; J. ANRATHER. *Weill Cornell Med. Col.*

1:00 D69 **221.13** ● Diet and stroke: Expression of genes that modulate inflammation and neuronal remodeling in the adult and aged male rat cerebral cortex. E. D. GRISLEY*; T. REHNBERG; J. A. MACLEAN, II; W. J. BANZ; D. N. BUTTEIGER; J. L. CHEATWOOD. *SIU Sch. of Med., SIU Sch. of Med., Southern Illinois Univ., Dupont Nutr. and Hlth.*

2:00 D70 **221.14** Ethyl pyruvate ameliorates 3-nitropropionic acid-induced striatal toxicity through anti-neuronal cell death and anti-inflammatory mechanisms. M. JANG*; M. LEE; I. CHO. *Kyung Hee Uni., Kyung Hee Univ. BK21 plus Korean medicine science center.*

3:00 D71 **221.15** Exosomes from IFNγ-stimulated dendritic cells mitigate hypomyelination from hypoxic-ischemic injury modeled in brain slice cultures. R. P. KRAIG*; A. D. PUSIC; K. M. PUSIC. *Univ. of Chicago.*

4:00 D72 **221.16** Neurorestorative effects of flavonoids isolated from Rumex aquaticus L in an oxygen glucose deprivation model of ischemic stroke. A. RAGHAVAN*; O. ORBAN-GYAPAI; J. HOHMANN; Z. SHAH. *Univ. of Toledo, Univ. of Szeged.*

1:00 E1 **221.17** Pro-apoptotic function of Pin1-mediated Notch1 activation in cell death. Y. CHOI*; U. YUN; J. JEONG; Y. JANG. *Sungkyunkwan Univ.*

2:00 E2 **221.18** Ischemia-induced cell-type specific alterations in brain mitochondrial homeostasis. K. OWENS; J. H. LEE; S. GOURLEY; T. KRISTIAN*. *Veterans Affairs Maryland Hlth. Ctr. Syst., Univ. Maryland Sch. Med.*

3:00 E3 **221.19** The interaction between Notch-1 and HIF-1α enhances ischemic neuronal death. Y. CHOI; D. JO*; U. YUN; Y. JANG; J. JEONG. *Sungkyunkwan Univ.*

4:00 E4 **221.20** Maged1 deficiency improves ischemic cell death. J. GAO*; L. JU. *Nanjing Med. Univ.*

1:00 E5 **221.21** Neuroprotective effects of emodin against ischemia/reperfusion injury through inducing parkin expression *in vitro* and *in vivo*. J. LAI*, ESQ. *Taipei Med. Univ.*

2:00 E6 **221.22** Cerebral metabolic changes in chronic stroke, assessed by Magnetic Resonance Spectroscopy. J. K. FERRIS*; K. E. BROWN; C. S. MANG; K. P. WADDEN; M. R. BORICH; S. K. MEEHAN; L. A. BOYD. *Brain Behaviour Lab., Univ. of British Columbia, Univ. of British columbia, Emory Univ., Univ. of Michigan.*

3:00 E7 **221.23** MEK1/2 inhibition diminishes ETB receptor-mediated vasoconstriction and improves neurological function after cerebral ischemia in female rats. H. AHNSTEDT*; M. MOSTAJERAN; F. W. BLIXT; K. WARFVINGE; S. ANSAR; D. N. KRAUSE; L. EDVINSSON. *Lund University, Exptl. Vascular Res., Univ. of California, Dept. of Pharmacology, Sch. of Med.*

POSTER

222. Ischemia: Neuroprotection

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 E8 **222.01** Lentiviral-mediated administration of interleukin-4 promotes alternative activation of microglia and reduces endothelin-1-induced cerebral ischemia. S. CHOI*; A. C. SILVA. *NINDS/NIH.*

2:00 E9 **222.02** Neurovascular protection by post-ischemic injections of a lipoxin A4 receptor agonist, BML-111, in a rat model of ischemic stroke. K. E. HAWKINS*; K. M. DEMARS; J. SINGH; J. C. FRANKOWSKI; S. DORÉ; E. CANDELARIO-JALIL*. *Univ. of Florida, Univ. of Florida.*

3:00 E10 **222.03** Lectin-like oxidized low-density lipoprotein receptor-1 (LOX-1) is a novel therapeutic target in neonatal hypoxic-ischemic encephalopathy (HIE). T. AKAMATSU*; T. TANAKA; M. MIZUGUCHI; Y. GOTO; M. ITOH. *Teikyo Univ., Natl. Ctr. of Neurol. and Psychiatry (NCNP), the Univ. of Tokyo.*

4:00 E11 **222.04** Enhanced survival of melanopsin-expressing ganglion cells and the non-image-forming visual system after acute retinal ischemia. D. DORFMAN*; M. F. GONZALEZ FLEITAS; M. L. ARANDA; P. H. SANDE; R. E. ROSENSTEIN. *Sch. of Medicine, UBA, CEFYBO/CONICET.*

1:00 E12 **222.05** Hippocampal pyramidal neurons lacking LC3A and LC3B are resistant to hypoxic-ischemic brain injury in neonatal mice. J. YAMAGUCHI; T. SUNABORI; M. KOIKE; T. NANAO; M. SHIBATA; A. FURUTA*; Y. UCHIYAMA. *Juntendo Univ. Grad Sch. of Med., Juntendo Univ. Grad Sch. of Med., Niigata Univ. Sch. of Med.*

2:00 E13 **222.06** Changes in monocarboxylate transporter (MCT) expression following ischemia: An *in vitro* and *in vivo* study. K. ROSAFIO; X. CASTILLO; L. HIRT; L. PELLERIN*. *Univ. de Lausanne, CHUV, CHUV, Univ. De Lausanne.*

3:00 E14 **222.07** GPR30 mediates estrogen rapid signaling and neuroprotection. R. WANG; H. TANG; Q. ZHANG; L. YANG; Y. DONG; M. KHAN; F. YANG; D. W. BRANN*. *Georgia Regents Univ., Charlie Norwood Dept. of Veteran Affairs Med. Ctr., Neurobio. Institute, Med. Res. Ctr., Georgia Regents Univ.*

4:00 E15 **222.08** ▲ Subacute administration of zinc caused an increase of CXCL1 and CXCR2 during a cerebral hypoxia-ischemia process in rat. V. M. BLANCO ALVAREZ*; G. SOTO-RODRIGUEZ; J. A. GONZALEZ-BARRIOS; C. PIÑA-LEYVA; C. TOMAS-SANCHEZ; D. MARTINEZ-FONG; E. BRAMBILA; M. TORRES-SOTO; A. RUIZ-TAGLE; B. A. LEON-CHAVEZ. *Benemerita Univ. Autonoma De Puebla, Benemerita Univ. Autonoma de Puebla, ISSSTE, CINVESTAV, Benemerita Univ. Autonoma de Puebla, CINVESTAV-IPN, Benemerita Univ. Autonoma de Puebla.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 F1 **222.09** Pharmacological inhibition of HDAC6 alleviates brain infarction and functional deficits after experimental stroke: Potential roles of α-tubulin acetylation, FGF-21 up-regulation and excitotoxicity mitigation. Z. WANG; J. WANG; Y. LENG; J. BERGMAN; P. LEEDS; A. KOZIKOWSKI; D. CHUANG*. *Natl. Inst. Mental Health/NIH, Univ. of Illinois at Chicago.*

2:00 F2 **222.10** ▲ Chronic administration of zinc decreased nitrosative stress in cerebral cortex and heart in rat. C. T. SANCHEZ*; C. PIÑA-LEYVA; V. M. BLANCO-ALVAREZ; G. SOTO-RODRIGUEZ; J. A. GONZALEZ-BARRIOS; D. MARTINEZ-FONG; E. BRAMBILA; M. TORRES-SOTO; A. UGARTE; B. A. LEON-CHAVEZ. *Benemerita Univ. Autonoma De Puebla, CINVESTAV-IPN, Benemerita Univ. Autonoma de Puebla, ISSSTE, Benemerita Univ. Autonoma de Puebla, Benemerita Univ. Autonoma de Puebla.*

3:00 F3 **222.11** The role of vagus nerve in the recovery of post-ischemic glucose intolerance and neuroprotective effect by hypothalamic orexin-A. S. HARADA*; S. TOKUYAMA. *Kobe Gakuin Univ.*

4:00 F4 **222.12** Activating transcription factor 3 by inhibiting carboxyl-terminal modulator protein transcription alleviates ischemia-reperfusion induced brain injury. H. TSAI; C. HUANG; J. WU; W. CHEUNG; T. LIN*. *Academia Sinica, Academia Sinica.*

1:00 F5 **222.13** ▲ Effect of limb remote ischemic preconditioning on angiogenesis. L. YU; S. DUAN; W. DONG; J. CHEN; W. JIN; Z. JIN; C. REN*. *Shanghai No.5 Hospital,Fudan Univ.*

2:00 F6 **222.14** Increased oligodendrogenesis by humanin promotes axonal remyelination and neurological recovery in hypoxic/ischemic brains. X. XU*; J. CHEN; H. ZHAO; C. LIU. *Soochow Univ., The Second Affiliated Hosp. of Soochow Univ.*

3:00 F7 **222.15** Lipid therapy significantly reduces the infarct volume in a rat model of transient focal cerebral ischemia. A. FERNANDEZ-LOPEZ*; M. SANTOS-GALDIANO; B. ANUNCIBAY-SOTO; D. PEREZ-RODRIGUEZ; A. I. CORTINA-RIVERO; F. SANROMAN-LLORENS; M. GARCIA-GOMEZ; P. V. ESCRIBA. *Univ. De Leon, Inst. de Biomedicina, Univ. de Leon, Univ. de las Islas Baleares.*

4:00 F8 **222.16** Lactate neuroprotection in cerebral ischemia: What is the mechanism? X. CASTILLO*; K. ROSAFIO; L. PELLERIN; L. HIRT. *CHUV, Univ. de Lausanne.*

1:00 F9 **222.17** Selective intra-arterial administration of neuroprotective agents directly to the site of ischemic injury after experimental stroke improves neuron survival and functional outcome. M. E. MANISKAS*; J. F. FRASER; G. J. BIX. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

2:00 F10 **222.18** Ischemia postconditioning relieves cerebral ischemia injury. Y. LUO*; H. ZHAO; Z. TAO; R. WANG; F. YAN; X. JI. *Xuanwu Hosp. of Capital Med. Univ., Xuanwu Hosp., Xuanwu hospital.*

3:00 F11 **222.19** Tilia americana reduces the infarct area in a model of middle cerebral artery occlusion (MCAO) in rats. R. VENTURA-MARTINEZ*; G. E. ANGELES-LOPEZ; M. E. GONZALEZ-TRUJANO. *Fac Med, UNAM, Natl. Inst. of Psichiatry.*

4:00 F12 **222.20** The role of neuronal expression of P2X7 receptors in the processes of brain injury in mice. A. B. CAGLAYAN*; M. C. BEKER; U. KILIC; B. CAGLAYAN; T. KELESTEMUR; G. OZTURK; E. KILIC. *Istanbul Medipol Univ., Bezmialem Vakif Univ.*

1:00 G1 **222.21** Thrombopoietin reduces injury and cognitive impairment in cerebrovascular disease models. D. M. ROSENBAUM; J. ZHOU; J. ZHUANG; C. POON; J. LI; F. C. BARONE*. *SUNY Downstate Med. Ctr.*

POSTER

223. Demyelinating Disorders

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 G2 **223.01** The role of low density lipoprotein receptor-related protein 1 (lrp1) in cns myelin development, stability and repair. J. LIN*; R. GIGER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

2:00 G3 **223.02** Leukemia-lymphoma related factor (LRF) is a transcriptional repressor of Hes5 and MBP that exhibits stage-specific expression during remyelination. N. DAVIDSON*; N. KIJPAISALRATANA; T. Q. LE; R. C. ARMSTRONG. *USUHS, Chulalongkorn Univ.*

3:00 G4 **223.03** Cell-autonomous and non-cell-autonomous functions of lipid phosphatase FIG4/SAC3 in oligodendrocyte development, axon myelination, and white matter stability. Y. MIRONOVA*; G. M. LENK; J. LIN; T. L. DICKENDESHER; M. H. MEISLER; P. SHRAGER; R. J. GIGER. *Univ. of Michigan, Univ. of Michigan, Harvard Univ., Univ. of Rochester.*

4:00 G5 **223.04** Alterations in presynaptic release machinery and synaptic vesicle mobility in the frontal cortex of rats with experimental autoimmune encephalomyelitis. N. L. CHANADAY*; A. A. VILCAES; A. L. DE PAUL; A. I. TORRES; A. L. DEGANO; G. A. ROTH. *Dpto. De Química Biológica - CIQUIBIC (CONICET), Ctr. de Microscopía Electrónica - INICSA (CONICET).*

1:00 G6 **223.05** Glatiramer acetate confers neuroprotection in experimental autoimmune encephalomyelitis through activation of SIRT1. V. K. NIMMAGADDA*; K. LAM; C. T. BEVER, Jr; D. TRISLER; S. I. V. JUDGE; T. K. MAKAR. *Univ. of Maryland Baltimore, MS Ctr. of Excellence-EAST, VA Maryland Hlth. Care Syst.*

2:00 G7 **223.06** ● Lineage tracing reveals dynamic changes in PDGF alpha receptor-derived cells following cuprizone-induced demyelination. J. DEBRUIN*; E. BAXI; D. E. BERGLES; P. A. CALABRESI. *Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 G8 **223.07** Prostaglandin $F_{2\alpha}$ FP receptor inhibitor suppress demyelination and motor dysfunction in a cuprizone-induced multiple sclerosis mouse model. K. YOSHIKAWA*; K. IWASA; S. YAMAMOTO; K. MARUYAMA. *Saitama Med. Univ.*

4:00 G9 **223.08** Lack of CerS2 suppresses the development of experimental autoimmune encephalomyelitis. J. MÄNNICH; K. SCHMITZ; Y. PEWEZNER-JUNG; A. FUTERMAN; A. SCHMIDTKO*; G. GEISSLINGER; S. GRÖSCH; S. SCHIFFMANN. *Clin. Pharmacol., Weizmann Institute/Department of Biol. Chem., Univ. Witten/Herdecke.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 G10 **223.09** Semaphorin4A causes an apoptotic response in oligodendrocytes. D. F. LEITNER*; B. TODORICH; X. ZHANG; J. R. CONNOR. *Penn State Univ. Col. of Med., Duke Univ. Eye Ctr., Penn State Univ. Col. of Med.*

2:00 G11 **223.10** Oligodendroglial TNFR2 mediates the protective effects of transmembrane tumor necrosis factor (tmTNF) by promoting remyelination in experimental autoimmune encephalomyelitis. P. MADSEN*; S. K. PATEL; H. GAO; D. E. SZYMKOWSKI; J. R. BETHEA; R. BRAMBILLA. *Univ. of Miami Miller Sch. of Med., Univ. of Southern Denmark, Xencor, Drexel Univ.*

3:00 G12 **223.11** System xc- transporter modulates CNS infiltration of immune cells in autoimmune inflammatory disease. K. S. EVONUK*; B. J. BAKER; R. E. DOYLE; C. M. SESTERO; B. P. JOHNSTON; P. DE SARNO; A. TANG; I. GEMBITSKY; S. J. HEWETT; H. SONTHEIMER; C. RAMAN; T. M. DESILVA. *Univ. of Alabama at Birmingham, Syracuse Univ.*

4:00 H1 **223.12** *In vitro* models for the study of amiodarone-induced peripheral neuropathy. N. NIIMI*; M. TSUKAMOTO; H. YANAGISAWA; K. WATABE; K. SANGO. *Tokyo Metropolitan Inst. of Med. Sci., Jikei Univ. Sch. Med.*

1:00 H2 **223.13** Role of N-Acylethanolamine Acid Amidase (NAAA) in the experimental autoimmune encephalomyelitis model of multiple sclerosis. S. PONTIS*; V. CAPURRO; A. GUIJARRO; M. SUMMA; D. PIOMELLI; A. REGGIANI. *Inst. Italiano Di Tecnologia.*

2:00 H3 **223.14** ● Human remyelination promoting IgM antibody rescues myelin-mediated inhibition of oligodendrocyte precursor cell process outgrowth. Y. ZORINA*; P. SARMIERE; A. O. CAGGIANO; D. BUTTON. *Acorda Therapeut.*

3:00 H4 **223.15** Role of Tumor Necrosis Factor Receptor 2 signaling in microglia and macrophages in experimental autoimmune encephalomyelitis. H. GAO*; P. M. MADSEN; R. BRAMBILLA; R. BRAMBILLA. *Univ. of Miami, Univ. of Southern Denmark.*

4:00 H5 **223.16** ▲ Potential neuroprotective effect of PAC1 signaling in experimental autoimmune encephalomyelitis. V. MAKHIJANI*; M. C. CONDRO; Y. V. TAN; S. K. TIWARI-WOODRUFF; J. WASCHEK. *UCLA, Univ. of Rouen, UCLA.*

1:00 H6 **223.17** The role of the notch signaling pathway in the demyelination-remyelination process. A. M. ADAMO*; F. ALMEIRA GUBIANI; M. PEREIRA LUPPI; P. MATHIEU. *Facultad De Farmacia Y Bioquímica. Univ. of Buenos Aires. IQUIFIB-CONICET.*

2:00 H7 **223.18** Expression of cxcl12 chemokine receptor cxcr7 in normal and demyelinated mouse brain. G. BANISADR*; J. R. PODOJIL; S. D. MILLER; R. J. MILLER. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

3:00 H8 **223.19** Astrocyte ETB-R activation delays OPC differentiation during remyelination. T. R. HAMMOND*; P. MORTON; M. RAYMOND; V. GALLO. *Childrens Natl. Med. Ctr.*

4:00 H9 **223.20** The inflammasome pyrin contributes to pertussis toxin-induced IL-1β synthesis, neutrophil intravascular crawling and autoimmune encephalomyelitis. L. VALLIERES*; A. DUMAS; N. AMIABLE; J. DE RIVERO VACCARI; J. CHAE; R. KEANE; S. LACROIX. *Laval Univ., Univ. Hosp. Ctr. of Quebec, Univ. of Miami, Natl. Human Genome Res. Inst., Univ. of Miami.*

1:00 H10 **223.21** Protein glycation affects peripheral nerve myelination mechanism and is involved in the pathogenesis of demyelinating disorders. H. HAGIWARA*; F. SAITO; S. WAKATSUKI; T. ARAKI. *Natl. Ctr. of Neurol. and Psychiatry Dept. of PNS.*

2:00 H11 **223.22** Inhibition of system Xc- transporter protects the CNS in autoimmune inflammatory demyelination. R. DOYLE*; K. S. EVONUK; B. J. BAKER; C. M. SESTERO; B. JOHNSTON; P. DE SARNO; A. TANG; I. GEMBITZKY; C. RAMAN; T. M. DESILVA. *Univ. of Alabama At Birmingham.*

3:00 H12 **223.23** Chronic oral riluzole or caloric restriction ameliorate symptoms of experimental autoimmune encephalomyelitis. R. ROTOLO*; J. DEMURO; G. DRUMMOND; J. WOOD; E. LAZAROFF; S. LUPINSKI; C. LITTLE; A. WOLF; G. VANN; L. TELISKA; D. RILEY; J. BAHGAT; J. VIDAL; M. ALBALAWI; L. JOHNS; A. BETZ. *Quinnipiac Univ., Quinnipiac Univ., Quinnipiac Univ.*

4:00 I1 **223.24** Acetylation changes regulate cytokine induced cell death and IRF-1 signalling in the HOG (Human Oligodendroglioma) cell line. E. LODA*; Y. WANG; J. PATEL; D. LIEBENSON; R. GOSWAMI; D. STEFOSKI; R. BALABANOV. *Rush Univ. Med. Ctr.*

1:00 I2 **223.25** Inducible deletion of myelin regulatory factor is a cell selective mechanism to impair oligodendrocyte remyelination. G. J. DUNCAN*; J. R. PLEMEL; J. LIU; R. E. HIRATA; Y. CHAEICHI; M. BERSON; W. TETZLAFF. *ICORD-UBC, Univ. of Calgary, Univ. of British Columbia.*

2:00 I3 **223.26** ● A remyelinating antibody rHIgM22 induces proliferation in mixed glial cells. I. HAKIMI; M. SRINIVAS*; J. CAO; A. M. VECCHIONE; P. D. SARMIERE; M. RODRIGUEZ; A. O. CAGGIANO; D. C. BUTTON. *Acorda Therapeut., Acorda Therapeut., Mayo Clin.*

3:00 I4 **223.27** Is PGJ2 involved in the effect of indomethacin on bone marrow mononuclear cell migration to the sciatic nerve of the rat after a lesion? V. USACH; C. I. CASALIS; K. WEBER; G. PIÑERO; M. FERNÁNDEZ-TOMÉ; P. C. SETTON-AVRUJ*. *Sch. of Pharm. and Biochem.*

4:00 I5 **223.28** Zinc transporter 3 (ZnT3) gene deletion reduces spinal cord white matter damage and behavioral deficits in a murine MOG-induced multiple sclerosis model. B. CHOI*; J. KIM; H. KIM; B. LEE; I. KIM; M. SOHN; J. KOH; S. SUH. *Hallym University, Col. of Med., Inha Univ., Ulasn University, Sch. of Med.*

1:00 I6 **223.29** Histological correlates of oct measures of retinal nerve fiber layer thickness in a large animal model of dysmyelination. I. D. DUNCAN*; J. VER HOEVE; B. GLATTING; L. TEIXEIRA; J. MAYER; R. DUBIELZIG; C. SMITH. *Univ. Wisconsin Sch. Vet Med., Univ. Wisconsin Sch. Med. Pub Hlth., Univ. Wisconsin Sch. Vet Med.*

2:00 I7 **223.30** ▲ Brain-derived neurotrophic factor and tau as molecular markers of multiple sclerosis. A. ISLAS*; C. F. CUEVAS; L. M. ESPAILLAT; B. BERTADO-CORTES; P. GARCIA-DE LA TORRE. *Inst. Mexicano del Seguro Social, Instituo Mexicano del Seguro Social.*

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POSTER

224. Demyelinating Disorders: Human Studies and Therapeutics

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 I8 **224.01** Electroacupuncture promotes the differentiation of transplanted trkc gene modified bone marrow mesenchymal stem cells into oligodendrocyte-like cells and remyelination in the demyelinated spinal cord of rat. Y. DING*. *Zhongshan Sch. of Medicine, Sun Yat-Sen Universi, Zhongshan Sch. of Medicine, Sun Yat-sen Univ.*

2:00 I9 **224.02** Intermittent blockade of the OGF-OGFr axis by low dose naltrexone upregulates OGF and inhibits the progression of established relapse-remitting experimental autoimmune encephalomyelitis. L. A. HAMMER; P. J. MCLAUGHLIN; I. S. ZAGON*. *Penn State Univ. Coll Med.*

3:00 I10 **224.03** Physical exercise alters the composition of the lesion extracellular matrix and promotes white matter regeneration. S. K. JENSEN*; M. B. KEOUGH; L. CRAIG; J. PLEMEL; C. BRIDEAU; V. YONG. *Univ. of Calgary.*

4:00 I11 **224.04** Fingolimod increases hippocampal histone H3 Lys14 acetylation and ameliorates behavioural and cognitive functions in a mouse model of reactive depression. L. DI NUZZO; R. ORLANDO; C. TOGNOLI; P. DI PIETRO; M. MOTOLESE; E. MOSCARDO; M. PELLITTERI; G. BERTINI; P. F. FABENE; G. BATTAGLIA; V. BRUNO*; F. NICOLETTI. *Univ. Sapienza, I.R.C.C.S. Associazione Oasi Maria S.S., Univ. of Verona, I.R.C.C.S. Neuromed, LIA (International Associalted Laboratories).*

1:00 I12 **224.05** ● A small molecule ligand for TrkB/TrkC neurotrophin receptors improves motor dysfunction and pathology in trembler mice. F. M. LONGO*; T. YANG; K. C. TRAN; S. M. MASSA. *Stanford Univ. Med. Ctr., San Francisco Veterans Affairs Med. Ctr., Univ. of California.*

2:00 J1 **224.06** Acute desipramine restores presynaptic cortical defects in murine experimental autoimmune encephalomyelitis by suppressing central CCL5 overproduction. A. PITTALUGA*; S. DI PRISCO; E. MEREGA; A. UCCELLI; S. CASAZZA. *Univ. of Genoa, Dept. Pharm.*

3:00 J2 **224.07** Pro-myelinating serum-derived exosomes from environmentally enriched rats are secreted by peripheral blood mononuclear cells. A. D. PUSIC*; K. M. PUSIC; R. P. KRAIG. *Univ. of Chicago.*

4:00 J3 **224.08** Nasal administration of IFNγ-stimulated dendritic cell exosomes inhibits spreading depression. K. M. PUSIC*; A. D. PUSIC; R. P. KRAIG. *Univ. of Chicago.*

1:00 J4 **224.09** ▲ Multiple sclerosis therapeutic glatiramer acetate enhances oligodendrocyte precursor cell differentiation and remyelination. S. COTTRELL-CUMBER*; A. ROSEN; A. FERNANDEZ-CASTANEDA; A. GAULTIER. *Univ. of Virginia.*

2:00 J5 **224.10** CB2 receptor mediated cannabinoid signaling contributes to the therapeutic effect of 2-AG hydrolytic enzyme ABHD6 inhibition on EAE. J. WEN; M. TANAKA; R. RIBEIRO; Y. ZHANG*. *Uniformed Services Univ.*

3:00 J6 **224.11** Fingolimod promotes primary sensory afferent growth through S1P1 receptor inhibition of cAMP. M. MCNAMARA*; A. GALVIN; T. CLASON; C. J. FOREHAND. *Univ. of Vermont.*

4:00 J7 **224.12** Optical coherence tomography (OCT) as a predictive and longitudinal *in vivo* biomarker of disease and estrogen receptor β agonist-induced repair in a mouse model of multiple sclerosis. A. J. KHALAJ*; P. KIM; M. SYED; S. HABIB; S. NUSINOWITZ; J. A. KATZENELLENBOGEN; S. K. TIWARI-WOODRUFF. *Univ. of California, Riverside, UCLA, UCLA, Univ. of Illinois.*

1:00 J8 **224.13** ● Serial block face scanning electron microscopy (sbf-sem) approaches for assessing remyelination. G. KIDD; S. MEDICETTY*; B. TRAPP; E. BENSON; B. BAI; A. ROHOLT. *Cleveland Clin., Renovo Neural Inc., Renovo Neural, Inc., Renovo Neural, Inc.*

2:00 J9 **224.14** A comparison of therapeutic candidates for promoting oligodendrocyte differentiation and remyelination. B. SHULTZ*; Y. ZHONG. *Drexel Univ.*

3:00 J10 **224.15** Young plasma treatment delays the onset and decreases the severity of chronic eae. A. C. MARCU; M. C. JOSYLN; P. J. YANNIE; R. CUTLER; J. L. DUPREE; G. H. DE VRIES*. *McGuire VA Med. Ctr., VCU Hlth. Sci.*

4:00 J11 **224.16** 7, 8 dihydroxyflavone suppresses optic neuritis in experimental autoimmune encephalomyelitis. D. TRISLER*; V. K. C. NIMMAGADDA; B. TANDUKAR; S. I. V. JUDGE; C. T. BEVER; T. K. MAKAR. *Univ. Maryland Sch. Med., MS Ctr. of Excellence-EAST, VA Maryland Hlth. Care Sysytem.*

1:00 J12 **224.17** Chondroitin sulfate proteoglycan scar formation after chronic nerve compression injury is attenuated by chondroitinase ABC administration. M. D. TAPADIA; M. LUU; J. JUNG; W. WANG; J. SU; T. MOZAFFAR; R. GUPTA*. *Univ. of California, Irvine, Univ. of California, Irvine.*

2:00 K1 **224.18** A chondroitin sulfate proteoglycan synthesis inhibitor promotes myelin regeneration and immunomodulation in experimental models of demyelination. M. B. KEOUGH*; J. A. ROGERS; P. ZHANG; S. K. JENSEN; E. L. STEPHENSON; M. G. HURLBERT; J. R. PLEMEL; C. LING; V. W. YONG. *Univ. of Calgary.*

3:00 K2 **224.19** Fingolimod therapy in multiple sclerosis is associated with an increase in inner nuclear layer thickness. O. A. S. AL-LOUZI*; A. LANG*; P. BHARGAVA*; A. CARASS*; J. PRINCE*; S. SAIDHA*; P. CALABRESI**. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

4:00 K3 **224.20** Targeted growth arrest-specific protein 6 (Gas6) delivery to the CNS protects axons from damage during chronic experimental autoimmune encephalomyelitis (EAE). R. C. GRUBER*; A. RAY; B. SHAFIT-ZAGARDO. *Albert Einstein Col. of Med.*

1:00 K4 **224.21** Exendin-4 promotes neurite outgrowth, neuronal survival and myelination *in vitro*. K. SANGO*; M. TSUKAMOTO; N. NIIMI; Y. KANAZAWA; K. WATABE; K. UTSUNOMIYA. *Tokyo Met Inst. Med. Sci., Jikei Univ. Sch. Med.*

2:00 K5 **224.22** Reward-related decreases of mental fatigue in individuals with multiple sclerosis: an fMRI study. E. DOBRYAKOVA*; H. GENOVA; J. DELUCA; G. WYLIE. *Kessler Res. Foundati8on, Kessler Fndn., Kessler Fndn.*

3:00 K6 **224.23** White matter degeneration in pericyte-deficient mice. G. L. SI*; A. MONTAGNE; Z. ZHAO; A. P. SAGARE; A. M. NIKOLAKOPOULOU; B. ZLOKOVIC*. *Zilkha Neurogenetic Institute, U of Southern Cal.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 K7 **224.24** Correlation between iron deposition and increased microglia activation in MS: Subcortical grey matter and cortical white matter differences. E. B. JOHNSON*. *Univ. of Alberta.*

1:00 K8 **224.25** The effect of social disruption stress on pain behaviors and cognitive deficits in chronic phase TMEV infection. H. R. LINSENBARDT*; J. L. COOK; E. E. YOUNG; E. G. VICHAYA; C. R. YOUNG; N. REUSSER; R. STORTS; C. J. WELSH; M. W. MEAGHER. *Texas A&M Univ., Texas A&M Univ.*

2:00 K9 **224.26** Do Glyoxalase 1 enzyme levels differ with people peripheral neuropathy? S. ALOTHMAN*; N. WILSON; J. RYALS; L. D'SILVA; L. HERBELIN; M. PASNOOR; P. KLUDING; D. WRIGHT. *The Univ. of Kansas Med. Ctr., The Univ. of Kansas Med. Ctr., The Univ. of Kansas Med. Ctr.*

3:00 L1 **224.27** Immunohistochemical characterization of multiple sclerosis plaques in human brain. J. BAUN*; B. TIPTON; C. ZURHELLEN; C. SEGOVIA; R. C. SWITZER III; S. O. AHMAD. *Neurosci. Associates, St. Louis Univ.*

4:00 L2 **224.28** The role of chronic meningeal pro-inflammatory cytokine expression in grey matter pathology in multiple sclerosis. R. JAMES*; E. J. BROWNE; R. M. SCHALKS; N. D. MAZARAKIS; R. REYNOLDS. *Imperial Col. London.*

POSTER

225. Traumatic Brain Injury: Animal Studies

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 L3 **225.01** ▲ Mouse models of intracerebral hemorrhage in ventricle, cortex, and hippocampus. Y. GAO*; W. ZHU; C. CHANG; J. WAN; S. ZHU; J. WANG. *Wuhan Univ. Renmin Hosp., Johns Hopkins University, Sch. of Med., Illinois Inst. of Technology, Col. of Sci., Johns Hopkins University, Sch. of Med.*

2:00 L4 **225.02** The effects of mild traumatic brain injury and psychosocial stress on limbic anxiety-like behaviors are mediated by glucocorticoid receptors. L. FOX; D. DAVIES; J. SCHOLL; D. MEYER; M. J. WATT*; G. FORSTER. *Univ. of South Dakota.*

3:00 L5 **225.03** The effect of levetiracetam treatment on gene expression and functional behavior using a controlled cortical impact model of traumatic brain injury. B. E. ELMORE*; G. D. ANDERSON; E. D. KANTOR; F. M. FARIN; T. K. BAMMLER; J. W. MACDONALD; M. R. HOANE. *Southern Illinois Univ. - Carbondale, Univ. of Washington, Univ. of Washington.*

4:00 L6 **225.04** Exosomes derived from multipluripotent mesenchymal stromal cells improve functional recovery and promote brain remodeling in rats after traumatic brain injury. Y. ZHANG; M. CHOPP; Y. MENG; M. KATAKOWSKI; H. XIN; A. MAHMOOD; Y. XIONG*. *Henry Ford Hlth. Syst., Henry Ford Hlth. Syst., Oakland Univ.*

1:00 L7 **225.05** Are there strain differences to anatomical and behavioral sequelae of repetitive mild traumatic brain injury in mice? G. D. ROSEN*; G. C. JOHNSON; T. KEHINDE; K. O'CONNELL; A. RENDALL; R. H. FITCH. *Beth Israel Deaconess Med. Ctr., Univ. of Connecticut.*

2:00 L8 **225.06** Central and systemic levels of pigment epithelium-derived factor are altered in the rat following traumatic brain injury. V. L. REEVES*; S. W. CARLSON; E. E. KERSHAW; C. E. DIXON. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 L9 **225.07** Knockout of androgen receptor decreases the expression of aquaporin-4 following traumatic brain injury. Y. CHEN; C. TSENG; L. YANG*. *Taipei Med. Univ., Taipei Med. Univ., Taipei Med. Univ.*

4:00 L10 **225.08** Evaluation of behavioral paradigms to assess functional deficits following single and multiple mild traumatic brain injuries in a murine model. J. N. NICHOLS*; T. L. NIEDZIELKO; S. A. EPPS; C. L. FLOYD. *Univ. of Alabama at Birmingham.*

1:00 L11 **225.09** Acute inflammatory response in rodent brain and blood following a blast-induced traumatic brain injury. C. C. TENN*; N. CADDY; M. GARRETT; L. MCLAWS; C. VAIR. *DRDC Suffield.*

2:00 L12 **225.10** ● CRMP2 modulation for treatment of TBI-induced cognitive dysfunction and pathology. M. E. HARRIS-WHITE*; A. POTESHKINA; M. F. JOHNSON; P. ESLAMI; K. M. VENKOVA-HRISTOVA; A. M. HRISTOV; K. HENSLEY. *UCLA & Veterans Administration-Greater Los Angeles, Univ. of Toledo.*

3:00 M1 **225.11** Energy-related biochemical changes in the peri-lesion area of striatum of conscious rats following penetrating ballistic-like brain injury. L. LEUNG*; M. WINTER; Y. DENG-BRYANT; D. SHEAR; F. TORTELLA. *Walter Reed Army Inst. of Res.*

4:00 M2 **225.12** ● Traumatic brain injury induces astrocytic serine racemase expression and D-serine localization *in vivo.* D. T. BALU*; E. J. PEREZ; S. TAKAGI; J. T. COYLE; D. J. LIEBL. *McLean Hosp. / Harvard Univ., Univ. of Miami Miller Sch. of Med., Tokyo medical and dental university, The Miami Project to Cure Paralysis and Dept. of Neurolog. Surgery.*

1:00 M3 **225.13** Modification of somatosensory evoked potentials following focal traumatic brain injury in the mouse. J. A. FISHER*; S. HUANG; M. YE; M. NABILI; E. F. CIVILLICO; V. KRAUTHAMER; M. MYERS; C. G. WELLE. *New York Med. Col., U.S. Food and Drug Admin.*

2:00 M4 **225.14** Electrophysiological signatures of brain injury in the mouse primary motor cortex. M. YE*; M. NABILI; J. FISHER; S. HUANG; Y. KIM; E. CIVILLICO; V. KRAUTHAMER; M. R. MYERS; C. WELLE. *FDA, New York Med. Col., Uniformed Services Univ. of the Hlth. Sci.*

3:00 M5 **225.15** Cellular mechanisms underlying the baroreflex dysfunction in a rat model of traumatic brain injury. J. OH*; C. LEE; K. WHANG; S. JEONG. *Wonju Col. of Medicine, Yonsei Univ., Wonju Col. of Medicine, Yonsei Univ.*

4:00 M6 **225.16** Increased expression of uPAR after traumatic brain injury in uPA deficient mice. T. BOLKVADZE*; A. PITKÄNEN. *A.I.Virtanen Inst. For Mol. Sciences, Univ. of Eastern Finland, Kuopio Univ. Hosp.*

1:00 M7 **225.17** A neuroprotective effect of Salubrinal in traumatic brain injury. C. G. PICK*; V. RUBOVITCH; S. BARAK. *Tel Aviv Univ., Tel-Aviv Univ., Tel Aviv Univ.*

2:00 M8 **225.18** Development of a ferret model of traumatic brain injury; preliminary imaging, behavioral and immunohistochemical findings. S. C. SCHWERIN*; E. HUTCHINSON; K. NGALULA; C. PIERPAOLI; S. L. JULIANO. *Uniformed Services Univ., NIH, Uniformed Services Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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3:00 M9 **225.19** ▲ Lorazepam does not negatively impact neurobehavioral outcome after experimental brain trauma. K. E. FREE; J. B. LEARY; A. M. VOZAR; B. S. KIM; S. D. STEVENS; C. M. EDWARDS; J. P. CHENG; C. O. BONDI; A. E. KLINE*. *Univ. Pittsburgh, Univ. Pittsburgh.*

4:00 M10 **225.20** Attentional set-shifting after brain trauma is restored by a preclinical model of neurorehabilitation. C. O. BONDI*; J. P. CHENG; H. M. TENNANT; N. LAJUD; K. E. FREE; C. M. MONACO; J. B. LEARY; A. E. KLINE. *Univ. of Pittsburgh, Lab. de Neuroendocrinologia, CIBIMI-IMSS, Univ. of Pittsburgh.*

1:00 M11 **225.21** ▲ Manipulating initiation time and duration of environmental enrichment exposure after traumatic brain injury to more accurately mimic clinical rehabilitation. A. M. GREENE*; V. V. MATTIOLA; J. B. LEARY; L. J. CARLSON; J. P. CHENG; C. M. MONACO; C. O. BONDI; A. E. KLINE. *Univ. Pittsburgh, Univ. Pittsburgh, Phys Med. & Rehab, Crit Care Med, Psych, Ctr. Neurosci, Safar Ctr. Resuscitation Res. Univ. Pittsburgh.*

2:00 M12 **225.22** Examines of depressive responses for posttraumatic stress disorder-like rats in forced swimming task. L. H. YEH*; F. WU; A. HUANG. *Dept. of Psychology, Fo Guang Univ.*

3:00 N1 **225.23** A single head impact in adult mice produces two patterns of neurological and behavioral deficits. N. M. GRINKINA*; Y. LI; A. M. EL SEHAMY; M. HABER; P. J. BERGOLD. *SUNY Downstate Med. Ctr.*

4:00 N2 **225.24** A single head impact to adult mice produces two patterns of white matter injury. M. A. SANGOBOWALE*; N. GRINKINA; Y. LI; M. HABER; P. BERGOLD. *SUNY Downstate Med. Ctr.*

1:00 N3 **225.25** Minocycline and N-acetylcysteine protects oligodendrocytes and promotes remyelination after mild controlled cortical impact. M. HABER; J. Y. KIM; J. JAMES; M. SANGOBAWALE; N. M. GRIN'KINA; A. RAMADANI; P. J. BERGOLD*. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., CUNY Brooklyn Col., SUNY-Downstate Med. Cen.*

2:00 N4 **225.26** Assessment of the Time Dependent changes in the amygdala of rats exposed to Blast-Induced Neurotrauma. F. GHODDOUSSI*; S. V. SAJJA; M. P. GALLOWAY; P. VANDEVORD. *Wayne State University, Sch. of Med., Virginia Polytechnic and State Univ.*

3:00 N5 **225.27** The kinetics of intracranial pressure changes following exposure to blast and the effect of n-acetylcysteine amide on recovery after blast in a rat model. U. KAWOOS; M. GU; J. LANKASKY; J. N. NORRIS*; R. M. MCCARRON; M. CHAVKO. *Naval Med. Res. Ctr.*

4:00 N6 **225.28** High speed videographic analysis of controlled cortical impact (CCI) devices. Y. KIM; J. OZL; A. FU; L. TUCKER; J. T. MCCABE*. *Ctr. for Neurosci. and Regenerative Med., Uniformed Services Univ. of the Hlth. Sci., Dept. of Anatomy, Physiol. & Genetics, Uniformed Services Univ.*

1:00 N7 **225.29** Caloric intake affects behavioural outcomes following pediatric concussion in rats. R. M. MYCHASIUK*; H. HEHAR; A. FARRAN; I. MA; M. J. ESSER. *Univ. Lethbridge, Univ. of Calgary, Univ. of Calgary.*

2:00 N8 **225.30** Hippocampal excitability after diffuse brain injury in swine. A. ULYANOVA*; M. R. GROVOLA; P. F. KOCH; J. P. HARRIS; V. E. JOHNSON; D. K. CULLEN; J. A. WOLF. *Univ. of Pennsylvania.*

POSTER

226. Excitotoxicity and Metabolic Stress

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 N9 **226.01** Neuronal death induced by endoplasmic reticulum stress is blocked by overexpression of co-chaperone E3 ubiquitin ligase CHIP in hippocampus. F. CABRAL MIRANDA*; J. ADAO NOVAES; H. PETRS SILVA; L. CHIARINI. *UFRJ.*

2:00 N10 **226.02** Cyclin-dependent kinase 5 promotes truncated apoptosis inducing factor-mediated neuronal cell death via phosphorylation of stub1/chip. C. KIM*; W. H. SHIN; K. C. CHUNG; Y. J. OH. *Yonsei Univ.*

3:00 N11 **226.03** Activation of β-catenin/TCF signaling in p25-overexpressing cells induces trans-neuronal loss of β-catenin and activated apoptosis in p25-free neurons by secreted factor Notum. H. CHOW*; K. HERRUP. *Div. of Life Sci., The Hong Kong Univ. of Sci. and Technol., Rugters Univ.*

4:00 N12 **226.04** ● ▲ Study on ATP concentration changes in cytosol and mitochondria of individual cultured neurons during glutamate-induced deregulation of calcium homeostasis. V. G. PINELIS*; A. M. SURIN; L. R. GORBACHEVA; I. G. SAVINKOVA; R. R. SHARIPOV; B. I. KHODOROV. *Scientific Ctr. For Children's Health, Russian A, Scientific Ctr. For Children's Health, Russian A, Inst. of Gen. Pathology and Pathophysiology, RAMS, Lomonosov Moscow State Univ., Lomonosov Moscow State Univ., Inst. of Gen. Pathology and Pathophysiology, RAMS.*

1:00 O1 **226.05** Early activation of autophagy during glucose deprivation contributes to cortical neuronal death. C. GERÓNIMO*; L. MASSIEU. *Inst. De Fisiología Celular, UNAM.*

2:00 O2 **226.06** ● Astrocytes provide a neuroprotective effect that counteracts rapid glutamate-receptor mediated neurotoxicity. D. MCEWEN; T. GARAY; J. BROWN; O. MCMANUS; D. ROCK; V. GROPPI*. *Essen Biosci.*

3:00 O3 **226.07** Glutamate toxicity changes expression profile of gangliosides in neurodegenerating rat primary cortical neurons. D. PARK*; G. A. LAJOIE; S. N. WHITEHEAD. *Western Univ., Western Univ.*

4:00 O4 **226.08** Calpain 5 carries dual nuclear localization signals. J. W. GEDDES*; R. SINGH; M. K. BREWER; C. B. MASHBURN; D. LOU; V. BONDADA; B. GRAHAM. *Univ. Kentucky Med. Ctr., Univ. Kentucky.*

1:00 O5 **226.09** Upregulation of the energy sensor AMPK inhibits mTOR function and promotes neuronal death in glaucoma. N. A. BELFORTE*; J. CUEVA VARGAS; A. DI POLO. *Univ. of Montreal Hosp. Res. Ctr.*

2:00 O6 **226.10** L-lactate as a neuroprotective agent against excitotoxicity: implication of an energy-dependent process. J. PASCAL*; I. ALLAMAN; P. MARQUET; P. J. MAGISTRETTI. *EPFL, Univ. Hosp. of Lausanne, KAUST.*

3:00 O7 **226.11** Effect of ATP7B knockdown on cellular morphology and viability in human neuroblastoma (SH-SY5Y) cells. R. KUNJUNNI*; M. K. SRIWASTVA; S. SATHIANATHAN; P. CHATTOPADHYAY; M. BEHARI; V. SUBBIAH. *All India Inst. of Med. Sci., All India Inst. of Med. Sci., All India Inst. of Med. Sci.*

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4:00 O8 **226.12** Expression and distribution of the scavenger receptor CD36 after Spinal Cord injury and its potential modulation by an O3PUFA and Vitamin E enriched diet. K. CORDERO*; J. D. FIGUEROA; M. DE LEÓN. *Loma Linda Univ. Sch. of Med.*

1:00 O9 **226.13** The Cdk5 modulator TFP5 displays anti-inflammatory and anti-oxidative actions in neurons. J. P. STEINER*; M. BACHANI; K. MATHER; E. FENNELL; N. CHESTER; A. POPESCU; V. SHUKLA; N. AMIN; B. BALACHANDRANKRISHNAMMA; H. C. PANT. *Natl. Inst. of Health/NINDS, Natl. Inst. of Health/NINDS, Natl. Inst. of Health/NINDS.*

2:00 O10 **226.14** Tumor Necrosis Factor Related Apoptosis Inducing Ligand reduces the expression of the neuroprotective Na^+/Ca^{2+} exchanger isoform 3 in human neuronal cells *in vitro.* O. VALERIO; G. DI BENEDETTO; G. CANTARELLA; V. LARICCIA; S. AMOROSO; R. BERNARDINI*. *Univ. Politecnica Marche, Univ. Catania Sch. of Med., Univ. of Roma "La Sapienza".*

3:00 O11 **226.15** Ligand binding to the GluN2B subunit is required for NMDA-induced superoxide production independent of ion flux. A. M. BRENNAN*; J. A. GRAY; X. JIANG; R. A. SWANSON. *UCSF, VA Med. Ctr., UC Davis, Ctr. for Neurosci., UCSF.*

4:00 O12 **226.16** Investigation on the role of the BH3-only protein Bid in promoting excitotoxic neuronal injury. B. D'ORSI*; H. P. BONNER; H. KÖNIG; J. H. M. PREHN. *Royal Col. of Surgeons In Ireland.*

1:00 P1 **226.17** The inactivation of M current is the link between acetylcholinesterase inhibition by diisopropylfluorophosphate and excitotoxicity. P. FERCHMIN*; D. PEREZ; V. A. ETEROVIC. *Univ. Central Del Caribe.*

2:00 P2 **226.18** Developing a model of spreading neurotoxicity. A. J. SAMSON*; C. N. CONNOLLY. *Univ. of Dundee.*

3:00 P3 **226.19** The combination of retinoic acid and basic fibroblast growth factor enhances neuroprotection against proteasome inhibition-induced cytotoxicity in SH-SY5Y cells. B. CHENG*; J. LONGORIA; K. OVALLE; A. KUANG; V. SCOFIELD; J. GARCIA. *Univ. Texas Hlth. Sci. Ctr., UT-Health Sci. Ctr. at San Antonio - Regional Academic Heath Ctr. at Edinburg (E-RAHC), Univ. of Texas - Pan American, Univ. Texas Hlth. Sci. Ctr.*

4:00 P4 **226.20** Telmisartan protects from glutamate-induced neuronal injury: Roles of AT1 receptor blockade. T. PANG*; J. WANG; R. HAFKO; J. BENICKY; E. SANCHEZ-LEMUS; H. LIAO; J. M. SAAVEDRA. *China Pharmaceut. Univ., Dept. of Neuroscience, Georgetown Univ. Med. Center,, Natl. Inst. of Mental Hlth., China Pharmaceut. Univ., Georgetown Univ. Med. Ctr.*

1:00 P5 **226.21** Chemokine CXCL12 increases CaMKII synaptic localization and glutamate-induced cell death. R. M. BRAGG, III; J. K. ROSE*. *Western Washington Univ.*

2:00 P6 **226.22** Evaluation of neurobehavioral and genotoxic parameters in rats treated with vigabatrin. J. N. PICADA*, SR; K. SOUSA; T. PIRES; M. AMBROZIO; C. VIEIRA; L. SOUZA; R. ANTUNES; V. COELHO; M. LEAL; P. PEREIRA. *Lutheran Univ. of Brazil, Federal Univ. of Rio Grande do Sul.*

3:00 P7 **226.23** Functional alterations of motor cortical circuits in Arginase I knockout mice. G. CANTERO*; C. HU; M. T. LAZARO; P. GOLSHANI; G. S. LIPSHUTZ. *David Geffen Sch. of Medicine, UCLA, David Geffen Sch. of Medicine, UCLA, David Geffen Sch. of Medicine, UCLA. West Los Angeles VA Med. Ctr., David Geffen Sch. of Medicine, Semel Inst. for Neurosci. and IDDRC at UCLA.*

4:00 P8 **226.24** ● Sensitivity, specificity and limitation of *in vitro* rodent hippocampal brain slice assay for assessment of drug-induced seizure liability. J. ZHAI*; Y. ZHOU; H. ZENG; A. LAGRUTTA; F. SANNAJUST. *Merck & Co., Merck & Co.*

1:00 P9 **226.25** Nmda receptor- and mitochondria-dependent neurotoxicity of berberine. K. KYSENIUS*; C. A. BRUNELLO; H. J. HUTTUNEN. *Univ. of Helsinki - Neurosci. Ctr.*

2:00 P10 **226.26** Heterogeneous nuclear ribonucleoprotein a1 as a target disease-associated protein in progressive multiple sclerosis. S. LEE*; Y. SHIN; M. C. LEVIN. *Univ. of Tennessee, Veterans Affairs Med. Ctr.*

3:00 P11 **226.27** Caramiphen as adjunct to standard treatment suppresses GD-induced status epilepticus, attenuates neuropathology, and prevents cognitive deficits in rats. M. K. SCHULTZ*; L. K. M. WRIGHT; M. DE ARAUJO FURTADO; S. H. ROBERTSON; M. F. STONE; M. C. MOFFETT; A. R. BOURNE; C. R. SCHULTZ; J. E. SCHWARTZ; L. A. LUMLEY. *USAMRICD, Walter Reed Army Inst. of Res.*

4:00 P12 **226.28** Validating protein-protein interactions and disruptions using AlphaScreen methodology. W. LEE*; Y. LAI; A. HOHMANN. *Indiana Univ., Indiana Univ., Indiana Univ.*

1:00 Q1 **226.29** Neurodevelopment, mitochondrial dynamics, autophagy and huntingtin aggregation differ in cortical vs. striatal neurons: Effects of HDAC6 inhibition. P. GUEDES-DIAS; M. R. DUCHEN; J. M. OLIVEIRA*. *Univ. of Porto - Fac. of Pharm., Univ. Col. London, REQUIMTE, U.Porto.*

POSTER

227. Drugs, Pharmaceuticals, and Toxicity

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Q2 **227.01** Crude venom of the South American rattlesnake (Crotalus durissus terrificus) induces CA1 neuronal death in rats' organotypic hippocampal slices. D. CARVALHO*; E. GERACE; D. PELLEGRINI-GIAMPIETRO; I. S. SANO-MARTINS; G. F. XAVIER. *Univ. of São Paulo, Univ. of Florence, Butantan Inst.*

2:00 Q3 **227.02** Long-term effects of single or multiple neonatal sevoflurane exposures on hippocampal ultrastructure. L. G. AMROCK; M. STARNER; K. L. MURPHY; M. G. BAXTER*. *Mount Sinai Sch. Med., Mount Sinai Sch. Med., Univ. Oxford.*

3:00 Q4 **227.03** Leptin attenuates the methamphetamine-induced apoptosis and inflammatory response in the murine striatum. N. H. KUTUB*; J. LIANG; V. PAHALYANTS; J. MAMTORA; J. A. ANGULO. *Hunter Col., The Grad. Center, CUNY, Hunter Col.*

4:00 Q5 **227.04** Toxicity of the antimalaria drug mefloquine and novel protection by quinolinic acid. K. E. HOLMES*; D. SMITH; G. W. GROSS. *Univ. of North Texas.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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1:00 Q6 **227.05** Cranial irradiation regulates multiple brain-derived neurotrophic factor transcript variants in the mouse hippocampus. S. KANG*; Y. SON; M. YANG; J. KIM; S. LEE; J. KIM; S. KIM; J. KIM; U. JUNG; C. MOON. *Chonnam Natl. Univ., Dongnam institute of Radiological & Med. Sci. (DIRAMS), Atomic Energy Res. Inst.*

2:00 Q7 **227.06** The modulation of GABA-ergic system in postnatal development and trimethyltin-induced neurodegeneration in the mouse hippocampus. J. KIM*; J. KIM; M. YANG; S. LEE; S. KANG; S. KIM; T. SHIN; H. WANG; C. MOON. *Chonnam Natl. Univ., Michigan State Univ., Jeju Natl. Univ.*

3:00 Q8 **227.07** Activation of extracellular signal regulated kinase 1/2 in the mouse hippocampus following trimethyltin treatment. S. LEE*; J. KIM; M. YANG; S. KANG; J. KIM; H. IM; H. WANG; C. MOON. *Chonnam Natl. Univ., Korea Inst. of Sci. and Technol. (KIST), Michigan State Univ.*

4:00 Q9 **227.08** ● Postnatal glucocorticoids suppress glutamatergic neurogenesis. M. T. K. ZIA; A. Z. KIDWAI; G. VINUKONDA; L. CARSON; P. BALLABH*. *New York Med. Coll, NewYork Med. Col., New York Med. Coll.*

1:00 R1 **227.09** Striatal dopaminergic neurotoxicity and neuroinflammation caused by methamphetamine are differentially affected by *in vivo* stressors versus corticosterone treatment. D. B. MILLER*; K. A. KELLY; J. P. O'CALLAGHAN. *CDC-NIOSH.*

2:00 R2 **227.10** Cellular zinc levels are modulated by TRPML1-TMEM163 interactions. J. SILVA*; L. BASILIO; T. HART; M. P. CUAJUNGCO. *California State University, Fullerton, California State University, Fullerton.*

3:00 R3 **227.11** The levels of E3 ligase Parkin are decreased in rat colon after self-administration of neurotoxic doses of methamphetamine. A. FLACK*; A. L. PERSONS; S. M. KOUSIK; T. NAPIER; A. MOSZCZYNSKA. *Wayne State Univ., Rush Univ. Med. Ctr.*

4:00 R4 **227.12** Methamphetamine induces activation of eNOS in cultured mouse brain endothelial cells. J. SEO*; S. M. JONES; J. P. ELLIOTT; G. A. WEST. *Swedish Med. Ctr., Colorado Brain and Spine Inst., Houston Methodist Hosp.*

1:00 R5 **227.13** Effect of the synthetic neurosteroidal derivatives BNN 20 and 27 in an *ex vivo* model of chemical ischemia and the *in vivo* STZ-model of diabetic retinopathy: Neuroprotection via TrkA signaling. K. A. THERMOS*; N. MASTRODIMOU; S. LISA; R. IBÁN-ARIAS; S. POULAKI; P. IORDANIDOU; P. GIANNOGONAS; D. KOKONA; M. KAMARATOU; E. VOLITAKI; I. CHARALAMPOPOULOS; A. GRAVANIS. *Univ. of Crete.*

2:00 R6 **227.14** Ethanol induces chemokine MCP-1 increasing neuroinflammation and neurodegeneration in mouse brain. L. QIN*; F. T. CREWS. *Univ. North Carolina, Sch. Med.*

3:00 R7 **227.15** Assessment of reflex sympathetic activity after guanethidine-induced depletion of postganglionic neurons in rat. C. LIU*; M. ZAHNER; C. OKERBERG; I. PARDO; C. NORTHCOTT; D. PELLETIER; J. AUBRECHT; C. SOMPS. *Pfizer Worldwide R&D.*

4:00 R8 **227.16** MDMA-induced reductions in hippocampal parvalbumin interneurons is associated with NMDA receptor activation. S. A. COLLINS*; G. A. GUDELSKY; B. K. YAMAMOTO. *Univ. of Toledo, Univ. of Cincinnati.*

1:00 R9 **227.17** ● An early exposure to general anesthesia modulates gene expression in the developing rat subiculum. H. OSURU; L. DALLA MASARA; A. OKLOPCIC; V. JEVTOVIC-TODOROVIC*. *Univ. Virginia.*

2:00 R10 **227.18** Egb761 attenuates zinc-induced tau phosphorylation at Ser262 via GSK3β regulation in rat primary cortical neurons. K. KWON*; E. LEE; K. CHO; S. YANG; M. KO; C. SHIN; S. HAN. *Konkuk Univ., CGNR, IBST, Konkuk Univ. Sch. of Med., CGNR, IBST, Konkuk Univ. Sch. of Med., CGNR, IBST, Konkuk Univ. Sch. of Med.*

3:00 R11 **227.19** Early exposure to general anesthesia alters developmental synaptic transmission and excitability. N. LUNARDI*; M. R. DIGRUCCIO; S. M. TODOROVIC; V. JEVTOVIC-TODOROVIC. *Univ. of Virginia Hlth. Syst., Univ. of Virginia.*

4:00 R12 **227.20** Selective sigma receptor ligands attenuate methamphetamine-induced neurotoxicity and genetic alterations in the striatum: Microarray study and validation of select targets. R. R. MATSUMOTO*; M. J. ROBSON; N. KAUSHAL; A. COOP. *West Virginia Univ., Univ. of Maryland.*

1:00 S1 **227.21** Cerebromicrovascular human endothelium: Characterization of functional responses induced by arachidonoyl serine. T. KINO; T. TOMORI; P. CASTRI; Y. CHEN; F. LENZ; R. ABUTARBOUSH*; R. MCCARRON; M. SPATZ. *Naval Med. Res. Ctr., Naval Med. Res. Ctr., Natl. Inst. of Hlth., Johns Hopkins Univ.*

POSTER

228. Gene Therapy

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 S2 **228.01** Choroid plexus-directed gene therapy as a source of alpha-N-acetyl-glucosaminidase-IGF2 fusion protein in Sanfilippo B mice. S. KAN*; S. Q. LE; M. HADDAD; E. CHOI; A. DONSANTE; S. G. KALER; P. I. DICKSON. *LA Biomed At Harbour UCLA, Eunice Kennedy Shriver Natl. Inst. of Child Hlth. and Develop. at the Natl. Inst. of Hlth.*

2:00 S3 **228.02** P11 gene therapy for Parkinson's disease L-Dopa induced dyskinesias. R. MARONGIU*; M. ARANGO-LIEVANO; A. FELIZ; A. CENCI NILSSON; P. GREENGARD; M. G. KAPLITT. *Weill Med. Col. of Cornell Univ., Lund Univ., The Rockefeller Univ.*

