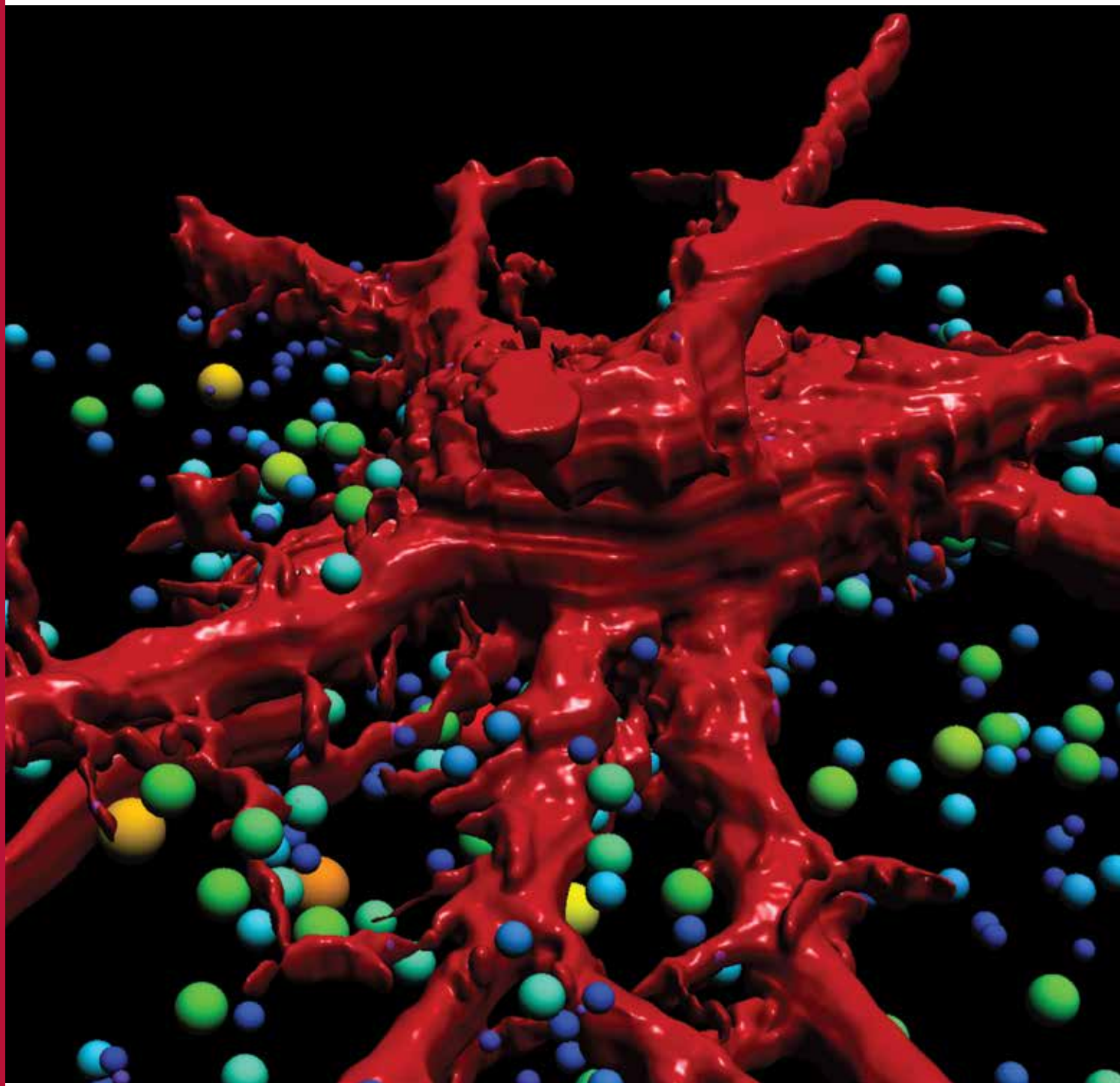
Neuroscience 2016

San Diego | November 12–16

Saturday



Scientific Session Listings 1–97

Society for Neuroscience

Information at a Glance

Important Phone Numbers

Annual Meeting Headquarters Office

Logistics and Programming

Logistics

San Diego Convention Center: Sails Pavilion
(619) 525-6200

Programming

San Diego Convention Center: Sails Pavilion
(619) 525-6205

Volunteer Leadership Lounge

San Diego Convention Center: Room 14A
(619) 525-6235

General Information Booths

San Diego Convention Center

Front of Box Office A, (619) 525-6224
Lobby D, (619) 525-6225
Sails Pavilion, (619) 525-6226

Press Office

Press Room

San Diego Convention Center: Room 15B
(619) 525-6230

Exhibit Management

San Diego Convention Center: Lobby D
(619) 525-6240

First Aid, Hospital and Urgent Care Numbers

First Aid Station

San Diego Convention Center:
Box Office G
(619) 525-6211

Scripps Mercy Hospital

4077 Fifth Avenue
San Diego, CA 92103
(619) 294-8111

Sharp Rees – Stealy Downtown San Diego Urgent Care

300 Fir Street
San Diego, CA 92101
(858) 499-2600

Note: The themes have been updated for Neuroscience 2016

Key to Poster Floor by Themes

Theme

A. Development
B. Neural Excitability, Synapses, and Glia
C. Neurodegenerative Disorders and Injury
D. Sensory Systems
E. Motor Systems
F. Integrative Physiology and Behavior
G. Motivation and Emotion
H. Cognition
I. Techniques
J. History and Education

NOTE: Theme J Posters will be located in Hall B beginning at 1 p.m. on Saturday, November 12, and will remain posted until 5 p.m., Sunday, November 13.

Code of Conduct at SfN Events

SfN is committed to supporting discovery and scientific dialogue, and to fostering a welcoming community in which all scientists are able to contribute fully. The Society asserts that sexual harassment and other harassing behaviors have no place in a healthy scientific enterprise. We expect all attendees, media, speakers, volunteers, organizers, venue staff, guests, and exhibitors at SfN-organized events to help us ensure a safe and positive environment. At the convention center, onsite medical and security personnel are available directly or through the SfN headquarters office.

If attendees experience unwelcome or unsafe situations anywhere in the city, attendees should swiftly contact local authorities (dial 9-1-1), and additional local social services resources are listed in one convenient location at the federal website www.notalone.gov. Any official report of sexual harassment should be brought to the designated Human Resources Officer in the SfN headquarters office at each meeting convention center, or sent via email to **hrofficer@sfn.org.** The HR Officer will facilitate the completion of a report by a complainant. View the entire Code of Conduct at SfN Events statement for more information.

For more information, on SfN's policy, please go to: **sfn.org/Member-Center/Professional-Conduct/Code-of-Conduct-at-SfN-Events**

Cover Image: This neurobiotin-filled hypoglossal motoneuron (red) has been surface rendered to show its 3D structure, including the soma, radiating dendrites, and spinal process. The location of glutamatergic synaptic inputs to the cell are indicated by colored spheres. Image by Fogarty, Kanjhan et al. with the assistance of Luke Hammond.

Matthew J. Fogarty, Refik Kanjhan1, Mark C. Bellingham, and Peter G. Noakes, 2016, *The Journal of Neuroscience*, 36(1): 80-87

Complete Session Listing

Saturday PM

LECTURE *San Diego Convention Center*

001. DIALOGUES BETWEEN NEUROSCIENCE AND SOCIETY - Global Mental Health and Neuroscience: Challenges and Opportunities

Sat. 11:00 AM - 1:00 PM — Ballroom 20

Speaker: S. SAXENA, *World Hlth. Organization.*

Support contributed by: Elsevier

Global mental health is slowly but steadily coming out of the shadows. It is benefiting from advances in neuroscience, but not adequately. The potential is much greater. The lecture will present a background of the current state of mental health in the world and then focus on how a closer collaboration between mental health and neuroscience could enhance knowledge and improve population health. Examples from the areas of autism, substance dependence, psychoses, and dementia will help illustrate this potential.

SYMPOSIUM *San Diego Convention Center*

002. Synaptic Actin Dysregulation: A Convergent Mechanism of Mental Disorders? — CME

Sat. 1:30 PM - 4:00 PM — 6B

Chair: S. H. SODERLING
Co-Chair: Z. YAN

Synaptic actin polymerization governs activity-dependent modulation of excitatory synapses. Many candidate genes for psychiatric and neurodevelopmental disorders encode regulators of signaling to the actin cytoskeleton, suggesting that its disruption is a commonly affected pathway in brain disorders. This symposium will discuss recent experimental findings that strongly support genetic evidence linking the synaptic cytoskeleton to conditions such as schizophrenia and autism spectrum disorders.

1:30 **2.01** Introduction.

1:35 **2.02** Synaptic cytoskeletal disturbances that drive abnormal wiring and behavior. S. H. SODERLING. *Duke Univ. Sch. of Med.*

2:10 **2.03** Targeting actin regulators for autism treatment. Z. YAN. *State Univ. of New York at Buffalo.*

2:45 **2.04** ● Altered regulation of actin dynamics and cortical dendritic spine deficits in schizophrenia. D. LEWIS. *Univ. of Pittsburgh.*

3:20 **2.05** Actin cytoskeleton, NMDA receptor dysfunction, and autism spectrum disorders. E. KIM. *IBS and KAIST.*

3:55 **2.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

003. Autophagy-Lysosomal Mechanism in Neurodegeneration — CME

Sat. 1:30 PM - 4:00 PM — 6A

Chair: Z. YUE
Co-Chair: A. CUERVO

This symposium will present recent advances in autophagy research in neurons and major neurodegenerative diseases. It will provide insight into molecular mechanisms of autophagy control, particularly on subtypes of autophagy that regulate neuronal homeostasis via the clearance of disease protein aggregates and damaged mitochondria. The session will discuss how disease mutants disrupt the autophagy-lysosomal pathway, and strategies of harnessing neuroprotection of autophagy for therapeutic development.

1:30 **3.01** Introduction.

1:35 **3.02** Regulation of autophagy kinases in neurons and neurodegenerative diseases. Z. YUE. *Icahn Sch. of Med. at Mount Sinai.*

2:10 **3.03** Emerging mechanism for neurodegenerative diseases: Ubiquitin signals on cargo promote mitophagy via autophagy receptors. R. YOULE. *Natl. Inst. of Health/ NINDS.*

2:45 **3.04** Chaperone-mediated autophagy and neuronal homeostasis. A. CUERVO. *Albert Einstein Col. of Med.*

3:20 **3.05** Progressive deficits of autophagy-lysosome system in motor neuron degeneration. Z. SHENG. *Natl. Inst. of Health/NINDS.*

3:55 **3.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

004. Is the Prefrontal Cortex Special? Working Memory Across the Cortical Mantle, From Single Units to Neural Ensembles — CME

Sat. 1:30 PM - 4:00 PM — 6F

Chair: J. C. MARTINEZ-TRUJILLO
Co-Chair: C. CONSTANTINIDIS

Working memory (WM) is one of the pillars of cognition. This symposium will offer an updated view of WM coding in primates, with emphasis in the prefrontal cortex. Experts will discuss WM coding in different brain areas of macaques, how the macaque prefrontal cortex encodes WM across the life span, how the prefrontal cortex integrates WMs from different modalities, and how to bridge WM studies in macaques and humans.

1:30 **4.01** Introduction.

1:35 **4.02** Working memory representations by single neurons and neuronal ensembles in the primate brain: Is the prefrontal cortex special? J. C. MARTINEZ-TRUJILLO. *Western Univ.*

2:10 **4.03** Coding of spatial working memory: Specialization of prefrontal cortex and development through adulthood. C. CONSTANTINIDIS. *Wake Forest Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:45 **4.04** The Role of the Ventral Prefrontal Cortex in Auditory and Audiovisual Working Memory. L. M. ROMANSKI. *Univ. of Rochester Sch. of Med.*

3:20 **4.05** Spatial and temporal distribution of visual working memory coding in prefrontal cortex: From monkey electrophysiology to human fMRI. N. SIGALA. *Brighton and Sussex Med. Sch. and Sackler Ctr. for Consciousness Science.*

3:55 **4.06** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

005. Neuronal Circuits Driving Behavior: Invertebrates to Vertebrates — CME

Sat. 1:30 PM - 4:00 PM — 28A

Chair: S. M. WASSERMAN

This minisymposium will focus on how neuronal circuits control complex behaviors from invertebrates to vertebrates. The latest tools being utilized to quantitatively measure behavior and physiology in behaving animals will be discussed. Also, the session will present findings across animal models that may provide molecular, circuit, and neuromodulatory targets for future studies, with the potential to develop therapeutics to benefit those suffering from a wide range of neurological disorders.

1:30 **5.01** Introduction.

1:35 **5.02** Perturbations to worm sleep, weak and strong. D. BIRON. *Univ. of Chicago.*

1:55 **5.03** The neural basis of parasitic behaviors. E. A. HALLEM. *UCLA.*

2:15 **5.04** A neural module for threat display in *Drosophila*. B. J. DUISTERMARS. *Caltech.*

2:35 **5.05** Thermoregulation: What the hungry flies tell us. F. N. HAMADA. *Cincinnati Children's Hosp. Med. Ctr.*

2:55 **5.06** Cached and inferred prediction errors are computed in a common circuit. B. F. SADACCA. *Natl. Inst. On Drug Abuse.*

3:15 **5.07** Behavioral characterization through motion sequencing. S. R. DATTA. *Harvard Univ.*

3:35 **5.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

006. Visceral Autonomic Nerves as Targets for Precision Bioelectronic Medicines — CME

Sat. 1:30 PM - 4:00 PM — 6E

Chair: W. M. GRILL
Co-Chair: A. SRIDHAR

The visceral autonomic nervous system is a largely untapped area to modulate pathophysiology. Many chronic diseases are driven by dysregulation of neural control of end organ function. Bioelectronic medicines are a new treatment modality that correct signals in peripheral nerves to reset feedback control of end organ function in disease. This session will highlight some of the new evidence that links peripheral autonomic nerves to disease and discuss neuromodulation approaches to treat these diseases.

1:30 **6.01** Introduction.

1:35 **6.02** ● Beyond sacral root modulation: How can one modulate the peripheral nerve to impact bladder function? J. HOKANSON. *Duke Univ.*

1:55 **6.03** ● Modulation of sympathetic nervous system for sleep apnea. Y. HSIEH. *Case Western Reserve Univ.*

2:15 **6.04** ● On demand modulation of vagal tone for COPD/ Asthma. B. CANNING. *Johns Hopkins Univ.*

2:35 **6.05** ● Neural insulin sensing as a target for treatment of type 2 diabetes. S. CONDE. *NOVA Univ.*

2:55 **6.06** ● Beyond the vagus anti-inflammatory reflex: Modulating neural signaling for treatment of immune function. P. BLANCOU. *Univ. of Nice.*

3:15 **6.07** ● Sympathetic modulation for treating cardiovascular disorders. J. ARDELL. *Univ. of California Los Angeles.*

3:35 **6.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

007. Homeostasis Versus Motivation in the Battle to Control Food Intake — CME

Sat. 1:30 PM - 4:00 PM — 29D

Chair: E. C. O'CONNOR

Signals that regulate energy homeostasis interact closely with neural circuits of motivation to control food intake. An emerging hypothesis is that transition to maladaptive feeding behavior, as seen in anorexia or obesity, may arise from dysregulation of these interactions. This minisymposium will consider how signals that regulate homeostasis and motivation interact at cellular, synaptic, and circuit levels, and how the outcome of this battle could have relevance for feeding disorders.

1:30 **7.01** Introduction.

1:35 **7.02** Glucose responsive neurons of the paraventricular thalamus control sucrose-seeking behavior. G. LABOUEBE. *Univ. of Lausanne.*

1:55 **7.03** Why did I eat that? Differences in nucleus accumbens function and cue-triggered motivation that contribute to obesity. C. R. FERRARIO. *Univ. of Michigan Med. Sch.*

2:15 **7.04** Hypothalamic neuronal dynamics during hunger and eating. S. XU. *Howard Hughes Med. Inst.*

2:35 **7.05** Lateral hypothalamus orexin glucose-inhibited (GI) neurons drive hedonic feeding during energy deficit. V. H. ROUTH. *Rutgers New Jersey Med. Sch.*

2:55 **7.06** Lateral hypothalamic control of feeding and other motivated behaviors through the midbrain dopamine system. E. H. NIEH. *MIT.*

3:15 **7.07** How insulin and diet modulate inputs to the ventral tegmental area. S. LIU. *Univ. of Calgary.*

3:35 **7.08** Closing Remarks.

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

LECTURE *San Diego Convention Center*

008. Lineage Analyses of Developing CNS Tissues — CME

Sat. 2:00 PM - 3:10 PM — Ballroom 20

Speaker: C. CEPKO, *Howard Hughes Med. Institute, Harvard Med. Sch.*

Lineage analyses describe the progenitor: progeny relationships in developing tissue. Lineage data can rule in, or out, particular models of how a cell achieves its fate, as well as when some of the fate-determining events occur. Lineages can be most definitively tracked using clonal methods, as afforded by retroviral infection. The interpretability of lineage data is further strengthened when mapping is done from identified types of progenitor cells. Recent studies using such methods in the retina and telencephalon will be presented.

LECTURE *San Diego Convention Center*

009. PRESIDENTIAL SPECIAL LECTURE - Tuning Auditory Circuits for Vocal Communication — CME

Sat. 5:15 PM - 6:25 PM — Ballroom 20

Speaker: S. M. N. WOOLLEY, *Columbia Univ.*

Support contributed by: Biogen

Social communication reflects the coordinated development of sensory and motor circuits around signals that convey information. The young brain, learning to communicate with hearing and voice, builds auditory and vocal motor circuits that are functionally coupled to perceive and produce similar signals. This lecture will describe progress made using songbirds to understand how species' identity dictates the capacities and limits of vocal learning, how early experience shapes auditory and vocal circuits, and how species and learning combine to map auditory tuning onto vocal acoustics.

NANOSYMPOSIUM

010. Mechanisms of Neural Reprogramming

Theme A: Development

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

1:00 **10.01** Direct reprogrammed adult human motor neurons for disease modeling and drug identification. M. LIU; T. ZANG; Y. TANG; C. ZHANG*. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

1:15 **10.02** Modeling Parkinson's disease in patient-derived neurons using direct reprogramming. J. DROUIN-OUELLET*; S. LAU; D. RYLANDER OTTOSSON; L. M. COLLINS; W. KUAN; R. A. BARKER; M. PARMAR. *Lund Univ., Univ. of Cambridge.*

1:30 **10.03** A repressive pro-neuronal master regulator. M. MALL*; M. KARETA; S. CHANDA; X. GE; H. AHLENIUS; T. SÜDHOF; M. WERNIG. *Stanford Univ., Lund Univ., Stanford Univ.*

1:45 **10.04** Expression of brain enriched microRNAs opens the neurogenic potential of adult human somatic cells. D. ABERNATHY*; M. MCCOY; W. KIM; A. YOO. *Washington Univ. In St. Louis.*

2:00 **10.05** Origin and development of different astroglial phenotypes in the cerebellum. V. CERRATO*; E. PARMIGIANI; K. LETO; E. FUCÀ; M. FIGUERES-OÑATE; L. LÓPEZ MASCARAQUE; A. BUFFO. *NICO (Neuroscience Inst. Cavalieri Ottolenghi), Dept of Neurosci. Rita Levi Montalcini, Univ. of Turin, Univ. of Basel, Cajal Inst.*

2:15 **10.06** Boosting *in vivo* reprogrammed neurons in the injured adult spinal cord. L. WANG*; Z. SU; W. TAI; X. XU; C. ZHANG. *Univ. of Texas Southwestern Med. Ctr., Second Military Med. Univ., Indiana Univ. Sch. of Med.*

2:30 **10.07** Small molecules efficiently reprogram human astroglial cells into functional neurons. L. ZHANG*; J. YIN; H. YEH; N. MA; G. LEE; X. CHEN; Y. WANG; P. JIN; L. LIN; L. CHEN; G. WU; G. CHEN. *The Pennsylvania State Univ., Pennsylvania State University, Pennsylvania State University, Emory Univ.*

2:45 **10.08** Unraveling the molecular underpinnings of ascl1 and sox2 mediated human brain pericyte-to-neuron lineage conversion. M. KAROW; G. CAMP; S. PERON; A. PATASKAR; C. SCHICHOR; V. TIWARI; B. TREUTLEIN; B. BERNINGER*. *LMU unich, Univ. Med. Ctr. of the Johannes Gutenberg Univ., Max Planck Inst. for Evolutionary Anthrop., IMB, LMU.*

3:00 **10.09** Human bone marrow harbor cells with neural crest-associated characteristics. S. WISLET*; C. COSTE. *Univ. of Liege, Univ. of Liège.*

NANOSYMPOSIUM

011. APP Processing and Metabolism

Theme C: Neurodegenerative Disorders and Injury

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

1:00 **11.01** Functional impact of rare SORL1 mutations observed in early-onset Alzheimer's disease. I. RUDOLPH*; S. CAGLAYAN; O. M. ANDERSEN; T. E. WILLNOW. *Max Delbrueck Ctr. For Mol. Med., Dept. of Biomedicine, Aarhus Univ.*

1:15 **11.02** Retromer complex stabilization reduces pathogenic APP processing and τ phosphorylation in a hiPSC models of sporadic Alzheimer's disease. J. E. YOUNG*; D. BERMAN; L. FONG; S. A. SMALL; G. PETSKO; L. S. B. GOLDSTEIN. *UCSD, Univ. of Washington, Columbia Univ., UCSD, Columbia Univ., Weill Cornell Med.*

1:30 **11.03** Alzheimer's disease associated VPS10P-domain receptors SORCS1 and SORCS3 cooperate to regulate amyloid-β peptide level in the brain. H. JU*; A. SUBKHANGULOVA; A. MALIK; T. BREIDERHOFF; T. E. WILLNOW. *Max Delbruck Ctr. For Mol. Med.*

1:45 **11.04** Primary age-related tauopathy: A genetic model of amyloid resilience? C. MCMILLAN*; E. B. LEE; K. JEFFERSON-GEORGE; V. M. VAN DEERLIN; D. WOLK. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 **11.05** Presenilin1 mutations impair neovascularization and increase vulnerability of brain to ischemia. Y. YOON*; G. VOLOUDAKIS; N. DORAN; L. CHEN; N. K. ROBAKIS; A. GEORGAKOPOULOS. *Icahn Sch. of Med., Icahn Sch. of Med., City Univ. of New York.*

2:15 **11.06** Expression of amyloidogenic secretases implicated in neurodegeneration is altered in astrocytes following infection with Chlamydia pneumoniae. Z. AL-ATRACHE*; A. CADER; S. HINGLEY; D. APPELT. *Philadelphia Col. of Osteo. Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:30 **11.07** Major Aβ degrading enzymes ECE-2 and neprilysin are expressed by distinct populations of GABAergic interneurons in hippocampus and neocortex. J. PACHECO-QUINTO*; E. A. ECKMAN. *Biomed. Res. Inst. of New Jersey.*

2:45 **11.08** Alzheimer's Aβ catabolism: Implications for the mechanisms of brain clearance and amyloid formation. J. GHISO*; E. CABRERA; A. ROSTAGNO. *New York Univ. Langone Med. Ctr.*

3:00 **11.09** ● Amyloid β-peptide modulation of glucose responses and insulin signaling requires endogenous APP. R. D. HENDRIX*; A. M. MOERMAN-HERZOG; W. WANG; S. W. BARGER. *Univ. of Arkansas For Med. Sci., Univ. of Arkansas for Med. Sci., Univ. of Arkansas for Med. Sci., Central Arkansas Veterans Healthcare Syst.*

3:15 **11.10** Identification of two somatostatin receptor subtypes regulating the major amyloid β-degrading enzyme neprilysin. P. NILSSON*; K. SÖRGJERD; N. KAKIYA; M. SEKIGUCHI; A. PETRISH; S. SCHULZ; T. SAITO; T. C. SAIDO. *RIKEN Brain Sci. Inst. - Wako, Universitätsklinikum Jena.*

3:30 **11.11** Investigating the role endosome-to-Golgi trafficking plays in APP biology. A. MUKADAM*; S. Y. BREUSEGEM; M. N. J. SEAMAN. *Univ. of Cambridge, Cambridge Inst. of Med. Res.*

3:45 **11.12** Cytosolic phospholipase A_2 facilitates internalization of amyloid-β in microglia. J. C. LEE*; D. RIDGLEY; T. TENG; L. DONG, 65211; S. TOLBERT; G. SUN. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Univ. of Missouri.*

4:00 **11.13** Mechanisms of neuron to neuron transfer of toxic amyloid-β oligomers via exosomes. M. S. SINHA; A. ANSELL; L. CIVITELLI; C. HILDESJÖ; M. LARSSON; M. INGELSSON; M. HALLBECK*. *Dept. of Pathology, Dept. of Clin. and Exptl. Medicine, Linköping Univ., Dept. of Publ. Hlth. and Caring Sciences, Uppsala Univ., Linkoping Univ.*

NANOSYMPOSIUM

012. Molecular and Neuroimaging Biomarkers for Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 **12.01** Using a single molecule digital analyzer to measure blood based biomarkers for neurodegenerative diseases. J. WANG*; Q. ZHANG; B. ZHENG; J. LAGE; C. STOCKMEIER; T. MOSLEY. *Univ. of Mississippi Med. Ctr., Univ. Mississippi Med. Ctr.*

1:15 **12.02** Blood-based protein variant biomarkers to facilitate presymptomatic diagnosis and staging of Alzheimer's disease. S. M. WILLIAMS*; P. SCHULZ; T. L. ROSENBERRY; R. J. CASELLI; M. R. SIERKS. *Arizona State Univ., Mayo Clin. Col. of Med., Mayo Clin.*

1:30 **12.03** CREB signaling components as blood biomarkers for cognitive function in Alzheimer's disease. N. BARTOLOTTI*; D. A. BENNETT; O. LAZAROV. *Univ. of Illinois At Chicago, Rush Univ. Med. Ctr.*

1:45 **12.04** Comparison of CSF and plasma τ biomarker associations with atrophy on MRI in Alzheimer's disease and mild cognitive impairment. K. D. DETERS*; S. R. RISACHER; K. NHO; S. KIM; J. D. WEST; K. BLENNOW; H. ZETTERBERG; M. W. WEINER; A. J. SAYKIN. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., The Sahlgrenska Acad. at Univ. of Gothenburg, Univ. of California San Francisco.*

2:00 **12.05** Basal forebrain degeneration precedes and predicts the cortical spread of Alzheimer's pathology. T. W. SCHMITZ*; R. N. SPRENG. *Med. Res. Council, Cornell Univ.*

2:15 **12.06** Impact of APOE4 genetic risk on CSF and MRI biomarkers of the neurovascular unit in preclinical Alzheimer's disease. M. D. SWEENEY*; A. MONTAGNE; D. A. NATION; A. P. SAGARE; J. PA; M. G. HARRINGTON; H. C. CHUI; C. Y. LIU; M. LAW; T. L. S. BENZINGER; A. M. FAGAN; J. C. MORRIS; B. V. ZLOKOVIC. *USC, USC, USC, Huntington Med. Res. Inst., USC, USC, USC, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

2:30 **12.07** Aging amygdala sub-nuclei: A high-field magnetic resonance imaging study. A. AGHAMOHAMMADI SERESHKI*; Y. HUANG; F. OLSEN; R. CARTER; N. V. MALYKHIN. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

2:45 **12.08** Effects of ApoE and BDNF polymorphisms on hippocampal subfield volumes in a healthy cognitive aging. S. G. TRAVIS*; Y. HUANG; F. OLSEN; R. CARTER; R. CAMICIOLI; N. V. MALYKHIN. *Univ. of Alberta, Univ. of Alberta.*

3:00 **12.09** Hemodynamic bias in fmri studies of aging. A. ANDERSON*; P. K. DOUGLAS; S. Y. BOOKHEIMER. *UCLA Ctr. For Cognitive Neurosci., UCLA.*

3:15 **12.10** ▲ The superficial white matter in Alzheimer's disease. M. DI PAOLA*; O. PHILLIPS, 00199; S. JOSHI; F. PIRAS; M. ORFEI; M. IORIO; K. NARR; D. SHATTUCK; C. CALTAGIRONE; G. SPALLETTA. *LUMSA Univ., IRCCS Santa Lucia Foundation, Rome, Italy, UCLA, California, USA, IRCCS Santa Lucia Fndn., UCLA, California, USA, Univ. of Rome "Tor Vergata".*

3:30 **12.11** PET imaging of amyloid-β protofibrils with a bispecific antibody-based radioligand. X. T. FANG*; D. SEHLIN; L. CATO; G. HULTQVIST; G. ANTONI; L. LANNFELT; S. SYVÄNEN. *Uppsala Univ., Uppsala Univ., Uppsala Univ. Hosp. PET-Center.*

3:45 **12.12** A novel tool for muscle research: Plasma Extracellular Vesicles enriched for myocytic origin. D. KAPOGIANNIS*; S. BERKOWITZ; E. EITAN; M. P. MATTSON; L. FERRUCCI. *Natl. Inst. on Aging (NIA/NIH), Natl. Inst. on Aging.*

4:00 **12.13** Extracellular vesicle –based biomarkers for Alzheimer's disease in the Baltimore Longitudinal Study of Aging. M. MUSTAPIC*; E. EITAN; S. T. BERKOWITZ; T. C. DIEHL; S. GULYANI; Y. AN; M. P. MATTSON; S. M. RESNICK; E. J. GOETZL; L. FERRUCCI; D. KAPOGIANNIS. *Natl. Institues of Hlth., UCSF Med. Ctr. and the Jewish Home of San Francisco.*

4:15 **12.14** ● Evaluation of cribriform plate morphology in Alzheimer's disease patients and controls. D. W. ETHELL*; R. WOLTJER; L. WOOD. *Western Univ. of Hlth. Sci., Oregon Hlth. Sci. Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

013. Alpha Synuclein in Parkinson's Disease: From Astrocytes to Epigenetics

Theme C: Neurodegenerative Disorders and Injury

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

1:00 **13.01** Aggregation of α-synuclein and TDP-43: Effects of synthetic polymers and substoichiometric concentrations of antibodies. L. BREYDO*; B. NEWLAND; D. MORGAN; V. UVERSKY. *Univ. of South Florida, Leibniz-Institut für Polymerforschung, Byrd Alzheimer's Institute, Morsani Col. of Medicine, Univ. of South Florida.*

1:15 **13.02** Functional interaction of the Parkinson´s disease risk factor RIT2 with α-synuclein. M. VOLTA*; J. OBERGASTEIGER; C. CORTI; A. LAVDAS; C. ASCIONE; C. ÜBERBACHER; P. P. PRAMSTALLER; A. A. HICKS. *EURAC Res.*

1:30 **13.03** α-Synunclein membrane association induces a mitochondrial fragmentation phenotype in a human Parkinson's disease models. V. POZO DEVOTO; N. DIMOPOULOS; M. ALLOATTI; T. SAEZ; G. OTERO; L. CROMBERG; G. SEVLEVER; T. L. FALZONE*. *IBCN-CONICET, Intl. Clin. Res. Ctr., FLENI, IBYME-CONICET, Univ. of Buenos Aires.*

1:45 **13.04** ● Analysis of microarray data using a PD cellular pathway map reveals early effects of α-synuclein on PD pathogenesis. A. ASHRAFI*; P. GARCIA; M. OSTASZEWSKI; P. GAWRON; J. JOHNSTON; L. MCCONLOGUE; W. ZAGO; E. GLAAB; R. BALLING; M. BUTTINI; S. GEBEL. *Luxembourg Ctr. For Systems Biomedicine, Elan Pharmaceuticals, Prothena Biosci.*

2:00 **13.05** High-content siRNA screen identifies cellular modifiers of pre-formed α-synuclein fibril uptake. R. KUMARAN*; D. FERNANDEZ; J. W. WERNER-ALLEN; E. BUEHLER ; A. BAX; M. LAL-NAG; M. R. COOKSON. *NIA, NIH, NCATS, NIH, NIDDK, NIH.*

2:15 **13.06** ● Structurally distinct strains of α-synuclein fibrils differentially seed Lewy Body-like inclusion formation and impair autophagy in a cell model of PD. A. PANDRAUD*; C. KERRIDGE; P. CRAIG; S. BOSE. *Eli Lilly and Co.*

2:30 **13.07** Accumulation and spreading of α-synuclein oligomers in human astrocytes. J. ROSTAMI*; S. HOLMQVIST; V. LINDSTRÖM; J. SIGVARDSON; M. INGELSSON; J. BERGSTRÖM; L. ROYBON; A. ERLANDSSON. *Uppsala Univ., Lund Univ., BioArctic Neurosci. AB.*

2:45 **13.08** Accumulation of α-synuclein in cultured astrocytes can be prevented by oligomer selective antibodies. A. ERLANDSSON*; G. GUSTAFSSON; E. NORDSTRÖM; L. LANNFELT; M. INGELSSON; J. BERGSTRÖM; V. LINDSTRÖM. *Uppsala Univ., BioArctic Neurosci. AB.*

3:00 **13.09** Phenotypic analysis of A53T SNCA iPSC-derived dopaminergic neurons. F. ZAMBON*; B. RYAN; H. FERNANDES; H. BOOTH; O. CORDERO LLANA; W. HAENSELER; J. VOWLES; S. COWLEY; R. WADE-MARTINS. *Univ. of Oxford, Univ. of Oxford.*

3:15 **13.10** α-synuclein enhances histone H3K9 methylation. N. SUGENO*; S. JÄCKEL; A. VOIGT; P. KAHLE. *Hertie Inst. For Clin. Brain Res., Tohoku Univ., Hertie Inst. for Clin. Brain Res. and German Ctr. for Neurodegenerative Dis., RWTH Univ. Clin. Aachen.*

3:30 **13.11** Uptake of misfolded α-synuclein oligomers and transmission to adjacent cells. A. TANDON*; M. M. MARANO; S. SRI RENGANATHAN; W. P. FLAVIN; E. M. CAMPBELL; P. E. FRASER. *Univ. of Toronto, Loyola Univ.*

3:45 **13.12** Defective endoplasmic reticulum dynamics and its selective autophagy in synucleinopathies. Y. C. WONG*; D. KRAINC. *Northwestern Univ.*

4:00 **13.13** α synuclein overexpression within the enteric nervous system impairs colonic contractility and motility. M. J. BENSKEY*; B. D. GULBRANSEN; X. BIAN; N. KUHN; J. J. GALLIGAN; F. P. MANFREDSSON. *Michigan State Univ., Michigan State Univ., Michigan State Univ., Michigan State Univ., Mercy Hlth. St. Mary's.*

NANOSYMPOSIUM

014. Movement Disorders

Theme C: Neurodegenerative Disorders and Injury

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

1:00 **14.01** ● Sustained suppression of huntingtin mRNA and protein throughout the non-human primate brain after intrathecal administration of antisense oligonucleotides. H. B. KORDASIEWICZ*; K. M. IKEDA-LEE; T. ZANARDI; M. STEPHAN-GUELDNER; D. NORRIS; A. SMITH; R. LANE; C. F. BENNETT; E. SWAYZE. *Ionis Pharmaceuticals, Hoffmann-La Roche AG.*

1:15 **14.02** Salivary Biomarkers for Huntington's disease. E. A. THOMAS*; A. AIKIN; S. PARK; A. HAQUE; M. GARZA; J. COREY-BLOOM. *The Scripps Res. Inst., The Scripps Res. Inst., UCSD.*

1:30 **14.03** ● Whole brain imaging of a walking patient in real-time: Potential and promise of a wearable PET scanner. J. A. BREFCZYNSKI-LEWIS*; A. STOLIN; C. BAUER; M. MANDICH; P. KINAHAN; J. QI; S. DOLINSKY; M. RISHEL; S. MAJEWSKI. *West Virginia Univ., Univ. of Washington, Univ. of California, Davis, GE Global Res., Univ. of Virginia.*

1:45 **14.04** Assessing the protein quality control system in the Huntington disease model R6/2 using a luciferase-based sensor. E. SCHULZ-TRIEGLAFF*; R. KLEIN; I. DUDANOVA. *Max Planck Inst. of Neurobio.*

2:00 **14.05** *In vivo* evidence for a moving Huntingtin Rab4 vesicle complex during axonal transport. S. GUNAWARDENA*; J. WHITE, 14221; K. ZIMMERMAN; H. HOFMAR-GLENNON. *SUNY At Buffalo, The State Univ. of New York at Buffalo.*

2:15 **14.06** The MID1 protein is a regulator of several CAG repeat mRNAs. S. KRAUSS*; N. GRIESCHE; J. SCHILLING; V. PESCH; S. WEBER; M. ROHM. *DZNE / German Ctr. of Neurodegenerative Dis.*

2:30 **14.07** Cell-intrinsic effects of mutant HTT in oligodendroglial cells contribute to myelination abnormalities and behavioural deficits in a mouse model of Huntington disease. C. FERRARI BARDILE*; M. GARCIA-MIRALLES; N. CARON; R. T. Y. TEO; M. R. HAYDEN; M. A. POULADI. *Translational Lab. In Genet. Med. and, Ctr. for Mol. Med. and Therapeut.*

2:45 **14.08** Presynaptic alterations in corticostriatal synapses in Huntington's disease model. C. BUREN*; A. SMITH-DIJAK; M. E. SCHMIDT; M. R. HAYDEN; L. A. RAYMOND. *The Univ. of British Columbia, The Univ. of British Columbia.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 **14.09** Sirt1 neuroprotection in spinocerebellar ataxia type 7 neurodegeneration involves restoration of proper calcium homeostasis. C. STOYAS*; B. DAVID; A. SAVTCHENKO; C. C. NIU; J. W. WARD; T. GAASTERLAND; F. XIE; M. MERCOLA; V. G. SHAKKOTTAI; A. R. LA SPADA. *UCSD, Univ. of Michigan, Stanford Univ., UCSD.*

3:15 **14.10** Withdrawn.