3:00 S4 **228.03** Transduction with hRheb(S16H) induces the production of ciliary neurotrophic factor and its receptor in the nigral dopaminergic neurons *in vivo.* K. JEONG*; J. NAM; R. E. BURKE; B. JIN; S. KIM. *Kyungpook Natl. Univ., KNU Creative BioResearch Group (BK21 plus program), Neurodegeneration Control Res. Ctr., Columbia Univ., Columbia Univ., Kyung Hee Univ., Inst. of Life Sci. & Biotech., Brain Sci. and Engin. Institute, Kyungpook Natl. Univ.*

4:00 S5 **228.04** Recombinant adeno-associated and lentiviral vector transduction efficiency in the young adult and aged rat midbrain. N. POLINSKI*; F. P. MANFREDSSON; M. BENSKEY; C. J. KEMP; N. C. KUHN; A. COLE-STRAUSS; K. STEECE-COLLIER; K. L. PAUMIER; J. W. LIPTON; C. E. SORTWELL. *Michigan State Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 S6 **228.05** Cell surface receptor targeting expanded: From oncolytic viruses to lentiviral and AAV vector. T. ABEL*; R. C. MÜNCH; C. J. BUCHHOLZ. *Paul-Ehrlich-Institut.*

2:00 S7 **228.06** Gene therapy for spinal cord injury using hypoxia-inducible neuron-specific VEGF expression system. Y. YUN*; D. YOON; M. LEE; Y. HA. *Yonsei Univ., Yonsei Univ., Hanyang Univ.*

3:00 S8 **228.07** Mito-mouse model of Leber hereditary optic neuropathy and the rescue. H. YU*; J. GUY. *Bascom Plamer Eye Inst.*

4:00 S9 **228.08** A comparison of effects of (i) AAV-mediated delivery of NG2 function-neutralizing antibody (AAV-NG2Ab), (ii) delivery of NG2-Ab via intrathecal mini-pumps and (iii) intraspinal injections of Chondroitinase-ABC on synaptic transmission and functional recovery after SCI in adult rats. Translational potential of treatments for clinical application. V. L. ARVANIAN*; H. PETROSYAN; V. ALESSI; S. SANDLER; J. LEVINE. *VA Med. Ctr., Stony Brook Univ.*

1:00 S10 **228.09** Non-invasive widespread gene delivery to rat striatum using MRI-guided focused ultrasound. M. A. STAVARACHE*; J. MARKUS; J. T. SCHWARZ; Z. ROSENFELD; S. A. MUSATOV; M. G. KAPLITT. *Weill Cornell Med. Coll, Weill Cornell Med. Coll.*

2:00 S11 **228.10** Development of tissue-specific gm-csf gene expressing system and combined cell therapy in spinal cord injury model. Y. YOU*; J. OH; D. YOON; Y. HA. *Yonsei Univ., Yonsei Univ.*

3:00 S12 **228.11** *In vivo* adeno-associated virus 1 transduction with hRheb(S16H) protects hippocampal neurons by the production of brain-derived neurotrophic factor. M. JEON*; J. NAM; H. KIM; N. KHOLODILOV; R. E. BURKE; B. JIN; S. KIM. *Kyungpook Natl. Univ., Kyungpook Natl. Univ., Kyung Hee Univ., Kyung Hee Univ., Columbia Univ., Columbia Univ., Kyungpook Natl. Univ., Brain Sci. and Engin. Institute, Kyungpook Natl. Univ.*

4:00 T1 **228.12** Assessing early and late gene therapy intervention using adeno-associated virus serotype 9 in a mouse model of Rett syndrome. K. K. E. GADALLA; M. E. S. BAILEY; P. ROSS; S. J. GRAY; S. R. COBB*. *Univ. of Glasgow, Pharmacol. Department, Fac. of Medicine, Tanta Univ., Sch. of Life Sciences, Col. of Medical, Vet. and Life Sciences, Univ. of Glasgow, Univ. of North Carolina Gene Therapy Center, Chapel Hill, NC, Univ. of North Carolina Dept. of Ophthalmology, Chapel Hill, NC.*

1:00 T2 **228.13** Clinical grade-MSCs for the treatment of brain tumor after retroviral transduction of a cytosine deaminase gene. S. LEE*; J. PARK; D. CHANG; J. JUNG; J. PARK; Y. LEE; H. SUH-KIM; S. KIM*. *Ajou Univ. Sch. of Med., Ajou Univ. Sch. of Med., Ajou Univ. Sch. of Med.*

POSTER

229. Psychosis: Neuropathology

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 T3 **229.01** Immunoaffinity isolation of COPII vesicles from human brain. S. D. YATES*; J. H. MEADOR-WOODRUFF. *Univ. of Alabama at Birmingham, Evelyn F. McKnight Brain Inst.*

2:00 T4 **229.02** Circadian rhythm abnormalities of somatostatin expression in the amygdala of subjects with bipolar disorder. H. PANTAZOPOULOS*; J. WISEMAN; M. MARKOTA; L. EHRENFELD; S. BERRETTA. *Harvard Med. School, McLean Hosp., Mclean Hosp., Harvard Med. Sch., Mclean Hosp.*

3:00 T5 **229.03** Tyrosine hydroxylase levels in the caudate, putamen, and nucleus accumbens in postmortem schizophrenia. L. A. MCCOLLUM*; C. K. WALKER; R. E. MCCULLUMSMITH; R. C. ROBERTS. *Univ. Alabama, Birmingham, Cincinnati Col. of Med.*

4:00 T6 **229.04** Abnormal expression of adaptor protein complex subunits in the superior temporal gyrus in schizophrenia. S. L. MOORE*, JR; V. HAROUTUNIAN; J. H. MEADOR-WOODRUFF. *Univ. of Alabama At Birmingham, Mt. Sinai Sch. of Med.*

1:00 T7 **229.05** A redox dysregulation affects the integrity and function of the fornix / fimbria and anterior commissure: Relevance to schizophrenia. P. STEULLET*; A. CORCOBA; P. S. BAUMANN; A. GRIFFA; J. DUARTE; Y. VAN DE LOOIJ; C. FERRARI; J. THIRAN; M. CUENOD; P. HAGMANN; P. CONUS; R. GRUETTER; K. Q. DO. *Ctr. For Psychiatric Neurosciences, Ecole Polytechnique Fédérale de Lausanne, Lausanne Univ. Hosp., Ecole Polytechnique Fédérale de Lausanne, Lausanne Univ. Hosp.*

2:00 T8 **229.06** Double labeled quantitative immunohistochemistry of midbrain dopamine neurons in human brain. M. S. SIMMONS*; J. MEADOR-WOODRUFF. *UAB.*

3:00 T9 **229.07** RCAN1/CaN signaling modulates behavioral expression in schizophrenia. P. CAIN*; J. LEVENGA; H. WONG; A. FALKNER; M. ROCHE; B. ROTHERMEL; C. HOEFFER. *Excelsior Col., Univ. of Colorado at Boulder, New York Univ., Univ. of Texas Southwestern Med. Ctr.*

4:00 T10 **229.08** ▲ Abnormal protein levels of cytosolic chaperone subunits in the superior temporal gyrus in patients with schizophrenia. C. E. REMEDIES*; S. D. YATES; V. HAROUTUNIAN; J. H. MEADOR-WOODRUFF. *UAB, UAB, Mt. Sinai Sch. of Med.*

1:00 T11 **229.09** ● Detailed characterization of olfactory cells via nasal biopsy: Surrogate biospecimens to define brain-relevant molecular and functional changes. Y. CHUNG*; S. NARAYAN; H. YUKITAKE; T. TSUJIMURA; N. J. GAMO; T. MASEDA; Y. HORIUCHI; S. KANO; K. ISHIZUKA; A. SAWA. *Johns Hopkins Univ. Sch. of Med.*

2:00 T12 **229.10** ● The differential effects of Activin and TGFbeta on signaling pathway transduction in mouse primary neurons. Q. CHEN*; K. TAJINDA; C. HAN; S. MIYAKE; N. M. WALTON; M. MATSUMOTO. *Neuroscience, Astellas Res. Inst. of Ameri, Master of Biotech. program, Northwestern Univ.*

3:00 U1 **229.11** ER stress and unfolded protein response in schizophrenia. P. KIM*; V. HAROUTUNIAN; J. MEADOR-WOODRUFF. *Univ. of Alabama At Birmingham, Sch. of Med., Mt. Sinai Sch. of Med., Univ. of Alabama at Birmingham.*

4:00 U2 **229.12** ● Altered cortical expression of immediate early gene NARP in schizophrenia: Impact on parvalbumin neurons. S. KIMOTO*; M. ZAKI; H. H. BAZMI; D. A. LEWIS. *Univ. of Pittsburgh, Nara Med. Univ.*

1:00 U3 **229.13** Altered ErbB4 splicing is associated with lower cortical parvalbumin expression in schizophrenia. D. W. CHUNG*; D. ARION; D. A. LEWIS. *Univ. of Pittsburgh.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 U4 **229.14** ● Lower GAD65 mRNA and protein levels in the prefrontal cortex of schizoaffective but not schizophrenia subjects. J. R. GLAUSIER*; S. KIMOTO; K. N. FISH; D. A. LEWIS. *Univ. Pittsburgh.*

3:00 U5 **229.15** Differential alterations of perineuronal net components in the dorsolateral prefrontal cortex of subjects with schizophrenia. J. F. ENWRIGHT*, III; A. FOGLIO; R. BERRY; S. SANAPALA; D. ARION; K. FISH; D. LEWIS. *Univ. of Pittsburgh Med. Ctr., Univ. of Pittsburgh.*

4:00 U6 **229.16** Altered Cdc42 signaling pathway in cortical layer 3 pyramidal cells in schizophrenia. D. DATTA*; D. ARION; D. A. LEWIS. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 U7 **229.17** Whole-transcriptome analysis of hippocampal ca3 and gene verification in schizophrenia. J. M. PEREZ*; K. GLEASON; S. GHOSE; H. HUANG; T. HWANG; T. KIM; C. A. TAMMINGA. *UT Southwestern.*

2:00 U8 **229.18** ● Molecular characteristics of cerebral networks for psychosis. W. LI; N. SAMUDRA; C. MEYER; K. GLEASON; E. I. IVLEVA; S. GHOSE; C. A. TAMMINGA*. *Univ. Texas Southwestern Med. Ctr., Univ. Texas Southwestern Med. Ctr.*

3:00 U9 **229.19** ● Haloperidol-exposure does not affect schizophrenia-linked reductions in microtubule associated protein 2 immunoreactivity. M. A. SHELTON*; J. T. NEWMAN; H. GU; A. R. SAMPSON; K. N. FISH; P. P. PENZES; D. A. LEWIS; R. A. SWEET. *Univ. of Pittsburgh, Univ. of Pittsburgh, Northwestern Univ. Feinberg Sch. of Med., Univ. of Pittsburgh, VA Pittsburgh Healthcare Syst.*

4:00 U10 **229.20** ● Loss of pattern separation performance and fMRI BOLD activation in schizophrenia. T. DAS; E. I. IVLEVA*; C. E. L. STARK; A. WAGNER; C. A. TAMMINGA. *Univ. Texas Southwestern Med. Ctr., UT Southwestern Med. Center, Dept. of Psychiatry, UC Irvine, Stanford Univ.*

1:00 U11 **229.21** Prefrontal cortical interneuron transplants reverse deficits in reversal learning in a rodent model of schizophrenia. A. M. BOLEY*; S. M. PEREZ; D. J. LODGE. *UTHSCSA.*

2:00 U12 **229.22** ▲ Cell adhesion molecules in psychiatric diseases and aging. T. BUTT; A. SANTIAGO; A. DWORK; G. ROSOKLIJA; V. ARANGO; R. HEN; J. MANN; M. BOLDRINI*. *Columbia Univ., NYSPI, Columbia Univ. - NYSPI.*

POSTER

230. Systems-Oriented Models of Schizophrenia

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 U13 **230.01** Alterations in the structure, plasticity and connectivity of inhibitory networks in a double hit model of schizophrenia. C. GARCÍA MOMPÓ*; E. CASTILLO-GÓMEZ; B. RIPOLL-MARTÍNEZ; Y. CURTO-SASTRE; J. GILABERT-JUAN; J. NÁCHER. *Universitat De València.*

2:00 U14 **230.02** ● Ventral pallidum is key to the endocannabinoid regulation of dopamine system function in a rodent model of schizophrenia. D. D. AGUILAR*; L. CHEN; D. J. LODGE. *UTHSCSA, Med. Sch. of Xi'an Jiaotong Univ.*

3:00 U15 **230.03** Impact of age and chronic ketamine treatment on parvalbumin expression in rats: Evidence for variation in protein expression. J. A. CORRIVEAU*; C. MCMAHON; J. J. CHROBAK. *Univ. of Connecticut.*

4:00 U16 **230.04** NMDA receptor antagonist-induced changes in rat EEG power spectra as a model of schizophrenia. N. UPTON*; G. WADSWORTH; K. WATERS; D. VIRLEY. *Transpharmation Ltd.*

1:00 U17 **230.05** Characterization of a mouse model of the human 22q11.2 microdeletion syndrome. J. B. LAURIDSEN*; K. FEJGIN; F. GASTAMBIDE; S. NILSSON; V. NIELSEN; D. CLAUSEN; P. H. LARSEN; M. TRICKLEBANK; T. BUSSEY; L. M. SAKSIDA; M. DIDRIKSEN; J. NIELSEN. *H. Lundbeck A/S, Eli Lilly & Co. Ltd., Univ. of Cambridge.*

2:00 U18 **230.06** Brain oscillatory patterns in 22q11.2 transgenic mice model of schizophrenia. Interaction with non-competitive NMDA-R antagonists. L. LLADÓ-PELFORT; P. CELADA*; F. ARTIGAS. *IIBB (CSIC-IDIBAPS), CIBERSAM.*

3:00 U19 **230.07** Gamma rhythms link interneuron dysfunction with cognitive inflexibility in Dlx5/6+/- mice. K. K. CHO*; R. HOCH; A. T. LEE; T. PATEL; J. L. R. RUBENSTEIN; V. S. SOHAL. *UCSF.*

4:00 U20 **230.08** Dopaminergic responses in shell part of the nucleus accumbens to MK801 administration are disrupted in adult rats after neonatal prefrontal cortex transient inactivation. T. POUVREAU; E. TAGLIABUE; S. EYBRARD; F. MEYER; A. E. LOUILOT*. *INSERM U1114-Fac. of Medicine- Uds, Donders Inst. for Brain, Cognition and Behaviour NCMLS.*

1:00 U21 **230.09** Quantitative EEG and hippocampal-prefrontal cortex synchrony in Df(h22q11)/+ mice, a model of high risk schizophrenia. S. TAKILLAH; J. NAUDÉ; P. FAURE; C. SEBBAN; B. DECROS; M. SPEDDING; E. SCHENKER; J. J. MARIANI*. *Sorbonne Universités, UPMC Univ. Paris 06, 9 quai St Bernard, Hôpital Charles Foix, 7 avenue de la République, Sorbonne Universités, UPMC Univ. Paris 06, Paris Seine Neurosci. Institut,9 quai St Bernard, Les laboratoires Servier, 50 rue Carnot, Inst. de Recherches Servier,125 Chemin de ronde, UMR 8526 B2A Biol. Adaptation and Ageing, UPMC and CNRS.*

2:00 U22 **230.10** Synaptic plasticity dysfunction in a model of psychosis-like behavior. M. G. HERNANDEZ*; I. RUÍZ-PÉREZ; C. LÓPEZ-RUBALCAVA; E. J. GALVAN. *CINVESTAV SUR.*

3:00 U23 **230.11** Comparing the response of ventral tegmental area and substantia nigra neurons during acquisition and maintenance of a reward-mediated instrumental task. M. A. WEGENER*; B. MOGHADDAM. *Ctr. For Neurosci. Univ. of Pittsburgh.*

4:00 U24 **230.12** Rescue of the trafficking deficient schizophrenia associated KCNH2 splice variant hERG 3.1 for the purpose of drug discovery. N. E. CALCATERRA; J. C. BARROW*. *Johns Hopkins Sch. of Med., Johns Hopkins Univ.*

1:00 U25 **230.13** Correlating ventral hippocampal lesion volume with working memory performance in an animal model of schizophrenia. T. BADIUDEEN*; J. M. HYMAN; J. K. SEAMANS. *Univ. of British Columbia.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 U26 **230.14** Impaired generation of high frequency oscillations in a rat model of schizophrenia. L. R. HARMS; D. M. HODGSON; W. R. FULHAM; A. S. W. WONG; M. PENTTONEN; U. SCHALL; J. TODD; P. T. MICHIE*. *Univ. of Newcastle, Schizophrenia Res. Inst., Univ. of Newcastle, Univ. of Newcastle, Univ. of Jyväskylä, Univ. of Newcastle.*

3:00 U27 **230.15** Investigation of schizophrenia-related behavioural phenotypes following early versus late gestation maternal immune activation in a rat model. C. L. MEEHAN*; J. FROST; L. R. HARMS; D. M. HODGSON; U. SCHALL; J. TODD; K. ZAVITSANOU; C. SHANNON-WEICKERT; P. MICHIE. *Univ. of Newcastle, Univ. of Newcastle, Univ. of New South Wales.*

4:00 U28 **230.16** Altered cortical neuronal avalanches in a rat model of schizophrenia. S. SESHADRI*; D. PLENZ. *NIMH.*

1:00 U29 **230.17** The effects of the maternal immune activation and MK-801 models of schizophrenia on mismatch negativity-like responses in awake, freely-moving rats. L. R. HARMS*; D. M. HODGSON; W. R. FULHAM; M. PENTTONEN; U. SCHALL; J. TODD; P. T. MICHIE. *The Univ. of Newcastle, Univ. of Jyväskylä.*

2:00 U30 **230.18** Contribution of a novel neuronal inhibitor to the cellular and behavioral deficits observed in a mouse model of 22q11.2 microdeletion-related schizophrenia. A. DIAMANTOPOULOU*; B. XU; Z. SUN; K. FÉNELON; M. KARAYIORGOU; J. A. GOGOS. *Columbia Univ., Univ. of Texas at El Paso.*

3:00 U31 **230.19** Striatonigral contribution to individual variability in susceptibility to chronic haloperidol-induced vacuous chewing movements. S. E. BACHUS*; C. BLANCHARD. *George Mason Univ., George Mason Univ.*

4:00 U32 **230.20** ● 15q13 microdeletion syndrome - characterization of homozygous knockout mice. A. FORSINGDAL*; J. NIELSEN. *H. Lundbeck A/S, Univ. of Copenhagen.*

1:00 U33 **230.21** Human iPSC glial mouse chimeras reveal glial contributions to schizophrenia. J. MUNIR; J. BATES; S. SCHANZ; S. WANG; M. S. WINDREM*; R. FINDLING; P. TESAR; S. A. GOLDMAN. *Univ. of Rochester Med. Ctr., Johns Hopkins, Case Western Reserve Univ.*

2:00 U34 **230.22** Regulation of BDNF exocytosis and GABAergic interneuron synapse by the schizophrenia susceptibility gene, dysbindin-1. H. S. JE*; Y. QIANG; N. HUSAIN; Y. XIAO; W. HAN. *Program In Neurosci. and Behavioral Disorders, Duke-NUS GMS, SBIC.*

3:00 U35 **230.23** ● Pathologically accumulated GAPDH in the lysosomes is associated with augmented autofluorescence in cells from patients with schizophrenia. A. RAMOS*; T. TSUJIMURA; T. SAITOH; F. EMILIANI; C. LIN; N. J. GAMO; M. KOGA; T. MASEDA; T. G. SEDLAK; C. KORTH; Y. HORIGUCHI; K. TAGUCHI; K. ISHIZUKA; A. SAWA. *Johns Hopkins Univ. Sch. of Med., Aomori Univ., Heinrich Heine Univ. of Düsseldorf, Showa Pharmaceut. Univ.*

4:00 U36 **230.24** Age-dependent decrease in Parvalbumin interneuron density and in inhibitory transmission in hippocampal area CA2 in the 22q11.2 mouse model of schizophrenia. V. CHEVALEYRE*; R. A. PISKOROWSKI; J. MUKAI; S. A. SIEGELBAUM; J. A. GOGOS. *Univ. Paris Descartes, CNRS8118, Columbia Univ.*

1:00 V1 **230.25** ● ▲ A novel function for matrix metalloproteinases in animal models of mood disorders and schizophrenia. K. ARDHANAREESWARAN*; N. WELTY; H. DUYTSCHAEVER; B. LORD; J. KANERVA; A. BITTNER; L. VER DONC; M. LETAVIC; P. BONAVENTURE; G. CHEN; T. LOVENBERG; J. R. SHOBLOCK. *Yale Univ., Janssen Res. & Development, L.L.C., Yale Univ. Sch. of Med., Duke Univ. Med. Ctr.*

2:00 V2 **230.26** Prefrontal cortex and dopamine single neuron spike rates and LFP phase represent time over distinct scales. B. MOGHADDAM*; N. K. B. TOTAH. *Univ. Pittsburgh, Max Planck Inst. for Biol. Cybernetics.*

POSTER

231. Nicotine: Reward and Seeking

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 V3 **231.01** Nicotine, even at low doses, suppresses body weight gain independent of food intake. L. RUPPRECHT*; T. T. SMITH; R. L. SCHASSBURGER; D. M. BUFFALARI; E. C. DONNY; A. F. SVED. *Univ. of Pittsburgh.*

2:00 V4 **231.02** Self-administration of cigarette smoke extract vs. nicotine alone in adolescent and adult male rats. C. GELLNER*; H. R. SMITH; S. L. DO; P. KAUR; S. SALSABILIAN; J. M. L. DEGUZMAN; J. D. BELLUZZI; F. M. LESLIE. *Univ. of California, Irvine.*

3:00 V5 **231.03** Rats that self-administer cigarette smoke extract are more sensitive to drug-induced relapse. D. REYNAGA*; J. BELLUZZI; F. LESLIE. *Univ. of California Irvine.*

4:00 V6 **231.04** Differential effects of tobacco smoke containing either high or low levels of nicotine during adolescence on novelty seeking and anxiety-like behaviors. D. P. BRANCO*; M. CORREA-SANTOS; C. C. FILGUEIRAS; C. C. CAVINA; V. F. NAIFF; A. C. MANHÃES; A. RIBEIRO-CARVALHO; Y. ABREU-VILLAÇA. *Univ. do Estado do Rio de Janeiro.*

1:00 V7 **231.05** ▲ Phosphorylation of mGluR1/5 by protein kinases after nicotine challenge. I. RYU*; J. KIM; E. CHOE. *Pusan Natioanl Univ.*

2:00 V8 **231.06** Acute nicotine delays extinction of contextual fear in mice. M. G. KUTLU; T. J. GOULD*. *Temple Univ.*

3:00 V9 **231.07** The effect of appetitive interoceptive conditioning on nicotine reinforcement: A novel nicotine self-administration model. S. CHARNTIKOV*; S. PITTENGER; N. SWALVE; R. BEVINS. *Univ. of Nebraska-Lincoln.*

4:00 V10 **231.08** Individual differences in forced and free-choice novelty differentially predict nicotine sensitization behaviors. A. M. FALCO*; R. A. BEVINS. *Univ. of Nebraska-Lincoln.*

1:00 V11 **231.09** Neuroanatomic mapping of dopamine D1 receptor involvement in nicotine self-administration in rats. B. J. HALL*; S. SLADE; C. ALLENBY; E. D. LEVIN. *Duke Univ. Med. Ctr.*

2:00 V12 **231.10** Serotonin receptor type1 function in nicotine-induced locomotor behavior. H. SCHNEIDER*; B. F. KOPECKY; N. J. SNYDER; S. OWIREDU; E. E. CLOR; S. INDIA-ALDANA; K. Y. CHEN. *Depauw Univ.*

● Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 V13 **231.11** Dextromethorphan interactions with the histaminergic H1 antagonist pyrilamine and the serotonergic 5HT2c agonist lorcaserin to reduce nicotine self-administration in rats. S. A. BRIGGS; C. WELLS; S. SLADE; M. MORRISON; P. JASKOWSKI; J. E. ROSE*; E. D. LEVIN. *Duke Univ.*

4:00 V14 **231.12** Nicotine-suppressive properties of the high affinity $\alpha3\beta4$ nAChR ligand AT-1001 are different than those of varenicline. A. CIPPITELLI*; J. WU; K. GAIOLINI; J. SCHOCH; G. BRUNORI; R. CICCOCIOPPO; N. ZAVERI; L. TOLL. *Torrey Pines Inst. For Mol. Studies, Univ. of Camerino, Astraea Therapeut. LLC.*

1:00 V15 **231.13** Hippocampus goes depression: Structural and functional correlates of negative mood states after smoking cessation. F. WUTTIG*; N. B. KROEMER; C. BURRASCH; M. N. SMOLKA. *Technische Univ. Dresden.*

2:00 V16 **231.14** Attenuating combined cue and prime-induced reinstatement of nicotine-seeking following chronic dosing of the novel D3-receptor antagonist PF-04363467. E. R. DUNN-SIMS*; A. ROSADO; A. FOOTE; C. TYSZKIEWICZ; N. C. STRATMAN; C. J. SCHMIDT; A. SAWANT-BASAK; A. N. MEAD; T. T. WAGER; T. A. CHAPPIE. *Pfizer Inc, Pfizer Inc.*

3:00 V17 **231.15** Maternal care deprivation and chronic alcohol consumption prevents conditioned place preference to nicotine in rats. *R. GARCÍA-RUIZ; I. ALVORADO-CAPULEÑA; A. FARJADO, A. BECERNIL; M. MENDEZ-DIAZ; O. PROSPÉRO-CARCÍA. *UNAM.*

4:00 V18 **231.16** Choice between nicotine and sucrose in rats as a model of the development, maintenance, and treatment of tobacco use. L. V. PANLILIO*; L. HOGARTH; M. SHOAIB. *NIDA-IRP, Univ. of Exeter, Newcastle Univ.*

1:00 V19 **231.17** The rewarding and reinforcing effects of nicotine in drug-naïve, nicotine pretreated, or tobacco smoke pre-exposed adolescent and adult rats. A. H. MUHAMMAD*; J. DE LA PENA; C. BOTANAS; R. TAMPUS; N. JEONG; J. KIM; H. KIM; J. CHEONG. *Uimyung Res. Inst. for Neurosci.*

2:00 V20 **231.18** Paternal nicotine self-administration is associated with increased acquisition and maintenance of nicotine taking in offspring. A. C. ARREOLA*; B. A. KIMMEY; H. D. SCHMIDT. *Univ. of Pennsylvania.*

3:00 V21 **231.19** Fatty acid amide hydrolase (FAAH) inhibition blocks abuse-related effects of nicotine in squirrel monkeys. S. R. GOLDBERG*; L. V. PANLILIO; G. H. REDHI; G. MORENO-SANZ; S. I. CHEFER; S. YASAR; D. PIOMELLI; Z. JUSTINOVA. *NIDA, IRP, NIH, DHHS, Univ. of California Irvine, NIAID, NIH, DHHS, Johns Hopkins Univ. Sch. of Med.*

4:00 V22 **231.20** Monoamine oxidase (MAO) inhibition decreases the threshold for nicotine self-administration in rats. T. T. SMITH; R. L. SCHASSBURGER; L. E. RUPPRECHT; S. N. CWALINA; D. M. BUFFALARI; S. ALI; E. C. DONNY; A. F. SVED*. *Univ. Pittsburgh, Natl. Ctr. for Toxicological Res.*

1:00 V23 **231.21** Nicotine and alcohol induce inhibition of medial vta dopaminergic neurons. S. VALVERDE; R. EDDINE; F. MARTI; S. TOLU; A. HAY; C. MOREL; Y. CUI; D. DAUTAN; R. HEPP*; L. VENANCE; B. LAMBOLEZ; P. FAURE. *UPMC, INSERM UMR-S 1130, CNRS UMR 8246, INSERM U667.*

2:00 V24 **231.22** Repeated nicotine exposure in rats: Alteration of medial habenula and blockade effect of oxytocin. H. LEE*; J. NOH. *Dankook Univ., Dankook Univ.*

3:00 V25 **231.23** The effects of varenicline, bupropion, lorcaserin, and naltrexone on nicotine-enhanced responding for a conditioned reinforcer. E. G. GUY*; D. C. FISHER; G. A. HIGGINS; P. J. FLETCHER. *Univ. of Toronto, Ctr. for Addiction and Mental Hlth., Univ. of Toronto, InterVivo Solutions, Univ. of Toronto, Univ. of Toronto.*

4:00 V26 **231.24** Smoking moderates association of 5-HTTLPR and *in vivo* availability of serotonin transporters. M. N. SMOLKA*; M. REIMOLD; A. KOBIELLA; G. REISCHL; M. RIETSCHEL; A. HEINZ. *Technische Univ. Dresden, Univ. Tübingen, Central Inst. of Mental Hlth., Charité.*

1:00 V27 **231.25** Neuroanatomical location of orexin projecting nerve fibers in mesocorticolimbic pathways of GAD67-GFP knock-in mice. O. DEHKORDI*; J. E. ROSE; S. ASADI; R. M. MILLIS; A. J. TROUTH. *Howard Univ., Duke Univ. Med. Ctr.*

2:00 V28 **231.26** ● Menthol speeds the desensitization of human $\alpha3\beta4$ nicotinic acetylcholine Receptors. H. TON*; A. SMART; T. XIE; K. J. KELLAR; G. P. AHERN. *Georgetown Univ.*

3:00 V29 **231.27** Menthol induces anesthetic effects mediated by GABAA-receptors in fishes. M. KASAI*. *Kagoshima Univ.*

4:00 V30 **231.28** ▲ A menthol conditioned reinforcer promotes acquisition of nicotine self-administration in rats. M. R. KELLICUT; A. M. BROWN; A. B. SHEPPARD; E. M. ODINEAL; M. I. PALMATIER*. *East Tennessee State Univ., East Tennessee State Univ.*

1:00 V31 **231.29** ▲ A chilling connection; menthol's effect on nicotinic acetylcholine receptor expression and synaptic structure in the rodent brain. S. P. BRIDGES*; J. R. KING; J. C. NORDMAN; P. MULDOON; M. LIZARRAGA; I. DAMAJ; N. KABBANI. *George Mason Univ., Virginia Commonwealth Univ.*

2:00 V32 **231.30** Menthol alone alters the number and assembly of $\alpha4\beta2$ and $\alpha6\beta2$* nAChRs. B. J. HENDERSON*; T. WALL; W. A. NICHOLS; R. SRINIVASAN; H. A. LESTER. *Caltech, Caltech.*

POSTER

232. Cocaine: Neural Mechanisms I

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 W1 **232.01** ▲ Metabotropic glutamate receptor 5 modulation within NAc shell during environmental elicited cocaine conditioning. K. TORRES*; A. MARTÍNEZ-RIVERA; D. SANTIAGO-TRISTANI; I. CARRO-CRUZ; A. ROSADO; C. S. MALDONADO-VLAAR. *Univ. De Puerto Rico, Rio Piedras.*

2:00 W2 **232.02** Sex differences in hippocampal activation during initial abstinence from cocaine: Effects of the beta-adrenergic antagonist, propranolol. A. S. KOHTZ*; J. I. OSBORNE; M. E. SMITH; A. M. CASON; G. ASTON-JONES. *Med. Univ. of South Carolina.*

3:00 W3 **232.03** The interaction between cocaine and ethanol within the nucleus accumbens shell. C. P. KNIGHT*; G. A. DEEHAN JR.; S. R. HAUSER; J. A. WILDEN; W. J. MCBRIDE; Z. A. RODD. *Indiana Univ. Sch. of Med., Louisiana State Univ. Hlth. Sci. Ctr.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 W4 **232.04** ● Retrospective carbon-14 birth dating demonstrates effects of cocaine and alcohol abuse on adult hippocampal cell turnover. H. DRUID; T. WARDI; K. ALKASS; S. BERNARD; S. P. GARAMSZEGI*; L. DUQUE; B. A. BUCHHOLZ; G. DHANABALAN; M. SALEHPOUR; K. SPALDING; D. C. MASH. *Karolinska Inst., Inst. Camille Jordan, Univ. of Lyon, Univ. of Miami, Lawrence Livermore Lab.*

1:00 W5 **232.05** Oligomers of orexin/hypocretin receptors, corticotropin-releasing factor receptors and σ1 receptors in the ventral tegmental area as targets for cocaine. C. R. QUIROZ*; G. NAVARRO; D. MORENO; A. SIERAKOWIAK; K. MCDOWELL; D. AGUINAGA; E. MORENO; F. HAUSCH; A. CORTES; J. MALLOL; V. CASADO; C. LLUIS; E. CANELA; P. MCCORMICK; S. FERRE. *NIDA, IRP, NIH, DHHS, University Of Barcelona, Max Planck Institute Of Psychiatry, University Of East Anglia.*

2:00 W6 **232.06** CB1 receptor involvement in reconsolidation of context-cocaine memories that drive instrumental drug-seeking behavior. M. A. PRESKER; S. J. STRINGFIELD; K. M. HARMON*; J. A. HIGGINBOTHAM; A. A. ARGUELLO; R. A. FUCHS. *Univ. of North Carolina, Washington State Univ.*

3:00 W7 **232.07** The dopamine-prefrontal-accumbens circuit and cocaine reinstatement behavior. M. H. JAMES*; G. ASTON-JONES. *Med. Univ. of South Carolina.*

4:00 W8 **232.08** Activated glutamatergic projections to the nucleus accumbens core vs. shell during cue-induced cocaine and sucrose seeking. E. M. MCGLINCHEY*; S. V. MAHLER; G. ASTON-JONES. *Med. Univ. of South Carolina.*

1:00 W9 **232.09** Orexin/hypocretin knockdown decreases cocaine seeking but does not alter cocaine taking. B. A. ZIMMER*; B. S. BENTZLEY; G. ASTON-JONES. *Med. Univ. of South Carolina.*

2:00 W10 **232.10** Incubation of cue-elicited cocaine-craving relates to sensitized glutamate release in the vmPFC. C. B. SHIN*; J. R. SHAHIN; M. M. SERCHIA; A. E. AGARONOVA; K. K. SZUMLINSKI. *Univ. of California, Santa Barbara.*

3:00 W11 **232.11** A novel combination treatment of levo-tetrahydropalmatine (l-THP) and low dose naltrexone (LDN) for the prevention of cocaine relapse. S. A. SUSHCHYK*; J. WANG; Z. XI. *Univ. of Maryland, Baltimore, Natl. Inst. on Drug Abuse.*

4:00 W12 **232.12** Neuropeptide Y attenuates cocaine-induced vocalizations and reinstatement behavior in the rat. L. M. STRAND*; C. P. KING; M. SUAREZ; E. NEILANS; D. HOLFOTH; J. M. DIPIRRO; M. L. DENT; A. C. THOMPSON. *Univ. at Buffalo, Buffalo State Col.*

1:00 W13 **232.13** Effects of caffeine and its primary metabolite, paraxanthine, administered alone or in combination with cocaine on intracranial self-stimulation in rats. M. F. LAZENKA*; F. G. MOELLER; S. S. NEGUS. *Virginia Commonwealth Univ., Virginia Commonwealth Univ.*

2:00 W14 **232.14** Role of Oxytocin on the anxiety environment-elicited cocaine seeking behavior and cocaine conditioning. A. MORALES-RIVERA*; J. PEREZ; C. M. COLON; C. PEREZ; C. S. MALDONADO. *Univ. Puerto Rico RCM, Univ. of Puerto Rico at Rio Piedras, Univ. of Puerto Rico at Bayamon.*

3:00 W15 **232.15** Potentiation of behavioral sensitization by the co-administration of methylenedioxypyrovalerone (MDPV) and cocaine in rodents. M. M. PEET*; E. L. HARVEY; J. L. WALTERS; L. E. BAKER. *MPI Res., Western Michigan Univ.*

4:00 W16 **232.16** Substance-specific influences of setting on drug reward: An ultrasonic vocalization study in rats self-administering heroin and cocaine. R. AVVISATI*; L. CONTU; E. STENDARDO; C. MONTANARI; M. L. SCATTONI; A. BADIANI. *Sapienza Univ. of Rome, Inst. Superiore di Sanità.*

1:00 W17 **232.17** ● The sensitivity of preclinical abuse potential models to detect reinforcing signals of the local anesthetic procaine. D. B. HORTON*; E. DUNN-SIMS; A. FOOTE; A. N. MEAD. *Pfizer, Inc.*

2:00 W18 **232.18** Cocaine addiction pharmacogenetics of buprenorphine therapy. D. A. NIELSEN*; R. WALKER; S. C. HAMON; M. H. HARDING; W. LING; T. R. KOSTEN. *Baylor Col. of Med., Michael E. DeBakey V.A. Med. Ctr., UT Southwestern, Statistical & Genet. Consulting LLC, UCLA.*

3:00 W19 **232.19** Cocaine self-administration results in a distinct epigenetic state in the dorsal medial prefrontal cortex. K. PLOENSE*; A. CARR; D. BAKER-ANDRESEN; N. WOODWARD; X. LI; Y. SUN; T. BREDY; T. KIPPIN. *Univ. of California Santa Barbara, Univ. of California Santa Barbara, Queensland Brain Inst., Univ. of California Los Angeles.*

4:00 W20 **232.20** Predisposing genetic differences in opioid peptides and receptors mRNA levels contribute to the escalation of cocaine intake in rats. M. VALENZA*; R. PICETTI; V. YUFEROV; M. KREEK. *Rockefeller Univ.*

1:00 W21 **232.21** Neuron-subtype specific transcriptional changes following cocaine self-administration in mice. E. C. ANDRADE*; E. F. SCHMIDT; J. L. WARNER-SCHMIDT; J. ALVAREZ; S. B. PICKETT; P. GREENGARD; N. HEINTZ. *The Rockefeller Univ., The Rockefeller Univ.*

2:00 W22 **232.22** Nicotine and Cocaine induce temporally-regulated, drug-specific and genome-wide changes in nucleosome occupancy. A. N. BROWN*; J. H. DENNIS; P. G. BHIDE. *Ctr. for Brain Repair, Biomed. Sci., Florida State Univ., Florida State Univ. Col. of Med.*

3:00 W23 **232.23** Alterations in behavioral regulation and Pavlovian conditioning in cadherin-13 (Cdh13) knock-out rats. C. P. KING; C. VERSAGGI; L. MILITELLO; J. CATLIN; A. A. PALMER; J. B. RICHARDS; P. MEYER*. *Univ. at Buffalo, Univ. at Buffalo, Univ. of Chicago.*

POSTER

233. Catecholamines and Behavior

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 W24 **233.01** Behavioural consequences of monoamines signaling alterations in the new conditional VMAT2 mutant mice. Q. RAINER*; E. ISINGRINI; L. PERRET; M. DESAULNIERS; L. MOQUIN; A. GRATTON; B. GIROS. *Douglas Mental Hlth. Univ. Inst.*

2:00 W25 **233.02** Norepinephrine (NE) function in basal and acute stress conditions with a new NE depletion model: the conditional VMAT2 knockout mice. L. C. PERRET*; E. ISINGRINI; L. MOQUIN; M. DESAULNIERS; A. GRATTON; B. GIROS. *Douglas Institute, McGill Univ.*

3:00 W26 **233.03** Unravelling norepinephrine function in cognition with the new conditional VMAT2 knock-out mice with brain-specific norepinephrine depletion. E. ISINGRINI*; L. PERRET; N. EILSTEIN; V. GORGIEVSKI; E. GUMA; M. DESAULNIERS; L. MOQUIN; A. GRATTON; B. GIROS. *McGill University, Douglas Inst.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 W27 **233.04** ● Binge-eating behaviour produces alterations in dopaminergic neurochemistry in the brains of rats. S. C. CHEETHAM*; J. GOSDEN; M. R. PROW; P. H. HUTSON; D. J. HEAL. *RenaSci Ltd, Shire Develop. Inc.*

1:00 W28 **233.05** Selective dopamine and noradrenergic antagonist oppositely modulate the PFC neuronal activity following chronic MPD exposure. N. DAFNY*; C. CLAUSSEN. *Univ. Texas Med. Sch.*

2:00 W29 **233.06** Differential expression of dopamine signaling proteins in Wfs1-deficient mice. T. VISNAPUU*; K. ESKLA; R. REIMETS; H. LUUK; A. TERASMAA; C. A. HUNDAHL; E. VASAR. *Univ. of Tartu.*

3:00 W30 **233.07** Phenotypical, behavioral and pharmacological characterization of a novel Knockout Rat model lacking the Dopamine Transporter. P. ILLIANO; D. LEO; I. SUKHANOV; L. MUS; S. ESPINOZA; T. D. SOTNIKOVA; M. C. HOENER; R. R. GAINETDINOV*. *Inst. Italiano Di Tecnologia, Neurosci. Research, Pharmaceuticals Division, F. Hoffmann-La Roche Ltd.*

4:00 W31 **233.08** Dopamine D1 antagonist prevents and D2 antagonist attenuates methylphenidate eliciting behavioral sensitization. C. CLAUSSEN; J. ARONOWSKI*; N. DAFNY. *Univ. Texas HSC - Houston.*

1:00 W32 **233.09** DREADD'ed addiction: Investigating the effect of DREADD-mediated modulation of G-protein coupled signaling in lateral habenula neurons projecting to the ventral tegmental area on cocaine self-administration and reinstatement in rats. S. G. NAIR*; D. SMIRNOV; J. F. NEUMAIER. *Univ. of Washington, Univ. of Washington.*

2:00 W33 **233.10** ● Selective D1 agonists induce head twitch response in mice: Implications for modeling comorbid Tourette's syndrome and obsessive-compulsive disorder. L. M. KLEIN*; M. A. GEYER; A. L. HALBERSTADT. *Univ. of California At San Diego, Univ. of California At San Diego.*

3:00 W34 **233.11** Behavioral economics in dopamine D2-like receptor mutant mice. P. L. SOTO*; T. HIRANITA; M. XU; D. K. GRANDY; J. L. KATZ. *Texas Tech. Univ., U.S. Food and Drug Admin., Univ. of Chicago, Oregon Hlth. & Sci. Univ., Natl. Inst. on Drug Abuse.*

4:00 W35 **233.12** Increased mesocorticolimbic dopamine before, during, and after social defeat stress: Role of corticotropin releasing factor receptors in the ventral tegmental area. E. N. HOLLY*; J. F. DEBOLD; K. A. MICZEK. *Tufts Univ.*

1:00 W36 **233.13** Pharmacology in sexually sluggish male Wistar rats: A new animal model to examine serotonin 5-HT_{1A} and dopamine disorders? J. S. CHAN*; E. Y. BIJLSMA; M. F. H. VAN SCHAIK; E. KOOIJMAN; F. N. VAN HASSELT; J. TITULAER; R. E. VERDONSCHOT; M. D. WALDINGER; A. NEWMAN-TANCREDI; M. VARNEY; R. S. OOSTING; B. OLIVIER. *Univ. Utrecht, Neurolixis, Inc.*

2:00 X1 **233.14** Effect of activation of Gi/o-coupled signaling in the lateral habenula on food reinforced operant responding and cue-induced reinstatement of food seeking. J. F. NEUMAIER*; D. SMIRNOV; S. NAIR. *Univ. Washington.*

3:00 X2 **233.15** Point mutations in the dopamine transporter reveal an obligatory role in learning and memory. S. A. CARMACK*; S. L. SCUDDER; K. K. HOWELL; G. N. PATRICK; H. H. GU; S. G. ANAGNOSTARAS. *UCSD, Ohio State Univ.*

4:00 X3 **233.16** The effects of early-life risperidone administration on behavior in the social interaction test during adulthood. C. BROWN*; M. A. GANNON; M. E. BARDGETT. *Northern Kentucky Univ., Northern Kentucky Univ.*

1:00 X4 **233.17** Modulation of *C. elegans* electrotactic swimming behavior by dopamine signaling. S. SALAM*; R. K. MISHRA; P. SELVAGANAPATHY; B. P. GUPTA. *McMaster Univ., McMaster Univ., McMaster Univ.*

2:00 X5 **233.18** The effect of acutely inhaled toluene on locomotor activity and extracellular dopamine is moderated by gaba in the mouse caudate putamen. S. CALLAN*; A. A. APAWU; T. A. MATTHEWS; S. E. BOWEN. *Wayne State Univ.*

3:00 X6 **233.19** The neurobehavioral consequences of gestational and chronic atrazine exposure in male and female Sprague-Dawley rats. J. L. WALTERS*; T. A. LANSDELL; K. LOOKINGLAND; L. E. BAKER. *Western Michigan Univ., Michigan State Univ., Western Michigan Univ.*

4:00 X7 **233.20** ▲ Antinociceptive effect of tizanidine and tramadol combinations in rats: Isobolographic analysis. K. BELTRÁN-VILLALOBOS*; M. DÉCIGA-CAMPOS. *IPN, Inst. Politécnico Nacional.*

1:00 X8 **233.21** ▲ Early-life risperidone administration enhances locomotor responses to amphetamine during adulthood. B. L. STUBBEMAN; C. J. BROWN; M. E. BARDGETT*. *Northern Kentucky Univ.*

2:00 X9 **233.22** Functional selectivity at the dopamine D1 receptor and its role in mediating antiparkinson effects. Y. YANG*; S. LEE; X. HUANG; C. A. LIEU; T. SUBRAMANIAN; V. MURTHY; R. B. MAILMAN. *Penn State Univ.*

POSTER

234. Drug Discovery and Development: Neurodegenerative Diseases I

Theme C: Disorders of the Nervous System

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 X10 **234.01** Attenuation of synaptic dysfunction by a novel experimental therapeutic that targets a single kinase present in both neurons and glia. O. ARANCIO; L. J. VAN ELDIK; F. SAEED; A. BACHSTETTER; J. P. SCHAVOCKY; J. C. PELLETIER; S. M. ROY; D. WATTERSON*. *Columbia Univ., Univ. of Kentucky, Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ.*

2:00 X11 **234.02** Characterization of pharmacological effects of a novel LRRK2 inhibitor. J. M. THOMAS*; X. HE; F. XUE; T. LI; S. ZHONG; D. YANG; J. LIU; L. KONG; P. VOULALAS; H. E. HASSAN; J. PARK; A. D. MACKERELL JR.; W. W. SMITH. *Univ. of Maryland Sch. of Pharm.*

3:00 X12 **234.03** Blood-brain barrier permeable Hsp90 inhibitor reduces soluble tau burden in mouse models of Alzheimer's disease. J. KOREN*, III; C. INDA; M. UDDIN; P. PANCHAL; G. CHIOSIS. *Mem. Sloan-Kettering.*

4:00 X13 **234.04** R-flurbiprofen attenuates experimental autoimmune encephalomyelitis in mice. K. SCHMITZ; N. DE BRUIN*; J. MÄNNICH; J. LÖTSCH; M. J. PARNHAM; G. GEISSLINGER; I. TEGEDER. *Pharmazentrum Frankfurt, Fraunhofer Inst. Mol Biol and Appl Ecol (IME).*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 X14 **234.05** ● Protective role of olesoxime against wild type alpha-synuclein-induced toxicity in human neuronally differentiated SHSY-5Y cells. C. GOUARNE; J. TRACZ; M. GIRAUDON-PAOLI; V. DELUCA; M. SEIMANDI; G. TARDIF; M. XILOURI; L. STEFANIS; T. BORDET; R. M. PRUSS*. *TROPHOS, Div. of Basic Neurosciences, Second Dept. of Neurol., Biotherapies Inst. for Rare Dis.*

2:00 X15 **234.06** Correlation between HSP90 target engagement and HSP70 level in mice brain. K. THIRSTRUP; L. C. RONN*; S. M. NIELSEN. *Lundbeck, Lundbeck, Lundbeck.*

3:00 X16 **234.07** ● Enhancement of protein clearance via activation of the 20S proteasome: A therapeutic approach for neurodegenerative diseases. S. KOIRALA; J. GRAY*; S. TALREJA; H. DOU; M. CUEVA; O. MURPHY; J. DANAO; Q. CHENG; K. LABITZKE; P. JAECKEL; S. MATERNA-REICHELT; S. SCHNEIDER; S. JOHNSTONE; N. SHARKOV; J. TANG; J. YE; C. PLEWA; P. CAO; S. ZHAO; P. ANDREWS; H. BECKMANN; Z. WANG; B. FOX; S. SAMBASHIVAN; S. KAMB; S. WANG. *Amgen, Amgen, Amgen, Amgen, Amgen.*

4:00 X17 **234.08** Acidic dual γ-secretase modulators/ PPARγ agonists improve the mitochondrial dysfunction in a cellular model of Alzheimer's disease. M. POHLAND*; S. HAGL; M. WURGLICS; M. SCHUBERT-ZSILAVECZ; G. P. ECKERT. *Goethe-University Frankfurt am Main, Goethe-University Frankfurt am Main.*

1:00 X18 **234.09** Role of oxidative redox shift on STEP activity. D. GHOSH*; J. ELLMAN; A. C. NAIRN; P. J. LOMBROSO. *Yale Sch. of Medicne, Yale Univ., Yale Univ., Yale Univ.*

2:00 X19 **234.10** Characterization of TC-2153 as a potent inhibitor of STriatal Enriched protein tyrosine Phosphatase. M. CHATTERJEE*; J. XU; T. BAGULEY; J. BROUILLETTE; P. KURUP; D. GHOSH; J. KANYO; J. GRESACK; P. GREENGARD; T. LAM; L. TAUTZ; J. ELLMANN; A. C. NAIRN; P. LOMBROSO. *Yale, Yale, Yale, The Rockefeller Univ., Sanford-Burnham Med. Res. Inst., Yale.*

3:00 X20 **234.11** STEP61 is a novel substrate for the E3 ligase parkin, and is implicated in Parkinson's disease. E. FOSCUE*; P. KURUP; R. ALEXANDRA VIDEIRA; J. XU; C. ONONENYI; G. BALTAZAR; A. C. NAIRN; P. LOMBROSO. *Yale Univ., Univ. of Beira Interior, Yale Univ.*

4:00 X21 **234.12** The tyrosine phosphatase STEP is implicated in age-related memory decline across different species. J. BROUILLETTE*; C. MÉNARD; R. QUIRION; B. BONTEMPI; J. S. SCHNEIDER; C. M. NORRIS; G. FERLAND; E. BÉZARD; P. GAUDREAU; P. J. LOMBROSO. *Yale Univ., Univ. of Montreal, Douglas Mental Hlth. Univ. Inst., Univ. of Bordeaux, Thomas Jefferson Univ., Univ. of Kentucky.*

1:00 X22 **234.13** ▲ Effects of inhibiting STEP activity on synaptic connections in Alzheimer's disease. C. SULERZYSKI*; M. CHATTERJEE; P. J. LOMBROSO. *Yale Univ., Yale Univ., Yale Univ.*

2:00 X23 **234.14** ▲ Effects of orally administered TC-2153, an inhibitor of the tyrosine phosphatase STEP, on cognitive deficits in an Alzheimer's mouse model. S. BAKSHI*; M. CHATTERJEE; J. ELLMAN; A. NAIRN; P. J. LOMBROSO. *Yale Univ., Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

3:00 X24 **234.15** ● SUVN-D4010: Novel 5-HT4 receptor partial agonist for the treatment of Alzheimer's disease. N. MUDDANA*; R. SUBRAMANIAN; R. MEDAPATI; R. ABRAHAM; R. GADI; V. BENADE; R. PALACHARLA; A. MANOHARAN; V. GOYAL; S. PANDEY; A. MOHAMMED; S. RAVELLA; R. NIROGI. *Suven Life Sci.*

4:00 Y1 **234.16** ● Effect of gender and food on the single dose pharmacokinetics of SUVN-502, a potent and selective 5-HT6 receptor antagonist. R. V. NIROGI*; K. MUDIGONDA; K. PENTA; G. BHYRAPUNENI; D. AJJALA; N. MUDDANA; V. BENADE; V. CHOWDARY PALACHARLA; V. GOYAL; S. PANDEY; R. ABRAHAM; P. JAYARAJAN; R. BADANGE; R. KAMBHAMPATI. *Suven Life Sci.*

1:00 Y2 **234.17** ● *In vitro* inhibition of glutamate/cystine transporter in microglial cells reduces excitotoxic conditions. M. FIGUERA-LOSADA; M. STATHIS; K. M. WOZNIAK*; B. STOCKWELL; C. ROJAS; B. S. SLUSHER. *Johns Hopkins Med. Brain Sci. Inst., Brain Sci. Inst, Johns Hopkins Sch. of Med., Columbia Univ., Brain Sci. Inst, Johns Hopkins Sch. of Med.*

2:00 Y3 **234.18** ● Characterization of MARP1, a novel positive allosteric modulator of the AMPA receptor that amerliorates age-related cognitive deficits in rats. J. A. MORROW*; L. H. SMITH; F. MARTIN; S. NEALE; N. ABROUS; P. V. PIAZZA; H. M. MARSTON. *Merck Res. Labs., Merck Res. Labs., Neurocentre Magendiem, INSERM.*

3:00 Y4 **234.19** Targeting nicotinic acetylcholine receptors with the designed multiple ligand (DML) approach. I. TOMASSOLI; A. J. REINHART; M. R. PICCIOTTO; T. T. TALLEY; R. L. PAPKE; D. GUNDISCH*. *Univ. of Hawaii at Hilo, Col. of Pharm., Yale Univ., Idaho State University, Col. of Pharm., Univ. of Florida, Col. of Med., Col. of Pharm. UHH.*

4:00 Y5 **234.20** ● Investigation of selective monoacylglycerol lipase (MAGL) inhibition and selective fatty acid amide hydrolase (FAAH) inhibition in comparison to simultaneous FAAH/MAGL inhibition on catalepsy and brain endocannabinoid, arachidonic and prostaglandin levels in mice. B. FERGER*; C. PORAZIK; N. PASQUARELLI; A. WITTING. *Boehringer Ingelheim Pharma GmbH & Co. KG, Ulm Univ.*

1:00 Y6 **234.21** ● Pharmacological characterization of TASP0428980, a dual orexin receptor antagonist. J. KARASAWA; T. AOKI*; D. KAMBE; T. SHIMAZAKI; H. HIKICHI; D. NOZAWA; H. KAWAMOTO. *Taisho Pharmaceut. Co., Ltd., Taisho Pharmaceut. Co., Ltd.*

2:00 Y7 **234.22** Induced expression of Nor1 is not important for neurite outgrowth in PC12 cells. K. SHIMOKE*; T. TOMIOKA; H. AOYAMA; Y. NISHIHATA; H. MARUOKA; T. IKEUCHI. *Kanasai Univ., Technol. Res. Laboratory, Kurabo Co. Ltd.*

3:00 Y8 **234.23** ● Cathepsin s: a novel therapeutic target for Alzheimer's disease. B. YI*; A. K. EVANS; L. J. HOLSINGER; R. BOOTH; M. SHAMLOO. *Stanford Univ., Virobay Inc.*

4:00 Y9 **234.24** The use of stereological analysis in non-clinical models of neurological disease and neurodegeneration. M. CERRADA-GIMENEZ; P. SWEENEY; A. NURMI; O. KONTKANEN; T. STENIUS*; T. AHTONIEMI; N. VARTIAINEN. *Charles River Discovery Res. Services Finland.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 Y10 **234.25** ● ▲ Further development of PADK for Alzheimer's disease: CNS lysosomal modulation by oral dosing and initial safety evaluation. S. RUIZ; M. C. PAIT; L. H. ELLIOTT; C. T. LONG; C. TIRLA; H. ROMINE; B. A. BAHR*; U. S. IKONNE. *UNC Pembroke, UNC Pembroke, Biotech Ctr. / William C. Friday Lab., A.T. Still Univ. of Hlth. Sci.*

2:00 Y11 **234.26** ● The novel M1/M4-selective muscarinic agonist NSX-0527 for the treatment of Alzheimer's disease. J. C. OCKULY; S. A. HANSON; J. D. BECK; M. L. HENDRICKSON*. *NeuroSolis, Inc.*

3:00 Y12 **234.27** Selective PPARγ activation improves memory deficits and increases BDNF expression. J. BLOEMER*; G. NANAYAKKARA; K. PARAMESHWARAN; M. DHANASEKARAN; V. SUPPIRAMANIAM; R. AMIN. *Auburn Univ., Auburn Univ.*

4:00 Y13 **234.28** ● Drug discovery for Alzheimer's disease targeting tau oligomers. P. K. KRISHNAMURTHY*; G. PAPIANI; P. LOPEZ; D. ROMERO; E. DAVIDOWITZ; J. MOE. *Oligomerix, Inc.*

1:00 Y14 **234.29** An in silico simulator to study oscillopathies and drug effects in various neurological disorders. A. LEGENDRE; M. BEDEZ; M. SARMIS; A. F. KELLER; N. AMBERT; R. GREGET; F. LALOUE; J. C. BOUTEILLER; M. BAUDRY; S. BISCHOFF*; S. MOUSSAOUI. *Rhenovia Pharma, USC, Western Univ. of Hlth. Sci.*

POSTER

235. Auditory Processing of Natural Sounds

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Y15 **235.01** Using nonstationary contrast and intensity statistics for sound category identification. M. A. ESCABI*; R. NARAYAN. *Univ. Connecticut.*

2:00 Y16 **235.02** Auditory evoked potentials reveal harmonic structure as a signal attribute. J. W. LEWIS*; W. J. TALKINGTON; B. SMITH; S. KHOO; C. FRUM; D. W. GRAHAM; M. SCHADE. *West Virginia Univ., West Virginia Univ., West Virginia Univ., West Virginia Univ., West Virginia Univ.*

3:00 Y17 **235.03** Limitations in fine-grained within-category semantic auditory discrimination: Insights from spatio-temporal analyses. R. DE MEO*; M. M. MURRAY; R. W. THOMPSON; S. CLARKE. *Service De Neuropsychologie Et Neuroréhabilitation, Univ. Hosp. Ctr. and Univ. of Lausanne, Ctr. for Biomed. Imaging (CIBM), Vanderbilt Univ. Med. Ctr., Johns Hopkins Univ. Sch. of Med.*

4:00 Y18 **235.04** Auditory network optimized for sound discrimination predicts hierarchical trends of the auditory system. F. KHATAMI*; M. A. ESCABI. *The Univ. of Connecticut, The Univ. of Connecticut.*

1:00 Y19 **235.05** Mapping intracranial ECoG responses onto the surface of the human superior temporal plane. H. OYA*; H. KAWASAKI; K. V. NOURSKI; J. D. GREENLEE; T. D. GRIFFITHS; M. A. HOWARD. *Univ. of Iowa Hosp. and Clinics, Newcastle university medical school.*

2:00 Y20 **235.06** Human auditory cortical coding of speech in background noise as a function of age and noise type. N. MAAMOR; C. BILLINGS*. *Portland Veterans Affairs Med. Ctr., Natl. Univ. of Malaysia, Oregon Hlth. & Sci. Univ.*

3:00 Y21 **235.07** Vocal signal processing and social categorization during natural communication in marmoset frontal cortex neurons. V. JOVANOVIC*; S. H. COOP; C. T. MILLER. *UC San Diego.*