NANOSYMPOSIUM

015. Olfaction: Sensation and Second Order Representation

Theme D: Sensory Systems

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

1:00 **15.01** Concentration change detection in the olfactory bulb. A. PARABUCKI; A. BIZER; G. MORRIS; M. SMEAR; R. SHUSTERMAN*. *Univ. of Haifa, Univ. of Oregon.*

1:15 **15.02** Glomerulus-centric exploration of the chemical map in the olfactory bulb. M. SCHMUKER*; J. SOELTER; J. SCHUMACHER; H. SPORS. *Univ. of Sussex, Freie Univ. Berlin, Max-Planck Inst. for Biophysics, Justus-Liebig-University.*

1:30 **15.03** Arc-transcribing accessory olfactory bulb internal granule cells increase their excitability through intrinsic mechanisms following intermale aggression. H. L. CANSLER*; M. A. MAKSIMOVA; J. P. MEEKS. *Univ. of Texas Southwestern Med. Ctr.*

1:45 **15.04** A robust feedforward model of the olfactory system. Y. ZHANG*; T. SHARPEE. *UCSD & Salk.*

2:00 **15.05** Sampling mode- and concentration-invariant temporal odor coding by airflow-driven neuronal oscillations. T. IMAI*; R. IWATA. *RIKEN CDB.*

2:15 **15.06** Fecal bile acids are potent activators of the accessory olfactory system. W. I. DOYLE*; J. A. DINSER; H. L. CANSLER; X. ZHANG; D. D. DINH; N. S. BROWDER; I. M. RIDDINGTON; J. P. MEEKS. *Univ. of Texas Southwestern Med. Ctr., Univ. of Texas at Austin.*

2:30 **15.07** Odor detection by newly generated mouse olfactory sensory neurons *in vivo*. C. E. CHEETHAM*. *Carnegie Mellon Univ.*

2:45 **15.08** Hormonal modulation of pup odor detection by the vomeronasal system in mice. F. PAPES*; T. S. NAKAHARA; P. H. M. NETTO. *Univ. of Campinas (UNICAMP).*

3:00 **15.09** Acetylcholine rapidly enhances habituated olfactory bulb odor responses and modulates odor salience. M. C. OGG*; M. BENDAHMANE; M. L. FLETCHER. *Univ. of Tennessee Hlth. Sci. Ctr.*

3:15 **15.10** Hormonal control of olfactory sensitivity alters behavior. S. DEY*; L. STOWERS. *The Scripps Res. Inst., The Scripps Res. Inst.*

3:30 **15.11** A family of non-GPCR chemosensors defines an alternative logic for mammalian olfaction. P. L. GREER*; D. BEAR; J. LASSANCE; M. BLOOM; T. TSUKAHARA; S. PASHKOVSKI; F. MASUDA; A. NOWLAN; R. KIRCHNER; H. HOKSTRA; S. R. DATTA. *Harvard Med. Sch., Harvard Univ., HMS, Harvard Sch. of Publ. Hlth., Harvard Med. Sch.*

3:45 **15.12** Role of inhibition in the antennal lobe: Gain control and odor invariance across concentrations. E. MARACHLIAN*; A. NALLY; R. HUERTA; F. LOCATELLI. *IFIByNE CONICET-University of Buenos Aires, Dept. de Fisiología, Biología Mol. y Celular, FCEyN , UBA, Dept. de Física, FCEyN , UBA, UCSD.*

NANOSYMPOSIUM

016. Distinct Approaches in the Study of Emotion: Integrative Informatics, Real Time fMRI, and Functional Connectivity

Theme G: Motivation and Emotion

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

1:00 **16.01** Crowd sourced development and validation of neurocomputational models of social and affective processes. L. CHANG*; A. BURNASHEV; T. WAGER. *Dartmouth Col., Univ. of Colorado Boulder.*

1:15 **16.02** Evaluation of full brain parcellation schemes using the NeuroVault database of statistical maps. K. J. GORGOLEWSKI*; A. TAMBINI; J. DURNEZ; V. V. SOCHAT; J. WEXLER; R. A. POLDRACK. *Stanford Univ., UC Berkeley.*

1:30 **16.03** Large-scale spatiosemantic topic modeling of the human brain. T. YARKONI*; T. RUBIN; S. KOYEJO; M. N. JONES; R. POLDRACK. *Univ. of Texas at Austin, Indiana Univ., Stanford Univ.*

1:45 **16.04** Quantifying cerebral contributions to pain beyond nociception: A mega-analytic approach. C. WOO*; L. SCHMIDT; A. KRISHNAN; M. JEPMA; M. ROY; M. LINDQUIST; L. ATLAS; T. WAGER. *Univ. of Colorado Boulder, Ecole Normale Supérieure, Brooklyn Col. of the City Univ. of New York, Leiden Univ., Concordia Univ., Johns Hopkins Univ., NIH.*

2:00 **16.05** Bridging psychology and genetics using large-scale spatial analysis of neuroimaging and neurogenetic data. A. S. FOX*; L. J. CHANG; K. J. GORGOLEWSKI; T. YARKONI. *Univ. of California - Davis, Dartmouth Col., Stanford, Univ. of Texas - Austin.*

2:15 **16.06** Atomic neuroscience, information processing and a candidate nexus for consciousness. E. L. OHAYON*; A. LAM. *Neurolinx Res. Inst.*

2:30 **16.07** Modeling spontaneous emotion dynamics during resting-state fMRI. K. S. LABAR; P. A. KRAGEL*; A. R. KNODT; A. R. HARIRI. *Duke Univ., Univ. Of Colorado At Boulder.*

2:45 **16.08** Classification of emotions from brain connectivity patterns. H. P. SAARIMÄKI*; E. GLEREAN; D. SMIRNOV; H. MYNTTINEN; I. P. JÄÄSKELÄINEN; M. SAMS; L. NUMMENMAA. *Aalto Univ.*

3:00 **16.09** ● Increased global interaction across the brain's functional modules during cognitive emotion regulation. F. BRANDL*; S. MULEJ BRATEC; X. XIE; A. M. WOHLSCHLÄGER; V. RIEDL; C. MENG; C. SORG. *Technische Univ. München.*

3:15 **16.10** Direct modulation of aberrant social brain network connectivity in Autistic Spectrum Disorder through NeuroFeedback. M. RAMOT*; S. KIMMICH; J. GONZALEZ-CASTILLO; H. POPAL; E. WHITE; A. MARTIN. *NIH/NIMH.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

017. Medial Temporal Lobe Subregion Imaging in Normal and Pathological Memory

Theme H: Cognition

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

1:00 **17.01** Unravelling subfields of the hippocampal head with 7T MRI: Leveraging the dark band. J. DEKRAKER*; K. FERKO; A. KHAN; S. KOHLER. *Western University, Brain and Mind Inst., Western Univ., Brain and Mind Inst., Robarts Res. Inst.*

1:15 **17.02** ● A harmonized protocol for *in vivo* human medial temporal lobe subfield segmentation: Initial results of the 3 tesla protocol for the hippocampal body. L. WISSE*; A. M. DAUGHERTY; R. K. OLSEN; R. S. C. AMARAL; D. BERRON; V. A. CARR; A. EKSTROM; P. KANEL; G. A. KERCHNER; S. G. MUELLER; J. B. PLUTA; C. E. STARK; T. A. STEVE; L. WANG; M. A. YASSA; P. A. YUSHKEVICH; R. LA JOIE. *Univ. of Pennsylvania, Univ. of Illinois Urbana-Champaign, Rotman Res. Inst., McGill Univ., Otto-von-Guericke Univ., Stanford Univ., Univ. of California Davis, Florida State Univ., Stanford Univ. Sch. of Med., Univ. of California San Francisco, Univ. of California Irvine, Univ. of Alberta, Northwestern Univ. Feinberg Sch. of Med.*

1:30 **17.03** Mapping the structural and functional network architecture of the medial temporal lobe using 7T MRI. P. SHAH*; D. S. BASSETT; J. A. DETRE; J. M. STEIN; M. A. ELLIOTT; J. PLUTA; E. VALENCIANO; M. DAFFNER; L. E. MANCUSO; C. COTO; L. E. M. WISSE; B. LITT; K. A. DAVIS; S. R. DAS. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:45 **17.04** Distinct and complementary contributions of hippocampal subfields and neocortical regions to source memory and item-level pattern separation. Z. REAGH*; R. F. STEVENSON; A. P. CHUN; E. A. MURRAY; M. A. YASSA. *Univ. of California Irvine Dept. of Neurobio. and Behavior.*

2:00 **17.05** ● Improving the concurrent validity of automated hippocampal subfield segmentation in older adults by direct comparison to manual tracing. A. R. BENDER*; A. KERESZTES*; N. C. BODAMMER; N. RAZ; M. WERKLE-BERGNER; Y. SHING; S. KÜHN; U. LINDENBERGER. *Max Planck Inst. for Human Develop., Wayne State Univ., Univ. of Stirling, Univ. Clin. Hamburg-Eppendorf, Max Planck UCL Ctr. for Computat. Psychiatry and Ageing Res., European Univ. Inst.*

2:15 **17.06** Advanced age, vascular risk and inflammation exacerbate differential shrinkage of hippocampal subfields in healthy adults: A two-year longitudinal study. A. M. DAUGHERTY*; A. R. BENDER; Q. YU; A. T. SHAFER; M. ARSHAD; N. OFEN; N. RAZ. *Univ. of Illinois, Urbana-Champaign, Max Planck Inst. for Human Develop., Wayne State Univ., Wayne State Univ., Wayne State Univ., Wayne State Univ.*

2:30 **17.07** Relationship between episodic memory performance and hippocampal subfields volumes in healthy cognitive aging: High resolution magnetic resonance imaging study. N. V. MALYKHIN*; S. TRAVIS; Y. HUANG; F. OLSEN; R. CARTER. *Univ. of Alberta, Univ. of Alberta.*

2:45 **17.08** Hippocampal subfield volumes and memory: Investigating memory storage in healthy ageing. H. K. ISOTALUS*; A. R. WEARN; B. MCCANN; M. J. KNIGHT; D. TSIVOS; R. A. KAUPPINEN; E. J. COULTHARD. *Univ. of Bristol, Univ. of Bristol, North Bristol Trust.*

3:00 **17.09** Volume reductions in the CA1 hippocampal subfield, perirhinal and anterolateral entorhinal cortices are associated with preclinical cognitive decline: Implications for dementia screening. R. K. OLSEN*; L. YEUNG; A. NOLY-GANDON; M. D'ANGELO; A. KACOLLJA; V. M. SMITH; J. D. RYAN; M. D. BARENSE. *Rotman Res. Inst., Univ. of Toronto.*

3:15 **17.10** τ binding measured using pet imaging correlates with mtl subregional atrophy and episodic memory performance in Alzheimer's disease. S. DAS*; J. PHILLIPS; L. WISSE; G. STOCKBOWER; K. TERNES; C. MCMILLAN; P. YUSHKEVICH; M. GROSSMAN; I. NASRALLAH; D. WOLK. *Univ. of Pennsylvania.*

3:30 **17.11** Hippocampus and subfield volumes are associated with CSF β-amyloid and phospho-τ and their interaction in asymptomatic individuals with parental history of Alzheimer's disease. C. L. TARDIF*; G. A. DEVENYI; P. ROSA-NETO; J. POIRIER; J. BREITNER; M. CHAKRAVARTY; T. PREVENT-AD WORKING GROUP. *Douglas Mental Hlth. Inst., Douglas Mental Hlth. Inst.*

NANOSYMPOSIUM

018. Neural Mechanisms of Language

Theme H: Cognition

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

1:00 **18.01** The representation of semantic information in the human brain during listening and reading. F. IMAMOGLU*; A. G. HUTH; J. L. GALLANT. *Univ. of California, Intl. Computer Sci. Inst., Univ. of California, Univ. of California.*

1:15 **18.02** Similarity of social attribution to abstract, dynamic shapes predicts similarity of neural responses in default mode network. M. NGUYEN*; T. VANDERWAL; J. CHEN; U. HASSON. *Princeton Univ., Yale Univ., Princeton Univ.*

1:30 **18.03** Explicit retrieval of visual and non-visual properties of concrete entities: Involvement of superior temporal sulcus and anterior inferior frontal gyrus. A. G. LIUZZI*; P. DUPONT; R. PEETERS; S. DE DEYNE; G. STORMS; R. VANDENBERGHE. *KU Leuven / Lab. for Cognitive Neurol., Univ. Hosp. Leuven, KU Leuven / Lab. for Exptl. Psychology, Univ. Hosp. Leuven.*

1:45 **18.04** Neural tuning to low level features of complex sound in posterior superior temporal gyrus and beyond. J. BEREZUTSKAYA*; Z. V. FREUDENBURG; U. GÜÇLÜ; M. A. J. VAN GERVEN; N. F. RAMSEY. *Brain Ctr. Rudolf Magnus, Univ. Med. Cen, Donders Inst. for Brain, Cognition and Behaviour, Radboud Univ. Nijmegen.*

2:00 **18.05** Face and language processes are integrated by a neural hub including the subcentral area. J. HIRSCH*; J. A. NOAH; X. ZHANG; S. DRAVIDA. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med., Univ. Col. London.*

2:15 **18.06** Using a novel Local Heterogeneity Regression method to index orthographic lexical representations. J. J. PURCELL*; B. RAPP. *Johns Hopkins Univ.*

2:30 **18.07** Whole-brain fMRI activity at a high temporal resolution: A novel analytic technique. N. JANSSEN*; J. HERNÁNDEZ CABRERA. *Univ. De La Laguna, Inst. of Biomed. Technologies, Basque Ctr. for Cognition, Brain and Language.*

2:45 **18.08** The visual word form area is highly specialized for processing real words. W. D. STEVENS*; N. KHAN; D. J. KRAVITZ; C. S. PENG; M. H. TESSLER; A. MARTIN. *York Univ., NIH.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 **18.09** Abstract concepts and neuroplasticity in bilinguals and multilinguals. M. ORKODASHVILI*. *Vanderbilt Univ.*

3:15 **18.10** Longitudinal decline in speech production in Lewy body spectrum disorder. S. ASH*; C. JESTER; K. FIRN; C. YORK; N. MIN; O. L. KOFMAN; C. T. MCMILLAN; M. GROSSMAN. *Univ. Pennsylvania Sch. Med.*

3:30 **18.11** Perception of non-native sounds in a second language: Electrophysiological evidence of neuroplasticity in the phonological system. K. HEIDLMAYR*; E. FERRAGNE; F. ISEL. *Paris Diderot – Sorbonne Paris Cité Univ., Univ. Paris Ouest Nanterre la Défense – Paris Lumières.*

NANOSYMPOSIUM

019. Genetic Techniques

Theme I: Techniques

Sat. 1:00 PM – *San Diego Convention Center*, 25A

1:00 **19.01** Somatic mutation in single human neurons tracks developmental and transcriptional history. M. B. WOODWORTH*; M. A. LODATO; S. LEE; G. D. EVRONY; B. K. MEHTA; A. KARGER; S. LEE; T. W. CHITTENDEN; A. M. D'GAMA; X. CAI; L. J. LUQUETTE; E. LEE; P. J. PARK; C. A. WALSH. *Children's Hosp. Boston, Harvard Med. Sch., Harvard Med. Sch.*

1:15 **19.02** Contributions of LINE-1 retrotransposons to diversity in the primates. A. M. DENLI*; I. NARVAIZA; B. E. KERMAN; M. PENA; C. BENNER; M. C. N. MARCHETTO; J. K. DIEDRICH; A. ASLANIAN; J. MA; J. J. MORESCO; L. MOORE; T. HUNTER; A. SAGHATELIAN; F. H. GAGE. *Salk Inst., Istanbul Medipol Univ. Sch. of Med.*

1:30 **19.03** L1-associated genomic regions are mutated in somatic cells of the healthy human brain. J. A. ERWIN*; A. C. M. PAQUOLA; R. LASKEN; F. H. GAGE. *Salk Inst., JCVI.*

1:45 **19.04** Early life experience drives somatic mosaicism of the mouse brain. T. A. BEDROSIAN*; C. QUAYLE; N. NOVARESI; E. JENNIFER; A. PAQUOLA; F. H. GAGE. *Salk Inst. for Biol. Studies.*

2:00 **19.05** Somatic genomic variation in developing human brain. A. ABYZOV; T. BAE; J. MARIANI; L. TOMASINI; A. AMIRI; B. ZHOU; D. FRANJIC; N. SESTAN; A. E. URBAN; F. M. VACCARINO*. *Mayo Clin., Yale Univ., Stanford Univ., Yale Univ.*

2:15 **19.06** Very-deep whole-genome sequencing based detection and analysis of mosaic transposable element insertions in human brain tissue. A. E. URBAN*; X. ZHU; B. ZHOU; R. PATTNI; A. FISTON-LAVIGNE; D. PETROV; M. SNYDER; D. LEVINSON. *Stanford Univ., Stanford Univ., Univ. of Montpellier.*

2:30 **19.07** DNA double strand breaks in human induced pluripotent stem cell-derived neurogenesis. N. MICHEL*; U. B. MAJUMDAR; W. M. CLARK; B. BANERJEE; M. J. MCCONNELL. *Univ. of Virginia, Univ. of Virginia, Univ. of Virginia, Univ. of Virginia.*

2:45 **19.08** Gene regulation in human iPSC-derived organoids. A. AMIRI*; G. COPPOLA; S. SCUDERI; D. FRANJIC; S. LIU; A. SZEKELY; N. SESTAN; M. GERSTEIN; S. WEISSMAN; F. M. VACCARINO. *Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

3:00 **19.09** DNA methylation differences between two major neuronal subtypes in the human prefrontal cortex. A. KOZLENKOV; P. ROUSSOS; M. WANG; B. ZHANG; Y. L. HURD; S. RUDCHENKO; M. BIBIKOVA; B. KLOTZLE; E. V. KOONIN; M. WEGNER; S. DRACHEVA*. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Hosp. for Special Surgery, Illumina, Inc., NIH, Friedrich-Alexander Univ. Erlangen-Nürnberg, James J Peters VA Med. Ctr.*

3:15 **19.10** Functional genomics of human brain development and autism spectrum disorder. N. SESTAN*; S. POCHAREDDY; M. B. GERSTEIN; A. C. NAIRN; M. STATE. *Yale Univ. Sch. Med., Univ. of California San Francisco.*

3:30 **19.11** Molecular phenotyping of human iPSC organoids using CLARITY and 2-photon microscopy. S. TOMASI*; S. SCUDERI; A. AMIRI; G. G. ALTOBELLI; J. MARIANI; C. DAMBROT; G. COPPOLA; F. M. VACCARINO. *Yale Univ.*

3:45 **19.12** Histone modification profiling in human brain. S. AKBARIAN*; Y. JIANG; M. KUNDAKOVIC; D. KAVANAGH; M. FROMER; S. SIEBERTS; B. LIPSKA; M. PETERS; P. SKLAR. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, SAGE Bionetworks, Natl. Inst. of Mental Hlth.*

4:00 **19.13** An automated platform for single-cell electrophysiology and perturbation *in vivo*. L. LI*; B. OUELLETTE; W. A. STOY; E. GARREN; T. DAIGLE; C. FOREST; H. ZENG. *Allen Inst. For Brain Sci., Georgia Inst. of Technol.*

THEME J POSTER *San Diego Convention Center*

020. History of Neuroscience

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—San Diego Convention Center, Halls B-H

1:00 MMM1 **20.01SA** Strange serendipities in the history of neuroscience. L. KRUGER. *UCLA Geffen Sch. of Med.*

2:00 MMM2 **20.02SA** The weber test for hearing - not a straightforward eponymous term. B. W. BAKKUM. *Illinois Coll Optometry.*

3:00 MMM3 **20.03SA** Historical analysis of the role of theory in the development of neuroscience. J. PORTES. *Columbia Univ.*

4:00 MMM4 **20.04SA** Neurogenesis in the adult brain: A history of findings from neuroscience research. K. CHANDLER; N. SALMASO. *Carleton Univ., Yale Univ.*

1:00 MMM5 **20.05SA** Hans berger The founder of human encephalography. M. F. KIRMANI; E. FONKEM; B. F. KIRMANI, Esq; M. A. A. NAMBOODIRI, PhD. *Meridian IB World Sch., Scott and White Neurooncology, Baylor Scott and White Health/ Texas A& M Univ. HSC Coll of Med., T, Scott and White Epilepsy Center, Baylor Scott and White Health/ Texas A& M Univ. HSC Coll of Med., Uniformed Services Univ. of Hlth. Sci.*

2:00 MMM6 **20.06SA** The history of the basal ganglia. A. PARENT. *Psychiat. & Neurosci. Dept, Univ. Laval.*

3:00 MMM7 **20.07SA** Probing the extent and boundaries of perceptual, conceptual and cognitive space: Insights and lessons from Bach and van Eyck. E. L. ALTSCHULER. *Temple Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 MMM8 **20.08SA** ▲ The invisible women in science. N. NUR; K. PEDEMONTE; J. M. FLINN. *George Mason Univ., George Mason Univ.*

1:00 MMM9 **20.09SA** ▲ The concept of the dual origin of the cortex. K. HEUER; A. GOULAS. *Max Planck Inst. for Human Cognitive and Brain Sci., UKE/Institute For Computat. Neurosci.*

2:00 MMM10 **20.10SA** Withdrawn.

3:00 MMM11 **20.11SA** Sexual differentiation of the brain- a historical perspective of sex differences in neuroscience research. G. M. RURAK; N. SALMASO. *Carleton Univ., Yale Univ.*

4:00 MMM12 **20.12SA** Watson and Guthrie viewed from the 21st century: Mechanisms contributing to contiguity-based learning, ocd, ptsd, and addictions. S. CURTIS. *True North, LLC.*

THEME J POSTER *San Diego Convention Center*

021. K-12 Teaching

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—San Diego Convention Center, Halls B-H

1:00 MMM13 **21.01SA** Game jam with brain bee: Steam learning through neuroscience-themed game development. J. A. MURRAY; I. POLLOCK; D. LEAL; C. BOBINO; E. YEAGER; T. J. YAO; J. HAIN; K. ZIB. *California State Univ, East Bay, California State Univ, East Bay, California State Univ, East Bay, California State Univ, East Bay.*

2:00 MMM14 **21.02SA** Precollege participant outcomes for a short-duration field trip outreach program to a neural engineering research center. E. H. CHUDLER; K. C. BERGSMAN. *Univ. of Washington.*

3:00 MMM15 **21.03SA** ▲ Development of automated measurement system for neuroscience education. C. J. COLLINS, 92618; J. COLLINS. *Univ. High Sch., Biopico Systems Inc.*

4:00 MMM16 **21.04SA** ▲ Your brain did that!: Introducing neuroscience concepts to preschool-aged children with an assessment of effectiveness. A. BROWN; M. EGAN; S. LYNCH; D. BUFFALARI. *Westminster Col., Westminster Col.*

1:00 MMM17 **21.05SA** Early Recruitment for Careers in Neuroscience. N. MYSLINSKI; D. A. SEMINOWICZ; A. SKVORTSOV; S. GHOSE; S. SHAH. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore.*

2:00 MMM18 **21.06SA** The NEUrL Project - neuroscience education for urban learners. R. C. WILSON; C. ANDRADE; D. CARRERA; E. GIRON; A. LAWWILL; S. LOW; G. VARGAS; G. VARGAS. *Univ. of Arizona.*

3:00 MMM19 **21.07SA** The 2016 world brain bee championship. N. R. MYSLINSKI; J. MCCALL. *Univ. of Maryland Dent. Sch., Heidelberg Univ. Hosp.*

4:00 MMM20 **21.08SA** iNeuron®: A neuronal circuit building app for high school classrooms. J. M. DUBINSKY; K. SCHLEISMAN; M. MICHLIN; R. F. LIE; H. SHACKLETON; A. SCHWERDFEGER; M. MICHALOWSKI; S. GUZEY. *Univ. of Minnesota Dept. of Neurosci., Univ. of Minnesota, Univ. of Minnesota, Purdue Univ., Adventium Labs.*

1:00 MMM21 **21.09SA** The Dynamite Van: Exploring dynamic brains in schools. R. E. ROSCH; T. BALDEWEG; K. J. FRISTON. *Univ. Col. London, Univ. Col. London, Univ. Col. London.*

2:00 MMM22 **21.10SA** Contributions of alternative methodologies in cognitive development in students of Brazilian elementary school. A. PEREIRA, Jr.; M. A. FREIRE. *Federal Univ. of Rio Grande do Norte, State Univ. of Rio Grande Do Norte.*

THEME J POSTER *San Diego Convention Center*

022. College Teaching I

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—San Diego Convention Center, Halls B-H

1:00 MMM23 **22.01SA** Membrane state diagrams make electrophysiological models simple. R. LAW; S. R. JONES. *Brown Univ., Brown Univ.*

2:00 MMM24 **22.02SA** Design and implementation of an introductory-level neuroscience seminar course for biology majors. K. NORTHCUTT. *Mercer Univ.*

3:00 MMM25 **22.03SA** Developmental neuroscience and community based learning: Deepening understanding and relevance through community engagement and practical application. N. STAFFEND. *Univ. of Notre Dame.*

4:00 MMM26 **22.04SA** Teaching invention technology program as a new cognitive neuroscience profession for the 21st century technological education. A. EKWERIKE; N. C. M. EKWERIKE. *Sci. Med. Res. Institute., Inst.Of Neurosci. and BiomedicalResearch, MedVentures Alfuncis Invention Technol. Program Inst.*

1:00 MMM27 **22.05SA** Teaching Practice and Exploration of Neurobiology. F. DING; M. SHEN; Q. HE; Q. CHENG; J. QIU. *Nantong University, China.*

2:00 MMM28 **22.06SA** Implementation of a brain mapping course-based undergraduate research experience in introductory biology: Impacts on novices' competency and affect. C. D'ARCY; A. M. MARTINEZ; C. E. WELLS; A. M. KHAN; J. T. OLIMPO. *Univ. Texas El Paso, Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

3:00 MMM29 **22.07SA** ▲ Stress: In and out of the classroom. C. ZIMMERMAN; A. FRANSSEN; C. L. FRANSSEN. *Longwood Univ., Longwood Univ.*

4:00 MMM30 **22.08SA** Using large-scale brain networks to enhance individual learning outcome of neuroscience in large undergraduate lecture based classes. M. L. KIRIFIDES. *Drexel Univ.*

1:00 MMM31 **22.09SA** Neuroethics & society - a first-year general education neuroscience seminar. M. T. KERCHNER. *Washington Col.*

2:00 MMM32 **22.10SA** A new curriculum for green and open neuroscience. P. W. TSANG; M. IKRAM; A. LAM; E. L. OHAYON. *Univ. of Toronto, Inst. for Green and Open Sci., Neurolinx Res. Inst.*

3:00 MMM33 **22.11SA** Project-based assessment and flipped classroom model in an undergraduate neuroscience lecture course. B. S. CARTER. *Oberlin Col.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 MMM34 **22.12SA** Using pond snails to explore post-synaptic potentials in the undergraduate teaching laboratory: Reversal potentials and membrane conductance. S. A. HAUPTMAN; P. S. DICKINSON. *Bowdoin Coll.*

1:00 MMM35 **22.13SA** Transforming a traditional classroom into an engaging online course to advance constructivist learning. R. H. CROSBIE-WATSON; R. C. CHOE; A. ARNDT; G. BARNES; E. ESHKOL; Z. SCURIC. *Univ. of California Los Angeles, Univ. of California Office of President, Univ. of California Los Angeles.*

2:00 MMM36 **22.14SA** ▲ Putting Neuroscience into the Business Curriculum. M. M. ZENS; G. S. LOWRY; C. D. WHITE; A. FRANSSEN; P. T. BARRETT; C. L. FRANSSEN. *Longwood Univ., Randolph-Macon Col., Longwood Univ., Longwood Univ.*

3:00 MMM37 **22.15SA** Group work enhances comfort with the primary literature more than individual work in a group of undergraduate occupational therapy students. A. K. PACK. *Utica Col.*

4:00 MMM38 **22.16SA** A college course in neuroscience and religion. W. KLEMM. *Texas A&M Univ. Col. Vet Med.*

1:00 MMM39 **22.17SA** ▲ Evaluating the use of individual electrodes and electrode caps in undergraduate lab courses and student research projects. S. M. SHIELDS; C. E. MORSE; D. F. NICHOLS. *Roanoke Col.*

2:00 MMM40 **22.18SA** Teaching about probability in simple ways: Location probabilities, Bayesian methods and exotic probabilities in the context of conditioned place preference with cockroaches. U. M. RICOY; M. CORREDOR; J. F. GOMEZ-MOLINA. *Northern New Mexico Col., Univ. of Antioquia, Intl. Group of Neurosci. IGN · Intl. Group of Neurosci.*

3:00 MMM41 **22.19SA** Reverse-inclusion courses in science subjects aimed at adults with intellectual and developmental disabilities. D. GUZMAN; J. SCANLON; T. SHETRON; K. HUCKLEBERRY; S. NORDQUIST; K. CEMPER; J. T. PIERCE-SHIMOMURA. *Univ. of Texas at Austin.*

4:00 MMM42 **22.20SA** Using assessment strategies to adapt a traditional neuroscience lecture to hybrid format. J. D. OMELIAN; S. I. SOLLARS. *Univ. of Nebraska at Omaha Dept. of Psychology.*

1:00 MMM43 **22.21SA** Designing a hands-on brain computer interface laboratory course. B. KHALIGHINEJAD; L. LONG; N. MESGARANI. *Columbia Univ.*

2:00 MMM44 **22.22SA** Mapping the brain with the next generation of neuroscientists. Z. A. JOHNSON; N. R. SCIOLINO; N. W. PLUMMER; P. JENSEN; S. D. ROBERTSON. *North Carolina State Univ., Natl. Inst. of Envrn. Hlth. Sciences, Natl. Inst. of Health, Dept. of Hlth. and Human Services.*

3:00 MMM45 **22.23SA** Undergraduate neuroscience education in the US: Quantitative comparisons of programs and graduates in the broader context of undergraduate life sciences education. R. L. RAMOS; A. W. ESPOSITO; S. O'MALLEY; P. T. SMITH; W. GRISHAM. *NYIT-COM, Suffolk County Community Col., Univ. of California at Los Angeles.*

4:00 MMM46 **22.24SA** Transforming connections for success in neuroscience and STEM: A new program for underrepresented students. N. G. SIMON; V. C. WARE, 18015. *Lehigh Univ., Lehigh Univ.*

1:00 MMM47 **22.25SA** ▲ Grey matters journal: A model for neuroscience education and outreach. G. LENZ; A. BOSMA-MOODY; A. HANS; M. LINDSTROM; E. GRATE; M. POTTER. *Univ. of Washington.*

8:00 DP09 **22.26SU** (Dynamic Poster) Write dynamic eBooks to disseminate your neuroscience work to students. H. I. THORSHEIM. *Knowledge Growers, Inc., St. Olaf Col.*

THEME J POSTER *San Diego Convention Center*

023. College Teaching II

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—San Diego Convention Center, Halls B-H

1:00 MMM48 **23.01SA** The 29th northeast under/graduate research organization for neuroscience (NEURON) conference held at Quinnipiac University in Hamden, CT. T. AHERN; D. MCQUADE; C. FRYE; A. J. BETZ. *Quinnipiac Univ., Skidmore Col., State Univ. of New York at Albany.*

2:00 MMM49 **23.02SA** The journal of undergraduate neuroscience education (JUNE): A peer-reviewed and PubMed listed forum for innovative ideas in neuroscience education. B. R. JOHNSON; R. A. RAMOS; E. P. WIERTELAK. *Cornell Univ., New York Inst. of Technol., Macalester Colege.*

3:00 MMM50 **23.03SA** Divide and conquer: An example of how to incorporate your research into the classroom. N. A. VELAZQUEZ ULLOA. *Lewis & Clark Col.*

1:00 DP10 **23.04SA** (Dynamic Poster) Neuronify: An educational app for simulation of neural circuits. S. DRAGLY; M. HOBBI MOBARHAN; A. V. SOLBRÅ; S. TENNØE; H. P. LANGTANGEN; A. MALTHE-SØRENSSEN; M. FYHN; T. HAFTING; G. T. EINEVOLL. *Univ. of Oslo, Univ. of Oslo, Univ. of Oslo, Simula Res. Lab., Univ. of Oslo, Norwegian Univ. of Life Sci.*

4:00 MMM51 **23.05SA** Online neuroscience educational resources. T. H. GILBERT. *Athabasca Univ.*

1:00 MMM52 **23.06SA** "C.r.e.a.t.e."-ing unique primary-source research paper assignments for a pleasure and pain course teaching neuroscientific principles in a large general education undergraduate course. R. J. BODNAR; F. M. ROTELLA; I. LOIACONO; T. COKE; K. OLSSON; A. BARRIENTOS; L. BLACHORSKY; D. WARSHAW; A. BURAS; C. M. SANCHEZ; R. AZAD; J. R. STELLAR. *Queens Col.*

2:00 MMM53 **23.07SA** ▲ Research based courses. L. TOWNLEY; B. OBAYOMI; M. AGRE; D. P. BALUCH. *Arizona State Univ.*

3:00 MMM54 **23.08SA** From 3D Brains to 3D PDFs: Using 3D photogrammetric scanning to increase access to neuroanatomy specimens outside of the laboratory through virtual 3D models. R. W. SIKES; C. R. BERNARDO; J. CHAN; E. F. YAVETZ. *Northeastern Univ., Northeastern Univ.*

4:00 MMM55 **23.09SA** First-year abroad and beyond: Pathways and partnerships for international neuroscience study abroad. C. A. KOREY. *Coll Charleston.*

1:00 MMM56 **23.10SA** Using an iPhone to teach relaxation skills to undergraduates. J. C. NEILL; J. SINGH; N. ZACCONE. *Long Island Univ.*

2:00 MMM57 **23.11SA** Nu Rho Psi, the national honor society in neuroscience. L. A. BECKER; M. J. ZEE; G. A. COUSENS; D. MOSKOW; G. A. MICKLEY. *Univ. of Evansville, Northeastern Univ., Drew Univ., Columbia Med. Center/New York State Psychiatric Inst., Nu Rho Psi.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 MMM58 **23.12SA** The value of discussing a retracted paper for journal club in an undergraduate neuroscience course. K. D. PARFITT. *Dept of Neurosci., Pomona Col.*

4:00 MMM59 **23.13SA** Mind-brain interactions: An introduction to neural plasticity for undergraduates. J. G. FOY. *Loyola Marymount Univ.*

1:00 MMM60 **23.14SA** Providing an authentic research experience in neurobiology coursework using neuronal differentiation of PC12 cells as a model system. K. W. ADAMS; M. L. MUSCEDERE; P. A. LIPTON. *Bridgewater State Univ., Hendrix Col., Boston Univ.*

2:00 MMM61 **23.15SA** Freshmen research initiative in neuroscience. E. J. SANDQUIST; B. B. PATEL; J. J. ESSNER; C. A. OGILVIE; D. S. SAKAGUCHI. *Iowa State Univ., Iowa State Univ.*

3:00 MMM62 **23.16SA** Laboratory based undergraduate neuroscience curriculum at a small liberal arts college. S. RAMAKRISHNAN; D. ANDRESEN. *Univ. of Puget Sound, Univ. of Puget Sound.*

4:00 NNN1 **23.17SA** Faculty for Undergraduate Neuroscience (FUN): Multiple mechanisms for supporting the development of undergraduate students and faculty in the neurosciences. A. STAVNEZER; L. CHASE; L. GABEL. *Col. of Wooster, Hope Col., Lafayette Col.*

1:00 NNN2 **23.18SA** Multiple forms of learning pedagogies used in an upper-division undergraduate behavioral neuroscience course. M. R. FOY. *Loyola Marymount Univ.*

2:00 NNN3 **23.19SA** Flipping for neurobiology! developing a hybrid upper division lab. A. C. NICHOLAS; L. JAVIER; N. GOLDBERG; V. BOUCQUEY; A. WHITE; J. OVERMAN; J. OCHABA. *Univ. of California At Irvine, Univ. of California, Unviversity of California.*

3:00 NNN4 **23.20SA** Flipping the classroom for student presentations: Podcasts coupled with on-line discussions. M. E. HARRINGTON. *Smith Col.*

4:00 NNN5 **23.21SA** To flip or not to flip? Transitioning a team taught neuroscience course towards active learning. L. C. MANELLA; I. BALLAGH. *Cornell Univ.*

1:00 NNN6 **23.22SA** Incorporating a bioinformatics module into an advanced undergraduate neuroscience course. S. LAGALWAR. *Skidmore Col.*

2:00 NNN7 **23.23SA** Quantitative literacy among non-science majors in a neuroscience course with lab. K. E. FRENZEL; D. KOHLHORST; E. LANDIS; L. A. ROESCH. *Emory Univ., Emory Univ., Emory Univ.*

3:00 NNN8 **23.24SA** ▲ The IMPULSE journal: A practical teaching tool for a neuroscience minor. R. SLEDGE; E. MOORE; H. JOHNSON; Z. KAPLAN; S. SNOUSE; M. PAVELKA; M. ZRULL. *Honors Col. At Appalachian State Univ.*

THEME J POSTER *San Diego Convention Center*

024. Graduate and Professional Teaching

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—San Diego Convention Center, Halls B-H

1:00 NNN9 **24.01SA** The iNeuro approach to educating scientists to deal with big data is consistent with Vision and Change principles. W. E. GRISHAM; B. LOM. *UCLA, Davidson Col.*

2:00 NNN10 **24.02SA** The *Drosophila* Neurobiology summer course at Cold Spring Harbor Laboratory: 33 years of teaching on the fly. S. LY; M. F. ZWART; S. R. PULVER; C. LEE; K. R. KAUN; D. J. STEWART. *Univ. of Pennsylvania, Cold Spring Harbor Lab., Janelia Res. Campus, Univ. of St. Andrews, NIH, Brown Univ.*

3:00 NNN11 **24.03SA** Evolution of a longitudinal undergraduate medical neuroscience course. J. M. MCBRIDE; D. NAIR; A. ALEXOPOULOS. *Cleveland Clin. Lerner Col. of Med., Cleveland Clin.*

4:00 NNN12 **24.04SA** Neuroscience centered post-baccalaureate research experience program at Max Planck Florida Institute for Neuroscience. R. CORLEW; J. HERBST. *Max Planck Florida Inst., Max Planck Florida Institue for Neurosci.*

1:00 NNN13 **24.05SA** A small-group problem-based programmed journal club: Considering knowledge on demand in research. S. NASOOHI; J. POURAHMAD JAKTAEI; H. YAZDANPANAH; M. FAIZI; S. HOSEINI SHIRAZI; H. VATANPOUR; N. NADERI. *Shahid Beheshti Univ. of Med. Sci.*

2:00 NNN14 **24.06SA** A new MS program in health disparities in neuroscience-related disorders as a means to increase diversity in the neuroscience workforce. C. MILLIGAN; R. A. BELL. *Wake Forest Sch. Med., Wake Forest Sch. of Med.*

3:00 NNN15 **24.07SA** Attention is associated with success in selection of health students for internship in a drug abuse telehealth service. H. M. BARROS; C. L. TANNHAUSER. *UFCSPA.*

4:00 NNN16 **24.08SA** Using microcontroller instrumentation to teach cognitive neurophysiology. M. JAYACHANDRA; A. PREMCHANDRA; N. HEBBAR; M. ARORA. *St. John's Res. Inst., NDRF, Inst. of Engineers, Indian Inst. of Sci.*

1:00 NNN17 **24.09SA** The lab associates program: Graduate student training for interdisciplinary work with neuroscientists. J. WRIGHT; R. FOLEY. *Univ. of Western Ontario, Rotman Inst. of Philosophy.*

2:00 NNN18 **24.10SA** BRAINS-Broadening the representation of academic investigators in neuroscience. S. J. MIZUMORI; M. HORNER-DEVINE; C. MARGHERIO; J. W. YEN. *Univ. Washington.*

3:00 NNN19 **24.11SA** Brain Studio: A practical high-performance tool to design and simulate spiking neural networks. Z. FOUNTAS; P. A. M. MEDIANO; D. BHOWMIK. *Imperial Col. London.*

4:00 NNN20 **24.12SA** Left-Right preference and its orthogonal processes in insect navigation: Teaching algorithms for recursive programs of general neural principles. J. F. GOMEZ-MOLINA; U. M. RICOY; M. CORREDOR; A. RESTREPO-VELAZQUEZ; F. LOPERA. *Intl. Group of Neurosci. (IGN), Northern New Mexico Col., Univ. of Antioquia, EAFIT Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 NNN21 **24.13SA** Active learning of clinical neuroscience in a medium sized group setting. A. WEERASURIYA. *Mercer Univ. Sch. Med.*

2:00 NNN22 **24.14SA** Standardized method for training and assessing competency in the application of transcranial magnetic stimulation. P. J. FRIED; P. DAVILA PEREZ; A. JANNATI; A. PASCUAL-LEONE. *Beth Israel Deaconess Med. Ctr.*

3:00 NNN23 **24.15SA** Tutorial contents on neuroinfomrmatics platforms. Y. YAMAGUCHI; S. HATTORI; K. TAKAO; Y. OKUMURA; S. SUENAGA; I. ISHII; A. HONDA; M. OGAWA; S. USUI; T. MIYAKAWA. *Neuroinformatics Japan Center, RIKEN BSI, Fujita Hlth. Univ., Univ. of Toyama, Natl. Inst. for Physiological Sci.*

4:00 NNN24 **24.16SA** Mindfulness based practice in a medical school classroom: Nonjudgmental embodied attention to self body systems is used as part of the curriculum. S. A. RUDE. *Bastyr Univ.*

1:00 NNN25 **24.17SA** Hands-on neuroscience education for pre- and post-doctoral students using mouse models. M. SASNER; K. LARUE; D. LIN; C. WRAY. *The Jackson Lab., NIDA.*

2:00 NNN26 **24.18SA** Consumption of fluoridated water leads to damage on the hippocampal CA1 field in the rat. P. MARIA ISABEL; A. CASTELLANOS ALVARADO; M. MIRANDA BELTRAN; L. VALDEZ JIMENEZ; O. GUTIERREZ CORONADO; C. SORIA FREGOZO. *Univ. De Guadalajara, Univ. de Guadalajara.*

3:00 NNN27 **24.19SA** Integrating rigor and reproducibility into the graduate neuroscience curriculum. E. E. SERRANO. *New Mexico State Univ.*

POSTER

028. Neuronal Morphology and Cell Death

Theme A: Development

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

1:00 A1 **28.01** Characterizing GABAergic interneuron deficit in Holoprosencephaly. A. GILANI*; J. LIBIEN. *SUNY Downstate Med. Ctr.*

2:00 A2 **28.02** Determining the impact of Zika virus on neural stem cells and mature neurons. O. V. LOSSIA*; M. T. OCEAN; E. D. PETERSEN; B. SRINAGESHWAR; U. HOCHGESCHWENDER; G. L. DUNBAR; M. J. CONWAY; J. ROSSIGNOL. *Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst., Central Michigan Univ.*

3:00 A3 **28.03** Apoptotic signaling through p75NTR in response to BDNF requires Rab5 and JNK activity. C. A. CABEZA*; C. ESCUDERO; F. BRONFMAN. *Pontificia Univ. Católica De Chile.*

4:00 A4 **28.04** Ventricular zone disassembly and delamination of radial glia progenitors triggers α-β hydrolase domain containing 4 (ABHD4)-mediated cell death in the embryonic neocortex. Z. LÁSZLÓ*; Z. LELE; Z. BALOGI; A. DORNING; G. SIMON; S. SHU-JUNG HU; K. MACKIE; B. CRAVATT; I. KATONA. *Inst. of Exptl. Medicine, HAS, Semmelweis Univ., The Scripps Res. Inst., Gill Inst.*

1:00 A5 **28.05** Angiopoietin-1 is essential for zebrafish embryonic neurogenesis. Y. CHEN*; V. MARCHICA; T. S. MARTINS; P. PANULA. *Univ. of Helsinki.*

2:00 A6 **28.06** Microglial morphology during cortical development. J. '. KEITER*; V. MARTINEZ-CERDEÑO; S. NOCTOR. *UC Davis, UC Davis.*

3:00 A7 **28.07** Mediation of autophagic cell death by type 3 ryanodine receptor (RyR3) in adult hippocampal neural stem cells. K. CHUNG*; E. JEONG; H. PARK; H. AN; S. YU. *Daegu Gyeongbuk Inst. of Sci. & Technol.*

4:00 A8 **28.08** ▲ Exposure of embryonic Xenopus laevis to organophosphate pesticides during development leads to disruption of the cholinergic nervous system. M. BRYSON*; F. WATSON; E. FRADINGER; T. HOLDER; M. QUELLHORST. *Washington and Lee Univ., Whittier Col.*

1:00 A9 **28.09** Mutant SOD1 species induce toxicity in astrocytic cultures: Bystander effects occur in a continuum of astrogliosis. R. D. O'SHEA*; N. WALLIS; C. L. LAU; M. A. FARG; J. D. ATKIN; P. M. BEART. *La Trobe University, Dept. of Physiology, Ana, The Florey Inst. of Neurosci. and Mental Hlth., La Trobe Univ., Macquarie Univ.*

2:00 A10 **28.10** Disruption of nuclear bodies causes activation of DNA damage and repair pathways. A. KANNAN*; K. BHATIA; L. GANGWANI. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. of Hlth. Sci. Ctr.*

3:00 A11 **28.11** Mechanisms underlying C9orf72 associated toxicity in a *C. elegans* model of disease. S. T. LAMITINA*; J. OOSTEN; C. SNOZNIK; U. PANDEY; P. RUDICH. *Childrens Hosp. of Pittsburgh of UPMC, Childrens Hosp. of Pittsburgh of UPMC, Childrens Hosp. of Pittsburgh of UPMC.*

4:00 A12 **28.12** The divergent neuroprotective capacities of *Drosophila* Nmnat in C9orf72 ALS/FTD. K. O. RUAN*; R. ZHAI; T. LLOYD. *Johns Hopkins Univ. Sch. of Med., Univ. of Miami Miller Sch. of Med.*

POSTER

029. Adult Neurogenesis Mammalian Systems

Theme A: Development

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

1:00 A13 **29.01** Temporal and spatial expression pattern of miRNA and protein expression in peripheral nerve injury. V. YEROKHIN*; S. DAS; K. MILLER. *Oklahoma State Univ. Ctr. For Hlth. Scienc.*

2:00 B1 **29.02** The daily pattern of adult neurogenesis in zebrafish. A. STANKIEWICZ*; V. AKLE; L. YU; I. ZHDANOVA. *Boston Univ. Sch. of Med., Univ. de los Andes.*

3:00 B2 **29.03** Alterations in human hippocampal neurogenesis predict progression from mild cognitive impairment to Alzheimer's disease. A. MARUSZAK; T. MURPHY; A. DOUIRI; A. J. NEVADO; B. LIU; C. DE LUCIA; J. PRICE; S. LOVESTONE; S. THURET*. *King's Col. London, King's Col. London, Univ. of Oxford.*

4:00 B3 **29.04** Astrocyte-derived neurogenesis layer II-III of the adult cerebral cortex. H. SABELSTROM*; H. TSAI; O. R. YABUT; T. FENSTER; E. YUAN; E. HUANG; T. BJORK-ERIKSSON; M. S. BERGER; D. H. ROWITCH; S. PLEASURE; A. I. PERSSON. *Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco, Sahlgrenska Univ. Hosp., Univ. of California, San Francisco.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 B4 **29.05** Multilevel regulation of neural stem cell proliferation and self-renewal by Pros1. T. BURSTYN-COHEN*; K. ZELENTSOVA; Z. TALMI; G. ABBOUD-JARROUS; T. SAPIR; T. CAPUTCHA. *The Hebrew Univ., Weizmann Inst. for Sci.*

2:00 B5 **29.06** Subnormal neurogenesis and cortical growth in a piglet model of congenital heart disease. P. D. MORTON*; L. KOROTCOVA; B. K. LEWIS; V. KUMAR; F. SHAIKH; E. SHORT; J. ZHANG; S. MORI; J. A. FRANK; V. GALLO; R. A. JONAS; N. ISHIBASHI. *Childrens Natl. Med. Ctr., Children's Natl. Med. Ctr., NIH, Children's Natl. Med. Ctr., Children's Natl. Med. Ctr., Johns Hopkins Sch. of Med., Children's Natl. Med. Center, Children's Natl. Med. Ctr., Children's Natl. Med. Ctr.*

3:00 B6 **29.07** Calorie restriction modulates intrinsic and niche factors in the aging murine subventricular zone. D. M. APPLE*; R. SOLANO FONSECA; S. MAHESULA; E. KOKOVAY. *Univ. of Texas Hlth. Sci. Ctr. San Antonio, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

4:00 B7 **29.08** ● The effects of a proprietary spearmint extract on neurogenesis rates in rat hippocampal neurons. B. A. FONSECA*; K. A. HERRLINGER. *Kemin Human Nutr. and Hlth.*

1:00 B8 **29.09** Effects of the Smoothened antagonist MRT-83 on adult neural stem cells quiescence and activation. L. TIROU; M. DAYNAC; H. FAURE; L. GAUTHIER; M. MOUTHON; F. BOUSSIN; M. RUAT*. *CNRS, CEA DSV iRCM SCSR Lab. de Radiopathologie.*

2:00 B9 **29.10** Deep brain stimulation regulates diet–responsive hypothalamic neurogenesis in young adult male rats. M. P. MEDINA*; J. SOTELO. *Inst. Nacional De Neurologia Y Neurocirugia, Inst. Nacional De Neurologia Y Neurocirugia.*

3:00 B10 **29.11** PINK1-deficient mice show impaired hippocampal neurogenesis and mitochondrial and cell signaling defects in adult neural stem cells. H. BUELER*; S. K. AGNIHOTRI. *Harbin Inst. of Technol.*

4:00 B11 **29.12** Regulation of adult neurogenesis in the mouse SGZ by Kv1.1. S. CHOU; C. LI; H. CHEN; L. JAN; S. YANG*. *Academia Sinica, Howard Hugh Med. Inst. Univ. of California San Francisco.*

1:00 B12 **29.13** Programming of stress-sensitive neurons via NRSF-dependent epigenetic mechanisms by neonatal experience promotes emotional resilience. A. SINGH*; J. MOLET; S. JIANG; A. KOROSI; J. L. BOLTON; Y. NOAM; K. SIMEONE; J. COPE; A. MORTAZAVI; T. Z. BARAM. *Univ. of California Irvine Dept. of Anat. and Neurobio., Univ. of California-Irvine, Univ. of California Irvine Dept. of Anat. and Neurobio., Univ. of Amsterdam, Creighton Univ.*

2:00 B13 **29.14** Brain-5, a novel regulator of activity-dependent cellular plasticity and synaptic integration in the adult brain. C. K. MCCLARD*; M. KOCHUKOV; I. HERMAN; Z. LIU; L. HUANG; J. ORTIZ-GUZMAN; D. COLCHADO; B. R. ARENKIEL. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Rice Univ.*

3:00 B14 **29.15** Neonatal hyperoxia leads to neurobehavioral impairment in adult mice by impairing synaptic plasticity and increasing inflammation in the hippocampus. M. RAMANI*; N. AMBALAVANAN; L. MCMAHON. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

4:00 B15 **29.16** Ependyma derived CCN1 promotes progenitor cell proliferation and neurogenesis in the adult SVZ. Q. SHEN*. *Tsinghua Univ.*

1:00 B16 **29.17** Diazepam binding inhibitor (DBI): A novel protein for the induction of postnatal neurogenesis in the spinal cord? L. NEW; E. TEDFORD; J. SMITH; J. HEE; J. DEUCHARS; S. A. DEUCHARS*. *Univ. of Leeds.*

2:00 B17 **29.18** Early-life sevoflurane exposure targets microRNAs and excitatory-inhibitory balance. D. LIN; J. LIU; J. COTTRELL; I. S. KASS*. *SUNY Downstate, SUNY Downstate.*

3:00 B18 **29.19** Neurovascular ligand-receptor systems modulate post-stroke neurogenesis and angiogenesis. N. ABDULJAWAD*; A. J. BRUMM; M. MACHNICKI; S. T. CARMICHAEL. *Univ. of California Los Angeles.*

4:00 B19 **29.20** The study of sonic hedgehog signaling pathway in development of cerebellar granule cells. X. JIAO*; N. ASHTARI; K. BAILEY; M. R. BALAEI; S. GHAVAMI; M. DEL BIGIO; H. MARZBAN. *Univ. of Manitoba.*

1:00 B20 **29.21** Meninges are a niche for neural precursor cells. I. DECIMO; V. BERTON; A. PINO; S. DOLCI; M. MARCHETTO; F. PARI; G. F. FUMAGALLI*; F. BIFARI. *Univ. of Verona, Univ. of Milan.*

2:00 B21 **29.22** Hilus of the hippocampus possess progenitor cells of oligodendrocytes and neurons in the adult brain. J. PACHECO-ROSADO*; Y. GARCÍA-MARTÍNEZ; L. FLORES-PÁEZ; K. B. SÁNCHEZ-HUERTA. *Escuela Nacional de Ciencias Bio, Inst. Politécnico Nacional, Inst. Nacional de Pediatría.*

3:00 B22 **29.23** Differential expression of Gas1 in neural stem cells and in cancer stem cells. N. AGUIRRE-PINEDA; E. BAUTISTA; J. HERNÁNDEZ; J. V. SEGOVIA-VILA*. *Cinvestav-IPN.*

4:00 B23 **29.24** Characterization of Met receptor tyrosine kinase-expressing serotonergic neurons. H. WU*; R. KAST; P. LEVITT. *Children's Hosp. Los Angeles, USC.*

1:00 B24 **29.25** Adult neurogenesis - A comparison between dark Agouti and Wistar rats. M. S. RAO*; F. B. AL HAMDAN; J. A. REZQALLA; S. SMITHA; H. AL HUSSAINI. *Dept. of Anat., Kuwait Univ.*

POSTER

030. Genetics of Autism and Autism Models

Theme A: Development

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

1:00 B25 **30.01** Assessment of single nucleotide variants in genes encoding eif2α kinases in autism simplex families. A. G. VOROBYEVA*; E. KLANN; I. IOSSIFOV; T. E. DEVER. *New York Univ., Cold Spring Harbor, NIH.*

2:00 B26 **30.02** Functional analysis of the autism gene SHANK3 using iPSCs-derived models of neural development. S. GONG*; L. SHI. *Room 819 The Second Sci. and Technol. Buildin, Jina Univ.*

3:00 C1 **30.03** Aberrant mitochondrial autophagy in autistic mouse models. H. LI*. *Columbia Univ. Med. Ctr.*

4:00 C2 **30.04** Identifying a neural circuit of social behavior in an autism mouse model Identifying a neural circuit of social behavior in an autism mouse model. J. J. WALSH*; G. A. BENDOR; R. C. MALENKA. *Stanford Univ.*

1:00 C3 **30.05** Altered action of 5-HT2a receptor ligands in the 16p11.2 deletion syndrome mouse. C. PANZINI; K. G. COMMONS*. *Boston Children's Hospital/Harvard Med., Children's Hosp, Harvard Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 C4 **30.06** Brain region-specific contributions of Foxp1 to autism-related phenotypes. D. ARAUJO*; K. TORIUMI; C. O. ESCAMILLA; M. HARPER; A. G. ANDERSON; S. BERTO; H. O. TUCKER; C. POWELL; G. KONOPKA. *UT Southwestern Med. Ctr., UT Austin.*

3:00 C5 **30.07** ▲ The association between genetic polymorphisms of methionine cycle enzymes and autism in Jordan. O. K. HALHOULI*; M. F. ALKHOUJAH; M. ELDAHABI; L. ALZGHOUL. *Univ. of Jordan - Fac. of Med., Univ. of Jordan - Fac. of Med.*

4:00 C6 **30.08** The effect of treatment with a partial 5-HT_{1A} receptor agonist on grooming behavior in Shank3 mice. J. DUNN*; M. E. RAGOZZINO. *Univ. of Illinois At Chicago.*

1:00 C7 **30.09** Expression of mutant DISC1 in Purkinje cells increased their spontaneous activity, leading to behavioral phenotypes consistent with aspects of autism spectrum disorders. A. V. SHEVELKIN*; B. N. ABAZYAN; C. YANG; O. A. MYCHKO; T. J. KAJSTURA; J. C. TRONCOSO; D. J. LINDEN; M. V. PLETNIKOV. *P.K.Anokhin Inst. Norm Physiol, Johns Hopkins Univ. Sch. of Med.*

2:00 C8 **30.10** Changes in thalamocortical projection patterns in a mouse model of autism. J. KRUEGER FISTER*; C. D. M. VARGAS; J. A. MAVITY-HUDSON; M. J. ROBSON; J. VEENSTRA-VANDERWEELE; M. T. WALLACE; R. D. BLAKELY; V. A. CASAGRANDE. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Med. Sch., Columbia Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Med. Sch., Florida Atlantic Univ., Florida Atlantic Univ., Vanderbilt Univ.*

3:00 C9 **30.11** The neurodevelopment of the autistic brain: Longitudinal changes of brain connectivity in Fmr1KO and CNTNAP2-KO mice models. V. ZERBI*; M. MARKICEVIC; G. D. IELACQUA; M. RUDIN; N. WENDEROTH. *Neural Control of Movement Lab, ETH Zurich, Inst. of Pharmacol. and Toxicology, Univ. Zurich.*

4:00 C10 **30.12** ● Spontaneous β oscillations: An electrophysiological biomarker of Dup15q syndrome. S. S. JESTE*; J. FROHLICH; R. SANKAR; P. GOLSHANI. *UCLA Hlth. Syst., UCLA, UCLA, UCLA.*

1:00 C11 **30.13** Regulatory small non-coding RNAs in the superior temporal sulcus and primary auditory cortex brain regions of Autism Spectrum Disorders display sexual dimorphism. B. STAMOVA*; B. P. ANDER; A. OMANSKA; F. R. SHARP; C. M. SCHUMANN. *UC Davis Sch. of Medicine, Dept. of Neurol., UC Davis Sch. of Med., UC Davis Sch. of Med.*

2:00 C12 **30.14** Ube3a and seizures impair sociability by down-regulating autism network gene Cbln1 in VTA. D. C. STOPPEL*; V. KRISHNAN; Y. NONG; M. A. JOHNSON; E. OZKAYNAK; I. NAGAKURA; M. SILVA; M. J. S. NADLER; S. PETERSON; E. M. KASPER; F. MOHAMMAD; R. ARNAOUT; M. P. ANDERSON. *Beth Israel Deaconess Med. Ctr.*

3:00 C13 **30.15** OTUD7A is a novel candidate driver gene of neurodevelopmental abnormalities in 15q13.3 microdeletion syndrome. B. K. UNDA*; M. UDDIN; S. WHITE; N. HOLZAPFEL; V. KWAN; N. MURTAZA; A. FORSINGDAL; J. NIELSEN; K. HOPE; S. W. SCHERER; K. SINGH, L8S 4L8. *McMaster Univ., The Hosp. for Sick Children, H. Lundbeck A/S.*

4:00 C14 **30.16** Loss of lateral asymmetry in the brain of mouse models of autism. J. ELLEGOOD*; B. C. DARWIN; M. C. VAN EEDE; R. M. HENKELMAN; J. P. LERCH. *Hosp. For Sick Children, Univ. of Toronto.*

1:00 C15 **30.17** Understanding the neuronal substrates of neurodevelopmental disorders. E. ZUCCARO; S. LODATO*; A. BYRNES; M. STOIBER; H. CHEN; M. ZILLER; J. L. RINN; B. NEALE; P. ARLOTTA. *Harvard Univ., Stanley Ctr. for Psychiatric Disease, Broad Inst. of Harvard and MIT, Univ. of California, Max Planck Inst. of Psychiatry.*

POSTER

031. Autism Pathogenesis

Theme A: Development

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

1:00 C16 **31.01** Matrix metalloproteinase 9 overexpression recapitulates neurophysiological changes induced by early exposure to valproic acid in a Xenopus tadpole model for neurodevelopmental disorders. E. J. JAMES*; J. PARK; C. D. AIZENMAN. *Brown Univ.*

2:00 C17 **31.02** Reduced mGluR5 binding activity and mRNA expression following astrocytes activation. T. LEE*; K. J. GREGORY; M. DOTTORI; C. PANTELIS; A. CHRISTOPOULOS; I. P. EVERALL; E. SKAFIDAS; G. CHANA. *The Univ. of Melbourne, The Univ. of Melbourne, Monash Univ., The Univ. of Melbourne.*

3:00 C18 **31.03** Alteration of Purkinje cells by autism-inducing drugs, and recovery effects with bumetanide or oxytocin administration in developing rat cerebellum. S. NAKAJIMA; T. TOMIDA; K. IKAI; Y. FUETA*; S. UENO; N. HOZUMI; Y. SEKINO; S. YOSHIDA. *Toyohashi Univ. Technol., Univ. Occupational/Environmental Hlth., Natl. Inst. of Health. Sci.*

4:00 C19 **31.04** Lifelong trajectory of human amygdala neuronal development is disrupted in autism. T. A. AVINO*; N. BARGER; M. VARGAS; M. D. BAUMAN; D. G. AMARAL; C. M. SCHUMANN. *UC Davis MIND Inst.*

1:00 C20 **31.05** ▲ Abnormal phosphorylation of AMPA receptor subunit GluR1 in the basolateral amygdala of the valproic acid-exposed rat model of autism following extinction learning. S. H. CAVALIER*; K. GRIFFIN; A. ALVAREZ-DIEPPA; C. MCINTYRE. *Univ. of Texas At Dallas, Univ. of Texas at Dallas.*

2:00 C21 **31.06** Dysregulated protein synthesis in autism and fragile X syndrome patient iPSC-derived neural progenitor cells. N. RAJ*; G. J. BASSELL. *Emory Univ.*

3:00 C22 **31.07** Neurobiological basis of Oxytocin on pro-social behaviors. G. WU*; Y. HO; Z. HU; Q. HUO; G. CHEN. *Sch. of Life Science, South China Normal Univ., Penn State Univ.*

4:00 C23 **31.08** Maternal immune activation disrupts synaptic pruning in the mouse offspring brain. L. FERNÁNDEZ DE COSSÍO GÓMEZ*; A. GUZMAN; G. N. LUHESHI. *Douglas Mental Hlth. Univ. Institute, McGil.*

1:00 C24 **31.09** Zinc and Shank regulation of AMPAR during neuronal development. H. T. HA*; S. A. KIM; C. C. GARNER; J. R. HUGUENARD. *Stanford Univ., Stanford Univ., German Ctr. for Neurodegenerative Dis.*

2:00 C25 **31.10** Regulating ERK signaling improves vocal communication in a mouse model of autism. N. CHENG*; M. KHANBABAEI; E. HUGHES; K. MURARI; J. M. RHO. *Univ. of Calgary.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 C26 **31.11** ● Maternal plasma fetal neuronal exosomes: A non-invasive tool to interrogate *in-utero* neuronal injury. L. GOETZL*; E. J. GOETZL; N. MERABOVA; E. LAURETTI; G. TATEVOSIAN; D. MARTIROSYAN; N. DARBINIAN. *Temple Univ. Sch. of Med., Lewis Katz Sch. of Med. at Temple Univ., Lewis Katz Sch. of Med. at Temple Univ., Univ. of California.*

4:00 C27 **31.12** Mmp-9 deletion rescues developmental abnormalities in the auditory cortex of fragile x syndrome mouse model. S. AFROZ*; T. WEN; S. REINHARD; K. TAPIA; K. RAZAK; I. ETHELL. *Univ. of California Riverside, Univ. of California Riverside.*

1:00 C28 **31.13** Time-delimited MET receptor tyrosine kinase signaling controls glutamatergic circuits formation and refinement in the developing forebrain. X. MA*; Z. LU; G. LI; L. ZHANG; M. PIECHOWICZ; J. WU; S. QIU. *The Univ. of Arizona Col. of Med., Univ. of Arizona COM-PHX, Barrow Neurolog. Inst.*

2:00 C29 **31.14** Synaptic protein interaction network analysis of seven autism mouse models. S. E. SMITH*; A. A. WILLIAMS; E. A. BROWN; S. C. NEIER; A. G. SCHRUM. *Seattle Childrens Res. Inst., Seattle Childrens Res. Inst., Mayo Clin.*

3:00 C30 **31.15** S100B protein accumulation alters intracellular trace metal homeostasis and affect autism associated signaling cascades in the central nervous system. S. HAGMEYER*; J. S. CRISTÓVÃO; T. M. BOECKERS; C. M. GOMES; A. M. GRABRUCKER. *Univ. Ulm, BioISI – Biosystems & Integrative Sci. Inst., Inst. for Anat. and Cell Biol., WG Mol. Analysis of Synaptopathies, Neurol. Dept., Neurocenter of Ulm University, Ulm, Germany, Inst. for Anat. and Cell Biol.*

4:00 C31 **31.16** Pericyte initiation of Intussusceptive (splitting) angiogenesis in the postmortem cortex of autism spectrum disorder. X. F. JIA*; E. C. AZMITIA; Z. T. SACCOMANO; K. N. LATCHA. *New York Univ.*

1:00 C32 **31.17** Microbial reconstitution reverses maternal diet-induced social and synaptic deficits in offspring. S. A. BUFFINGTON*; G. VIANA DI PRISCO; J. F. PETROSINO; M. COSTA-MATTIOLI. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

2:00 C33 **31.18** Greater amygdala spine density in young ASD brains. R. K. WEIR*; M. D. BAUMAN; C. M. SCHUMANN. *Univ. of California, Davis, UC Davis MIND Inst.*

POSTER

032. Genetic Animal Models of Neurodevelopmental Disorders

Theme A: Development

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

1:00 C34 **32.01** Deletion of CTNNB1 in inhibitory circuitry contributes to autism-associated behavioral defects. F. DONG*; J. JIANG; C. MCSWEENY; D. ZOU; L. LIU; Y. MAO. *Penn State Univ., First Affiliated Hospital, Guangxi Med. University, Dept. of Chem. and Biology, Col. of Science, Natl. Univ. of Def. Technol.*

2:00 D1 **32.02** Protocadherin 19 downregulation affects cortical development and autism-related behaviors in rats. A. W. CWETSCH*; L. PERLINI; S. BASSANI; M. PASSAFARO; L. CANCEDDA. *Inst. Italiano Di Tecnologia, CNR Inst. of Neurosci.*

3:00 D2 **32.03** Autism animal model exhibits abnormal norepinephrine innervation and increased stress circuit activity following forced swim. J. W. LUNDEN*; M. GENESTINE; C. C. PENG; V. MIRABELLA; S. PREM; J. MILLONIG; E. DICICCO-BLOOM. *Rutgers - Robert Wood Johnson Med. Sch., Columbia Univ., Rutgers Univ.*