4:00 Y22 **235.08** Neuronal mechanisms of vocalization sound processing in the primary auditory area of common marmosets. T. BANNO*; W. SUZUKI; N. MIYAKAWA; H. ABE; N. ICHINOHE. *Natl. Ctr. of Neurol. and Psychiatry.*

1:00 Y23 **235.09** Development of an awake-behaving fMRI preparation for investigating auditory cognition in common marmosets. C. TOARMINO*; C. C. YEN; A. C. SILVA; C. T. MILLER. *UC San Diego, Natl. Inst. of Neural Disorders and Stroke.*

2:00 Y24 **235.10** A preparation for optogenetic photostimulation in marmoset cortex. M. MACDOUGALL; J. MITCHELL; S. SRINIVASAN; C. T. MILLER*. *UC San Diego, Salk Inst., UCSD.*

3:00 Y25 **235.11** Ontogeny of antiphonal calling in common marmosets. C. P. CHOW*; C. T. MILLER. *UCSD.*

4:00 Y26 **235.12** Studying the neural basis of vocal communication in a naturalistic environment using wireless neural recording technology in marmoset monkeys (Callithrix jacchus). L. ZHAO*; H. YI; X. WANG. *The Johns Hopkins Univ., Tianjin Med. Univ.*

1:00 Y27 **235.13** Norm-based neural coding of conspecific vocalization in the macaque monkey. S. A. LOVE*; M. FUKUSHIMA; A. DOYLE; R. C. SAUNDERS; N. FUJII; P. BELIN; M. MISHKIN; D. A. LEOPOLD. *Inst. de Neurosciences de La Timone, NIMH/NIH, RIKEN Brain Sci. Inst.*

2:00 Y28 **235.14** Oscillatory activity in amygdala represents emotion categories of naturalistic auditory stimuli. Z. CHEN; L. PARKKONEN; J. WEI; J. DONG; Y. MA; S. CARLSON*. *Aalto Univ. Sch. of Sci., Univ. of Helsinki, Aalto Univ. Sch. of Sci., Kunming Inst. of Zoology, Chinese Acad. of Sci.*

3:00 Y29 **235.15** LFP's in the superior colliculus of an echolocating bat are timed with ongoing behaviors. M. J. WOHLGEMUTH*, III; C. MOSS. *Johns Hopkins Univ.*

4:00 Y30 **235.16** Streaming of repeated embedded noise in ferret auditory cortex. D. S. THORSON*; J. H. MCDERMOTT; S. V. DAVID. *Oregon Hlth. & Sci. Univ., MIT.*

1:00 Y31 **235.17** Audio-haptic coordination and multisensory integration in rat auditory cortex. R. P. RAO*; F. MIELKE; E. BOBROV; M. BRECHT. *Bernstein Ctr. For Computat. Neurosci., Humboldt Univ. of Berlin.*

2:00 Y32 **235.18** Genetic dissection of infant vocalizations. S. ROY*; M. L. SCATTONI; D. H. HECK; L. LU; R. W. WILLIAMS. *Univ. Of Tennessee Hlth. Sci. Ctr., Inst. Superiore di Sanità.*

3:00 Z1 **235.19** Coding of vowels in the auditory midbrain of the budgerigar and rabbit. K. S. HENRY*; E. G. NEILANS; J. M. MCDONOUGH; L. H. CARNEY. *Univ. of Rochester, Univ. at Buffalo, Univ. of Rochester.*

4:00 Z2 **235.20** Encoding of complex natural sound in auditory midbrain by small neural groups. D. LYZWA*. *Dep. Nonlinear Dynamics Max Planck Inst. For Dynamics and Self-Organization, Inst. of Perception, Action and Behaviour.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

236. Extrastriate Cortex: Responses and Coding

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Z3 **236.01** Reorganisation of V1 and the pulvinar nucleus following early life lesion of area MT. J. A. BOURNE*; I. MUNDINANO; H. YU; C. WARNER; W. KWAN. *Aust. Reg. Med. Inst., Dept. Physiol.*

2:00 Z4 **236.02** Spatio-temporal distribution of gamma power and coherence in primate middle temporal area of the visual cortex. S. S. SOLOMON*; S. C. CHEN; J. W. MORLEY; S. G. SOLOMON. *Univ. of Sydney, The Univ. of Sydney, Univ. of Western Sydney, Univ. Col. London.*

3:00 Z5 **236.03** Response decay kinetics in areas MT, MST, and VIP on the motion pathway in macaques. F. VIEIRA*; S. W. EGGER; K. H. BRITTEN. *Univ. of California, Davis, MIT.*

4:00 Z6 **236.04** Realistic simulations of cortical population response for the evaluation of MT decoding models. J. LOMBARDO*; B. BAYER; L. OSBORNE; S. PALMER. *Univ. of Chicago.*

1:00 Z7 **236.05** Constraints on decoding of visual motion parameters for smooth pursuit from MT cortical population activity. M. V. MACELLAIO*; L. C. OSBORNE. *Univ. of Chicago.*

2:00 Z8 **236.06** Motion detection in Extrastriate Area 21a of the cat cortex. H. ASLANYAN*; A. KHACHATRYAN; D. KHACHVANKYAN; B. KOZAK-HARUTYUNIAN. *Inst. of Applied Problems of Physics of NAS, SUNY Downstate Med. Ctr.*

3:00 Z9 **236.07** Temporal dynamics of heading perception in the presence of moving objects. O. W. LAYTON*; B. FAJEN. *Boston Univ., Rensselaer Polytechnic Inst., Rensselaer Polytechnic Inst.*

4:00 Z10 **236.08** Processing of contrast-modulated second-order stimuli in mouse visual cortex. Z. KHASTKHODAEI; O. JURJUT; S. KATZNER; L. BUSSE*. *Univ. of Tuebingen.*

1:00 Z11 **236.09** Frequency-dependent spatiotemporal profiles of visual responses recorded with subdural electrodes in awake monkeys. K. TAKAURA*; N. TSUCHIYA; N. FUJII. *RIKEN Brain Sci. Inst. - Wako, Sch. of Psychological Sciences, Fac. of Medicine, Nursing and Hlth. Sciences, Monash Univ., Decoding and Controlling Brain Information, Japan Sci. and Technol. Agency.*

2:00 Z12 **236.10** ▲ Activity propagation between early visual areas determines the awareness of phosphenes. B. V. VUGT*; B. DAGNINO; P. ROELFSEMA. *Netherlands Inst. for Neurosci.*

3:00 Z13 **236.11** Rapid learning impacts noise correlation in monkey V4. Y. WANG*; V. DRAGOI. *UT medical school at Houston, UT medical school at Houston.*

4:00 Z14 **236.12** Functional MRI mapping of IT single unit responses during natural vision. S. PARK*; B. E. RUSS; D. B. T. MCMAHON; H. D. ELNAIEM; D. A. LEOPOLD. *SCNI, Lab. of Neuropsychology, NIMH, NIH, Seoul Natl. Univ., Lab. of Sensorimotor Research, NEI, NIH.*

1:00 Z15 **236.13** Effect of image familiarity on neuronal responses in areas V2 and V4 of monkey visual cortex. S. RAMACHANDRAN*; T. S. LEE; C. R. OLSON. *Carnegie Mellon Univ., Ctr. for the Neural Basis of Cognition.*

2:00 Z16 **236.14** Maintenance of spatial information gates the processing of incoming visual information in area V4. Y. MERRIKHI; M. PARSA; E. ALBARRAN; B. NOUDOOST*. *Inst. for Res. in Fundamental Sci., Montana State Univ., Stanford Univ.*

3:00 Z17 **236.15** Late responses of V2 neurons are enhanced by global scene context of natural movies. J. M. SAMONDS*; Y. LI; Y. ZHANG; T. LEE. *Carnegie Mellon Univ., Zhejiang Univ., Carnegie Mellon Univ., Carnegie Mellon Univ.*

4:00 Z18 **236.16** Sparse and distributed representation of visual concepts in V1 and V2 neuronal populations. T. LEE*; C. MASSOT; G. PAPANDREOU; A. YUILLE. *Carnegie Mellon Univ., Carnegie Mellon Univ., Toyota Technol. Inst., Univ. of California, Los Angeles.*

1:00 Z19 **236.17** Relating divisive normalization to spike count correlations between and within cortical areas. D. MONTEZ*; D. A. RUFF; M. R. COHEN. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 Z20 **236.18** Spatio-temporal structure of shape-tuning in V4 receptive fields. A. S. NANDY*; J. H. REYNOLDS; J. F. MITCHELL. *Salk Inst.*

3:00 Z21 **236.19** Converging encoding strategies in dorsal and ventral visual streams. P. J. MINEAULT*; T. P. ZANOS; C. C. PACK. *Montreal Neurolog. Inst., Montreal Neurolog. Inst.*

4:00 Z22 **236.20** Low-frequency oscillations in extrastriate cortex: Contributions of V1 and pulvinar. J. T. SCHMIEDT*; A. MAIER; R. C. SAUNDERS; D. A. LEOPOLD; M. C. SCHMID. *Ernst Strüngmann Inst. (ESI) for Neurosci., Vanderbilt Univ., NIMH.*

1:00 Z23 **236.21** Neural noise correlations in visual area V4 of the rhesus macaque after V1 lesion. K. SHAPCOTT*; J. T. SCHMIEDT; A. MAIER; R. C. SAUNDERS; D. A. LEOPOLD; M. C. SCHMID. *Ernst Strüngmann Inst., Vanderbilt Univ., NIMH.*

2:00 Z24 **236.22** Rhythmic neural activity during perceptual grouping in visual area V4 and its dependence on area V1 input. R. KIENITZ*; M. A. COX; J. T. SCHMIEDT; R. C. SAUNDERS; D. A. LEOPOLD; A. MAIER; M. C. SCHMID. *Ernst Strüngmann Inst., Vanderbilt Univ., NIMH.*

3:00 Z25 **236.23** Differential response consistency in the macaque face processing system to the viewing of social and non-social movies. B. E. RUSS*; D. A. LEOPOLD. *NIMH/NIH, NIH/NIMH.*

4:00 Z26 **236.24** A sinc wavelet describes the receptive fields of neurons in the motion cortex. S. G. ODAIBO*. *Quantum Lucid Res. Labs., Howard Univ. Hosp., Univ. of Michigan.*

1:00 Z27 **236.25** Modeling attention-induced reduction of spike synchrony in the visual cortex. N. WAGATSUMA*; R. VON DER HEYDT; E. NIEBUR. *Johns Hopkins Univ., Tokyo Denki Univ., Johns Hopkins Univ.*

2:00 Z28 **236.26** Using optogenetics to probe neural circuit mechanisms underlying biased competition and de-correlation with attention. J. H. REYNOLDS*; A. S. NANDY; J. J. NASSI. *Salk Inst.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

237. Eye Movements: Clinical and Behavioral

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Z29 **237.01** Using saccadic eye movement tasks to differentiate attention-deficit hyperactivity disorder from bipolar disorder. S. SONCIN*; D. BRIEN; A. MARIN; D. MUNOZ. *Queen's Univ.*

2:00 Z30 **237.02** Saccade-related modulation of acoustic activity recorded from the external ear canal. K. GRUTERS*; C. A. SHERA; J. M. GROH. *Duke Univ., Harvard Med. Sch. Massachusetts Eye & Ear Infirmary, Duke Univ., Duke Univ.*

3:00 Z31 **237.03** How do patients with strabismus locate visual targets? J. R. ECONOMIDES*; D. L. ADAMS; J. C. HORTON. *UCSF.*

4:00 Z32 **237.04** Optimal control of saccades in patients with ataxia-telangiectasia. T. O. CRAWFORD*; P. VASWANI; J. M. WRIGHT; H. M. LEDERMAN; R. SHADMEHR. *Johns Hopkins Univ. Med. Sch., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

1:00 Z33 **237.05** Saccade performance in children with and without dyslexia during reading tasks. N. Z. AL DAHHAN*; D. C. BRIEN; J. R. KIRBY; D. P. MUNOZ. *Queen's Univ. Ctr. for Neurosci. Studies.*

2:00 Z34 **237.06** Saccade planning in ambiguous situations. H. GERTZ*; K. FIEHLER. *Justus-Liebig Univ. Giessen, Exptl. Psychology.*

3:00 Z35 **237.07** Temporal stability and training effects in "express saccade makers". P. C. KNOX*; F. D. A. WOLOHAN. *Univ. Liverpool, Univ. of Liverpool.*

4:00 Z36 **237.08** Saccadic adaptation violates Hering's law of equal innervation on multiple timescales. T. KNAPEN*; T. BEEMSTERBOER. *VU Amsterdam, Univ. of Amsterdam.*

1:00 AA1 **237.09** ▲ The effect of prosaccade training on antisaccade latency and accuracy. S. MONTENEGRO; J. A. EDELMAN*. *City Col. of New York.*

2:00 AA2 **237.10** Visual attention and individual miniature saccadic eye movements generated during car driving. T. HIRAYAMA; T. OGURI; K. INAGAKI*; Y. HIRATA. *Chubu Univ., DENSO Corp., Chubu Univ., Chubu Univ.*

POSTER

238. Eye Movements: Cortex and Superior Colliculus

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 AA3 **238.01** Contribution of dorsolateral prefrontal cortex to attentional and mnemonic processes in visual search. B. BELBECK*; S. G. LOMBER; S. EVERLING; K. JOHNSTON. *The Univ. of Western Ontario.*

2:00 AA4 **238.02** Saccadic suppression of visual sensitivity in frontal eye field neurons. R. M. KROCK*; T. MOORE. *Stanford Univ., Stanford Univ.*

3:00 AA5 **238.03** Bilateral anterior cingulate cortex deactivation reduces switch costs in the macaque monkey. J. L. CHAN*; K. JOHNSTON; S. G. LOMBER; S. EVERLING. *Univ. of Western Ontario.*

4:00 AA6 **238.04** Theta-band coherent activity is involved in transmission of task relevant information between frontal eye field and anterior cingulate cortex. S. BABAPOOR-FARROKHRAN*; T. WOMELSDORF; M. VINCK; K. JOHNSTON; S. EVERLING. *Western Univ., York University, Ctr. for Vision Res., Yale University, Kavli Inst. for Neurosci., Westen Univ.*

1:00 AA7 **238.05** Electrophysiological correlates of the saccadic preparation cognitive processes in the experimental scheme with distractors at stimulation of the leading and unleading eye. V. MOISEEVA*; M. SLAVUTSKAYA; V. SHULGOVSKIY; N. FONSOVA. *Lomonosov Moscow State Univ., Higher Sch. of Econ.*

2:00 AA8 **238.06** How do frontal eye field neurons ignore distractors while selecting target-relevant features in natural scenes? D. K. WOOD*; P. RAMKUMAR; J. I. GLASER; P. N. LAWLOR; K. P. KORDING; M. A. SEGRAVES. *Northwestern Univ., Rehabil. Inst. of Chicago.*

3:00 AA9 **238.07** The frontal eye field reflects task demands in natural scenes. J. I. GLASER*; P. N. LAWLOR; D. K. WOOD; P. RAMKUMAR; S. CADDIGAN; J. DRAPEKIN; B. FRICK; B. QIN; K. P. KORDING; M. A. SEGRAVES. *Rehabil. Inst. of Chicago, Northwestern Univ.*

4:00 AA10 **238.08** Gating of visual input to prefrontal cortex: Orthodromic activation of FEF neurons by V4 stimulation. K. L. CLARK*; B. NOUDOOST. *Montana State Univ.*

1:00 AA11 **238.09** Cognitive modulation of neuronal activity in the frontal cortex of monkeys performing a simple reaction-time task with reward bias. C. K. HAUSER*; D. ZHU; M. COSTELLO; E. SALINAS; T. STANFORD. *Wake Forest Sch. of Med.*

2:00 AA12 **238.10** MST neurons contribute to perceiving the visual world as continuous across saccades by memory remapping of moving visual stimuli. N. INABA*; K. KAWANO. *Kyoto Univ., Kyoto Univ.*

3:00 AA13 **238.11** The role of the superior colliculus in the coordination of the pupil orienting response. C. WANG*; D. P. MUNOZ. *Queens Univ.*

4:00 AA14 **238.12** Neurons in the human medial temporal lobe encode target saliency during visual search. S. WANG*; A. N. MAMELAK; R. ADOLPHS; U. RUTISHAUSER. *Caltech, Cedars-Sinai Med. Ctr., Caltech.*

1:00 AA15 **238.13** Modulation of fixational event-related potentials by low-level image features during free-viewing. C. DEVIA*; R. MAYOL-TRONCOSO; R. MONTEFUSCO-SIEGMUND; J. P. OSSANDÓN; A. V. HELO; P. E. MALDONADO. *Pontificia Univ. Católica, ICBM, BNI, CENEM, Univ. de Chile, Ctr. for Vision Research, York Univ., Univ. Osnabrück, Inst. für Kognitionswissenschaft, Lab. Psychologie de la Perception, Univ. Paris Descartes.*

2:00 AA16 **238.14** Target selection in primate Superior Colliculus: Simultaneous recordings of single unit and local field potential. T. IKEDA*; B. J. WHITE; D. P. MUNOZ. *Queen's Univ.*

3:00 AA17 **238.15** Sensory priming influences form-based perceptual decision-making and superior colliculus population activity. T. B. CRAPSE*; M. A. BASSO. *UCLA.*

4:00 AA18 **238.16** Correlates of saccade target selection in simultaneously-recorded frontal eye field and superior colliculus local field potentials. R. M. MCPEEK*; S. RAY; J. PARK. *SUNY Optometry, Univ. of Allahabad.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 AA19 **238.17** Layer-specific influences of microsaccades on spatial vision in the primate superior colliculus. C. CHEN*; Z. M. HAFED. *Werner Reichardt Ctr. For Integrative Neurosci., Grad. Sch. of Neural and Behavioural Sciences, Intl. Max Planck Res. Sch.*

POSTER

239. Pain Behavioral Models

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 AA20 **239.01** Inactivation of the prelimbic rather than infralimbic cortex impairs acquisition and expression of formalin-induced conditioned place avoidance. J. WANG*; Z. JIANG; F. LUO. *Inst. Psychol, Chin Acad Sci.*

2:00 AA21 **239.02** Enhanced pain behavior observed in mice lacking interleukin-27. T. YASAKA*; T. SASAGURI; Y. MURATA; H. HARA; A. ISHIKAWA; T. FUJITA; E. KUMAMOTO; S. MASUKO; N. HIRAKAWA; H. YOSHIDA. *Saga Univ., Saga Univ., Saga Univ.*

3:00 AA22 **239.03** Chronic pain-related depression of behavior: Effects of intraplantar formalin and complete freund's adjuvant on intracranial self-stimulation (ICSS) and endogenous kappa opioid biomarkers in rats. M. LEITL*; D. N. POTTER; K. CHENG; K. C. RICE; W. A. CARLEZON JR; S. NEGUS. *Virginia Commonwealth Univ., McLean Hospital, Harvard Med. Sch., NIH.*

4:00 AA23 **239.04** Effects of nicotine on pain-stimulated and pain-depressed behavior in rats. K. FREITAS; S. S. NEGUS*. *Virginia Commonwealth Univ.*

1:00 AA24 **239.05** Morphine antinociception is resistant to tolerance in an assay of pain-depressed intracranial self-stimulation. A. ALTARIFI*; S. NEGUS. *Jordan Univ. of Sci. and Technol., Virginia Commonwealth Univ.*

2:00 BB1 **239.06** A rat model for sciatic endometriosis. S. CHEN; W. XIE; J. A. STRONG; J. JIANG; J. ZHANG*. *Qilu Hospital, Shandong Univ., Univ. Cincinnati Coll Med.*

3:00 BB2 **239.07** ● Analysis of sleep disorders under pain using an optogenetic tool: possible involvement of the activation of dorsal raphe nucleus-serotonergic neurons. H. ITO*; M. YANASE; A. YAMASHITA; C. KITABATAKE; A. HAMADA; Y. SUHARA; M. NARITA; D. IKEGAMI; H. SAKAI; M. YAMAZAKI; M. NARITA. *Univ. of Toyama, Hoshi Univ. Sch. of Pharm. and Pharmaceut. Sci.*

4:00 BB3 **239.08** Further characterization of a rodent headache model with video analysis and EEG recording. A. MELO-CARILLO; C. ALEXANDRE; A. LOPEZ-AVILA; R. BURSTEIN; A. M. STRASSMAN*. *Beth Israel Deaconess Med. Ctr., Beth Israel Deaconess Med. Ctr., Inst. Nacional de Psiquiatria Ramon de la Fuente Muniz.*

1:00 BB4 **239.09** Brain neuroplastic changes accompany anxiety and memory deficits in a model of complex regional pain syndrome. P. SAHBAIE*; M. TAJERIAN; D. LEU; W. LI; W. S. KINGERY; T. HUANG; J. CLARK. *Stanford Univ., Veterans Affairs Palo Alto Hlth. Care Syst., Stanford Univ., Veterans Affairs Palo Alto Hlth. Care Syst., Veterans Affairs Palo Alto Hlth. Care Syst.*

2:00 BB5 **239.10** The Coy Operant Conflict System: Adaptations allow testing of mechanical and cold sensitivity in mice with a spinal nerve ligation (Chung model). S. M. CARLTON*; S. ZHOU. *Univ. Texas Med. Br.*

3:00 BB6 **239.11** ● Mechanisms of 16, 16 dimethyl prostaglandin (dmPGE2) in the sensitization of capsaicin induced mechanical allodynia in male Sprague Dawley rats (a model of hyperalgesic priming). S. M. JAFFAL*. *McGill Univ.*

4:00 BB7 **239.12** Differential components relating to pain expectation were isolated after pain-related learning in a rodent model. N. WANG*; S. LI; J. WANG; F. LUO. *Inst. of Psychology, Chinese Acad. of Sciences; Key Lab. of Mental H.*

1:00 BB8 **239.13** ● Effect of tapentadol on neuropathic pain in arthritis models using automated and manual methods. V. GOURA; A. VUYYURU; R. ABRAHAM; P. JAYARAJAN*; R. NIROGI. *Suven Life Sci. Ltd.*

2:00 BB9 **239.14** Effects of 5-fluorouracil on stomatitis-induced pain in rats. K. YAMAGUCHI; N. HARANO*; S. HITOMI; K. ONO; T. SAGO; S. WATANABE; K. INENAGA. *Kyushu Dent. Univ., Kyusyu Dent. Univ., Kyushu Dent. Univ.*

3:00 BB10 **239.15** Electrolytic lesion of the infralimbic cortex attenuates distraction analgesia in rats. C. T. MCNABB*; M. M. WHITE; C. A. SALCIDO; P. N. FUCHS. *Univ. of Texas at Arlington, Univ. of Texas at Arlington.*

4:00 BB11 **239.16** Assessing the aversive nature of pain with an operant approach/avoidance paradigm. C. A. SALCIDO*; A. L. HARRIS; C. T. MCNABB; M. M. WHITE; P. N. FUCHS. *Univ. of Texas at Arlington.*

1:00 BB12 **239.17** Clinically relevant endpoints in a recurrent nitroglycerin migraine model in rats. K. J. SUFKA*; S. M. STASZKO; A. P. JOHNSON; M. E. DAVIS; R. E. DAVIS; T. A. SMITHERMAN. *Univ. of Mississippi, Univ. of Mississippi.*

2:00 BB13 **239.18** RGS4 modulates sensory and affective components of chronic pain states. F. CARR*; S. GASPARI; M. STRATINAKI; V. MITSI; V. ZACHARIOU. *Mount Sinai Sch. of Med., Univ. of Crete.*

3:00 BB14 **239.19** Analgesic effect of Hangeshashinto, a traditional Japanese medicine, on oral ulcer-induced intraoral pain in rats. S. HITOMI*; K. ONO; Y. OOMIYA; K. TERAWAKI; A. KANEKO; Y. UEZONO; K. INENAGA. *Kyushu Dent. Univ., Tsumura & Co., Natl. Cancer Ctr. Res. Inst.*

4:00 BB15 **239.20** Chronic, mild stress prior to spinal cord injury increases post-injury allodynia in male Sprague Dawley rats. A. MOHAIMANY-APONTE*; M. T. ROBBINS; C. L. FLOYD. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

1:00 BB16 **239.21** Sleep deprivation potentiates neuropathic pain induced by chronic constriction injury of sciatic nerve in mice. G. R. MOLSKA*; L. I. G. PAULA FREIRE; C. E. N. GIRARDI; D. SUCHEKI. *Univ. Federal De São Paulo, Univ. Federal de São Paulo.*

2:00 BB17 **239.22** Non-invasive, *in vivo* assessment of the modulating effect of persistent pain on the output of the mouse central pattern generator for mastication. C. G. WIDMER*; J. MORRIS-WIMAN. *Univ. of Florida, West Virginia Sch. of Osteo. Med.*

3:00 BB18 **239.23** ● Behavioral characterization of a tamoxifen-inducible Nav1.7 KO mouse. T. WU*; L. DENG; K. SCEARCE-LEVIE; D. HACKOS. *Genentech.*

4:00 BB19 **239.24** ● Pain response in a rat model of intravertebral breast cancer. R. SARABIA ESTRADA*; P. ZADNIK; I. JMENEZ-ESTRADA; L. YANG; Z. GOKASLAN; D. SCIUBBA. *Johns Hopkins Univ., Johns Hopkins Univ., CINVESTAV.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 BB20 **239.25** Assessment of pain outcomes in rodent models of severe spinal cord injury. C. A. G. LEE-KUBLI; M. INGVES; K. W. HENRY; M. TUSZYNSKI; W. M. CAMPANA*. *UCSD, UCSD, Veteran's Admin.*

2:00 BB21 **239.26** ● Closed head injury promotes a selective trigeminal hyper-nociception: implications for the acute emergence of posttraumatic headache. T. BENROMANO; R. DEFRIN; A. H. AHN; J. ZHAO; C. G. PICK; D. LEVY*. *Tel Aviv Univ., Tel Aviv Univ., Univ. of Florida, BIDMC, Harvard Med. Sch.*

3:00 BB22 **239.27** Characterization of two animal models of orofacial pain. H. DE BRITO GARIEPY*; A. RAMSEY; E. PODBORITS; C. LEE; J. GIBBS. *NYU New York Univ.*

4:00 BB23 **239.28** NeurotropinR) ameliorates depression-like behavior in chronic pain via induction of brain-derived neurotrophic factor. T. ISHIKAWA*; S. YASUDA; H. FUJIMURA; K. FUKUHARA; K. ISHIKAWA; Y. IDA; Y. IWANAGA; T. IBUKI. *Yamaguchi Univ. Grad. Sch. Med., Grad. Sch. of Med. Science, Kyoto Prefectural.*

1:00 BB24 **239.29** Effects of chronic pain on activation of inflammatory brain mechanisms and development of depressive-like behaviors. M. CARDER; M. LEONG; M. LENDE; K. WATSON; R. FIRKINS; L. YUAN; V. DURIC*. *Des Moines Univ.*

2:00 BB25 **239.30** Acute ketamine attenuates long-lasting neuropathic pain-induced social avoidance in mice. Z. YANG*; P. ZHANG; D. GE. *Huai'An First People's Hosp.*

POSTER

240. Inflammatory Pain

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 BB26 **240.01** Toll-like receptor 4 regulates central sensitization, touch-evoked itch, and inflammatory pain. Q. HAN*. *Duke University.*

2:00 BB27 **240.02** Extracellular and secreted microRNAs are novel pain mediators: Involvement of TLR7 and TRPA1. T. BERTA*; Z. XU; C. PARK; Q. HAN; X. LIU; R. JI. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

3:00 BB28 **240.03** Anti-nociceptive actions of Botulinum toxin B on spinal sensory processing and AMPA receptor trafficking. S. SIKANDAR*; M. MAARDH; A. H. DICKENSON; L. SORKIN; T. L. YAKSH. *Univ. Col. London, UCSD.*

4:00 BB29 **240.04** Signaling transduction events involved in agonist-induced PGE2 EP4 receptor externalization in cultured dorsal root ganglion neurons. B. ST-JACQUES; W. MA*. *McGill Univ., McGill Univ.*

1:00 BB30 **240.05** Akap150 mediates transition to chronic pain. N. A. JESKE*; M. P. ROWAN; R. GOMEZ; J. DU; S. M. CARLTON. *UTHSCSA, UTMB.*

2:00 BB31 **240.06** The activation of neuronal cannabinoid CB1 receptor inhibits inflammatory hyperalgesia via inactivation of P2X3 receptor in rats. C. A. PARADA*; M. G. OLIVEIRA-FUSARO; D. ARALDI; I. J. M. BONET; C. H. TAMBELI. *State Univ. of Campinas - Unicamp.*

3:00 BB32 **240.07** Effects of morphine on formalin-evoked somatic and affective components of nociception in male and female rats. L. HARTON; J. RICHARDSON; A. NAZARIAN*. *Western Univ. of Hlth. Sci., Western Univ. Hlth. Sci.*

4:00 BB33 **240.08** Role of microglia and P2X7 receptors in arthritis pain. M. J. MOUSSEAU*; A. PILAPIL; J. MATYAS; T. TRANG. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Hotchkiss Brain Inst.*

1:00 CC1 **240.09** Sex differences in the antihyperalgesic and anti-inflammatory effect of P2X7 receptor blockade on carrageenan-induced arthritis in the rats knee joint model. C. H. TAMBELI*; J. M. TEIXEIRA; C. A. PARADA; E. V. DIAS. *UNIVERSITY OF CAMPINAS.*

2:00 CC2 **240.10** A novel phenotypic marker reveals resident macrophage monitoring of neuronal activity within sensory ganglia. D. C. MOLLIVER*; E. S. SCHWARTZ. *Univ. New England, Univ. of Pittsburgh.*

3:00 CC3 **240.11** The systemically active NAAA inhibitor, ARN726, alleviate inflammation in an animal model of rheumatoid arthritis. F. BONEZZI; O. SASSO; S. PONTIS; D. PIOMELLI*. *Fondazione Inst. Italiano Di Tecnologia.*

4:00 CC4 **240.12** ▲ Participation of peripheral P2Y1and P2Y6 receptors in formalin-induced inflammatory pain in rats. V. SOLANO-OLIVARES*; P. BARRAGAN-IGLESIAS; J. PINEDA-FARIAS; F. FLORES-MURRIETA; V. GRANADOS-SOTO; J. RODRÍGUEZ-SILVERIO; H. ROCHA-GONZALEZ. *Inst. Nacional De Enfermedades Respiratorias, Cinvestav sede sur, Escuela Superior de Medicina-IPN.*

1:00 CC5 **240.13** Protein levels of the resolvin D1 receptors GPR32 (G-protein coupled receptor 32) and FPR2 (formyl peptide receptor 2) are higher in juvenile rats with arthritis compared to young adult rats with arthritis. T. D. WILSON-GERWING*; A. M. ROSENBERG. *Univ. of Saskatchewan.*

2:00 CC6 **240.14** Autoantibody profiling in complex regional pain syndrome using luciferase immunoprecipitation system (lips) assay. A. BAYAT; M. J. IADAROLA*; A. BUVANENDRAN; A. J. MANNES; J. S. KROIN. *Dept. of Perioperative Med., Univ. of Chicago, Rush Med. Col.*

3:00 CC7 **240.15** Endothelin and bradykinin signaling divergence in sensory neurons. K. SZTEYN*; R. GOMEZ; N. A. JESKE. *Univ. of Texas Hlth. Sci. Ctr. San Anto.*

4:00 CC8 **240.16** Complement C5a contributes to inflammatory heat hyperalgesia via TRPV1 and macrophage-dependent mobilization of NGF in mouse. L. P. SHUTOV; C. A. WARWICK; R. P. GUPTE; A. J. SHEPHERD; D. J. CLARK; T. M. WOODRUFF; D. P. MOHAPATRA; Y. M. USACHEV*. *Univ. Iowa, VA Palo Alto Healthcare Syst. and Stanford Univ., The Univ. of Queensland.*

1:00 CC9 **240.17** Microglia specific Delta-Opioid Receptor deletion mouse model characterization. H. MAURIN*; D. REISS; L. ROECKEL; B. L. KIEFFER; C. GAVÉRIAUX-RUFF. *IGBMC, IGBMC Inst. de Génétique et de Biologie Moléculaire et Cellulaire, IGBMC Inst. de Génétique et de Biologie Moléculaire et Cellulaire, ESBS, École Supérieure de Biotechnologie de Strasbourg.*

2:00 CC10 **240.18** ▲ B vitamins suppress serine protease and protease-activated receptor 2 as well as behaviorally expressed hyperalgesia in Achilles tendonitis rats. W. B. SONG; Z. HUANG; X. SONG*. *Dept. of Neurobiology, Parker Univ. Res. Inst., Peking Univ.*

3:00 CC11 **240.19** The small GTPase Ras mediates Epac-induced sensitization of rat sensory neurons. B. SHARIATI*; E. L. THOMPSON; R. WANG; G. D. NICOL; M. R. VASKO. *Dept. of Pharmacol. and Toxicology, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

● Indicated a real or perceived conflict of interest, see page 147 for details.

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4:00 CC12 **240.20** Tumor Necrosis Factor alfa rapidly modulates gating properties of tetrodotoxin-resistant sodium channels, leading to acute nociceptive hyperexcitability. S. GUDES; B. KATZ; S. LEV; A. BINSHTOK*. *The Hebrew Univ. Med. Sch., The Edmond and Lily Safra Ctr. for Brain Sci.*

1:00 CC13 **240.21** ● Tnfα is involved in paclitaxel-induced chemotherapy-induced painful peripheral neuropathy. Z. WU*; M. MATA; D. FINK. *Univ. of Michigan, Univ. of Michigan.*

2:00 CC14 **240.22** Effects of alpha-7 nicotinic positive allosteric modulator on mechanical allodynia and TNF-alpha following LPS-induced neuroinflammatory pain in mice. M. ABBAS*; S. RAHMAN. *South Dakota State Univ.*

3:00 CC15 **240.23** Time-course of local release of inflammatory cytokines in a plantar incision model in rats. M. A. MEDEIROS*; N. M. SOUZA; L. L. CASTRO; F. A. VANDERLINDE. *UFRRJ, Federal Rural Univ. of Rio de Janeiro.*

4:00 CC16 **240.24** TNF-alpha overexpression in the tooth pulp and root results in painful pulpitis. B. HALL; E. UTRERAS PURATICH*; M. PROCHAZKOVA; A. TERSE; J. DOLAN; A. KULKARNI. *Natl. Inst. of Dent. and Craniofacial Res., Univ. of Chile. Fac. of Sci., New York Univ.*

1:00 CC17 **240.25** Pharmacologic blockade of the cannabinoid enzyme monoacyglycerol lipase attenuates hyperalgesia induced by inflammatory arthritis. S. R. NASS*; S. G. KINSEY. *West Virginia Univ.*

2:00 CC18 **240.26** Effect of glutamate on carrageenan-induced acute pleurisy in rat. S. DAS; Z. ZHANG; M. B. ANDERSON; K. S. CURTIS*; K. E. MILLER. *Oklahoma State Univ. Ctr. For Hlth. Sci., Oklahoma State Univ. Ctr. For Hlth. Sci.*

POSTER

241. Pain: Ion Channels and Physiology

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 CC19 **241.01** Activity dependent upregulation of Cav3.2 channels by USP5 - implications for pain. P. STEMKOWSKI*; A. GARCÍA-CABALLERO; V. M. GADOTTI; L. CHEN; A. CHEN; N. D. BERGER; T. K. LAPOINTE; C. ALTIER; P. PODGORNY; G. ZAMPONI. *Univ. of Calgary.*

2:00 CC20 **241.02** Hyperphosphorylation of Kv3.4 channels in DRG neurons as a putative mechanism of peripheral pain sensitization induced by spinal cord injury. B. ZEMEL*; T. HALA; A. LEPORE; M. COVARRUBIAS. *Thomas Jefferson Univ.*

3:00 CC21 **241.03** Facilitation of hyperpolarization-activated cyclic nucleotide-gated channel by Prostaglandin E1 in dorsal root ganglion neurons in mice. S. LEE*; P. CHO; I. AN; S. JUNG. *Physiol. of Dept. Dept. Med. of Col. Hanyang Univ.*

4:00 CC22 **241.04** Participation of cation channels in the peripheral pronociceptive effect induced by hydrogen sulfide in hyperglycemic rats. J. E. ROA-CORIA*; F. FLORES-MURRIETA; V. GRANADOS-SOTO; H. ROCHA-GONZÁLEZ. *Superior Sch. of Med. IPN, Inst. Nacional de Enfermedades Respiratorias, Cinvestav Sede-Sur.*

1:00 CC23 **241.05** Increased expression of Nav1.7, TRPV1 and Peizo2 channels contribute to the diabetes-induced hyperexcitability of dorsal root ganglion neurons. M. E. O'LEARY*; C. HO. *Cooper Med. Sch., Cooper Med. Sch.*

2:00 CC24 **241.06** Expression of alpha-2-delta-1 subunit at the lumbar spinal cord in spinal cord injury rats. K. KUSUYAMA; T. TACHIBANA*; H. YAMANAKA; K. NOGUCHI. *Hyogo Col. of Med., Hyogo Col. of Med.*

3:00 CC25 **241.07** Role of NaVβ4 regulatory subunit and resurgent current in development of pathological pain. W. XIE; Z. TAN; C. M. BARBOSA-NUNEZ; J. A. STRONG*; T. R. CUMMINS; J. ZHANG. *Univ. Cincinnati, Indiana Univ. Sch. Med.*

4:00 CC26 **241.08** ● Roles of Acid-Sensing Ion Channels in neuropathic pain induced by experimental autoimmune encephalomyelitis. I. WANG*; C. LEE; S. LIN; C. CHUNG; F. LIAO; C. CHEN. *Dept. of Life Science, Natl. Taiwan Univ., Inst. of Biomed. Sciences, Academia Sinica.*

1:00 CC27 **241.09** Discovery of a novel T-type calcium channel blocker for the treatment of neuropathic pain. Y. HIRAI*; T. KAWAZU; K. YASUTAKE; M. ADACHI; T. NAITOH; D. IKEGAMI; M. NARITA. *Nissan Chemcal Industries, Ltd., Nissan Chem. Industries, Ltd., Hoshi Univ., Life Sci. Tokyo Advanced research center (L-StaR).*

2:00 CC28 **241.10** Thrombospondin-4 increase mediates disruption of intracellular calcium signaling in injured primary sensory neurons. Y. GUO*; H. WU; Z. LUO; Q. HOGAN; B. PAN. *Med. Col. of Wisconsin, Univ. of California Irvine.*

3:00 CC29 **241.11** ● Discovery and characterization of novel, potent and selective P2X4 receptor antagonists for the treatment of pain. C. A. BOWEN*; J. NEWCOM; W. YANG; M. ORSINI; L. HARDY; L. SCARABOTTOLO; A. DI SILVIO; J. ROLLAND; F. ZHAO; H. WEI; D. C. SPANSWICK; T. LARGE. *Sunovion Pharmaceuticals Inc., Axxam SpA, NeuroSolutions Ltd., Warwick Med. School, Univ. of Warwick.*

4:00 CC30 **241.12** Sigma-1 receptor regulates sarco-endoplasmic reticulum Ca^{2+}-ATPase and store-operated Ca^{2+} entry activity in axotomized sensory neurons. H. WU*; Y. GUO; B. PAN; Q. HOGAN. *Med. Col. Wisconsin, Dept. Anesthesiology, Res. M4280, Med. Col. Wisconsin, Dept. Anesthesiology, Res. M4280.*

1:00 CC31 **241.13** A novel T-type calcium channel blocker P11520031 is effective for neuropathic pain without CNS-linked side effects. Y. HAMADA*; D. IKEGAMI; A. HAMADA; Y. HIRAI; T. KAWAZU; M. NARITA. *Hoshi Univ., Nissan Chem. Industries, Ltd., Life Sci. Tokyo Advanced research center (L-StaR).*

2:00 CC32 **241.14** Thrombospondin-4 elevates sensory neuron excitability by decreasing N-type and increasing T-type calcium currents. B. PAN*; Z. LUO; Q. H. HOGAN. *Med. Coll Wisconsin, Univ. of California.*

3:00 CC33 **241.15** Differential activation of cutaneous sensory neurons by optical activation of keratinocytes. P. C. ADELMAN*; K. M. BAUMBAUER; J. J. DEBERRY; R. H. MILLER; B. M. DAVIS; K. M. ALBERS; H. R. KOERBER. *Univ. of Pittsburgh.*

4:00 CC34 **241.16** Optogenetic control of neuromodulator release from keratinocytes. R. H. MILLER*; K. M. BAUMBAUER; P. C. ADELMAN; H. R. KOERBER; B. M. DAVIS; K. M. ALBERS. *Univ. of Pittsburgh.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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1:00 CC35 **241.17** Stopping orofacial pain: Re-purposing old drugs for new use. D. N. LYONS*; T. KNIFFIN; L. ZHANG; F. MA; R. DANAHER; C. MILLER; C. CARLSON; K. WESTLUND HIGH. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

2:00 CC36 **241.18** ▲ The effects of repeated forced exercise and/or caffeine on analgesia and analgesic tolerance. J. W. PICKEL*; V. SVYSTUN; G. PHANEUF; M. SHIELDS; E. GAUMER; J. A. SCHROEDER. *Connecticut Col.*

3:00 DD1 **241.19** ● Optogenetic tools for control of primary afferent neurons. S. M. IYER*; S. R. YOUNG; C. GORINI; K. L. MONTGOMERY; H. SCUTT; A. J. CHRISTENSEN; C. RAMAKRISHNAN; K. DEISSEROTH; S. L. DELP. *Stanford Univ., Stanford Univ., Stanford Univ.*

4:00 DD2 **241.20** Exposure of early-life stress changes smechanical allodynia and depression-like behavior following nerve injury in mice. T. NISHINAKA*; K. NAKAMOTO; S. TOKUYAMA. *Kobe Gakuin Univ.*

1:00 DD3 **241.21** Cholinergic mechanism in posterior hypothalamus: Affects on neural activity in the forebrain and animal behavioral responses to noxious stimuli. Z. WANG*; M. ARIFFIN; S. KHANNA. *Natl. Univ. of Singapore.*

2:00 DD4 **241.22** Inhibition of anandamide hydrolysis reduces nociceptor sensitization through CB1 receptors in a murine model of chemotherapy-induced peripheral neuropathy. M. L. UHELSKI*; C. HARDING-ROSE; D. SIMONE. *Univ. of Minnesota Twin Cities, Univ. of Minnesota.*

3:00 DD5 **241.23** Optimization of a cisplatin model of chemotherapy-induced peripheral neuropathy in mice: Use of vitamin C and sodium bicarbonate pretreatments to reduce nephrotoxicity and improve animal health status. J. GUINDON*; L. DENG; B. FAN; J. WAGER-MILLER; A. G. HOHMANN. *Indiana Univ., Indiana Univ.*

4:00 DD6 **241.24** ● *In vitro* electrophysiological screening with dorsal root ganglion neurons for pain related assays. A. M. NICOLINI; M. W. BROCK; C. M. ARROWOOD; D. C. MILLARD*. *Axion Biosystems.*

1:00 DD7 **241.25** Development and characterization of a primate model of central post stroke pain. K. NAGASAKA; I. TAKASHIMA; K. MATSUDA; N. HIGO*. *Univ. of Tsukuba, Human Tech. Res. Inst, AIST.*

2:00 DD8 **241.26** ▲ Mentha Piperita (peppermint) anti-nociception: Measurement in rats in the hotplate assay of the nociception. W. MICHNO*; E. P. WIERTELAK. *Macalester Col.*

3:00 DD9 **241.27** Kappa-Opioid receptor agonist analgesia and antianxiety: Effects of Salvinorin A in rat. E. P. WIERTELAK*; S. A. ANDERSON, Jr.; H. C. GEMRICH; T. M. NICHOLS-MEADE; S. SANGGAARD. *Macalester Col.*

4:00 DD10 **241.28** Use of a light dark choice paradigm for defining migraine like pain in mice after mast ell degranulation. T. L. YAKSH*; R. RAMACHANDRAN. *Univ. California.*

POSTER

242. Mechanisms of Neuropathic Pain: Signaling Pathways and Models

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 DD11 **242.01** Different types of ROS are involved in opposing forms of synaptic plasticity in the spinal cord. J. JUN*; J. WANG; A. BITTAR; K. CHUNG; J. M. CHUNG. *Univ. of Texas Med. Br.*

2:00 DD12 **242.02** Treatment of neuropathic pain with a highly selective monoclonal antibody targeting sodium channel NaV1.7. R. JI*; J. LEE; C. PARK; G. CHEN; R. XIE; S. LEE. *Duke Univ. Med. Ctr., Duke Univ., Duke Univ.*

3:00 DD13 **242.03** Preserved antinociceptive efficacy following chronic administration of a brain impermeant inhibitor of the anandamide hydrolyzing enzyme fatty-acid amide hydrolase (FAAH) in a mouse model of chemotherapy-induced peripheral neuropathy. R. SLIVICKI*; L. DENG; A. HOHMANN. *Indiana Univ., Indiana Univ.*

4:00 DD14 **242.04** Paclitaxel sensitizes trpv1 via activation of tlr4 contributing to chemotherapy induced peripheral neuropathy. Y. LI*; H. ZHANG; A. K. KOSTURAKIS; P. M. DOUGHERTY. *MD Anderson Cancer Center.*

1:00 DD15 **242.05** Dorsal root ganglia transcriptome profile of early painful diabetic neuropathy in a rat model of type-i diabetes. M. P. ATHIÉ*; A. S. VIEIRA; F. C. PRADO; E. V. DIAS; C. A. PARADA. *Univ. Estadual De Campinas, Univ. Estadual De Campinas.*

2:00 DD16 **242.06** Involvement of the opioid system in the analgesic effect of celecoxib in rats with diabetic neuropathy. I. E. JUAREZ-ROJOP*, JR; C. A. TOVILLA-ZARATE; H. AGUILAR-MARISCAL; D. Y. BERMUDEZ-OCAÑA; T. RAMON-FRIAS; J. L. BLE-CASTILLO; J. C. DIAZ-ZAGOYA. *Univ. Juárez Autonoma De Tabasco, Univ. Juárez Autonoma De Tabasco, Univ. Nacional Autonoma de Mexico.*

3:00 DD17 **242.07** Modulation of spinal AMPA receptor phosphorylation by PI3-Kinase activation in a rat model of neuropathic pain. J. JUN; S. JUNG; H. KIM; J. W. LEEM*. *Yonsei Univ. Col. Med., Yonsei Univ. Col. Med.*

4:00 DD18 **242.08** Anti-hyperalgesic effects of ROS scavengers in neuropathic mice. A. BITTAR*; J. JUN; J. WANG; K. CHUNG; J. M. CHUNG. *Univ. Texas Med. Br.*

1:00 DD19 **242.09** Phosphorylation of transcriptional factors CREB and C/EBPβ was mediated by mitochondrial ROS in the HIV gp120 neuropathic pain model in rats. S. HAO*; H. YI; W. ZHENG; W. HUANG; S. LIU; R. LEVITT; K. CANDIOTTI; D. A. LUBARSKY. *Univ. Miami.*

2:00 DD20 **242.10** Resolution of chemotherapy-induced neuropathic pain by protectin D1 via peripheral and central mechanisms. Z. XU*; R. XIE; S. BANG; G. CHEN; R. JI. *Duke Univ. Med. Ctr.*

3:00 DD21 **242.11** Pentoxifylline decreases Paclitaxel-increased free radicals level in the primary dorsal root ganglia cells in culture. H. KIM*; S. ABDI. *MD Anderson Cancer Ctr.*

4:00 DD22 **242.12** Regulator of G protein signaling – 9 modulates the actions of analgesic drugs in neuropathic pain models. V. MITSI*; S. GASPARI; D. TERZI; L. MANOURAS; G. DESCALZI; J. FENG; I. PURUSHOTHAMAN; L. SHEN; V. ZACHARIOU. *Univ. of Crete, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

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▲ Indicates a high school or undergraduate student presenter.

1:00 DD23 **242.13** Behavioral characterization of ZDF rat as model for neuropathic pain. N. GORODETSKAYA*; A. PEKCEC; L. CORRADINI; H. N. DOODS. *Boehringer Ingelheim Pharma Gmbh&Co. KG.*

2:00 DD24 **242.14** Painful nerve injury reduces mitochondrial calcium buffering in axotomized sensory neurons but elevates calcium buffering in adjacent sensory neurons. Q. H. HOGAN*; C. SPRICK; Y. GUO; S. MUELLER; M. BIENENGRAEBER; B. PAN; H. WU. *Med. Col. of Wisconsin.*

3:00 DD25 **242.15** Netrin acts as a pain-inducing factor in the adult spinal cord. Y. HAYANO*; K. KITADA; T. YAMASHITA. *Grad. Sch. of Medicine, Osaka Univ., Hokkaido Univ.*

4:00 DD26 **242.16** Deletion of Sox11 in nociceptive neurons inhibits nerve regeneration and prolongs neuropathic pain after nerve injury. L. LEI*; M. ANDERSON; B. ROY; L. CAO; E. BILSKY. *Univ. of New England, Univ. of New England, Univ. of New England.*

1:00 DD27 **242.17** ● Electrophysiological characterization of the ZDF rat model of type 2 diabetes using conventional nerve conduction studies and microneurography. E. GARCIA; N. GORODETSKAYA; A. PEKCEC; R. SOLA; M. SUMALLA; J. SERRA*. *Neurosci. Technologies, Boehringer Ingelheim Pharma GmbH & Co. KG.*

2:00 DD28 **242.18** Protein synthesis of synaptic proteins in the anterior cingulate cortex maintains chronic pain. H. KO*; J. CHOI; X. LI; G. BAEK; J. PARK; J. KIM; S. SIM; J. DO; J. SHIM; T. CHEN; M. ZHUO; B. KAANG. *Seoul Natl. Univ., Dept. of Physiology, Fac. of Medicine, Ctr. for the Study of Pain, Univ. of Toronto.*

3:00 DD29 **242.19** Sensory neuron subpopulation specific dysregulation of intracellular calcium in a rat model of chemotherapy-induced peripheral neuropathy. E. YILMAZ*; M. S. GOLD. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 DD30 **242.20** Activation of cAMP-PKA signaling pathway in rat dorsal root ganglion and spinal cord contributes to development of bone cancer pain. X. TAN; G. ZHU*; X. HE; P. CHEN; X. SONG. *Lianyungang City Oriental Hosp., Lianyungang East Hosp.*

1:00 DD31 **242.21** Ventrobasal thalamic burst firing after selective spinal cord tractotomies. J. OVELMEN-LEVITT; P. G. SHINKMAN*. *Wake Forest Baptist Hlth. Ctr., Univ. North Carolina.*

2:00 DD32 **242.22** Contribution of dorsal root ganglion myeloid zinc finger protein 1 to neuropathic pain in rats after nerve trauma. Y. TAO*; Z. LI; X. GU; L. SUN; S. WU; L. LIANG; B. M. LUTZ. *Rutgers, The State Univ. of New Jersey.*

3:00 EE1 **242.23** Wnt5a signaling pathway in the pathogenesis of HIV-associated pain. S. YUAN*; B. LI; G. JI; V. NEUGEBAUER; S. TANG. *Univ. of Texas Med. Br.*

4:00 EE2 **242.24** A spinal analogue of memory reconsolidation enables the reversal of hyperalgesia. R. P. BONIN*; Y. DE KONINCK. *CR-IUSMQ, Univ. Laval.*

1:00 EE3 **242.25** ● Painful hypersensitivity is attenuated by treatment with a novel CSE inhibitor in a rat model of chemotherapy induced peripheral neuropathy. S. SYDSERFF*; B. FRANCHINI; T. SACH; S. DURON; J. CHAPMAN. *Sova Pharmaceuticals.*

2:00 EE4 **242.26** AKAP-dependent cAMP-PKA signaling maintains pain-related spontaneous activity in nociceptor somata after spinal cord injury. A. BAVENCOFFE; Z. WU; Q. YANG; J. DU; Y. LI; E. J. KENNEDY; S. M. CARLTON; C. W. DESSAUER; E. T. WALTERS*. *Univ. Texas Med. Sch. At Houston, Scripps Res. Inst., Univ. Texas Med. Br, Univ. of Georgia.*

POSTER

243. Pain Imaging and Perception

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 EE5 **243.01** Functional MRI reveals emotional modulation of pain processing in the human brainstem and cervical spinal cord. T. A. MCIVER*; J. KORNELSEN; S. D. SMITH; R. L. BOSMA; H. S. KHAN; A. I. COTOI; R. H. Y. LEUNG; P. W. STROMAN. *Queen's Univ., Univ. of Manitoba, Univ. of Winnipeg.*

2:00 EE6 **243.02** Nanotheranostics as a tool for search, rescue and discovery: Understanding chronic pain processing in the peripheral nervous system. M. SALEEM*; J. M. JANJIC; K. VASUDEVA; K. ANDERSEN; B. ZEYZUS-JOHNS; T. K. HITCHENS; S. K. PATEL; J. POLLOCK. *Duquesne Univ., Duquesne Univ., Duquesne Univ., Duquesne Univ., Duquesne Univ., Carnegie Mellon Univ.*

3:00 EE7 **243.03** Neuromodulation of conditioned placebo/nocebo cue effect in heat pain: Anodal vs. cathodal tDCS to the right DLPFC. N. EGOROVA*; R. YU; J. A. CAMPRODON; N. KAUR; D. D. DOUGHERTY; R. L. GOLLUB; J. KONG. *Massachusetts Gen. Hosp., Harvard Med. Sch., MGH/MIT/HMS Athinoula A. Martinos Ctr. for Biomed. Imaging.*

4:00 EE8 **243.04** Changes in the functional connectivity of pain related brain areas during mental stress. R. RINGLER*; P. V. KEYLEN; K. DETMAR; R. LOOSE; C. FORSTER. *Univ. of Appl. Sci., Univ. of Erlangen-Nuremberg, Clin. Ctr. of Nuremberg, Univ. of Erlangen-Nuremberg.*

1:00 EE9 **243.05** An objective human brain biomarker of target engagement by gabapentin in central sensitization. V. WANIGASEKERA*; M. MEZUE; Y. KONG; I. TRACEY. *Univ. of Oxford.*

2:00 EE10 **243.06** Temporal summation of sensory and affective dimensions of pain in humans: A fMRI study. X. LIU*; W. XIAO; L. LI; H. WANG; H. SU; Y. WANG; Y. QIU. *Shenzhen Inst. of Advanced Technol., Loudi hospital, Ohio State Univ., Shenzhen Middle Sch.*

3:00 EE11 **243.07** Motor cortex stimulation on neuropathic pain with positron emission tomography. J. KIM*; S. LEE; J. SHIN; H. JUNG; S. KIM; J. CHANG. *Yonsei Univ. Coll of Med., Seoul Natl. Univ.*

4:00 EE12 **243.08** ● A magnetoencephalography study of pain anticipation in patients with thalamic pain syndrome. R. GOPALAKRISHNAN*; R. BURGESS; A. MACHADO. *Cleveland Clin., Cleveland Clin.*

1:00 EE13 **243.09** Neurophysiological correlates of bottom-up and top-down mediated modulations of pain. L. TIEMANN; E. MAY; M. POSTORINO; E. SCHULZ; M. NICKEL; U. BINGEL; M. PLONER*. *TU Muenchen, Univ. Hosp. Essen.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 EE14 **243.10** Investigation of the neural processes involved in cognitive modulation of pain in the human cervical spinal cord and brainstem using functional MRI. R. H. LEUNG*; A. I. COTOI; R. L. BOSMA; T. A. MCIVER; H. T. KHAN; P. W. STROMAN. *Queen's Univ.*

3:00 EE15 **243.11** Effects of visual body image on pain perception. M. OSUMI*; R. IMAI; K. UETA; S. MORIOKA. *Dept. of Neurorehabilitation, Grad. Sch.*

4:00 EE16 **243.12** Cathodal transcranial direct current stimulation over primary somatosensory cortex increases joint flexibility. T. MIZUNO*; Y. ARAMAKI. *Chukyo Univ., Res. Fellow of Japan Society for the Promotion of Sci.*

1:00 EE17 **243.13** Pain facilitation in the spinal cord and brainstem of patients with fibromyalgia syndrome: An fMRI study. R. BOSMA*; E. MOJARAD; L. LEUNG; C. PUKALL; R. STAUD; P. STROMAN. *Queen's Univ., Univ. of Florida.*

2:00 EE18 **243.14** Chronic non-resolving nerve injury in the rat causes behavioral changes and global and cellular abnormalities in brain morphology. L. A. LOW*; B. WANG; S. J. THOMPSON; M. BUSHNELL. *Natl. Inst. of Health/ NCCAM, McGill Univ.*

3:00 EE19 **243.15** Measuring the effect of pain on sensorimotor integration using short-latency afferent inhibition. L. J. BOUYER*; M. GAGNÉ; J. BEAUMONT; C. MERCIER. *Univ. Laval Fac Med., CIRRIS-Université Laval.*

4:00 EE20 **243.16** Investigating the neural processing of Conditioned Pain Modulation (CPM) in the human brainstem and spinal cord using functional MRI. A. COTOI*; R. H. Y. LEUNG; R. L. BOSMA; T. A. MCIVER; M. VALENCIA; H. S. KHAN; P. W. STROMAN. *Queen's Univ.*

1:00 EE21 **243.17** Demonstration and validation of a new MRI-safe pain tolerance device. T. A. DANIEL*; M. T. DAVIS; T. K. WITTE; J. Z. WILLIS; R. J. BEYERS; Y. WANG; T. S. DENNEY, Jr; N. SALIBI; J. S. KATZ; G. DESHPANDE. *Auburn Univ., Auburn Univ., Auburn Univ., Siemens Healthcare.*

2:00 EE22 **243.18** An fMRI study of estrogen-dependent visceral hypersensitivity following stress in rats. D. A. SEMINOWICZ; C. S. HUBBARD*; A. FURMAN; J. M. KARPOWICZ; R. J. TRAUB. *Univ. of Maryland, Baltimore.*

3:00 EE23 **243.19** *In vivo* opioid receptor availability in rat brain. S. J. THOMPSON*; L. HYSON; Y. WANG; G. NIU; X. CHEN; D. O. KIESEWETTER; P. SCHWEINHARDT; M. C. BUSHNELL. *Alan Edwards Ctr. for Res. on Pain, McGill U, Div. of Intramural Research, Natl. Ctr. for Complementary and Alternative Medicine, Natl. Inst. of Hlth., Div. of Intramural Research, Natl. Inst. of Biomed. Imaging and Bioengineering, Natl. Inst. of Hlth.*

4:00 EE24 **243.20** Human nerve growth factor mutation alters neural pathways for behavioral responses to acute pain. I. MORRISON*; I. PERINI; M. CEKO. *Linköping Univ., Linköping Univ., NIH.*

1:00 EE25 **243.21** Intrinsic brain networks normalize with treatment in pediatric complex regional pain syndrome. L. BECERRA*; L. SIMONS; A. LEBEL; S. BORSOOK. *Boston Children's Hosp., Boston Children's Hosp., Boston Children's Hosp.*

2:00 EE26 **243.22** White matter neuroplasticity following cognitive behavioral therapy for chronic pain. J. BISHOP; G. LIEBERMAN; M. SHPANER; T. ANDREWS; R. WATTS; M. DAVIS; C. FILIPPI; M. R. NAYLOR*. *Clin. Neurosci. Res. Unit, Univ. of Vermont, Phillips Healthcare, Univ. of Vermont, Columbia Univ.*

3:00 EE27 **243.23** Brain responsiveness to mechanical pressure in patients with sub-acute low back pain. Z. MANSOUR*; L. E. MARTIN; R. J. LEPPING; S. KANAAN; B. COWLEY; V. PAPA; W. BROOKS; N. K. SHARMA. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Jordan Univ. of Sci. and Technol., Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

4:00 EE28 **243.24** Cortical thickness change following acupuncture therapy predicts long-term pain improvement in idiopathic hand pain patients. Y. MAEDA*; N. KETTNER; J. KIM; S. CINA; C. MALATESTA; J. GERBER; C. MCMANUS; A. LIBBY; R. ONG-SUTHERLAND; P. MEZZACAPPA; L. R. MORSE; J. AUDETTE; V. NAPADOW. *MGH, Athinoula A. Martinos Ctr. For Biomed. Imaging, Harvard Med. Sch., Logan Univ., Spaulding Rehabil. Hosp., Harvard Med. School, Spaulding Rehabil. Hosp., Harvard Vanguard Med. Associates, Atrium Hlth.*

1:00 FF1 **243.25** 10 hz-modulation low level laser stimulation of k1 acupoint induced brain ipislateral activations: a rodent functional mri study. C. HSIEH; Y. HUANG; S. YANG; C. HSIEH; C. WU; D. CHEN*. *Asia Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Central Univ., Dept Psychology, Natl. Cheng Kung Univ.*

2:00 FF2 **243.26** Structural and functional network topologies of the limbic system shape chronic pain. E. VACHON-PRESSEAU*; M. N. BALIKI; P. TETREAULT; T. J. SCHNITZER; A. V. APKARIAN. *Northwestern Univ.*

3:00 FF3 **243.27** Resting state and stimulus evoked brain activity in awake or isoflurane-anesthetized rat. P. CHANG*; D. PROCISSI; A. APKARAIN. *Northwestern Univ.*

4:00 FF4 **243.28** Cell to cell coupling in dorsal root ganglion (DRG) neurons amplifies pain sensation. Y. KIM*; K. PARK; S. JILAFU; L. HAN; Z. LI; L. YOUNG; P. LAVINKA; S. HE; F. ZHOU; Y. GUAN; M. CATERINA; X. DONG. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

POSTER

244. Opioids and Other Analgesics

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 FF5 **244.01** A bivalent ligand that targets μ opioid and mGluR5 receptor heteromers reduces neuropathic pain responses when given intrathecally to mice. C. PETERSON*; K. F. KITTO; E. AKGUN; M. LUNZER; P. S. PORTOGHESE; C. FAIRBANKS. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

2:00 FF6 **244.02** Antinociceptive mechanisms of spinal beta-endorphine with opioid recepter antagonists on acute pain. T. TERASHIMA*; S. YAMAGUCHI; T. TAKASUSUKI; Y. HORI; T. L. YAKSH. *Dokkyo Med. Univ., Dokkyo Med. Univ., UCSD.*

3:00 FF7 **244.03** ● SEO-16: An orally active opioid analgesic with rapid onset of activity and reduced CNS-side effects. S. D. HARRISON*; N. ANAND; I. CHOI; J. EVANS; K. GOGAS; M. HENNESSY; H. GURSAHANI; G. KIM; M. LEE; P. QUACH; W. RUBAS; J. RIGGS. *Nektar Therapeut. Inc., Nektar Therapeut.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 FF8 **244.04** Valpronic acid attenuated the development of morphine withdrawal syndrome in mice. T. SHINOZAKI; M. ARAKI; T. YAMAMOTO*. *Kumamoto Univ. Hosp.*

1:00 FF9 **244.05** Activation of the mu opioid receptor stimulates the binding of RGS4 to the receptor/G protein complex in a GTP-dependent manner. R. SANTHAPPAN; T. E. COTE*. *Uniformed Services Univ., Uniformed Services Univ.*

2:00 FF10 **244.06** Intrathecal pretreatment with AAV5 carrying the gene for human arginine decarboxylase (hADC) inhibits the development of opioid analgesic tolerance. C. C. CHURCHILL*; S. SCHNELL; M. RIEDL; C. PETERSON; K. KITTO; J. WEINHOLD; L. VULCHANOVA; C. FAIRBANKS. *Univ. of MN, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

3:00 FF11 **244.07** Identification of new opioid receptor variants. M. H. PILTONEN*; L. DIATCHENKO. *McGill Univ., McGill Univ.*

4:00 FF12 **244.08** ▲ Ligand biased differences in morphine and fentanyl antinociception following microinjection into the ventrolateral periaqueductal gray of the rat. R. L. WESCOM; K. N. CAMPION; K. A. SAVILLE; E. N. BOBECK; M. M. MORGAN*. *Washington State Univ.*

1:00 FF13 **244.09** A possible role of peripheral mu-opioid receptors in DALDA-induced inhibition of ongoing neuropathic pain and persistent inflammatory pain in rats. V. TIWARI*; S. HE; F. YANG; Q. XU; R. SHECHTER; A. CARTERET; Y. GUAN; S. RAJA. *The Johns Hopkins Univ. Sch. of Med.*

2:00 FF14 **244.10** ● How do biased u-opioid receptor and non-biased agonists differ on receptor desensitization and downstream signaling? S. P. ARNERIC*; T. W. STINNETTE. *Eli Lilly and Co.*

3:00 FF15 **244.11** Involvement of radixin in the attenuation of morphine analgesia through the small intestinal P-glycoprotein. S. TOKUYAMA*; T. KOBORI; S. HARADA; K. NAKAMOTO. *Kobe Gakuin Univ. Library Yakugaku.*

4:00 FF16 **244.12** β–arrestin–2–biased agonism of delta opioid receptors sensitizes transient receptor potential vanilloid type 1 (TRPV1) in primary sensory neurons. A. P. DOYLE*; M. P. ROWAN; R. GOMEZ; K. SZTEYN; M. A. HENRY; N. A. JESKE. *UTHSCSA.*

1:00 FF17 **244.13** The prototypical kappa opioid receptor (KOR) antagonist, norBNI, uniquely regulates KOR function in peripheral sensory neurons. R. J. JAMSHIDI*; B. A. MCGUIRE; L. C. SULLIVAN; T. A. CHAVERA; W. P. CLARKE; K. A. BERG. *UT Hlth. Sci. Ctr. San Antonio.*

2:00 FF18 **244.14** ● Differential effects of various opioids on the development of allodynia and abuse in the context of pain. M. A. EMERY*; M. L. S. BATES; P. J. WELLMAN; S. EITAN. *Texas A&M Univ.*

3:00 FF19 **244.15** Increased response to glutamate in small dorsal root ganglia neuron of morphine tolerant rats. K. GONG*; P. OHARA; L. JASMIN. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco.*

4:00 FF20 **244.16** Curcumin attenuates thermal hyperalgesia in a rat full thickness thermal injury model. M. M. SALAS*; L. N. PETZ; M. FOWLER; J. CLIFFORD. *United States Army Inst. of Surgical Res., United States Army Inst. of Surgical Res.*

1:00 FF21 **244.17** Local anaesthesia reduces the acute inflammatory edema and early elevation of glutaminase in dorsal root ganglion neurons during adjuvant induced arthritis. Z. ZHANG*; B. BOLT; S. DAS; M. ANDERSON; K. MILLER. *Oklahoma State Univ-CHS.*

2:00 FF22 **244.18** Antinociceptive properties of the mastoparan peptide Agelaia-MP I from social wasps. M. RANGEL*; J. C. GONÇALVES; A. B. MAYER; E. S. ALVES; K. G. MOREIRA; L. P. SILVA; M. R. MORTARI. *Butantan Inst., Biol. Sci. Institute, Univ. of Brasilia, Univ. Federal de Goiás, Embrapa Genet. Resources and Biotech.*

3:00 FF23 **244.19** Thermal hyperalgesia is offset by top-down inhibition in offset analgesia. E. IKEDA; H. KOBINATA; S. ZHANG; T. LI; K. MAKITA; J. KURATA*. *Tokyo Med. and Dent. Univ. Sch. of Med.*

4:00 FF24 **244.20** Epinephrine dose not worsen histological damage induced by lidocaine neurotoxicity in the rats. T. TAKENAMI*; Y. NARA; H. OKAMOTO. *Kitasato Univ., Kitasato Univ. Sch. of Med.*

1:00 FF25 **244.21** Antineuropathic effect of 7-hydroxy-3,4-dihydrocadalin in streptozotocin-induced diabetic rats. H. I. ROCHA-GONZALEZ*; M. RAMÍREZ-AGUILAR; V. GRANADOS-SOTO; J. RESYES-GARCÍA; J. TORRES-LÓPEZ; J. HUERTA-CRUZ; A. NAVARRETE. *Sección De Estudios De Posgrado E Investigación, Facultad de Química , UNAM, Cinvestav Sede sur, Univ. Juárez Autónoma de Tabasco, Facultad de Química, UNAM.*

2:00 FF26 **244.22** Remembering dynamic changes in acute pain: Effects of pain intensity and memory delays. M. KHOSHNEJAD*; M. FORTIN; G. DUNCAN; P. RAINVILLE. *Univ. of Montreal, Rutgers Univ.*

3:00 FF27 **244.23** Gonadal hormone modulation of antinociceptive tolerance to delta-9-tetrahydrocannibinol. R. M. CRAFT*; A. A. WAKLEY. *Washington State Univ., Washington State Univ.*

4:00 FF28 **244.24** Characterization of 2-261, a novel positive allosteric modulator of GABAA receptor β2/3 subunit, in experimental neuropathic pain. C. QU*; J. Y. XIE; M. H. OSSIPOV; T. B. JOHNSTONE; K. GEE; F. PORRECA. *Univ. of Arizona, Univ. of California, Irvine.*

1:00 FF29 **244.25** The oral administration of trans-caryophyllene attenuates mechanical hypernociception in chronic pain induced by sciatic nerve injury and sleep restriction. L. G. FREIRE*; G. R. MOLSKA; A. A. F. Z. LOPES; D. SUCHECKI. *Univ. Federal De São Paulo, Univ. Federal De São Paulo.*

POSTER

245. Somatosensory Transduction

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 FF30 **245.01** Store-operated calcium channels play an important role in neuropathic pain via the ERK signaling pathway. H. HU*; X. GAO; R. GAO; Y. TIAN; J. E. BARRETT. *Drexel Univ. Col. of Med.*

2:00 FF31 **245.02** Activation of NK1 receptors leads to store-operated calcium entry in mouse spinal cord dorsal horn neurons. J. XIA*; R. GAO; Y. TIAN; J. E. BARRETT; H. HU. *Drexel Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 FF32 **245.03** A quantitative analysis of Meissner's corpuscles in the fingertips of humans, chimpanzees and monkeys. A. VERENDEEV*; C. THOMAS; S. C. MCFARLIN; W. D. HOPKINS; K. A. PHILLIPS; C. C. SHERWOOD. *George Washington Univ., George Washington Univ., Yerkes Natl. Primate Res. Ctr., Georgia State Univ., Trinity Univ.*

4:00 GG1 **245.04** Somatosensory innervation in the skin of humpback whales (Megaptera novaeangliae). S. A. ELDRIDGE*; F. MORTAZAVI; V. HERRERA; F. L. RICE; D. KETTEN; D. L. ROSENE. *Univ. of Massachusetts Dartmouth, Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Integrated Tissue Dynamics, Woods Hole Oceanographic Inst.*

1:00 GG2 **245.05** Ion channels/receptors expressed along group IV sensory afferent fibers within rat skeletal muscle. R. RAMACHANDRA*; K. S. ELMSLIE. *A.T. Still Univ., A.T.Still Univ. of Hlth. Sci.*

2:00 GG3 **245.06** Encoding temperature valence. L. POGORZALA; M. ISAACSON; H. SOLINSKI; M. HOON*. *NIDCR.*

3:00 GG4 **245.07** Elucidating mechanisms of touch-receptor plasticity during target-organ remodeling. E. A. LUMPKIN*; K. L. MARSHALL; B. A. JENKINS; Y. BABA; Y. WANG; D. R. LESNIAK; G. J. GERLING. *Columbia Univ. Physicians & Surgeons, Columbia Univ., Columbia Univ., Univ. of Virginia.*

4:00 GG5 **245.08** Cellular and behavioral characterization of ASIC4 in knockout mouse. S. LIN*; C. CHEN. *Academia Sinica, Inst. of Biomed. Sci.*

1:00 GG6 **245.09** Vibration detection thresholds in a human cohort with congenital hearing deficits. R. MOSHOURAB*; V. BEGAY; J. WALCHER; C. WETZEL; M. GROSS; G. LEWIN. *Max-Delbrück Centrum, Charité - Universitätsmedizin.*

2:00 GG7 **245.10** Role of somatic/perisomatic membrane potential of nociceptive neurons in peripheral nociceptive transmission. X. DU*; H. HAO; S. GIGOUT; D. HUANG; Y. YANG; C. WANG; D. SUNDT; D. JAFFE; H. ZHANG; N. GAMPER. *Hebei Med. Univ., Univ. of Leeds, Univ. of Texas at San Antonio.*

3:00 GG8 **245.11** Bidirectional modulation of heteromeric acid-sensing ion channel 1a/3 channels by zinc. X. CHU*; X. ZHA; Q. JIANG. *Univ. Missouri-Kansas City, Univ. of South Alabama.*

4:00 GG9 **245.12** The novel T-type Cav3 channel biologic probe ML218 produces state-dependent inhibition of T-currents and mitigation of neuropathic and inflammatory pain in rodents. B. ZOU*; C. PASCUAL; L. YANG; J. XIE; X. XIE; D. WEAVER; C. LINDSLEY. *AfaSci Res. Lab., Vanderbilt Univ., Vanderbilt Univ.*

1:00 GG10 **245.13** Control of activity mode and sensory signal processing in the thalamus: The novel role of KCNQ channels. M. CERINA*; H. J. SZKUDLAREK; P. COULON; T. KANYSHKOVA; P. MEUTH; K. GOEBEL; T. SEIDENBECHER; S. G. MEUTH; H. C. PAPE; T. BUDDE. *Inst. of Neuropathophysiology, Inst. of Physiol. I, Univ. Hosp.*

2:00 GG11 **245.14** Somatosensory signal processing in ventrobasal thalamocortical neurons- contribution of KCNQ channels. H. J. SZKUDLAREK; M. CERINA; P. COULON; P. MEUTH; P. BLAESSE*; T. KANYSHKOVA; K. GÖBEL; T. SEIDENBECHER; S. G. MEUTH; H. PAPE; T. BUDDE. *Westfaelische Wilhelms-Universitaet Muenster, Westfaelische Wilhlelms-Universitaet Muenster, Westfaelische Wilhelms-Universitaet Muenster.*

3:00 GG12 **245.15** TRP channel mediated cross-talk between axotomized and intact neurons in dorsal root ganglia revealed by probing activity with an ion channel photoswitch compound. C. HEROLD*; R. H. KRAMER. *UC Berkeley.*

4:00 GG13 **245.16** Neuropeptides in Sensory Neurons. S. K. MISHRA*; J. HUANG; M. A. HOON. *Natl. Inst. of Dent. and Craniofacial Research/NIH.*

1:00 GG14 **245.17** KCNS1 as a biomarker for increased pain perception in patients with musculoskeletal pain. A. FRENCH*; J. BISHOP; S. ATKINSON; V. MAY; G. LIEBERMAN; M. NAYLOR. *Univ. of Vermont, Univ. of Vermont.*

Sun. PM

POSTER

246. Neocortical Plasticity

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 GG15 **246.01** ▲ Conditioned taste aversion prevents the long-lasting BDNF-induced enhancement of synaptic transmission in the insular cortex: A metaplastic effect. A. RIVERA-OLVERA; M. L. ESCOBAR*. *Fac Psicol, UNAM.*

2:00 GG16 **246.02** Alterations in neurotrophin expression associated with adult experience-dependent plasticity. S. A. MARIK*; C. D. GILBERT. *The Rockefeller Univ.*

3:00 GG17 **246.03** Epigenetic regulation of BDNF affects parvalbumin interneuron maturation during experience-dependent plasticity of the mouse barrel cortex. D. X. KOH*; S. LO; G. J. AUGUSTINE; J. C. SNG. *A*STAR, Natl. Univ. of Singapore, Nanyang Technological Univ., A*STAR, Natl. Univ. of Singapore.*

4:00 GG18 **246.04** Post-training changes in the numerical density of CB1 and PV immunoreactive puncta in barrel cortex following fear conditioning in the mouse. E. SIUCINSKA*; W. BRUTKOWSKI; T. BERNAS. *Nencki Inst.*

1:00 GG19 **246.05** Visualization of NMDA receptor-dependent AMPA receptor synaptic plasticity *in vivo.* Y. ZHANG*; R. H. CUDMORE; D. LIN; D. J. LINDEN; R. L. HUGANIR. *Johns Hopkins UniV, NIDA.*

2:00 GG20 **246.06** Synapse-specific plasticity and calcium-permeable AMPA receptors expression in the neocortical layer-5 microcircuit. T. LALANNE*; J. OYRER; R. P. COSTA; A. J. CHUNG; M. FARRANT; P. J. SJÖSTRÖM. *McGill Univ., Univ. Col. London, Univ. of Edinburgh.*

3:00 GG21 **246.07** Development of sub- and suprathreshold plasticity in RS and IB cells in layer V of the mouse barrel cortex *in vivo.* S. GREENHILL*; K. FOX. *Cardiff Univ.*

4:00 GG22 **246.08** Role of experience in plasticity outcomes of spatially separate synaptic pathways onto individual neurons in mouse visual cortex. O. M. FITCH*; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst., Baylor Col. of Med.*

1:00 GG23 **246.09** The role of CaMKII-alpha in experience-dependent structural plasticity of Layer2/3 pyramidal dendritic spines in mouse barrel cortex. G. SEATON*; K. D. FOX. *Cardiff Univ.*

2:00 GG24 **246.10** Sensory training reorganizes intracortical connections differentially across modalities after a mild TBI. S. L. JULIANO*; E. M. SHINDELL; S. SCHWERIN. *USUHS.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 GG25 **246.11** Inhibitory and excitatory spike-timing-dependent plasticity in the auditory cortex. J. A. D'AMOUR*; R. C. FROEMKE. *New York University, Sch. of Med.*

4:00 GG26 **246.12** Interhemispheric interactions contribution in experience dependent plasticity. J. A. JABLONKA*; P. URBAN; M. KAZMIERCZAK; Z. BORZYMOWSKA; E. KUBLIK. *Warsaw Univ., Warsaw University, Warsaw, Poland, Rutgers Univ. Cell Biol. & Neurosci., Nencki Inst. of Exptl. Biol.*

1:00 GG27 **246.13** Altered microRNAs expression in cortical plasticity after sensory stimulation. I. KHADIMALLAH*; N. WENGER; R. KRAFTSIK; R. REGAZZI; G. KIRSCHMANN; E. WELKER. *Univ. of Lausanne, Univ. Hosp. Ctr.*

2:00 GG28 **246.14** Control of vesicle release by cortical presynaptic NMDA receptors. T. ABRAHAMSSON*; R. P. COSTA; K. A. BUCHANAN; D. ELGAR; A. V. BLACKMAN; J. OYRER; A. A. TUDOR-JONES; M. C. W. VAN ROSSUM; P. J. SJÖSTRÖM. *The Res. Inst. of the McGill Univ. He, Univ. of Edinburgh, Univ. Col. London.*

3:00 GG29 **246.15** Imbalanced synaptic plasticity rules lead to energy efficient connectivity. J. SACRAMENTO; M. C. VAN ROSSUM*. *INESC-ID, Univ. Edinburgh.*

4:00 GG30 **246.16** Distinct mechanisms of spike timing-dependent LTD at vertical and horizontal inputs onto L2/3 pyramidal neurons in mouse barrel cortex. A. RODRIGUEZ-MORENO*; A. BANERJEE; A. GONZALEZ-RUEDA; C. SAMPAIO-BAPTISTA; O. PAULSEN. *Univ. Pablo de Olavide (Edificio 21), Univ. of Oxford, Univ. of Cambridge.*

1:00 GG31 **246.17** Microglial P2Y12 signaling is critical for visual plasticity. G. O. SIPE*; A. K. MAJEWSKA. *Univ. of Rochester Med. Ctr.*

2:00 GG32 **246.18** Motor skill learning induced AMPA receptor synaptic translocation in the fmr1 KO mouse. A. SURESH; A. DUNAEVSKY*. *Univ. of Nebraska Med. Ctr.*

3:00 GG33 **246.19** Dynamic synaptic re-organization in the motor cortex in Parkinson's disease. T. XU; L. GUO; J. KIM; H. XIONG; Y. WU*; Y. CUI; J. B. DING. *Wuhan Natl. Lab. for Optoelectronics-Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol., Stanford Univ., Stanford Univ. Sch. of Med.*

4:00 GG34 **246.20** Deprivation-induced strengthening of pre- and postsynaptic inhibitory transmission in layer 4 of visual cortex during the critical period. M. NAHMANI*; G. G. TURRIGIANO. *Brandeis Univ.*

1:00 GG35 **246.21** Cortical neuronal morphology and alteration of Neurexin distribution by Rho GTPases. S. K. VALAPPIL*; H. L. HYNDS. *Texas Womans Univ., Texas Womans Univ.*

2:00 GG36 **246.22** Immunohistochemical and morphometric characterization of neuropeptide Y positive neurons in the human neocortex during regional chronic ischemia. V. AKULININ*; P. V. BELICHENKO; A. V. MYTSIK; A. V. SERGEEV; S. S. STEPANOV. *Omsk State Med. Acad., Sch. of Medicine, Univ. of California.*

3:00 HH1 **246.23** Chronic *in vivo* imaging of synaptic reorganization in visual cortex after traumatic brain injury. E. WITKOWSKI*; G. DEWALT; A. FOSTER; W. ELDRED; I. DAVISON. *Boston Univ.*

4:00 HH2 **246.24** Dorsal column lesions in monkeys differentially affect widespread activity and response properties of putative inhibitory and excitatory neurons in area 3b. J. L. REED*; H. QI; J. H. KAAS. *Vanderbilt Univ.*

POSTER

247. Motor Neurons: Development, Identification, Intrinsic Properties, and Modulation

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH3 **247.01** Amplification of synaptic currents without bistability in motoneurons: A tale of two channels modulated by monoamines. P. ROSE*; R. MARATTA; K. FENRICH. *Queens Univ., Univ. of Alberta.*

2:00 HH4 **247.02** Effect of cannabidiol treatment associated with CB1 and CB2 receptors antagonists after neonatal rat sciatic nerve axotomy. M. PEREZ*; L. P. CARTAROZZI; F. S. GUIMARÃES; E. A. DEL BEL; A. L. R. OLIVEIRA. *Unicamp, Univ. of São Paulo.*

3:00 HH5 **247.03** Reduction of survival of motor neuron protein in the enteric nervous system impairs neuromuscular transmission to smooth muscle and gastrointestinal function. S. E. GOMBASH*; K. C. WILLIAMS; J. A. FITZGERALD; C. C. IYER; V. L. MCGOVERN; I. S. GRANTS; F. L. CHRISTOFI; C. C. COWLEY; A. H. M. BURGHES; K. D. FOUST. *Ohio State Univ.*

4:00 HH6 **247.04** Direct cutaneous modulation of motoneuron activity: Evidence for a monosynaptic circuit connecting cutaneous afferents with spinal motoneurons. P. M. SONNER*; M. A. DALLMAN; D. R. LADLE. *Wright State Univ.*

1:00 HH7 **247.05** Stereological and immunohistochemical analysis of inhibitory and excitatory innervation of the cranial motor nuclei that control extraocular muscles in the mouse. N. M. DOIG*; V. LUCO; J. CORTÉS; A. OÑATE; P. HENNY. *Pontificia Univ. Católica De Chile.*

2:00 HH8 **247.06** Task-specific activation of extraocular motoneurons in Xenopus laevis. J. M. SCHULLER; A. G. KNORR; S. GLASAUER*; H. STRAKA. *LMU Munich - Biocenter Martinsried, Ludwig-Maximilian-University.*

3:00 HH9 **247.07** Vestibulo-ocular reflexes are mediated by functionally distinct subgroups of extraocular motoneurons. H. DIETRICH; S. GLASAUER; H. STRAKA*. *LMU Munich - Biocenter Martinsried, LMU Munich, Dept. Neurology, Klinikum Grosshadern.*

4:00 HH10 **247.08** ● A method to detect silent carriers of spinal muscular atrophy by analysis of human sperm. M. C. EVANS; M. C. GALLEN; N. J. ROBICHAUD; D. A. HILL; C. D. BRAASTAD; J. J. HIGGINS*, Jr. *Quest Diagnostics.*

1:00 HH11 **247.09** Active intrinsic properties differ between murine cranial and spinal motoneurons. M. A. TADROS*; A. J. FUGLEVAND; A. M. BRICHTA; R. J. CALLISTER. *Univ. Newcastle, Univ. of Arizona.*

2:00 HH12 **247.10** Abnormal migration and functional architecture in zebrafish facial motor neurons. K. L. MCARTHUR*; J. R. FETCHO. *Cornell Univ.*

3:00 HH13 **247.11** Copper nanoparticles and or ionic copper (II) causes neurotoxicity and cardiotoxicity in Zebrafish embryos. E. CUEVAS*; W. TRICKLER; M. G. PAULE; S. ALI; J. KANUNGO. *NCTR-FDA, NCTR/FDA.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 HH14 **247.12** Myelin-Associated Glycoprotein modulates programmed cell death of motoneurons during early postnatal development via NgR/p75NTR receptor-mediated activation of RhoA signaling pathway. A. PALANDRI*; M. V. ROZES SALVADOR; J. WOJNAKI; A. L. VIVINETTO; R. L. SCHNAAR; P. H. H. LOPEZ. *Inst. De Investigacion Mercedes Y Martin Ferre, Johns Hopkins Univ. Sch. of Med.*

1:00 HH15 **247.13** Developmental changes in dendritic morphology and distribution of excitatory and inhibitory synaptic inputs of mouse hypoglossal motor neurons. M. C. BELLINGHAM*; R. KANJHAN; M. J. FOGARTY; P. G. NOAKES. *Univ. of Queensland.*

2:00 HH16 **247.14** Analysis of efferent microneurography recordings for ENG-driven hand neuroprosthesis. F. M. PETRINI*; S. RASPOPOVIC; J. RIGOSA; M. CAPOGROSSO; F. GIAMBATTISTELLI; L. ZOLLO; E. GUGLIELMELLI; S. MICERA. *EPFL, IRCCS S.Raffale-Pisana, Campus Bio-Medico di Roma, Scuola Superiore Sant'Anna, Campus Bio-Medico di Roma.*

3:00 HH17 **247.15** Stereological estimation of the number of cells and VGluT1, VGluT2 and VIAAT immuno-positive varicosities in the trigeminal, facial and ambiguus motor nuclei of the mouse brain. P. HENNY*; M. FAUNES; S. FERNANDEZ; A. ONATE. *Pontificia Univ. Catolica de Chile.*

4:00 HH18 **247.16** Role of subthreshold Ca-dependent potassium currents in motoneuron firing properties. R. H. LEE*; C. S. MITCHELL. *Georgia Tech., Emory Univ.*

1:00 HH19 **247.17** Spinal nerve root and rootlet stimulation. J. A. NORTON*. *Univ. Of Saskatchewan.*

2:00 HH20 **247.18** Estimating the time course of excitatory postsynaptic potential in human motoneuron. X. HU*; N. L. SURESH; B. JEON; W. Z. RYMER. *Rehabil. Inst. of Chicago, Rehabil. Inst. of Chicago.*

POSTER

248. Small Networks and Plasticity

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH21 **248.01** Synaptic plasticity of two genetically distinct populations of GPe neurons after dopamine depletion. K. J. MASTRO*; H. A. HOLT; A. H. GITTIS. *Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ.*

2:00 HH22 **248.02** Differential gabaergic contribution during corticostriatal activation. A. B. GARCÍA*; R. HENÁNDEZ-MARTÍNEZ; J. E. PÉREZ-ORTEGA; V. G. LÓPEZ-HUERTA; J. BARGAS; E. GALARRAGA. *Inst. De Fisiología Celular UNAM, Okinawa Inst. of science and Technol.*

3:00 HH23 **248.03** Striatal microcircuit plasticity. E. LARA-GONZALEZ*; M. DUHNE; J. BARGAS. *Univ. Nacional Autónoma de México.*

4:00 HH24 **248.04** Network theory applied to living neural circuits distinguish between normal and pathological conditions. J. E. PÉREZ-ORTEGA*; M. DUHNE; E. LARA; V. PLATA; D. GASCA; A. HERNÁNDEZ-CRUZ; E. GALARRAGA; J. BARGAS. *Inst. De Fisiología Celular - Univ. Nacional Autónoma De México.*

1:00 HH25 **248.05** Motor deficits induced by a selective loss of dopamine D2 receptors in striatal indirect pathway neurons. J. C. LEMOS*; A. R. KAPLAN; D. M. FRIEND; J. H. SHIN; M. RUBINSTEIN; A. V. KRAVITZ; V. A. ALVAREZ. *NIAAA/NIH, NIDDK/NIH, Inst. de Investigaciones en Ingeniería Genética y Biología Mol.*

2:00 HH26 **248.06** Presynaptic active zone proteins RIM1$\alpha\beta$ are required for normal corticostriatal transmission and striatal-based behaviors. D. A. KUPFERSCHMIDT*; D. M. LOVINGER. *Natl. Inst. of Alcohol Abuse and Alcoholism.*

3:00 HH27 **248.07** Striatal indirect pathway activity is reduced in a mouse model of dyskinesia. A. B. NELSON*; D. NATHANIEL; A. KREITZER. *Gladstone Inst. of Neurolog. Dis., UC San Francisco.*

4:00 HH28 **248.08** Activity of basal ganglia output neurons in Parkinsonian mice. C. J. LOBB*; D. JAEGER. *Emory Univ.*

1:00 HH29 **248.09** Dopamine reinforcement signals modify the direction of spike timing dependent synaptic plasticity in the striatum. S. D. FISHER*; Y. F. ZHANG; M. J. BLACK; W. C. ABRAHAM; J. N. J. REYNOLDS. *Univ. of Otago, Univ. of Otago.*

2:00 HH30 **248.10** ● A putative vglut1-positive cortico-pallidal glutamatergic projection: Differential organization between the internal and external globus pallidus. Y. SMITH*; A. MATHAI; J. PARE; R. C. MOOT. *Yerkes Res. Ctr., Udall Ctr. Excel. For Parkinson's Dis. and Dept. of Neurol.*

3:00 HH31 **248.11** Loss of glutamatergic thalamic input (vGluT2-positive) in deep layers (layer VI) of primary motor cortex (M1) of MPTP-treated parkinsonian monkeys. R. M. VILLALBA*; J. PARE; T. WICHMANN; Y. SMITH. *Yerkes Resch Ctr. and Udall Ctr. of Excelence For Parkinson's disease, Emory Un, Yerkes Res. Ctr., Udall Ctr. Excel For Parkinson's Dis. and Dept of Neurol., Emory Univ.*

4:00 HH32 **248.12** Effects of stimulation of the internal globus pallidus on thalamic activity patterns in parkinsonian monkeys. S. KAMMERMEIER; I. HAMADA; A. DEVERGNAS; D. PITTARD; Y. SMITH; T. WICHMANN*. *Emory Univ., Ludwig-Maximilians-University, Emory Univ. Sch. Med.*

1:00 II1 **248.13** ▲ Localization of Cav3.1 T-Type calcium channels in the monkey thalamus: light and electron microscopic immunocytochemistry using subtype-specific antibodies. E. CHEN*; J. PARÉ; S. JENKINS; T. WICHMANN; Y. SMITH. *Emory Univ., Emory Univ., Emory Univ., Emory Univ.*

2:00 II2 **248.14** Electrophysiological effects of local administration of a selective T-type calcium channel blocker on thalamic neurons. A. DEVERGNAS*; Y. MA; I. HAMADA; C. K. JONES; C. W. LINDSLEY; Y. SMITH; T. WICHMANN. *Yerkes Natl. Primate Res. Ctr., Udall Ctr. of Excellence in Parkinson's Dis. Res., Vanderbilt Univ. Med. Ctr., Vanderbilt Ctr. for Neurosci. Drug Discovery, Emory Univ.*

3:00 II3 **248.15** Optogenetic modulation of cortico-thalamic interactions in monkeys. A. GALVAN*; X. HU; Y. SMITH; T. WICHMANN. *Emory Univ., Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

249. Grasping Dexterity

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 II4 **249.01** Multi-digit position and force coordination during unconstrained grasping. A. NACERI*; M. O. ERNST; M. SANTELLO. *Bielefeld Univ., Arizona State Univ.*

2:00 II5 **249.02** Haptic grasping configurations in early infancy reveal different developmental profiles for visual guidance of the reach vs. the grasp. J. M. KARL*; I. Q. WHISHAW. *Univ. of Lethbridge.*

3:00 II6 **249.03** Grasp force coding in F5 and AIP in a delayed grasping task. R. W. INTVELD*; H. SCHERBERGER. *German Primate Ctr.*

4:00 II7 **249.04** The effect of electrical microstimulation of the macaque anterior intraparietal area during grasping. R. VAN EUPEN*; P. JANSSEN. *Kuleuven, KULeuven.*

1:00 II8 **249.05** Calcium imaging in motor cortex of mice grasping regular or irregular ladder rungs reveals cortical control of forelimb movement parameters according to relevance. W. OMLOR; A. WAHL; H. LÜTCKE; C. VON ACHENBACH; M. VAN 'T HOFF; H. KASPER; M. WIECKHORST; M. E. SCHWAB; F. HELMCHEN*. *Brain Res. Inst. / Univ. of Zurich, Brain Res. Inst. / Univ. of Zurich and ETH Zurich.*

2:00 II9 **249.06** Grasp-specific modulation of corticospinal excitability during observation of person vs. hand actions. K. L. BUNDAY*; J. M. KILNER; R. N. LEMON; M. DAVARE; G. A. ORBAN. *Univ. Col. London, Univ. of Parma.*

3:00 II10 **249.07** Object-specific single neuron and population activity in rhesus macaque primary motor cortex during a reach-to-grasp task. R. N. TIEN*; S. PEREL; A. B. SCHWARTZ. *Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ.*

4:00 II11 **249.08** The role of anterior intraparietal area in updating weight to size mapping for skilled grasp. M. DAVARE*; A. NURUKI. *Inst. of Neurol., Kagoshima Univ., Inst. of Neurol.*

1:00 II12 **249.09** Laterality of grasp-related activity in macaque areas AIP and F5. J. A. MICHAELS*; H. SCHERBERGER. *German Primate Ctr., Georg-August-Universität Göttingen.*

2:00 II13 **249.10** An EMG-based state machine decoder for the detection of hand posture and grip force for reach-to-grasp tasks. A. GAILEY*; M. SANTELLO; P. ARTEMIADIS; M. ISON. *Arizona State Univ.*

3:00 II14 **249.11** Object-directed action sequences decoded from human frontoparietal and occipitotemporal networks. J. P. GALLIVAN*; I. S. JOHNSRUDE; R. FLANAGAN. *Queen's Univ., Queen's Univ.*

4:00 II15 **249.12** Connectional heterogeneity of the macaque dorsal prefrontal area 46 (46d). E. BORRA; M. GERBELLA; V. GIORGETTI; S. ROZZI; G. LUPPINO*. *Univ. of Parma.*

1:00 II16 **249.13** Similarity of representations in human dorsal- and ventral-stream brain regions during object viewing and grasping. S. FABBRI*; K. STUBBS; R. CUSACK; J. C. CULHAM. *Radboud Univ., Univ. of Western Ontario.*

2:00 II17 **249.14** Are there interlimb differences in lower extremity stability and dexterity? L. LEVEY*; A. B. SAWERS; M. LYLE; L. H. TING. *Emory University/Georgia Inst. of Technol., Georgia Inst. of Technol.*

3:00 II18 **249.15** Correlates between motor cortical output and control of the digits during common-practiced hand dexterity tasks. Z. A. RILEY*; A. W. MEEK; J. WILLIAMS; N. R. ECKERT. *Indiana University- Purdue Univ. Indianapolis, Indiana University- Purdue Univ. Indianapolis.*

4:00 II19 **249.16** Facilitating supplementary motor area using near-infrared spectroscopy mediated neurofeedback improves postural stability but not hand dexterity. H. FUJIMOTO*; M. MIHARA; N. HATTORI; M. HATAKENAKA; H. YAGURA; T. KAWANO; H. OTOMUNE; I. MIYAI; H. MOCHIZUKI. *Morinomiya Hosp., Dept. of Neurology, Osaka Univ. Grad. Sch. of Med.*

1:00 II20 **249.17** Visual and haptic guidance to facilitate inter-manual transfer of handwriting skills. I. TAMAGNONE; V. SANGUINETI*. *Univ. of Genoa.*

2:00 II21 **249.18** Time-of-day effects on brain activity during the imagination and execution of finger opposition movements. L. BONZANO*; L. ROCCATAGLIATA; G. L. MANCARDI; C. PAPAXANTHIS; M. BOVE. *Univ. Genoa, Univ. de Bourgogne, Univ. Genoa.*

3:00 II22 **249.19** Role of contralateral anterior intraparietal sulcus in coordinating digit force to position for dexterous manipulation. P. J. PARIKH*; M. DAVARE; M. SANTELLO. *Arizona State Univ., Univ. Col. of London.*

4:00 II23 **249.20** Classification of hand shapes for dexterous control of a five-fingered robot hand using neural signals in the macaque inferior temporal cortex. R. HAYASHI*; S. SAGA. *AIST, Univ. of Tsukuba.*

1:00 II24 **249.21** Localization of grasp domains in frontal and parietal cortex with intrinsic optical imaging in behaving monkeys. O. A. GHARBAWIE*; R. M. FRIEDMAN; A. W. ROE. *Vanderbilt Univ., Vanderbilt Univ.*

POSTER

250. Reaching Control: Action and Sensation

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 II25 **250.01** Do spatial and temporal cues interact during proprioceptive estimates of arm motion? H. M. WEEKS*; A. J. BASTIAN. *Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ.*

2:00 II26 **250.02** The effect of force level on the force reproduction error changes with force direction and arm posture. B. ONNEWEER*; W. MUGGE; A. C. SCHOUTEN. *Delft Univ. of Technol., MOVE Res. Inst. Amsterdam, Lab. of Biomechanical Engin.*

3:00 II27 **250.03** Simultaneous multichannel microelectrode recording from macaque primary motor cortex and primary somatosensory cortex during an intuitive reach to grasp task. S. N. FLESHER*; A. B. SCHWARTZ; R. A. GAUNT. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 II28 **250.04** Precision of fine and gross pointing movements differs across visual conditions. J. M. HONDZINSKI*; S. A. WINGES. *Louisiana State Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 II29 **250.05** Fine-tuned force control under consistent visual feedback of object motion. S. TAKAMUKU*; H. GOMI. *NTT Communication Sci. Labs.*

2:00 II30 **250.06** Predictive coding and sensory gating in autism spectrum disorders. J. FINNEMANN*; P. FLETCHER; C. TEUFEL; D. WOLPERT; J. INGRAM; K. PLAISTED-GRANT. *Univ. of Cambridge.*

3:00 JJ1 **250.07** Pantomime Grasping attenuates tactile sensitivity of the moving limb. F. L. COLINO*; G. BINSTED. *Univ. of British Columbia Okanagan, The Univ. of British Columbia.*

4:00 JJ2 **250.08** The effect of effector movement on body- and gaze-centered spatial coding of proprioceptive-tactile reaching. S. MUELLER*; K. FIEHLER. *Justus-Liebig Univ. Giessen.*

1:00 JJ3 **250.09** Haptic guidance needs to be intuitive not just informative to improve human motor accuracy. W. MUGGE*; I. A. KULING; E. BRENNER; J. B. J. SMEETS. *VU Univ. Amsterdam.*

2:00 JJ4 **250.10** The effects of aging on proprioceptively guided reaching movements in three dimensional space. T. I. GONZALES*; T. S. SCHAAP; T. J. W. JANSSEN; S. H. BROWN. *Univ. of Michigan, VU Univ., Amsterdam Rehabil. Res. Inst.*

3:00 JJ5 **250.11** Precision of arm position sense strongly depends on arm configuration. K. OH*; B. I. PRILUTSKY. *Georgia Inst. of Technol., Georgia Inst. of Technol.*

4:00 JJ6 **250.12** Identification of functional muscle synergies for the control of gravitational loads during reaching movements. E. V. OLESH*; W. J. TALKINGTON; V. GRITSENKO. *Erienne V Olesh, West Virginia Unversity.*

1:00 JJ7 **250.13** Haptic fMRI: Mapping neural activation during planning and reaching for unconstrained three degree-of-freedom tasks. S. MENON*; M. YU; H. GANTI; K. BOAHEN; O. KHATIB. *Stanford Univ.*

2:00 JJ8 **250.14** Using single pulse microstimulation to assess excitability of cortical microcircuits. D. S. SOTEROPOULOS*. *Newcastle Univ.*

3:00 JJ9 **250.15** Spatial bias, the superior colliculus and prism adaptation. A. CHAUDHARI*; A. BARRETT. *New Jersey Med. Sch., Kessler Fndn.*

4:00 JJ10 **250.16** Object grasp by the ipsilateral and contralateral hands evokes similar responses from posterior parietal cortex (PPC) neurons. E. P. GARDNER*; J. CHEN; J. L. BAKER. *New York Univ. Sch. Med., Weill Cornell Med. Col.*

POSTER

251. Reaching Control: Movement Selection and Strategy

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 JJ11 **251.01** Cognitive motor interference regarding upper extremity function among stroke patients. J. SHIN*; S. EUN; S. JEONG; S. LEE; J. LEE; S. KIM; J. LEE; H. CHOI. *Natl. Rehabil. Ctr., Hanyang Univ., Seoul Natl. Univ. Bundang Hosp.*

2:00 JJ12 **251.02** Abnormal muscle patterns underlie poor upper limb control during reaching in children with dystonia. M. BERTUCCO*; C. NGUYEN; T. D. SANGER. *USC, USC.*

3:00 JJ13 **251.03** Advanced techniques for the computational modeling of human movement. G. G. GAMBLE*; M. YAZDANI; R. HECHT-NIELSEN. *UCSD.*

4:00 JJ14 **251.04** Bayesian filtering of surface electromyography as a human-computer interface. A. FEINMAN*; M. BERTUCCO; N. H. BHANPURI; T. D. SANGER. *USC.*

1:00 JJ15 **251.05** Using non-negative matrix factorization as a filter to improve usability of myocontrol. C. NGUYEN*; M. BERTUCCO; D. J. BERGER; A. D'AVELLA; T. D. SANGER. *USC, Santa Lucia Fndn.*

2:00 JJ16 **251.06** An empirical validation of the cost of effort during arm-reaching. A. A. AHMED*. *Univ. Colorado.*

3:00 JJ17 **251.07** The two learning systems in motor control: reward vs. sensory prediction errors. P. VASWANI*; R. SHADMEHR. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

4:00 JJ18 **251.08** Does task engagement level affect how we move? Y. CHEN*; Y. CHUNG; B. KIM; C. WINSTEIN. *USC.*

1:00 JJ19 **251.09** Characterization of visuomotor behavior in patients with schizophrenia under a 3D-depth inversion illusion. J. NGUYEN*; S. M. SILVERSTEIN; T. V. PAPATHOMAS; E. B. TORRES. *Rutgers Univ.*

2:00 JJ20 **251.10** ▲ Identifying MI/PMv neural ensemble states associated with motor errors using spike train similarity analysis. T. C. WHALEN*; C. E. VARGAS-IRWIN; J. P. DONOGHUE. *Brown Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ.*

3:00 JJ21 **251.11** Inverse vs forward dynamics analysis of join control during arm movements. N. DOUNSKAIA*; W. WANG. *Arizona State Univ.*

4:00 JJ22 **251.12** Influence of gravity on direction preferences of arm movements. W. WANG*; N. DOUNSKAIA. *Arizona State Univ., Arizona State Univ.*

1:00 JJ23 **251.13** Electrocorticographic decoding of high-level action goals following verbal instruction. G. HOTSON*; G. MILSAP; D. P. MCMULLEN; B. A. WESTER; W. S. ANDERSON; J. W. KRAKAUER; N. E. CRONE; N. V. THAKOR. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ. Applied Physics Lab., Johns Hopkins Univ.*

2:00 JJ24 **251.14** Eye-hand coordination: Evidences for interaction at the level of motor planning. A. GOPAL P A*; S. JANA; A. MURTHY. *Natl. Brain Res. Ctr., Indian Inst. of Sci.*

3:00 JJ25 **251.15** Impedance-based communication for human-robot interaction. K. MOJTAHEDI*; B. WHITSELL; P. ARTEMIADIS; M. SANTELLO. *Arizona State Univ., Arizona State Univ.*

4:00 JJ26 **251.16** Independent control of stabilizing reflexes and triggered reactions in the human arm. H. LEE*; E. PERREAULT. *Rehabil. Inst. of Chicago, Northwestern Univ., Northwestern Univ.*

1:00 JJ27 **251.17** The role of the cortex in the control of arm stability. D. B. SNYDER*; S. A. BEARDSLEY; B. D. SCHMIT. *Marquette Univ.*

2:00 JJ28 **251.18** Graded neural selectivity in sensorimotor cortex reflects reward-independent preferences during rule-based reach goal selection in monkey. L. SURIYA-ARUNROJ*; A. GAIL. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 JJ29 **251.19** Vestibular contribution to arm movement planning. J. GAVEAU*; D. J. DICKMAN; S. D. NEWLANDS; C. PAPAXANTHIS; D. E. ANGELAKI. *Baylor Col. of Med., Univ. of Rochester Med. Ctr., Univ. of Burgundy.*

4:00 JJ30 **251.20** Stochastic motor control as probabilistic inference in spiking neural networks with noise. D. KAPPEL*; D. PECEVSKI; A. WHITFORD; S. CHASE; W. MAASS. *Graz Univ. of Technol., Univ. of Pittsburgh, Carnegie Mellon Univ.*

1:00 JJ31 **251.21** ▲ Sport fencing as a model system for studying complex, highly trained reaching movements. A. N. MICHAELSEN; C. L. CLELAND*. *James Madison Univ.*

2:00 JJ32 **251.22** Competing costs determine the dynamical structure of inter-trial variability in a shuffleboard task. J. P. CUSUMANO*; J. M. MAHONEY; J. B. DINGWELL. *Penn State Univ., Univ. of Texas at Austin.*

3:00 JJ33 **251.23** ▲ Co-optimization of multiple competing action plans. K. BARTON*; J. P. GALLIVAN; C. S. CHAPMAN; D. M. WOLPERT; J. R. FLANAGAN. *Queen's Univ., Univ. of Alberta, Univ. of Cambridge.*

4:00 JJ34 **251.24** Inactivation of Parietal Reach Region (PRR) affects reach but not saccade choices in spatial decisions. V. N. CHRISTOPOULOS*; I. KAGAN; R. CHO; R. A. ANDERSEN. *Caltech, German Primate Ctr.*

1:00 JJ35 **251.25** Effects of age and fear cognitions on motor behavior in a step and reach task with varying support surface conditions. K. MCFADDEN; L. RUSSELL; L. HONG; M. NAKAZAWA; J. S. THOMAS*. *Ohio Univ., Ohio Univ., Ohio Univ.*

2:00 JJ36 **251.26** Are there shared resources for motor planning? L. OOSTWOUD WIJDENES*; R. B. IVRY; P. M. BAYS. *UCL Inst. of Neurol., Univ. of California.*

3:00 KK1 **251.27** The neural correlates of dissociating the spatial directions of eye and arm movements. D. J. GORBET*; L. E. SERGIO. *York Univ.*

4:00 KK2 **251.28** Parietal activation during vergence eye movements: Implications for attentional control of reaching behavior. C. W. TYLER*; L. T. LIKOVA; S. C. NICHOLAS. *Smith-Kettlewell Eye Res. Inst.*

1:00 KK3 **251.29** Anticipation modulates sound representation and behavioral performance. I. CARCEA*; M. N. INSANALLY; R. C. FROEMKE. *NYU Med. Ctr., New York Univ. Sch. of Med.*

POSTER

252. Neuroprosthetics

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 KK4 **252.01** Advancing stability and performance of point-and-click cursor control by people with tetraplegia using an intracortical brain-computer interface. A. A. SARMA*; D. BACHER; C. BLABE; M. L. HOMER; B. JAROSIEWICZ; E. MATTESON; T. MILEKOVIC; C. PANDARINATH; J. SAAB; J. D. SIMERAL; B. SORICE; K. V. SHENOY; J. M. HENDERSON; J. P. DONOGHUE; L. R. HOCHBERG. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Stanford Univ., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Harvard Med. Sch.*

2:00 KK5 **252.02** ● Collaborative, multi-institutional intracortical bci research and the key role of the clinical neurotechnology research assistant. C. H. BLABE*; B. SORICE*; D. BACHER; V. GILJA; M. HOMER; B. JAROSIEWICZ; T. MILEKOVIC; P. NUYUJUKIAN; C. PANDARINATH; J. A. PERGE; J. SAAB; A. A. SARMA; K. V. SHENOY; J. D. SIMERAL; J. P. DONOGHUE; J. M. HENDERSON; L. R. HOCHBERG. *Stanford Univ., Massachusetts Gen. Hosp., Brown Univ., Brown Univ., Brown Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Harvard Med. Sch.*

3:00 KK6 **252.03** Progress toward a self-calibrating, practical intracortical BCI for people with tetraplegia. B. JAROSIEWICZ*; D. BACHER; A. A. SARMA; N. Y. MASSE; E. D. BERHANU; B. SORICE; E. M. OAKLEY; K. NEWELL; C. H. BLABE; C. PANDARINATH; K. V. SHENOY; J. M. HENDERSON; J. D. SIMERAL; J. P. DONOGHUE; L. R. HOCHBERG. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Brown Univ., Harvard Med. Sch.*

4:00 KK7 **252.04** Integrating advances in signal processing and decoding into intracortical BCIs for people with tetraplegia. J. D. SIMERAL*; A. A. SARMA; B. JAROSIEWICZ; D. BACHER; M. L. HOMER; B. SORICE; J. SAAB; J. P. DONOGHUE; L. R. HOCHBERG. *VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., VA Med. Ctr., Brown Univ., Brown Univ., Harvard Med. Sch.*

1:00 KK8 **252.05** Watch, Imagine, Attempt: Context-dependent decoding of movement direction in human motor cortex using spike train similarity analysis. C. E. VARGAS-IRWIN*; J. FELDMAN; S. S. CASH; E. N. ESKANDAR; G. FRIEHS; K. NEWELL; L. R. HOCHBERG; J. P. DONOGHUE. *Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Massachusetts Gen. Hosp., Scott & White Hospital, A&M University , Dept. of VA Med. Ctr., Brown Univ.*

2:00 KK9 **252.06** State space modeling of local field potentials in motor cortex during observed, imagined, and attempted arm movement in humans with tetraplegia. D. L. MENZER; J. M. FELDMAN; E. OAKLEY; L. R. HOCHBERG; J. P. DONOGHUE. *Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ.*

3:00 KK10 **252.07** Classifying movement types during an instructed delay task from motor cortex recordings in an individual with paralysis. J. SAAB*; J. A. PERGE; T. MILEKOVIC; J. D. SIMERAL; B. SORICE; J. P. DONOGHUE; L. R. HOCHBERG. *Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch.*

4:00 KK11 **252.08** ● Application of a high performance intracortical brain computer interface for communication in a person with amyotrophic lateral sclerosis. C. PANDARINATH*; P. NUYUJUKIAN; V. GILJA; C. H. BLABE; J. A. PERGE; B. JAROSIEWICZ; L. R. HOCHBERG; K. V. SHENOY; J. M. HENDERSON. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Univ. of California San Diego, Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Stanford Univ., Stanford Univ.*

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1:00 KK12 **252.09** Design of a high performance intracortical brain computer interface for a person with amyotrophic lateral sclerosis. P. NUYUJUKIAN*; C. PANDARINATH; V. GILJA; C. BLABE; J. A. PERGE; B. JAROSIEWICZ; L. R. HOCHBERG; K. V. SHENOY; J. M. HENDERSON. *Stanford Univ., Stanford Univ., Stanford Univ., Univ. of California San Diego, Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Stanford Univ., Stanford Univ., Stanford Univ.*

2:00 KK13 **252.10** Brain-machine interface performance is mediated by an internal model of decoder velocity gain. S. D. STAVISKY*; J. C. KAO; S. I. RYU; K. V. SHENOY. *Stanford Univ., Stanford Univ., Palo Alto Med. Fndn., Stanford Univ., Stanford Univ., Stanford Univ.*

3:00 KK14 **252.11** A robust and high-performance brain-machine interface using a nonlinear recurrent neural network trained with years of neural data. J. C. KAO*; S. D. STAVISKY; D. SUSSILLO; S. I. RYU; K. V. SHENOY. *Stanford Univ., Stanford Univ., Palo Alto Med. Fndn., Stanford Univ., Stanford Univ.*

4:00 KK15 **252.12** A brain-controlled spinal interface (BCSI) for reanimation of paralyzed limbs after spinal cord injury. A. IEVINS*; M. SUNSHINE; A. BOSMA-MOODY; R. CARLSON; C. MORITZ. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

1:00 KK16 **252.13** Novel electrocorticographic brain-computer interface framework for dexterous robotic control. D. SARMA*; J. WU; V. KUMAR; J. G. OJEMANN; R. P. N. RAO. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

2:00 KK17 **252.14** Volitional modulation of optically recorded calcium signals during neuroprosthetic learning. K. CLANCY*; A. KORALEK; R. COSTA; D. FELDMAN; J. CARMENA. *UC Berkeley, Champalimaud.*

3:00 KK18 **252.15** Decoding dexterous finger movements from peripheral neural signals using machine learning algorithms. C. BARTON*; S. PADMANABAN; T. DAVIS; H. A. C. WARK; D. T. HUTCHINSON; B. GREGER. *Arizona State Univ., Univ. of Utah, Univ. of Utah, Univ. of Utah.*

4:00 KK19 **252.16** ECoG-based neural decoding and prosthetic control in a completely paralyzed ALS person. M. HIRATA*; T. YANAGISAWA; H. SUGATA; R. FUKUMA; T. MORIWAKI; M. SHAYNE; Y. KAMITANI; H. KISHIMA; T. SEKI; H. YOKOI; J. SAWADA; M. MIHARA; H. FUJINO; Y. HAYASHI; T. KUDO; T. YOSHIMINE. *Osaka Univ. Med. Sch., ATR Computat. Neurosci. Labs., The Univ. of Electro-Communications, Osaka Prefectural Gen. Med. Ctr.*

1:00 KK20 **252.17** Brain Computer Interface human platform to control a 4-limb exoskeleton based on the ECoG-recording implant WIMAGINE® : preliminary results. C. MESTAIS*; G. CHARVET; F. SAUTER; N. ABROUG; N. ARIZUMI; S. COKGUNGOR; T. COSTECALDE; M. FOERSTER; B. MORINIERE; J. PRADAL; D. RATEL; N. TARRIN; N. TORRES-MARTINEZ; A. VERNEY; A. YELISYEYEV; T. AKSENOVA; A. BENABID. *CEA-LETI-CLINATEC, CEA-LIST.*

2:00 KK21 **252.18** Spike-by-spike control using an adaptive optimal feedback-controlled point process decoder improves BMI performance. M. M. SHANECHI*; A. ORSBORN; H. MOORMAN; S. GOWDA; J. M. CARMENA. *Cornell Univ., Univ. of California, Berkeley.*

3:00 KK22 **252.19** Reconstruction of hand trajectories from MEG recording for BCI application. T. AKSENOVA*; N. ARIZUMI; M. C. SCHAEFFER; C. PÖSCHL; T. COSTECALDE; E. LABYT; N. TARRIN; C. MESTAIS; A. BENABID. *CLINATEC, CEA-LETI MINATEC.*

4:00 KK23 **252.20** Thresholding the discriminant output improves the reliability of communication using visual P300 speller brain-computer interface (BCI) for physically disabled persons. K. MORI*; Y. MATSUMOTO; T. M. RUTKOWSKI. *Natl. Rehab Ctr. Persons W/Disab, Univ. of Tsukuba.*

1:00 KK24 **252.21** Evaluation of fractal dimension estimation of eeg signals for features extraction in motor imagery based bci. J. MONTALVO*. *CINVESTAV Del IPN.*

2:00 KK25 **252.22** Plasticity following skilled learning and the implications for BCI performance. N. MRACHACZ-KERSTING*; N. JIANG; K. DREMSTRUP; D. FARINA. *Aalborg Univ., Georg-August Univ.*

3:00 KK26 **252.23** ▲ The need to be me: Influence of participant specific instructions on mu-based BCI performance. M. SCHLUSSEL; A. BATTISON; T. FULLER; V. L. CORBIT; Y. YU; L. A. GABEL*. *Lafayette Col., Lafayette Col., Univ. of Pittsburgh.*

4:00 KK27 **252.24** EEG change through long term brain-computer interface training in focal hand dystonia. Y. HASHIMOTO*; T. OTA; M. MUKAINO; J. USHIBA. *Kitami Inst. of Technol., Asahikawa Med. Univ. Hosp., Fujita Hlth. Univ., Keio Univ.*

1:00 KK28 **252.25** Identifying hand poses using common spatial patterns in human electrocorticographic signals. C. KAPELLER*; C. SCHNEIDER; K. KAMADA; H. OGAWA; N. KUNII; R. ORTNER; C. GUGER. *Guger Technologies OG, g.tec Guger Technologies OG, Dept. for Neurosurgery, Asahikawa Med. Univ., Dept. for Neurosurgery, The Univ. of Tokyo.*

2:00 KK29 **252.26** Real-time artificial hand posture control by using electrocorticographic signals from human sensorimotor cortex. S. ZHANG*; D. WANG; Y. LI; Q. ZHANG; J. ZHU; X. ZHENG. *Zhejiang Univ., Zhejiang Univ., 2nd Affil Hops, Zhejiang Univ.*

3:00 KK30 **252.27** Arm prosthetic control through electromyographic recognition of leg gestures. K. R. LYONS*; S. S. JOSHI. *UC Davis.*

4:00 KK31 **252.28** Altered spatial representation of event related desynchronization during finger and shoulder motor imagery. K. HASEGAWA*; T. ONO; M. LIU; S. KASUGA; J. USHIBA. *Keio Univ., Saiseikai Kanagawa-ken Hosp., Keio Univ., Keio University, Fac. of Sci. and Technol.*

1:00 KK32 **252.29** Proprioceptive feedback modulates motor cortical activity during the control of an intracortical microelectrode brain-machine interface. D. M. RAGER*; J. E. DOWNEY; J. L. COLLINGER; D. J. WEBER; M. L. BONINGER; V. VENTURA; R. A. GAUNT. *Carnegie Mellon Univ., Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Carnegie Mellon Univ.*