4:00 D3 **32.04** Decreased expression of β_2 subunit of $GABA_A$ receptor in the hippocampus and cerebellum in a rat model of autism. A. PUIG-LAGUNES*; E. VELASCO-CERCAS; I. ZAMORA-BELLO; A. PUIG-NOLASCO; R. TOLEDO-CÁRDENAS; C. PÉREZ-ESTUDILLO; C. MORGADO-VALLE; L. LÓPEZ-MERAZ. *Ctr. De Investigaciones Cerebrales, Univ. Veracruzana, Univ. Veracruzana.*

1:00 D4 **32.05** Epilepsy in toll like receptor 3, 7, 9 deficient mice. J. CORDERO*; O. ARIAS-CARRION. *Hosp. Gen. Dr. Manuel Gea Gonzalez.*

2:00 D5 **32.06** ▲ Protocadherin-19 downregulation affects the surface expression of associated $GABA_A$Rs and increases seizure susceptibility in rats. S. BASSANI; L. GEROSA; A. CWETSCH; L. CANCEDDA; M. PASSAFARO*. *CNR -Institute of Neurosci., Dept. of Neurosci. and Brain Technologies, Inst. Italiano di Tecnologia, DTI-CNR-IN Sect Cell.*

3:00 D6 **32.07** Heightened neuronal network excitability in a mouse model of CDKL5 disorder. M. YENNAWAR*; H. SUN; Z. ZHOU; F. E. JENSEN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

4:00 D7 **32.08** ● Synaptic dysfunction in Sanfilippo Syndrome: The affects of lysosomal heparan sulfate accumulation on the cell surface glycocalyx. C. WRIGHT DWYER*; S. L. SCUDDER; Y. LIN; L. DOZIER; N. J. ALLEN; G. N. PATRICK; J. D. ESKO. *Univ. of California San Diego, Univ. of California San Diego, Salk Inst. for Biol. Studies.*

1:00 D8 **32.09** Elevated doses of 22q11.2 genes arrest the developmental maturation of working memory capacity and adult neurogenesis. S. BOKU*; S. ABE; T. IZUMI; T. TAKAHASHI; T. HIRAMOTO; Y. NAKA; H. NOMARU; A. NISHI; G. KANG; A. HISHIMOTO; G. DURAN-TORRES; K. TANIGAKI; J. ZHANG; K. YE; S. KATO; K. KOBAYASHI; P. T. MÄNNISTÖ; N. HIROI. *Kobe Univ. Grad. Sch. of Med., Albert Einstein Col. of Med., Univ. of Helsinki, Shiga Med. Ctr., Fukushima Med. Univ.*

2:00 D9 **32.10** A novel mouse model of neurosteroid insufficiency: The AKR1c14 floxed mouse. D. BAKALAR*; H. LACAILLE; J. J. O'REILLY; A. A. PENN. *Children's Natl. Hlth. Syst., George Washington Univ., Childrens Natl. Hlth. Syst.*

3:00 D10 **32.11** Elucidation of the molecular mechanisms of cognitive impairment in Bardet- Biedl syndrome. N. HAQ*; C. SCHMIDT-HIEBER; M. HÄUSSER; P. BEALES; S. CHRISTOU-SAVINA. *ICH, Wolfson Inst. for Biomed. Res.*

4:00 D11 **32.12** The Noonan Syndrome-linked $Raf1^{L613V}$ mutation drives increased glial number and alterations in learning. M. HOLTER*; L. T. HEWITT; S. V. KOEBELE; J. JUDD; C. WEDWICK; H. A. BIMONTE-NELSON; C. D. CONRAD; B. G. NEEL; T. ARAKI; W. D. SNIDER; J. M. NEWBERN. *Arizona State Univ., Arizona Alzheimer's Consortium, Arizona State Univ., Ontario Cancer Inst. and Princess Margaret Hosp., Univ. of North Carolina.*

1:00 D12 **32.13** Mutation in a tubulin gene reveals a novel model of leukodystrophy. I. D. DUNCAN*; A. B. RADCLIFF; J. J. MORAN; J. P. SVAREN. *Univ. Wisconsin Sch. Vet Med., Univ. Wisconsin Sch. Vet Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 D13 **32.14** Evaluation of visual motion perception ability in mice with knockout of the dyslexia candidate susceptibility gene Dcdc2. P. A. PERRINO*; A. R. RENDALL; J. J. LOTURCO; R. H. FITCH. *Univ. of Connecticut, Univ. of Connecticut.*

3:00 D14 **32.15** Behavioral and neuroanatomical evaluation of the Ts2-neo mouse model of Timothy syndrome, a rare genetic disorder associated with autism spectrum disorders. A. R. RENDALL*; A. L. FORD; P. A. PERRINO; R. H. FITCH. *Univ. of Connecticut.*

4:00 D15 **32.16** Disrupted Cav1.2 L-type calcium channel function and expression alters behavior and ascending serotonin system activity. D. G. EHLINGER*; C. M. PANZINI; K. G. COMMONS. *Boston Children's Hosp/Harvard Med. Sch., Boston Children's Hosp., Harvard Med. Sch.*

1:00 D16 **32.17** Ablation of arx in mature interneurons impaired network functions via disruption of calcium homeostasis in the mouse hippocampus. D. J. JOSEPH; A. J. MCCOY; R. RISBUD; J. G. JACKSON*; E. D. MARSH. *Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

2:00 D17 **32.18** EphrinA5$^{-/-}$ mice display behavioral abnormalities and exhibit altered striatal organization and synaptic function. L. F. KROMER*; R. WURZMAN; S. VICINI; J. G. PARTRIDGE. *Georgetown Univ. Med. Ctr., Univ. of Pennsylvania Perelman Sch. of Med., Georgetown Univ. Med. Sch.*

3:00 D18 **32.19** Deletion of the NR2A subunit of NMDAR increases susceptibility to redox dysregulation causing long-term impairment of prefrontal parvalbumin interneurons and perineuronal net. P. STEULLET*; R. CARDIS; J. CABUNGCAL; K. Q. DO. *Ctr. For Psychiatric Neuroscience, CHUV, Lausanne Univ. Hosp., Lausanne Univ. Hosp.*

4:00 D19 **32.20** Loss of oligophrenin-1 in medial prefrontal cortex leads to age-dependent synaptic dysfunction. T. KROON*; H. MANSVELDER; R. M. MEREDITH. *VU Univ.*

1:00 D20 **32.21** Do neuroanatomical abnormalities in Pax6-deficient mice change as a function of age? M. K. GRANT*; A. M. BOBILEV; K. K. JOHNSON; K. HEKMATYAR; J. D. LAUDERDALE. *Univ. of Georgia, Univ. of Georgia, Univ. of Georgia.*

2:00 D21 **32.22** Gnas imprinted gene, a new player connecting neurodevelopment, sleep and cognition. C. GARCIA-GARCIA*; E. BALZANI; C. CHIABRERA; E. ALBANESI; L. CANCEDDA; V. TUCCI. *Inst. Italiano di Tecnologia.*

3:00 D22 **32.23** Effects of Transient P7 DISC1 signalling disruption on LTP in the prefrontal cortex. N. R. HARDINGHAM*; K. FOX. *Cardiff Univ., Cardiff Univ.*

4:00 D23 **32.24** Engrailed-2 is a cell-autonomous regulator of proliferation and survival in cultured hippocampal neural stem cells. M. DURENS*; S. CHUNG; E. DICICCO-BLOOM. *Rutgers Univ. - Busch Campus, Rutgers Robert Wood Johnson Med. Sch.*

1:00 D24 **32.25** Cerebellar corticogenesis in the lysosomal acid phosphatase (acp2) mutant mice; purkinje cell neurodevelopmental disorder. N. ASHTARI*; X. JIAO; M. RAHIMI BALAEI; K. BAILEY; S. GHAVAMI; H. MARZBAN. *Univ. of Manitoba, Univ. of Manitoba.*

2:00 D25 **32.26** Neurofibromin loss of function leads to increased spontaneous grooming in *Drosophila*. L. B. KING*; M. KOCH; K. R. MURPHY; Y. VELAZQUEZ; W. W. JA; S. TOMCHIK. *The Scripps Res. Inst., The Scripps Res. Inst., Florida Atlantic Univ., The Scripps Res. Inst.*

3:00 D26 **32.27** ▲ Determining the locomotor effects and expression of thrombospondin in *Drosophila melanogaster* larva. E. LOWENSTEIN; N. A. VELAZQUEZ ULLOA*. *Lewis & Clark Col., Lewis & Clark Col.*

POSTER

033. Dopamine

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 D27 **33.01** The effects of dopaminergic receptor ligands on the performance of nonhuman primates in a comprehensive, translational cognitive operant test battery (OTB). J. L. WALTERS*; J. J. CHELONIS; M. P. GILLAM; J. C. TALPOS; M. G. PAULE. *Natl. Ctr. for Toxicological Res. (NCTR).*

2:00 D28 **33.02** ▲ Lateral septum stimulation induces and increase in GABA and dopamine extracellular levels in the rat ventral tegmental area. I. M. VEGA; H. E. YARUR; K. GYSLING*. *Pontificia Univ. Catolica De Chile, Pontificia Univ. Catolica De Chile.*

3:00 D29 **33.03** Sex differences in behavior and neurophysiology during reward approach and punishment avoidance. T. G. CHOWDHURY*; N. W. SIMON; R. DUTTA; B. MOGHADDAM. *Univ. of Pittsburgh, Stanford Univ.*

4:00 D30 **33.04** Agitating dopamine d1 receptor prevents long-term special memory loss. J. ZHANG*. *Dept. of Oriental Phamaceutical Sci.*

1:00 D31 **33.05** Regional heterogeneity of dopamine D2-receptor signaling in the dorsal striatum and nucleus accumbens. P. F. MARCOTT*; C. P. FORD. *Case Western Reserve Univ.*

2:00 D32 **33.06** Altered dopamine D4 receptor dependent regulation of synaptic transmission and hippocampal circuit function in PGC-1α-/- mice. L. BRADY*; A. BARTLEY; Q. LI; L. DOBRUNZ. *Univ. of Alabama At Birmingham.*

3:00 D33 **33.07** Dopaminergic transmission in nucleus accumbens shell neurons are modulated by methylphenidate. C. REYES-VAZQUEZ*; A. VÁZQUEZ-ALVAREZ; D. PINEDA-VÁZQUEZ; S. RAMOS-MEJIA; B. PRIETO-GÓMEZ. *Depto. De Fisiología.*

4:00 D34 **33.08** Kinetic characterization of stimulation-evoked striatal dopamine release in a 6-hydroxydopamine-lesioned Parkinsonian rodent model. S. PAEK*; J. K. TREVATHAN; A. D. BATTON; C. D. BLAHA; A. J. BIEBER; J. L. LUJAN; K. H. LEE. *Mayo Clin.*

1:00 E1 **33.09** Differential dopamine potency across striatal d1 positive neurons. S. E. PEDERSEN; T. F. ANDREASSEN; J. K. DREYER; U. GETHER; K. L. MADSEN*. *Univ. of Copenhagen, Univ. of Copenhagen.*

2:00 E2 **33.10** ACh and opioid regulation of dopamine D2 receptor mediated transmission in striatal medium spiny neurons. Y. CAI*; A. A. MAMALIGAS; C. P. FORD. *Case Western Reserve Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

034. $GABA_A$ Receptors

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 E3 **34.01** Shedding light on the subunit arrangement of extrasynaptic $\alpha_4\beta_2\delta$ $GABA_A$ receptors. N. WONGSAMITKUL*; R. BAUR; E. SIGEL. *Univ. of Bern.*

2:00 E4 **34.02** Multiple sites of action of CGS 9895 on $GABA_A$ receptors. M. C. MALDIFASSI*; R. BAUR; E. SIGEL. *Univ. of Bern.*

3:00 E5 **34.03** Competitive antagonists facilitate the recovery of α1β2γ2 $GABA_A$ receptors from desensitization. Y. CHANG*; X. XU; D. ROBERTS; G. ZHU. *Barrow Neurolog. Inst., St. Joseph's Hosp. & Med. Ctr., Inst. of Pesticide and Envrn. Toxicology, Zhejiang University, China.*

4:00 E6 **34.04** Pharmacology of the human ε subunit from the $GABA_A$ receptors. D. C. BERTRAND*; S. BERTRAND; E. NEVEU; M. A. ACKLEY. *Hiqscreen, SAGE Therapeut.*

1:00 E7 **34.05** ● The challenge in comparing the pharmacology of agonists and modulators at α4β2γ2 and α4β2δ $GABA_A$ receptors. N. ABSALOM*; L. H. BANG; M. CHEBIB; P. K. AHRING. *Univ. of Sydney, Neurosearch A/S.*

2:00 E8 **34.06** Positive modulation of $GABA_A$ receptor currents by isomers of 2,6-Dimethylcyclohexanol. A. C. HALL*; L. COWDHURY; C. J. CROFT; S. GOEL; N. ZAMAN; A. C. TAI; E. M. WALCH; K. M. SHEA; C. D. HALL; D. JISHKARIANI; G. G. PILLAI. *Smith Col., Univ. of Florida, Univ. of Tartu.*

3:00 E9 **34.07** Multiple non-equivalent interfaces mediate direct activation of α1β3 $GABA_A$ receptors by propofol. A. S. EVERS*; M. M. EATON; A. GERMANN; R. ARORA; L. CAO; X. GAO; D. SHIN; A. WU; D. C. CHIARA; J. B. COHEN; J. H. STEINBACH; G. AKK. *Washington Univ. In St. Louis, Harvard Med. Sch.*

4:00 E10 **34.08** Diphenylpyraline, a histamine receptor antagonist, acts as a $GABA_A$ receptor agonist. D. B. WILLIAMS*; J. J. HARP. *Winston Salem State Univ., Winston-Salem State Univ.*

1:00 E11 **34.09** Acute and chronic itch are suppressed by positive allosteric modulators of α2- and α3-$GABA_A$ receptors. W. T. RALVENIUS*; D. BENKE; M. PAGANI; H. JOHANNSSEN; U. RUDOLPH; H. U. ZEILHOFER. *Inst. of Pharmacol. and Toxicology, Univ. Zürich, Lab. of Genet. Neuropharmacology, McLean Hosp., Inst. of Pharmaceut. Sciences, Swiss Federal Inst. of Technol. (ETH) Zurich.*

2:00 E12 **34.10** *De novo* GABRB3 mutations disrupt $GABA_A$ receptor gating and expression and lead to Early Infantile Epileptic Encephalopathy. C. C. HERNANDEZ*; Y. ZHANG; N. HU; D. SHEN; W. SHEN; X. LIU; W. KONG; Y. JIANG; R. MACDONALD. *Vanderbilt Univ. Med. Ctr., Dept. of Neurology, Vanderbilt Univ. Med. Ctr., Dept. of Pediatrics, Peking Univ. First Hospital., The Grad. Program of Neuroscience, Vanderbilt Univ.*

3:00 E13 **34.11** Functional properties of GABArho receptors from cerebellar astrocytes. A. PÉTRIZ*; D. REYES-HARO; M. GONZÁLEZ-GONZÁLEZ; R. MILEDI; A. MARTÍNEZ-TORRES. *Univ. Nacional Autónoma De México-Instituto, Univ. Nacional Autónoma De México-INB.*

4:00 E14 **34.12** Human peripheral blood mononuclear cells (PBMCs) express receptors for the neurotransmitters GABA and Glutamate. A. BHANDAGE*; C. HELLGREN; Z. JIN; S. KOROL; E. OLAFSSON; I. SUNDSTRÖM; B. BIRNIR. *Dept. of Neuroscience, Uppsala Univ., Uppsala Univ.*

1:00 E15 **34.13** Metabolic hormones modulate GABA-A receptors mediated synaptic and tonic currents in rat hippocampal and amygdala neurons. B. BIRNIR*; S. V. KOROL; O. BABATEEN; Z. JIN. *Uppsala Univ.*

2:00 E16 **34.14** Neonatal estradiol exposure to female rats changes $GABA_A$ receptor expression and function during adulthood. P. PORCU*; A. LOCCI; G. TALANI; E. SANNA; A. CONCAS. *Natl. Res. Council of Italy (CNR), Univ. of Cagliari.*

3:00 E17 **34.15** Novel, simplified $GABA_A$ receptor modulators based on the scaffold of Valerenic acid and derived from a ligand-based pharmacophore model. M. J. STADLER*; G. PARISI; S. MONTICELLI; D. LUGER; W. HOLZER; T. SEIDEL; C. SCHWARZER; V. PACE; T. LANGER; S. HERING. *Univ. of Vienna, Univ. of Vienna, Med. Univ. Innsbruck.*

4:00 E18 **34.16** Elucidating putative binding site for THIP on α4-containing receptors. L. Y. HARTIADI*; N. ABSALOM; H. J. LEE; P. K. AHRING; M. CHEBIB. *The Univ. of Sydney.*

1:00 E19 **34.17** Hispidulin alleviates methamphetamine-induced hyperlocomotion and impairment of prepulse inhibition via cerebellar α6-containing GABA-A receptors. H. LEE*; Y. LIAO; H. CHEN; W. HUANG; P. FAN; L. CHIOU. *Natl. Taiwan Univ., Dept. of Pharmacology, Col. of Medicine, Natl. Taiwan Univ., Grad. Inst. of Pharmacology, Col. of Medicine, Natl. Taiwan Univ., Dept. of Pharmacognosy, Taipei Med. Univ., Dept. of Pediatrics, Col. of Medicine, Natl. Taiwan Univ.*

2:00 E20 **34.18** The cerebellar α6-containing GABA-A receptor: A novel target for neuropsychiatric disorders. L. CHIOU*; C. WU; H. LEE; J. DU; C. HOR; M. ERNST; W. SIEGHART; J. M. COOK. *Natl. Taiwan University, Med. Col., Dept. of Pharmacology, Col. of Medicine, Natl. Taiwan Univ., Grad. Inst. of Pharmacology, Col. of Medicine, Natl. Taiwan Univ., Grad. Inst. of Brain and Mind Sciences, Col. of Medicine, Natl. Taiwan Univ., Ctr. for Brain Research, Med. Univ. of Vienna, Dept. of Chem. & Biochemistry, Univ. of Wisconsin.*

3:00 E21 **34.19** Neurosteroids selectively disinhibit the cortex and facilitate cortical spreading depression. A. PARGA*; S. VENUGOPAL; T. ANDERSON. *Univ. of Arizona, Univ. of Arizona - Col. of Med. - Phoenix.*

4:00 E22 **34.20** Different Benzodiazepines seem to interact differently with $GABA_A$ receptors. P. SCHOLZE*; A. A. ELGARF; F. STEUDLE; G. LI; J. M. COOK; M. ERNST. *Med. Univ. Vienna, Univ. of Milwaukee.*

1:00 E23 **34.21** Investigations into the pharmacology and physiology of gabaergic neurotransmission in planaria. L. RAMAKRISHNAN*. *St. Cloud State Univ.*

2:00 E24 **34.22** Developmental characterization of intrinsic physiology and inhibitory regulation of Dentate Semilunar Granule Cells. A. GUPTA*; B. SWIETEK; J. GUEVARRA; Y. SHAH; V. SANTHAKUMAR. *Rutgers, The Col. of New Jersey.*

3:00 E25 **34.23** The role of neurosteroid-δ-GABAR interaction in epileptogenesis. S. JOSHI*; K. RAJASEKARAN; J. WILLIAMSON; J. KAPUR. *Univ. of Virginia, Univ. of Texas, Univ. of Virginia.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 E26 **34.24** ● Modulation of inhibitory receptors by non-psychoactive cannabinoids. J. ASSIS MANUEL; R. A. GRAY; T. D. M. HILL; A. J. RUIZ; R. J. HARVEY*. *UCL Sch. of Pharm., GW Res. Ltd.*

1:00 E27 **34.25** Electrophysiological and behavioral characterization of a genetic mouse model of diminished synaptic inhibition in the spinal dorsal horn. L. TUDEAU*; W. T. RALVENIUS; M. POE; J. M. COOK; H. C. JOHANNSSEN; H. U. ZEILHOFER. *Univ. of Zurich, ETH Zurich, Univ. of Wisconsin-Milwaukee.*

2:00 E28 **34.26** ● Disinhibition of the HPA axis during the postpartum period induces deficits in maternal behaviors and postpartum depression-like behaviors. J. L. MAGUIRE*; A. HOOPER; L. C. MELÓN. *Tufts Univ. Sch. of Med.*

3:00 E29 **34.27** Conventional theory does not adequately explain benzodiazepine-$GABA_A$ receptor interactions. O. MOODY*; A. JENKINS. *Emory Univ., Emory Univ.*

1:00 DP01 **34.28** ● (Dynamic Poster) Adolescent synaptic pruning in CA3 hippocampus is due to α4βδ gabar expression. J. PARATO*; S. SMITH. *SUNY Downstate.*

1:00 E30 **34.29** The developmental decrease in neuronal chloride concentration is independent of slicing trauma in thalamo-cortical brain slices. J. C. GLYKYS*; K. STALEY. *Massachusetts Gen. Hosp.*

2:00 E31 **34.30** Characterization of neuronal chloride microdomains. N. RAHMATI*; K. J. STALEY. *Harvard Med. Sch. & Massachusetts Gen. Hos.*

POSTER

035. Opioid, Purine, and Peptide Receptors

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 E32 **35.01** μ-opioid receptor-mediated catecholamine secretion in adrenal tissue. L. DUNAWAY*; L. SOMBERS. *North Carolina State Univ.*

2:00 E33 **35.02** A structure-activity relationship study of the pan-opioid antagonist AT-076 reveals a κ-selective antagonist with exceptionally high binding affinity. E. TUAN*; V. B. JOURNIGAN; N. T. ZAVERI. *Astraea Therapeut.*

3:00 E34 **35.03** A comprehensive brain mapping study of 77 orphan GPCRs in mouse and human brain reveals new drug targets for psychiatric disease. A. EHRLICH*; G. MAROTEAUX; M. OSIKOWICZ; E. DARCQ; A. ROBE; L. VENTEO; J. A. J. BECKER; B. KIEFFER. *Douglas Res. Inst. and Hosp., McGill Univ., Igbmc, Inst. Génétique Biologie Moléculaire Cellulaire, Label Histologie.*

4:00 E35 **35.04** Synaptic mechanisms of OPRM1 A118G (MOR N40D) gene variants in human neurons. A. HALIKERE*; J. C. MOORE; J. TISCHFIELD; R. P. HART; Z. P. PANG. *CHINJ, RWJMS, Rutgers Univ., RUCDR/Infinite Biologics, The Human Genet. Inst. of New Jersey, Dept. of Genetics, Rutgers Univ., The Human Genet. Inst. of New Jersey, Dept. of Cell Biol. and Neuroscience, Rutgers Univ., Child Hlth. Inst. of New Jersey, Robert Wood Johnson Med. School, Rutgers Univ.*

1:00 E36 **35.05** High content screening of mu-opioid receptor internalizationusing fluorescent rabbit monoclonal antibodies against its N-terminal fragment. A. E. KALYUZHNY*; J. HAGEN; N. HOPP; M. GRAHEK; J. HUMPHREY; G. DU; P. MURTHA; M. COOPER; C. AUTIN; B. AGGELER. *Bio-Techne.*

2:00 E37 **35.06** $P2Y_1$ receptor-mediated modulation of neuronal activity in the mouse olfactory bulb. D. HIRNET*; K. SCHULZ. *Univ. of Hamburg.*

3:00 E38 **35.07** The caffeine-binding adenosine A2A receptor induces age-like HPA-axis dysfunction by targeting glucocorticoid receptor function. L. V. LOPES*; V. L. BATALHA; D. FERREIRA; J. E. COELHO; R. GOMES; T. SHMIDT; Y. BAQI; L. BUÉE; C. E. MÜLLER; M. HAMDANE; T. F. OUTEIRO; M. BADER; S. H. MEIJSING; G. SADRI-VAKILI; D. BLUM. *Inst. de Medicina Molecular, Fac Med. Lisbon, MDC, Univ. Bonn, INSERM, Univ. Med. Ctr. Göttingen, Max Planck Inst. for Mol. Genet., MassGeneral Inst. for Neurodegenerative Dis.*

4:00 F1 **35.08** Exogenous ATP modulates prostaglandin E_2 synthesis during inflammation. R. S. AKUNDI*; S. AKTER. *South Asian Univ.*

1:00 F2 **35.09** Trafficking of the neuropeptide galanin and its receptors in live cells. T. LI*; V. VUKOJEVIĆ; Y. BAI; Y. YANG; L. TERENIUS; T. HÖKFELT; P. SVENNINGSSON; Z. XU. *Capital Med. Univ., Karolinska Institutet, Karolinska Institutet.*

2:00 F3 **35.10** Oxytocin alters excitatory synaptic transmission in rat insular cortex. J. A. VARELA*; V. KRISHNA; J. P. CHRISTIANSON. *Boston Col.*

3:00 F4 **35.11** ● Expression of functional ox2 receptor in the human cervix cell line c33a. E. PERDONA'; F. FAGGIONI; M. A. CORSI*. *Aptuit Ctr. For Drug Discovery & Develop.*

4:00 F5 **35.12** Wnt-5a/Frizzled-9 regulates dendritic spine formation through Gαo and Gβγ. V. T. RAMIREZ*; E. RAMOS-FERNÁNDEZ; N. C. INESTROSA. *Pontifical Catholic Univ.*

1:00 F6 **35.13** Comparison of Leu^8- and Pro^8-oxytocin potency, efficacy and functional selectivity at the human and marmoset receptors. M. PIERCE*; S. MEHROTRA; M. L. TOEWS; J. A. FRENCH; T. F. MURRAY. *Creighton Univ., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Omaha.*

2:00 F7 **35.14** ● Immunohistochemical localization of a functional PAC1 antagonist antibody in the rodent trigeminovascular system. S. MILLER*; H. LIU; J. K. PRETORIUS; H. SUN; G. HILL DELLA PUPPA; D. W. SMITH; C. XU. *Amgen Inc., Amgen Inc., Amgen Inc.*

3:00 F8 **35.15** Melanin-concentrating hormone-mediated signaling induces cilium shortening via Gi/o-dependent Akt phosphorylation. Y. SAITO*; A. HAMAMOTO; S. YAMATO; Y. KOBAYASHI. *Hiroshima Univ., Kurume Univ.*

4:00 F9 **35.16** Characterization of leptin receptor expressing neurons in the mouse NTS. J. DO; T. KOWAL*; L. FLOREANI; D. MCCRIMMON; M. MARTINA. *Northwestern University, Feinberg Sch. of Med., Northwestern Univ. Dept. of Physiol., Intl. Sch. for Advanced Studies.*

1:00 F10 **35.17** Oxytocin increases excitability and burst firing of CA2 pyramidal neurons and tunes their synaptic output. N. N. TIRKO*; M. MITRE; R. C. FROEMKE; M. V. CHAO; R. W. TSIEN. *New York Univ. Sch. of Med., NYU Sch. of Med.*

2:00 F11 **35.18** Functional consequences of the heteromerization between dopamine D1 and type-2 corticotropin releasing factor receptors. H. E. YARUR*; C. A. LOPEZ; K. GYSLING. *Pontificia Univ. Catolica De Chile, Pontificia Univ. Católica de Chile.*

3:00 F12 **35.19** Functional authentication of two isoforms of a gastropod gonadotropin-releasing hormone receptor. S. I. KAVANAUGH*; P. TSAI. *Univ. of Colorado.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 F13 **35.20** Tanning the GnRH neurons-Melanocortin receptor 1 in GnRH neurons. C. HAERING; S. S. CONSTANTIN*; S. WRAY. *NIH.*

POSTER

036. Homeostatic Plasticity

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 F14 **36.01** Exercise-induced neurotransmitter switching in the adult mouse midbrain. H. LI*; K. B. JACKSON; N. C. SPITZER. *UCSD.*

2:00 F15 **36.02** Neurotransmitter switching in the adult mammalian hippocampus. S. ZAMBETTI*; J. O. CONNORS; N. C. SPITZER. *UC San Diego, UC San Diego.*

3:00 F16 **36.03** Neuronal activity regulates neurotransmitter switching in the adult brain. D. MENG*; S. LEUTGEB; K. DEISSEROTH; N. C. SPITZER. *UC San Diego, UC San Diego, Stanford Univ., Stanford Univ.*

4:00 F17 **36.04** Neurotransmitter switching in mouse prefrontal cortex. S. K. GODAVARTHI*; N. C. SPITZER. *Univ. of California San Diego.*

1:00 F18 **36.05** Investigating mechanisms by which the WDR proteins regulate the deubiquitinating enzyme USP-46 *in vivo* to control *C. elegans* AMPA receptor GLR-1. M. HODUL*; C. L. DAHLBERG; P. JUO. *Tufts Univ., Tufts Univ., Western Washington Univ.*

2:00 F19 **36.06** ▲ Dynamic changes in Kv7/KCNQ channel complex at the axonal initial segment of hippocampal neurons during homeostatic plasticity. Z. HUANG*; S. LEE; J. CAVARETTA; G. LEE; H. CHUNG. *Univ. of Illinois At Urbana-Champaign.*

3:00 F20 **36.07** Homeostatic plasticity induces rapid temperature adaptation of the life-saving C-start mediated by NMDA receptors and gap junctions at Mauthner cell level in larval zebrafish. A. HECKER*; W. SCHULZE; S. SCHUSTER. *Dept. of Animal Physiol.*

4:00 F21 **36.08** Homeostatic modulation of neocortical plasticity: Extinction of aversive taste memory prevents the maintenance of *in vivo* insular cortex LTP. A. RIVERA-OLVERA*; M. L. ESCOBAR. *Facultad De Psicologia, UNAM, Facultad De Psicologia, UNAM.*

1:00 F22 **36.09** Pharmacological rescue of synaptic scaling. V. TATAVARTY*; H. LIN; G. G. TURRIGIANO. *Brandeis Univ.*

2:00 F23 **36.10** Impaired astrocytic calcium signalling interferes with experience-dependent plasticity (EDP) in layers 2/3 of the murine barrel cortex. J. BUTCHER*; R. E. SIMS; H. R. PARRI; S. GLAZEWSKI. *Keele Univ., Aston Univ.*

3:00 F24 **36.11** Evidence for homeostatic and Hebbian plasticity components in cortical layer 2/3 neurons. K. D. FOX*; S. D. GREENHILL; S. GLAZEWSKI. *Cardiff Univ., Aston Univ., Keele university.*

4:00 F25 **36.12** Glial sources of TNF during homeostatic synaptic plasticity. R. HEIR*; H. ALTIMIMI; D. STELLWAGEN. *McGill Univ. Ctr. For Res. In Neurosci.*

1:00 F26 **36.13** How spontaneous activity drives homeostatic synaptic plasticity. C. J. NEFF*; C. A. FRANK. *Univ. of Iowa, Univ. of Iowa.*

2:00 F27 **36.14** Presynaptic scaling of active zone size and number homeostatically tunes global synaptic strength. P. GOEL*; J. PALUCH; J. WONDOLOWSKI; L. NUNNELLY; D. DICKMAN. *USC, USC.*

3:00 F28 **36.15** Retrograde potentiation of presynaptic release is suppressed when three homeostatic perturbations are chronically combined at an individual synapse. X. LI*; P. GOEL; J. WONDOLOWSKI; J. PALUCH; D. DICKMAN. *USC, USC, USC, USC.*

4:00 F29 **36.16** Differential expression of JAK2-STAT3 during homeostatic plasticity. S. CHOI*; G. COLLINGRIDGE. *Ctr. For Synaptic Plasticity.*

1:00 F30 **36.17** Distinct requirements for pallidin and the schizophrenia susceptibility gene dysbindin in promoting synaptic vesicle recycling and homeostatic plasticity. X. CHEN*; W. MA; S. ZHANG; J. PALUCH; W. GUO; D. K. DICKMAN. *USC, USC.*

2:00 F31 **36.18** Hypoperfusion-induced changes in neuronal network oscillations in the mouse forebrain. Y. NISHIMURA*; R. ABE; T. SASAKI; Y. IKEGAYA. *The Univ. of Tokyo.*

3:00 F32 **36.19** Homer1a mediated experience-dependent synaptic plasticity in mouse primary visual cortex. V. B. CHOKSHI*; M. GAO; P. WORLEY; H. LEE. *Johns Hopkins Univ., Johns Hopkins Univ., Barrow Neurolog. Inst., Johns Hopkins Univ.*

4:00 F33 **36.20** A mechanism of synaptic homeostasis in ca3 critical for maintaining hippocampal circuit balance. F. WENG*; K. ALVINA; Y. ZHANG; M. DUSHKO; S. LUTZU; A. SORENSEN; M. HUNG; D. GARCIA-DOMINQUEZ; D. RICH; P. CASTILLO; Y. LIN. *MIT, Albert Einstein Col. of Med., MIT, MIT.*

1:00 F34 **36.21** A presynaptic glutamate receptor confers robustness to neurotransmission and homeostatic potentiation. B. KIRAGASI*; J. WONDOLOWSKI; Y. LI; G. W. DAVIS; D. K. DICKMAN. *USC, USC, Eunice Kennedy Shriver Natl. Inst. of Child Hlth. and Human Develop., Univ. of California, San Francisco.*

2:00 F35 **36.22** Homeostatic regulation of cortical firing rates is inhibited by sleep. K. B. HENGEN*; A. TORRADO PACHECO; G. G. TURRIGIANO. *Brandeis Univ.*

3:00 F36 **36.23** Homeostatic scaling of intrinsic excitability involves upstream signaling pathways that are distinct from homeostatic scaling of excitatory synapses. A. WEISS; S. JANG; E. KIM; G. LEE; H. CHUNG*. *Univ. of Illinois At Urbana Champaign, Univ. of Illinois At Urbana Champaign.*

4:00 F37 **36.24** Calcium signaling mediates retrograde homeostatic compensation at the *Drosophila* neuromuscular junction. L. GRAY*; R. BALL; G. KAUWE; M. MORI; E. ISACOFF; P. HAGHIGHI. *Buck Inst. For Res. On Aging, Univ. of California, Berkeley.*

1:00 F38 **36.25** Chronic enhancement of neuronal activity induces homeostatic down-scaling in $STEP_{61}$-dependent manners. S. JANG*; H. JEONG; H. OH; S. ROYSTON; M. VEST; J. XU; P. LOMBROSO; H. CHUNG. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

2:00 F39 **36.26** Homeostatic scaling-down of excitatory synapses during sleep driven by Homer1a. G. H. DIERING*; R. NIRUJOGI; R. H. ROTH; P. F. WORLEY; A. PANDEY; R. L. HUGANIR. *Johns Hopkins Univ., Johns Hopkins Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 F40 **36.27** Neuregulin1 (NRG1)/ErbB4 signaling regulates visual critical period cortical plasticity. T. IKRAR*; Y. SUN; N. GONG; M. F. DAVIS; S. P. GANDHI; X. XU. *Univ. of California, Irvine, Univ. of California, Irvine.*