2:00 LL1 **252.30** Brain-Machine interface using human parietal cortex: Control of prosthetic devices from anterior intraparietal area and Brodmann's area 5. S. KELLIS*; C. KLAES; T. AFLALO; B. LEE; Y. SHI; K. PEJSA; K. SHANFIELD; S. HAYES-JACKSON; M. AISEN; C. HECK; C. LIU; R. A. ANDERSEN. *Caltech, Caltech, USC, Rancho Los Amigos Natl. Rehabil. Ctr., USC, Rancho Los Amigos Natl. Rehabil. Ctr.*

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POSTER

253. Brain–Machine Interface

Theme D: Sensory and Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 LL2 **253.01** Potential of neural-network based modeling of bladder pressure from sacral dorsal root ganglia recordings. S. S. RAJAGOPALAN*; S. E. ROSS; T. M. BRUNS. *Univ. of Michigan, Univ. of Michigan.*

2:00 LL3 **253.02** Targeting sacral dorsal root ganglia for concurrent monitoring and control of bladder function via electrical stimulation. S. E. ROSS*; J. T. BENTLEY; T. M. BRUNS. *Univ. of Michigan.*

3:00 LL4 **253.03** ● A novel interface for visualizing and controlling stimulation on high-channel-count electrode arrays. A. M. WILDER*; M. A. FRANKEL; S. D. HIATT; E. L. BARCIKOWSKI; K. S. GUILLORY. *Ripple.*

4:00 LL5 **253.04** The development and validation of a high channel count simultaneous stimulation and recording system. E. L. BARCIKOWSKI*; S. D. HIATT; D. M. PAGE; S. M. WENDELKEN; G. A. CLARK; K. S. GUILLORY. *Ripple, Univ. of Utah.*

1:00 LL6 **253.05** Changes in response properties in motor cortex neurons during brain-machine interface control. C. LIBEDINSKY; R. SO; Z. XU; C. GUAN; S. YEN*. *Singapore Inst. for Clin. Sci., Inst. for Infocomm Res., Natl. Univ. Singapore, Singapore Inst. for Neurotechnology.*

2:00 LL7 **253.06** Decoder error detection in a saccade brain-computer interface. A. SALAZAR-GOMEZ*; S. L. BRINCAT; N. JIA; M. PANKO; E. K. MILLER; F. H. GUENTHER. *Boston Univ., Boston Univ., MIT, Boston Univ., Boston Univ., Boston Univ.*

3:00 LL8 **253.07** Smooth degradation of behavior with ICMS electrode silencing. M. C. DADARLAT*; P. SABES. *Univ. of California, San Francisco.*

4:00 LL9 **253.08** Decoding hand gestures using high-density ECoG in somatosensory cortex. M. P. BRANCO*; Z. V. FREUDENBURG; M. G. BLEICHNER; M. J. VANSTEENSEL; E. J. AARNOUTSE; N. F. RAMSEY. *UMC Utrecht Brain Ctr. Rudolf Magnus, Univerisity of Oldenburg.*

1:00 LL10 **253.09** Stochastic facilitation of prosthetic derived sensory stimulation in primates. J. C. TANNER*; C. K. OVERSTREET; S. I. HELMS TILLERY. *Arizona State Univ., Nanovision Biosci.*

2:00 LL11 **253.10** Discrimination of electrical stimulation to primary somatosensory cortex. S. KIM*; T. CALLIER; G. TABOT; F. TENORE; S. BENSMAIA. *Univ. of Chicago.*

3:00 LL12 **253.11** Developing dry-electrode, minimal preparation BCI for the everyday user. S. M. GORDON*; B. KELLIHAN. *DCS Corp.*

4:00 LL13 **253.12** Eye-implanted microelectrode arrays and surrounding tissue assessed by contrast-enhanced microCT imaging. A. J. WOOLLEY*; T. T. HUNG; A. T. FUNG; G. J. SUANING; N. H. LOVELL; J. W. MORLEY. *Univ. of New South Wales, Univ. of Western Sydney, Univ. of New South Wales, Macquarie Univ. Hosp., Univ. of Sydney.*

POSTER

254. Neuroimmune System Pathways and Regulators

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 LL14 **254.01** Microbiota regulates microRNA expression in the hippocampus in a sex dependent manner. G. MOLONEY*; O. O' LEARY; L. DESBONNET; F. SHANAHAN; T. G. DINAN; G. CLARKE; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork.*

2:00 LL15 **254.02** Microbiome impacts vasopressin immunoreactivity in juvenile Swiss-Webster mice. N. V. PETERS*; M. J. PAUL; B. CHASSAING; A. GEWIRTZ; G. DE VRIES. *Georgia State Univ., Univ. at Buffalo, SUNY, Georgia State Univ.*

3:00 LL16 **254.03** Toll-like receptor 2 and sex differences in SCN vasopressin expression. C. FIELDS*; A. KIM; J. LI; G. DEVRIES. *Georgia State Univ., Georgia State Univ.*

4:00 LL17 **254.04** Early expression of Osteopontin impacts Central Nervous System pathogenesis by controlling the Caspase-1-dependent Inflammasome and apoptosis during early West Nile virus infection. M. MARCONDES*; N. BORTELL; B. CONTI; H. FOX. *The Scripps Res. Inst., The Scripps Research Institute, Univ. of Nebraska Med. Ctr.*

1:00 LL18 **254.05** Prostaglandins as central mediators of neuro-immune pathways. P. REVATHIKUMAR*; N. AGALAVE; E. LE MAÎTRE; C. I. SVENSSON; P. JAKOBSSON; M. KOROTKOVA; J. LAMPA. *Karolinska Institutet, Karolinska Institutet.*

2:00 LL19 **254.06** IL-1beta sensitizes its own response in hippocampal neurons. G. A. PRIETO*; E. D. SMITH; M. NGUYEN; L. TONG; C. W. COTMAN. *Inst. for Memory Impairments and Neurolog. Disorders.*

3:00 LL20 **254.07** Serotonin 2A receptors modified taurine transport in lymphocytes of rat treated with fluoxetine. M. G. COLMENARES*; L. LIMA. *Inst. Venezolano De Investigaciones Científicas.*

4:00 LL21 **254.08** Anti-inflammatory effect of remifentanil in the mouse brain after systemic lipopolysaccharide administration. S. MAEDA*; R. OHNISHI; Y. TOMOYASU; H. HIGUCHI; T. MIYAWAKI. *Okayama Univ. Hosp., Okayama Univ. Grad. Sch. of Medicine, Dent. and Pharmaceut. Sci.*

1:00 LL22 **254.09** Tumor necrosis factor induces specific neurograms in the sensory vagus nerve. S. S. CHAVAN*; S. ROBBIATI; B. E. STEINBERG; H. SILVERMAN; T. TSAAVA; P. T. HUERTA; K. J. TRACEY. *Feinstein Inst. For Med. Res.*

2:00 LL23 **254.10** Characterization of LRRK2-linked signaling pathways in human lymphoblast. T. LI*; L. KONG; J. THOMAS; A. SAWA; W. SMITH. *Univ. of Maryland, Univ. of Maryland, Pharm. Sch., Johns Hopkins Schizophrenia Ctr.*

3:00 LL24 **254.11** Chronic thoracic spinal cord injury impairs peripheral T-cell immunity by inducing T-cell exhaustion. J. ZHA*; A. SMITH; S. ANDREANSKY; V. BRACCHI-RICARD; J. R. BETHEA. *Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med., Drexel Univ.*

4:00 LL25 **254.12** Neuronal input modulates antigen flow through peripheral lymph nodes. W. HANES*; P. S. OLOFSSON; T. TSAAVA; Y. A. LEVINE; S. S. CHAVAN; K. J. TRACEY. *The Feinstein Inst. For Med. Res., SetPoint Med. Corp.*

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1:00 LL26 **254.13** Circadian time of infection affects the progression and outcome of vesicular stomatitis virus-induced encephalitis. K. GAGNIDZE*; I. KARATSOREOS; P. D'AGOSTINO; Z. MASHEEB; K. BULLOCH. *Rockefeller Univ., Col. of Vet. Medicine, Washington State Univ., Rockefeller Univ.*

2:00 LL27 **254.14** Electrophysiological properties of thalamic relay cells are prone to neuro-immune modulation by Interleukin-1β, interleukin-6 and tumor necrosis factor-α. V. N. SAMIOS*; T. INOUE. *Waseda.*

3:00 LL28 **254.15** Mechanism of Natural Killer cytotoxicity against peripheral sensory neurons *in vitro.* A. J. DAVIES*; J. CHOI; M. LEE; S. OH. *Seoul Natl. Univ.*

4:00 MM1 **254.16** PACAP receptor expression of hematopoietic stem/progenitor cells in mouse bone marrow with special reference to sympathetic innervation. Z. XU; S. TANAKA*; H. OHTAKI; J. WATANABE; Y. HIRAIZUMI; S. NUMAZAWA; S. SHIODA. *Dept. of Anatomy, Showa Univ. Sch. of Med., Showa Univ. Sch. of Pharm., Dept. of Orthopaedic Surgery, Showa Univ. Sch. of Med.*

1:00 MM2 **254.17** Mechanisms by which estradiol (E2) suppress neuronal cox-2 gene expression. W. STACEY*; R. M. UHT. *Univ. of North Texas Hlth. Sci. Ctr., Inst. for Aging and Alzheimer's Research, Univ. of North Texas Hlth. Sci. Ctr.*

2:00 MM3 **254.18** Multiple intracellular antigen specific T cells enhance chronic but not acute inflammation in EAE. A. RAYASAM*; B. D. S. CLARKSON; M. G. HARRIS; A. RITTER; L. STEINMETZ; J. KARMAN; M. SANDOR; Z. FABRY. *Univ. of Wisconsin - Madison, Univ. of Wisconsin-Madison, Genzyme Corp.*

3:00 MM4 **254.19** Reovirus-mediated induction of ADAR1 (p150) only minimally alters RNA editing patterns. J. L. HOOD*; M. V. MORABITO; C. R. MARTINEZ, III; J. A. GILBERT; E. A. FERRICK; G. D. AYERS; J. D. CHAPPELL; T. S. DERMODY; R. B. EMESON. *Vanderbilt Univ., Columbia Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

4:00 MM5 **254.20** Characterization of hematopoietically-derived macrophages to the central nervous system in mixed chimeric mice. T. D. WILLIAMS*; M. W. DEFAZIO; Z. W. HEROUX; J. M. KURTZ. *Emmanuel Col.*

1:00 MM6 **254.21** Expression of peptidoglycan sensing molecules during postnatal brain development and their regulation by the commensal gut microbiota. T. B. ARENTSEN*; T. FEMENIA CANTO; S. GKOTZIS; K. UDEKWU; H. FORSSBERG; R. DIAZ HEIJTZ. *Karolinska Institutet, Karolinska Institutet.*

2:00 MM7 **254.22** ● ▲ Deficiency of Angiotensin II type 2 Receptors (AT2) results in increased brain damage whereas activation of AT2 does not affect lesion growth after experimental traumatic brain injury in mice. S. CORONEL CASTELLO*; E. SCHAIBLE; A. GARCIA BARDON; A. S. SEBASTIANI; M. K. E. SCHAEFER *; K. ENGELHARD; S. C. THAL; R. TIMARU-KAST. *Univ. Med. Ctr. of Johannes Gutenberg Univ., Univ. Med. Ctr. of the Johannes Gutenberg Univ.*

3:00 MM8 **254.23** IL-27 and IL-35 as gene therapy of neuroinflammation. G. CASELLA*; A. FINARDI; J. MELDOLESI *; R. FURLAN. *Inst. Scientifico San Raffaele, Inst. Scientifico San Raffaele.*

4:00 MM9 **254.24** Regional and phenotypic differences in hematogenous cells repopulating the brain after irradiation or chemotherapy-based myeloablative approaches for bone marrow transplantation. Y. SUGIYAMA*; G. FARACO; C. IADECOLA; J. ANRATHER. *Feil Family Brain and Mind Res. Institute, Wei.*

1:00 MM10 **254.25** Role of Interferon gamma (IFN-γ) in protecting SH-SY5Y cells against cisplatin-induced toxicity. C. ANDREWS; A. HENDERSON; M. R. VASKO; G. D. GRIFFIN*. *Tuskegee Univ., Indiana Univ. Sch. of Med.*

2:00 MM11 **254.26** Neuronal activity in the mouse brain during acute endotoxemia. T. TSAAVA*; B. E. STEINBERG; S. S. CHAVAN; K. J. TRACEY. *The Feinstein Inst. For Med. Res.*

3:00 MM12 **254.27** Functions of E prostanoid receptors in post-stroke inflammation. P. B. LARKIN*; Q. WANG; J. MENZIES; X. LIANG; R. JUELSGAARD; L. LIN; K. ANDREASSON. *Stanford Univ.*

4:00 MM13 **254.28** Effect of endogenous neurotoxin salsolinol and nm-salsolinol on alpha-synucein aggregation in neuroblastoma sh-sy5y cells -a step forward to uncover the mechanism of Parkinson's disease. H. QING*; F. WANG. *Beijing Inst. Technol.*

1:00 MM14 **254.29** Acute hypoxia increases proinflammatory cytokines in brain areas involved in autonomic regulation. A. T. TAKAKURA*; T. M. SILVA; R. C. SILVA; L. J. CHAAR; V. R. ANTUNES; N. O. CAMARA; T. S. MOREIRA. *Dept of Pharmacology, Inst. of Biomed. Science, Univ. of Sao Paulo, Inst. of Biomed. Science, Univ. of Sao Paulo, Inst. of Biomed. Science, Univ. of Sao Paulo.*

2:00 MM15 **254.30** Behavioral aspects of the LPS-induced sickness during lactation. A. F. NASCIMENTO*, SR; L. FREITAS FELICIO; M. BERNARDI; G. ALVES. *FMVZ - USP, Paulista Univ.*

POSTER

255. Thirst and Water Balance

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 MM16 **255.01** Unique interweaved microtubule scaffold mediates osmosensory transduction via physical interaction with TRPV1. M. PRAGER-KHOUTORSKY*; A. KHOUTORSKY; C. W. BOURQUE. *McGill Univ., McGill Univ.*

2:00 MM17 **255.02** Effect of suprachiasmatic nucleus stimulation on organum vasculosum of the lamina terminalis neurons in rat hypothalamic slices. C. GIZOWSKI*; C. W. BOURQUE. *Res. Inst. of the MUHC.*

3:00 MM18 **255.03** Central effect of IL-1β on sodium appetite: Participation of specific brain areas. J. B. FREGONEZE*; D. R. CERQUEIRA; A. I. R. NASCIMENTO; A. L. MOITEIRO; E. S. ARAÚJO; M. A. C. ALELUIA; H. S. FERREIRA. *Federal Univ. of Bahia, State Univ. of Southwest Bahia, State Univ. of Bahia.*

4:00 MM19 **255.04** Impact of activity pattern on presynaptic inhibition of excitatory neurotransmission via somato-dendritic release in rat supraoptic nucleus neurons. A. GAGNON*; M. WALSH; T. OKUDA; K. Y. CHOE; C. ZAELZER; C. W. BOURQUE. *Ctr. For Res. In Neurosci. McGill Univ., Univ. of Toronto.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 MM20 **255.05** Involvement of angiotensinergic mechanisms on sodium intake induced by central cholinergic activation. C. F. RONCARI*; R. B. DAVID; P. M. DE PAULA; D. S. A. COLOMBARI; L. A. DE LUCA JR.; E. COLOMBARI; J. V. MENANI. *Dept Physiol. and Pathol., UNESP.*

2:00 MM21 **255.06** Acetaldehyde induces thirst sensation through the renin-angiotensin system in rat. I. UJIHARA; S. HITOMI; K. ONO; Y. KAKINOKI; K. INENAGA*. *Kyushu Dent. Univ.*

3:00 MM22 **255.07** Effects of the salt loading during prenatal and postnatal period on the gene expression of the adulthood offspring. M. SANTOS DA SILVA*; F. LUCIO DE OLIVEIRA; C. HINDMARCH; J. RODRIGUES PLAÇA; L. LEICO KAGOHARA ELIAS; W. ARAÚJO DA SILVA JUNIOR; D. MURPHY; J. ANTUNES-RODRIGUES. *Ribeirão Preto Sch. of Med. - Univ. of São Paulo., Univ. of Bristol, Ctr. for Integrative Syst. Biol. and Regional Blood Ctr. of Ribeirão Preto, Ribeirão Preto Sch. of Med. - Univ. of São Paulo.*

4:00 MM23 **255.08** Synergy of angiotensin II and deoxycorticosterone acetate during sodium depletion-induced salt appetite in old rats. R. L. THUNHORST*; S. CLAYTON; T. BELTZ; B. XUE; A. K. JOHNSON. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

1:00 MM24 **255.09** Activation of GABAA receptors in the lateral parabrachial nucleus induces ingestion of sodium bicarbonate in rats. J. C. CALLERA*; R. B. DAVID; C. A. F. ANDRADE; L. A. DE LUCA JR; J. V. MENANI. *Sao Paulo State Univ., Sao Paulo State Univ.*

2:00 MM25 **255.10** Effect o central administration of carvacrol on sodium appetite and blood pressure in spontaneously hypertensive rats. A. S. BATISTA*; C. F. PERRONE; J. M. ANDRADE; F. B. CARVALHO; H. S. FERREIRA; J. B. FREGONEZE. *Federal Univ. of Bahia, State Univ. of Bahia.*

3:00 MM26 **255.11** Involvement of serotonergic receptors in the NTS on water intake induced by cellular dehydration. R. A. TOMEO*; J. MENANI; P. DE PAULA. *São Paulo State Univ.*

POSTER

256. Central Pathways: Anatomy and Development

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 MM27 **256.01** Feeding but not drinking from optogenetic stimulation of an LH to VTA pathway. E. GIGANTE*; R. A. WISE. *NIH-NIDA.*

2:00 MM28 **256.02** The ventral tegmental area: Wide-field and confocal imaging of hypothalamic peptidergic afferents and their putative synaptic appositions. E. M. WALKER*; B. DE HARO; R. H. THOMPSON; A. M. KHAN. *Univ. of Texas El Paso, USC.*

3:00 MM29 **256.03** Close associations of α-MSH-immunoreactive fibers with traced vagal afferents, and catecholaminergic neurons in the rat hindbrain: high-resolution immunofluorescence studies. S. D. CHENAUSKY*; C. A. CAMPOS; R. C. RITTER; A. M. KHAN. *Univ. of Texas At El Paso, Washington State Univ.*

4:00 MM30 **256.04** ▲ Binge eating behavior induced by corn oil modifies preference for different corn oil concentrations. W. ZEPEDA-RUIZ*; C. RAMOS-LAZZARI; V. CHAVEZ-RODRIGUEZ; D. VELAZQUEZ-MARTINEZ. *Univ. Nacional Autonoma De Mexico.*

1:00 MM31 **256.05** Lesions of hindbrain catecholaminergic projections to nucleus accumbens, bed nucleus of the stria terminalis, lateral parabrachial nucleus or locus coeruleus do not impair glucoprivic feeding. T. T. DINH; N. HUSTON; S. RITTER*. *Washington State Univ.*

2:00 MM32 **256.06** Hypoglycemia reduces c-Fos expression in the ventromedial hypothalamic nucleus. N. FOSTER*; S. AZAM; A. G. WATTS. *USC.*

3:00 MM33 **256.07** Central glucoprivation increases sympathetic drive to liver and some but not all white adipose tissue depots. L. A. SZYMANSKI*; J. EHLEN; T. J. BARTNESS. *Georgia State Univ., Morehouse Sch. of Med.*

4:00 MM34 **256.08** Multifaceted effects of brain-derived neurotrophic factor on arcuate neurons. G. LIAO*; K. BOUYER; A. KAMITAKAHARA; C. WANG; N. SAHIBZADA; R. B. SIMERLY; B. XU. *Scripps Reserch Inst., The Saban Res. Institute, Children's Hosp. Los Angeles, Univ. of Southern California, Dept. of Pharmacol. and Physiology, Georgetown Univ. Med. Ctr.*

1:00 MM35 **256.09** Diet-induced obesity alters the gut-brain communication and results in microglia activation in the hindbrain feeding centers. K. CZAJA*; A. C. VAUGHN; C. FLETCHER; L. A. BALLSMIDER; P. M. DI LORENZO. *Washington State Univ., Binghamton Univ.*

2:00 MM36 **256.10** Suppressed Fos induction within the central nucleus of the amygdala corresponds with inhibited feeding in the presence of a fear-cue in male and female rats. C. J. REPPUCCI*; G. D. PETROVICH. *Boston Col.*

3:00 NN1 **256.11** Mice exposed perinatally to the obesogenic endocrine disruptor bisphenol-A (BPA) show impaired central and behavioral leptin sensitivity in advance of diet-induced obesity: evidence for developmental programming of hypothalamic pro-opiomelanocortin (POMC) regulation. H. A. MACKAY*; Z. R. PATTERSON; A. ABIZAID. *Carleton Univ.*

4:00 NN2 **256.12** ABHD6 loss-of-function in nucleus accumbens neurons reduces food intake and prevents diet-induced obesity. S. TOBIN*; D. MATTHYS; S. ZHAO; S. MADIRAJU; T. ALQUIER; M. PRENTKI; S. FULTON. *Montreal Diabetes Res. Ctr. and CRCHUM, Montreal Diabetes Res. Ctr. and CRCHUM, Montreal Diabetes Res. Ctr. and CRCHUM, Montreal Diabetes Res. Ctr. and CRCHUM.*

1:00 NN3 **256.13** Ventral hippocampal neurons influence meal onset and meal frequency. R. C. HANNAPEL*; M. B. PARENT. *Neurosci. Inst.*

2:00 NN4 **256.14** Afferent and efferent projections of the periventricular hypothalamus: A combined anterograde and retrograde tract tracing study in the adult male rat. B. DE HARO*; A. M. KHAN. *Univ. of Texas at El Paso.*

3:00 NN5 **256.15** Effects of the food form of apple products on satiety and brain responses in humans: An fMRI study. M. SOTO; N. P. DARCEL*; A. MARSSET-BAGLIERI; J. PIEDCOQ; D. TOMÉ; G. FROMENTIN; N. NADKARNI. *Agroparistech.*

4:00 NN6 **256.16** The underlying neural network of proopiomelanocortin (POMC)-mediated regulation in food intake. C. LI*; M. KRASHES. *NIH/NIDDK.*

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1:00 NN7 **256.17** Hypothalamic chemoarchitecture in the adult male rat: Creating canonical atlas maps for three co-visualized peptidergic neuronal populations and their fiber systems from a single brain. C. E. WELLS*; K. PENNINGTON; A. M. KHAN. *The Univ. of Texas at El Paso.*

2:00 NN8 **256.18** Glutamatergic regulation of the lateral septum by melanin-concentrating hormone neurons. M. J. CHEE*; E. ARRIGONI; E. MARATOS-FLIER. *Beth Israel Deaconess Med. Center, HMS, Beth Israel Deaconess Med. Center, HMS.*

3:00 NN9 **256.19** Chronic energy imbalance via hyperlipidemic diet disrupts olfactory sensory systems and odor reversal learning in mice. K. L. FERGUSON*; G. A. BELL; M. C. JOHNSON; N. THIEBAUD; D. A. FADOOL. *Florida State Univ., Florida State Univ., Univ. of West Georgia.*

4:00 NN10 **256.20** Efferent projections of the arcuate nucleus of the hypothalamus in the adult male rat: A dual retrograde tract tracing study. A. MARTINEZ*; B. E. PINALES; A. M. KHAN. *Univ. of Texas At El Paso.*

1:00 NN11 **256.21** Insulin sensitizers block effects of prenatal testosterone excess in female sheep on expression of tyrosine hydroxylase, insulin and androgen receptors in the ventral tegmental area. C. J. STEADMAN*; M. N. LEHMAN; V. PADMANABHAN; L. M. COOLEN. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Michigan, Univ. of Mississippi Med. Ctr.*

2:00 NN12 **256.22** Phenotypic characterization of Urocortin 3 in the paraventricular nucleus of the hypothalamus. C. VAN HOVER*; C. LI. *Univ. of Virginia, Univ. of Virginia.*

3:00 NN13 **256.23** Characterization of c-Fos activation following limited access to palatable food and subsequent binge eating. M. M. HURLEY*; J. M. RESCH; B. MAUNZE; D. A. BAKER; S. CHOI. *Marquette Univ.*

POSTER

257. Sleep

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 NN14 **257.01** 4-aco-dmt affects sleep-waking cycle of rats. M. MENDEZ DIAZ*; O. AMANCIO-BELMONT; R. GARCÍA-RUIZ; I. ALVARADO-CAPULEÑO; A. BECERRIL-MELÉNDEZ; H. VARGAS-PEREZ; O. PROSPÉRO-GARCÍA. *Univ. Nacional Autonoma De Mexico, Univ. of Toronto.*

2:00 NN15 **257.02** Using microarray data for an improved sleep related gene ontology and identifying candidate genes for sleep QTL. S. S. JOSHI; B. F. O'HARA*. *Univ. of Kentucky.*

3:00 NN16 **257.03** Melatonin effect over ERK/MAPK signaling pathway on hippocampus of adult BalbC mice, submit to 96 hours of REM sleep deprivation. G. L. ARMAS*; S. SOTO-RODRIGUEZ; G. YAÑEZ-DELGADILLO; S. LUQUIN DE ANDA; R. RAMOS-ZUÑIGA; M. FLORES-SOTO; V. CHAPARRO; R. GONZALEZ-CASTANEDA. *Univ. of Guadalajara, Univ. of Guadalajara, Ctr. Universitario de Ciencias Exactas e Ingeniería. Univ. of Guadalajara, Ctr. de investigación Biomédica de Occidente, Inst. Tecnológico y de Estudios Superiores, Campus Guadalajara. México.*

4:00 NN17 **257.04** ● The dual orexin receptor antagonist lowers rat brain histamine levels without lowering rat brain acetylcholine. S. M. SMITH*; L. YAO; A. RAMIREZ; A. GOTTER; P. TANNENBAUM; J. USLANER; C. WINROW; S. KUDUK; P. COLEMAN; J. RENGER. *Merck & Co., Inc.*

1:00 NN18 **257.05** Effects of zolpidem on sleep pattern in an animal model of insomnia. K. A. ZANIN*; C. L. PATTI; A. ZAGER; L. B. LOPES-SILVA; C. S. BIZERRA; R. SANTOS-BALDAIA; A. W. HOLLAIS; M. L. ANDERSEN; S. TUFIK; R. FRUSSA-FILHO; D. L. R. POYARES. *Univ. Federal De São Paulo, Univ. Federal de São Paulo, Univ. de São Paulo.*

2:00 NN19 **257.06** ● Dual orexin receptor antagonists demonstrate efficacy with chronic treatment and restore REM sleep following induced insomnia in healthy animals. J. I. BRUNNER; A. L. GOTTER*; J. STEVENS; P. L. TANNENBAUM; S. V. FOX; S. GARSON; J. USLANER; J. J. RENGER; C. J. WINROW. *Merck & Co, Merck Res. Labs, Merck & Co.*

3:00 NN20 **257.07** Non-steroidal anti-inflammatory drug alters c-fos expression during rebound after rapid eyes movement sleep deprivation. K. GUZMAN VASQUEZ*; D. MILLAN-ALDACO; M. PALOMERO-RIVERO; R. DRUCKER-COLIN. *UNAM.*

4:00 NN21 **257.08** Optogenetic stimulation of basal forebrain cholinergic neurons promotes cortical activation both directly and indirectly. J. C. ZANT; T. KIM; A. V. KALINCHUK; C. YANG; R. E. BROWN; J. MCNALLY; S. THANKACHAN; J. T. MCKENNA; R. E. STRECKER; R. W. MCCARLEY; R. BASHEER*. *VA Boston Healthcare System-Harvard Med. Sch., Harvard Univ./Boston VAMC.*

1:00 NN22 **257.09** ● Sleep-wake profile and EEG power spectrum: Distinct effects of zolpidem and dual orexin receptor antagonists in rats. L. H. JACOBSON*; L. PERROT; M. FENDT; D. BEHNKE; S. COTESTA; G. LAUE; S. OFNER; E. LEGANGNEUX; S. HINTERMANN; C. BETSCHART; C. E. GEE; D. HOYER. *Florey Insitute of Neurosci. and Mental Hlth., Novartis Inst. for BioMedical Res., Otto-von-Guericke Univ. Magdeburg, Ctr. for Mol. Neurobio., The Univ. of Melbourne.*

2:00 NN23 **257.10** Enhancing effects of Ursolic acid on pentobarbital-induced sleeping model. J. JUNG*; B. KIM; Q. GAO; S. KO; Y. LEE; H. LEE; S. PARK; S. JEON; J. CHEONG; J. RYU. *Kyung Hee Univ., Kyung Hee East-West Pharmaceut. Res. Institute, Col. of Pharmacy, Kyung Hee Univ., Kyung Hee Univ., Uimyung Res. Inst. for Neuroscience, Col. of Pharmacy, Sahmyook Univ.*

3:00 NN24 **257.11** The dual hypocretin receptor antagonist almorexant is permissive for the activation of wake-promoting systems. G. S. PARKS*; D. R. WARRIER; L. DITTRICH; A. J. WILK; M. D. SCHWARTZ; T. C. NEYLAN; S. R. MORAIRTY; T. S. KILDUFF. *SRI Intl., VA Med. Center/NCIRE, UCSF.*

4:00 NN25 **257.12** Behaviorally activated localized expression of brain-derived neurotrophic factor (BDNF) in the brainstem is a molecular signature for homeostatic regulation of rapid eye movement (REM) sleep. S. DATTA*; R. SINGH. *Boston Univ. Sch. Med.*

1:00 NN26 **257.13** Water extract from Withania Somnifera (Ashwagandha) leaves (ASH-WEX) decreases sleep deprivation-induced anxiety, impairment in motor coordination, and decline in cognitive function. R. SINGH*; G. KAUR; S. MANCHANDA; T. KAUR; R. MISHRA; S. DATTA. *Boston Univ. Sch. of Med., Guru Nanak Dev Univ.*

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2:00 NN27 **257.14** Purinergic P2 receptor-mediated excitation of basal forebrain cortically projecting cholinergic and GABAergic neurons. C. YANG*; R. W. MCCARLEY; R. BASHEER; R. E. BROWN. *VA Boston Healthcare Syst. and Harvard Med. Sch.*

3:00 NN28 **257.15** Orexin (Hypocretin) levels in patients with Niemann-Pick type C and Miglustat treatment. T. KANBAYASHI*; Y. SAGAWA; H. KUBOTA; A. IMANISHI; Y. HAMADA; M. OMOKAWA; T. TAKAHASHI; N. SAKAI; S. NISHINO; M. SATO; A. NOGUCHI; K. TSUTSUI; H. KUSANAGI; S. IWAKI; E. NARITA; Y. TAKAHASHI; J. TAKAHASHI; Y. OHMORI; M. TAKESHIMA; T. SHIMIZU. *Akita Univ. Sch. of Med., Intl. Inst. for Integrative Sleep Med. (WPI-IIIS), Univ. of Tsukuba, Akita Univ. Sch. of Med., Akita Univ. Sch. of Med., Osaka Univ., Stanford Univ. Sch. of Med.*

4:00 NN29 **257.16** Caffeine improve memory performance and molecular plasticity during 48h of total sleep deprivation in rat. S. SAHU*; M. WADHWA; S. DEEP; P. SINGH; U. PANJWANI. *DIPAS, DIPAS.*

1:00 NN30 **257.17** ▲ Expression of MAP-K in hypothalamus and PONS on sleep deprivation and rebound in rats. A. POOT-AKE*; S. MIJANGOS-MORENO; A. MANJARREZ-MARTÍN; R. JIMÉNEZ-MORENO; E. PACHECO-PANTOJA; P. AQUINO-HERNÁNDEZ; E. MURILLO-RODRÍGUEZ. *Univ. Anahuac Mayab, Univ. Anahuac Mayab.*

2:00 NN31 **257.18** Evidence that glutamatergic neurons of the supramammillary nucleus are responsible for the activation of the dentate gyrus during paradoxical (REM) sleep in the rat. F. BILLWILLER*; L. RENOUARD; O. CLÉMENT; P. FORT; P. LUPPI. *Inserm U1028-CNRS UMR5 5292, Dept. of Neuroscience, Sch. of Med.*

3:00 NN32 **257.19** Modulation of gamma oscillations in the pedunculopontine nucleus (PPN). S. M. DONOFRIO*; N. KEZUNOVIC; J. HYDE; B. LUSTER; S. MAHAFFEY; E. GARCIA-RILL; F. J. URBANO. *Univ. of Arkansas For Med. Sci., Univ. of Buenos Aires.*

4:00 NN33 **257.20** Mechanisms behind gamma band activity in the pedunculopontine nucleus (PPN). B. R. LUSTER*; J. HYDE; S. DONOFRIO; F. J. URBANO; E. GARCIA-RILL. *Univ. of Arkansas For Med. Sci., Univ. of Buenos Aires.*

1:00 NN34 **257.21** Sleep repairs DNA double-strand breaks that normally occur during wake. M. BELLESI*; G. TONONI; C. CIRELLI. *Univ. of Wisconsin-Madison.*

2:00 NN35 **257.22** Histaminergic neurons at the intersection of circadian rhythms and the sleep wake cycle. X. YU*; A. ZECHARIA; Z. ZHANG; Q. YANG; R. YUSTOS; P. JAGER; A. L. VYSSOTSKI; E. S. MAYWOOD; J. E. CHESHAM; S. G. BRICKLEY; M. H. HASTINGS; N. P. FRANKS; W. WISDEN. *Imperial Col. London, Univ. Col. London, Univ. of Zurich/ETH Zurich, Cambridge Biomed. Campus, Cambridge.*

3:00 NN36 **257.23** Genetically mapping the sites of zolpidem-induced sleep reveals that histaminergic neurons are key targets. D. S. UYGUN*; A. ZECHARIA; Z. YE; X. YU; R. YUSTOS; A. ZYSSOTSKI; S. BRICKLEY; N. FRANKS; W. WISDEN. *Imperial Col. London, Univ. of Zurich.*

4:00 OO1 **257.24** Ultrastructural signatures of sleep and wake in neuronal cell bodies of mouse frontal cortex. L. DE VIVO*; G. TONONI; C. CIRELLI. *Univ. of Wisconsin.*

1:00 OO2 **257.25** [Unable to Attend] Projections from dorsal deep mescencephalic nucleus (dDpMe) to nucleus pontis oralis (PnO) utilize inhibitory and excitatory neurotransmitters. G. A. MARKS*; C. LIANG. *VA North Texas Hlth. Care Syst., Univ. of Texas Southwestern Med. Ctr.*

2:00 OO3 **257.26** Optogenetic activation of melanin-concentrating hormone (MCH) containing neurons powerfully increases sleep in rats. C. A. BLANCO-CENTURION*; D. PELLURU; R. KONADHODE; M. LIU; A. VAN DEN POL; P. SHIROMANI. *Med. Univ. of South Carolina, Yale University. Sch. of Med., Ralph Johnson VAMC.*

3:00 OO4 **257.27** Optogenetic activation of MCH neurons simultaneously with DREDD-induced inhibition of LC neurons has an additive effect in enhancing both NREM and REM sleep. P. J. SHIROMANI*; E. VAZEY; D. PELLURU; R. KONADHODE; M. LIU; G. ASTON-JONES; C. BLANCO CENTURION. *VA - Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

4:00 OO5 **257.28** Optogenetic activation versus inhibition of melanin-concentrating hormone (MCH) containing neurons in MCH-Cre mice. R. KONADHODE*; D. PELLURU; C. BLANCO-CENTURION; M. LIU; A. VAN DEN POL; P. SHIROMANI. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Yale Univ. Sch. of Med., Ralph H. Johnson VA Med. Ctr.*

POSTER

258. Sleep: Systems and Behavior

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 OO6 **258.01** ● High throughput behavioral sleep assay for larval zebrafish. K. KARLSSON*, Dr.; A. ÁGUSTSDÓTTIR; H. THORSTEINSSON. *Reykjavik Univ., Reykjavik Univ.*

2:00 OO7 **258.02** ● Analysis of sleep and wake in the KOMP2 mouse population using an improved non-invasive, automated sleep phenotyping system. M. STRIZ*; N. COLE; J. ASHLEY, Jr; J. M. DENEGRE; K. D. DONOHUE; E. J. CHESLER; K. L. SVENSON; B. F. O'HARA. *Univ. of Kentucky, The Jackson Lab., Univ. of Kentucky, Signal Solutions, LLC.*

3:00 OO8 **258.03** ● A system for applying sleep deprivation to a single animal in a group-housed environment. D. A. JOHNSON*; H. P. HARMON; S. GABBERT; E. L. AKERS; D. V. AILLON; D. A. JOHNSON; P. A. PETILLO; E. NAYLOR. *Pinnacle Technology, Inc.*

4:00 OO9 **258.04** ● Characterizing the continuous behavioral and physiological dynamics of the sleep onset: A novel behavioral and computational approach. M. J. PRERAU*; K. HARTNACK; G. OBERGON; A. SAMPSON; M. BIANCHI; J. ELLENBOGEN; P. PURDON. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Johns Hopkins.*

1:00 OO10 **258.05** ▲ Validation of an assessment strategy to accurately measure sleep in non-human primates from actigraphy data. T. J. GAUGHAN*; D. B. KAY; M. PONGIBOVE; B. KREIDER; N. ROCKCASTLE; N. D. RYAN; J. L. CAMERON. *Univ. of Pittsburgh, Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh, Univ. of Pittsburgh.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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2:00 OO11 **258.06** Using whole-brain computational modelling for identifying hubs necessary for transitioning between sleep stages measured with MEG. A. B. STEVNER*; G. PIANTONI; G. COLCLOUGH; M. WOOLRICH; C. PARSONS; J. CABRAL; E. VAN SOMEREN; Y. VAN DER WERF; G. DECO; M. L. KRINGELBACH. *Univ. of Oxford, 2. Aarhus Univ., Massachusetts Gen. Hosp., Univ. of Oxford, Aarhus Univ., Univ. Pompeu Fabra, Netherlands Inst. for Neurosci.*

3:00 OO12 **258.07** Two different mechanisms alternate during the slow oscillation. E. MUNRO*; T. KHODAI; S. SAKATA; T. TOYOIZUMI. *RIKEN Brain Sci. Inst. - Wako, Univ. of Strathclyde, RIKEN Brain Sci. Inst.*

4:00 OO13 **258.08** Comparison of corticocortical coherence between spontaneous and recovery sleep-wake states in rat. D. PAL*; B. SILVERSTEIN; A. LEE; U. LEE; G. MASHOUR. *Univ. of Michigan.*

1:00 OO14 **258.09** REM-sleep latency predicts napping improvement on planning ability. M. WONG*; E. LAU. *Univ. of Hong Kong, The Univ. of Hong Kong.*

2:00 OO15 **258.10** Cortical dynamic of an EEG high frequency band during rapid eye movement (REM) sleep. A. SÁNCHEZ LÓPEZ*; L. C. CERVANTES; M. ESCUDERO. *Neurociencia Y Comportamiento, Univ. of Seville.*

3:00 OO16 **258.11** Insights into local properties and synchrony of sleep spindles from ECoG in humans. G. PIANTONI*; E. HALGREN; S. S. CASH. *Massachusetts Gen. Hosp., UCSD, Harvard Med. Sch.*

4:00 OO17 **258.12** Differences between transcranial magnetic stimulation-evoked brain activity during N2 and N3 sleep measured by electroencephalography. J. O. NIEMINEN*; O. GOSSERIES; F. SICLARI; M. BOLY; M. MASSIMINI; G. TONONI. *Univ. of Wisconsin, Aalto Univ., Univ. of Wisconsin, Univ. of Wisconsin, Univ. degli Studi di Milano.*

1:00 OO18 **258.13** Steady-state visually evoked potentials as a method for studying information processing during sleep. J. NORTON*; S. UMUNNA; T. BRETL. *Univ. of Illinois.*

2:00 OO19 **258.14** Co-activated yet disconnected: Neural correlates of eye closure during sleep deprivation. J. ONG; D. KONG; T. T. Y. CHIA; J. TANDI; B. T. T. YEO; M. W. CHEE*. *Duke-NUS Grad. Med. Sch., Natl. Univ. of Singapore.*

3:00 OO20 **258.15** The effects of non-oscillating transcranial direct current stimulation on sleep in rats. L. KALVI; M. ECKERT; K. ALI; M. TATSUNO*. *Univ. Lethbridge.*

4:00 OO21 **258.16** The effects of sleep deprivation on pre and post-training in a one-trail discriminative learning task. J. J. IZYGON; D. M. NGHIEM; J. SHAHIN; D. MCGHIEY; C. MADISON; A. MASOOD; M. HENCEROTH-CHOMIAK; G. SRINIVASARAO; D. H. MALIN; C. P. WARD*. *Univ. Houston Clear Lake.*

1:00 OO22 **258.17** Effect of immune challenge and/or REM-sleep restriction on memory, anxiety and helplessness. S. A. CASTILLO-GARCIA*; E. BECERRIL; J. VELAZQUEZ-MOCTEZUMA; L. PAVON; E. DOMINGUEZ-SALAZAR. *Universidad Autonoma Metropolitana, Iztapalapa, Inst. Nacional de Psiquiatria Ramon de la Fuente, Univ. Autonoma Metropolitana- Iztapalapa.*

2:00 OO23 **258.18** Effects of chronic sleep restriction on cardiac and thermoregulatory functions in rats. T. BAH*; S. DEURVEILHER; E. E. EGOM; B. RUSAK; R. A. ROSE; K. SEMBA. *Dalhousie Univ.*

3:00 OO24 **258.19** Phenotypic characterization of sleep, circadian rhythm, and drug response in MitoPark mouse, a model of Parkinson's disease. N. SAKAI*; N. CHAN; S. NISHINO. *Stanford Sleep and Circadian Neurobio. Lab.*

4:00 OO25 **258.20** Chronic sleep deprivation alters theta and gamma powers during REM sleep in mice. B. KIM; Y. KIM; E. HWANG*; R. STRECKER; R. MCCARLEY; J. CHOI. *Korea Inst. of Sci. and Technol., Yonsei Univ., VA Boston Healthcare Syst. & Harvard Med. Sch., Univ. of Sci. and Technol.*

1:00 OO26 **258.21** The effects of sleep deprivation on spatial representations in young and aged adult mice during an object-place recognition task. R. K. YUAN*; I. A. MUZZIO. *Univ. of Pennsylvania.*

2:00 OO27 **258.22** Environmental enrichment reduces sleep deprivation induced impairments of attention and recall in the novel object recognition task. J. W. CORDEIRA; J. M. MCNALLY; J. T. MCKENNA; C. V. BAGLINI; R. E. STRECKER*; R. W. MCCARLEY. *VABHS & Harvard Med. Sch., Stonehill Col.*

3:00 OO28 **258.23** ▲ Mice exposed to predator threat display protracted sleep disruptions. A. PATEL; R. SHARMA; P. SAHOTA; M. M. THAKKAR*. *HSTMV Hospital/University of Missouri.*

4:00 OO29 **258.24** Acute dietary manipulations alter sleep/wake architecture in mice. I. J. PERRON*; P. FENIK; S. VEASEY; A. PACK. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 OO30 **258.25** The long term effects of early rearing environment on daytime and nighttime behavioral activity of adult male rhesus monkeys (Macaca mulatta) across the lifespan. P. J. PIERRE*; A. J. BENNETT. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

2:00 OO31 **258.26** Dim light at night reduces the amplitude of the sleep wake cycle in rats. D. STENVERS; R. VAN DORP; A. L. OPPERHUIZEN; E. FLIERS; P. H. BISSCHOP; J. H. MEIJER; A. KALSBEEK*; T. DEBOER. *Academic Med. Ctr. (AMC), Leiden Univ. Med. Ctr., Netherlands Inst. for Neurosci. (NIN), Amsterdam Med. Ctr. (AMC), Dept Endrocrinol. and Metabolism.*

3:00 OO32 **258.27** Gender effects in the decline of slow-wave sleep during adolescence. J. GAINES*; J. FERNANDEZ-MENDOZA; A. N. VGONTZAS; D. LIAO; E. O. BIXLER. *Penn State Col. of Med.*

4:00 PP1 **258.28** Sleep quality and alcohol use in older adults of Mexico City. M. M. MELENDEZ*; A. GALLEGOS-CARI; N. HERNANDEZ-LLANES; R. CAMACHO-SOLIS; J. VELAZQUEZ-MOCTEZUMA; A. JIMENEZ-ANGUIANO; J. SANCHEZ-SOSA; G. BORGES; M. MEDINA-MORA ICAZA. *IAPA-DF, Facultad De Psicologia - Universidad Nacional Autonoma De Mexico, Universidad Autonoma Metropolitana - Iztapalapa, Facultad De Psicologia - Universidad Nacional Autonoma De Mexico, Instituto Nacional De Psiquiatria "Ramon De La Fuente Muñiz".*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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POSTER

259. Functional Neuroimaging: Neurovascular Mechanisms

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

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 PP2 **259.01** ● Spontaneous glial calcium waves in cerebellar cortex *in vivo* reduce blood vessel diameter possible via constriction of pericytes. C. MATHIESEN*; B. L. LIND; A. BRAZHE; B. GESSLEIN; M. LAURITZEN. *Panum Inst., Univ. of Copenhagen, Univ. of Moscow, Glostrup Hosp.*

2:00 PP3 **259.02** Development of newly optical imaging systems of simultaneous measurement of changes in cerebral oxygen metabolism and hemodynamics by awake-mice. T. MATSUURA*; H. TAKUWA; A. NISHINO; Y. TAJIMA; H. ITO. *Fac Engin, Iwate Univ., Dept Biophysics, Natl. Inst. Radiol Sci.*

3:00 PP4 **259.03** Coupling of spontaneous and sensory evoked hemodynamic signals to neural activity in the barrel cortex of the awake mouse. A. WINDER*; P. J. DREW. *Penn State Univ., Penn State Univ.*

4:00 PP5 **259.04** fMRI measurements of spiking vs. synaptic activity in the rat olfactory bulb. A. J. POPLAWSKY*; H. FUKUDA; S. KIM. *Univ. of Pittsburgh, Inst. for Basic Sci. (IBS).*

1:00 PP6 **259.05** Neural correlates of spontaneous BOLD fluctuations: A simultaneous LFP-fMRI investigation in the nonhuman primate. N. HASHEMI*; R. M. HUTCHISON; J. S. GATI; R. S. MENON; S. EVERLING. *Univ. of Western Ontario, Robarts Res. Inst., Harvard Univ., Univ. of Western Ontario.*

2:00 PP7 **259.06** ● Comparison of high-resolution functional magnetic resonance imaging performance among spiral trajectory variants and echo-planar imaging. V. SINGH*; D. RESS. *The Univ. of Texas At Austin, Baylor Col. of Med.*

3:00 PP8 **259.07** Investigating the spatiotemporal characteristics of the bold and the non-bold response across cortical layers in awake marmosets. C. C. YEN*; D. PAPOTI; A. C. SILVA. *Natl. Institues of Hlth.*

4:00 PP9 **259.08** Mechanisms of neurovascular maturation in the developing brain. M. G. KOZBERG*; Y. MA; M. A. SHAIK; C. N. LUNARDI; A. J. GOMES; E. TFOUNI; E. M. C. HILLMAN. *Columbia Univ., Univ. of Brasilia, Univ. of San Paulo.*

1:00 PP10 **259.09** Development of long-term two-photon awake imaging in marmosets: A novel optical imaging model for studies of cerebral microcirculation and neuroglial activation in primates. T. P. SANTISAKULTARM*; J. L. CIUCHTA; J. PARK; S. CHOI; A. C. SILVA. *NIH.*

2:00 PP11 **259.10** Neurovascular coupling and decoupling in the cortex during voluntary locomotion. B. HUO*; J. B. SMITH; P. J. DREW. *Pennsylvania State Univ., Pennsylvania State Univ.*

3:00 PP12 **259.11** Depth and tissue variations of BOLD signal reliability in human visual cortex. J. KIM*; D. RESS. *Baylor Col. of Med.*

4:00 PP13 **259.12** ● Comparison of five different anesthetics for phMRI using nicotine challenge. J. K. HUTTUNEN*; J. PAASONEN; R. SALO; K. LEHTIMÄKI; E. JOHANSSON; M. M. FORSBERG; O. GRÖHN. *Univ. of Eastern Finland, Charles River Discovery Res. Services Finland, AstraZeneca R&D Mölndal, Univ. of Eastern Finland.*

1:00 PP14 **259.13** Imaging brain microvascular dynamics using CellVizio confocal endomicroscopy in hypertensive rats *in vivo.* D. N. MAYOROV*; J. F. R. PATON; S. KASPAROV. *Univ. of Bristol.*

2:00 PP15 **259.14** Neural correlates of single-vessel hemodynamic responses *in vivo.* P. O'HERRON; P. CHHATBAR; M. LEVY; A. SCHRAMM; P. KARA*. *MUSC.*

3:00 PP16 **259.15** A new non-linear model of the fmri bold response. J. PORTES*; C. B. AMOOZEGAR; B. R. CHEN; M. G. KOZBERG; M. S. SHAIK; E. M. C. HILLMAN. *Biomed. Engineering, Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ.*

4:00 PP17 **259.16** A rubber hand illusion: Lateralization of brain area that is associated with the body image. Y. KODAN*; A. MITANI; R. NAKAI; T. INO. *Kyoto Univ., Kyoto Univ., Rakuwakai-Otowa Hosp.*

1:00 PP18 **259.17** Parametric application of transcranial alternating current stimulation leads to selective increases in BOLD signaling. C. WALKER*; N. POLIZZOTTO; V. SHARMA; E. SANTARNECCHI; A. ROSSI; S. KIM; R. CHO. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Siena, Univ. of Pittsburgh.*

POSTER

260. Sequence Learning

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 PP19 **260.01** Old habits die hard: what happens when predictive relationships change in a probabilistic sequence learning task? S. A. KISER*; K. M. O'NEIL; R. L. M. FULLER; D. V. HOWARD; J. H. HOWARD, Jr. *The Catholic Univ. of America, Georgetown Univ., Georgetown Univ., Georgetown Univ.*

2:00 PP20 **260.02** Adult age differences in white matter integrity and implicit probabilistic sequence learning. K. L. SEAMAN*; C. M. STILLMAN; D. V. HOWARD; J. H. HOWARD, Jr. *The Catholic Univ. of America, Georgetown Univ., Georgetown Univ.*

3:00 PP21 **260.03** Explicit, but not implicit motor sequence training contributes to choking under pressure due to large rewards. T. G. LEE; A. S. PANESCU; S. T. GRAFTON*. *UCSB, Univ. of California Santa Barbara, UCSB.*

4:00 PP22 **260.04** Cortical representations of motor sequence features. D. M. MUSSGENS*; F. ULLÉN; C. I. BAKER. *Karolinska Institutet, Natl. Inst. of Mental Hlth.*

1:00 PP23 **260.05** Motor sequencing in the human cerebellum: How movement predictability and effector influence activity. C. J. LOPRESTI*; T. ALVAREZ; J. FIEZ. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 PP24 **260.06** Competitive neurocognitive networks underlying sequence learning. D. NEMETH*; K. JANACSEK; B. POLNER; Z. A. KOVACS. *Eotvos Lorand Univ., Eotvos Lorand Univ., Budapest Univ. of Technol. and Econ., Univ. of Szeged.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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3:00 QQ1 **260.07** A secondary task induces offline learning of motor sequences following a three-minute delay. Y. DU*; J. E. CLARK. *Univ. of Maryland.*

4:00 QQ2 **260.08** Effects of interference on implicit and explicit motor sequence learning. X. LI*; S. M. MORTON. *Univ. of Delaware.*

1:00 QQ3 **260.09** The role of the prefrontal cortex in sequential memory formation and consolidation. K. JANACSEK*; G. G. AMBRUS; W. PAULUS; A. ANTAL; D. NEMETH. *Eotvos Lorand University, Inst. of Psychology, Georg-August Univ., Eotvos Lorand Univ.*

2:00 QQ4 **260.10** Transient but consistent dynamic changes in motor cortex activity in repeating a trained and novel movement sequence. E. GABITOV*; D. MANOR; A. KARNI. *Univ. of Haifa.*

3:00 QQ5 **260.11** Reduction of primary motor cortex cTBS excitability predicts benefit of feedback for retention of sequence knowledge. A. D. STEEL*; L. WILKINSON; E. MOOSHAGIAN; T. ZIMMERMANN; A. KEISLER; J. D. LEWIS; E. M. WASSERMANN. *NIH, NIH.*

4:00 QQ6 **260.12** Effects of moderate physical activity on learning a simple movement sequence. S. PANZER*; C. WEICH; F. MARSCHALL. *Saarland Univ., Saarland Univ.*

1:00 QQ7 **260.13** Anticipatory and carry-over coarticulation in sequential human arm movements. E. NOWAK; B. GRIMME; H. REIMANN; G. SCHONER*. *Ruhr-Universität Bochum.*

2:00 QQ8 **260.14** A hierarchical model of human motor learning that combines high-level symbolic motor planning and low-level control of actuators. E. ABRAMOVA*; A. FAISAL. *Imperial Col. London, Imperial Col. London, Hammersmith Hosp.*

3:00 QQ9 **260.15** Motor learning in hemiparesis following stroke. R. M. HARDWICK*; V. A. RAJAN; P. A. CELNIK. *Johns Hopkins Univ.*

4:00 QQ10 **260.16** Effects of short and long term motor learning on cortical structure. A. TREFLER*; C. THOMAS; E. AGUILA; M. KING; P. MODI; C. PIERPAOLI; C. I. BAKER. *NIMH, Natl. Inst. of Child Hlth. and Human Develop.*

1:00 QQ11 **260.17** Effect of experimental muscle pain on the acquisition and retention of locomotor adaptation. J. BOUFFARD; S. E. SALOMONI; K. TUCKER; W. VAN DEN HOORN; C. MERCIER*; J. ROY; P. W. HODGES; L. J. BOUYER. *CIRRIS - Laval Univ., Univ. of Queensland.*

2:00 QQ12 **260.18** Autonomic arousal during implicit associative learning predicts risky behavior. A. B. FORMAN-ALBERTI*; B. HINNANT. *The Catholic Univ. of America.*

3:00 QQ13 **260.19** Implicit sequence learning in Parkinson's disease: Intraindividual variability in reaction time. K. R. GAMBLE*; T. J. CUMMINGS, Jr; S. E. LO; J. H. HOWARD, Jr; D. V. HOWARD. *Georgetown Univ., MedStar Georgetown Univ. Hosp., MedStar Georgetown Univ. Hosp., The Catholic Univ. of America, Georgetown Univ. Med. Ctr.*

4:00 QQ14 **260.20** Practice structure improves transitional memory through increased cortico-subcortical coupling with the premotor cortex. S. S. SONG*; S. J. GOTTS; E. DAYAN; L. G. COHEN. *NIH/NINDS, NIH/NIMH.*

1:00 QQ15 **260.21** Oscillatory cortical dynamics of implicit learning in patients with schizophrenia. L. B. HINKLEY*; S. VINOGRADOV; M. FISHER; D. MIZUIRI; B. BIAGIANTI; S. NAGARAJAN. *UC San Francisco, UCSF.*

2:00 QQ16 **260.22** ▲ Aerobic exercise and implicit learning in healthy young adults. C. G. WAMBACH; C. M. STILLMAN; J. H. HOWARD, Jr.; D. V. HOWARD*. *Georgetown Univ., The Catholic Univ. of America, Georgetown Univ.*

3:00 QQ17 **260.23** Prefrontal and cerebellar contributions to oculomotor rule learning: An eye-tracking fMRI study. G. P. D. ARGYROPOULOS; J. L. MILLS; N. RAMNANI*. *Royal Holloway Univ. London.*

POSTER

261. Consciousness and Neural Networks

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 QQ18 **261.01** Mechanisms of large-scale network switching in task engagement and conscious report. W. R. XIAO*; W. C. CHEN; R. E. WATSKY; R. KIM; E. A. B. LEVINSOHN; J. L. GERRARD; D. D. SPENCER; H. BLUMENFELD. *Yale Univ., Yale Univ., Yale Univ.*

2:00 QQ19 **261.02** Mechanism of impaired consciousness in typical childhood absence seizures. J. N. GUO*; R. KIM; S. JHUN; W. XIAO; E. FEENEY; X. BAI; M. NEGISHI; M. J. CROWLEY; L. C. MAYES; R. T. CONSTABLE; H. BLUMENFELD. *Yale Univ.*

3:00 QQ20 **261.03** Phenomenal consciousness created by decoded neurofeedback. K. AMANO*; T. WATANABE; K. SHIBATA; M. KAWATO; Y. SASAKI. *Ctr. for Information and Neural Networks (CiNet), Brown Univ., Advanced Telecommunications Res. Inst. Intl.*

4:00 QQ21 **261.04** The influence which rubber hand illusion gives the hand capacity. T. YUDA*; M. OSUMI; S. MORIOKA. *Kio Univ., Nishiyamato Rehabil. Hosp.*

1:00 QQ22 **261.05** The effect of emotional valence on nonconscious visual memory activity. S. KARK*; S. D. SLOTNICK; E. A. KENSINGER. *Boston Col.*

2:00 QQ23 **261.06** Damage to the medial prefrontal cortex is associated with impaired autonomic responses to music-evoked autobiographical memories. A. M. BELFI*; D. TRANEL. *Univ. of Iowa.*

3:00 QQ24 **261.07** Pragmatic: A probabilistic and generative model of areas tiling the cortex. A. G. HUTH*; T. L. GRIFFITHS; J. L. GALLANT. *UC Berkeley.*

4:00 QQ25 **261.08** Using multivariate pattern analysis to investigate memory reactivation during sleep. J. W. ANTONY*; L. R. PILOTO; K. A. PALLER; K. A. NORMAN. *Northwestern Univ., Princeton Univ., Northwestern Univ., Princeton Univ.*

1:00 QQ26 **261.09** Default mode network activity precedes attention lapse in healthy subjects. R. C. PHILLIPS*; T. SALO; C. S. CARTER. *UC Davis Neurosci.*

2:00 QQ27 **261.10** The effect of short-term meditation training on attentional blink. F. LUO*; S. WANG; J. WANG. *Inst. Psychology, Chinese Acad of Sci.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

262. Human Decision-Making and Learning: Individual Differences and Disorders

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 QQ28 **262.01** Risk-taking behaviors relate to functional connectivity in striatal and fronto-parietal networks in adolescence. A. A. BATO*; D. SARPAL; M. A. BLAIR; K. BEECHER; J. NAIDICH; A. K. MALHOTRA; K. H. KARLSGODT. *Zucker Hillside Hosp., North Shore-LIJ Feinstein Inst., Zucker Hillside Hosp., North Shore-LIJ Hlth. Syst., Hofstra North Shore LIJ Sch. of Med.*

2:00 QQ29 **262.02** Cautious decision making in obsessive-compulsive disorder: The role of perceptual uncertainty and implicit incentives. P. BANCA*; M. D. VESTERGAARD; V. RANKOV; S. MITCHELL; T. LAPA; M. CASTELO-BRANCO; V. VOON. *Univ. of Cambridge, Univ. of Cambridge, Inst. for Biomed. Imaging and Life Sciences, Univ. of Coimbra.*

3:00 QQ30 **262.03** Decision making and dopamine variability in healthy human subjects. L. C. KENNERLY*; V. D. COSTA; J. B. CZARAPATA; D. P. EISENBERG; P. D. KOHN; C. E. HEGARTY; A. M. IANNI; K. F. BERMAN; B. B. AVERBECK. *NIH, NIH.*

4:00 QQ31 **262.04** Does working memory capacity mediate age and performance on the Balloon Analogue Risk Task (BART)? M. BLAIR*; A. A. BATO; A. K. MALHOTRA; K. H. KARLSGODT. *Zucker Hillside Hosp., Feinstein Inst. for Med. Res., Zucker Hillside Hosp., Hofstra NorthShore LIJ Sch. of Med.*

1:00 QQ32 **262.05** Neural and behavioral indices of value- and urgency-dependent saccade prioritization in humans: Behavioral 'types' and conversion through implicit training. A. BLANGERO*; S. P. KELLY. *City Col. of New York.*

2:00 QQ33 **262.06** Distinctive resting-state brain activity in Internet gaming disorder: a comparison to alcohol use disorder and healthy control. J. CHOI*; H. KIM; Y. KIM; J. LEE; S. CHOI. *SMG-SNU Boramae Med. Ctr., Seoul Natl. Univ. Col. of Med., SMG-SNU Boramae Med. Ctr.*

3:00 QQ34 **262.07** Age-related striatal dedifferentiation and frontal overactivation during choice value processing. Y. SU*; T. TAI; J. O. S. GOH. *Natl. Taiwan Univ. Col. of Med., Neurobio. and Cognitive Sci. Center, Natl. Taiwan Univ., Dept. of Psychology, Natl. Taiwan Univ.*

4:00 QQ35 **262.08** Attentional effects of stimuli induced craving in people with marijuana use disorders. F. H. TSOI*; A. SHEVORYKIN; S. SINGH; E. CABREJA; C. PEREZ; L. M. RUGLASS; R. D. MELARA. *City Col. of New York.*

1:00 QQ36 **262.09** Towards a study of compared EEG activity during logical reasoning tasks between champions of the Logic Olympiad and regular students. V. REYES*; J. CASTRO-MANZANO; J. CASTILLA-CASTILLA; C. PERALTA-UTRILLA; J. MEDINA-DELGADILLO. *Psychology/ Upaep, Philosophy, UPAEP, Psychology, UPAEP.*

2:00 RR1 **262.10** Degradation of subjective value judgements in patients with behavioral variant frontotemporal dementia. T. A. BISBING*; C. T. MCMILLAN; J. P. POWERS; N. SPOTORNO; M. GROSSMAN. *Univ. of Pennsylvania.*

3:00 RR2 **262.11** Temporal discounting of future rewards in behavioral variant frontotemporal dementia and Alzheimer's disease. K. RASCOVSKY*; J. W. KABLE; R. KAZINKA; E. MORAN; C. OLM; J. GLASENBERG; A. BOLLER-HEWITT; C. T. MCMILLAN; R. CLARK; M. GROSSMAN. *Univ. of Pennsylvania Sch. of Med., Univ. of Pennsylvania, Univ. of Pennsylvania.*

4:00 RR3 **262.12** ● Neuroanatomical changes in behavioral variant frontotemporal dementia correlate with risk-related behavior. J. POWERS*; C. T. MCMILLAN; K. RASCOVSKY; L. BURKHOLDER; M. GROSSMAN. *Univ. of Pennsylvania Perelman Sch. of Med.*

1:00 RR4 **262.13** Dopamine D2 receptors, reward discounting, and B-cell function in obese and normal-weight humans. D. M. GREDYSA*; S. EISENSTEIN; A. ARBELAEZ; J. KOLLER; J. PERLMUTTER; S. MOERLEIN; E. BIHUN; S. RANCK; A. BISCHOFF; T. HERSHEY. *Washington Univ. In St. Louis, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

2:00 RR5 **262.14** The mechanism underlying quota-dependent modulation of risk-attitude and its deficit in the Pathological Gambling. A. FUJIMOTO*; H. TAKAHASHI. *Kyoto Univ.*

3:00 RR6 **262.15** Dopamine mediates reward-dependent incentivisation of effort in Parkinson's disease. T. T. CHONG*; V. BONNELLE; S. MANOHAR; K. VEROMANN; K. MUHAMMED; M. HUSAIN. *Univ. of Oxford.*

4:00 RR7 **262.16** Dissociable mechanisms of value-based decision-making in children: My own will or my Mom's choice? S. LIM*; A. S. BRUCE; J. B. CHERRY; N. HASS; S. N. BALAKRISHNAN; A. M. DAVIS. *Univ. of Missouri - Kansas City, Missouri Univ. of Sci. and Technol., Univ. of Kansas Med. Ctr.*

1:00 RR8 **262.17** Anterior insula self-regulation in obsessive compulsive disorder using real-time fmri-brain computer interfaces. K. BUYUKTURKOGLU*; H. RÖTTGERS; J. SOMMER; M. RANA; L. DIETZSCH; E. ARIKAN; R. VEIT; R. MALEKSHAHI; T. KIRCHER; N. BIRBAUMER; R. SITARAM; S. RUIZ. *Inst. of Med. Psychology and Behavioral Neurobiology, Univ. of Tuebingen, Neural and Behavioral Sci. Intl. Max Planck Res. Sch., Dept. of Psychiatry und Psychotherapy, Philipps-University Marburg, Rudolf-Bultmann-Straße 8, 35039., Ospedale San Camillo, IRCCS., Dept. of Biomed. Engineering, Univ. of Florida, Dept. de Psiquiatría, Escuela de Medicina, Ctr. Interdisciplinario de Neurociencia, Pontificia Univ. Católica de Chile.*

2:00 RR9 **262.18** Neural correlates of probabilistic reinforcement learning in individuals with obesity. J. KUBE*; L. KASTNER; A. HORSTMANN; A. HILBERT; A. VILLRINGER; J. NEUMANN. *MPI For Human Cognitive and Brain Sci., Leipzig Univ. Med. Center, IFB Adiposity Dis., Clin. of Cognitive Neurology, Univ. Hosp. Leipzig, Mind & Brain Institute, Berlin Sch. of Mind and Brain, Humboldt-University, Berlin.*

3:00 RR10 **262.19** Cannabis users failure to learn from errors associated with hypoactive dorsal ACC response. R. HESTER*; S. CAREY; L. NESTOR; J. JONES; H. GARAVAN. *Univ. of Melbourne, Univ. of Melbourne, Trinity Col. Dublin, Univ. of Vermont.*

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4:00 RR11 **262.20** Post-traumatic stress disorder (PTSD) and generalization of learned associations: More severe re-experiencing symptoms are associated with increased generalization. C. E. MYERS*; R. J. SERVATIUS; M. W. GILBERTSON; S. P. ORR. *Dept. of Veterans Affairs, New Jersey Healthcare Syst., New Jersey Med. School, Rutgers The State Univ. of New Jersey, Dept. of Veterans Affiars, Manchester VA Med. Ctr., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

1:00 RR12 **262.21** Exaggerated acquisition and resistance to extinction of avoidance behavior in treated heroin-dependent males (but not females). J. SHEYNIN*; A. A. MOUSTAFA; K. D. BECK; R. J. SERVATIUS; P. A. CASBOLT; P. HABER; M. ELSAYED; L. HOGARTH; C. E. MYERS. *Dept. of Veterans Affairs, NJHCS, New Jersey Inst. of Technol. and Grad. Sch. of Biomed. Sciences, Rutgers, The State Univ. of New Jersey, Stress & Motivated Behavior Institute, New Jersey Med. School, Rutgers, The State Univ. of New Jersey, Univ. of Michigan, Marcs Inst. for Brain and Behaviour, Univ. of Western Sydney, Sch. of Social Sci. and Psychology, Univ. of Western Sydney, Drug Hlth. Services, Addiction Medicine, Central Clin. School, Royal Prince Alfred Hospital, The Univ. of Sydney, Sch. of Psychology, Univ. of New South Wales, Sch. of Psychology, Univ. of Exeter.*

2:00 RR13 **262.22** Learning from positive, but not negative, feedback is modulated by dopamine transporter genotype in patients with major depressive disorder and healthy subjects. M. B. TAHA*; H. Y. KHDOUR; I. T. MUGHRABI; J. Y. NATSHEH; H. M. DARWISH; M. M. HERZALLAH; M. A. GLUCK. *Al-Quds Cognitive Neurosci. Lab., The Feinstein Inst. for Med. Research, NSLIJ Hlth. Syst., Ctr. for Mol. and Behavioral Neuroscience, Rutgers Univ., Al-Quds Med. Res. Center, Fac. of Medicine, Al-Quds Univ.*

3:00 RR14 **262.23** The neural correlates of simulated drug choice in human addiction. S. J. MOELLER*; A. B. KONOVA; M. A. PARVAZ; M. MISYRLIS; K. E. SCHNEIDER; F. D'OLEIRE UQUILLAS; N. ALIA-KLEIN; R. Z. GOLDSTEIN. *Icahn Sch. of Med. at Mount Sinai, Stony Brook Univ.*

4:00 RR15 **262.24** Tight together: cross-level coupling during voluntary modulation of theta oscillations. J. BAGDASARYAN*; M. VALDERRAMA; K. LEHONGRE; V. NAVARRO; M. LE VAN QUYEN. *Inst. Du Cerveau Et De La Moelle Epiniere (ICM), Univ. de Los Andes, Epilepsy Unit - CHU Pitie-Salpetriere.*

POSTER

263. Functional Mechanisms of Attention I

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR16 **263.01** Thalamocortical alpha rhythms reflect attention and predict reaction times. S. HAEGENS*; P. LAKATOS; M. DING; C. E. SCHROEDER. *Columbia Univ. Med. Ctr., Nathan Kline Inst., Univ. of Florida.*

2:00 RR17 **263.02** The role of low frequency oscillations in attentional modulation in area mt. M. ESGHAEI; M. DALIRI*; K. MABOUDI. *Inst. for Res. in Fundamental Sci., Iran Univ. of Sci. and Technol.*

3:00 RR18 **263.03** Slow fluctuations underlying information processing in macaque monkeys. C. YAN*; A. BARCZAK; S. HAEGENS; M. P. MILHAM; F. X. CASTELLANOS; C. E. SCHROEDER. *The Nathan S. Kline Inst. For Psychiatric Res., New York Univ. Sch. of Med., Columbia Univ. Col. of Physicians and Surgeons, Child Mind Inst., New York Univ. Sch. of Med.*

4:00 RR19 **263.04** The role of fast-spiking parvalbumin interneurons and gamma rhythms in attention and behavior. H. KIM*; M. CARLÉN. *Karolinska Institutet.*

1:00 RR20 **263.05** Time course of attentional modulations in primary visual cortex. X. LI*; M. JANSEN; R. LASHGARI; H. SWADLOW; Y. BERESHPOLOVA; J. ALONSO. *SUNY Col. of Optometry, Iran Univ. of Sci. and Technol., Univ. of Connecticut.*

2:00 RR21 **263.06** Assessing removal of illumination as a signal: Effects of loss of basal forebrain corticopetal cholinergic neurons. J. A. BURK*; D. OTOYA; C. LEONG; A. NG; C. T. KOZIKOWSKI. *Col. of William & Mary.*

3:00 RR22 **263.07** Cholinergic modulation of frontoparietal activity during the orienting and disengagement of attention in rats. V. LJUBOJEVIC*; P. LUU; P. R. GILL; L. BECKETT; K. TAKEHARA-NISHIUCHI; E. DE ROSA. *Univ. of Toronto, Univ. of Toronto, Rambus Inc.*

4:00 RR23 **263.08** Neural correlates of sustained attention in various modalities in rats. D. WU*; H. DENG; L. WEI; X. XIAO; Y. ZUO; Z. WANG. *Inst. of Neurosci.*

1:00 RR24 **263.09** Emotional distracters and emotional state both influence spatial attention in macaque monkeys. J. SHARMA*; R. LANDMAN; M. SUR; R. DESIMONE. *MIT & MGH, McGovern Inst. of Brain Res., Picower Inst. for Learning and Memory.*

2:00 RR25 **263.10** ● Repeated sensory load post-weaning induces lasting alterations in attentional functions and BDNF expression. I. HADAS*; Y. AMITAI; A. ZANGEN. *Ben Gurion Univ. In the Negev, Life Sci. D, Ben gurion university in the negev.*

3:00 RR26 **263.11** 3D video analysis of object exploration in rats. J. MATSUMOTO*; T. UEHARA; S. URAKAWA; Y. TAKAMURA; T. SUMIYOSHI; M. SUZUKI; T. ONO; H. NISHIJO. *Univ. of Toyama, Kanazawa Med. Univ., Natl. Ctr. of Neurol. and Psychiatry, Univ. of Toyama.*

4:00 RR27 **263.12** Rapid species discrimination and individual recognition associated brain areas and components of event-related potentials in frogs. G. FANG*; P. YANG; Y. TANG. *Chengdu Inst. of Biology, CAS.*

1:00 RR28 **263.13** Effects of attention and working memory in the different layers of monkey primary visual cortex. T. J. VAN KERKOERLE*; M. W. SELF; P. R. ROELFSEMA. *Rockefeller Univ., Netherlands Inst. for Neurosci., Ctr. for Neurogenomics and Cognitive Research, VU Univ. Amsterdam.*

2:00 RR29 **263.14** Attention and normalization circuits in macaque V1. A. THIELE*; M. SANAYEI; J. HERRERO; C. DISTLER. *Newcastle Univ., Newcastle Univ., Neurobiologie.*

3:00 RR30 **263.15** Frontal eye field correlates of salient distractor suppression during visual search. J. D. COSMAN*; J. D. SCHALL; G. F. WOODMAN. *Vanderbilt Univ., Vanderbilt Univ.*

4:00 RR31 **263.16** Interactions between noncholinergic basal forebrain neurons and muscarinic receptors in attentional processing. C. T. KOZIKOWSKI*; E. L. WOLFE; P. G. YANEV; J. A. BURK. *Col. of William and Mary.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 RR32 **263.17** Selective attention independently modulates both spiking correlations and EEG oscillations. A. C. SNYDER*; M. A. SMITH. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 RR33 **263.18** ▲ High-dimensional neural correlates of choice and attention in V4. M. J. MORAIS*; A. C. SNYDER; M. A. SMITH. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 RR34 **263.19** Establishment of a touchscreen-based Variable Time Wait Task and Go/No-Go Task for mice to assess behavioral inhibition and sustained attention. A. OKADA*; T. ENDO; C. TOHYAMA; M. KAKEYAMA. *Grad. Sch. of Medicine, Univ. of Tokyo, Grad. Sch. of Biomed. Sciences, Nagasaki Univ.*

4:00 RR35 **263.20** Deficits on learing, memory, and attention in Wistar rats submitted to neonatal hypoxic-ischemia procedure. L. BIZARRO*; J. JABOINSKI; L. A. ALMEIDA; R. DECKER; P. MIGUEL; R. DIAZ; L. ORLANDI. *Univ. Federal Do Rio Grande Do Sul, Univ. Federal Do Rio Grande Do Sul.*

1:00 RR36 **263.21** Phasic and tonic activation of the locus coeruleus induces global remapping in the dentate gyrus. S. L. GRELLA*; J. NEIL; I. V. ODINTSOVA; G. MARTIN; C. W. HARLEY; D. F. MARRONE. *Wilfrid Laurier Univ., Mem. Univ. of Newfoundland, McKnight Brain Institute, Univ. of Arizona.*

2:00 RR37 **263.22** Attenuation of high-frequency (50-200 Hz) thalamocortical EEG rhythms by propofol is more pronounced for the thalamus than for the cortex. S. J. REED; G. PLOURDE*. *Montreal Neurol Hosp.*

3:00 RR38 **263.23** Sustained auditory attention and response anticipation in a two-alternative choice task, in rats. L. F. MARCHELLI*; G. F. XAVIER. *Univ. of São Paulo.*

4:00 RR39 **263.24** Theta-gamma interactions in monkey visual cortex and their role in selective attention. G. SPYROPOULOS*; C. BOSMAN; P. FRIES. *Ernst Struengmann Inst. For Neurosci. In Co, Swammerdam Inst. for Life Sciences, Ctr. for Neuroscience, Univ. of Amsterdam, Donders Inst. for Brain, Cognition, and Behaviour, Radboud Univ. Nijmegen.*

1:00 RR40 **263.25** Basal forebrain responses to odorants and modulation of olfactory bulb function in mice. X. ZHAN*; P. YIN; T. HEINBOCKEL. *Howard Univ. Coll. Med., Univ. of Maryland at Baltimore, Univ. of Maryland, Howard Univ.*

POSTER

264. Hippocampal and Cortical Circuits I

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR41 **264.01** Firing properties and immediate early gene mapping in hippocampal area CA2. G. M. ALEXANDER*; S. FARRIS; S. M. DUDEK. *Natl. Inst. of Envrn. Hlth. Scienc.*

2:00 RR42 **264.02** Hippocampal memory codes regulated by NMDA receptor synaptic plasticity. M. LI*; H. ZHANG; H. KUANG; G. CHEN; J. Z. TSIEN. *Georgia Regents Univ., Banna Biomed. Res. Inst.*

3:00 RR43 **264.03** *In-vivo* predictive relationship from CA1 to CA3 in rodent hippocampus. R. SANDLER*; D. SONG; R. HAMPSON; S. DEADWYLER; T. BERGER; V. MARMARELIS. *USC, Wake Forest Univ. Sch. of Med.*

4:00 RR44 **264.04** Memory consolidation during sleep slow oscillations. Y. WEI*; G. PRASHANTH; M. BAZHENOV. *Univ. of California, Riverside.*

1:00 RR45 **264.05** Hippocampal ripples as inhibitory transients. P. MALERBA*; G. P. KRISHNAN; J. FELLOUS; M. BAZHENOV. *UC Riverside, Univ. of Arizona.*

2:00 RR46 **264.06** Characterization of a continuous sharp wave ripple state in rat hippocampus under isofluorane anesthesia. B. R. LUSTIG*; Y. WANG; E. PASTALKOVA. *Janelia Farm Res. Campus.*

3:00 RR47 **264.07** Hippocampal theta sequences reflect rats' spatial goals. A. WIKENHEISER*; A. D. REDISH. *Univ. of Minnesota, Univ. of Minnesota.*

4:00 RR48 **264.08** Systemic stimulation of α2 adrenergic receptors with clonidine affects oscillatory activity in the rat hippocampus during a spatial decision-making task. S. AMEMIYA*; A. D. REDISH. *Univ. of Minnesota.*

1:00 RR49 **264.09** Task-dependent changes in local field potential (LFP) coordination between orbitofrontal cortex and ventral striatum on contrasting decision-making tasks. J. J. STOTT*; A. P. STEINER; Y. A. BRETON; A. D. REDISH. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 RR50 **264.10** Orbitofrontal inactivation blunts flavor preferences in the Restaurant Row task. Y. BRETON*; B. SCHMIDT; A. D. REDISH. *Univ. of Minnesota, Univ. of Minnesota.*

3:00 SS1 **264.11** Silencing the rat medial prefrontal cortex decreases hesitation and impairs vicarious trial and error (VTE) behavior on the Restaurant Row task. B. SCHMIDT*; Y. A. BRETON; A. D. REDISH. *Univ. Minnesota, Univ. of Minnesota.*

4:00 SS2 **264.12** ● Translating from rats to humans: A human foraging model of decision making. S. V. ABRAM; A. MACDONALD, III; A. D. REDISH*. *Univ. of Minnesota, Univ. of Minnesota, Univ. Minnesota.*

1:00 SS3 **264.13** Does place field repetition impair spatial learning? R. M. GRIEVES; B. W. JENKINS; E. R. WOOD; P. A. DUDCHENKO*. *Univ. Stirling, Univ. of Edinburgh.*

2:00 SS4 **264.14** Exploring the effects of disrupting the nucleus reuniens in rats on performance of hippocampus-dependent tasks. E. ALLISON; T. RIPARD; G. YUKHNOVICH; P. A. DUDCHENKO; E. R. WOOD*. *Univ. of Edinburgh, Univ. of Stirling, Univ. of Edinburgh.*

3:00 SS5 **264.15** Does memory retrieval depend on the precise synaptic organization? M. T. HASAN; A. CARRETERO-GUILLÉN; M. A. GÓMEZ-CLIMENT; M. TREVIÑO; G. DOGBEVIA; M. ROßMANITH; R. SPRENGEL*; A. VLACHOS; A. GRUART; J. M. DELGADO-GARCÍA. *Neurocure-Charité-Universitätsmedizin, Univ. Pablo de Olavide, Univ. de Guadalajara, Max Planck Inst. for Med. Res., Goethe-University.*

4:00 SS6 **264.16** Large environments reveal the statistical structure governing hippocampal representations. P. RICH*; H. LIAW; A. K. LEE. *Janelia Farm.*

1:00 SS7 **264.17** Hippocampal memory prosthesis: Enhancing nonlinear dynamical identification of spike-timing-dependent plasticity. B. S. ROBINSON*; D. SONG; T. W. BERGER. *USC.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 SS8 **264.18** Hippocampal memory prosthesis: Decoding and restoring hippocampal spatial memories with nonlinear dynamical modeling. D. SONG*; M. HARWAY; V. Z. MARMARELIS; R. E. HAMPSON; S. A. DEADWYLER; T. W. BERGER. *Univ. of Southern California, Wake Forest University, Sch. of Med.*

3:00 SS9 **264.19** ● Sex differences in the rat hippocampus and prefrontal cortex following rearing in an enriched environment. N. KOKRAS; I. SOTIROPOULOS; E. L. TZOUVEKA; D. P. BESSINIS; O. F. X. ALMEIDA; N. SOUSA; Z. PAPADOPOULOU-DAIFOTI; C. DALLA*. *Med. School, Univ. of Athens, Sch. of Hlth. Sciences, Univ. of Minho, Max Planck Inst. of Psychiatry.*

POSTER

265. Learning and Memory: Pharmacology I

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS10 **265.01** Ionotropic glutamate receptor activity within the ventral tegmental area is required for the expression of ethanol conditioned place preference. M. M. PINA*; C. L. CUNNINGHAM. *OHSU.*

2:00 SS11 **265.02** ▲ Lycopene attenuates insulin resistance associated cognitive deficits in rats. A. K. SACHDEVA*; K. CHOPRA. *Panjab Univ.*

3:00 SS12 **265.03** Effect of kappa opioid modulation on forebrain dependent trace associative learning: An eyeblink conditioning analysis. R. LOH*; S. SHAH; R. GALVEZ. *Univ. of Illinois: Urbana-Champaign, Univ. of Illinois: Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

4:00 SS13 **265.04** Can environmental enrichment alleviate adult learning impairments caused by adolescent nicotine exposure in rats? S. M. RENAUD*; M. E. MILLER; S. B. FOUNTAIN. *Kent State Univ.*

1:00 SS14 **265.05** Interactions of behavioral training and ketamine administration on changes in parvalbumin positive neurons. M. M. BOLTON*; C. F. HEANEY; A. S. MURTISHAW; M. A. LANGHARDT; J. W. KINNEY. *Univ. of Nevada, Las Vegas.*

2:00 SS15 **265.06** Relationship between astrogliosis in hippocampal formation and neural plasticity induced by acute treatment with Ginkgo biloba and acquisition of fear memory. M. A. S. TILGER; C. R. ZAMBERLAM; R. F. SILVA; S. M. CERUTTI*. *Univ. Federal De Sao Paulo.*

3:00 SS16 **265.07** Maintenance of memory functions by chronic administration of cilostazol, a phosphodiesterase 3 inhibitor, in aged mice models. S. YANAI*; K. KOJIMA; T. ARASAKI; S. ENDO. *Tokyo Metropolitan Inst. of Gerontology.*

4:00 SS17 **265.08** A calpain-2 selective inhibitor enhances learning and memory through prolonged ERK activation. Y. LIU*; Y. WANG; G. ZHU; X. BI; M. BAUDRY. *Western Univ. of Hlth. Sci.*

1:00 SS18 **265.09** Effect of an N-methyl-D-aspartate receptor antagonist in animal models of schizophrenia: An immunohistochemical study in the rat. H. MATSUO; T. NISHIMORI; H. ABE; A. KURAMASHI; G. KOGANEMARU; H. FUNAHASHI; K. EBIHARA; T. IKEDA; Y. ISHIDA*. *Dep Psychiatry, Fac of Med, Univ. Miyazaki, Div. Neurobiol, Fac of Med, Univ. Miyazaki.*

2:00 SS19 **265.10** Fear reducing effects of Souroubea Spp. and Platanus occidentalis in rats: Potential relevance for post traumatic stress disorder. K. DELCELLIER*; C. CAYER; P. KENT; J. ARNESON; Z. MERALI. *Carleton Univ., Inst. of Mental Hlth. Res., Univ. of Ottawa.*

3:00 SS20 **265.11** Folic acid prevented cognitive impairment in Experimental pneumococcal meningitis. T. BARICHELLO*; J. S. GENEROSO; L. R. SIMOES; D. DOMINGUINI; A. MOREIRA; P. FERRARI; C. GUBERT; F. KAPCZINSKI; L. C. JORNADA; L. G. DANIELSKI; F. PETRONILHO; J. BUDNI; J. QUEVEDO. *The Univ. of Texas Hlth. Sci. Ctr. At H, Univ. do Extremo Sul Catarinense, Univ. Federal do Rio Grande do Sul, Univ. Federal do rio Grande do Sul, Univ. do Sul Catarinense, The Univ. of Texas Hlth. Sci. Ctr. at Houston.*

4:00 SS21 **265.12** Influence of norepinephrine, corticotrophin releasing hormone and corticosterone, individually and in conjunction, on the expression of hippocampal synaptic plasticity in tissue obtained from stressed versus non-stressed rats. G. E. FARMER; M. F. MIDKIFF; C. R. PARK; D. M. DIAMOND*. *Univ. South Florida, VA Hosp.*

1:00 SS22 **265.13** Chronic effects of the 'biased' 5-HT1A receptor agonists F15599 and F13714 on object pattern separation and core body temperature. B. T. VAN HAGEN*; N. P. VAN GOETHEM; R. SCHREIBER; A. NEWMAN-TANCREDI; M. VARNEY; J. PRICKAERTS. *Maastricht Univ., Suadeo Drug Discovery Consulting LLC, Univ. of Groningen, Neurolixis Inc.*

2:00 SS23 **265.14** Evaluation the effect of tempol on learning and memory impiarment induced by sleep deprivation. O. F. KHABOUR*; K. H. ALZOUBI; A. S. ALBAWAANA. *Jordan Univ. of Sci. and Technol., Jordan Univ. of Sci. and Technol.*

3:00 SS24 **265.15** ● SUVN-I1312004, Novel M_1 muscarinic acetylcholine receptor positive allosteric modulator: Potential for the treatment of Alzheimer's disease. R. ABRAHAM*; R. MEDAPATTI; R. KARTHIK GADI; V. RAVIRALA; S. YATHAVAKILLA; R. SUBRAMANIAN; R. CHOWDARY; M. ABDUL RASHEED; N. MUDDANA; S. GAGGINAPALLI; P. JAYARAJAN; R. NIROGI. *Suven Life Sci.*

4:00 SS25 **265.16** Responsiveness to restraint stress and scopolamine in simple learning and memory. I. M. WHITE*; Z. ABBOTT; J. B. DUTY; W. WHITE. *Morehead State Univ.*

1:00 SS26 **265.17** Scopolamine impairs latent working memory in the water maze. S. Y. JABITTA*; J. J. IZYGON; D. M. NGHIEM; M. M. HENCEROTH-CHOMIAK; W. T. WILLIAMSON; D. H. MALIN. *Univ. of Houston-Clearlake.*

2:00 SS27 **265.18** Modafinil as a neuroenhancer. H. M. MURPHY*; C. H. WIDEMAN. *John Carroll Univ., John Carroll Univ.*

3:00 SS28 **265.19** Involvement of BDNF in doxorubicin and cyclophosphamide-induced spatial cognition in rats. Y. KITAMURA*; S. YONEDA; I. MIYAZAKI; M. ASANUMA; T. SENDO. *Okayama Univ. Hosp., Okayama Univ.*

4:00 SS29 **265.20** Severe crossmodal object recognition impairment in ketamine-treated rats: Amelioration by $\alpha 4\beta 2$ nicotinic receptor stimulation of the GABAergic system. J. M. CLOKE*; B. D. WINTERS. *Univ. of Guelph.*

1:00 SS30 **265.21** Novel cognitive enhancer SAK3 enhances T-type voltage-gated Ca^{2+} channel current in Neuro2a cells expressed cav3.1 gene. Y. YABUKI*; M. WAKAMORI; K. FUKUNAGA. *Tohoku Univ., Tohoku Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 SS31 **265.22** The effect of waterpipe tobacco smoke exposure on learning and memory functions. K. H. ALZOUBI*; O. F. KHABOUR; E. A. AL HARAHSHAH. *Jordan Univ. of Sci. & Technol., Jordan Univ. of Sci. and Technol.*

3:00 SS32 **265.23** A negative allosteric modulator selective for the NR2b subtype of NMDA receptors impairs cognition in cynomolgus monkeys. M. R. WEED*; M. BOOKBINDER; J. POLINO; D. KEAVY; R. N. CARDINAL; J. SIMMERMACHER-MAYER; F. LUAN; L. J. BRISTOW. *Bristol-Myers Squibb, Univ. of Cambridge, Cambridgeshire and Peterborough NHS Fndn. Trust, Bristol-Myers Squibb.*

4:00 SS33 **265.24** Long term dantrolene treatment reduced intraneuronal amyloid in Alzheimer triple transgenic mice. H. WEI*; Z. WU; B. YANG; C. LIU; M. ECKENHOFF; W. LIU; S. PICKUP; Q. MENG; Y. TIAN; S. LI; G. LIANG. *Univ. Pennsylvania, Dept. of Anesthesiology, Tongji Hospital, Tongji Med. College, Huazhong Univ. of Sci. and Technol., Dept. of Anesthesiology, First People's Hospital, Sch. of Medicine, Shanghai Jiaotong Univ., Small Animal Imaging Facility, Perelman Sch. of Medicine, Univ. of Pennsylvania, Philadelphia.*

1:00 SS34 **265.25** Interferon-β1a-induced effects on memory and depression in model animals. A. VAZQUEZ-ALVAREZ*; D. PINEDA-VÁZQUEZ; E. LEON-CRUZ; I. TIBURCIO-DOMINGUEZ; R. MIRELES-LOPEZ; R. VAQUERO-GARCIA; C. REYES-VAZQUEZ. *Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México.*

POSTER

266. Invertebrate Learning and Memory I

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS35 **266.01** ▲ Multi-modal spatial learning and memory in the split-brained cockroach, Periplaneta americana. M. POMAVILLE*; D. D. LENT. *CSU Fresno.*

2:00 SS36 **266.02** Effects of field relevant concentrations of imidacloprid and clothianidin on bee neuronal function. C. MOFFAT*; M. J. PALMER; C. N. CONNOLLY. *Dundee Univ.*

3:00 SS37 **266.03** Synaptic correlates of performance on an ecologically relevant visual discrimination task in the adult honey bee mushroom body. B. N. VAN NEST*; G. S. MARRS; S. E. FAHRBACH. *Wake Forest Univ.*

4:00 SS38 **266.04** Dynamic levels of phosphorylated Apis mellifera CREB in inner compact cells of the honeybee mushroom bodies and their role in the stimulus responsiveness of an animal. D. EISENHARDT*; K. GEHRING. *Freie Univ. Berlin.*

1:00 SS39 **266.05** Cell polarity protein scribble is required for forgetting of olfactory memories. I. CERVANTES-SANDOVAL*; R. L. DAVIS. *The Scripps Res. Inst.*

2:00 SS40 **266.06** PKMzeta is necessary for maintaining the long-term facilitation of glutamatergic synaptic inputs but not of somatic glutamate responses in the snail neurons. P. M. BALABAN*; M. LEMAK; T. KORSHUNOVA; M. ROSHCHIN; A. ZUZINA; A. TIMOSHENKO; A. MALYSHEV. *Inst. Higher Nervous Activity & Neurophysiol. RAS.*

3:00 SS41 **266.07** miR-iab-8(4as)-3p is necessary during development in the αβ and α'β' mushroom body neurons for optimal learning and memory retention. G. U. BUSTO*; T. GUVEN-OZKAN; R. L. DAVIS. *The Scripps Research Institute.*

4:00 SS42 **266.08** Neural pathways routing early memory decay in *Drosophila*. Y. SHUAI*; A. HIROKAWA; Y. AI; W. LI; Y. ZHONG. *Cold Spring Harbor Lab., Rockefeller Univ.*

1:00 SS43 **266.09** An importin role in long-term memory consolidation. Q. LI*; X. ZHANG; X. LIANG; L. WANG; Y. ZHONG. *Tsinghua Univ., Cold Spring Harbor Lab.*

2:00 SS44 **266.10** ▲ Octopamine's role in sexual behavior. A. I. FERNANDEZ*; J. LIM; J. JAMES; K. HAN. *Univ. of Texas At El Paso.*

3:00 SS45 **266.11** ▲ Behavioral assays to study deficits in spatial cognition in *Drosophila melanogaster*. J. APARICIO VALENZUELA*; D. HWANG; D. D. LENT. *CSU Fresno.*

4:00 SS46 **266.12** Sleep pattern and hierarchical organization in Procambarus clarkii. K. MENDOZA-ÁNGELES; N. JIMÉNEZ-MORALES; G. ROLDÁN-ROLDÁN; J. HERNANDEZ-FALCON*. *Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México, Univ. Natl. Autonoma Mexico.*

1:00 SS47 **266.13** Defining the parameters through which sleep deprivation affects the induction of associative memory using *Aplysia californica*. L. C. LYONS*; R. T. WILLIAMSON; J. SANCHEZ-PACHECO; H. C. KRISHNAN. *Florida State Univ., Florida State Univ.*

2:00 SS48 **266.14** Robust neural and behavioral sensitization after peripheral, but not central, application of serotonin. R. CROOK*; P. PAREKH; M. LERNER; J. JO; L. KLAASSEN; E. T. WALTERS. *Univ. of Texas Hlth. Sci. Ctr. At Houston, Univ. of Texas Southwestern, Temple Univ., Univ. of Texas Hlth. Sci. Ctr. At Houston, Netherlands Inst. for Neurosci.*

3:00 SS49 **266.15** Single exposure to natural noxious stimuli produces short-term suppression of feeding in *Aplysia*. K. D. WOLFE; M. L. WAINWRIGHT; D. L. SMEE; R. MOZZACHIODI*. *Texas A&M Univ. - Corpus Christi.*

4:00 SS50 **266.16** Molecular correlates of long-term memory consolidation after a brief training of *Aplysia* with inedible food at night, with a protein synthesis inhibitor. R. LEVY; A. J. SUSSWEIN*. *Bar-Ilan Univ., Bar-Ilan Univ., Bar Ilan Univ.*

1:00 SS51 **266.17** Solute carrier protein is required in the adult mushroom body neurons for the regulation of *Drosophila* memory acquisition and memory loss. Y. GAI*; Z. LIU; M. CHAKRABORTY; R. DAVIS. *The Scripps Res. Inst.*

POSTER

267. Motivation and Reward

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS52 **267.01** Two cortical hedonic hotspots: Orbitofrontal and insular sites of sucrose 'liking' enhancement. D. C. CASTRO*; N. S. CHESTERMAN; M. K. H. WU; K. C. BERRIDGE. *Univ. of Michigan.*

2:00 SS53 **267.02** Optogenetic VTA dopamine stimulation supports motivated 'wanting' for a reward but does not enhance hedonic 'liking'. M. J. ROBINSON*; D. C. CASTRO; K. C. BERRIDGE. *Wesleyan Univ., Univ. of Michigan.*

3:00 SS54 **267.03** Optogenetic stimulation of central amygdala magnifies motivation and controls choice for cocaine reward. S. M. WARLOW*; M. J. F. ROBINSON; K. C. BERRIDGE. *Univ. of Michigan, Wesleyan Univ.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 SS55 **267.04** ▲ Stimulation of dopamine D3 receptors attenuates the expression of pavlovian conditioned approach responses and motivation for incentive cue presentation. K. M. FRASER*; J. L. HAIGHT; S. B. FLAGEL. *Mol. and Behavioral Neurosci. Inst., Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

1:00 SS56 **267.05** A role for negative reinforcement in AGRP neuron-mediated instrumental food seeking. Z. HUANG CAO*; J. BETLEY; S. M. STERNSON. *Janelia Farm Res. Campus, Univ. of Cambridge.*

2:00 SS57 **267.06** Identifying functional alterations in neuronal ensembles activated during 1-day acquisition of operant learning in rats. L. R. WHITAKER*; K. B. MCPHERSON; J. M. BOSSERT; Y. SHAHAM; B. T. HOPE. *Natl. Inst. On Drug Abuse.*

3:00 SS58 **267.07** Specific impairments of brain activations in individuals with trait anhedonia: A preliminary study. R. C. CHAN*; Z. LI; W. XIE; C. YAN. *Inst. of Psychology, Chinese Acad. of Scienc, Univ. of California, Riverside, East China Normal Univ.*

4:00 SS59 **267.08** Improving how we measure motivation by dissociating goal directed responding from arousal induced responding with a novel progressive hold down task. M. BAILEY*; G. JENSEN; K. TAYLOR; C. MEZIAS; C. WILLIAMSON; V. MAGALONG; R. SILVER; E. SIMPSON; P. BALSAM. *Columbia Univ., Columbia Univ., Barnard Col., Columbia Univ., New York State Psychiatric Inst.*

1:00 SS60 **267.09** Optogenetic self-stimulation of hypocretin neurons. A. C. CASTRO*; J. SILVA; A. OLIVEIRA-MAIA; R. M.COSTA. *Champalimaud Ctr. For the Unknown, Gulbenkian Fndn., Faculdade de Ciências Médicas, Univ. Nova de Lisboa, Ctr. Hospitalar de Lisboa Ocidental, Lisboa, Portugal.*

2:00 SS61 **267.10** The enhancement of cue-induced motivation in obesity-prone vs. resistant rats is accompanied by sensitization to cocaine and increased CP-AMPA receptor expression in the NAc. C. W. NOBILE; P. B. GOFORTH; J. T. CORTHELL; M. J. F. ROBINSON; K. C. BERRIDGE; C. R. FERRARIO*. *Univ. of Michigan, Wesleyan Univ., The Univ. of Michigan, The Univ. of Michigan.*

3:00 SS62 **267.11** Activation of ventral pallidum versus lateral preoptic area: double dissociation by threat discounting and locomotion. D. S. ZAHM*; H. S. STEVENSON; Z. M. SCHWARTZ; K. P. PARSLEY. *St. Louis Univ. Sch. of Med.*

4:00 SS63 **267.12** Lesions of the paraventricular nucleus of the thalamus differentially affect the acquisition and expression of Pavlovian-conditioned responses. J. HAIGHT*; K. M. FRASER; B. N. KUHN; H. AKIL; S. B. FLAGEL. *Univ. of Michigan, Univ. of Michigan, Mol. and Behavioral Neurosci. Inst., Univ. of Michigan.*

1:00 SS64 **267.13** Local injection of oxytocin into the primate amygdala enhances prosocial motivation. S. W. CHANG*; K. TODA; A. V. UTEVSKY; M. L. PLATT. *Yale Univ., Duke Univ., Japan Society for the Promotion of Sci.*

2:00 SS65 **267.14** Motivation for palatable food in an animal model of diet-induced obesity. F. CORTÉS SALAZAR*; J. O. SUÁREZ-ORTÍZ; D. DÍAZ-URBINA; V. E. LÓPEZ-ALONSO; J. M. MANCILLA-DÍAZ; N. TORRES-TORRES; R. E. ESCARTÍN-PÉREZ. *Univ. Nacional Autónoma de México, Inst. Nacional de Ciencias Médicas y Nutricion Salvador Zubiran.*

3:00 SS66 **267.15** ▲ The effect of glucocorticoid receptor antagonism on sign-tracking behavior. S. SEWANI; K. H. LONG; T. SHAPIRO; H. AKIL; S. B. FLAGEL*. *Univ. of Michigan, Univ. of Michigan.*

4:00 SS67 **267.16** Selective optogenetic stimulation of d1 'direct' or d2 'indirect' neurons of nucleus accumbens versus lateral septum. S. L. COLE*; M. J. F. ROBINSON; K. C. BERRIDGE. *Univ. of Michigan.*

1:00 SS68 **267.17** Representation of past negative outcome and subsequent behavioral shift in the primate lateral habenula and anterior cingulate cortex. T. KAWAI*; H. YAMADA; N. SATO; M. TAKADA; M. MATSUMOTO. *Primate Res. Institute, Kyoto Univ., Kwansei Gakuin Univ., Univ. of Tsukuba, JSPS Res. Fellow, Univ. of Tsukuba.*

2:00 TT1 **267.18** ● ▲ Impact of binge eating upon learning and performance of a sucrose discrimination task. E. G. FONSECA DE LA CRUZ*; M. VILLAVICENCIO; R. GUTIERREZ. *Ctr. De Investigación Y Estudios Superiores, Inst. de Fisiología Celular, Ctr. de Investigación y Estudios Avanzados del I.P.N.*

3:00 TT2 **267.19** Optogenetic stimulation of ventral tegmental area dopamine cells facilitates operant shock avoidance behavior. J. M. WENZEL*; E. B. OLESON; V. C. CHIOMA; W. N. GOVE; A. RAGANATH; L. N. SMITH; J. F. CHEER. *Univ. of Maryland, Baltimore.*

4:00 TT3 **267.20** Motivational deficits and reduced cortico-striatal communication in Huntington's disease transgenic rat model. E. A. COLE*; I. GILDISH; R. CACHOPE; J. F. CHEER. *Univ. of Maryland Sch. of Med., CHDI Fndn.*

1:00 TT4 **267.21** Psychometric assessment of brain stimulation reward discriminability. M. S. MCMURRAY*; J. A. SAUREZ; J. D. ROITMAN. *Univ. of Illinois At Chicago.*

2:00 TT5 **267.22** Resolving the interface between glucose homeostasis and reward. T. L. DAHLE-MORVILLE*; M. KERAMATI; B. GUTKIN; H. R. SIEBNER; O. J. HULME. *DRCMR, Univ. Col. London, ENS.*

3:00 TT6 **267.23** Nucleus Accumbens shell neurons monitor tastant consumption independent of their palatability. M. A. VILLAVICENCIO CAMARILLO*; I. O. PEREZ; S. S. SIMON; R. GUTIERREZ. *Ctr. De Investigación Y Estudios Avanzados, Univ. Nacional Autónoma de México, Duke Univ. Med. Ctr.*

4:00 TT7 **267.24** Selectively bred HAD-1 rats exhibit a unique emotional phenotype predictive of excessive alcohol intake. N. THAKORE*; J. M. RENO; E. KUSEY; A. GONZALEZ; T. SCHALLERT; R. A. GONZALES; C. L. DUVAUCHELLE. *Col. of Pharm., Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas at Austin.*

1:00 TT8 **267.25** Conditional deletion of CB1 receptors on cholinergic terminals and its functional consequences. V. KASHTELYAN*; J. M. IRVING; A. FITOUSSI; H. WANG; M. MORALES; J. F. CHEER. *Univ. of Maryland Sch. of Med., Natl. Inst. on Drug Abuse, Univ. of Maryland Sch. of Med.*

2:00 TT9 **267.26** Evaluation of behavioral differences between rats selectively bred for low and high voluntary running. D. K. MILLER*; J. D. BROWN; A. I. FILIPI; R. K. WILDING; F. W. BOOTH. *Univ. of Missouri, Univ. of Missouri, Univ. of Missouri.*

3:00 TT10 **267.27** Cholinergic regulation of depression like-behavior: Role of VTA nicotinic and muscarinic receptors. E. J. NUNES*; R. J. WICKHAM; N. A. ADDY. *Yale Univ.*

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4:00 TT11 **267.28** Serotonergic neurons signal reward and punishment on multiple timescales. J. Y. COHEN*; M. W. AMOROSO; N. UCHIDA. *Johns Hopkins Univ., Harvard Univ.*

1:00 TT12 **267.29** Role of histamine in the ventral tegmental area during a motivation dependent, and resistance to extinction tasks. M. A. TORO*; R. FALCON; J. L. VALDES. *Programa De Fisiologia Y Biofisica, Fac. Med.*

2:00 TT13 **267.30** Selective ablation of mu opioid receptor expressing gaba neurons in the rostromedial tegmental nucleus promotes ethanol intake. R. FU*; X. CHEN; W. ZUO; J. LI; J. YE. *Dept. of Anesthesiology,njms,Rutgers Univ.*

POSTER

268. Motivation and Emotions: Negative Emotional States

Theme F: Cognition and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT14 **268.01** Sex differences in the depressive-like effects of kappa opioid receptor activation do not depend on circulating gonadal hormones in rats. D. J. PUTTICK; S. E. RUSSELL; D. N. POTTER; E. H. CHARTOFF*. *Harvard Med. Sch.*

2:00 TT15 **268.02** Estrogen suppresses negative vocalizations in female rats during methamphetamine withdrawal. J. R. BROWNING*; J. A. MONG. *Univ. of Maryland Med. Ctr.*

3:00 TT16 **268.03** Doublecortin-positive cells in male adolescent mice brain after repeated social defeat. L. S. RESENDE*; L. ALVES-DOS-SANTOS; J. F. S. CARILLO; A. S. ALVES; L. R. G. BRITTO; S. CHIAVEGATTO. *Univ. of Sao Paulo, Univ. of Sao Paulo Med. Sch., Univ. of Sao Paulo.*

4:00 TT17 **268.04** Association between vitamin D levels and depression-like behaviour in mice. T. H. BURNE*; J. MCGRATH; C. SIMPSON. *Queensland Brain Inst.*

1:00 TT18 **268.05** The effects of prenatal immune activation and infantile repeated maternal separation stress on maternal behavior. S. CHOU*; C. DAVIS; M. LI. *Univ. of Nebraska-Lincoln.*

2:00 TT19 **268.06** Δ9-Tetrahydrocannabinol withdrawal alters affective-like behaviors in mice. S. G. KINSEY*; K. M. GABELLA; M. S. JONES; S. R. NASS. *West Virginia Univ.*

3:00 TT20 **268.07** Cotinine reduced depressive-like behavior and enhanced VEGF in mice after forced swim stress. A. GRIZZELL*; M. MULLINS; A. IARKOV; S. PATEL; R. ZEITLIN; A. ROHANI; L. CHARRY; V. ECHEVERRIA MORAN. *Univ. of South Florida, Bay Pines VA Healthcare system, Univ. of South Florida, Univ. Autonoma de Chile.*

4:00 TT21 **268.08** Pituitary adenylate cyclase-activating polypeptide (PACAP) disrupts motivation, attention, and social interaction. R. J. DONAHUE*; A. VENKATARAMAN; A. VAN'T VEER; C. J. WEBBER; E. G. MELONI; D. A. PIZZAGALLI; W. A. CARLEZON, Jr. *Harvard Med. School, McLean Hosp.*

1:00 TT22 **268.09** Lidocaine infusions in the centromedial amygdala reduce successive negative contrast, without affecting anticipatory negative contrast. K. KAWASAKI*; A. C. GLUECK; I. ANNICCHIARICO; M. R. PAPIN. *Hoshi Univ., Texas Christian Univ.*

2:00 TT23 **268.10** Partial excitotoxic lesions of the rostromedial tegmentum (RMTg) diminish the inhibitory effects of lateral habenula stimulation on midbrain dopamine neurons *in vivo* and reduce the incidence of learned helplessness in rats. P. D. SHEPARD*; P. L. BROWN; H. PALACOROLLA; D. BRADY; K. RIEGGER; C. MAYO; M. KLIMA; G. I. ELMER. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

3:00 TT24 **268.11** Superior collicular neurons reveal preferential responses to snakes in primates. Q. V. LE*; J. MATSUMOTO; Q. V. LE; E. HORI; T. ONO; H. NISHIJO. *Univ.*

4:00 TT25 **268.12** The role of prelimbic inputs to the rostromedial tegmental nucleus in aversive behavior. E. J. BURNETT*; D. H. LENCH; T. C. JHOU; L. J. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

1:00 TT26 **268.13** Substantia nigra pars reticulata guides gaze to reward-associated objects and punishment-associated objects. A. GHAZIZADEH*; O. HIKOSAKA. *LSR NIH.*

2:00 TT27 **268.14** Differential regulation of negative emotion by areas 25 and 32 of the marmoset ventromedial prefrontal cortex. C. U. WALLIS*; A. C. ROBERTS; H. F. CLARKE. *Cambridge, Univ. of Cambridge.*

3:00 TT28 **268.15** Emotion regulation preference in anger: A combined behavioral- resting state fMRI approach. J. ROEBBIG; D. KUMRAL; A. SCHAEFER; M. GAEBLER; M. ERBEY; J. REINELT; L. SCHAARE; A. REITER; A. BABAYAN; A. VILLRINGER*. *Max Planck Inst. for Human Cognitive and Brain Sci., Max Planck Inst. for Human Development, LIFE, Max Planck Inst. for Human Cognitive and Brain Sci.*

4:00 TT29 **268.16** Cholinergic modulation of emotion and memory in humans: a pharmacological fMRI study. Y. NISHIO*; N. ABE; Y. SHIGEMUNE; S. MUGIKURA; T. FUJII; E. MORI. *Tohoku Univ., Kyoto Univ., Kyoto Univ., Tohoku Univ., Tohoku Fukushi Univ.*

1:00 TT30 **268.17** ▲ The invisible variable: Sleepiness and suicidality in a large national college health survey. A. TARTER; J. R. PRICHARD*. *Univ. St. Thomas.*

2:00 TT31 **268.18** Participant expectations of the Healthy Body Healthy Mind exercise program for youth with major depressive disorder. R. CALLISTER*; A. GILES; Y. NASSTASIA; A. BAKER; S. HALPIN; B. KELLY. *Univ. of Newcastle, Univ. of Newcastle, Univ. of Newcastle, Univ. of Newcastle.*

3:00 TT32 **268.19** Recalling the positive past dampens the physiological response to acute stress. M. SPEER*; H. MANGLANI; E. S. KIM; M. R. DELGADO. *Rutgers Univ.*

4:00 TT33 **268.20** Effects of prenatal music on the emotional behavior and neuronal activity in offspring. Y. TAKANO*; S. YANAGITA; N. KUBOTA; T. MATSUZAWA; K. TAKEDA. *Tokyo Univ. of Sci., Tokyo Univ. of Sci., Tokyo Univ. of Sci.*

1:00 TT34 **268.21** Does the response to negative TV news depend on the level of emotional burnout? S. TUKAIEV*; I. ZYMA; S. SOBISHCHANSKYI; Y. HAVRYLETS; M. MAKARCHUK; V. RIZUN; I. SOSIEDKA; I. BABYN. *Natl. Taras Shevchenko Univ. of Kyiv, Inst. of Biol., Natl. Taras Shevchenko Univ. of Kyiv, Natl. Taras Shevchenko Univ. of Kyiv, Natl. Taras Shevchenko Univ. of Kyiv.*

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2:00 TT35 **268.22** Persistent enhancement of unprovoked 22-28 kHz USVs and decreased 50-55 kHz USV counts after alcohol experience may underlie alcohol avoidance behavior in low-alcohol preferring rats. C. L. DUVAUCHELLE*; N. THAKORE; J. RENO; E. KUSEY; W. T. MADDOX; R. GONZALES; T. SCHALLERT. *Univ. of Texas, Univ. of Texas.*

3:00 TT36 **268.23** WITHDRAWN

4:00 TT37 **268.24** Changes in effective connectivity between dorsal and ventral prefrontal regions moderate emotion regulation. C. MORAWETZ*; S. BODE; J. BAUDEWIG; E. KIRILINA; H. HEEKEREN. *FU Berlin, The Univ. of Melbourne, Christian-Albrecht Univ. Kiel, Freie Univ. Berlin, Freie Univ. Berlin.*

1:00 TT38 **268.25** Impact of frustration on brain activation pattern of subjects with different temperamental traits during a tactile discrimination task. M. BIERZYNSKA; M. BIELECKI; A. MARCHEWKA; W. ZAJKOWSKI; P. SOBCZAK; W. DEBOWSKA; M. M. KOSSUT*. *Nencki Inst. Expmtl Biol, Univ. of Social Sci. and Humanities.*

2:00 TT39 **268.26** Differential effects of neuroticism on the entropy of spontaneous brain activity at rest. I. A. CRISTEA*; C. GENTILI; E. RICCIARDI; D. DAVID; P. PIETRINI. *Babes-Bolyai Univ., Univ. of Pisa.*

POSTER

269. Optical Methods I

Theme G: Novel Methods and Technology Development

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT40 **269.01** Optimum optical wavelength pair for high-CNR multi-distance NIRS system. J. CHOI*; M. CHOI; J. KIM; G. HWANG; H. BAE. *KAIST, KAIST.*

2:00 TT41 **269.02** Fine spatiotemporal control of voltage-gated ion channels in neuronal dendrites. A. V. FEDORCHAK*; R. H. KRAMER. *UC Berkeley.*

3:00 TT42 **269.03** Centering device for high content imaging of neuronal screens using micro culture platforms. K. GORDON*; A. M. TAYLOR. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

4:00 TT43 **269.04** Chronic cranial window with access port allowing repeated cellular manipulations and electrophysiology. C. J. ROOME*; B. KUHN. *OIST.*

1:00 TT44 **269.05** Intrinsic connectivity network strength modulated by working memory load: An fNIRS study. F. A. FISHBURN*; M. E. NORR; A. V. MEDVEDEV; C. J. VAIDYA. *Georgetown Univ., Georgetown Univ., Georgetown Univ., Georgetown Univ. Med. Ctr., Children's Natl. Med. Ctr.*

2:00 TT45 **269.06** Development of a transmembrane fusion protein with tagging peptide for optical sensing of membrane potential during neuronal activity. S. LEE*; Y. BANG; J. LEE; J. JANG; Y. SONG. *Seoul Natl. Univ., Advanced Inst. of Convergence Technol.*

3:00 TT46 **269.07** *In vivo* measurement of intracellular Chloride and pH during neuronal development by means of 2-photon spectroscopy. S. SULIS SATO; P. ARTONI; A. I. IDILLI; S. LANDI; S. LUIN; R. PARRA; J. SZCZURKOWSKA; F. TROVATO; D. AROSIO; F. BELTRAM; L. CANCEDDA; G. RATTO*. *NEST, Scuola Normale Superiore, Inst. di Biofisica, Consiglio Nazionale delle Ricerche & Fondazione Bruno Kessler, Inst. Nanoscience, CNR, Inst. Italiano di Tecnologia.*

4:00 TT47 **269.08** Genetically encoded voltage sensors for optical monitoring of rapid neuronal activity. F. ST-PIERRE*; Y. YANG; X. DING; J. D. MARSHALL; Y. GONG; M. J. SCHNITZER; M. Z. LIN. *Stanford Univ., Univ. of California at San Diego.*

1:00 TT48 **269.09** New optical CNiFERs to detect neuropeptides. J. ZHANG; A. MULLER; L. MELLANDER; E. LACIN; D. KLEINFELD; M. FERNANDO; P. A. SLESINGER*. *Mount Sinai, Friedman Brain Inst., UCSD.*

2:00 TT49 **269.10** Transcriptomic analysis of CLARITY-processed tissues. J. H. CHO*; E. MURRAY; X. ADICONIS; J. LEVIN; K. CHUNG. *MIT, Broad Inst.*

3:00 TT50 **269.11** Rapid and quantitative phenotyping of intact biological systems. S. KIM*; E. MURRAY; J. H. CHO; N. BAKH; K. OHN; K. CHUNG. *MIT, MIT.*

4:00 TT51 **269.12** Enhanced infrared peripheral nerve stimulation using local heating of gold nanorods. K. EOM; S. JUN*; S. HWANG; Y. LEE; K. BYUN; S. KIM. *Seoul Natl. Univ., Ewha Womans Univ., Ewha Womans Univ., Ewha Womans Univ., Kyung Hee Univ.*

1:00 TT52 **269.13** Single-molecule patch-clamp fret microscopy studies of nmda receptor dynamics in living cells. H. LU*; D. K. SASMAL. *Bowling Green State Univ.*

2:00 TT53 **269.14** Development of wearable monitoring system for acquisition of physiological information from diverse portions of the whole body using near infrared lights (NIRS). H. EDA*; R. SHIMOKITA; T. YAMAUCHI; N. KAZETANI; H. WADA; T. SAWADA; K. UJIIE; K. SOETA; Y. OHTAKI; M. SAKURAI; M. HIRAYAMA; S. IJUIN. *Grad. School Of Gpi, Genial Light. Co.,Ltd, Alps Electric Co., Ltd.*

3:00 TT54 **269.15** Fruit fly functional imaging. S. AIMON*; T. KATSUKI; L. GROSENICK; M. BROXTON; K. DEISSEROTH; R. J. GREENSPAN. *Kavli Inst. For Brain and Mind UCSD, Stanford Univ.*

4:00 TT55 **269.16** Multichromic optical interrogation of neural systems using caged compounds. J. M. AMATRUDO*; J. P. OLSON; H. K. AGARWAL; G. C. R. ELLIS-DAVIES. *Mount Sinai Sch. of Med.*

1:00 TT56 **269.17** Imaging medial prefrontal and entorhinal cortex at cellular resolution in behaving mice using chronically implanted microprisms. R. J. LOW*; Y. GU; D. W. TANK. *Princeton Univ.*

2:00 TT57 **269.18** Optimizing CLARITY for the analysis of brain wide activity mapping. J. R. EPP*; Y. NIIBORI; H. L. HSIANG; K. DEISSEROTH; S. A. JOSSELYN; P. W. FRANKLAND. *Hosp. For Sick Children, Hosptial For Sick Children, Stanford Univ.*

3:00 TT58 **269.19** Imaging action potentials and subthreshold depolarizations in single trials with single cell resolution using the FRET based hybrid voltage sensor hVOS. N. GHITANI*; P. BAYGUINOV; Y. MA; M. B. JACKSON. *Univ. of Wisconsin.*

• Indicated a real or perceived conflict of interest, see page 147 for details.