4:00 F41 **36.28** A forward genetic screen identifies a link between the homeostatic control of sleep behavior and synaptic plasticity. K. KIKUMA*; M. AMAR; H. YANG; D. DICKMAN. *USC, USC.*

1:00 F42 **36.29** Tyrosine kinase-based synaptic signals drive the long-term maintenance of homeostatic neuroplasticity. C. FRANK*; D. J. BRUSICH; A. M. SPRING. *Univ. of Iowa, Wartburg Col.*

POSTER

037. Microglia I

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 F43 **37.01** Dynamic effects of ethanol on microglia. T. J. WALTER*; F. CREWS. *Univ. of North Carolina - Chapel Hill.*

2:00 F44 **37.02** The role of microglial tlr-myd88 function in the cns after chronic intermittent ethanol. P. D. RIVERA*; K. M. MILLER; H. S. SWARTZWELDER; S. D. BILBO. *Duke Univ., Duke Univ. Med. Ctr.*

3:00 F45 **37.03** Chronic ethanol exposure provokes diverse microglial activation patterns in region-specific manner in the mouse brain. S. MONTGOMERY*; M. BAJO; S. HUITRON-RESENDIZ; T. NADAV; L. N. CATES; E. F. CRAWFORD; K. CHENG; H. YIN; A. J. ROBERTS; M. ROBERTO. *The Scripps Res. Inst., The Scripps Res. Inst., Univ. of Colorado Boulder.*

4:00 F46 **37.04** Microglia morphology in the medial prefrontal cortex following binge alcohol consumption and exercise. E. A. BARTON*; Y. LU; M. MEGJHANI; M. E. MAYNARD; B. ROYSAM; J. L. LEASURE. *Univ. of Houston, Univ. of Houston.*

1:00 F47 **37.05** Hyperthermia activates microglia to engulf inhibitory synapses in early-life seizures. R. KOYAMA*; Y. KASAHARA; K. SHIBATA; S. UJITA; S. SUGIO; K. F. TANAKA; K. SHIBASAKI; Y. IKEGAYA. *Grad. Sch. of Pharmaceut. Sciences, The Univ. of Tokyo, Gunma Univ. Grad. Sch. of Med., Keio Univ. Sch. of Med.*

2:00 F48 **37.06** Synaptic excitation and ltp are altered in juvenile trem2-deficient mice. P. W. HICKMOTT*; A. MADANY; M. CARSON. *Univ. California, Riverside, Univ. of California, Riverside.*

3:00 F49 **37.07** TREM2 and CCR2 mediated regulation of hippocampal synapse development. A. MADANY*; Y. OTANI; D. DAVIS; S. SLONIOWSKI; I. ETHELL; M. J. CARSON. *Univ. of California Riverside.*

4:00 F50 **37.08** Noradrenergic modulation of microglial dynamics and synaptic plasticity. R. STOWELL*; G. SIPE; A. MAJEWSKA. *Univ. of Rochester.*

1:00 F51 **37.09** Deficient autophagy in microglia results in impaired synapse pruning and social behavior. H. KIM*; M. CHO; W. SHIM; J. KIM; S. YOON. *Univ. of Ulsan Col. of Med., Univ. of Ulsan Col. of Med., Asan Med. Center, Univ. of Ulsan Col. of Med.*

2:00 F52 **37.10** The inflammatory response following a laser-induced cortical microhemorrhage in a rodent model is dominated by migration of brain-resident microglia. S. AHN*; J. ANRATHER; N. NISHIMURA; C. B. SCHAFFER. *Cornell Univ., Weill Cornell Med. Col.*

3:00 F53 **37.11** The role of APOE in MS-associated neuroinflammation. E. CUDABACK*. *Depaul Univ.*

4:00 G1 **37.12** Microglia rapidly adopt a filopodia-rich phenotype during hypoxia by sensing tissue acidosis. L. BERNIER*; L. DISSING-OLESEN; J. K. HEFENDEHL; J. M. LEDUE; B. A. MACVICAR. *Univ. of British Columbia.*

1:00 G2 **37.13** Transducing acidosis to panic: Role of microglial and renin angiotensin system (RAS) mechanisms. A. WINTER*; R. SAH; L. VOLLMER; R. AHLBRAND; E. KRAUSE. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Florida.*

2:00 G3 **37.14** Cytosolic immature cathepsin D controls F-actin-mediated lamellipodia extension in microglia. Y. LIU*; T. ZHANG; L. QIN; Y. ZHANG; X. LI; J. YANG; Y. HU; Z. GUO; H. LOU; M. HO; S. DUAN. *Zhejiang Univ., Affiliated Hosp. of Nantong Univ., Tongji Univ. Sch. of Med.*

3:00 G4 **37.15** Microglia development follows a stepwise program to regulate brain homeostasis. O. MATCOVITCH-NATAN*; D. R. WINTER; S. ITZKOVITZ; E. ELINAV; M. SIEWEKE; M. SCHWARTZ; I. AMIT. *Weizmann Inst. of Sci., Weizmann Inst. of Sci., Weizmann Inst. of Sci., Ctr. d'Immunologie de Marseille-Luminy, Univ. Aix-Marseille, Weizmann Inst. of Sci.*

4:00 G5 **37.16** Nuclear GAPDH cascade and cellular autofluorescence: Microglia-mediated novel mechanisms involved in cognitive deficits in schizophrenia. A. RAMOS*; N. ELKINS; T. TSUJIMURA; T. SAITO; F. EMILIANI; N. GAMO; C. LI; T. SEDLAK; C. KORTH; K. ISHIZUKA; A. SAWA. *Johns Hopkins Univ. Sch. of Med., Aomori Univ., Univ. of Duesseldorf Med. Sch.*

1:00 G6 **37.17** THIK-1 regulates cytokine release by microglia. V. KYRARGYRI; C. MADRY; R. JOLIVET; D. ATTWELL*. *Univ. Col. London, Univ. of Geneva, CERN.*

2:00 G7 **37.18** Neuroprotective effect of nicotine by inhibition of microglial proton currents via α7 nAChR. M. NODA*; A. KOBAYASHI, 812-8582. *Kyushu Univ., Kyushu Univ.*

3:00 G8 **37.19** Elimination of microglia in adult mouse forebrain does not alter kynurenine 3-monooxygenase activity. K. V. SATHYASAIKUMAR*; P. SEVERSON; B. L. WEST; R. SCHWARCZ. *Univ. of Maryland Sch. of Med., Plexxikon Inc.*

4:00 G9 **37.20** Sex-specific vulnerability to maternal immune activation - Are microglia involved? S. M. SCHAAFSMA*; K. E. LAUPMAN; E. M. HOL; M. JOËLS. *Univ. Med. Ctr. Utrecht.*

1:00 G10 **37.21** Alterations in glial iron homeostasis in hypoxic conditions and effects of induced hypothermia on iron regulatory proteins in cell culture. A. L. ARAL*; M. A. ERGUN; B. ENGIN; A. Ö. BÖRCEK; L. PINAR; M. K. BAYKANER; H. BOLAY. *Gazi Univ. Fac. of Med., Gazi Univ. Fac. of Med., Gazi Univ. Fac. of Pharmacy, Gazi Univ. Fac. of Med., Gazi Univ. Fac. of Med., Gazi Univ.*

2:00 G11 **37.22** Role of spinal microglia in DCP-induced contact dermatitis. B. CHOI*; H. MIN; S. LEE. *Seoul Natl. Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 G12 **37.23** ● Transforming growth factor - β1 attenuates pro-inflammatory activation in microglia through ALK5-dependent signaling. Q. CHEN*; B. V. CHEUNG; T. SHIMADA; M. MATSUMOTO; H. ITO; K. TAJINDA. *Astellas Res. Inst. of America LLC, Master of Biotech. program, Northwestern Univ., Neurosci. Res. Unit, Drug Discovery Research, Astellas Pharma Inc.*

4:00 G13 **37.24** Piwi-like 4 regulates neuroinflammation via the nf-κb and p38 mapk pathways. Q. HU*; C. SUBHRAMANYAM; C. WANG; Q. CAO. *Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

1:00 G14 **37.25** Brain-derived neurotrophic factor promotes a neuroprotective phenotype in microglia during stress or inflammation. A. M. DUGAN*; J. M. PARROTT; L. REDUS; J. G. HENSLER; J. C. O'CONNOR. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Audie L. Murphy VA Hosp.*

2:00 G15 **37.26** Maternal immune activation and later-life behavioral deficits: Is there a link with embryonic microglia migration? C. LACABANNE; A. BENMAMAR--BADEL; S. LAYE; G. N. LUHESHI*. *McGill Univ., INRA-Université de Bordeaux, Ecole Normale Supérieure de Lyon, Univ. de Lyon.*

3:00 G16 **37.27** ● Measurements of hydrogen peroxide in line and their change by hypoxia and microglia modulation. K. PARDO-PEÑA*; F. PEÑA-ORTEGA; A. MORALES-VILLAGRÁN; N. CAMACHO-HERNÁNDEZ; J. LOREA-HERNÁNDEZ. *UNAM, UNAM, CUCBA, Univ. de Guadalajara.*

4:00 G17 **37.28** Effects of early life infection and iron deficiency upon neurodevelopment in the neonatal piglet. B. J. LEYSHON*; R. W. JOHNSON. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

1:00 G18 **37.29** Activation of the PGE2 EP1 receptor promotes microglial phagocytosis through CD36 receptor recycling. B. MA*; B. SLOOTSKY; H. PHILLIPS; K. KOLAROVA; S. DORÉ. *Univ. of Florida Col. of Med., Dept. of Anesthesiology, Ctr. for Translational Res. in Neurodegenerative Disease, Univ. of Florida, Col. of Medicine;, Dept. of Anesthesiology, Ctr. for Translational Res. in Neurodegenerative Disease, Univ. of Florida, Col. of Medicine;.*

2:00 G19 **37.30** A putative interaction of tspo with nadph oxidase in primary microglia. M. K. LOTH*; S. R. GUARIGLIA; J. CHOI; D. B. RE; T. R. GUILARTE. *FIU, Columbia Univ.*

POSTER

038. Immune Responses in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 G20 **38.01** Mitochondrial fragmentation induced ROS triggers p62 mediated autophagy in microglia. U. CHAE*; H. LEE; D. LEE. *Kyungpook Natl. Univ., Biomed. Res. Institute, Chung-Ang Univ. Col. of Med.*

2:00 G21 **38.02** Role of adult neurogenesis in increased sensitivity of ArcticAβ mice to kainic acid. M. ZAICHUK*; T. GSCHWIND; I. KNUESEL; J. FRITSCHY. *Univ. of Zürich.*

3:00 G22 **38.03** The contribution of Alzheimer's disease-like pathology to epileptogenesis in a mouse model for temporal lobe epilepsy. T. GSCHWIND*; T. GFELLER; C. LAFOURCADE; M. ZAICHUK; I. KNUESEL; J. FRITSCHY. *Univ. of Zurich, Univ. de los Andes.*

4:00 G23 **38.04** ● β1 adrenergic receptors modulate neurocognitive function, neuroinflammation and pathology in a mouse model of Alzheimer's disease. A. K. EVANS*; B. YI; M. SHAMLOO. *Stanford.*

1:00 G24 **38.05** ● Microvessel occlusions alter amyloid-β plaque morphology in mouse models of Alzheimer's disease. N. NISHIMURA*; E. D. BANDER; Y. LEE; C. MUOSER; C. B. SCHAFFER. *Cornell Univ.*

2:00 G25 **38.06** Investigating the effects of hypertension on a transgenic model of Alzheimer disease. A. LEVIT*; V. HACHINSKI; S. WHITEHEAD. *Univ. of Western Ontario, London Hlth. Sci. Ctr.*

3:00 G26 **38.07** Comparison of brain vasculature network characteristics between wild type and Alzheimer's disease mice using topological metrics. M. HAFT JAVAHERIAN*; V. MUSE; J. C. CRUZ HERNÁNDEZ; C. KERSBERGEN; I. IVASYK; Y. KANG; G. OTTE; S. LORTHOIS; C. B. SCHAFFER; N. NISHIMURA. *Cornell Univ., Inst. de Mécanique des Fluides de Toulouse.*

4:00 G27 **38.08** Genetic evidence for the substantial contribution of the trail/trail-receptor system to amyloid-β neurotoxicity in the mouse. G. DI BENEDETTO; L. LEMPEREUR; F. SERAPIDE; O. VALERIO; H. WALCZAK; R. BERNARDINI*; G. CANTARELLA. *Univ. Catania Med. Sch., Eli-Lilly Lab., UCL Cancer Inst., Policlinico, Univ. of Catania.*

1:00 G28 **38.09** RXR agonist with Am80 improved memory deficits in a mouse model of Alzheimer's disease. K. KAWAHARA*; H. TAKASE; Y. YAMADA; D. YAMADA; T. MAEDA; H. NAKAYAMA; H. FUKASAWA; K. SHUDO. *Niigata Univ. of Pharm. and Applied Life Sci., Kumamoto Univ., Tokyo Med. and Dent. Univ., Kemphys Ltd.*

2:00 G29 **38.10** Placenta-derived mesenchymal stem cells facilitate neural and cognitive recovery in dementia rat model. J. CHO*; J. LEE; D. JEONG; H. KIM; W. CHANG; J. MOON; J. CHANG. *Yonsei Univ. Col. of Med., Brain Korea 21 PLUS Project for Med. Sci. and Brain Res. Institute, Yonsei Univ. Col. of Med., Gen. Res. Institute, Gangnam CHA Gen. Hosp., Dept. of Bioengineering, Col. of Life Science, CHA Univ.*

3:00 G30 **38.11** Microglial kca3.1 channels as a potential therapeutic target for Alzheimer's disease. I. MAEZAWA*; H. M. NGUYEN; J. DI LUCENTE; V. SINGH; L. SINGH; M. CHAVEZ; H. WULFF; L. JIN. *M.I.N.D. Inst, UC Davis, UC Davis, UC Davis.*

4:00 G31 **38.12** A 3D Alzheimer's disease brain model recapitulates microglial activation, recruitment and neuronal loss. J. PARK*; D. KIM; R. E. TANZI; H. CHO. *UNC Charlotte, Ctr. for Biomed. Engin. and Sci. (CBES), Massachusetts Gen. Hospital, Harvard Med. Sch.*

1:00 G32 **38.13** Reducing the incidence of stalled blood flow in brain capillaries leads to improved cognitive function in a mouse model of Alzheimers disease. O. BRACKO*; J. C. CRUZ HERNÁNDEZ; L. VINARCSIK; N. NISHIMURA; C. B. SCHAFFER. *Cornell Univ.*

2:00 G33 **38.14** Are parvalbumin interneurons selectively targeted by ineffective autophagy and mitophagy in aging brain? Q. TANG*; B. KRAEMER; M. DIXIT; J. B. RUDEN; P. J. SPITZLER; L. L. DUGAN. *Vanderbilt Univ. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 G34 **38.15** Stalled blood flow in brain capillaries is responsible for reduced cortical perfusion in mouse models of Alzheimer's disease. J. CRUZ*; O. BRACKO; C. KERSBERGEN; V. MUSE; I. IVASYK; M. HAFT-JAVAHERIAN; J. ZHOU; J. D. BEVERLY; E. SLACK; G. OTTE; T. P. SANTISAKULTARM; C. IADECOLA; N. NISHIMURA; C. B. SCHAFFER. *Cornell Univ., Weill Cornell Med. Col.*

4:00 G35 **38.16** Gamma oscillations attenuate amyloid pathology and trigger a distinct microglia response in mouse models of Alzheimer's disease. H. F. IACCARINO*; A. C. SINGER; A. J. MARTORELL; A. RUDENKO; F. GAO; T. Z. GILLINGHAM; R. G. CANTER; R. RUEDA; E. N. BROWN; E. S. BOYDEN; L. TSAI. *MIT.*

1:00 G36 **38.17** Diminished mitochondrial activity in myeloid cells in response to $A\beta_{42}$ oligomer stimulation is associated with altered kynurenine pathway activity. P. S. MINHAS*; S. D. MHATRE; P. K. MOON; Q. WANG; C. A. TSAI; A. J. RUBIN; J. WANG; K. I. ANDREASSON. *Stanford Univ.*

2:00 G37 **38.18** Role of RAGE in Alzheimer's disease. M. S. KINDY*; J. YU; H. ZHU; S. TAHERI. *Univ. of South Florida.*

3:00 G38 **38.19** Region- and age-specific effects of apoe4 on expression of trem2 mRNA and microglial phenotype in young adult targeted replacement mice. T. JONES*; J. VALLEJO; B. CHAVIRA; C. DE VERA; M. CASTRO; G. JENTARRA. *Midwestern Univ.*

4:00 G39 **38.20** Dimethyl fumarate modulates pro-inflammatory microglia activation via the nuclear-erythroid factor 2-independent and -dependent pathways. H. PARAISO; P. KUO; J. YEN; G. A. WEMHOFF; R. D. SWEAZEY; F. CHANG; I. I. YU*. *Indiana University-Purdue Univ. Fort Wayne, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

POSTER

039. Memory and Cognition in Alzheimer's Disease and Other Neurodegenerative Disorders

Theme C: Neurodegenerative Disorders and Injury

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

1:00 G40 **39.01** ● Educational attainment confers protection against amyloid deposition during early but not later old age on higher order cognition. M. E. FARRELL; G. N. BISCHOF; D. C. PARK*. *Ctr. For Vital Longevity, Univ. of Texas At Dallas, Inst. of Neurosci. & Med. (INM-3) Res. Ctr.*

2:00 G41 **39.02** Electrophysiological markersof top-down control in younger and older participants. N. NAPIORKOWSKI*; H. MÜLLER; T. TÖLLNER; A. PETERSEN; I. WIEGAND; K. FINKE. *Ludwig Maximilian Univ. of Munich, Univ. of Copenhagen.*

3:00 G42 **39.03** Memory for lifelike events in older adults with memory impairment. C. OEDEKOVEN*; J. L. KEIDEL; G. RACZEK; C. M. BIRD. *Univ. of Sussex, Univ. of Sussex.*

4:00 G43 **39.04** Visual episodic memory does not depend on precuneus disease: Evidence from posterior cortical atrophy. K. WIN*; P. YUSHKEVICH; D. WOLK; M. GROSSMAN. *Penn Frontotemporal Degeneration Ctr., Neurosci. Grad. Group, Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 G44 **39.05** Chronic HDACi therapy to long term neurological disease. M. ALAM; M. GETZ; B. COMBS; K. HALDAR*. *Univ. of Notre Dame.*

2:00 G45 **39.06** Translational validity of the psychomotor vigilance paradigm in an acute pharmacological model of neurocognitive decline in primates. I. HERNADI*; V. OLAH; A. TRUNK. *Univ. of Pecs.*

3:00 G46 **39.07** Relative frontal and temporal contributions to social knowledge in bvFTD. A. HALPIN*; R. LANGEY; N. MIN; C. YORK; O. KOFMAN; K. RASCOVSKY; D. IRWIN; C. JESTER; C. MCMILLAN; M. GROSSMAN. *Univ. of Pennsylvania.*

4:00 G47 **39.08** Cumulative effect of systemic chemotherapy on cognitive function. S. JUNG*; J. MIN. *Seoul Natl. Univ. Boramae Med. Ctr., Seoul Natl. Univ. Col. of Med., Seoul Natl. Univ. Hosp.*

1:00 G48 **39.09** ▲ Reversal learning deficits in behavioral variant frontotemporal degeneration. K. TERNES*; J. KABLE; J. MCGUIRE; K. RASCOVSKY; C. MCMILLAN; M. GROSSMAN. *Univ. of Pennsylvania Dept. of Neurol., Univ. of Pennsylvania Dept. of Psychology, Boston Univ. Dept. of Psychological & Brain Sci.*

2:00 G49 **39.10** Cerebral metabolic correlates of disorientation in Alzheimer's disease. G. WEISSBERGER*; R. MELROSE; T. NARVAEZ; D. HARWOOD; M. MANDELKERN; D. SULTZER. *West Los Angeles Veteran's Admin., West Los Angeles Veteran's Admin.*

3:00 G50 **39.11** Brain activity, functional connectivity and auditory feedback processing in primary progressive aphasia variants. K. RANASINGHE*; L. B. HINKLEY; H. KOTHARE; A. J. BEAGLE; D. MIZUIRI; S. HONMA; I. HUBBARD; A. E. WELCH; M. MEYER; Z. MILLER; J. F. HOUDE; M. GORNO-TEMPINI; K. A. VOSSEL; S. S. NAGARAJAN. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco, Gladstone Inst. of Neurolog. Dis.*

4:00 H1 **39.12** Structural deficits and altered intrinsic connectivity in presymptomatic progranulin mutation carriers. S. LEE*; A. C. SIAS; E. KOSIK; J. A. BROWN; J. DENG; A. A. VIDOVSZKY; A. M. KARYDAS; G. COPPOLA; D. H. GESCHWIND; R. RADEMAKERS; H. J. ROSEN; B. L. MILLER; W. W. SEELEY. *UCSF Memory and Aging, UCLA Neurobehavior Div., Mayo Clin., UCSF Memory and Aging.*

POSTER

040. Diagnostic Biomarkers for Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 H2 **40.01** Similarity-based cortical thickness analysis of mild cognitive impairment (MCI). C. E. HAN*; H. KAM; J. SEONG. *Korea Univ., Korea Univ., Korea Univ., Korea Univ.*

2:00 H3 **40.02** A new biomarker of pericyte injury and blood-brain barrier dysfunction. A. P. SAGARE*; M. D. SWEENEY; A. MONTAGNE; J. MAKSHANOFF; D. LAZIC; M. G. HARRINGTON; B. V. ZLOKOVIC. *USC, Huntington Med. Res. Inst.*

3:00 H4 **40.03** Vascular risk factors, education and physical fitness are associated with differences in brain volumes. C. PINTZKA*; T. HANSEN; A. K. HÅBERG. *St. Olavs Hosp., Norwegian Univ. of Sci. and Technol.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 H5 **40.04** Hippocampal and ventricular volumes of idiopathic normal-pressure hydrocephalus and the cerebrospinal fluid tap test. K. KANG*; J. KIM; M. LEE. *Dept. of Neurol., Dept. of Neurology, Kyungpook Natl. Univ. Sch. of Med., Dept. of Pharmacology, Kyungpook Natl. Univ. Sch. of Med.*

1:00 H6 **40.05** Proteomic analysis of blood, induced pluripotent stem cells, three dimensional neurons, and post-mortem brain tissue specimens from the same alzheimer patients for biomarker exploration. M. CHEN; H. LEE; C. VELAZQUEZ*; P. MORIN; T. STEIN; W. XIA. *Geriatric Res. Educ. and Clin. Center, ENR Mem. Veterans Hosp., Harvard Sch. of Publ. Hlth., Rhode Island Hosp. and Brown Univ. Warren Alpert Med. Sch., Boston Univ., Boston Univ., Boston Univ., Boston Univ.*

2:00 H7 **40.06** Relations between cognitive decline, regional specificity of brain atrophy and cerebrospinal fluid biomarkers in elderly patients with Alzheimer's disease. Y. OIWA*; T. KITAGAWA; I. NAKANISHI; H. TANAKA; M. ARITA. *Wakayama Med. Univ., Wakayama Med. Univ. Sch. of Hlth. and Nursing Sci.*

3:00 H8 **40.07** The Hippocampal Network Model - A neuroimaging approach for identifying dementia biomarkers in metabolic syndrome. E. KOTKOWSKI*; P. T. FOX. *Univ. of Texas Hlth. Sci. Ctr. At San A.*

4:00 H9 **40.08** MR imaging of blood perfusion at the nucleus basalis of Meynert in modulation of attention and visual processing. A. WOJNA PELCZAR*; N. SZABO; P. FARAGO; A. KIRALY; T. Z. KINCES; I. REKTOR; B. TOMANEK. *CEITEC - Central European Inst. of Technol., Albert Szent-Györgyi Clin. Centre, Univ. of Szeged, St. Anne's Univ. Hosp.*

1:00 H10 **40.09** ● Quantitative neuroimaging and biomarkers in Alzheimer's disease and Lewy body spectrum diseases. K. TRINGALE*; P. OOMEN; J. BREWER. *UC San Diego, Vrije Univ. Amsterdam, Univ. of California at San Diego.*

2:00 H11 **40.10** τ deposition and microglial activation in early stage Alzheimer disease. T. TERADA*; M. YOKOKURA; T. BUNAI; E. YOSHIKAWA; M. FUTATSUBASHI; T. MATSUDAIRA; T. OBI; Y. OUCHI. *Hamamatsu Univ. Sch. of Med., Shizuoka Inst. of Epilepsy and Neurolog. Disorders, Hamamatsu Univ. Sch. of Med., Preeminent Med. Photonics Educ. & Res. Center, Hamamatsu Univ. Sch. of Med., Hamamatsu Photonics K.K.*

3:00 H12 **40.11** ▲ Estimation of age of onset in presymptomatic frontotemporal degeneration. P. VADDI*; E. MCCARTY WOOD; V. VAN DEERLIN; D. IRWIN; M. GROSSMAN; C. MCMILLAN. *Univ. of Pennsylvania.*

4:00 H13 **40.12** Disease-specific relationship between longitudinal neuroimaging and cerebrospinal fluid. C. A. JESTER*, III; K. FIRN; K. TERNES; L. M. SHAW; D. IRWIN; D. WEINTRAUB; M. GROSSMAN; C. T. MCMILLAN. *Univerisity of Pennsylvania, Univerisity of Pennsylvania, Univ. of Pennsylvania.*

1:00 H14 **40.13** Using event related potentials to investigate aging and Alzheimer's disease in adults with Down's Syndrome. S. JENNINGS*; S. CHENNU; T. BEKINSCHTEIN; V. NOREIKA; A. HOLLANAD; H. RING. *Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge, Med. Res. Council Cognition and Brain Sci. Unit.*

2:00 H15 **40.14** Developing neuroimaging biomarkers for classification of Alzheimer's disease: A correlative study between brain network centrality, cognitive functions and biochemical measurements in clinical settings. C. LIN*; S. LIN; T. HSIEH; C. HSU; L. KUO. *Natl. Hlth. Res. Inst., Natl. Hlth. Res. Inst.*

3:00 H16 **40.15** *In vivo* assessment of synaptic properties in rTg4510 tauopathy transgenic mouse model by positron emission tomography. M. SHIMOJO*; M. TOKUNAGA; T. MINAMIHISAMATSU; S. UCHIDA; H. TAKUWA; Y. TAKADO; I. MATSUMOTO; M. ZHANG; T. SUHARA; M. HIGUCHI; N. SAHARA. *Natl. Inst. of Radiological Sci.*

4:00 H17 **40.16** ● Components and neural correlates of apathy and impulsivity in frontotemporal lobar degeneration syndromes. C. LANSDALL*; I. COYLE-GILCHRIST; P. VÁZQUEZ RODRÍGUEZ; E. WEHMANN; A. WILCOX; K. DICK; P. JONES; K. PATTERSON; J. ROWE. *Univ. of Cambridge, Univ. Med. Ctr. Hamburg-Eppendorf, Univ. Col. London.*

1:00 H18 **40.17** ● Local atrophy of entorhinal and trans-entorhinal cortex in mild cognitive impairment measured via diffeomorphometry. D. J. TWARD; C. C. SICAT; T. BROWN; E. A. MILLER; J. T. RATNANATHER*; L. YOUNES; A. BAKKER; M. ALBERT; M. GALLAGHER; S. MORI; M. I. MILLER. *Johns Hopkins Univ., Ctr. for Imaging Sci., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 H19 **40.18** Relationship between performance on a famous faces test and AD biomarkers in a group of normal older adults. R. K. BELL*; T. J. MELLINGER; K. N. SWINNERTON; W. J. JAGUST. *Univ. of California, Berkeley.*

3:00 H20 **40.19** *In vivo* wide-field imaging and quantitative analysis reveals decrease of perivascular drainage in Alzheimer's disease. S. KIM*; P. LEE; J. KIM; Y. JEONG. *Korea Advanced Inst. of Sci. and Technol., Korea Advanced Inst. of Sci. and Technol.*

4:00 H21 **40.20** ● Characterization of the τ radioligand [^{3}H]THK-5351 binding in Alzheimer brain tissue. C. WINTMOLDERS; A. BOTTELBERGS; J. MARÏEN; D. MOECHARS; X. LANGLOIS*. *Janssen Res. and Develop.*

1:00 H22 **40.21** Electroencephalogram-based functional connectivity changes in patients with prion diseases. E. FRANKO*; O. JOLY; T. WEHNER; S. MEAD. *Univ. of Oxford, MRC Cognition and Brain Sci. Unit, Natl. Hosp. for Neurol. and Neurosurg., NHS Natl. Prion Clinic, Natl. Hosp. for Neurol. and Neurosurgery, UCL.*

2:00 H23 **40.22** Inhibitory control in Alzheimer's disease, mild cognitive impairment and healthy aging: An fmri study. A. C. LUEDKE*; J. FERNANDEZ-RUIZ; A. GARCIA; D. P. MUNOZ. *Queen's Univ., Natl. Autonomous Univ. of Mexico.*

3:00 H24 **40.23** Longitudinal alteration of intrinsic neural activity in the striatum in mild cognitive impairment. P. REN*; R. LO; B. CHAPMAN; M. MAPSTONE; A. PORSTEINSSON, 14623; F. LIN. *Univ. of Rochester, Tzu Chi Univ., Univ. of California-Irvine, Univ. of Rochester.*

4:00 H25 **40.24** Structural MRI shows accelerated reduction in gray matter density and white matter integrity in asymptomatic progranulin mutation carriers. C. A. OLM*; C. T. MCMILLAN; D. J. IRWIN; V. VAN DEERLIN; P. A. COOK; J. C. GEE; M. GROSSMAN. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 H26 **40.25** The olfactory system and its relevance for behavioral screening and diagnostic imaging in neurological disorders. A. VAN DER JEUGD*; D. SHAH; I. BLOEMEN; L. VAN DEN BROECK; P. HANSQUINE; A. VAN DER LINDEN; R. D'HOOGE. *Kuleuven, Univ. of Antwerp.*

2:00 I1 **40.26** Confirming the network degeneration hypothesis for intrinsic brain networks and for distinct neurodegenerative syndromes. J. NEITZEL*; J. DIEHL-SCHMID; M. ORTNER; T. GRIMMER; I. YAKUSHEV; P. BUBLAK; C. PREUL; K. FINKE; C. SORG. *Ludwig-Maximilians-Universität, Klinikum rechts der Isar, Technische Univ. München, Klinikum rechts der Isar, Technische Univ. München, Klinikum rechts der Isar, Technische Univ. München, Univ. Hosp. Jena.*

1:00 DP02 **40.27** (Dynamic Poster) Memory and hippocampal volume in behavioural variant Frontotemporal Dementia. C. PENNINGTON*; D. TSIVOS; B. WOOD; M. KNIGHT; S. DILLON; R. KAUPPINEN; E. COULTHARD. *Univ. of Bristol, North Bristol NHS Trust, Univ. of Bristol.*

4:00 I2 **40.28** Novel extracellular vesicle-based approach for Alzheimer's disease diagnosis and monitoring effects of the treatment. T. V. BILOUSOVA*; J. CAMPAGNA; M. ALAM; P. HEINZELMAN; D. BAI; P. SPILMAN; V. JOHN. *UCLA.*

1:00 I3 **40.29** Severity score a predictive tool for Alzheimer's disease. F. V. CHIRILA*; D. L. ALKON. *Blanchette Rockefeller Neurosciences Inst., Blanchette Rockefeller Neurosciences Inst.*

2:00 I4 **40.30** High burden of vascular risk factors is associated with greater longitudinal increase in CSF total τ. L. GLODZIK*; T. BUTLER; C. RANDALL; E. TANZI; R. OSORIO; H. RUSINEK; A. DESHPANDE; Y. LI; M. DE LEON. *NYU Sch. of Med., NYUSM.*

POSTER

041. Postural Instability, FOG, and Kinematics in Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 I5 **41.01** Avoiding virtual obstacles during treadmill gait in Parkinson's disease. C. LU*; M. MCCABE; E. TWEDELL; S. E. COOPER. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 I6 **41.02** Towards responsive deep brain stimulation for medically refractory freezing of gait in Parkinson's disease. R. MOLINA*; J. SHUTE; E. OPRI; D. MARTINEZ-RAMIREZ; K. FOOTE; A. GUNDUZ; M. OKUN. *Univ. of Florida, Univ. of Florida.*

3:00 I7 **41.03** Biomechanical and electromyographic events preceding and accompanying freezing episodes during gait initiation in people with Parkinson's disease. C. D. MACKINNON*; M. N. PETRUCCI; S. L. AMUNDSEN HUFFMASTER; E. T. HSIAO-WECKSLER; P. J. TUITE; C. LU. *Univ. of Minnesota Dept. of Neurol., Univ. of Minnesota, Univ. of Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign, Univ. of Minnesota.*

4:00 I8 **41.04** Proprioceptive training improves reaching movement accuracy and postural stability limits in Parkinson's disease. S. BERGERON*; P. BLANCHET; D. MONGEON; M. BLANCHET; M. JEAN-DÉSILETS; J. TREMBLAY; F. PRINCE; J. MESSIER. *Univ. of Montreal, Inst. universitaire de gériatrie de Montréal (IUGM), Ctr. Hospitalier de l'Université de Montréal (CHUM).*

1:00 I9 **41.05** A sensorimotor training that improves proprioception and transfers to untrained movements in Parkinson's disease. N. ELANGOVAN*; P. TUITE; J. KONCZAK. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 I10 **41.06** Subthalamic neural and kinematic features of freezing of gait on and off DBS in freely moving Parkinson's subjects. J. SYRKIN-NIKOLAU*; Z. BLUMENFELD; T. PRIETO; A. VELISAR; M. TRAGER; T. MARTIN; A. SRIVATSAN; E. QUINN; H. BRONTE-STEWART. *Stanford Univ.*

3:00 I11 **41.07** ● Kinematic and neural triggered adaptive deep brain stimulation for tremor dominant Parkinson's disease. A. VELISAR*; J. A. HERRON; J. SYRKIN-NIKOLAU; Z. BLUMENFELD; M. TRAGER; T. MARTIN; H. J. CHIZECK; H. BRONTE-STEWART. *Stanford Univ., Univ. of Washington.*

4:00 I12 **41.08** How tremor propagates throughout the upper limb. S. K. CHARLES*; A. D. DAVIDSON. *Brigham Young Univ., Brigham Young Univ.*

1:00 J1 **41.09** Postural control and freezing of gait in Parkinson's disease. C. SCHLENSTEDT*; M. MUTHURAMAN; K. WITT; B. WEISSER; A. FASANO; G. DEUSCHL. *Univ. Hosp. Schleswig-Holstein Kiel, Christian-Albrechts-University Kiel, Morton and Gloria Shulman Movement Disorders Clin. and the Edmond J. Safra Program in Parkinson's disease, Toronto Western Hosp.*

2:00 J2 **41.10** The effects of anodal tDCS over the supplementary motor area on anticipatory postural adjustments during gait initiation in people with Parkinson's disease with freezing of gait. S. L. AMUNDSEN HUFFMASTER*; C. LU; P. J. TUITE; C. D. MACKINNON. *Univ. of Minnesota Syst., Univ. of Minnesota Syst.*

3:00 J3 **41.11** ● Impact of the α4β2 partial agonists on gait and motor coordination alterations in a rat model of Parkinson's disease. W. M. HOWE*; K. DLUGOLENSKI; A. ROSSI; D. VOLFSON; P. TIERNEY; R. KOZAK. *Pfizer Inc, Pfizer, Inc.*

4:00 J4 **41.12** Normal and Parkinsonian gait signatures in mice and human: A translational approach. A. WORLEY; C. ASHTON; L. BROOM; C. TOCCI; L. C. SHIH; V. G. VANDERHORST*. *BIDMC.*

1:00 J5 **41.13** Gait analysis of unilateral 6-OHDA Parkinson's rat model. B. K. HARVEY*; H. A. BALDWIN; P. P. KOIVULA; J. C. NECARSULMER; K. W. WHITAKER. *NIDA - NIH, NIDA - NIH, US Army Res. Lab.*

2:00 J6 **41.14** Sensorimotor integration in Parkinson's disease: Optimal or not? S. SENGUPTA*; L. P. J. SELEN; W. P. MEDENDORP; P. PRAAMSTRA. *Donders Inst., Radboud Univ., Radboud Univ.*

3:00 J7 **41.15** Altered modulation of long-latency afferent inhibition by rubber hand illusion in patients with Parkinson's disease. R. ISAYAMA*; G. JEGATHEESWARAN; M. VESIA; K. UDUPA; B. ELAHI; C. A. GUNRAJ; L. CARDINALI; A. FARNE; R. CHEN. *Toronto Western Hosp., Univ. of Toronto, Toronto Western Hosp., Univ. of Western Ontario, Lyon Neurosci. Res. Ctr.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 J8 **41.16** Impact of enhancing expectations on self-efficacy and motor learning in individuals with Parkinson's disease. Y. CHUNG*; R. LEWTHWAITE; C. J. WINSTEIN; B. E. FISHER. *USC, Rancho Los Amigos Natl. Rehabil. Ctr.*

1:00 J9 **41.17** MRI guided targeting and stimulation of the mesencephalic locomotor region in the Yucatan minipig. F. D. BENAVIDES; I. OPRIS; A. J. SANTAMARIA; F. J. SANCHEZ; L. M. VILLAMIL; Y. NUNEZ-GOMEZ; J. P. SOLANO; J. D. GUEST; B. R. NOGA*. *Univ. of Miami Sch. of Med., Univ. of Miami Sch. of Med.*

2:00 J10 **41.18** Deep brain stimulation of the mesencephalic locomotor region improves emg correlation with kinematics in the yucatan minipig. I. OPRIS*; F. D. BENAVIDES; F. J. SANCHEZ; L. M. VILLAMIL; J. D. GUEST; B. R. NOGA. *Univ. of Miami Miller Sch. of Med.*

3:00 J11 **41.19** Posture-gait control by the lateral part of the mesopontine tegmentum. K. TAKAKUSAKI*; M. TAKAHASHI; R. CHIBA. *Asahikawa Med. Univ., Asahikawa Med. Univ.*

POSTER

042. Parkinson's Disease: Molecular Mechanisms and Models

Theme C: Neurodegenerative Disorders and Injury

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

1:00 J12 **42.01** A physiological role for monomeric α-synuclein. M. LUDTMANN*; P. ANGELOVA; N. NINKINA; S. GANDHI; V. BUCHMAN; A. ABRAMOV. *Inst. of Neurol., Sch. of Biosciences, Cardiff Univ.*

2:00 J13 **42.02** Extracellular and exosomal α-synuclein modulate innate immunity and possibly contribute to inflammation in Parkinson's disease. V. GROZDANOV*; N. VERHAGEN; C. MEIER; L. BOUSSET; A. C. LUDOLPH; R. MELKI; J. H. WEISHAUPT; K. M. DANZER. *Univ. of Ulm, Paris-Saclay Inst. of Neurosci.*

3:00 J14 **42.03** Uptake and sequestration of prion-like α-synuclein in a cellular model. M. MARANO*; S. SRI RENGANATHAN; P. E. FRASER; A. TANDON. *Univ. of Toronto, Univ. of Toronto.*

4:00 J15 **42.04** 27 hydroxycholesterol induces α-synuclein expression in dopaminergic neurons-implications in synucleinopathies. J. SCHOMMER*; M. KLEINJAN; G. MARWARHA; O. GHRIBI. *Univ. of North Dakota.*

1:00 J16 **42.05** Withdrawn.