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POSTER

270. Optical Methods II

Theme G: Novel Methods and Technology Development

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT59 **270.01** Evaluating conduction and action potential broadening with an axonally targeted genetically-encoded voltage sensor. Y. MA*; M. B. JACKSON. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

2:00 TT60 **270.02** ▲ Surface modification of micro electrode array with gold nanorods for photo-thermal stimulation of cultured neuronal networks. S. YOO; J. PARK; Y. NAM*. *KAIST, KAIST.*

3:00 TT61 **270.03** Imaging neural spiking in brain tissue using FRET-opsin protein voltage sensors. Y. GONG*; M. WAGNER; J. LI; M. J. SCHNITZER. *Stanford Univ.*

4:00 TT62 **270.04** Analyzing morphology-dependent neuronal function using laser dendrotomy. V. DARIA*; M. GO; A. COLIBABA; S. REDMAN; S. REDMAN; H. BACHOR; C. STRICKER. *The Australian Natl. Univ., The Australian Natl. Univ., The Australian Natl. Univ., The Australian Natl. Univ.*

1:00 TT63 **270.05** ● Measuring voltage in dendrites and dendritic spines using quantitative all-optical electrophysiology. S. L. FARHI*; E. N. WEINSTEIN; A. E. COHEN. *Harvard Univ., Howard Hughes Med. Inst.*

2:00 TT64 **270.06** Imaging Fast Calcium Currents: a pilot study of native T-type Ca^{2+} channels in CA1 hippocampal pyramidal neurons. M. CANEPARI*; N. JAAFARI. *Grenoble Inst. of Neurosci., Inserm.*

3:00 TT65 **270.07** Development of an integrated platform for standardized, high-throughput *in vivo* functional imaging. T. M. KEENAN*; K. ROLL; J. PERKINS; E. MOUNT; M. GARRETT; C. WHITE; N. ORLOVA; S. DE VRIES; C. FARRELL; C. LAU; L. NG; S. OLSEN; D. RIZZUTO; C. SLAUGHTERBECK; W. WAKEMAN; J. WATERS; D. WILLIAMS; C. REID; A. JONES; J. PHILLIPS; A. BERNARD. *Allen Inst. for Brain Sci.*

4:00 TT66 **270.08** Two-photon optogenetic control of cAMP dynamics in dendritic spines for studying synaptic plasticity. T. LUYBEN*; M. KHAN; K. OKAMOTO. *Samuel Lunenfeld Res. Inst., The Univ. of Toronto.*

1:00 TT67 **270.09** Scanless two-photon fluorescence imaging in the intact mouse brain. S. BOVETTI; C. MORETTI; M. DAL MASCHIO; S. ZUCCA; P. BONIFAZI; T. FELLIN*. *Inst. Italiano di Tecnologia, Sch. of Physics and Astronomy.*

2:00 TT68 **270.10** ▲ Gabaergic transmission and its long-term potentiation revealed by voltage sensitive dye imaging at mesoscale level. M. COLAVITA*; C. LEMERCIER; G. TERRAL; F. DRAGO; G. MARSICANO; F. MASSA. *INSERM U862, Univ. de Bordeaux, Univ. degli Studi di Catania.*

3:00 TT69 **270.11** High throughput optical imaging of the CLARITY-processed tissue. H. CHOI*; K. CHUNG. *MIT.*

4:00 TT70 **270.12** Scalable CLARITY. E. MURRAY*; N. BAKH; J. H. CHO; S. KIM; K. OHN; K. CHUNG. *MIT.*

1:00 TT71 **270.13** Development of a portable optical system for *in vivo* deep-brain neuronal imaging. B. OZBAY*; J. T. LOSACCO; E. A. GIBSON; D. RESTREPO. *Univ. of Colorado Denver, Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

2:00 TT72 **270.14** Rapid *in situ* three dimensional gene profiling. N. BAKH*; K. CHUNG. *MIT, MIT, MIT.*

3:00 TT73 **270.15** A comparative study of the two-photon performances of GCaMPs and GECOs. B. PODOR*; Y. ZHAO; J. WU; Y. HU; M. OHKURA; J. NAKAI; R. CAMPBELL; R. CROLL; A. FINE. *Dalhousie Univ., Univ. of Alberta, Saitama Univ.*

4:00 TT74 **270.16** Genetically targeted, cell-type specific optical recording of membrane voltage dynamics in freely moving mice. J. D. MARSHALL*; P. JONES; Y. GONG; J. LI; F. ST-PIERRE; M. LIN; M. SCHNITZER. *Stanford Univ., Stanford Univ.*

1:00 TT75 **270.17** A high-throughput technology for fixation optimization and antibody screening of CLARITY-processed tissue. A. C. HOUSTON*; E. MURRAY; J. CHO; K. CHUNG. *MIT, MIT, MIT, Children's Hosp. Boston, MIT.*

POSTER

271. Optogenetics: Tool Development

Theme G: Novel Methods and Technology Development

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT76 **271.01** Programmable wireless LED stimulator for chronic stimulation of optogenetic molecules in freely moving mice. M. HASHIMOTO*; T. MIYATA; H. HIRASE. *Nagoya Univ. Med., RIKEN Brain Sci. Inst.*

2:00 TT77 **271.02** A large bi-directional interface for optogenetic stimulation and recording in non-human primates. A. YAZDAN-SHAHMORAD*; T. HANSOS; C. DIAZ-BOTIA; P. LEDOCHOWITSCH; V. KHARAZIA; M. MAHARABIZ; P. N. SABES. *Univ. of California San Francisco, Univ. of California Berekley, Univ. of California San Francisco.*

3:00 TT78 **271.03** Aramid nanofiber-epoxy coated intracortical LEDs for optogenetic stimulation. K. E. SCHROEDER*; C. CHENG; A. W. WELLNER; I. DIESTER; N. A. KOTOV; C. A. CHESTEK. *Univ. of Michigan, Univ. of Michigan, Ernst Strüngmann Inst. for Neurosci., Univ. of Michigan, Univ. of Michigan.*

4:00 TT79 **271.04** Effect of spectrally-shaped light stimulation on Channelrhodopsin-2 currents and spike response in cortical neurons. K. PAUL*; H. TU; E. D. ARK; Y. ZHAO; S. A. BOPPART. *Univ. Illinois, Urbana-Champaign.*

1:00 TT80 **271.05** ● Optically-integrated multiwell microelectrode arrays for high-throughput drug discovery and disease modeling with optogenetics. I. P. CLEMENTS; D. C. MILLARD; A. M. NICOLINI; M. BROCK*; A. J. PREYER; J. D. ROSS. *Axion Biosystems, Axion Biosystems.*

2:00 TT81 **271.06** Multi-focal photostimulations with light emitting diodes on a multi-channel electrocorticographic array in non-human primates. M. KOMATSU*; E. SUGANO; H. TOMITA; N. FUJII. *RIKEN Brain Sci. Inst., Iwate Univ.*

3:00 TT82 **271.07** Fully internal wireless optogenetics for truly untethered stimulation. A. J. YEH*; K. L. MONTGOMERY; J. S. HO; V. TSAO; E. A. FERENCZI; S. M. IYER; L. GROSENICK; Y. TANABE; K. DEISSEROTH; S. L. DELP; A. S. Y. POON. *Stanford Univ.*

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4:00 TT83 **271.08** ● An implantable optogenetics device based on CMOS integrated circuit technology for a freely moving animal. M. HARUTA*; S. NAKAJIMA; N. KAMIYAMA; H. TAKEHARA; H. TAKEHARA; T. NODA; K. SASAGAWA; T. TOKUDA; J. OHTA. *Nara Inst. of Sci. and Technol.*

1:00 TT84 **271.09** Silicon multi electrode-optrode arrays for optogenetics *in vitro and in vivo.* L. HOFFMAN*; A. ANDREI; R. PUERS; G. GIELEN; D. BRAEKEN. *Imec, ESAT, KULeuven.*

2:00 TT85 **271.10** ▲ Virtual reality environment for patching and imaging in brain slices. J. V. HIBBARD*; M. A. NAVARRO; L. S. MILESCU. *Univ. of Missouri.*

3:00 TT86 **271.11** Spatiotemporally-controlled optogenetic activation of developing ferret visual cortex. J. OSIK*; A. ROY; N. J. RITTER; J. R. HURVITZ WOLFF; J. MILLER; Y. WANG; J. FISER; S. D. VAN HOOSER. *Brandeis Univ., MIT, Central European Univ.*

4:00 TT87 **271.12** neuroPG: Open source software for optical pattern generation, experimentation, and data analysis. D. MURPHY*; B. W. AVANTS; J. A. DAPELLO; J. T. ROBINSON. *Rice Univ., Rice Univ., Hampshire Col., Rice Univ.*

1:00 TT88 **271.13** ● A turn-key system for optogenetic light delivery and simultaneous electrophysiological recording. D. A. JOHNSON*; S. GABBERT; H. P. HARMON; E. NAYLOR; D. A. JOHNSON; P. G. HAYDON; R. DOYLE; D. J. HINES; P. A. PETILLO. *Pinnacle Technol, Inc., Tufts Univ. Sch. of Med.*

2:00 TT89 **271.14** A transparent ZnO optoelectrode array for probing neural circuits through spatiotemporally controlled light delivery and simultaneous multisite electrophysiology. J. LEE*; I. OZDEN; Y. SONG; A. NURMIKKO. *Brown Univ., Seoul Natl. Univ.*

3:00 TT90 **271.15** A system for neural circuit mapping at single cell resolution using two-photon excitation of soma-targeted channelrhodopsin. C. A. BAKER*; A. PARRA-MARTIN; M. M. BOLTON. *Max Planck Florida Inst., Max Planck Florida Inst.*

4:00 TT91 **271.16** Tuning optical characteristics of Channelrhodopsin-2 by conjugating plasmonic nanoparticles. Y. BANG*; S. LEE; Y. KIM; A. LEE; Y. SONG. *Seoul Natl. Univ., Advanced Inst. of Convergence Technol.*

1:00 TT92 **271.17** Multiscale computational tools for optogenetics. K. NIKOLIC*; S. JARVIS; S. SCHULTZ. *Imperial Col. London, Imperial Col. London.*

POSTER

272. Data Analysis and Statistics II

Theme G: Novel Methods and Technology Development

Sun. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU1 **272.01** Characterizing EEG artifacts with matching pursuit time-frequency decomposition. K. W. WHITAKER*; V. LAWHERN; P. J. FRANASZCZUK. *U.S. Army Res. Lab.*

2:00 UU2 **272.02** Real time algorithms for sharp-wave ripple detection. A. SETHI*; C. KEMERE. *Rice Univ.*

3:00 UU3 **272.03** Automatic eye-movement artifact removal using short fast fourier transform and nonnegative matrix factorization. H. TSUBAKIDA*; T. SHIRATORI; A. ISHIYAMA; Y. ONO. *Waseda Univ. c/o Prof. Tsushi Ishiyama, Meiji Univ.*

4:00 UU4 **272.04** Spatiotemporal adaptive filter for cleaning MR artifacts in simultaneous EEG-fMRI recordings. A. M. GORDON*; A. GONZALEZ-BARBOSA; J. M. ALES; A. M. NORCIA; A. D. WAGNER. *Stanford Univ., Stanford Univ., Stanford Univ.*

1:00 UU5 **272.05** Statistics: Minimal effort but maximum profit!. H. THIJS*; R. MEESEN; K. CUYPERS. *I-Biostat, Hasselt Univ.*

2:00 UU6 **272.06** Fractal analysis of spontaneous activity in single neurons. L. H. FAVELA; C. A. COEY; E. R. GRIFF*; M. J. RICHARDSON. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. Cincinnati.*

3:00 UU7 **272.07** ● Automatic white matter bundle dissection in ad and pd - results from adni and ppmi. M. DESCOTEAUX*; J. HOUDE; J. BÉLANGER; P. JODOIN; F. MORENCY. *Univ. De Sherbrooke, Imeka.*

4:00 UU8 **272.08** Introducing Multiple Kernel Learning for automatic selection of features in intracranial EEG. J. V. SCHROUFF*; M. ÖZKER; M. DASTJERDI; B. FOSTER; V. RANGARAJAN; J. MOURÃO-MIRANDA; C. PHILLIPS; J. PARVIZI. *Stanford Univ., Stanford Univ., Univ. of Texas, Univ. Col. London, Univ. of Liège.*

1:00 UU9 **272.09** Six month reproducibility of diffusion spectrum imaging. A. B. YU*; J. M. VETTEL; S. T. GRAFTON; T. D. VERSTYNEN. *United States Army Res. Lab., Univ. of California Santa Barbara, Carnegie Mellon Univ.*

2:00 UU10 **272.10** Most informative graph theory metrics for unsupervised classification of cognitive states. L. C. BUCHANAN; J. GONZALEZ CASTILLO*; C. W. HOY; D. A. HANDWERKER; P. A. BANDETTINI. *SFIM/LBC/NIMH/NIH.*

3:00 UU11 **272.11** Extracellular recordings of human dorsal root ganglion cells using the *in vitro* chip-based human investigational platform (ichip). S. H. FELIX*; M. W. MCNERNEY; H. A. ENRIGHT; E. V. MUKERJEE; N. O. FISCHER; J. J. OSBURN; A. S. CHANG; S. E. BAKER; F. QIAN; J. V. CANDY; K. S. KULP; E. K. WHEELER; S. S. PANNU. *Lawrence Livermore Natl. Lab.*

4:00 UU12 **272.12** Assessing signal quality of a dry EEG system across multiple signal domains common in EEG research. W. HAIRSTON*; G. A. APKER. *US Army Res. Lab.*

1:00 UU13 **272.13** An approach to studying neural signals underlying acute and chronic Stress in the real-world. T. DOTY; B. KELLIHAN*; J. CANADY; G. APKER; W. HAIRSTON; K. MCDOWELL. *Army Res. Lab., DCS Corp.*

2:00 UU14 **272.14** Fully-Bayesian inference of time-varying synaptic weights from neural spike trains. S. LINDERMAN*; C. STOCK; R. ADAMS. *Harvard Univ., Harvard Univ., Harvard Univ.*

3:00 UU15 **272.15** MELD: Mixed effects for large datasets. D. M. NIELSON*; P. B. SEDERBERG. *The Ohio State Univ., The Ohio State Univ.*

4:00 UU16 **272.16** Conserved spatiotemporal motifs during evoked reverberation in cultured neuronal networks. W. WU*; L. QI; Y. LI; P. LAU; G. BI. *Sch. of Life Sci., Hefei Natl. Lab. for Physical Sci. at the Microscale, USTC, Shenyang Inst. of Automation, CAS.*

1:00 UU17 **272.17** Ecological fallacy in neuroscience studies: A systematic review and simulation study. J. CRAGG*; J. K. KRAMER; D. PATRICK; J. BORISOFF; M. RAMER. *Univ. of British Columbia, Intl. Collaboration on Repair Discoveries (ICORD), Shepherd Ctr., British Columbia Inst. of Technol. (BCIT).*

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2:00 UU18 **272.18** First neuronal connectomics challenge: From imaging to connectivity: From design to result harvesting and crowdpublishing. J. G. ORLANDI*; B. RAY; M. SAEED; J. SORIANO; A. STATNIKOV; O. STETTER; I. GUYON; D. BATTAGLIA. *Univ. de Barcelona, New York Univ., Natl. Univ. of Computer Emerging Sci., Max Planck Inst. for Dynamics and Self-Organization, Bernstein Ctr. for Computat. Neurosci., ChaLearn, Inst. for Systems Neuroscience, Univ. Aix-Marseille.*

3:00 UU19 **272.19** Neural networks with combination of individual and template-based input information improves attenuation correction in quantitative PET/MR hybrid scanner settings. E. ROTA KOPS; H. HAUTZEL*; A. SANTOS RIBEIRO; G. ANTOCH; H. HERZOG; H. MÜLLER; N. J. SHAH. *Res. Ctr. Jülich, Res. Ctr. Juelich & Univ. of Duesseldorf, Univ. of Lisbon, Heinrich-Heine-University Düsseldorf, Med. Fac.*

4:00 UU20 **272.20** Improving fMRI data test-retest reliability using independent component analysis (ICA) denoising technique. Y. TONG*; K. E. HEALY; L. H. STERNBERG; E. XIAO; Y. XU; S. DAS; K. F. BERMAN; D. R. WEINBERGER; V. S. MATTAY. *NIH/NIMH, The Lieber Inst. for Brain Develop., NIH/NIDCD.*

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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.

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109.01	**C. Lucchinetti:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); named inventor on patents (12/678,350 filed 2010 and 12/573,942 filed 2008) and shares in royalties from patent (#7101679 issued 2006).
109.07	**H. Hiyama:** A. Employment/Salary (full or part-time); Astellas Pharma Inc. **K. Ni:** A. Employment/Salary (full or part-time); Astellas.
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132.16	**M. Yamato:** 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; Daiichi-Sankyo. **Y. Kataoka:** 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; Daiichi-Sankyo.
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135.08	**Y. Honjo:** 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; Nagaokakyo hospital. **A. Nakanishi:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Daiichi Sankyo Co.,Ltd., Mitsubisih Tanabe Pharma Co, Novartis Pharma K.K., Janssen pharmaceutical K.K., Eisai Co., Ltd., NHK culture center Co.,Ltd., Pfizer Japan Inc. **H. Mori:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Nihon Medi-Physics. **R. Takahashi:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Boehringer Ingelheim, Glaxo Smith Kline, DAINIPPON SUMITOMO PHARMA, Kyowa Hakko Kirin Co., NOVARTIS, Mitsubishi Tanabe Pharma, Pfizer Inc., Astellas Pharma Inc., Takeda Pharmaceutical Co. Ltd. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Boehringer Ingelheim, FP PHARMACEUTICAL CORP., Glaxo Smith Kline, DAINIPPON SUMITOMO PHARMA, Medical Review, NOVARTIS, Daiichi-Sankyo, Kyowa Hakko Kirin Co., Mitsubishi Tanabe Pharma,

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	NIHON PHARMACEUTICAL CO., Otsuka Pharmaceutical Co., Janssen Pharmaceutical Company, SANOFI, Alfresa Pharma Co., Japan Brood Products Organization, ASBIO PHARMA CO., MSD. F. Consulting Fees (e.g., advisory boards); KAN Research Institute, Inc., Daiichi-Sankyo. **K. Kawakami:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Dainippon Sumitomo Pharma Co., Ltd, Kyowa Hakko Kirin Co., Ltd, Olympus Corporation, Taiho Pharmaceuticals Co., Bayer Yakuhin, Co. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Daiichi Sankyo Company, Ltd, Behringer Ingelheim Japan, Inc., Eisai Co., Ltd., Senju Pharmaceuticals Co., Ltd, Maruho Co., Ltd, CSL Boehring., Shionogi Co. F. Consulting Fees (e.g., advisory boards); Olympus Corporation, Kyowa Hakko Kirin Co., Ltd, Kaken Pharmaceutical Co., Ltd, Otsuka Pharmaceuticals Co., Ltd.
135.11	**C. Rehak:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **N. Izzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **C. Silky:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **K. Mozzoni:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **R. Yurko:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **H. Safferstein:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **G. Rishton:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **G. Look:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **S. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics.
135.17	**K. Hildebrand:** A. Employment/Salary (full or part-time); Medtronic, Inc. **D. Bumbaca:** A. Employment/Salary (full or part-time); Genentech, Inc. **K. Wildsmith:** A. Employment/Salary (full or part-time); Genentech, Inc. **R. Fuji:** A. Employment/Salary (full or part-time); Genentech, Inc. **K. Scearce-Levie:** A. Employment/Salary (full or part-time); Genentech, Inc. **J. Maloney:** A. Employment/Salary (full or part-time); Genentech, Inc. **W. Meilandt:** A. Employment/Salary (full or part-time); Genentech, Inc. **H. Solanoy:** A. Employment/Salary (full or part-time); Genentech, Inc. **Y. Lu:** A. Employment/Salary (full or part-time); Genentech, Inc. **K. Peng:** A. Employment/Salary (full or part-time); Genentech, Inc. **B. Wilson:** A. Employment/Salary (full or part-time); Genentech, Inc. **P. Chan:** A. Employment/Salary (full or part-time); Genentech, Inc. **A. Kosky:** A. Employment/Salary (full or part-time); Genentech, Inc. **A. Daugherty:** A. Employment/Salary (full or part-time); Genentech, Inc. **J. Couch:** A. Employment/Salary (full or part-time); Genentech, Inc. **T. Keene:** A. Employment/Salary (full or part-time); Medtronic, Inc. **K. Hayes:** A. Employment/Salary (full or part-time); Medtronic, Inc. **L. Jungbauer-Nikolas:** A. Employment/Salary (full or part-time); Medtronic, Inc. **D. Lane:** A. Employment/Salary (full or part-time); Medtronic, Inc. **R. Watts:** A. Employment/Salary (full or part-time); Genentech, Inc. **S. Prabhu:** A. Employment/Salary (full or part-time); Genentech, Inc. **L. Shafer:** A. Employment/Salary (full or part-time); Medtronic, Inc. **D. Thakker:** A. Employment/Salary (full or part-time); Medtronic, Inc. **J. Atwal:** A. Employment/Salary (full or part-time); Genentech, Inc.
135.23	**T. Sogabe:** A. Employment/Salary (full or part-time); Otsuka Pharmaceutical Co., Ltd.
135.25	**J.C. Dodart:** A. Employment/Salary (full or part-time); Acumen Pharmaceuticals Inc. **J. Jerecic:** A. Employment/Salary (full or part-time); Acumen Pharmaceuticals Inc. **J.J. Palop:** 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; Acumen Pharmaceuticals.
136.07	**H. Scheich:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Leibniz Institute for Neurobiology. **K.G. Reymann:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Leibniz Institute for Neurobiology. **J. Goldschmidt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Leibniz Institute for Neurobiology.
136.09	**K. Piorkowska:** A. Employment/Salary (full or part-time); AC Immune SA. **K. Antoniello:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Davranche:** A. Employment/Salary (full or part-time); AC Immune SA. **P. Paganetti:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AC Immune SA. **M. Pihlgren:** A. Employment/Salary (full or part-time); AC Immune SA. **O. Adolfsson:** A. Employment/Salary (full or part-time); AC Immune SA. **V. Gafner:** A. Employment/Salary (full or part-time); AC Immune SA. **D. Di cara:** A. Employment/Salary (full or part-time); Genentech. **I. Hotzel:** A. Employment/Salary (full or part-time); Gen. **G. Ayalon:** A. Employment/Salary (full or part-time); Genentech. **A. Pfeifer:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Muhs:** A. Employment/Salary (full or part-time); Kasia Piorkowska, AC Immune SA.
136.15	**F.M. Longo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PharmatrophiX, has a patent interest in LM11A-31.
136.16	**S.M. Massa:** Other; Patent interest in LM11A-31. **F.M. Longo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PharmatrophiX, Patent interest in LM11A-31.
136.24	**S.M. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **K. Mozzoni:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **C. Rehak:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **R. Yurko:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **N. Izzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **C. Silky:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **G. Rishton:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **G. Look:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **H. Safferstein:** A. Employment/Salary (full or part-time); Cognition Therapeutics.
137.01	**R.A. Semechkin:** A. Employment/Salary (full or part-time); ISCO. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ISCO. **R. Gonzalez:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **I. Garitaonandia:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **T. Abramihina:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **M. Poustovoitov:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **G.K. Wambua:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **A. Noskov:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt

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	of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **L. Laurent:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **D. Redmond:** 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; International Stem Cell Corporation.
137.08	**R. Drolet:** A. Employment/Salary (full or part-time); Merck & Co. **M. Cosden:** A. Employment/Salary (full or part-time); Merck & Co. **S. Suon:** A. Employment/Salary (full or part-time); Merck & Co. **S. Grauer:** A. Employment/Salary (full or part-time); Merck & Co. **S. Polsky-Fisher:** A. Employment/Salary (full or part-time); Merck & Co. **M. Marino:** A. Employment/Salary (full or part-time); Merck. **J. Renger:** A. Employment/Salary (full or part-time); Merck & Co.
137.09	**D.M. Gash:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 3 US patents are pending-University of Kentucky. **G.A. Gerhardt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 3 US patents are pending-University of Kentucky. **L.H. Bradley:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 3 US patents are pending-University of Kentucky.
137.11	**J. Mather:** A. Employment/Salary (full or part-time); Employee of AZ. **D. Burdette:** A. Employment/Salary (full or part-time); Employee of AZ. **G. Cebers:** A. Employment/Salary (full or part-time); Employee of AZ. **J. Posener:** A. Employment/Salary (full or part-time); Employee of AZ. **R. Alexander:** A. Employment/Salary (full or part-time); Employee of AZ. **S. Leventer:** A. Employment/Salary (full or part-time); Employee of AZ. **N. Ye:** A. Employment/Salary (full or part-time); Employee of AZ. **M. Poole:** A. Employment/Salary (full or part-time); Employee of AZ. **J. Dunlop:** A. Employment/Salary (full or part-time); Employee of AZ. **P. Ravenscroft:** 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; Performed contract research for AZ. **T.H. Johnston:** 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; Performed contract research for AZ. **M.P. Hill:** 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; Performed contract research for AZ. **J.M. Brotchie:** 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; Performed contract research for AZ.
137.13	**T.H. Johnston:** 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; TJ provided contract research support. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Studies supported by Michael J. Fox Foundation for Parkinson's Research. **R. Corey:** A. Employment/Salary (full or part-time); RC is employed by Eboo Pharmaceuticals Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Studies supported by Michael J. Fox Foundation for Parkinson's Research. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); RC has an ownership stake in Eboo Pharmaceuticals Inc. **E. Versi:** A. Employment/Salary (full or part-time); EV is employed by Eboo Pharmaceuticals Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Studies supported by Michael J. Fox Foundation for Parkinson's Research. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); EV has an ownership stake in Eboo Pharmaceuticals Inc. **M.P. Hill:** 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; MH provided contract research support. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Studies supported by Michael J. Fox Foundation for Parkinson's Research. **P. Howson:** 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; PH provided contract research support. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Studies supported by Michael J. Fox Foundation for Parkinson's Research. **J.M. Brotchie:** 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; JB provided contract research support. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Studies supported by Michael J. Fox Foundation for Parkinson's Research.
137.18	**W.D. Ko:** A. Employment/Salary (full or part-time); Motac Holdings Ltd. **Q. Li:** A. Employment/Salary (full or part-time); Motac Holdings Ltd. **A.R. Crossman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac Holdings Ltd. **G. Porras:** A. Employment/Salary (full or part-time); Motac Holdings Ltd. **E. Bezard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac Holdings Ltd. **E. Pioli:** A. Employment/Salary (full or part-time); Motac Holdings Ltd.
137.20	**E.Y. Pioli:** A. Employment/Salary (full or part-time); Motac Holding. **J. Schneider:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac Holding. **J. Yang:** A. Employment/Salary (full or part-time); Motac Holding. **Q. Li:** A. Employment/Salary (full or part-time); Motac Holding. **A.R. Crossman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac Holding. **E. Bezard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac Holding. **W. Martin:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Theravance Inc.
137.24	**K.S. Gannon:** A. Employment/Salary (full or part-time); NeuroPhage. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroPhage. **J.C. Carroll:** A. Employment/Salary (full or part-time); NeuroPhage. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroPhage. **J.M. Levenson:** A. Employment/Salary (full or part-time); NeuroPhage. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property

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	rights/patent holder, excluding diversified mutual funds); NeuroPhage. **V. Cullen:** A. Employment/Salary (full or part-time); NeuroPhage. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroPhage. **S. Schroeter:** A. Employment/Salary (full or part-time); NeuroPhage. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroPhage. **R. Fisher:** A. Employment/Salary (full or part-time); NeuroPhage. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroPhage. **E. Rockenstein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroPhage. F. Consulting Fees (e.g., advisory boards); NeuroPhage. **E. Masliah:** 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; NeuroPhage.
138.09	**M. Naoi:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); TEVA Pharmaceutical Co. **Y. Wu:** A. Employment/Salary (full or part-time); Helthcare System. **K. Kazumura:** A. Employment/Salary (full or part-time); Hamamatsu Photonics.
138.18	**M.J. Oneill:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **L.M. O'Bryan:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **D. Leung:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **M. Ghanem:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **J. Wilson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **J. Hanson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **S. Sossick:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **J. Cooper:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **L. Huang:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **K.M. Merchant:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **J. Lu:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **R.C. Smith:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company.
138.19	**R.C. Smith:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **L.M. O'Bryan:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **P. Mitchell:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **D. Leung:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **M. Ghanem:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **J. Wilson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **J. Hanson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **S. Sossick:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **J. Cooper:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **K. Merchant:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **J. Lu:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company. **M.J. O'Neill:** A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly and Company.
140.17	**S. Nair:** A. Employment/Salary (full or part-time); San Diego State University. **C.P. Chen:** A. Employment/Salary (full or part-time); San Diego State University. **C.L. Keown:** A. Employment/Salary (full or part-time); University of California, San Diego. **R.A. Müller:** A. Employment/Salary (full or part-time); San Diego State 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; PI: NIMH 1R01 MH081023.
141.05	**A.M. Thomas:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); F. Hoffmann-La Roche Ltd. **M.D. Saxe:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd.
141.10	**C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research.
143.24	**G. Haddad:** 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 HL098053.
144.16	**B. Shukitt-Hale:** 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; U.S. Highbush Blueberry

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	Council.
144.17	**B. Shukitt-Hale:** 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; California Walnut Commission.
144.18	**D.R. Fisher:** 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; Cherry Marketing Institute. **D.F. Bielinski:** 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; Cherry Marketing Institute. **B. Shukitt-Hale:** 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; Cherry Marketing Institute.
146.02	**D. Franceschini:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **C. Scali:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **G. Pollio:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **R. Remelli:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **D. Diamanti:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **M. Camarri:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **V. Porcari:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **H. Bothmann:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **C. Castaldo:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **G. Lazzeroni:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **C. Federico:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **L. Magnoni:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **I. Micco:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **M. Valacchi:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **A. Chiumiento:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **S. Coniglio:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **L. Cesari:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **A. Nencini:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **M. Travagli:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **P. Perfetti:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **N. Caradonna:** A. Employment/Salary (full or part-time); Siena Biotech SpA. **R. Thomas:** A. Employment/Salary (full or part-time); Siena Biotech SpA.
146.12	**I.R. Holtman:** A. Employment/Salary (full or part-time); University Medical Center Groningen. **D.D.A. Raj:** A. Employment/Salary (full or part-time); University Medical Center Groningen. **J. Miller:** A. Employment/Salary (full or part-time); Allen Institute for brain science. **W. Schaafsma:** A. Employment/Salary (full or part-time); University Medical Center Groningen. **N. Brouwer:** A. Employment/Salary (full or part-time); University Medical Center Groningen. **M. Orre:** A. Employment/Salary (full or part-time); Netherlands Institute for Neuroscience, - an Institute of the Royal Netherlands Academy of Arts and Sciences (KNAW),. **W. Kamphuis:** A. Employment/Salary (full or part-time); Netherlands Institute for Neuroscience, - an Institute of the Royal Netherlands Academy of Arts and Sciences (KNAW),. **E.M. Hol:** A. Employment/Salary (full or part-time); Netherlands Institute for Neuroscience, - an Institute of the Royal Netherlands Academy of Arts and Sciences (KNAW),, Brain Center Rudolf Magnus, University Medical Center Utrecht, Swammerdam Institute for Life Sciences, Center for Neuroscience, University of Amsterdam. **E.H. Boddeke:** A. Employment/Salary (full or part-time); University Medical Center Groningen. **B.J.L. Eggen:** A. Employment/Salary (full or part-time); University Medical Center Groningen.
146.18	**G.L. Suidan:** A. Employment/Salary (full or part-time); Pfizer, Inc. **J.R. Piro:** A. Employment/Salary (full or part-time); Pfizer, Inc. **A.N. Cameron:** A. Employment/Salary (full or part-time); Pfizer, Inc. **T. Nguyen:** A. Employment/Salary (full or part-time); Pfizer, Inc. **M.C. Ilardi:** A. Employment/Salary (full or part-time); Pfizer, Inc. **T.A. Samad:** A. Employment/Salary (full or part-time); Pfizer, Inc. **T.A. Samad:** A. Employment/Salary (full or part-time); Pfizer, Inc. **R.D. Bell:** A. Employment/Salary (full or part-time); Pfizer, Inc.
147.04	**A. Rentsch:** A. Employment/Salary (full or part-time); BIOLOG Life Science Institute. **F. Schwede:** A. Employment/Salary (full or part-time); BIOLOG Life Science Institute.
147.11	**H.S. Ying:** A. Employment/Salary (full or part-time); The 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; Regeneron. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cross Foundation, Research to Prevent Blindness. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); The Johns Hopkins University.
147.18	**D.B. Polley:** 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 Therapeutics Limited. **C.H. Large:** A. Employment/Salary (full or part-time); Autifony Therapeutics Limited. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Autifony Therapeutics Limited.
147.20	**N. Ghazaleh:** A. Employment/Salary (full or part-time); Swiss National Science Foundation (SNSF).
148.10	**T.J. Ness:** 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; Funded by DK51413.
148.13	**Y. Wen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Gimer Med. Co. Ltd.
148.24	**S. Lardell:** A. Employment/Salary (full or part-time); Cellectricon. **A. Karlsson:** A. Employment/Salary (full or part-time); Cellectricon. **M. Karlsson:** A. Employment/Salary (full or part-time); Cellectricon. **C. Lindwall-blom:** A. Employment/Salary (full or part-time); Cellectricon. **P. Karila:** A. Employment/Salary (full or part-time); Cellectricon.
149.04	**H. Schaffhauser:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **E.P. Prinssen:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **M. Honer:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **T.M. Ballard:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **T.L. Wallace:** A. Employment/Salary (full or part-time); SRI International, Menlo Park, California. **J. Peters:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **L. Gobbi:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **A. Nilly:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **T. Hartung:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **R. Alvarez Sanchez:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **E. Borroni:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **J.W. Wettstein:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland. **A. Flohr:** A. Employment/

ABSTRACT NUMBER	STATEMENT
	Salary (full or part-time); F. Hoffmann-La Roche, Basel, Switzerland.
153.13	**J.W. Young:** A. Employment/Salary (full or part-time); UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Lundbeck, Omeros. F. Consulting Fees (e.g., advisory boards); Amgen.
153.21	**K.A. Rouibi:** A. Employment/Salary (full or part-time); Canadian Institutes of Health Research. **C. Bouchard:** A. Employment/Salary (full or part-time); Université de Montréal. **P. Rompre:** A. Employment/Salary (full or part-time); Canadian Institutes of Health Research.
155.15	**B. Rózsa:** Other; Femtonics.
156.16	**G. Garcia Molina:** A. Employment/Salary (full or part-time); Philips Research.
157.09	**L. Ling:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property. **K. Nie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property. **J.T. Rubinstein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property. F. Consulting Fees (e.g., advisory boards); Cochlear, Ltd. **J.O. Phillips:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property.
158.05	**H. Choi:** 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; National Research Foundation of Korea. **D. Roh:** 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; National Research Foundation of Korea. **J. Moon:** 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; National Research Foundation of Korea. **S. Choi:** 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; National Research Foundation of Korea. **S. Kwon:** 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; National Research Foundation of Korea. **H. Han:** 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; National Research Foundation of Korea. **A.J. Beitz:** 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; National Research Foundation of Korea. **S. Oh:** 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; National Research Foundation of Korea. **J. Lee:** 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; National Research Foundation of Korea.
158.18	**L.B. Badgujar:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Gift Samples of drugs like Lutein, Zeaxanthin given by OmniActive Health Technologies, Mumbai. Other; Council of Scientific & Industrial Research (CSIR), India awarded the research fellowship (CSIR-SRF-I) to Mr. Lohit Badgujar for his PhD research work.
160.07	**C.J. De Luca:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); President of Delsys Inc, President of the NeuroMuscular Research Foundation.
160.15	**Z. Jiang:** A. Employment/Salary (full or part-time); New Jesrsey Institute of Technology.
160.16	**C.J. De Luca:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); President and CEO of Delsys Inc, the company that developed the sEMG decomposition technology, President of the NeuroMuscular Research Foundation.
160.18	**C.J. DeLuca:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); President of Delsys Inc, President of the NeuroMuscular Research Foundation.
161.08	**E. Fonfria:** A. Employment/Salary (full or part-time); Ipsen Ltd. **V.A. Cadd:** A. Employment/Salary (full or part-time); Ipsen Ltd. **J.J. Krupp:** A. Employment/Salary (full or part-time); Ipsen Ltd.
162.02	**E. Rouiller:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Antibodies provided by Novartis Pharma AG.
167.20	**M. Yoshida:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research on Risk of Chemical Substances, Health and Laboratory Sciences Research Grants, and the Ministry of Health, Labour and Welfare, Japan (H25-KAGAKU-IPPANN-003). **M. Kawaguchi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research on Risk of Chemical Substances, Health and Laboratory Sciences Research Grants, and the Ministry of Health, Labour and Welfare, Japan (H25-KAGAKU-IPPANN-003).
169.03	**M.J. Weiser:** A. Employment/Salary (full or part-time); DSM. **M.H. Mohajeri:** A. Employment/Salary (full or part-time); DSM. **C.M. Butt:** A. Employment/Salary (full or part-time); DSM.
169.04	**J.C. Geerling:** F. Consulting Fees (e.g., advisory boards); Red Bull.
173.20	**U. Yamamoto:** A. Employment/Salary (full or part-time); Doshisha University. **T. Hiroyasu:** A. Employment/Salary (full or part-time); Doshisha University.
175.01	**E.G. Mohler:** A. Employment/Salary (full or part-time); AbbVie. **Z. Ding:** A. Employment/Salary (full or part-time); AbbVie. **J.W. Brown:** A. Employment/Salary (full or part-time); AbbVie. **L.E. Rueter:** A. Employment/Salary (full or part-time); AbbVie.
179.04	**V. Trezza:** 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; Netherlands Organization for Scientific Research (NWO) Veni grant 91611052, Marie Curie Career Reintegration Grant PCIG09-GA-2011-293589. **L.J.M.J. Vanderschuren:** 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

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	study, report that research relationship even if those funds come to an institution; National Institute on Drug Abuse Grant R01 DA022628.
180.09	**A. Thome:** A. Employment/Salary (full or part-time); University of Rochester.
181.21	**M.E. Arnegard:** A. Employment/Salary (full or part-time); Environmental Resources Management.
182.06	**T. Koumura:** A. Employment/Salary (full or part-time); University of Tokyo. **K. Okanoya:** A. Employment/Salary (full or part-time); University of Tokyo.
183.11	**P. Paredes-Ramos:** A. Employment/Salary (full or part-time); UNIVERSITY OF MARYLAND.
184.06	**U. Yamamoto:** A. Employment/Salary (full or part-time); Doshisha University. **M. Ohzeki:** A. Employment/Salary (full or part-time); Kyoto University.
184.09	**A.J. Worth:** A. Employment/Salary (full or part-time); Neuromorphomerics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuromorphometrics, Inc. **J.A. Tourville:** F. Consulting Fees (e.g., advisory boards); Neuromorphometrics, Inc.
185.02	**C. Sung:** A. Employment/Salary (full or part-time); IBM.
185.05	**T. Ragan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Tissue Vision, Inc.
185.06	**J. Korich:** A. Employment/Salary (full or part-time); MBF Bioscience - MicroBrightField, Inc. **B.S. Eastwood:** A. Employment/Salary (full or part-time); MBF Bioscience - MicroBrightField, Inc. **M.J. Fay:** A. Employment/Salary (full or part-time); MBF Bioscience - MicroBrightField, Inc. **S.J. Tappan:** A. Employment/Salary (full or part-time); MBF Bioscience - MicroBrightField, Inc. **N.J. O'Connor:** A. Employment/Salary (full or part-time); MBF Bioscience - MicroBrightField, Inc. **P.J. Angstman:** A. Employment/Salary (full or part-time); MBF Bioscience - MicroBrightField, Inc. **J.R. Glaser:** A. Employment/Salary (full or part-time); MBF Bioscience - MicroBrightField, Inc.
185.07	**A. Vavilin:** A. Employment/Salary (full or part-time); Ulsan National Institute of Science and Technology. **E. Min:** A. Employment/Salary (full or part-time); Ulsan National Institute of Science and Technology. **T. Kim:** A. Employment/Salary (full or part-time); Futurist. **W. Jung:** A. Employment/Salary (full or part-time); Ulsan National Institute of Science and Technology.
185.11	**D. Soulet:** A. Employment/Salary (full or part-time); FRQS. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; CIHR, Parkinson Society Canada. **S. Lacroix:** A. Employment/Salary (full or part-time); FRQS. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; CIHR.
185.14	**E. Min:** A. Employment/Salary (full or part-time); Ulsan Institute of Science and Technology. **J. Kim:** A. Employment/Salary (full or part-time); KYUNGPOOK NATIONAL UNIVERSITY.
185.16	**T. Huffman:** A. Employment/Salary (full or part-time); 3Scan. **M. Goodman:** A. Employment/Salary (full or part-time); 3Scan. **C. Daniel:** A. Employment/Salary (full or part-time); 3Scan.
185.18	**H. Dimant:** A. Employment/Salary (full or part-time); Employment. **P. Knodle:** A. Employment/Salary (full or part-time); Employment. **P. Kamelin:** A. Employment/Salary (full or part-time); Employment. **T. Ragan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); owenrship.
185.23	**D.W. Beacham:** A. Employment/Salary (full or part-time); Thermo Fisher Scientific. **W. Zhao:** A. Employment/Salary (full or part-time); Thermo Fisher Scientific. **K. Gee:** A. Employment/Salary (full or part-time); Thermo Fisher Scientific.
185.24	**U. Yamamoto:** A. Employment/Salary (full or part-time); DOSHISHA University. **T. Hiroyasu:** A. Employment/Salary (full or part-time); DOSHISHA University.
185.28	**T. Ragan:** A. Employment/Salary (full or part-time); TissueVision, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TissueVision, Inc. **H. Dimant:** A. Employment/Salary (full or part-time); TissueVision, Inc.
187.02	**T.A. Cleland:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NVIDIA Corporation.
187.08	**J.K. Mai:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MR-X-Brain GmbH, Düsseldorf. **M. Majtanik:** A. Employment/Salary (full or part-time); MR-X-Brain GmbH.
188.26	**T.A. Verdoorn:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intuitive Quantitation, LLC. **B. Verdoorn:** A. Employment/Salary (full or part-time); Intuitive Quantitation, LLC.
191	**D. Piomelli:** 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; Thesan Pharmaceuticals, Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Agilent Technologies Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Thesan Pharmaceuticals, Inc, iMetabolite Inc, Antena Therapeutics Inc. F. Consulting Fees (e.g., advisory boards); Thesan Pharmaceuticals, Inc.
191.04	**B.D. Hammock:** A. Employment/Salary (full or part-time); University of California. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Largely NIH. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); EicOsis.
191.05	**D. Piomelli:** 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; Thesan Pharmaceutical, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Thesan Pharmaceutical, Inc, iMetabolite Inc, Anteana Therapeutics, Inc. F. Consulting Fees (e.g., advisory boards); Thesan Pharmaceutical, Inc.
197.02	**R.J. Bateman:** 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; Merck, Research Collaboration, DIAN-TU, NIH U-01-AG042791, DIAN-TU, Alzheimer's Association, Zenith Fellows Award, Alzheimer's Association. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Avid Radiopharmaceuticals, DIAN-TU (donation of imaging supplies). D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents' (e.g., speakers' bureaus); Roche, Invited Speaker. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); C2N, Co-Founder/Part Owner. F. Consulting Fees (e.g., advisory boards); Novartis, Sanofi, IMI.
197.03	**E.J. Goetzl:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Nanosomix, Inc.

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198.06	**G.M. Cole:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); UCLA/VA patent on curcumin formulation Longvida licensed to Verdure Biosciences. **S. Frautschy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); UCLA/VA patent on curcumin formulation Longvida licensed to Verdure Biosciences.
199.08	**T.A. Yacoubian:** Other; Talene Yacoubian has a US Patent # 7,919,262 on the use of 14-3-3s in Parkinson's disease.
201.03	**B. Day:** 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; Dr. Day is a consultant for and holds equity in Aeolus Pharmaceutials that is developing metalloporphyrins as potential therapeutic agents.
202.06	**R.C. Ashmore:** A. Employment/Salary (full or part-time); Neuro Kinetics, Inc. **R. Sclabassi:** A. Employment/Salary (full or part-time); Computational Diagnostics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuro Kinetics, Inc. **L. Oakes:** A. Employment/Salary (full or part-time); Neuro Kinetics, Inc. **A. Kiderman:** A. Employment/Salary (full or part-time); Neuro Kinetics, Inc.
204.05	**P. Dupont:** A. Employment/Salary (full or part-time); KU Leuven. **K. Van Laere:** A. Employment/Salary (full or part-time); KU Leuven. **R. Vandenberghe:** A. Employment/Salary (full or part-time); KU Leuven.
204.07	**M. Grossman:** A. Employment/Salary (full or part-time); University of Pennsylvania.
205.07	**R.M. Mok:** Other; Studentship support paid by principle investigator's grant, supported by the National Institute for Health Research (NIHR) Oxford Biomedical Research Centre.
207.03	**T. Berdyyeva:** A. Employment/Salary (full or part-time); Janssen LLC. **S. Otte:** A. Employment/Salary (full or part-time); Inscopix. **L. Aluisio:** A. Employment/Salary (full or part-time); Janssen LLC. **L.D. Burns:** F. Consulting Fees (e.g., advisory boards); Inscopix. **Y. Ziv:** F. Consulting Fees (e.g., advisory boards); Inscopix. **C. Dugovic:** A. Employment/Salary (full or part-time); Janssen LLC. **K.K. Ghosh:** A. Employment/Salary (full or part-time); Inscopix. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inscopix. **M.J. Schnitzer:** F. Consulting Fees (e.g., advisory boards); Inscopix. **T. Lovenberg:** A. Employment/Salary (full or part-time); Janssen LLC. **P. Bonaventure:** A. Employment/Salary (full or part-time); Janssen LLC.
207.05	**J. McConathy:** F. Consulting Fees (e.g., advisory boards); Speakers Bureau, Eli Lilly and Company Research Consultant, General Electric Company Research Consultant, Blue Earth Diagnostics Ltd Research Consultant, Siemens AG. **T. Benzinger:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research Grant: ACS, ICTS, NIH. F. Consulting Fees (e.g., advisory boards); Eli Lilly and Company.
207.08	**B.J. Bedell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biospective Inc. **A.C. Evans:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biospective Inc.
207.11	**J.P. Seibyl:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Molecular Neuroimaging,LLC. **G.D. Tamagnan:** A. Employment/Salary (full or part-time); Molecular Neuroimaging,LLC. **D. Jennings:** A. Employment/Salary (full or part-time); Molecular Neuroimaging,LLC. **K. Marek:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Molecular Neuroimaging,LLC.
209.08	**M. Willand:** 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; MED-EL GmbH.
209.12	**S. Takatori:** 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; Smoking Research Foundation. **H. Kawasaki:** 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; Smoking Research Foundation.
209.17	**Y. Li:** 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; Med EL. **S. Huang:** A. Employment/Salary (full or part-time); Vanderbilt University. **D. Zealear:** 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; Med EL.
209.18	**D.L. Zealear:** A. Employment/Salary (full or part-time); Med-El, Inc. 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; Med-El, Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Med-El, Inc.
210.05	**M.O. Job:** A. Employment/Salary (full or part-time); The Neuroscience Institute of Georgia State University, Atlanta, GA.
210.20	**M.J. Glenn:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Sage Labs.
211.23	**G. Clarke:** Other; Science Foundation Ireland, Health Research Board, Brain and Behaviour Research Foundation. **M. Naughton:** Other; Science Foundation Ireland. **J.F. Cryan:** Other; Science Foundation Ireland, Health Reseach Board. **T.G. Dinan:** Other; Science Foundation Ireland, Health Research Board.
213.11	**M.D. Ehlers:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer, Inc.
216.03	**J.J. Martinez:** A. Employment/Salary (full or part-time); University of Utah. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIH R01MH085074, NIH R01EB016407. **J.A. White:** A. Employment/Salary (full or part-time); University of Utah. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIH R01MH085074, NIH R01EB016407.
218.05	**H.J. Draheim:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Boehringer Ingelheim Pharma GmbH & Co KG.
218.19	**S. Schann:** A. Employment/Salary (full or part-time); Domain Therapeutics, SynAging SAS. **S. Mayer:** A. Employment/Salary (full or part-time); Domain Therapeutics. **C. Franchet:** A. Employment/Salary (full or part-time); Domain Therapeutics. **M. Frauli:**

ABSTRACT NUMBER	STATEMENT
	A. Employment/Salary (full or part-time); Domain Therapeutics. **S. Scheffler:** A. Employment/Salary (full or part-time); Domain Therapeutics. **T. Pillot:** A. Employment/Salary (full or part-time); SynAging SAS. **B. Manteau:** A. Employment/Salary (full or part-time); Domain Therapeutics. **P. Neuville:** A. Employment/Salary (full or part-time); Domain Therapeutics.
218.20	**T. Di Paolo:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Phenomenome Discoveries Inc.
220.03	**D. Millard:** A. Employment/Salary (full or part-time); Axion Biosystems. **A. Nicolini:** A. Employment/Salary (full or part-time); Axion Biosystems. **S. Chvatal:** A. Employment/Salary (full or part-time); Axion Biosystems. **M. Brock:** A. Employment/Salary (full or part-time); Axion Biosystems. **K. Cook:** A. Employment/Salary (full or part-time); Axion Biosystems. **J. Ross:** A. Employment/Salary (full or part-time); Axion Biosystems. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Axion Biosystems.
221.10	**K. Skold:** A. Employment/Salary (full or part-time); Denator AB. **M. Borén:** A. Employment/Salary (full or part-time); Denator AB.
221.13	**D.N. Butteiger:** A. Employment/Salary (full or part-time); Dupont Nutrition and Health. **J.L. Cheatwood:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Dupont Nutrition and Health.
223.06	**J. Debruin:** 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 and Silverman foundation. **E. Baxi:** A. Employment/Salary (full or part-time); Johns Hopkins University. **D.E. Bergles:** A. Employment/Salary (full or part-time); Johns Hopkins University. **P.A. Calabresi:** A. Employment/Salary (full or part-time); Johns Hopkins University.
223.14	**Y. Zorina:** A. Employment/Salary (full or part-time); Acorda Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics. **P. Sarmiere:** A. Employment/Salary (full or part-time); Acorda Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics. **A.O. Caggiano:** A. Employment/Salary (full or part-time); Acorda Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics. **D. Button:** A. Employment/Salary (full or part-time); Acorda Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acorda Therapeutics.
223.26	**M. Rodriguez:** Other; Acorda Therapeutics.
224.05	**F.M. Longo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PharmatrophiX, Patent interest in BC-2. **S.M. Massa:** Other; Patent interest in BC-2.
224.13	**G. Kidd:** F. Consulting Fees (e.g., advisory boards); Renovo Neural, Inc. **B. Trapp:** F. Consulting Fees (e.g., advisory boards); Renovo Neural, Inc.
225.10	**K. Hensley:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Xonovo, Inc.
225.12	**J.T. Coyle:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A patent owned by Massachusetts General Hospital for the use of D-serine as a treatment for serious mental illness could yield royalties for Dr. Coyle. F. Consulting Fees (e.g., advisory boards); served as a consultant for EnVivo, and Abbvie in the last 2 years.
226.04	**V.G. Pinelis:** A. Employment/Salary (full or part-time); full time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Contracted Research/Research Grant. **A.M. Surin:** A. Employment/Salary (full or part-time); Employment/Salary (part-time). B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Contracted Research/Research Grant. **L.R. Gorbacheva:** A. Employment/Salary (full or part-time); part-time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants. **I.G. Savinkova:** A. Employment/Salary (full or part-time); part-time. **R.R. Sharipov:** A. Employment/Salary (full or part-time); part-time. **B.I. Khodorov:** A. Employment/Salary (full or part-time); full-time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research Gran.
226.06	**D. McEwen:** A. Employment/Salary (full or part-time); Essen BioScience. **T. Garay:** A. Employment/Salary (full or part-time); Essen BioScience. **J. Brown:** A. Employment/Salary (full or part-time); Essen BioScience. **O. McManus:** A. Employment/Salary (full or part-time); Essen BioScience. **D. Rock:** A. Employment/Salary (full or part-time); Essen BioScience. **V. Groppi:** A. Employment/Salary (full or part-time); Essen BioScience. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Essen BioScience.
226.24	**J. Zhai:** A. Employment/Salary (full or part-time); Merck & Co.
227.08	**P. Ballabh:** 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 RO1NS071263.
227.17	**H. Osuru:** A. Employment/Salary (full or part-time); Research Associate,NIH/NICHD HD44517 (to V.J-T.), NIH/NICHD HD44517-S (to V.J-T.), Harold Carron endowment (to V.J-T), John E. Fogarty Award TW007423-128322 (to P.I. V.J-T.), the National March of Dim. 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/NICHD HD44517 (to V.J-T.), NIH/NICHD HD44517-S (to V.J-T.), Harold Carron endowment (to V.J-T), John E. Fogarty Award TW007423-128322 (to P.I. V.J-T.), the National March of Dimes Award (to V.J-T. **L. Dalla Masara:** 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/NICHD HD44517 (to V.J-T.), NIH/NICHD HD44517-S (to V.J-T.), Harold Carron endowment (to V.J-T), John E. Fogarty Award TW007423-128322 (to P.I. V.J-T.), the National March of Dimes Award (to V.J-T. **A. Oklopcic:** A. Employment/Salary (full or part-time); NIH/NICHD HD44517 (to V.J-T.), NIH/NICHD HD44517-S (to V.J-T.), Harold Carron endowment (to V.J-T), John E. Fogarty Award TW007423-128322 (to P.I. V.J-T.), the National March of Dimes Award (to V.J-T. B. Contracted Research/Research Grant (principal

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	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/NICHD HD44517 (to V.J-T.), NIH/NICHD HD44517-S (to V.J-T.), Harold Carron endowment (to V.J-T), John E. Fogarty Award TW007423-128322 (to P.I. V.J-T.), the National March of Dimes Award (to V.J-T. **V. Jevtovic-Todorovic:** A. Employment/Salary (full or part-time); University Of Virginia, Medical School,Anesthesiology,Research Associate. 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; Dr.Vesna jevtovic-todorovic.
229.09	**H. Yukitake:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. **T. Tsujimura:** A. Employment/Salary (full or part-time); Dainippon Sumitomo Pharma Co., Ltd.
229.10	**Q. Chen:** A. Employment/Salary (full or part-time); Astellas Research Institute of America LLC, Astellas Pharma. **K. Tajinda:** A. Employment/Salary (full or part-time); Astellas Research Institute of America LLC, Astellas Pharma. **C. Han:** A. Employment/Salary (full or part-time); Astellas internship. **S. Miyake:** A. Employment/Salary (full or part-time); Astellas Research Institute of America LLC, Astellas Pharma. **N.M. Walton:** A. Employment/Salary (full or part-time); Astellas Research Institute of America LLC, Astellas Pharma. **M. Matsumoto:** A. Employment/Salary (full or part-time); Astellas Research Institute of America LLC, Astellas Pharma.
229.12	**D.A. Lewis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Bristol-Myers Squibb, Pfizer. F. Consulting Fees (e.g., advisory boards); Autifony, Bristol-Myers Squibb, Concert Pharmaceuticals, Sunovion.
229.14	**D.A. Lewis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Bristol-Myers Squibb, Pfizer. F. Consulting Fees (e.g., advisory boards); Autifony, Bristol-Myers Squibb, Concert Pharmaceuticals, Sunovion.
229.18	**N. Samudra:** A. Employment/Salary (full or part-time); UT Southwestern Medical Center. **E.I. Ivleva:** A. Employment/Salary (full or part-time); UT Southwestern Medical Center. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIH grant. **S. Ghose:** A. Employment/Salary (full or part-time); UT Southwestern Medical Center. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIH grant. **C.A. Tamminga:** A. Employment/Salary (full or part-time); UT Southwestern Medical Center.
229.19	**A.R. Sampson:** F. Consulting Fees (e.g., advisory boards); Janssen Pharmaceutical Research and Development LLC. **D.A. Lewis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Bristol-Myers Squibb, Pfizer. F. Consulting Fees (e.g., advisory boards); Autifony, Bristol-Myers-Squibb, Concert Pharmaceuticals, Sunovion.
229.20	**C.E.L. Stark:** A. Employment/Salary (full or part-time); University California at Irvine. **A. Wagner:** A. Employment/Salary (full or part-time); Stanford 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; NIMH grants. **C.A. Tamminga:** A. Employment/Salary (full or part-time); UT Southwestern Medical Center. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIH grants. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Sunovian.
230.02	**D.J. Lodge:** F. Consulting Fees (e.g., advisory boards); Dey Pharmaceuticals.
230.20	**A. Forsingdal:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **J. Nielsen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S.
230.23	**T. Tsujimura:** A. Employment/Salary (full or part-time); Tsuyoshi Tsujimura is a employee of Dainippon Sumitomo Pharma Co., Ltd.
230.25	**K. Ardhanareeswaran:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **N. Welty:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **H. Duytschaever:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **B. Lord:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **J. Kanerva:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **A. Bittner:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **L. Ver Donc:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **M. Letavic:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **P. Bonaventure:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **G. Chen:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **T. Lovenberg:** A. Employment/Salary (full or part-time); Employee of Janssen R&D. **J.R. Shoblock:** A. Employment/Salary (full or part-time); Employee of Janssen R&D.
231.26	**H. Ton:** A. Employment/Salary (full or part-time); Department of Pharmacology and Physiology, Georgetown University, Washington DC 20007, USA. **A. Smart:** A. Employment/Salary (full or part-time); Department of Pharmacology and Physiology, Georgetown University, Washington DC 20007, USA. **T. Xie:** A. Employment/Salary (full or part-time); Department of Pharmacology and Physiology, Georgetown University, Washington DC 20007, USA. **K.J. Kellar:** A. Employment/Salary (full or part-time); Department of Pharmacology and Physiology, Georgetown University, Washington DC 20007, USA. **G.P. Ahern:** A. Employment/Salary (full or part-time); Department of Pharmacology and Physiology, Georgetown University, Washington DC 20007, USA.
232.04	**H. Druid:** Other; NIH Grant DA031429. **K. Alkass:** Other; NIH Grant DA031429. **S.P. Garamszegi:** Other; NIH Grant DA031429. **L. Duque:** Other; NIH Grant DA031429. **D.C. Mash:** Other; NIH Grant DA031429.
232.17	**D.B. Horton:** A. Employment/Salary (full or part-time); Pfizer, Inc. **E. Dunn-Sims:** A. Employment/Salary (full or part-time); Pfizer, Inc. **A. Foote:** A. Employment/Salary (full or part-time); Pfizer, Inc. **A.N. Mead:** A. Employment/Salary (full or part-time); Pfizer, Inc.
233.04	**S.C. Cheetham:** 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. **J. Gosden:** 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. **M.R. Prow:** 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

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	Pharmaceuticals, UK. **P.H. Hutson:** A. Employment/Salary (full or part-time); I am employed by Shire Developments Inc. **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.
233.10	**M.A. Geyer:** A. Employment/Salary (full or part-time); UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Intracellular Therapeutics, Johnson & Johnson, NIDA, NIMH, U.S. Veteran's Administration VISN 22 Mental Illness Research, Education, and Clinical Center. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); San Diego Instruments. F. Consulting Fees (e.g., advisory boards); Abbott, Acadia, Addex, Cerca, Lundbeck, Merck, Neurocrine, Omeros, Takeda, Teva.
234.05	**C. Gouarne:** A. Employment/Salary (full or part-time); Trophos. **J. Tracz:** A. Employment/Salary (full or part-time); Trophos. **M. Giraudon-Paoli:** A. Employment/Salary (full or part-time); Trophos. **V. Deluca:** A. Employment/Salary (full or part-time); Trophos. **M. Seimandi:** A. Employment/Salary (full or part-time); Trophos. **G. Tardif:** A. Employment/Salary (full or part-time); Trophos. **T. Bordet:** A. Employment/Salary (full or part-time); Trophos. **R.M. Pruss:** A. Employment/Salary (full or part-time); Trophos.
234.07	**S. Koirala:** A. Employment/Salary (full or part-time); Amgen. **J. Gray:** A. Employment/Salary (full or part-time); Amgen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen. **S. Talreja:** A. Employment/Salary (full or part-time); Amgen. **H. Dou:** A. Employment/Salary (full or part-time); Amgen. **M. Cueva:** A. Employment/Salary (full or part-time); Amgen. **O. Murphy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen. **J. Danao:** A. Employment/Salary (full or part-time); Amgen. **Q. Cheng:** A. Employment/Salary (full or part-time); Amgen. **K. Labitzke:** A. Employment/Salary (full or part-time); Amgen. **P. Jaeckel:** A. Employment/Salary (full or part-time); Amgen. **S. Materna-Reichelt:** A. Employment/Salary (full or part-time); Amgen. **S. Schneider:** A. Employment/Salary (full or part-time); Amgen. **S. Johnstone:** A. Employment/Salary (full or part-time); Amgen. **N. Sharkov:** A. Employment/Salary (full or part-time); Amgen. **J. Tang:** A. Employment/Salary (full or part-time); Amgen. **J. Ye:** A. Employment/Salary (full or part-time); Amgen. **C. Plewa:** A. Employment/Salary (full or part-time); Amgen. **P. Cao:** A. Employment/Salary (full or part-time); Amgen. **S. Zhao:** A. Employment/Salary (full or part-time); Amgen. **P. Andrews:** A. Employment/Salary (full or part-time); Amgen. **H. Beckmann:** A. Employment/Salary (full or part-time); Amgen. **Z. Wang:** A. Employment/Salary (full or part-time); Amgen. **B. Fox:** A. Employment/Salary (full or part-time); Amgen. **S. Sambashivan:** A. Employment/Salary (full or part-time); Amgen. **S. Kamb:** A. Employment/Salary (full or part-time); Amgen. **S. Wang:** A. Employment/Salary (full or part-time); Amgen.
234.15	**N. Muddana:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **R. Subramanian:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **R. Medapati:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **R. Abraham:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **R. Gadi:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **V. Benade:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **R. Palacharla:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **A. Manoharan:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **V. Goyal:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **S. Pandey:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **A. Mohammed:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **S. Ravella:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA. **R. Nirogi:** A. Employment/Salary (full or part-time); SUVEN LIFE SCIENCES LTD., HYDERABAD, INDIA.
234.16	**R.V. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **K. Mudigonda:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **K. Penta:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **G. Bhyrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **D. Ajjala:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **N. Muddana:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Chowdary Palacharla:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Goyal:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **S. Pandey:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **R. Abraham:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **P. Jayarajan:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **R. Badange:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD.
234.17	**B.S. Slusher:** 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; Eisai Inc. F. Consulting Fees (e.g., advisory boards); Eisai Inc.
234.18	**J.A. Morrow:** A. Employment/Salary (full or part-time); Full time employee of Merck & Co. **L.H. Smith:** A. Employment/Salary (full or part-time); Full time emplyee of Merck & Co. **F. Martin:** A. Employment/Salary (full or part-time); Full time emplyee of Merck & Co,. **S. Neale:** A. Employment/Salary (full or part-time); Full time emplyee of Merck & Co,. **N. Abrous:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Principal investigator of drug study. **P.V. Piazza:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Principal Investigator of drug study. **H.M. Marston:** A. Employment/Salary (full or part-time); Full time emplyee of Merck & Co.
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239.11	**S.M. Jaffal:** Other; To best of my knowledge, there is no conflict of interest between authors regarding the results of the in vivo work. There is for the submission issue.
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242.25	**S. Sydserff:** A. Employment/Salary (full or part-time); Sova Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sova Pharmaceuticals. **B. Franchini:** A. Employment/Salary (full or part-time); Sova Pharmaceuticals. **T. Sach:** A. Employment/Salary (full or part-time); Sova Pharmaceuticals. **S. Duron:** A. Employment/Salary (full or part-time); Sova Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sova Pharmaceuticals. **J. Chapman:** A. Employment/Salary (full or part-time); Sova Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sova Pharmaceuticals.
243.08	**A. Machado:** 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; Office of Director, NIH. Grant number: 1DP2OD006469-01.
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252.08	**J.M. Henderson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Nevro - Medical Advisory Board - stock options, Circuit Therapeutics - Chair, Medical Advisory Board - stock options. F. Consulting Fees (e.g., advisory boards); Medtronic - ad hoc consulting, Neuropace - Neurosurgical Advisory Board.
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254.22	**S. Coronel Castello:** 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; Focus Program Translational Neuroscience (FTN).