2:00 J17 **42.06** ▲ A gene-environment interaction study to examine the role of human wild-type α-synuclein in cadmium-induced neurotoxicity. J. A. JIMENEZ*; W. CHONG; G. KWAKYE; M. SAITO. *Oberlin Col., Woods Hole Oceanographic Inst.*

3:00 J18 **42.07** The SUMO conjugase Ubc9 regulates the stability of α-synuclein and Dopamine Transporter in Parkinson's disease models. E. CARTIER; J. GARCIA-OLIVARES; E. JANEZIC; M. L. LIN; Y. KIM*. *Delaware State Univ., Natl. Inst. of Mental Hlth., Univ. of Florida.*

4:00 K1 **42.08** Function of TMEM175 in synucleinopathy & Parkinson's disease. S. JINN*; H. WONG; D. TOOLAN; S. GRETZULA; B. VOLETI; P. CRAMER; R. E. DROLET; M. TADIN-STRAPPS; D. STONE. *Merch Res. Labs., Merck Res. Labs., Merck Res. Labs., Merch Res. Labs.*

1:00 K2 **42.09** Phenotyping of human of ipsc-derived dopaminergic neurons containing the engineered a53t α-synuclein mutation. B. W. JARECKI*; K. MANGAN; K. KIM; N. AUMANN; L. LITTLE; C. CARLSON; S. DELAURA; E. JONES. *CDI, Cell. Dynamics Intl.*

2:00 K3 **42.10** iPSC-derived human neuronal knockout model of PINK1. C. J. BUS*; B. SCHMID; S. HOFFMANN; S. GEISLER; P. FALLIER-BECKER; K. KAPOLOU; J. WAGNER; D. O. HALIM; R. KRÜGER; T. GASSER; J. C. FITZGERALD. *Hertie Inst. For Clin. Brain Res., The German Ctr. for Neurodegenerative Dis. (DZNE), Grad. Acad. of the Univ. of Tübingen, Bioneer A/S, Inst. of Pathology and Neuropathology, Univ. of Tübingen, Grad. Sch. of Cell. and Mol. Neurosci., Luxembourg Ctr. for Systems Biomedicine.*

3:00 K4 **42.11** Mitochondrial chaperone Trap1 loss of function in Parkinson's disease. J. C. FITZGERALD*; A. ZIMPRICH; B. MAURER; K. SCHINDLER; C. SCHULTE; A. HAUSER; R. LEWIN; M. KEUBLER; L. MARTINS; D. PICARD; O. RIESS; M. SHARMA; T. GASSER; R. KRUEGER. *Hertie Inst. For Clin. Brain Res., Med. Univ. Vienna, Dept. of Neurol., Univ. of Tübingen, Dept. of Biochem., MRC Toxicology Unit, Leicester Univ., Univ. of Geneva, Dept. of Cell Biol., Univ. of Tübingen, Inst. of Med. Genet. and Applied Genomics, Ctr. for Genet. Epidemiology, Inst. for Clin. Epidemiology and Applied Biometry, Univ. of Tubingen, Luxembourg Ctr. for Systems Biomedicine.*

4:00 K5 **42.12** ● Characterization of α synuclein oligomers from Parkinson's patient tissue. C. SILKY*; C. REHAK; K. MOZZONI; R. YURKO; N. IZZO; G. RISHTON; G. LOOK; H. SAFFERSTEIN; S. M. CATALANO. *Cognition Therapeut. Inc.*

1:00 K6 **42.13** ▲ Functional characterization of dual-specificity tyrosine-phosphorylation-regulated kinase 1A to modulate parkin ubiquitin E3 ligase activity and the formation of toxic protein aggregates. S. JUNG; E. IM; H. RHIM*; K. CHUNG. *Yonsei Univ., Korea Inst. Sci. Tech. (KIST).*

2:00 K7 **42.14** ▲ Leucine-rich repeat kinase 2 (LRRK2) stimulates IL-1β-mediated inflammatory signaling through phosphorylation of a novel target p25. M. HYUN; K. HAN; W. SEOL; K. C. CHUNG*. *Yonsei Univ., Sanbon Med. Center, Col. of Medicine, Wonkwang Univ.*

3:00 K8 **42.15** LRRK2-mediated cellular and synaptic alterations in the striatum. L. PARISIADOU*; C. MAKARIOU-PIKIS; F. KOURI; H. CAI. *Feinberg Sch. of Medicine, Northwestern Universi, Natl. Inst. on Aging.*

4:00 K9 **42.16** ▲ In silico simulation of Lrrk2 interactions in Parkinson's disease using SEED. J. W. RYAN*; A. WIDENER; I. C. IKEDA; T. J. SWEENEY; A. D. LEE; B. BEHROUZ. *Neuroinitiative.*

1:00 K10 **42.17** ▲ Mitophagy is impaired in carriers of Parkinson's disease-linked LRRK2 mutations. F. WAUTERS; T. CORNELISSEN; S. MARTIN; B. KOENTJORO; C. SUE; P. VANGHELUWE; W. P. VANDENBERGHE*. *KU Leuven, KU Leuven, Kolling Inst. of Med. Research, Royal North Shore Hosp. and Univ. of Sydney, Univ. Hosp. Leuven.*

2:00 K11 **42.18** The relationship between LRRK2 and Rab GTPase family. T. FUJIMOTO*; T. KUWAHARA; T. KOMORI; T. IWATSUBO. *The Univ. of Tokyo.*

3:00 K12 **42.19** The dynamic changes in the localization of LRRK2 in macrophage cells. T. EGUCHI*; T. KUWAHARA; G. ITO; T. IWATSUBO. *The Univ. of Tokyo.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 K13 **42.20** LRRK2 phosphorylates the actin nucleating complex protein WASF2 to regulate phagocytosis. K. KIM*; P. C. MARCOGLIESE; J. YANG; C. WEI; E. ABDEL-MESSIH; R. S. SLACK; M. G. SCHLOSSMACHER; D. S. PARK. *Univ. of Ottawa, Ottawa Hosp.*

1:00 K14 **42.21** Regulation of Wnt and Ca^{2+} signalling by the Parkinson's disease protein LRRK2. A. WETZEL*; M. HUGHES; T. MCKAY; S. WADDINGTON; A. RAHIM; K. HARVEY. *Univ. Col. London, Sch. of Healthcare Sci., Gene Transfer Technol. Group.*

2:00 K15 **42.22** Leucine-rich repeat kinase 2 (LRRK2) inhibitors exhibit greater pharmacological potency to reduce the Ser1292 autophosphorylation compared to Ser935 *in vitro* and *in vivo*. H. SAMAROO*; Y. CHEN; E. NEEDLE; K. WELCH; P. GALATSIS; S. STEYN; Z. BERGER; W. D. HIRST. *Pfizer, Pfizer Vaccines Res. East and Early Develop., Pfizer Worldwide Medicinal Chem., Pfizer Pharmacokinetics, Dynamics, and Metabolics-New Biol. Entities, Biogen Neurol. Res.*

3:00 K16 **42.23** Regulation of the Parkinson's kinase Leucine-rich Repeat Kinase 2 (LRRK2) by metabolic signalling. A. MAMAIS*; D. ROOSEN; R. KUMARAN; R. LANGSTON; A. BEILINA; H. RIDEOUT; K. MELACHROINOU; D. HAUSER; I. N. RUDENKO; Y. LI; M. R. COOKSON. *Natl. Inst. On Aging, NIH, Biomed. Res. Foundation, Acad. Of Athens, NINDS, NIH.*

4:00 K17 **42.24** Calcium-dependent calpain cleavage of Parkin: Relevance to Parkinson's disease. A. STOLL; H. WANG; P. ROCKWELL; M. E. FIGUEIREDO-PEREIRA*. *Hunter Col., Hunter Col.*

1:00 L1 **42.25** The involvement of the calcium binding protein in aberrant calcium release from IP_3 receptor by α-synuclein oligomers. K. YAMAMOTO*; H. SAWADA. *Utano Natl. Hosp.*

2:00 L2 **42.26** The parkin-lipoprotein lipase link in the pathogenesis of Parkinson's disease. J. L. THUNDYIL*; S. Y. Q. ZHANG; A. NAIR; G. G. Y. LIM; T. P. YAO*; K. L. LIM*. *Natl. Neurosci. Inst., Natl. Univ. of Singapore, Duke Univ. Sch. of Med., DUKE-NUS Med. Sch.*

3:00 L3 **42.27** Lipid induced relief of N terminal mediated autoinhibition of ATP13A2/PARK9. S. VAN VEEN*; S. MARTIN; T. HOLEMANS; C. VAN DEN HAUTE; V. BAEKELANDT; P. VANGHELUWE. *KU Leuven, KU Leuven.*

4:00 L4 **42.28** ATP13A2/PARK9 protects against mitochondrial stress and metal toxicity by maintaining mitochondrial network functionality. S. MARTIN*; S. VAN VEEN; T. HOLEMANS; C. VAN DEN HAUTE; V. BAEKELANDT; P. AGOSTINIS; P. VANGHELUWE. *KU Leuven, KU Leuven.*

1:00 L5 **42.29** Cloning the n27 dopamine cell line to improve a cell culture model of Parkinson's disease. L. GAO*. *Shanghai Med. School, Fudan Univ.*

2:00 L6 **42.30** Modeling Parkinson's disease using patient-derived primary dermal fibroblasts. J. Y. TEVES*; A. J. FLORES; V. BHARGAVA; M. J. CORENBLUM; R. JUSTINIANO; G. T. WONDRAK; J. E. SLIGH; C. CURIEL-LEWANDROWSKI; S. J. SHERMAN; D. A. SCHIPPER; Z. KHALPEY; L. MADHAVAN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

POSTER

043. Ataxia

Theme C: Neurodegenerative Disorders and Injury

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

1:00 L7 **43.01** ● Anterior cerebellar degeneration impairs feedforward control in spinocerebellar ataxia type 6. N. KANG*; D. E. VAILLANCOURT; A. CASAMENTO-MORAN; S. H. SUBRAMONY; E. A. CHRISTOU. *Univ. of Florida.*

2:00 L8 **43.02** Combining Atm and Wrn deficiencies in mice leads to cerebellar deterioration. O. BIHARI*; N. KAMINSKY; R. GALRON; B. F. JOHNSON; E. PIKARSKY; Y. SHILOH; A. BARZILAI. *Tel Aviv Univ., Tel Aviv Univ., Univ. of Pennsylvania, Hebrew University-Hadassah Med. Sch., Tel Aviv Univ.*

3:00 L9 **43.03** An miRNA-mediated therapy for SCA6 blocks IRES-driven translation of the CACNA1A second cistron. Y. MIYAZAKI*; X. DU; S. MURAMATSU; C. GOMEZ. *The Univ. of Chicago, Jichi Med. Univ.*

4:00 L10 **43.04** 4-Aminopyridine alleviates ataxia and reverses cerebellar cortical output deficiency in a mouse model of spinocerebellar ataxia type 6. S. JAYABAL*; H. CHANG; K. E. CULLEN; A. J. WATT. *McGill Univ., McGill Univ., McGill Univ.*

1:00 L11 **43.05** Mechanistic insights into the nucleocytoplasmic shuttling of ataxin-3. T. SCHMIDT*; A. SOWA; M. MARTINS; J. SCHMIDT; D. WEISHAEUPL; M. ABEDI; Z. WANG; L. LEHMANN; A. TEIXEIRA-CASTRO; P. MACIEL; H. TRICOIRE; O. RIESS. *Med. Genetics, Univ. Tuebingen, Ctr. for Rare Dis. (ZSE Tuebingen), Grad. Sch. for Cell. & Mol. Neurosci., Univ. of Minho, Univ. Paris Diderot.*

2:00 L12 **43.06** ASO-mediated reduction of ATXN2 expression after motor phenotype onset in SCA2 mice restores cerebellar Purkinje cell electrophysiological phenotypes. D. R. SCOLES*; P. MEERA; M. SCHNEIDER; K. FIGUEROA; F. RIGO; F. BENNETT; T. OTIS; S. PULST. *Univ. of Utah, Univ. of California Los Angeles, Ionis Pharmaceuticals.*

3:00 L13 **43.07** The role of α1ACT in the early stage development of the cerebellum. X. DU*; C. GOMEZ. *Univ. Chicago.*

4:00 L14 **43.08** Early cerebellar mitochondrial deficits in a frataxin-deficient mouse model of Friedreich's ataxia. H. LIN*; C. LAO-PEREGRÍN; E. M. CLARK; Y. DONG; A. J. RATTELLE; J. MAGRANÉ; D. R. LYNCH. *The Children's Hosp. of Philadelphia, Weill Cornell Med. Col., Perelman Sch. of Med. Univ. of Pennsylvania.*

1:00 M1 **43.09** ATM kinase activity is required to maintain mitochondrial integrity. R. P. HART*; H. CHOW; K. HERRUP. *Rutgers Univ., Hong Kong Univ. of Sci. and Technol.*

2:00 M2 **43.10** Dysfunction of mGluR1 signaling as a potential cause for ATX2-mediated purkinje neuron death in a spinocerebellar ataxia 2 mouse model. P. MEERA*; S. M. PULST; T. S. OTIS. *Univ. of California Los Angeles, Univ. of Utah.*

3:00 M3 **43.11** ● Widespread *in vivo* suppression of mutant ATXN3 by antisense oligonucleotides in transgenic mouse models of SCA3. L. MOORE*; H. S. MCLOUGHLIN; I. DILLINGHAM; R. KOMLO; M. QUTOB; G. RAJPAL; H. KORDASIEWICZ; H. L. PAULSON. *Neurosci. Grad. Program Univ. of Michigan, Univ. of Michigan, Ionis Pharmaceuticals.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 M4 **43.12** Impact of ataxin-1 expression during postnatal cerebellar Purkinje neuron development and the role of metabotropic glutamate receptor type 1 for progression of SpinoCerebellar Ataxia Type 1. E. M. POWER*; M. F. IBRAHIM; R. M. EMPSON. *Univ. of Otago.*

1:00 M5 **43.13** Peripheral blood gene expression biomarkers in Friedreich's Ataxia. D. NACHUN*; F. GAO; C. ISAACS; Z. YANG; D. DOKURU; V. VAN BERLO; R. SEARS; J. FARMER; S. PERLMAN; D. LYNCH; G. COPPOLA. *UC Los Angeles, Children's Hosp. of Philadelphia, Washington Univ., Friedreich's Ataxia Res. Alliance, UC Los Angeles.*

2:00 M6 **43.14** ATM is located on synaptic vesicles and its deficit leads to failsures in synaptic plasticity. A. CHENG*; G. VAIL; T. ZHAO; Y. HAN; S. DU; M. LOY; K. HERRUP; M. PLUMMER. *HKUST, Rutgers Univ.*

3:00 M7 **43.15** ● A new simple automatic and non invasive method for measurement of chemically induced tremors in rats. D. AMRUTKAR*; T. A. JACOBSEN; K. S. NIELSEN. *Saniona A/S.*

4:00 M8 **43.16** Use of the scale for the assessment and rating of ataxia (SARA) in healthy volunteer and subjects with schizophrenia. S. SYED; N. SHAAFI KABIRI; T. BALI; D. KARLIN; B. BINNEMAN; Y. TAN; K. THOMAS*. *Tufts Med. Center, Pfizer Neurosci. and Pain Res. Unit, Boston Univ. Sch. of Med., Massachusetts Gen. Hosp., Pfizer Neurosci. and Pain Res. Unit, Pfizer Inc. Res. Statistics, Worldwide Res. & Develop.*

1:00 M9 **43.17** A CK2 dependent phosphorylation mechanism is required to trigger attacks in an episodic ataxia type 2 mouse model. A. VITENZON*; K. KHODAKHAH. *Albert Einstein Col. of Medicince.*

2:00 M10 **43.18** Impact of SNX14 mutations on endocytic trafficking and autophagy. D. T. BRYANT*; C. DEMETRIOU; E. PESKETT; M. ISHIDA; M. SEDA; D. JENKINS; R. SCOTT; S. SOUSA; M. BITNER-GLINDZICZ; G. MOORE; P. STANIER. *Univ. Col. London, Great Ormond Street Hosp., Hosp. Pediátrico de Coimbra.*

3:00 M11 **43.19** Simultaneus ablation of polyamine catabolizing enzymes Spermine/Spermidine-N^1-Acetyltransferase and Spermine Oxidase causes cerebellar injury and ataxia. M. SOLEIMANI*; M. BROOKS; S. L. BARONE; T. MURRAY-STEWART; C. DESTEFANO-SHIELDS; J. L. CLEVELAND; R. A. CASERO; K. ZAHEDI. *Univ. of Cincinnati Med. Ctr., Johns Hopkins Sch. of Med., The Moffitt Cancer Ctr. & Res. Inst.*

4:00 M12 **43.20** Progressive impairment of metabotropic glutamate receptor (mGluR)-mediated signaling and cerebellar synaptic plasticity in spinocerebellar ataxia type 1 (SCA1) model mice. N. HOSOI*; A. SHUVAEV; H. HIRAI. *Gunma Univ. Grad. Sch. of Med., Krasnoyarsk State Med. Univ.*

1:00 M13 **43.21** Neuron-specific contributions to pathology in a dox-inducible mouse model of FXTAS. M. M. FOOTE*; C. VIERIA; E. NEVEROVA; K. VALENTINE; L. BROCHARD; M. CAREAGA; E. DOISY; R. WILLEMSEN; R. HUKEMA; J. KEITER; S. C. NOCTOR; R. F. BERMAN. *Univ. of California Davis, Univ. of California Davis, Univ. of California Davis, Erasmus Med. Ctr.*

2:00 M14 **43.22** Rapid atrophy and hyperexcitability in cerebellar Purkinje cells expressing infant-onset spinocerebellar ataxia type 13 Kv3.3. mutation. D. M. PAPAZIAN*; B. N. ULRICH; J. HSIEH; F. A. ISSA; B. BROWN; M. A. LIN. *Geffen Sch. Med. UCLA, Geffen Sch. Med. UCLA.*

POSTER

044. Motor Neuron Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 M15 **44.01** ● PTBP1 and PTBP2 regulate conserved and nonconserved cryptic exons. R. CHHABRA*; J. P. LING; J. D. MERRAN; P. M. SCHAUGHENCY; S. J. WHEELAN; J. L. CORDEN; P. C. WONG. *The Johns Hopkins Univ. Sch. of Med., The Johns Hopkins Univ. Sch. of Med., The Johns Hopkins Univ. Sch. of Med., The Johns Hopkins Univ. Sch. of Med.*

2:00 M16 **44.02** Exploring G4C2 repeat expansions using long-read next generation sequencing. J. GREGORY*; K. KANG; G. DEIKUS; M. HARMS; N. SHNEIDER; R. SEBRA; H. PHATNANI. *New York Genome Ctr., Icahn Sch. of Med. at Mt. Sinai, Columbia Univ. Med. Ctr.*

3:00 M17 **44.03** ▲ Investigating effects of TDP-43 on metabolic gene expression in a *Drosophila* model of amyotrophic lateral sclerosis. J. BARROWS*; E. MANZO; A. JOARDAR; A. COYNE; D. C. ZARNESCU. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

4:00 M18 **44.04** V2a neurons drive accessory respiratory muscle activity and degenerate in mouse models of ALS. V. N. JENSEN*; S. H. ROMER; K. SEEDLE; S. M. TURNER; S. A. CRONE. *Univ. of Cincinnati, Cincinnati Children's Hosp. Med. Ctr.*

1:00 N1 **44.05** Mechanisms of RAN translation in a C9orf72 heterologous expression system. E. L. DALEY*; J. A. ORTEGA; D. SANTOS; E. KISKINIS. *Northwestern Univ. - Chicago.*

2:00 N2 **44.06** Environmental toxicants upregulate TDP-43 expression through the Aryl Hydrocarbon Receptor. P. E. ASH*; E. A. STANFORD; G. J. MURPHY; D. H. SHERR; B. WOLOZIN. *Boston Univ. Med. Ctr., Boston Univ. Sch. of Publ. Hlth., Boston Univ.*

3:00 N3 **44.07** Phosphorylation of the intrinsically disordered domain of fused-in-sarcoma inhibits aggregation. Z. MONAHAN*; V. RYAN; K. BURKE; F. SHEWMAKER; N. FAWZI. *Uniformed Services Univ. of the Hlth. Scienc, Brown Univ.*

4:00 N4 **44.08** ● In the superoxide dismutase 1 ($hSOD1^{G93A}$) mouse model, cortical glucose metabolism is impaired while astrocytic TCA cycling is unaffected at onset of disease. T. W. TEFERA*; K. BORGES. *The Univ. of Queensland.*

1:00 N5 **44.09** Pharmacologic and pathophysiologic readouts of c9orf72 therapy in iPS neurons. L. R. HAYES*; T. GENDRON; L. PETRUCELLI; M. DISNEY; J. ROTHSTEIN. *Johns Hopkins Univ., Mayo Clin., The Scripps Res. Inst.*

2:00 N6 **44.10** Assessing the role of Nurr1 in a murine model of amyotrophic lateral sclerosis. M. M. BOIDO*; V. VALSECCHI; M. GUGLIELMOTTO; N. GIONCHIGLIA; E. TAMAGNO; A. VERCELLI. *Univ. of Turin.*

3:00 N7 **44.11** Cellular and Molecular Analysis of Corticospinal Motor Neurons that become vulnerable due to $hTDP\text{-}43^{A315T}$ mutation. M. GAUTAM*; L. A. LABOISSONNIERE; M. KANDPAL; J. H. JARA; Y. BI; K. D. KIM; J. M. TRIMARCHI; R. V. DAVULURI; P. H. OZDINLER. *Northwestern Univ., Iowa State Univ., Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 N8 **44.12** ● Investigating the role of a novel variant in the copper transporter ATP7A detected in an ALS patient-parent trio. A. P. STARR*; Z. T. MCEACHIN; N. BAKKAR; I. LORENZINI; D. C. ZARNESCU; G. J. BASSELL; C. M. HALES; W. ROSSOLL; R. SATTLER; N. M. BOULIS; R. BOWSER. *Barrow Neurolog. Inst., Emory Univ., Univ. of Arizona.*

1:00 N9 **44.13** Complement and microglia mediate sensory-motor synaptic loss in Spinal Muscular Atrophy. A. VUKOJICIC*; N. DELESTREE; E. V. FLETCHER; S. SANKARANARAYANAN; T. YEDNOCK; B. A. BARRES; G. Z. MENTIS. *Columbia Univ., Columbia Univ., Annexon Biosci., Stanford Univ. Sch. of Med.*

2:00 N10 **44.14** ● Blood-CSF barrier disruptions in ALS. N. BAKKAR*; R. KOTHUR; R. BOWSER. *St Joseph Hosp. and Med. Center/Barrow Neurolog. Inst.*

3:00 N11 **44.15** TDP-43 overexpression leads to the repression of conserved exons. J. P. LING*; W. W. TSAO; P. C. WONG. *Johns Hopkins Univ.*

4:00 N12 **44.16** ● Alterations in protein-protein interactions caused by ALS associated mutations in Matrin 3. A. BOEHRINGER*; K. GARCIA; P. PIRROTTE; R. BOWSER. *Barrow Neurolog. Inst., Translational Genomics Inst.*

1:00 N13 **44.17** ▲ Rescue of neurotoxicity in a TDP-43-based *Drosophila* model of ALS by a 4-aminoquinoline analog. B. ZAEPFEL*; A. COYNE; J. A. CASSEL; A. B. REITZ; D. C. ZARNESCU. *Univ. of Arizona, ALS BioPharma, LLC.*

2:00 N14 **44.18** A computational model for investigating early alterations in motor neuron and reflex excitability in amyotrophic lateral sclerosis. S. VENUGOPAL*; S. CHANDLER. *Univ. of California Los Angeles.*

3:00 N15 **44.19** Identification of therapeutic targets for cytoskeletal defects in amyotrophic lateral sclerosis. A. JAVAHERIAN*; P. GOYAL; K. SHAH; E. MOUNT; M. HSIAO; S. BROSKI; C. FALLINI; E. DANIELSON; J. LANDERS; S. FINKBEINER. *Gladstone Inst., Univ. of Massachusetts Med. Sch.*

4:00 N16 **44.20** Intracellular transport defects as emerging disease mechanisms in ALS/FTD. C. CHOU; Y. ZHANG; M. E. UMOH; Y. CHEN; S. VAUGHAN; J. PAREE; M. A. POWERS; N. SEYFRIED; J. D. GLASS; D. C. ZARNESCU; W. ROSSOLL*. *Emory Univ. Sch. of Med., Xiangya Hosp. - Central South Univ., Emory Univ. Sch. of Med., Univ. of Arizona, Emory Univ. Sch. of Med.*

1:00 N17 **44.21** Glua2 editing deficiency and synaptic dysfunction in C9orf72 ALS and FTD. I. LORENZINI*; E. MENDEZ; I. VARELA; J. ROTHSTEIN; J. CHEW; L. PETRUCELLI; R. SATTLER. *Barrow Neurolog. Inst., Johns Hopkins Univ., Mayo Clin.*

2:00 N18 **44.22** A proteomic perspective: Amyotrophic lateral sclerosis and frontotemporal dementia disease overlap. M. E. UMOH*; E. DAMMER; M. GEARING; D. DUONG; N. T. SEYFRIED; J. D. GLASS. *Emory Univ., Emory Univ.*

3:00 O1 **44.23** Functional screening of ALS and ALS-dementia-linked Ubiquilin 2 (UBQLN2) mutations. K. N. MCFARLAND*; Y. ZHANG; D. RYU; C. CEBALLOS; D. RINCON-LIMAS; N. MCFARLAND. *McKnight Brain Institute, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

POSTER

045. Therapeutic Potential in Motor Neuron Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 O2 **45.01** ● Stem cells for treatment of amyotrophic lateral sclerosis. Preclinical and clinical study. M. SYKA; S. FOROSTYAK; A. HOMOLA; S. KONRADOVA; K. RUZICKOVA; P. JENDELOVA; M. BOJAR; I. VORISEK; E. M. SYKOVA*. *Inst. Exptl. Med. ASCR, Bioinova, s.r.o., 2nd Fac. of Medicine, Charles Univ.*

2:00 O3 **45.02** Selection and prioritization of candidate drug targets for amyotrophic lateral sclerosis through a meta-analysis approach. G. MORELLO*; A. SPAMPINATO; F. CONFORTI; V. D'AGATA; S. CAVALLARO. *CNR, CNR, Univ. of Catania.*

3:00 O4 **45.03** Microneurotrophins improve survival in motor neuron-astrocyte co-cultures but do not improve disease phenotypes in a mutant SOD1 mouse model of Amyotrophic Lateral Sclerosis. K. E. GLAJCH*; L. FERRAIUOLO; K. A. MUELLER; A. GRAVANIS; P. J. SHAW; G. SADRI-VAKILI. *Massachusetts Gen. Hosp., Univ. of Sheffield, Univ. of Crete, Sch. of Med.*

4:00 O5 **45.04** The effects of different applications of mesenchymal stem cells in the treatment of amyotrophic lateral sclerosis. P. JENDELOVA*; M. SENEKLOVA; S. FOROSTYAK; Y. PETRENKO; E. SYKOVA. *Inst. of Exptl. Medicine, ASCR, 2nd Fac. of Medicine, Charles Univ.*

1:00 O6 **45.05** Therapeutically targeting the motor cortex in ALS using human neural progenitor cells expressing GDNF. G. M. THOMSEN*; A. MA; P. AVALOS; P. HARO; O. SHELEST; C. N. SVENDSEN. *Cedars-Sinai Med. Ctr.*

2:00 O7 **45.06** A personalized gene therapy approach for charcot-marie-tooth disease type 2d. K. H. MORELLI*; J. S. DOMIRE; N. PYNE; A. FOWLER; S. HARPER; R. BURGESS. *The Jackson Lab., The Univ. of Maine, The Res. Inst. at Nationwide Children's Hosp.*

3:00 O8 **45.07** Il37 reduces inflammation and ameliorates pathophysiology in amyotrophic lateral sclerosis. A. MARTINEZ-MURIANA*; C. A. DINARELLO; R. LOPEZ-VALES. *Univ. Autonoma De Barcelona, Univ. of Colorado Denver, Radboud Univ. Med. Ctr.*

4:00 O9 **45.08** Gene therapy for familial amyotrophic lateral sclerosis using adeno-associated virus serotype-9 mediated silencing of mutant SOD1. T. IANNITTI*; J. M. SCARROTT; I. R. P. COLDICOTT; B. K. KASPAR; L. FERRAIUOLO; P. J. SHAW; M. AZZOUZ. *Univ. of Sheffield, The Ohio State Univ.*

1:00 O10 **45.09** ● Artificial microRNA silences C9ORF72 variants and decreases dipeptides in BAC transgenic mouse. G. TORO*; O. M. PETERS; T. F. GENDRON; C. MUELLER; R. H. BROWN, Jr. *Horae Gene Therapy Ctr. , UMASS Med. Sch., UMASS Med. Sch., Mayo Clin., UMASS Med. Sch.*

2:00 O11 **45.10** Antisense oligonucleotides-based strategy as a therapy for the development of genetic Motor Neuron Diseases Antisense oligonucleotides-based strategy as a therapy for the development of genetic Motor Neuron Diseases. M. NIZZARDO; M. BUCCHIA; A. RAMIREZ; F. RIZZO; M. RIZZUTI; P. RINCHETTI; G. ULZI; A. BORDONI; N. BRESOLIN; G. P. COMI*; S. CORTI. *Univ. of Milan, Ospedale Maggiore Policlinico, Univ. of Milan.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 O12 **45.11** ● Mitigation of TDP-43 proteinopathy through recombinant single chain antibodies. S. POZZI*; S. S. THAMMISSETTY; C. GRAVEL; J. KRIZ; J. JULIEN. *CRIUSMQ.*

4:00 O13 **45.12** Development of clinical grade neurotrophic factor secreting autologous mesenchymal stem cells for treatment of amyotrophic lateral sclerosis. S. RAMESH*; N. N. MADIGAN; K. J. CLARK; M. J. POLZIN; S. P. EKKER; A. J. WINDEBANK; N. P. STAFF. *Mayo Clin.*

1:00 O14 **45.13** Data from pre-clinical and completed phase I clinical studies with intraspinal injection of human neural stem cells in amyotrophic lateral sclerosis. L. MAZZINI; M. GELATI; D. C. PROFICO; D. FERRARI; C. ZALFA; G. SGARAVIZZI; M. PROJETTI PENSI; G. MUZI; C. RICCIOLINI; S. CARLETTI; C. GIORGI; C. SPERA; M. COPETTI; M. BOIDO; L. ROTA NODARI; G. QUERIN; E. VACCHI; E. BERSANO; E. BINDA; V. GARLATTI; F. PINOS; I. BICCHI; D. FRONDIZI; I. PIRISINU; F. PETRUZZELLI; A. STECCO; G. SORARÙ; A. VERCELLI; N. BOULIS; A. L. VESCOVI*. *Eastern Piedmont University, Maggiore della Carità Hosp., Univ. of Milan Bicocca, I.R.C.C.S. Casa Sollievo della Sofferenza, Lab. Cellule Staminali, Cell Factory and Biobanca, "Santa Maria" Hosp., Inst. Fondazione Poliambulanza, Neurosci. Inst. Cavalieri Ottolenghi, Univ. of Padova, Emory Univ.*

2:00 O15 **45.14** Cryptic exon repression by tdp-43 as a novel approach to a disease modification biomarker in ALS, ftd, and ad. R. KESILMAN (KORN)*. *Merck & Co., Inc.*

3:00 O16 **45.15** Chronic laryngeal nerve stimulation to improve swallow function and survival in an ALS mouse model. M. M. HANEY; K. L. ROBBINS; J. H. ALLEN; A. THIESSEN; I. DENINGER; K. FLYNN; V. CAYWOOD; A. MOK; D. OHLHAUSEN; N. KHODAPARAST; T. E. LEVER*. *Univ. of Missouri Columbia, Univ. of Missouri Columbia, Univ. of Missouri Columbia, Nuviant Med.*

POSTER

046. Modulating and Tracking Neuroinflammation

Theme C: Neurodegenerative Disorders and Injury

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

1:00 O17 **46.01** 3a-diol is neuroprotective and attenuates pro-inflammatory cytokines in the brain following soman exposure in mice. K. LAITIPAYA*; J. K. CHANDLER; T. M. FERRARA-BOWENS; J. F. IRWIN; D. D. PALMER; L. J. SHUMWAY; E. A. JOHNSON. *USAMRICD.*

2:00 O18 **46.02** Increased amyloidogenic processing of APP potentially induced by the cyclooxygenase product of inflammation prostaglandin J2. T. JEAN-LOUIS*; P. ROCKWELL; M. FIGUEIREDO PEREIRA. *Hunter Col., The Grad. Center, CUNY.*

3:00 P1 **46.03** Tumor necrosis factor-α enhances vascular cell adhesion molecule-1 expression and promotes monocyte adhesion in human glioblastoma cells. Y. LIU*; C. LIN; C. TSAI; D. LU. *China Med. Univ., Dept. of Physiology, Sch. of Medicine, China Med. Univ., Dept. of Biotechnology, Asia Univ., Dept. of pharmacology, Sch. of Medicine, China Med. Univ.*

4:00 P2 **46.04** ● The brain penetrant phosphodiesterase-4 inhibitor, ABI-4, blocked endotoxin and age related pro-inflammatory effects in the plasma and CNS. J. R. HEDDE*. *Pfizer Global Res.*

1:00 P3 **46.05** Emergence of CNS biomarkers for lysosomal abnormalities in aging progranulin deficient mice. L. H. MARTENS*; F. ALBAYYA; J. H. SOPER; V. KING; D. E. SLEAT; P. LOBEL; M. TOWNSEND; L. LEVENTHAL; G. KOENIG; H. PATZKE. *FORUM Pharmaceuticals, Ctr. for Advanced Biotech. and Med.*

2:00 P4 **46.06** The therapeutic role of recombinant IL-1 signaling inhibition on behavioral functioning of nerve agent soman-exposed mice in the shuttle box apparatus. D. D. PALMER*; J. K. CHANDLER; T. M. FERRARA-BOWENS; J. F. IRWIN; K. LATIPAYA; J. L. LANGSTON; T. M. MYERS; E. A. JOHNSON. *US Army Med. Res. Inst. of Chem. Def.*

3:00 P5 **46.07** Rat model of neuroinflammation exhibiting Parkinsonian-like pathology induced by prostaglandin J2 a product of the cyclooxygenase pathway. C. CORWIN; M. NUNEZ SANTOS*; A. NIKOLOPOULOU; Y. KANG; S. VALLABHAJOSULA; P. SERRANO; J. BABICH; M. FIGUEIREDO PEREIRA. *Hunter Col., The Grad. Center, CUNY, Hunter Col., Weill Cornell Med.*

4:00 P6 **46.08** Inhibition of IL-1 signaling provides neuroprotection following seizurogenic exposure to the nerve agent soman (GD) in mice. J. IRWIN*; T. M. FERRARA-BOWENS; J. K. CHANDLER; D. D. PALMER; K. LAITIPAYA; M. WEGNER; E. A. JOHNSON. *USAMRICD, USAMRICD, USAMRICD.*

1:00 P7 **46.09** Suppression of seizure-induced glial activation in the hippocampus using a novel N-acylethanolamine acid amidase inhibitor. C. B. MERRILL*; T. BANDIERA; F. BERTOZZI; D. PIOMELLI. *Univ. of California Irvine Dept. of Anat. and Neurobio., Inst. Italiano di Tecnologia, Univ. of California-Irvine.*

2:00 P8 **46.10** Interactions of peripherally derived macrophages and microglia after spinal cord injury. A. D. GREENHALGH*; S. DAVID. *McGill Univ., Res. Inst. of McGill Univ. Hlth. Ctr.*

3:00 P9 **46.11** Gene expression profiling of the interlukin-1 inflammatory pathway in knockout mice following soman exposure. J. K. CHANDLER*; T. M. FERRARA-BOWENS; J. F. IRWIN; K. LAITIPAYA; D. D. PALMER; H. M. HOARD-FRUCHEY; E. A. JOHNSON. *US Army Med. Res. Inst. of Chem. Def.*

4:00 P10 **46.12** Is progranulin deficiency in microglia alone sufficient to cause microglia activation and neurodegeneration? M. CAHILL*; J. ZHANG; H. LUI; E. J. HUANG. *Univ. of California San Francisco, Univ. of California, Berkeley.*

1:00 P11 **46.13** An immunohistochemical analysis of inflammation-driven changes in synaptic plasticity: The combined effects of aging and an immune challenge. V. G. ROMETT; C. W. MOODY; N. TANAKA; L. R. PEACH; S. L. PATTERSON*. *Temple Univ.*

2:00 P12 **46.14** Inhibition of monoacylglycerol lipase prevents HIV gp120-induced synapse loss by decreasing prostaglandin production. X. ZHANG*; S. THAYER. *Univ. of Minneasota, Univ. of Minneasota.*

3:00 Q1 **46.15** Immune sensitization in sequential stem cell transplantation in the spinal cord. M. S. TORA*; J. J. LAMANNA; J. GUTIERREZ; L. N. URQUIA; C. MORETON; J. L. WAGNER; T. FEDERICI; N. M. BOULIS. *Emory Univ. Sch. of Med., Georgia Inst. of Technol., Emory Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 Q2 **46.16** APOBEC1-mediated RNA-editing of LAMP2 in microglia is linked to lysosomal accumulation in hippocampus and impaired cognitive decline in middle-aged Apobec1$^{-/-}$ mouse. K. GAGNIDZE; D. COLE; K. HAJDAROVIC; F. N. PAPAVASILIOU; T. A. MILNER; V. RAYON-ESTRADA; K. BULLOCH*. *The Rockefeller Univ., The Rockefeller.edu, Weill Cornell Med. Col., The Rockefeller, The Rockefeller Univ.*

1:00 Q3 **46.17** A mouse model of Gulf War Illness reveals a primed neuroinflammatory response to subsequent systemic inflammatory challenge. K. A. KELLY*; A. R. LOCKER; L. T. MICHALOVICZ; J. A. VRANA; S. VASHISHTHA; G. BRODERICK; D. B. MILLER; J. P. O'CALLAGHAN. *CDC-NIOSH, Univ. of Alberta, Univ. of Miami, NOVA Southeastern Univ.*

2:00 Q4 **46.18** ▲ Complement activation due to HexB deficient microglia targets neurons: Implications for Sandhoff and Tay-Sachs disease. N. SASIDHARAN*; B. JUN; Y. GONG; F. EICHLER. *Harvard Med. Sch. / Massachusetts Gen. Hos.*

3:00 Q5 **46.19** Neuroinflammation in vervet brains following chronic dietary exposures to a cyanobacterial toxin. D. A. DAVIS*; A. DELLE DONNE; S. A. BANACK; R. PALMOUR; W. G. BRADLEY; P. A. COX; D. C. MASH. *Univ. of Miami, Univ. of Miami, Inst. of Ethnomedicine, McGill Univ.*

4:00 Q6 **46.20** Type I interferon response in Alzheimer's disease pathology. A. CARRANO; C. VERBEECK; P. DAS*. *Mayo Clin., Mayo Clin.*

1:00 Q7 **46.21** Detecting gangliosides expression profile changes during microglial activation. M. M. ALSHAIKH*; G. LAJOIE; S. WHITEHEAD. *Western Univ., Western Univ.*

2:00 Q8 **46.22** Toxoplasma gondii-infected monocytes can disrupt outer blood retinal barrier by paracrinely activating FAK signaling pathway. H. SONG*; H. JUN; J. KIM; S. LEE; M. CHOI; J. KIM. *Seoul Natl. Univ., Seoul Natl. Univ. Hosp., Hallym Univ. Sacred Heart Hosp., Seoul Natl. Univ. Col. of Med., Seoul Natl. Univ. Hosp.*

3:00 Q9 **46.23** ▲ The galectin-1 and -3 participate in the neuroinflammation-induced by the administration amyloid-β (25-35) into hippocampus of rats. E. RAMIREZ*; L. MENDIETA; M. A. MAYORAL; I. MARTINEZ; F. LUNA; I. D. LIMÓN. *Benemérita Univ. Autónoma De Puebla, Benemerita Univ. Autonoma de Puebla, Univ. Autonoma Benito Juarez, Benemérita Univ. Autónoma de Puebla, Benemérita Univ. Autónoma de Puebla, Benemérita Univ. Autónoma de Puebla.*

4:00 Q10 **46.24** Cofilin mediates LPS-induced microglial cell activation & associated neurotoxicity through NF-κB & JAK-STAT pathways. Q. M. ALHADIDI*; Z. A. SHAH. *Univ. of Toledo, Univ. of Toledo.*

1:00 Q11 **46.25** ▲ Inflammation induces a biphasic nuclear Nrf2 translocation activation in neuronal cells. S. KREPEL; T. B. KUHN*. *Univ. Alaska Fairbanks.*

2:00 Q12 **46.26** Quantification of brain acetylcholine in a mouse model of Gulf War Illness using HILIC-UPLC-MS/MS. J. A. VRANA*; A. R. LOCKER; K. A. KELLY; L. T. MICHALOVICZ; R. F. LEBOUF; J. P. O'CALLAGHAN; D. B. MILLER. *CDC-NIOSH, CDC-NIOSH.*

3:00 Q13 **46.27** Using novel ALDH1L1 bacTRAP technology to evaluate the astrocyte-specific responses to Gulf War Illness-related exposures. L. T. MICHALOVICZ*; K. A. KELLY; A. R. LOCKER; J. A. VRANA; G. BRODERICK; D. B. MILLER; J. P. O'CALLAGHAN. *CDC-NIOSH, Univ. of Miami, Nova Southeastern Univ., Univ. of Alberta.*

4:00 Q14 **46.28** Initial characterization of 11C-GSK1482160 as radioligand for P2X7 receptors. J. S. PETERS; J. A. MEYER*; A. A. RILEY; B. P. MCCARTHY; M. GAO; M. WANG; Q. ZHENG; G. D. HUTCHINS; P. R. TERRITO. *Indiana Univ. Sch. of Med.*

POSTER

047. Transplantation and Integration of Neural Precursors in the Adult Brain

Theme C: Neurodegenerative Disorders and Injury

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

1:00 R1 **47.01** Electrical stimulation enhances migratory ability of transplanted bone marrow stromal cells in stroke model of rats. J. MORIMOTO*; T. YASUHARA; M. KAMEDA; M. UMAKOSHI; K. KIN; M. OKAZAKI; H. TAKEUCHI; T. SASAKI; A. TOYOSHIMA; T. AGARI; I. DATE. *Okayama Univ. Grad Sch. of Med.*

2:00 R2 **47.02** Development of optimized hematopoietic stem cell gene-therapy approaches for treatment of infantile neuronal ceroid lipofuscinosis. M. PEVIANI*; U. CAPASSO; R. MILAZZO; V. CIPOLLA; S. GATTI; D. MOSCATELLI; A. BIFFI. *Dana-Farber/Boston Children's, Politecnico di Milano, San Raffaele Scientific Inst., ETH Zürich.*

3:00 R3 **47.03** Transplanting human NPCs derived from iPSC into the rodent spinal cord. Y. JIN*; J. BOUYER; K. HAYAKAWA; C. HAAS; J. RICHARD; N. MARAGAKIS; I. FISCHER. *Drexel Univ. Col. of Med., Johns Hopkins Univ. Sch. of Med.*

4:00 R4 **47.04** Survival of iPSC-derived grafts within the striatum of immunodeficient mice: Importance of developmental stage of both transplant and host. C. TOM*; S. YOUNESI; E. MEER; V. B. MATTIS. *Cedars-Sinai Med. Ctr.*

1:00 R5 **47.05** Donor age and passage number of Mesenchymal stem cells have an effect on alleviating the motor deficits in R6/2 mouse model of Huntington's disease. B. SRINAGESHWAR*; A. ANTCLIFF; A. CHRISTIANSEN; A. STONER; M. DAM; A. YALAMARTHY; A. CRANE; N. KOLLI; A. AL-GHARAIBEH; R. CULVER; D. STORY; O. V. LOSSIA; A. MOORE; G. L. DUNBAR; J. ROSSIGNOL. *CENTRAL MICHIGAN UNIVERSITY, Field Neurosciences Inst. Lab. for Restorative Neurol., Central Michigan Univ., Col. of Medicine, Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst.*

2:00 R6 **47.06** ▲ The significance of HLA matching in allogeneic human iPS cell-derived neural stem/progenitor cell transplantation for spinal cord injury. M. OZAKI*; A. IWANAMI; J. KOHYAMA; N. NAGOSHI; G. ITAKURA; H. IWAI; M. MATSUMOTO; H. OKANO; M. NAKAMURA. *Dept. of Orthopaedic Surgery, Keio Univ., Dept. of Physiology, Keio Univ.*

3:00 R7 **47.07** Grafted glutamatergic neuronal precursors integrate into the postnatal cerebral cortex and promote functional recovery after targeted neuronal apoptosis. J. MIHHAILOVA; V. PETRENKO; P. CONSTANTHIN; A. CONTESTABILE; R. BOCCHI; K. EGERVARI; P. SALMON; J. Z. KISS*. *Univ. of Geneva, Dept. of Neurosciences.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 R8 **47.08** ● Human-porcine chimerism and the use of blastocyst complementation to generate a source of nigral dopamine precursors suitable for transplantation. A. CRANE*; P. SWAMINATHAN; H. HEWITT; F. XIAO; V. SAVANUR; J. VOTH; Z. SCHULTZ; D. CARLSON; S. FAHRENKRUG; J. DUTTON; W. LOW. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Recombinetics Inc.*

1:00 R9 **47.09** hESC-derived dopaminergic grafts improve L-DOPA induced dyskinesia in a rat model of Parkinson's disease. O. F. ELABI*; A. KIRKEBY; M. PARMAR; E. LANE. *Cardiff Univ., Lund stem cell centre.*

2:00 R10 **47.10** Transplanted embryonic neurons integrate adequately into adult neocortical circuits. S. GRADE*; L. DIMOU; K. CONZELMANN; M. GÖTZ. *Ludwig-Maximilians Univ., Helmholtz Ctr. Munich, Ludwig-Maximilians Univ., Ludwig-Maximilians Univ.*

3:00 R11 **47.11** A novel strategy for developing a robust stem cell based therapeutic for Parkinson's disease using the transcription factor MEF2C. R. AMBASUDHAN*; N. DOLATABADI; D. POLIOUDAKIS; A. SULTAN; K. LOPEZ; A. NUTTER; J. PARKER; M. TALANTOVA; S. MCKERCHER; N. NAKANISHI; E. MASLIAH; D. GESCHWIND; D. E. REDMOND, Jr.; S. A. LIPTON. *Scintillon Inst., Univ. of California Los Angeles, Univ. of California San Diego, Yale Univ. Sch. of Med.*

4:00 R12 **47.12** ● An immortalized cell line from the motor cortex of an adult rat as a model of cell transplant therapy in rats subjected to cortical ischemia. Survival, phenotype and functionality post grafting. A. ARMIJO; C. F. ARRIAGADA*; R. CAVIEDES; P. CAVIEDES. *ICBM, Fac. Med, Univ. Chile, ICBM, Fac. Med, Univ. Chile, ICBM, Fac. of Medicine, Univ. of Chile, ICBM, Fac. Med, Univ. Chile.*

1:00 R13 **47.13** Embryonic stem cell transplants as a therapeutic strategy in a rodent model of autism. J. J. DONEGAN*; A. M. BOLEY; D. J. LODGE. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Univ. of Texas Hlth. Sci. Ctr.*

2:00 R14 **47.14** Potential of induced pluripotent stem cells (iPSCs) and iPSC-derived neural stem cells (iNSCs) for treatment of the behavioral and neuropathological deficits in the YAC128 mouse model of Huntington's disease. A. AL-GHARAIBEH*; R. CULVER; A. CRANE; R. WYSE; A. ANTCLIFF; B. SRINAGESHWAR; N. KOLLI; L. FROLLO; D. STORY; G. PATRICIA; S. MOORE; O. LOSSIA; A. EICKHOLT; G. DUNBAR; J. ROSSIGNOL. *Central Michigan Univ., Field Neurosciences Inst. Lab. for Restorative Neurol., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst.*

3:00 R15 **47.15** Growth, differentiation and connectivity of implanted human neuronal precursor cells in the mouse visual cortex. J. BENOIT*; H. WU; V. BRETON-PROVENCHER; J. P. K. IP; D. FELDMAN; S. CHOU; R. JAENISCH; M. SUR. *MIT, MIT.*

4:00 R16 **47.16** Optogenetics stimulation improves stem cell engraftment after transplantation into neonatal rats with focal ischemic stroke. Z. WEI*; A. GANGAL; X. GU; D. CHEN; C. LIU; Z. LI; K. BERGLUND; S. YU; L. WEI. *Anesthesiol./ Neurol., Emory Univ. Sch. Med., Neurosurg., Emory Univ. Sch. Med.*

1:00 R17 **47.17** Chronically reduced adult neurogenesis in the mouse hippocampus contributes to functional deficits following soman-induced status epilepticus. K. M. HOFFMAN; K. L. SCHULZ; E. K. JOHNSON; J. K. CHANDLER; P. M. MCNUTT*. *US Army Med. Res. Inst. of Chem. Def., USAMRICD.*

2:00 S1 **47.18** Histological characterization of stem-cell derived 3D retinal progenitor sheet transplants in an immunodeficient retinal degenerate rat model. A. MATHUR; B. T. MCLELLAND; M. SARY; J. WAN; G. NISTOR; I. NASONKIN; R. ARAMANT; H. S. KEIRSTEAD; M. J. SEILER*. *UC Irvine, Sch. of Med., AiVita Biomed., Bio Time Inc., UC Irvine, Sch. of Med.*

3:00 S2 **47.19** Heterochronic transplants of caudal ganglionic eminence precursors disperse into host visual cortex and adapt lineage-appropriate lamination and neurochemical identity. J. SPATAZZA; P. LARIMER; S. ESPINOSA; Y. TANG; A. R. HASENSTAUB*; M. P. STRYKER; A. ALVAREZ-BUYLLA. *UCSF, UCSF, UCSF, UCSF, UCSF, Kavli Ctr. for Fundamental Neurosci.*

4:00 S3 **47.20** Heterochronic transplants of caudal ganglionic eminence precursors are functionally integrated into visual cortex but do not induce ocular dominance plasticity. P. LARIMER*; J. SPATAZZA; J. S. ESPINOSA; Y. TANG; M. KANEKO; A. ALVAREZ-BUYLLA; M. P. STRYKER; A. R. HASENSTAUB. *Univ. of California San Francisco, Kavli Inst. for Fundamental Neurosci., Ctr. for Integrative Neurosci., UCSF, Eli and Edythe Broad Ctr. for Regenerative Med., UCSF, Univ. of California San Francisco, Univ. of California San Francisco, Kavli Ctr. for Fundamental Neurosci., Univ. of California San Francisco.*

1:00 S4 **47.21** Restoration of visual cortical responses after retinal sheet transplantation in rats with retinal degeneration. A. T. FOIK*; G. A. LEAN; B. T. MCLELLAND; A. MATHUR; R. B. ARAMANT; M. SEILER; D. C. LYON. *Univ. of California, Univ. of California.*

2:00 S5 **47.22** ● *In vivo* imaging and functionality of stem-cell derived 3D retinal organoid (retinoid) transplants assessed in an immunodeficient rat disease model. B. B. THOMAS*; B. T. MCLELLAND; A. MATHUR; B. LIN; J. SIGMAN; P. N. PATEL; G. NISTOR; L. M. KITZES; I. NASONKIN; R. B. ARAMANT; H. J. KEIRSTEAD; M. J. SEILER. *USC, UC Irvine Sch. of Med., UC Irvine, Sch. of Med., AiVita Biomed. Inc., Biotime Inc.*

3:00 S6 **47.23** Fear erasure facilitated by immature inhibitory neuron transplantation. Y. YU*; W. YANG; T. LIU; J. CAO; L. LIU. *Fudan Univ.*

4:00 S7 **47.24** Spontaneous neuronal repopulation within the dorsal hippocampus following an acute kainic acid-mediated excitotoxic injury. Y. YIN*; L. M. KONEN; C. W. VAUGHAN; B. VISSEL. *Univ. of Sydney, Garvan Inst. of Med. Res., Univ. of Technol., UNSW Australia.*

1:00 S8 **47.25** Characterization of neural progenitor cell differentiation on poly (ε-caprolactone) microfibers. B. B. PATEL*; F. SHARIFI; D. P. STROUD; N. HASHEMI; D. S. SAKAGUCHI. *Iowa State Univ., Iowa State Univ., Iowa State Univ.*

2:00 S9 **47.26** Combining optogenetics and *in vivo* two photon calcium imaging to explore the functional impact of newborn neurons in the mouse olfactory bulb. C. FOIS*; S. PÉRON; N. MARICHAL; P. PROUVOT; B. BERNINGER; A. STROH. *Johannes Gutenberg Univ., Johannes Gutenberg Univ. Mainz.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

048. Disorders of the Auditory or Visual System

Theme D: Sensory Systems

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

1:00 S10 **48.01** Reduced binocular summation of fMRI responses to visual stimulation in ventral extrastriate cortex in anisometropic amblyopia is related to visual cortical GABA concentration. K. N. BYRNE*; E. YANG; L. LI; D. M. LEVI; M. A. SILVER. *Univ. of California Berkeley, Univ. of California Berkeley, Univ. of California Berkeley, Univ. of California Berkeley, Univ. of California Berkeley.*

2:00 S11 **48.02** Spatiotemporal excitation of the primary visual cortex induced by intracortical microstimulation in the Royal College of Surgeons rats. S. MIYAMOTO*; N. SUEMATSU; Y. UMEHIRA; Y. HAYASHIDA; T. YAGI. *Osaka Univ.*

3:00 S12 **48.03** A case report of visual and motor recovery after cognitive sensorimotor rehabilitation in a patient with cortical blindness. D. DE PATRE; C. PERFETTI; F. PANTE; C. RIZZELLO; M. ZERNITZ; A. VAN DE WINCKEL*. *Ctr. Studi di Riabilitazione Neurocognitiva, Villa Miari, Univ. of Minnesota Twin Cities.*

4:00 S13 **48.04** Sodium channel redistribution in the DBA/2J mouse model of glaucoma. M. A. SMITH*; G. N. WILSON; C. M. DENGLER-CRISH; J. R. RICHARDSON; S. D. CRISH. *Northeast Ohio Med. Univ.*

1:00 S14 **48.05** Bioenergetic analysis of optic nerve mitochondria in the DBA/2J model of glaucoma. L. L. COUGHLIN*; P. T. KANG; D. M. INMAN. *Northeast Ohio Med. Univ., Kent State Univ., Northeast Ohio Med. Univ.*

2:00 T1 **48.06** Effects of IL-4 on inflammation in the visual projection of DBA/2J glaucomatous mice. G. N. WILSON*; M. A. SMITH; C. M. DENGLER-CRISH; J. R. RICHARDSON; S. D. CRISH. *Kent State Univ., NEOMED.*

3:00 T2 **48.07** Cortical plasticity in retinitis pigmentosa. L. BARONCELLI*; T. BEGENISIC; M. CENNI; A. SALE; L. GALLI. *Neurosci. Institute, CNR.*

4:00 T3 **48.08** Differential changes in distribution of nitric oxide synthase at the central auditory relays after chronic injections of salicylate in rats. T. CHIU*; C. SOO; S. HSU. *Dept of Biol. Sci. and Technology, NCTU, Natl. Chiao Tung Univ.*

1:00 T4 **48.09** Topographical functional connectivity patterns exist in the congenitally, prelingually deaf. E. STRIEM-AMIT*; J. ALMEIDA; M. BELLEDONNE; Q. CHEN; Y. FANG; Z. HAN; A. CARAMAZZA; Y. BI. *Harvard Univ., Univ. of Coimbra, Harvard Univ., Beijing Normal Univ., Beijing Normal Univ., Univ. of Trento.*

2:00 T5 **48.10** Disrupted auditory nerve activity limits peripheral but not central temporal acuity. C. Q. PHAM*; F. ZENG. *Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine.*

3:00 T6 **48.11** A simple method to detect noise-induced "hidden" hearing loss. H. ZHAO*; L. MEI; Y. ZHU. *Univ. Kentucky Med. Sch.*

4:00 T7 **48.12** Pharmacological activation of sphingosine 1-phosphate receptor 2 protects neural-derived cells from cisplatin toxicity by attenuating generation of reactive oxygen species. D. R. HERR*; M. J. Y. REOLO; Y. X. PEH; W. WANG. *Natl. Univ. of Singapore, San Diego State Univ.*

1:00 T8 **48.13** Effects of glutathione transferase α 4 deficiency on cochlear and auditory function. H. PARK*; C. HAN; M. KIM; K. WHITE; M. TICSA; I. CAICEDO; S. MANOHAR; D. DING; P. LINSER; R. SALVI; S. SOMEYA. *Univ. of Florida, Univ. of Florida, Dept. of Communicative Disorders and Sciences/University at Buffalo The State Univ. of New York.*

2:00 T9 **48.14** Auditory functional deficits < structures changes following blast shockwave exposure > mice. Y. WANG*; Y. WEI; S. VAN ALBERT; A. NORTHROP; R. URISTE; P. ARUN; D. WILDER; S. VENKATASIVASAISUJITH; I. GIST; S. MCLNTURFF; W. CHANG; T. FITZGERALD; M. KELLEY; J. LONG. *Walter Reed Army Inst. of Res., NIDCD/NIH.*

POSTER

049. Somatosensory Cortical Circuits

Theme D: Sensory Systems

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

1:00 T10 **49.01** Critical dynamics during processing of somatosensory input are maintained by interneuronal activity. S. SESHADRI*; D. PLENZ. *NIMH.*

2:00 T11 **49.02** Membrane potential correlates of increased SNR and asynchronous cortical activity following activation of the nucleus basalis. I. MEIR*; Y. KATZ; I. LAMPL. *Weizmann Inst. of Sci.*

3:00 T12 **49.03** Slow asynchronous synaptic noise broadens the dynamic range of spiny stellate neurons in layer 4 of the mouse barrel cortex. O. REVAH; A. BINSHTOK; F. WOLF; A. NEEF; M. J. GUTNICK*. *Koret Sch. of Vet Med, Hebrew Univ. Jerusalem, The Hebrew Univ. Med. Sch., The Edmond and Lily Safra Ctr. for Brain Sci., MPI For Dynamics and Self-Organisation, Bernstein Ctr. for Comput Neurosci.*

4:00 T13 **49.04** Cholinergic control of cortical circuit dynamics. R. DASGUPTA*; F. M. SEIBT; M. BEIERLEIN. *Univ. of Texas Hlth. Sci. Ctr. At Houst.*

1:00 T14 **49.05** Complementary connectivity defines two distinct networks of cortical somatostatin-expressing interneurons. A. S. NAKA*; B. SHABABO; B. SNYDER; H. ADESNIK. *UC Berkeley.*

2:00 T15 **49.06** Diversity and connectivity of somatostatin interneurons in layer V of the mouse barrel cortex. M. J. NIGRO*; Y. HASHIKAWA; R. TREMBLAY; B. RUDY. *New York Univ.*

3:00 T16 **49.07** Remodeling of dendritic inhibition during active wakefulness. W. MUNOZ*; R. TREMBLAY; D. LEVENSTEIN; B. RUDY. *NYU Neurosci. Inst., NYU Ctr. for Neural Sci.*

4:00 T17 **49.08** Dendritic dynamics in sensory perception. N. TAKAHASHI*; M. LARKUM. *Humboldt-Universität zu Berlin.*

1:00 T18 **49.09** *In vivo* monosynaptic excitatory transmission during active cortical states. J. KREMKOW*; J. JOUHANNEAU; A. L. DORRN; J. F. A. POULET. *Charité-Universitätsmedizin Berlin, Max-Delbrück Ctr. for Mol. Med. (MDC), Humboldt-Universität zu Berlin, Charité-Universitätsmedizin Berlin.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 U1 **49.10** ▲ A quantitative morphological analysis of supragranular neurons of the barrel cortex and their connections. F. PALAGUACHI; M. C. ANAYA; C. TSE; S. SOSNOWIK; J. BRUMBERG; A. TSIMOUNIS*. *Queens Col., Queensborough Community College, CUNY, New York Col. of Pediatric Med.*

3:00 U2 **49.11** ▲ Tactile noise improves somatosensory response in the injured rat brain. L. M. ANGUIANO-PACHECO; J. M. DUENAS-JIMENEZ; N. HUIDOBRO; P. LINARES; S. H. DUENAS-JIMENEZ; E. MANJARREZ; B. DE LA TORRE*. *Univ. de Guadalajara, Univ. de Guadalajara, Benemérita Univ. Autónoma de Puebla, Univ. de Guadalajara.*

4:00 U3 **49.12** ● Combined *in-vivo* functional and structural imaging in mouse barrel cortex L4. Y. HUA*; V. PAWLAK; J. N. D. KERR; M. HELMSTAEDTER. *Max-planck-Institute For Brain Res., research center caesar.*

1:00 U4 **49.13** Connectomics of three-layered reptilian and mammalian cortices. P. BASTIANS; M. HELMSTAEDTER; G. LAURENT. *MPI of Neurobio., MPI for Brain Res.*

2:00 U5 **49.14** Automated detection of glia cells for the analysis of connectome-specific neuron-glia interactions in cerebral cortex. A. MOTTA*; M. HELMSTAEDTER. *Max Planck Inst. For Brain Res.*

3:00 U6 **49.15** Automated synapse detection in large scale connectomics data. B. STAFFLER*; M. BERNING; K. M. BOERGENS; P. VAN DER SMAGT; M. HELMSTAEDTER. *MPI Brain Res., TUM.*

4:00 U7 **49.16** Local connectomic patterns in septal versus barrel circuits. P. LASERSTEIN*; M. HELMSTAEDTER. *Max Planck Inst. For Brain Res.*

1:00 U8 **49.17** Local connectome statistics in mouse barrel cortex. K. M. BOERGENS*; M. BERNING; B. STAFFLER; A. MOTTA; S. LOOMBA; M. HELMSTAEDTER. *Max Planck Inst. of Brain Res.*

2:00 U9 **49.18** Developmental analysis of cortical connectomes. A. G. GOUR*; M. HELMSTAEDTER. *Max Planck Inst. For Brain Res.*

3:00 U10 **49.19** Exploring the role of BDNF in the organization of borders in adult cortical representations of S1. L. GONZALEZ*; P. W. HICKMOTT. *UC Riverside.*

4:00 U11 **49.20** The effects of microstimulation on the behavioral report of single neuron stimulation. G. DORON*; M. BRECHT; M. VON HEIMENDAHL. *Humboldt Univ. of Berlin.*

1:00 U12 **49.21** Somatotopic organization within the rat trunk sensory cortex. G. H. BLUMENTHAL*; B. NANDAKUMAR; K. A. MOXON. *Drexel Univ. Sch. of Biomed. Engin. Sci. and Hlth. Systems.*

2:00 U13 **49.22** The role of mouse barrel cortex in tactile trace eye blink conditioning. J. I. HOFMANN*; B. JOACHIMSTHALER; C. SCHWARZ. *Ctr. For Integrative Neuroscience; Ag Schwarz, Univ. Tübingen.*

3:00 U14 **49.23** Relationships between sensory-evoked synaptic input and long-range target-related spiking output of cortical layer 5. M. OBERLAENDER*; R. EGGER; G. ROJAS-PILONI; R. T. NARAYANAN; J. M. GUEST; C. P. J. DE KOCK; D. UDVARY. *Max Planck Inst. For Biol. Cybernetics, Max Planck Inst. For Biol. Cybernetics, Max Planck Florida Inst. for Neurosci., Ctr. for Neurogenomics and Cognitive Res. VU Univ. Amsterdam.*

POSTER

050. Taste: Behavior and Processing

Theme D: Sensory Systems

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

1:00 U15 **50.01** Stochastic transitions in cortical ensemble dynamics can predict the timing of taste ingestion egestion orofacial behavior. N. MUKHERJEE*; J. WACHUTKA; D. B. KATZ. *Brandeis Univ.*

2:00 U16 **50.02** Gustatory cortical input onto the nucleus of the solitary tract refines neuronal firing patterns and enhances learning in the awake rat. J. D. SAMMONS*; C. E. BASS; J. D. VICTOR; P. M. DI LORENZO. *Binghamton Univ., Univ. at Buffalo, SUNY, Weill Cornell Med. Col.*

3:00 U17 **50.03** Patterned activation of amygdalo-cortical projections induces synaptic and intrinsic plasticity in rat primary gustatory cortex. M. HALEY*; A. FONTANINI; A. MAFFEI. *SUNY At Stony Brook.*

4:00 U18 **50.04** Layer specific sensorimotor activity in the gustatory cortex of licking mice. G. N. DIKECLIGIL*; D. M. GRAHAM; I. M. PARK; A. FONTANINI. *Stony Brook Univ.*

1:00 V1 **50.05** Holistic processing of taste mixtures in rat gustatory cortex. J. WACHUTKA*; N. MUKHERJEE; S. ZARMSKY; D. KATZ. *Brandeis Univ., Brandeis Univ.*