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267.18	**R. Gutierrez:** 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; CONACYT 179484, ICYTDF-PICSA12-126, Salud2010-02-151001, Productos Medix 0001275.
270.05	**A.E. Cohen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Q-State Biosciences.
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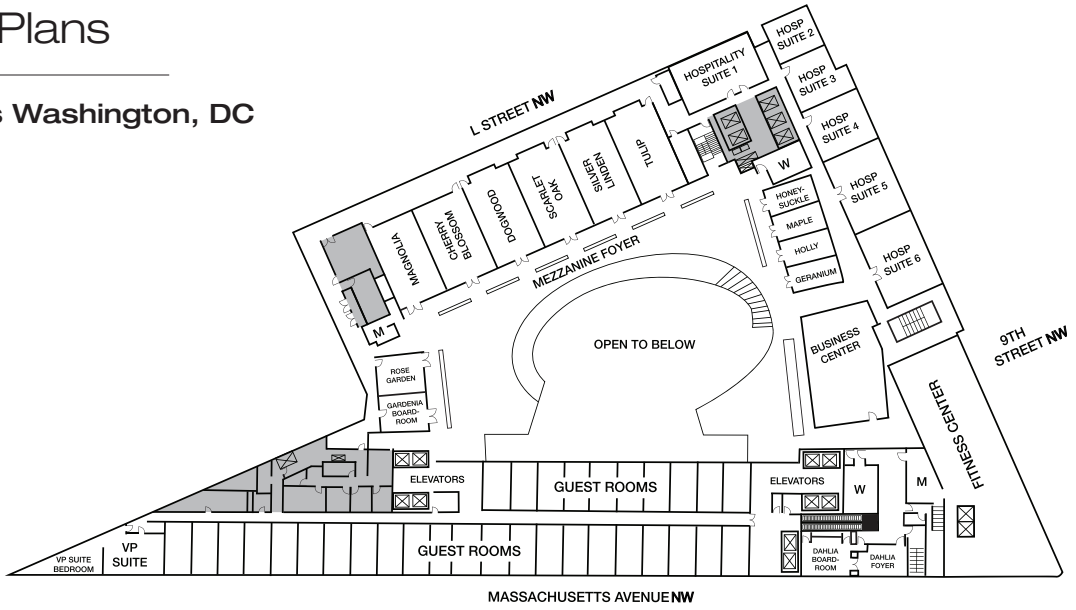
271.08	**M. Haruta:** A. Employment/Salary (full or part-time); full-time.
271.13	**D.A. Johnson:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **S. Gabbert:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **H.P. Harmon:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **E. Naylor:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **D.A. Johnson:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **P.G. Haydon:** F. Consulting Fees (e.g., advisory boards); Pinnacle Technology, Inc. **P.A. Petillo:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc.
272.07	**M. Descoteaux:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Imeka Solution Inc (www.imeka.ca). **J. Houde:** A. Employment/Salary (full or part-time); Imeka Solution Inc (www.imeka.ca). **J. Bélanger:** A. Employment/Salary (full or part-time); Imeka Solution Inc (www.imeka.ca). **P. Jodoin:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Imeka Solution Inc (www.imeka.ca). **F. Morency:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Imeka Solution Inc (www.imeka.ca).

Hotel Floor Plans

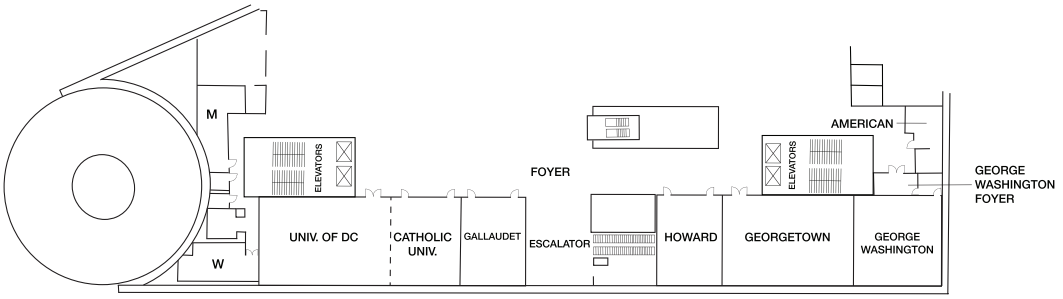
Marriott Marquis Washington, DC

Mezzanine Level



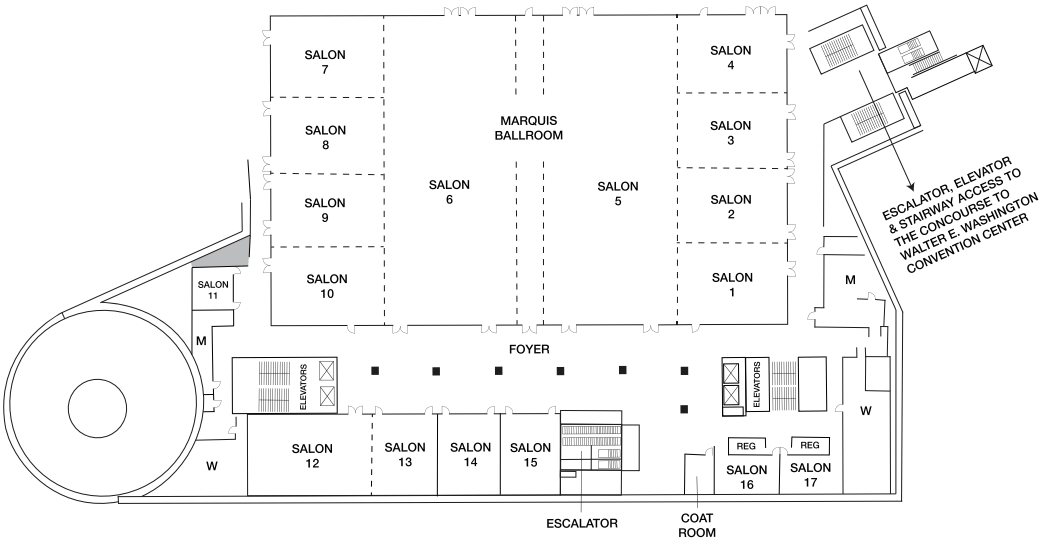
Marriott Marquis Washington, DC

Meeting Level 1



Marriott Marquis Washington, DC

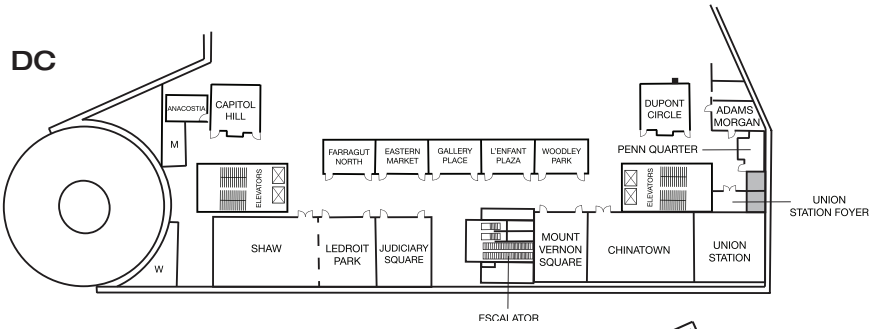
Meeting Level 2



Hotel Floor Plans

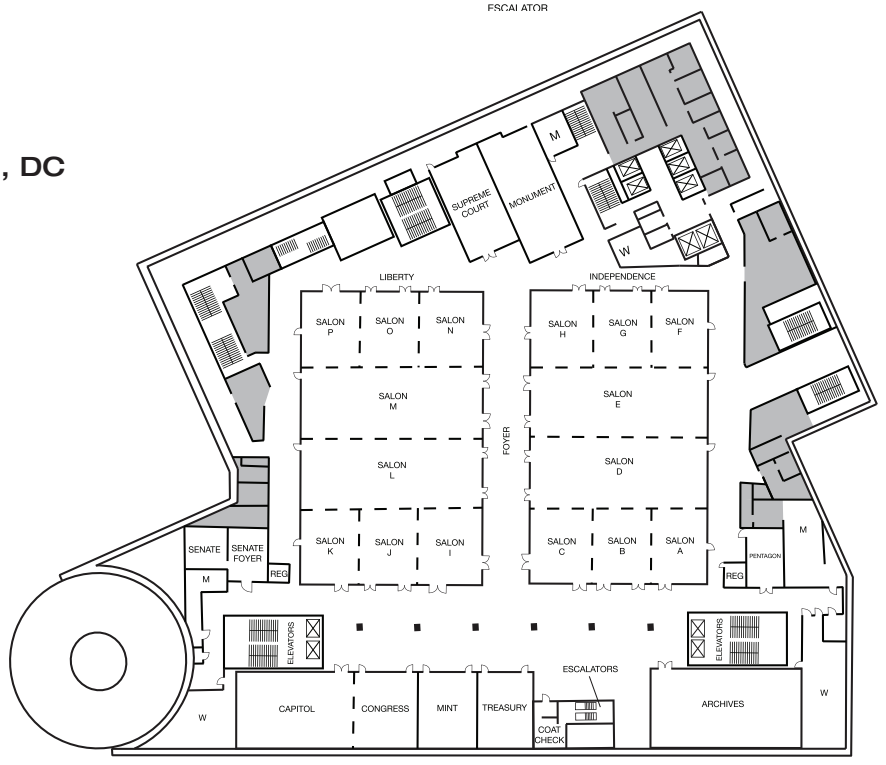
Marriott Marquis Washington, DC

Meeting Level 3



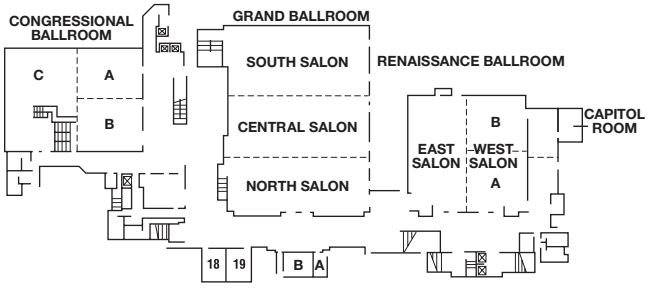
Marriott Marquis Washington, DC

Meeting Level 4



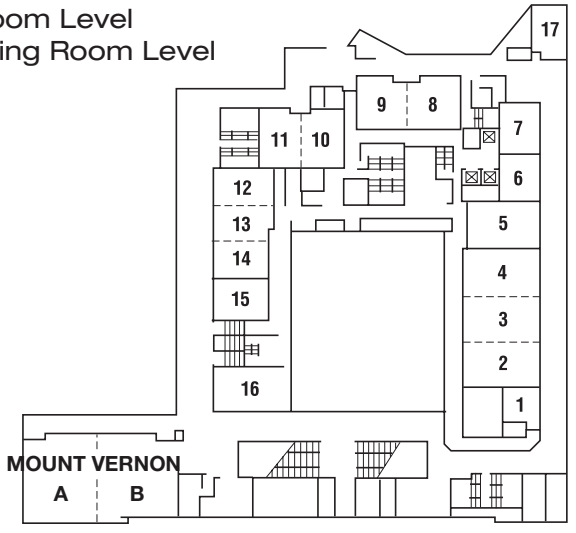
Renaissance Washington, DC Downtown Hotel

Ballroom Level



Renaissance Washington, DC Downtown Hotel

Ballroom Level
Meeting Room Level

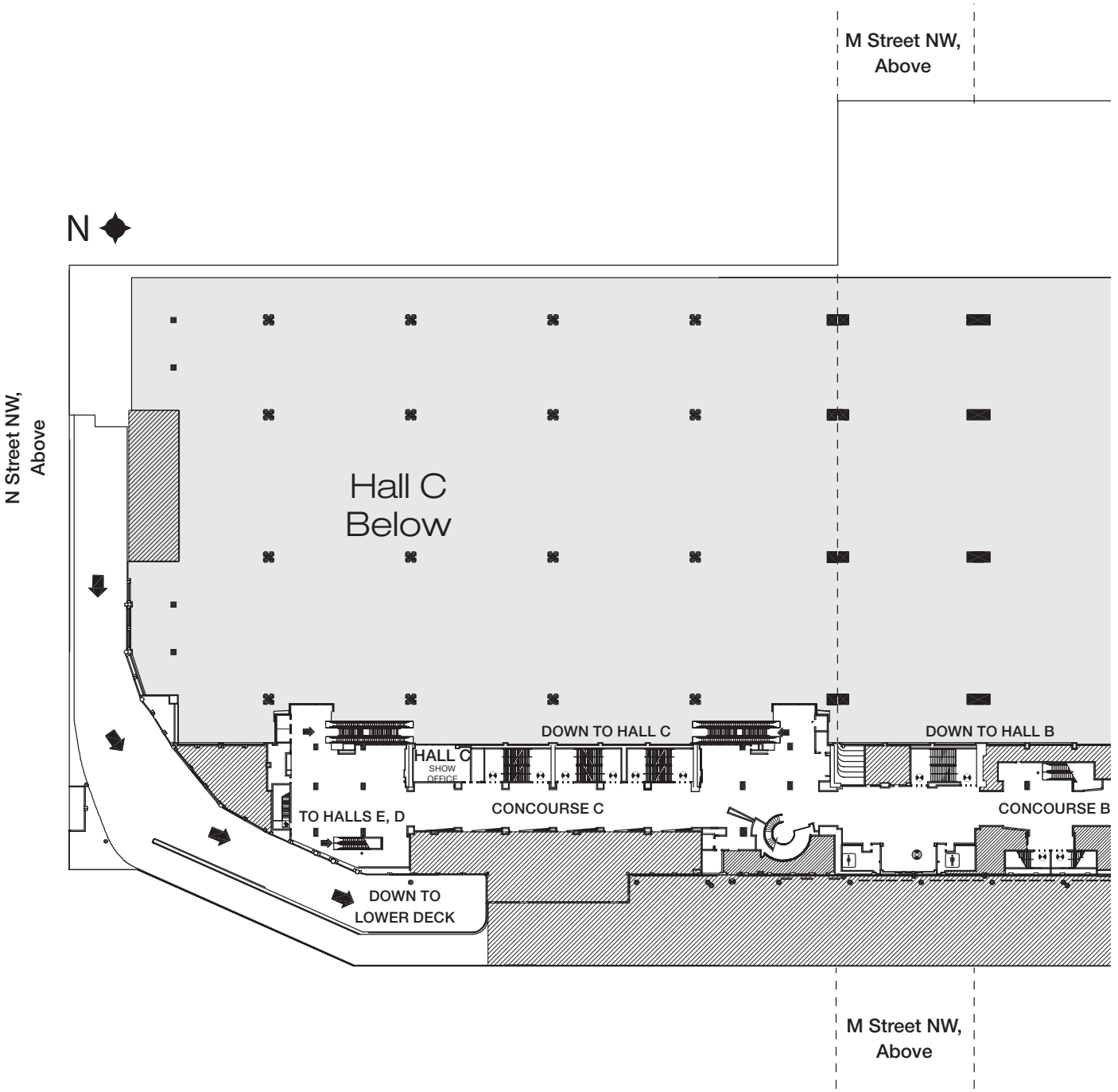


Convention Center Floor Plans

Concourse Level

Access to Exhibit Halls A–C

Show Offices A–C

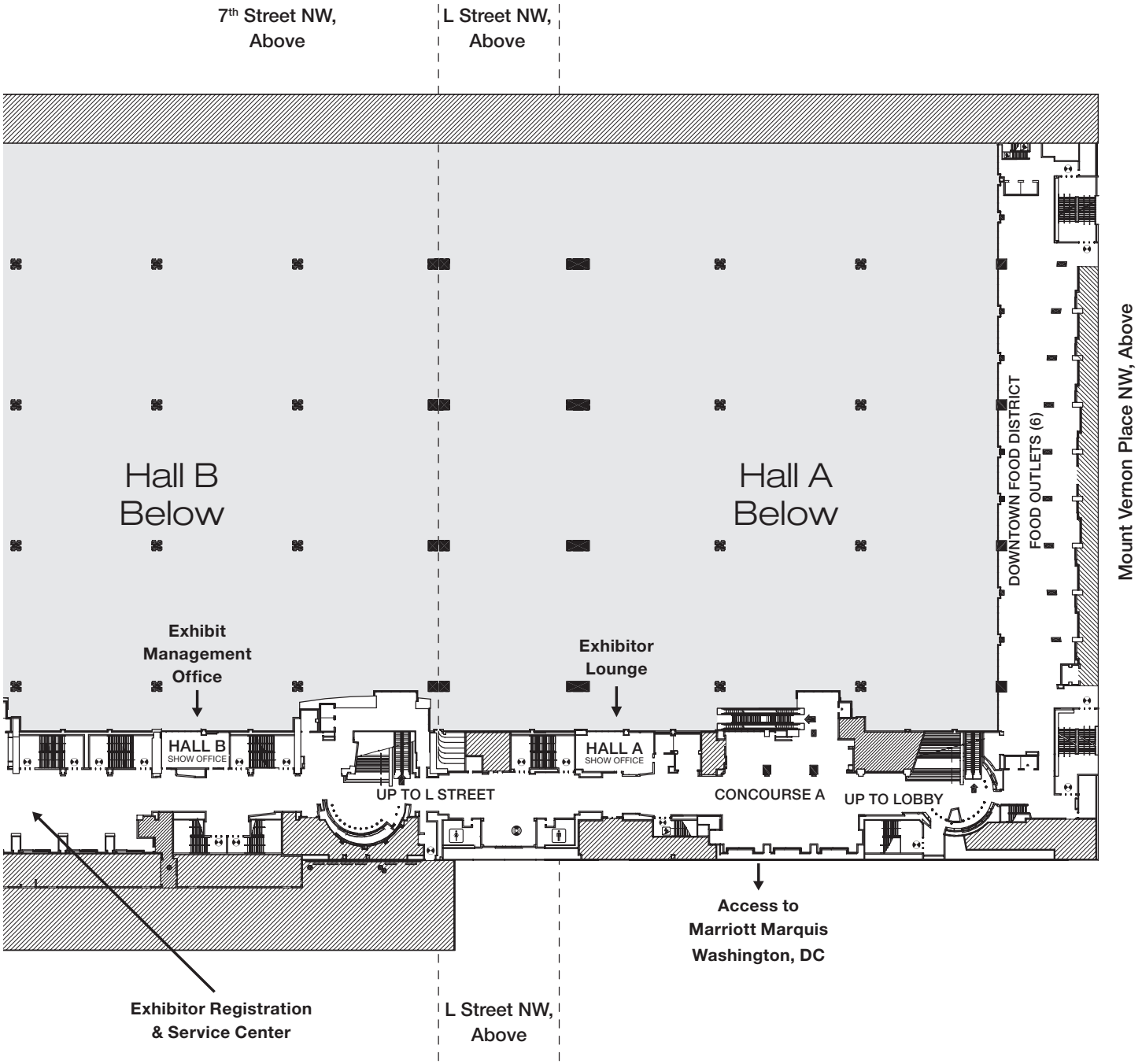


Convention Center Floor Plans

Concourse Level

Access to Exhibit Halls A–C

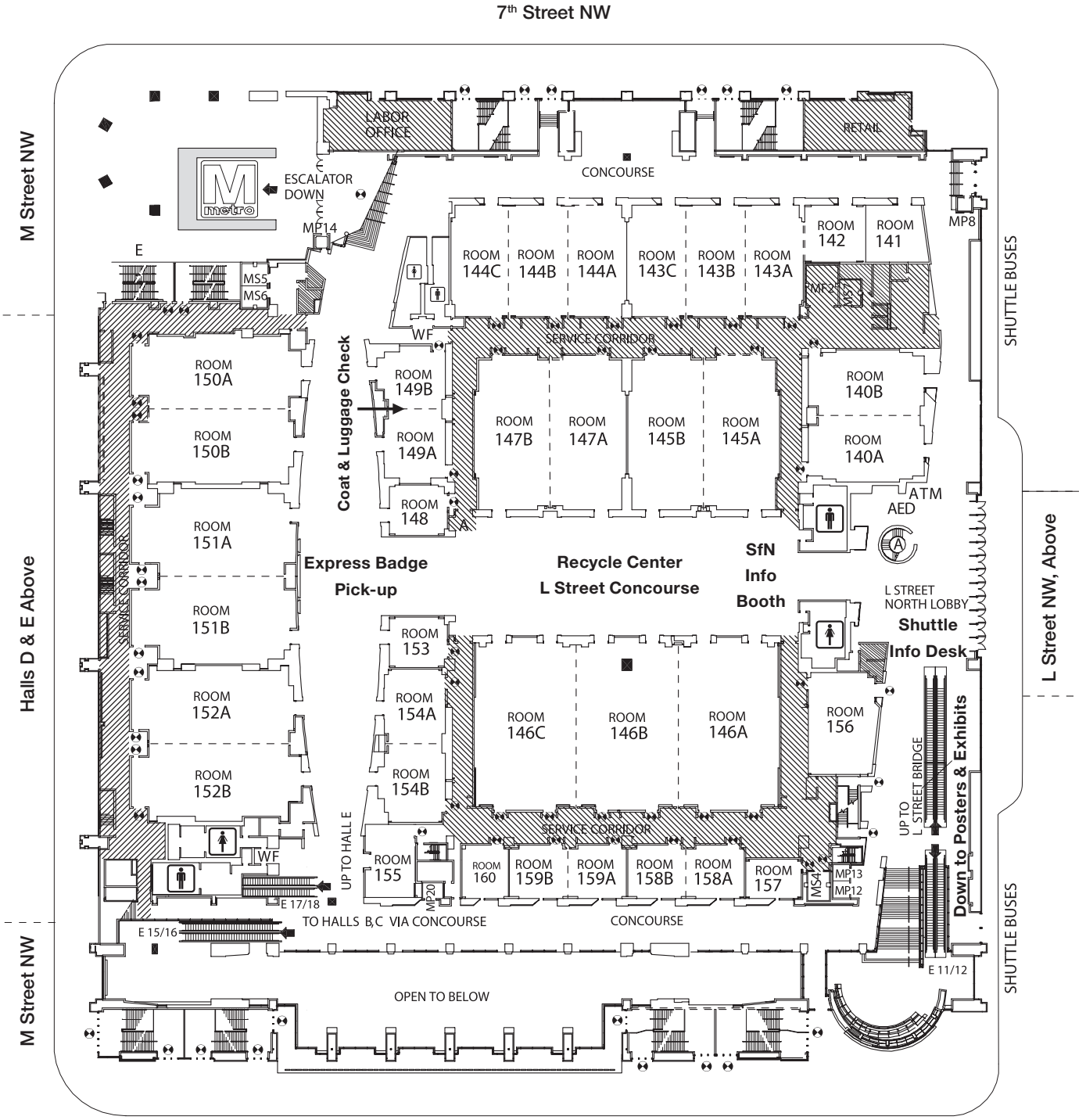
Show Offices A–C



Convention Center Floor Plans

Lobby Level/Level 1

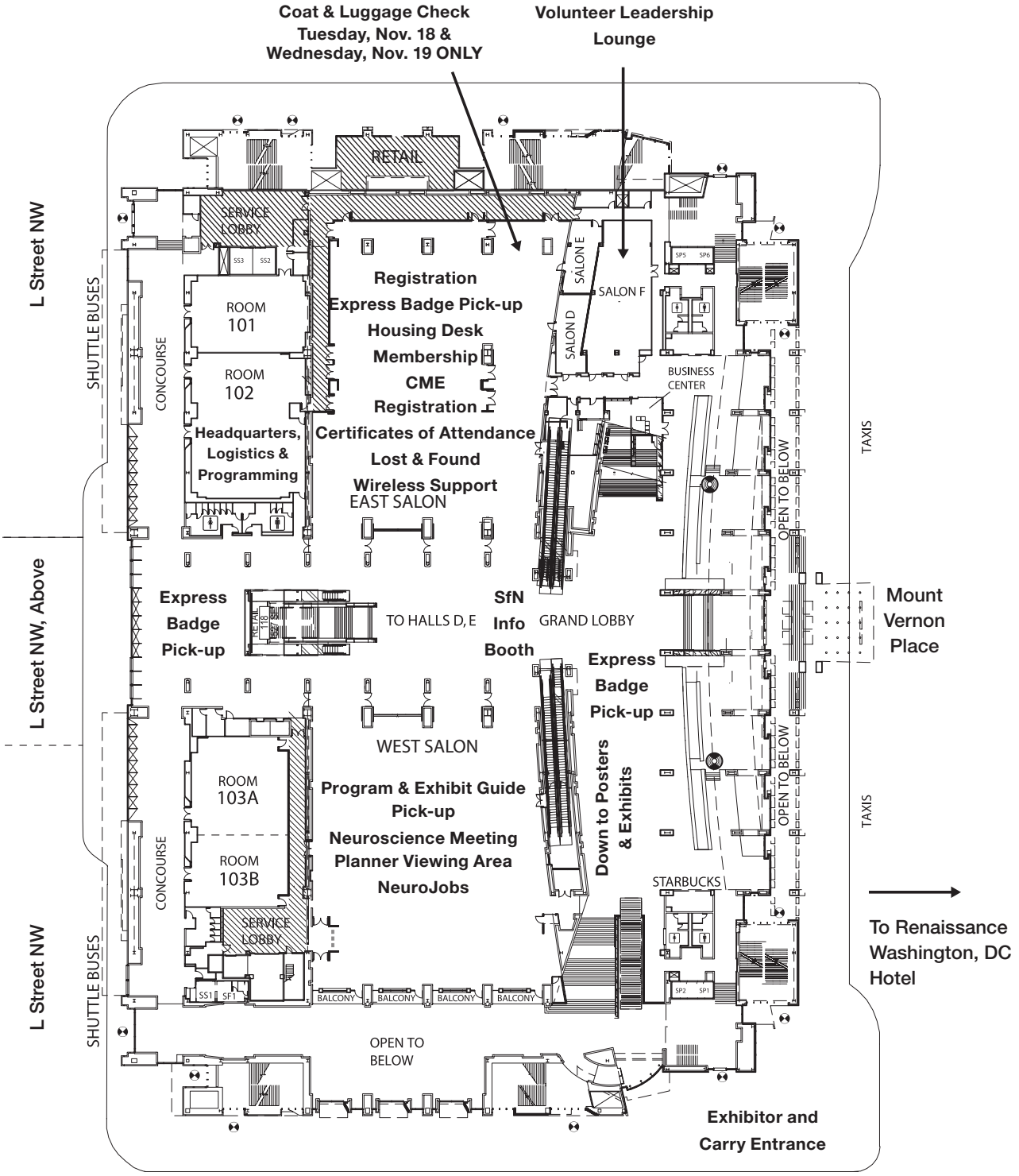
Meeting Rooms 101-103 & 150-160



Convention Center Floor Plans

Lobby Level/Level 1

Meeting Rooms 101-103 & 150-160

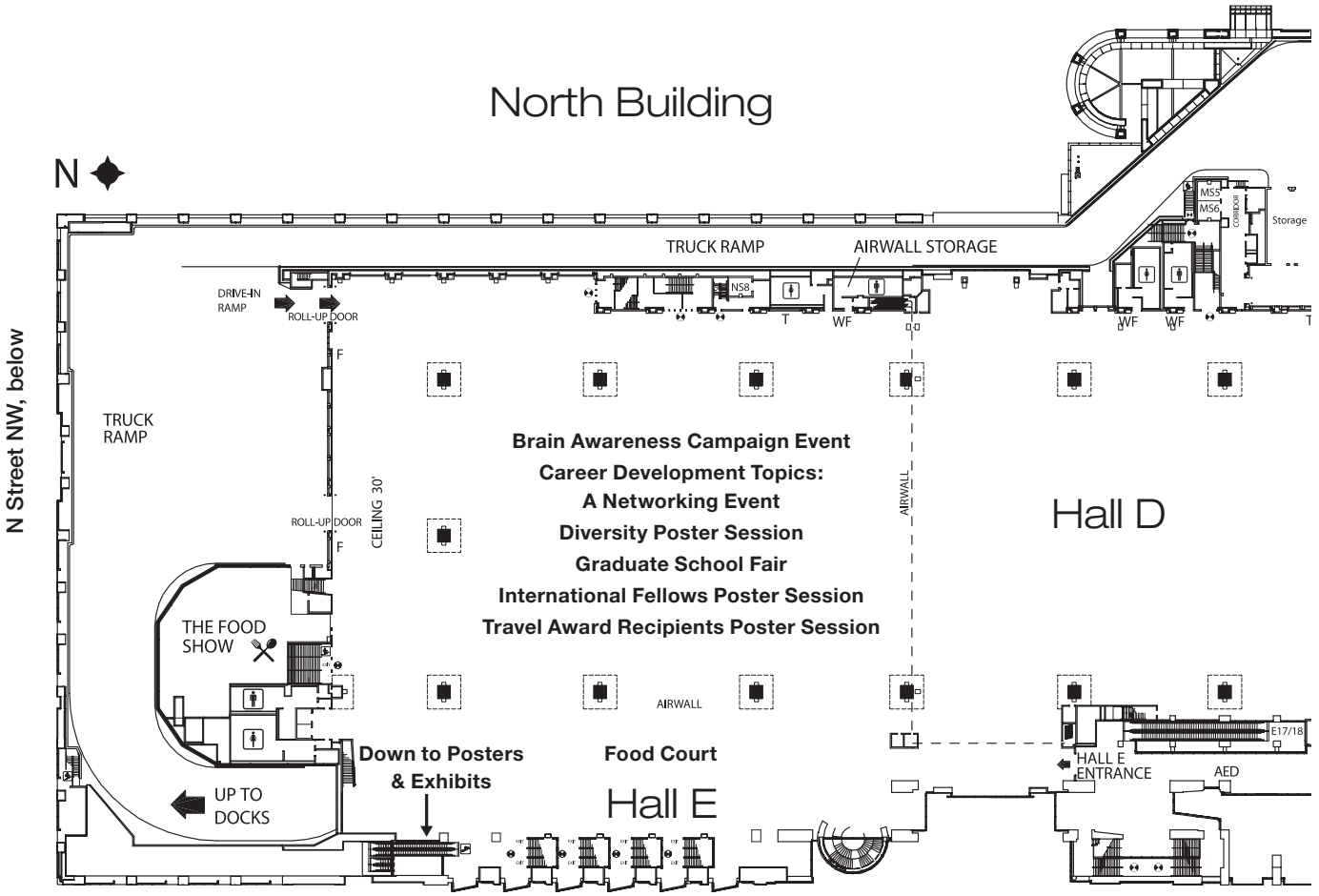


Convention Center Floor Plans

Level 2

Halls D &E

Meeting Rooms 201-210

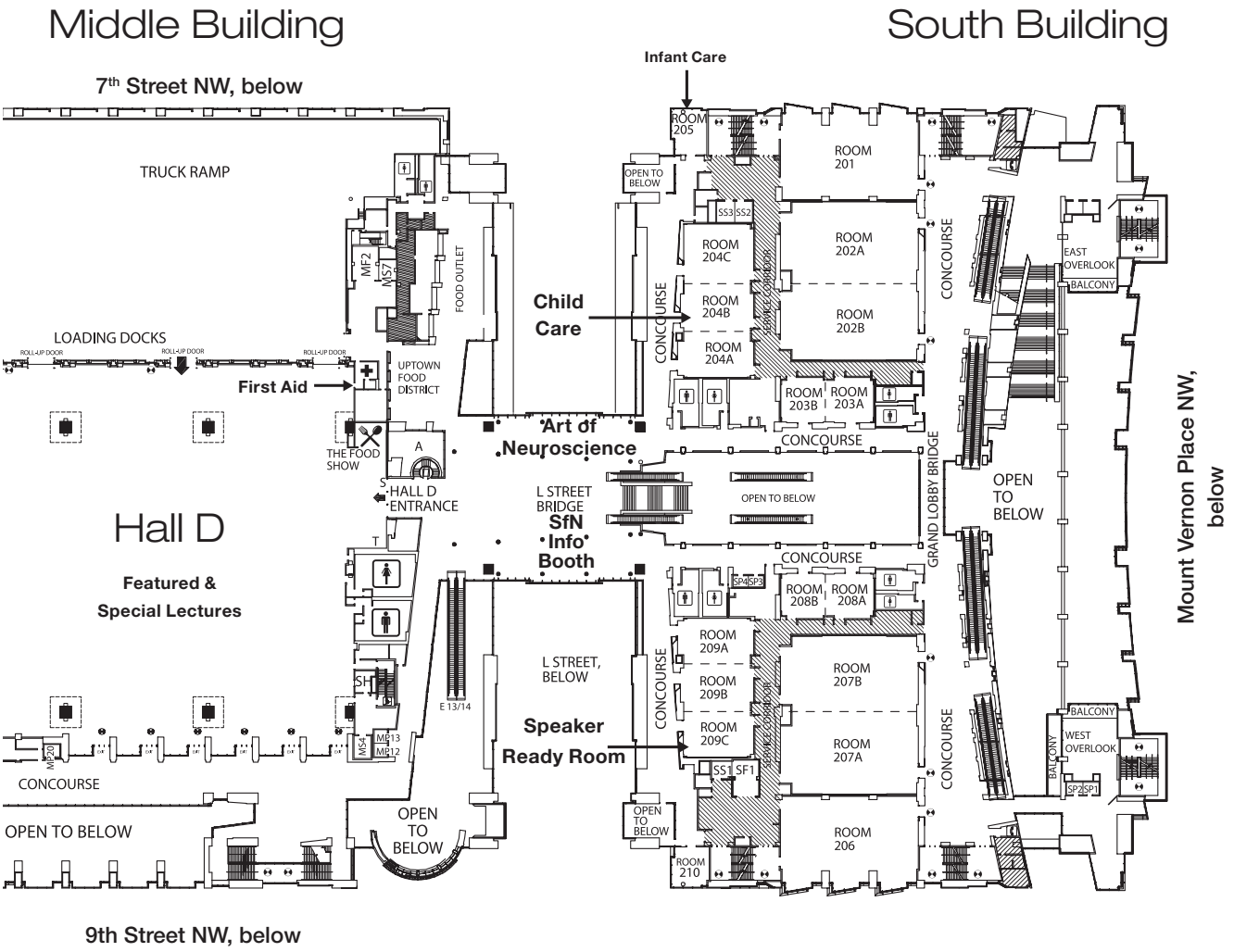


Convention Center Floor Plans

Level 2

Halls D &E

Meeting Rooms 201-210

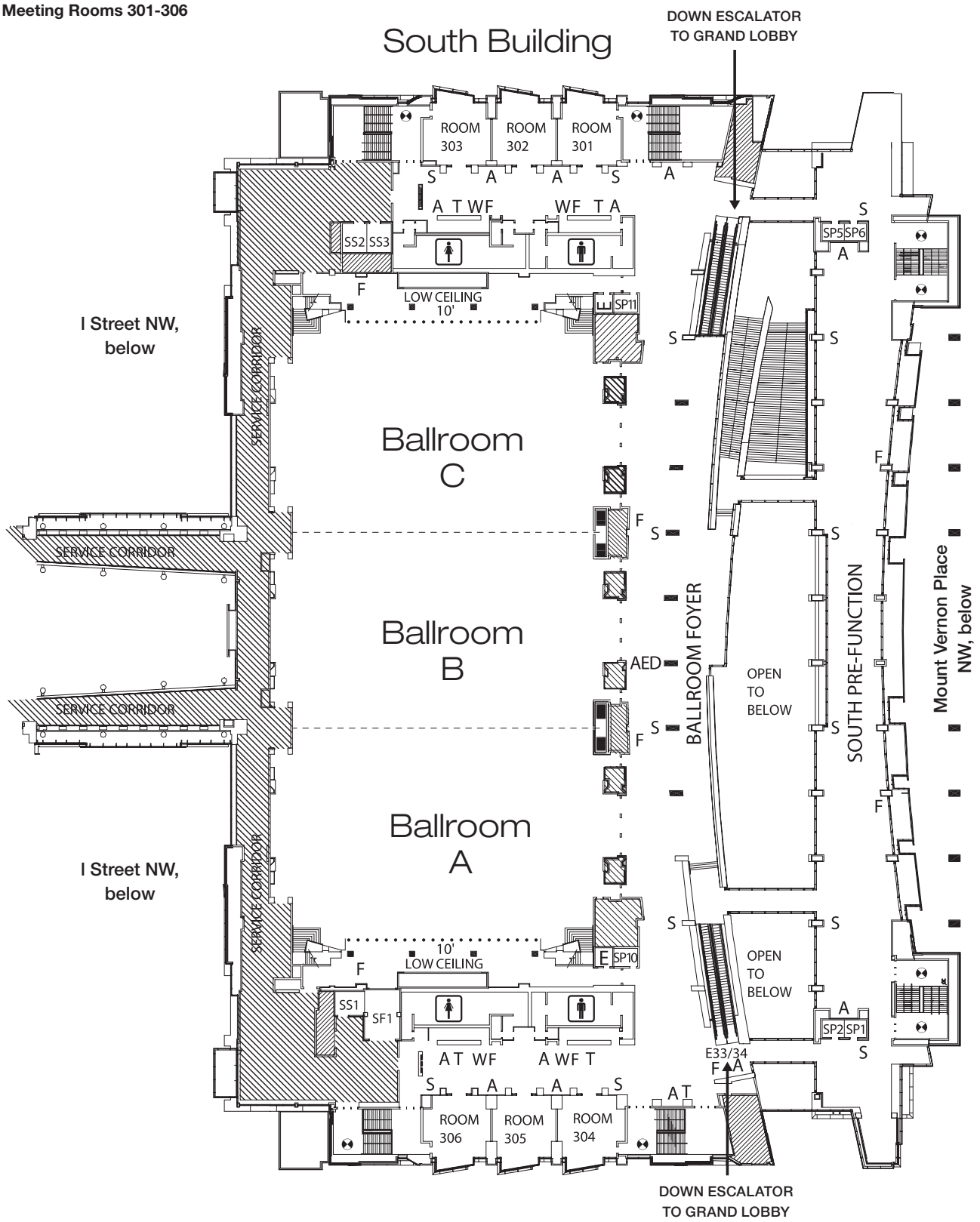


Convention Center Floor Plans

Level 3

Ballrooms A-C

Meeting Rooms 301-306



Neuroscience 2014 — Exhibits and Poster Sessions

Walter E. Washington Convention Center: Halls A–C

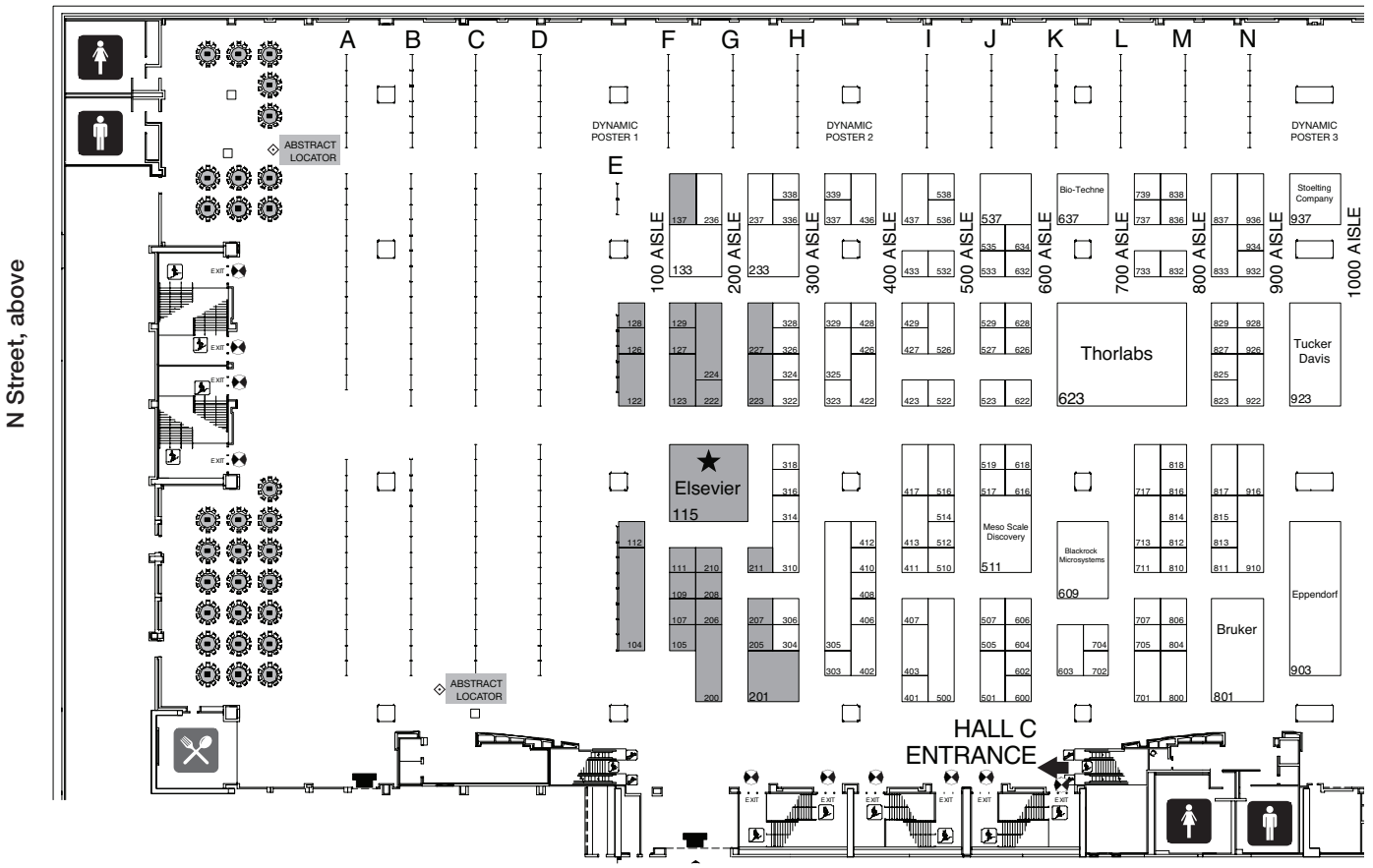
Meeting Dates: November 15–19
Exhibit Dates: November 16–19

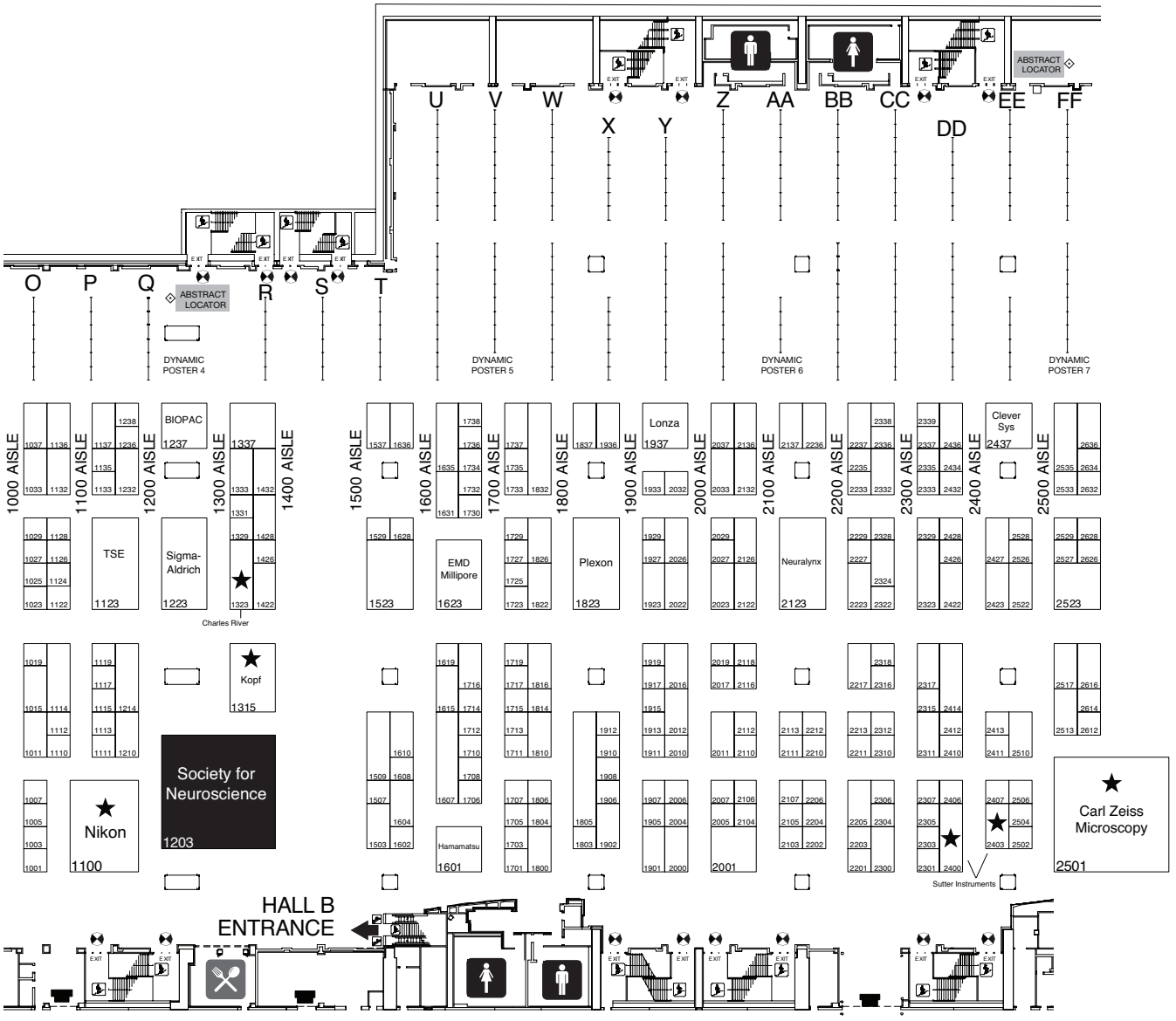
Hall entrances open at noon on Saturday, Nov. 15 and at 7 a.m. on Sunday, Nov. 16 to Wednesday, Nov. 19 for poster presenter setup.

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




ABSTRACT LOCATOR
U V W X Y Z AA BB CC DD EE FF
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DYNAMIC POSTER 5
DYNAMIC POSTER 6
DYNAMIC POSTER 7
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1100 AISLE
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Lonza 1937
Clever Sys 2437
TSE 1123
Sigma-Aldrich 1223
Charles River
EMD Millipore 1623
Plexon 1823
Neuralynx 2123
Kopf 1315
Society for Neuroscience 1203
Nikon 1100
Hamamatsu 1601
Sutter Instruments
Carl Zeiss Microscopy 2501
HALL B ENTRANCE

KEY

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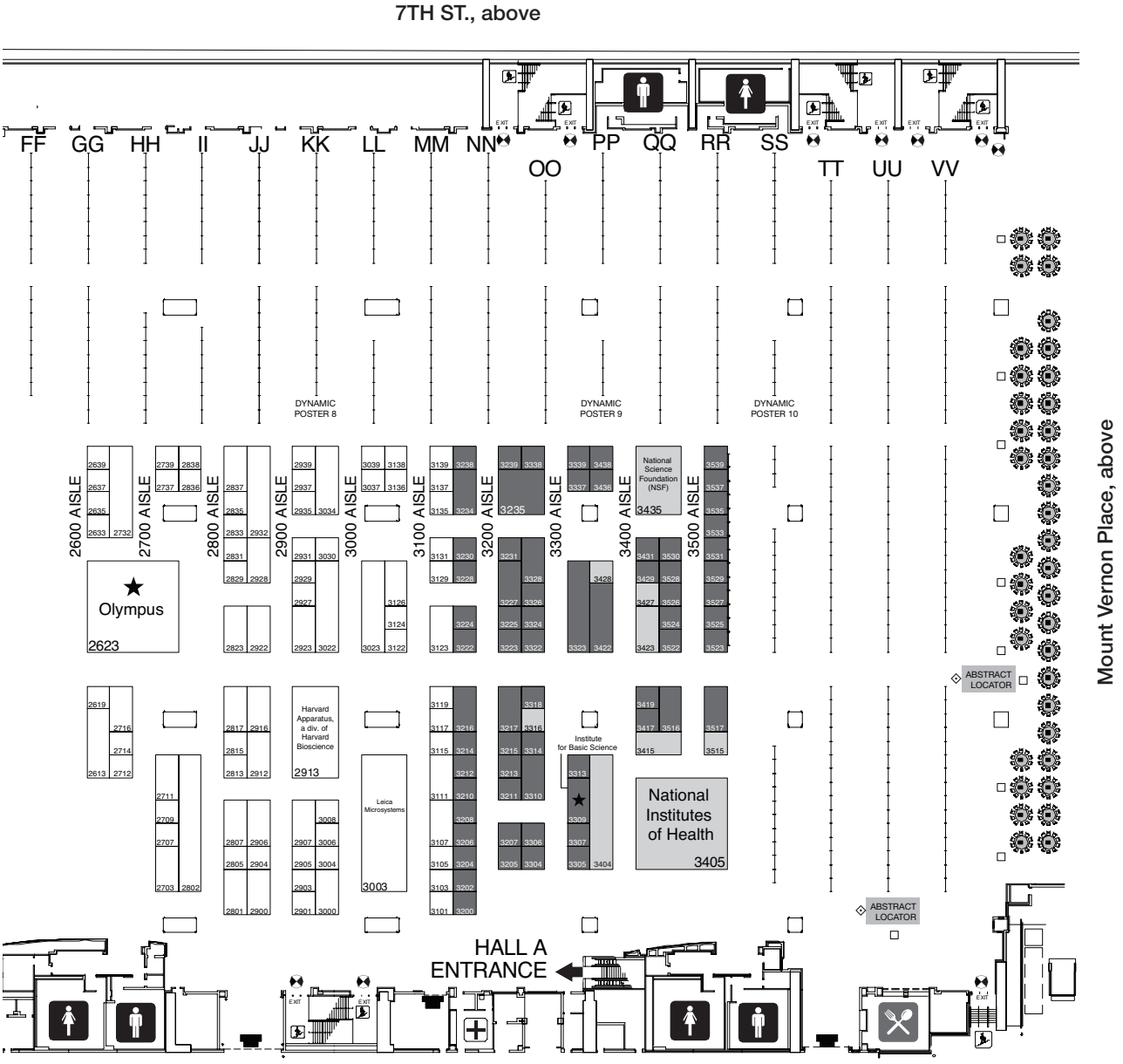

Notes

Notes

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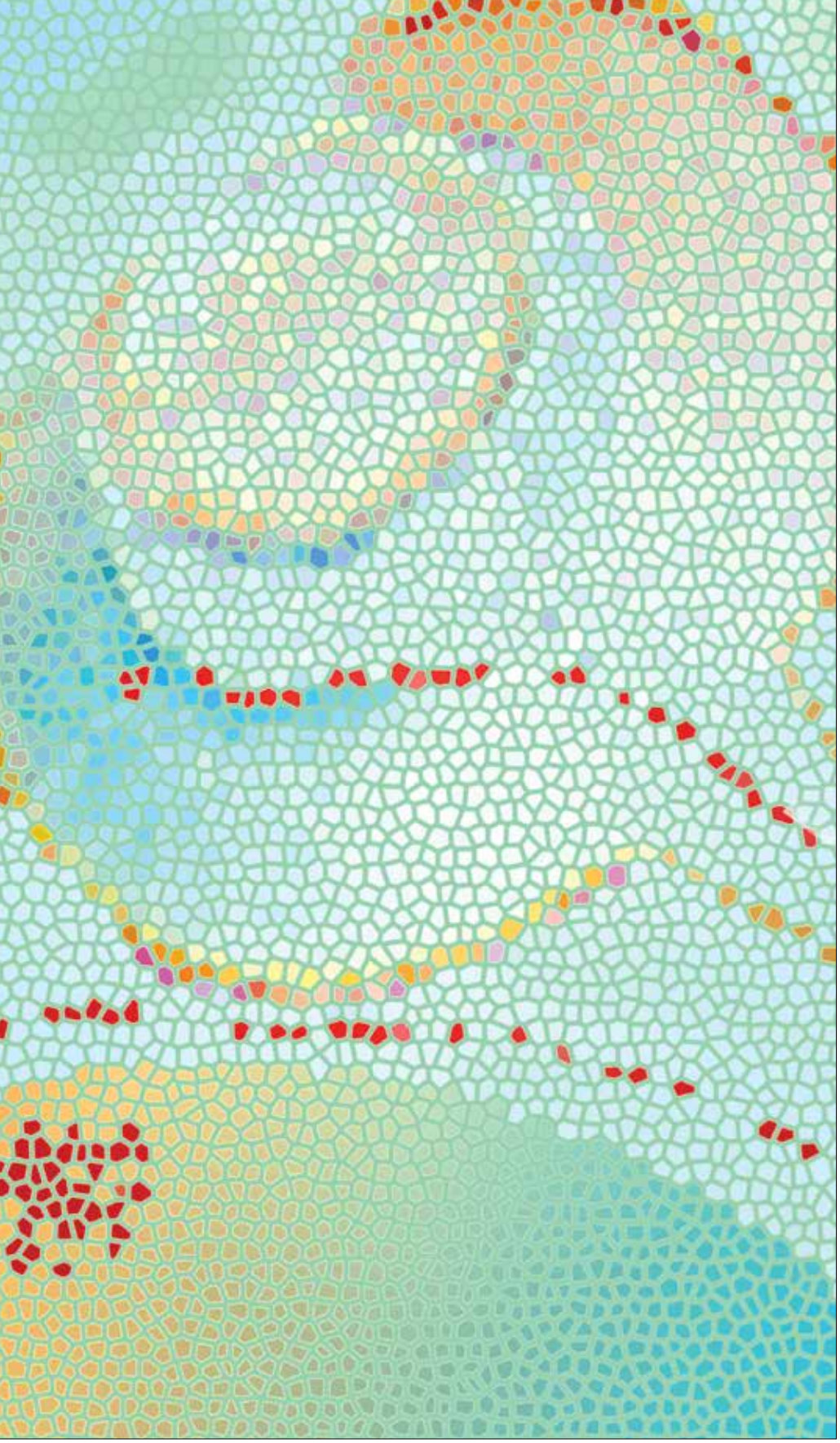
See You In CHICAGO

Neuroscience
2015

October **17–21**



NEUROSCIENCE
2014

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