2:00 V2 **50.06** Modification of the gustatory responses in rat insular cortex by the olfactory stimulation. N. MIZOGUCHI*; M. KOBAYASHI; K. MURAMOTO. *Meikai Univ. Sch. of Dent., Nihon Univ. Sch. of Dent.*

3:00 V3 **50.07** ● Neural correlates of sweet taste intensity in the insular and orbitofrontal cortex. E. G. FONSECA DE LA CRUZ*; A. S. MATSUMOTO; M. VILLAVICENCIO; A. I. HERNANDEZ-COSS; S. A. SIMON; R. GUTIERREZ. *Inst. De Fisiología Celular, UNAM, CINVESTAV - IPN, Fac. of Psychology, UNAM, CINVESTAV - IPN, Duke Univ. Sch. of Med.*

4:00 V4 **50.08** Gustatory thalamus in the tree shrew and the rodent are not similar. E. MAHER*; M. PRILLAMAN; H. PETRY; A. ERISIR. *Univ. of Virginia, Univ. of Louisville.*

1:00 V5 **50.09** ● Pungency and pain and *in vivo* imaging of mouse trigeminal ganglion neurons. S. LEIJON; J. M. BREZA; N. CHAUDHARI; S. D. ROPER*. *Univ. of Miami Sch. of Med., Eastern Michigan Univ.*

2:00 V6 **50.10** Developmentally dependent microglia increase following chorda tympani transection in rats. A. J. RIQUIER*; S. I. SOLLARS. *Univ. of Nebraska At Omaha.*

3:00 V7 **50.11** Transganglionic degeneration of the chorda tympani nerve terminal field following neonatal denervation. L. J. MARTIN*; K. K. SAMSON; A. H. ORAND; S. I. SOLLARS. *Univ. of Nebraska At Omaha, Univ. of Nebraska Med. Ctr.*

4:00 V8 **50.12** Thermal and tactile responses of the rat chorda tympani nerve. Y. YOKOTA; A. KUMARI; C. M. MISTRETTA; R. M. BRADLEY*. *Univ. Michigan Sch. Dent.*

1:00 V9 **50.13** Metabolic syndrome is associated with altered functional connectivity of the primary and secondary taste cortices and eating disinhibition. E. E. PONGPIPAT*; A. JACOBSON; C. MURPHY. *San Diego State Univ.*

2:00 V10 **50.14** Differences in neural gustatory processing between lean and obese individuals revealed by evoked responses. S. HARDIKAR*; R. WALLROTH; A. VILLRINGER; K. OHLA. *MPI for Human Cognitive and Brain Sci., German Inst. of Human Nutr.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 V11 **50.15** Cortical correlates of metabolic syndrome risk factors and hunger in middle aged and older adults. R. B. VERTREES*; E. E. PONGPIPAT; E. MCINTOSH; C. MURPHY. *San Diego State Univ., UCSD, UCSD.*

4:00 V12 **50.16** ●▲ Sucrose binge eating selectively alters taste palatability but not sweet taste identification. A. S. MATSUMOTO*; E. G. FONSECA; S. A. SIMON; R. GUTIERREZ. *Ctr. De Investigación Y De Estudios Avanzados De, Fac. of Psychology, UNAM, Mexico, Lab. of Neurobio. of Appetite, Dept. of Pharmacology, CINVESTAV-IPN, Inst. of Cell. Physiology, UNAM, Mexico, Duke Univ. Sch. of Med., Lab. of Neurobio. of Appetite, Dept. of Pharmacology, CINVESTAV-IPN.*

1:00 V13 **50.17** Normosmic subjective ageusia. M. K. ALHAIDAR*; A. R. HIRSCH. *George Washington Univ. Hosp., Smell and Taste Treatment and Res. Fndn.*

1:00 DP03 **50.18** ● (Dynamic Poster) Application of an automated rapid throughput taste measurement system to signal detection theory (SDT) using human subjects. R. K. PALMER*; M. K. STEWART. *Opertech Bio.*

3:00 V14 **50.19** ● Rapid generation of concentration-response functions for taste in human subjects using an automated 96-well platform and interactive algorithms for taste measurement. M. M. STEWART*; D. J. LONG; R. K. PALMER. *Opertech Bio.*

4:00 V15 **50.20** Neural processing of sweet taste in Hispanic young adults: An fMRI study. J. SZAJER*; A. JACOBSON; E. GREEN; L. HAASE; C. MURPHY. *SDSU/UC San Diego, San Diego State Univ., VA Palo Alto Hlth. Care Syst., Stanford Univ. Sch. of Med., Univ. of California San Diego.*

1:00 V16 **50.21** ● Paradoxical gustatory intensification from traumatic anosmia. G. HANSRA*; A. R. HIRSCH; T. LOPES. *Caribbean Med. Univ., Smell & Taste Treatment and Res. Fndn.*

2:00 V17 **50.22** Role of insulin-1 in conditional taste aversion learning paradigm. S. PANGULURI*. *Univ. of South Florida.*

3:00 V18 **50.23** Innocuous experience enhances aversion learning and affects aversion-related neural activation. V. FLORES*; D. LEVITAN; T. PARMET; D. B. KATZ. *Brandeis Univ.*

4:00 W1 **50.24** Transcription factors to define subsets of taste neurons in the geniculate ganglia of adult mice. G. DVORYANCHIKOV*; D. HERNANDEZ; N. CHAUDHARI. *Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med.*

1:00 W2 **50.25** Effect of color on taste thresholds. S. NAGAHAMA*. *Teikyo Heisei Univ.*

2:00 W3 **50.26** ● When matter matters: Taste of solids versus liquids. S. KANWAR*; M. R. CHAND; A. R. HIRSCH. *Smell and Taste Treatment and Res. Fndn., Smell and Taste Treatment and Res. Fndn.*

3:00 W4 **50.27** Role of innervation in HH signaling in the adult mouse fungiform taste papilla. A. KUMARI; B. L. ALLEN; R. M. BRADLEY; A. A. DLUGOSZ; C. MISTRETTA*. *Univ. Michigan Sch. Dent., Univ. of Michigan, Univ. of Michigan.*

4:00 W5 **50.28** Normosmic normogeusic subjective ageusia, why is food tasteless if I can smell and taste? P. KHEIRKHAH*; A. HIRSCH. *UIC, Smell & Taste Treatment and Res. Fndn.*

1:00 W6 **50.29** ●▲ Temperature dependent dysgeusia: A reverse Goldilocks syndrome. A. DUNN*; A. HIRSCH. *Lake Forest Col., Smell and Taste Treatment and Res. Fndn.*

2:00 W7 **50.30** Objective chemosensory testing in subjective salty hypergeusia; report of three cases. K. KAVEH*; K. NATASHA; A. R. HIRSCH. *Smell and Taste Treatment and Res. Foundation, Smell and Taste Treatment and Res. Foundation, Chicago, IL.*

POSTER

051. Auditory Processing: Temporal and Frequency

Theme D: Sensory Systems

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

1:00 W8 **51.01** Characterizing receptive fields in awake primate auditory cortex using principled correction of the spike-triggered average. J. BIGELOW*; R. E. BEITEL; B. J. MALONE. *UCSF.*

2:00 W9 **51.02** Noise-robust encoding of frequency modulation in awake primate cortex. B. J. MALONE*; M. HEISER; R. BEITEL; J. BIGELOW; C. SCHREINER. *UCSF Sch. of Med., UCLA Semel Inst. for Neurosci. and Behavior.*

3:00 W10 **51.03** Locomotion modifies sound perception in mouse primary auditory cortex. A. G. GUSEV*; M. WEHR. *Inst. of Neuroscience, Univ. of Oregon.*

4:00 W11 **51.04** Neural response differences in the rat primary auditory cortex under anesthesia with ketamine versus the mixture of medetomidine, midazolam and butorphanol. H. OSANAI*; T. TATENO. *Hokkaido Univ.*

1:00 W12 **51.05** Response profiles of inferior colliculus neurons in young and old rats. E. X. HAN*; A. PARTHASARATHY; E. L. BARTLETT. *Purdue Univ., Purdue Univ., Mass. Eye and Ear, Harvard Med. Sch.*

2:00 X1 **51.06** Varying frequency in vagus nerve stimulation to optimize plasticity in the rat auditory cortex. E. BUELL*; M. BORLAND; K. LOERWALD; M. KILGARD. *Univ. of Texas At Dallas, Univ. of Texas at Dallas.*

3:00 X2 **51.07** Brain rhythms reveal how words integrate into phrases. A. TAVANO*; S. BLOHM; C. KNOOP; V. WAGNER; M. SCHARINGER; N. DING; O. GHITZA; D. POEPPEL; W. MENNINGHAUS. *Max Planck Inst. For Empirical Aesthetics, Max Planck Inst. For Empirical Aesthetics, Zhejiang Univ., Boston Univ., New York Univ.*

4:00 X3 **51.08** Distortion of tonotopic maps in auditory cortex of rats following blast exposure. S. MASRI*; H. LUO; E. PACE; J. ZHANG; S. BAO. *Univ. of Arizona, Wayne State Univ.*

1:00 X4 **51.09** Responses to sinusoidal frequency modulation in the guinea pig ventral cochlear nucleus. N. PARAOUTY*; A. STASIAK; C. LORENZI; I. WINTER. *Ecole Normale Superieure Paris, Univ. of Cambridge.*

2:00 X5 **51.10** Thalamocortical circuitry of oscillatory phase reset. M. N. O'CONNELL*; A. BARCZAK; T. MCGINNIS; D. ROSS; P. LAKATOS. *Nathan Kline Instit, Nathan Kline Inst., Nathan KLine Inst., New York Univ. Sch. of Med.*

3:00 X6 **51.11** Modulation of acoustic processing in the auditory cortex by frontal cortex synaptic inputs. J. W. MIDDLETON*; S. M. BROWN. *LSU Hlth. Sci. Ctr., Louisiana State Univ. Hlth. Sci. Ctr.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 X7 **51.12** Information processing by synchronized neuronal ensembles in the primary auditory cortex. J. SEE*; C. ATENCIO; V. SOHAL; C. SCHREINER. *UCSF.*

1:00 X8 **51.13** Adaptation in auditory cortex is actively shaped by somatostatin-positive and not parvalbumin-positive interneurons. R. G. NATAN*; W. RAO; M. N. GEFFEN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 X9 **51.14** Amplitude modulation coding in awake mice. N. HOGLEN*; E. A. K. PHILLIPS; P. LARIMER; B. J. MALONE; A. R. HASENSTAUB. *Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco.*

3:00 X10 **51.15** Forward masking and synaptic inhibition in the auditory cortex of awake mice. E. A. PHILLIPS*; C. E. SCHREINER; A. R. HASENSTAUB. *Univ. of California, San Francisco, Univ. of California, San Francisco.*

4:00 X11 **51.16** Background EEG activity modulates auditory-evoked response in C57BL/6J mice. B. H. TRACEY; L. SCOTT; C. SIOK; D. VOLFSON*. *Tufts Univ., Pfizer.*

1:00 X12 **51.17** Developmental changes in the functional laminar mesoscale organization of primary auditory cortex revealed with multi-scale imaging. K. SOLARANA*; D. WINKOWSKI; Z. BOWEN; J. LIU; N. FRANCIS; D. NAGODE; P. O. KANOLD. *Univ. of Maryland, Univ. of Maryland.*

2:00 X13 **51.18** Two types of cortical interneurons differentially modulate behavioral frequency discrimination acuity. J. BLACKWELL*; M. AIZENBERG; L. MWILAMBWE-TSHILOBO; S. JONES; R. G. NATAN; M. N. GEFFEN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

3:00 X14 **51.19** A high-frequency tonotopic reversal in marmoset parabelt auditory cortex. D. GAMBLE*; X. WANG. *Johns Hopkins Univ.*

4:00 X15 **51.20** A high-throughput platform for combined optogenetic stimulation and wireless EEG recordings for use with auditory assays in awake-behaving rodents. D. J. GRAZIANO*; A. M. PATINO; M. M. SIDOR. *Novartis, Novartis.*

1:00 X16 **51.21** Functional organisation of the thalamo-cortical auditory system in awake ferrets using fast ultrasound imaging. C. BIMBARD*; C. DEMENÉ; C. GIRARD; S. RADTKE-SCHULLER; S. SHAMMA; M. TANTER; Y. BOUBENEC. *Lab. Des Systèmes Perceptifs CNRS UMR 8248, Inst. Langevin, Waves physics for medecine, Inserm U979.*

2:00 X17 **51.22** Auditory analogues of simple and complex cells: Linearity of responses to periodic stimuli. P. KUSMIEREK*; J. P. RAUSCHECKER. *Georgetown Univ.*

POSTER

052. Subcortical Visual Pathways: LGN

Theme D: Sensory Systems

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

1:00 X18 **52.01** Subcortical and cortical color representation and attentional modulation. S. HONG*; Q. YU; W. SHIM. *Florida Atlantic Univ., Florida Atlantic Univ., Dartmouth Col., Sungkyunkwan Univ., Sungkyunkwan Univ.*

2:00 Y1 **52.02** A firing-rate based simulation tool for studying roles of cortical feedback in lateral geniculate nucleus (LGN). M. HOBBI MOBARHAN*; G. HALNES; P. M. CAÑADA; T. HAFTING; M. FYHN; G. T. EINEVOLL. *Univ. of Oslo, Norwegian Univ. Life Sci., Univ. of Granada, Univ. of Oslo, Univ. of Oslo.*

3:00 Y2 **52.03** A reassessment of retinogeniculate convergence using optogenetic stimulation. E. Y. LITVINA; C. CHEN*. *Children's Hosp, Harvard Med. Sch., Harvard Med. Sch.*

4:00 Y3 **52.04** Corticogeniculate feedback enhances temporal precision of LGN neurons in a stream specific manner. J. M. HASSE*; F. BRIGGS. *Dartmouth Col. Geisel Sch. of Med.*

1:00 Y4 **52.05** Functional mapping of retinogeniculate inputs on mouse thalamocortical relay neurons. J. A. BEATTY*; C. L. COX. *Michigan State Univ.*

2:00 Y5 **52.06** Thalamic suppression as revealed in a Hidden Markov Model. A. R. CASTI*. *Fairleigh Dickinson Univ.*

3:00 Y6 **52.07** Response profiles of interneurons in the ferret vs. cat lateral geniculate nucleus. V. SURESH*; U. M. CIFTCIOGLU; K. R. DING; F. T. SOMMER; J. A. HIRSCH. *USC, Univ. of California.*

4:00 Y7 **52.08** Contrast dependent synchrony in the retinogeniculate circuit. P. C. ALEXANDER*; H. J. ALITTO; T. G. FISHER; D. L. RATHBUN; W. M. USREY. *Univ. of California, Davis, Univ. of California, Davis, Eberhard Karls Univ.*

1:00 Y8 **52.09** New methods to identify extra-classical receptive fields in macaque lateral geniculate nucleus. N. J. KILLIAN; J. S. PEZARIS*. *Massachusetts Gen. Hosp., Harvard Med. Sch.*

2:00 Y9 **52.10** Brain state-dependent modulation of thalamic visual processing by cortico-thalamic feedback. K. REINHOLD*; M. SCANZIANI. *Harvard Med. Sch., Univ. of California at San Francisco.*

3:00 Y10 **52.11** Contrast and temporal dynamics of extraclassical suppression in the lateral geniculate nucleus of the alert macaque monkey. D. ARCHER*; W. M. USREY. *Univ. of California, Davis.*

POSTER

053. Visual Cortex: Carnivores

Theme D: Sensory Systems

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

1:00 Y11 **53.01** What features are matched binocularly for stereopsis? I. OHZAWA*; D. KATO; M. BABA; K. S. SASAKI. *Osaka Univ., CiNet, Natl. Inst. for Physiological Sci.*

2:00 Y12 **53.02** Fast contrast adaptation in V1 neurons - neural correlates of fading illusion -. K. S. SASAKI*; K. KURIHARA; I. OHZAWA. *Osaka Univ., CiNet (Center for Information and Neural Networks)*.

3:00 Y13 **53.03** Serotype-specific tropism of adeno-associated viruses in ferret primary visual cortex. A. DANIELS; T. BOUCHER; K. J. NIELSEN*. *Zanvyl Krieger Mind/Brain Inst., Johns Hopkins Univ., Johns Hopkins Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 Y14 **53.04** Retinal input and callosal neuron axons regulate activity-dependent elimination of Chandelier cells at the V1-V2 border before eye opening. B. WANG*; Z. J. HUANG. *Cold Spring Harbor Lab.*

1:00 Y15 **53.05** Separating ON and OFF pathway inputs to cortical simple cells reveals receptive fields with ON-dominated asymmetric push-pull. A. GHARAT*; C. L. BAKER, Jr. *McGill Univ., McGill Univ.*

2:00 Y16 **53.06** Targeted optogenetic activation of the parvalbumin inhibitory neuron circuit in cat primary visual cortex sharpens orientation tuning of putative excitatory neurons. D. C. LYON*; A. T. FOIK; Y. LIU; L. A. ZHANG. *Univ. of California Irvine.*

3:00 Y17 **53.07** Synaptic architecture of visual space in ferret visual cortex. B. SCHOLL*; D. E. WILSON; D. FITZPATRICK. *Max Planck Florida Inst.*

4:00 Y18 **53.08** Subthreshold spatio-temporal receptive fields in developing ferret visual cortex. A. ROY; B. MESCHEDE-KRASA; W. ALFORD; S. D. VAN HOOSER*. *Brandeis Univ.*

1:00 Z1 **53.09** ▲ Horizontal organization of thalamic inputs in visual cortex. A. SIAHKAMARI*; E. ZABEH; J. JIN; R. LASHGARI; J. ALONSO. *Inst. For Res. In Fundamental Sci., Dept. of Biol. Science, SUNY-Optometry.*

2:00 Z2 **53.10** Cellular and synaptic mechanisms of direction selectivity in visual cortex. D. E. WILSON*; B. SCHOLL; D. FITZPATRICK. *Max Planck Florida Inst. For Neurosci.*

POSTER

054. Mechanisms of Color, Contrast, and Form Perception

Theme D: Sensory Systems

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

1:00 Z3 **54.01** Modeling individual variations in contrast perception as lateral connections within V1. E. C. MORGAN*; V. R. DE SA. *UC San Diego.*

2:00 Z4 **54.02** Color processing in mouse primary visual cortex. I. RHIM*; G. COELLO-REYES; I. NAUHAUS. *The Univ. of Texas At Austin, The Univ. of Texas At Austin, The Univ. of Texas At Austin.*

3:00 Z5 **54.03** Large visual stimuli induce two distinct γ oscillations with different tuning properties in the primary visual cortex of macaque monkeys. P. RAVISHANKAR*; M. V. P. S. DINAVAHI; V. SHIRHATTI; S. RAY. *Indian Inst. of Sci., Indian Inst. of Sci., Indian Inst. of Sci.*

4:00 Z6 **54.04** Evidence of nonlinear dynamics in cortical processing of the color VEP. V. NUNEZ*; R. SHAPLEY; P. SCHUETTE; A. AMIR; C. BRITTENHAM; A. BUTT; N. CHAN; S. A. HASSAN; P. PEHME; C. RIDWAN; Y. SONG; J. GORDON. *CUNY Hunter Col., NYU.*

1:00 Z7 **54.05** Red predominance of γ band power in macaque v1 and v4. Y. LIU*; J. YIN; Z. CHEN; I. M. ANDOLINA; W. WANG. *Inst. of Neuroscience,CAS, Univ. of Chinese Acad. of Sci.*

2:00 Z8 **54.06** Interocular gain control in primate LGN. K. DOUGHERTY*; M. A. COX; A. MAIER. *Vanderbilt Univ.*

3:00 Z9 **54.07** Effect of stimulus discontinuities and chromatic input on γ rhythm in primate primary visual cortex. V. SHIRHATTI*; S. RAY. *Indian Inst. of Sci., Indian Inst. of Sci.*

4:00 Z10 **54.08** Neuronal dynamics related to figure-ground modulations in V1 and V4 of the macaque monkey. S. VAN STIJN*; W. H. BARNES; W. SINGER; S. H. LEE. *Ernst Strüngmann Inst. (ESI) In Cooperation With Max Planck Society, Max Planck Inst. for Brain Res., Ernst Strüngmann Inst. (ESI) In Cooperation With Max Planck Society, Max Planck Inst. for Empirical Aesthetics.*

1:00 Z11 **54.09** The extra integration time window for illusory contour representation in macaque V2 and V4. Z. CHEN*; J. YIN; Y. LIU; Y. LU; X. LI; I. M. ANDOLINA; W. WANG. *Inst. of Neuroscience, CAS, Univ. of Chinese Acad. of Sci.*

2:00 Z12 **54.10** Inter-ocular contrast normalization in the amblyopic visual cortex. B. RICHARD*; F. LYGO; D. H. BAKER. *The Univ. of York.*

3:00 Z13 **54.11** Multiple mechanisms underlying color appearance and color naming. K. EMERY*; V. J. VOLBRECHT; D. H. PETERZELL; M. A. WEBSTER. *Univ. of Nevada, Reno, Colorado State Univ., John. F. Kennedy Univ., Univ. of Nevada, Reno.*

4:00 Z14 **54.12** Chromatic interaction profile in macaque area V4. T. M. SANADA*; H. KOMATSU. *Natl. Inst. For Physiological Sciences, Div. of Sensory and Cognitive, SOKENDAI.*

1:00 AA1 **54.13** Green face illusion. M. HASSANTASH*; A. AFRAZ. *Inst. For Res. In Fundamental Sciences,Ipm, McGovern Inst. for Brain Res.*

2:00 AA2 **54.14** ● Comparison of contrast sensitivity in human and non-human primates. W. RIDDER*; A. KARSOLIA; K. ZHANG; J. BURKE. *Marshall B. Ketchum Univ., Allergan, Inc.*

3:00 AA3 **54.15** Stimulus dependence of γ oscillations (20 - 70 Hz) in human EEG. M. V. P. S. DINAVAHI*; V. SHIRHATTI; P. RAVISHANKAR; S. RAY. *Indian Inst. of Sci., Indian Inst. of Sci.*

4:00 AA4 **54.16** Powerful visual illusion of light/dark perception in human faces. R. BACHY*; J. ALONSO; Q. ZAIDI. *SUNY Optometry.*

1:00 AA5 **54.17** Attention and amodal completion affect metacontrast masking. V. S. RAMACHANDRAN*; M. VAJANAPHANICH; C. CHUNHARAS. *UCSD, UCSD, Chulalongkorn University, KCMH.*

2:00 AA6 **54.18** Monkeys see snakes like humans do: A comparative analysis of internal noise and efficiency in contour integration. A. ZHANG*; P. KHAYAT; H. AKHAVEIN; A. BALDWIN; R. HESS; R. FARIVAR-MOHSENI. *McGill Univ. Hlth. Ctr., Univ. of Montreal.*

3:00 AA7 **54.19** Which side of the face is more sensitive to enfacement illusion? E. GÜLBETEKIN*. *Akdeniz Univ.*

4:00 AA8 **54.20** Repulsion of perceived visual motion direction as an emergent property of deciding to unify or segregate sources. A. I. MESO*; K. HARUHANA; G. S. MASSON; J. L. GARDNER. *Bournemouth Univ., CNRS/Aix-Marseille Univ., Riken Brain Sci. Inst., Stanford Univ.*

1:00 AA9 **54.21** Solid field of visibility: First model and test. S. GEPSHTEIN*; G. LYNN; A. MCDOWELL. *The Salk Inst. VCL-A, Univ. of California at Los Angeles, USC.*

2:00 AA10 **54.22** Modeling orientation preference in the apical and basal trees of L2/3 V1 neurons. A. PAPOUTSI; J. PARK; S. M. SMIRNAKIS; P. POIRAZI*. *IMBB-FORTH, Baylor Col. of Med., Harvard Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 AA11 **54.23** Cortical mechanisms of stereopsis vision investigated using naturalistic stimuli and magnetoencephalography. Y. CHEN*; A. DEHMOOBADSHARIFABADI; E. BOCK; S. BAILLET; R. FARIVAR-MOHSENI. *The Res. Inst. of the McGill Univ. Hlth. Ctr., Montreal Neurolog. Institute, McGill Univ.*

4:00 AA12 **54.24** Color signal processing in the larval zebrafish brain. D. A. GUGGIANA-NILO*; F. ENGERT. *Harvard Univ.*

1:00 AA13 **54.25** Figure-ground discrimination by a population of V4 cells. K. SAKAI*; M. HASUIKE; D. MINOWA; Y. YAMANE; H. TAMURA. *Univ. Tsukuba, Univ. Tsukuba, Osaka Univ.*

2:00 AA14 **54.26** Population coding model of color in visual cortex. T. WACHTLER; C. KELLNER*. *Ludwig-Maximilians-Universität München, Bernstein Ctr. for Computat. Neurosci., Ludwig-Maximilians-Universität München.*

3:00 AA15 **54.27** Chromatic isolumance assessment using pupillary oscillations. P. M. DAYE*; P. CAVANAGH; J. LORENCEAU; P. POUGET. *Inst. De La Vision, Univ. Paris Descartes, Ecole Normale Supérieur, Inst. du Cerveau et de la Moelle épinière.*

4:00 AA16 **54.28** ● OptokineSys: An automated method of quantifying visual function, even in people who cannot follow commands. J. HILL*; M. SUNER; J. B. CARMEL; G. T. PRUSKY. *Burke Med. Res. Inst., Blythedale Children's Hosp., Weill Cornell Med.*

1:00 AA17 **54.29** Advancing models of shape representation for mid-level vision. D. V. POPOVKINA*; W. BAIR; A. PASUPATHY. *Univ. of Washington.*

2:00 AA18 **54.30** Behavioral and neural correlates of the effect of context-dependent lightness on threshold and suprathreshold contrast perception. H. BOYACI*; Z. PAMIR. *Bilkent Univ., Giessen Univ.*

POSTER

055. Eye Movements I

Theme E: Motor Systems

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

1:00 BB1 **55.01** ▲ Scotopic fixation eye movements dependence on eye position: Separate visual modes? O. SPIVAK*; P. THIER; S. BARASH. *IMPRS For Cognitive and Systems Neurosci., Hertie Inst. for Cinical Brain Res., Weizmann Inst. of Sci.*

2:00 BB2 **55.02** GABAergic dysfunction in the olivary-cerebellar-brainstem network causes eye oscillations and body tremor. E. PRETEGIANI; F. ROSINI; R. ROCCHI; F. GINANNESCHI; A. RUFA; L. M. OPTICAN*. *Natl. Eye Inst., Univ. of Siena.*

3:00 BB3 **55.03** Bilateral fastigial control of the horizontal amplitude of saccades: Evidence from studying oblique and vertical saccades after unilateral inactivation. J. J. QUINET*; L. GOFFART. *Inst. De Neurosciences De La Timone, CNRS.*

4:00 BB4 **55.04** Neuronal diversity in macaque frontal eye field. K. LOWE*; W. ZINKE; J. D. COSMAN; J. D. SCHALL. *Vanderbilt Univ.*

1:00 BB5 **55.05** Parallel processing for the generation of saccades to simultaneously moving centrifugal targets. L. GOFFART*. *CNRS.*

2:00 BB6 **55.06** Discrimination of saccade latencies. V. VENCATO*; L. MADELAIN; L. MADELAIN. *Univ. Lille 3, Inst. de Neurosciences de la Timone.*

3:00 BB7 **55.07** Adjustments in the Purkinje cell simple spike discharge parallels changes in saccade metrics warranting movement precision despite diminished vigor. A. MARKANDAY*; Z. SUN; P. THIER. *Hertie Inst. For Clin. Brain Res.*

4:00 BB8 **55.08** Correlation between pupil size and self-timed saccade latency in non-human primates. T. W. SUZUKI*; J. KUNIMATSU; M. TANAKA. *Hokkaido Univ. Sch. of Med., NEI, NIH.*

1:00 BB9 **55.09** The value of simultaneous EOG and EEG recording for measurement of saccade-related brain activity. Y. JIA*; C. W. TYLER. *The Smith-Kettlewell Eye Res. Inst.*

2:00 BB10 **55.10** What saccadic behavior can tell us on how we use haptic feedback in collision tasks. F. SALMEN*; F. CREVECOEUR; J. THONNARD; P. LEFÈVRE. *Univ. catholique de Louvain, Univ. catholique de Louvain, Cliniques Universitaires Saint-Luc.*

3:00 BB11 **55.11** Sequential hemifield gating of 8-15 hz behavioral performance oscillations after microsaccades generation. J. BELLET*; Z. M. HAFED. *Ctr. for Integrative Neurosci., Intl. Max Planck Grad. Sch. of Behavioral and Neural Sci.*

4:00 BB12 **55.12** Classification of COMT Val^{158}Met genotype by oculomotor behavior. J. BILLINO*; J. HENNIG; K. GEGENFURTNER. *Justus-Liebig-Universität Gießen.*

1:00 BB13 **55.13** Compound effects of transcranial magnetic stimulation on the oculomotor system. I. G. CAMERON*; A. CRETU; F. STRUIK; I. TONI. *Donders Inst. For Brain, Cognition and Behav., Donders Inst. for Brain, Cognition and Behav., ETH Zurich, Donders Inst. for Brain, Cognition and Behav., Radboud Univ. Nijmegen.*

2:00 BB14 **55.14** Dopamine modulates sensorimotor transformation in the optic tectum. J. PÉREZ-FERNANDEZ*; A. KARDAMAKIS; B. ROBERTSON; S. GRILLNER. *Karolinska Inst., Karolionska Institutet.*

3:00 BB15 **55.15** Effect of maintaining neck flexion on reaction time of memory-guided saccade: An investigation using transcranial magnetic stimulation to the frontal oculomotor field. K. KUNITA*; K. FUJIWARA. *Fac. of Sports & Human, Sapporo Intl. Univ., Kanazawa Gakuin Univ.*

4:00 BB16 **55.16** Choice bias after lateral intraparietal (LIP) area inactivation predominantly reflects a decision rather than an attention deficit. V. N. CHRISTOPOULOS*; I. KAGAN; R. A. ANDERSEN. *Caltech, German Primate Ctr. (DPZ), Caltech.*

1:00 BB17 **55.17** Graph theoretical analysis of functional network changes during recovery of saccade selection bias following stroke in nonhuman primates. R. ADAM*; K. JOHNSTON; R. HUTCHISON; S. EVERLING. *The Univ. of Western Ontario, Harvard Univ.*

2:00 BB18 **55.18** Evolution of a reference frame along a brain pathway: Persistently hybrid coordinates of auditory signals in Frontal Eye Fields implicate the Superior Colliculus in computing eye-centered sound location. V. C. CARUSO*; D. S. PAGES; M. A. SOMMER; J. M. GROH. *Duke Univ., Duke Univ.*

3:00 CC1 **55.19** Adult cat injured motoneurons recover a normal firing pattern and synaptic inputs after VEGF administration. P. M. CALVO; A. M. PASTOR; R. M. DE LA CRUZ*. *Univ. de Sevilla, Facultad de Biología.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 CC2 **55.20** Ketamine-induced changes in prefrontal cortex oscillatory activities during a working memory task in monkeys. L. MA*; K. SKOBLENICK; K. JOHNSTON; S. EVERLING. *Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario.*

1:00 CC3 **55.21** Investigating the contribution of M1 in Eye-Hand coordination using TMS. J. MATHEW*; A. EUSEBIO; F. DANION. *Aix Marseille Univ. - PACE.*

2:00 CC4 **55.22** Parameters of the presaccadic EEG potentials in the experimental scheme with distracters. V. MOISEEVA*; M. SLAVUTSKAYA; V. SHULGOVSKIY; N. FONSOVA. *HSE, Lomonosov MSU.*

3:00 CC5 **55.23** ▲ Simultaneous analysis of local field potential and spikes to understand the visuo-motor transformation in monkey frontal eye field. N. SENDHILNATHAN*; D. BASU; A. MURTHY. *Columbia Univ. Dept. of Neurosci., Indian Inst. of Sci.*

4:00 CC6 **55.24** Oculomotor plant dynamics during quick and slow phase movements in alert rhesus monkeys. K. SCHULTZ*; J. M. MILLER; P. D. GAMLIN. *Univ. of Alabama at Birmingham, Eidactics.*

1:00 CC7 **55.25** Action selection after motor adaptation. L. TEUNISSEN*; F. MAIJ; L. P. J. SELEN; W. P. MEDENDORP. *Radboud Univ. Nijmegen.*

2:00 CC8 **55.26** A shared mechanism for control of vigor in saccades, reaching, and head movements. T. REPPERT*; A. RAMAMOORTHY; O. KOMOGORTSEV; R. SHADMEHR. *Johns Hopkins Univ., Texas State Univ.*

3:00 CC9 **55.27** The gap effect on performance in the minimally delayed oculomotor response (MDOR) task. P. C. KNOX*; F. D. A. WOLOHAN; E. HEMING DE-ALLIE. *Univ. Liverpool, Edge Hill Univ.*

4:00 CC10 **55.28** Neural mechanisms associated with normal and pathological vergence. M. M. WALTON*; M. J. MUSTARI. *Univ. of Washington, Univ. of Washington.*

1:00 CC11 **55.29** Individual differences in the speed of oculomotor processing. B. PARSONS*; C. GAMBACORTA; I. LIU; R. B. IVRY. *UC Berkeley.*

2:00 DD1 **55.30** EEG denoising and decoding of smooth pursuit eye movements by using Extra-Dipole Method. K. MORISHIGE*; M. SATO; M. KAWATO. *Toyama Prefectural Univ., ATR Neural Information Analysis Labs., ATR Brain Information Communication Res. Lab. Group.*

POSTER

056. Reaching Control: Action and Sensation

Theme E: Motor Systems

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

1:00 DD2 **56.01** Are vestibular contributions to online reach execution processed by an internal model of the limb? C. MARTIN*; D. LUCIEN; P. LAPIERRE; A. M. GREEN. *Univ. De Montreal.*

2:00 DD3 **56.02** Functional tuning of rubromotoneuronal cells in the forelimb movement in a macaque monkey. T. OYA*; T. TAKEI; K. SEKI. *Natl. Ctr. of Neurol. and Psychiatry, Ctr. for Neurosci. Studies, Queens Univ.*

3:00 DD4 **56.03** Temporal dynamics of interaction between efference copy and sensory feedback in the primary somatosensory cortex. T. UMEDA*; Y. NISHIHARA; M. SUZUKI; Y. YAMANISHI; T. ISA; Y. NISHIMURA. *NCNP, NIPS, Kyoto Univ., SOKENDAI.*

4:00 DD5 **56.04** Distinct temporal evolution for visuomotor feedback of the hand and target. D. W. FRANKLIN*. *Tech. Univ. of Munich.*

1:00 DD6 **56.05** Gravitational effects on proprioceptive sensitivity. J. D. KLEIN*; B. WHITSELL; M. PATEL; P. ARTEMIADIS; C. A. BUNEO. *ASU, ASU, ASU, ASU, ASU, Arizona State Univ.*

2:00 DD7 **56.06** Multisynaptic projections from the basal nucleus of the amygdala to the ventral premotor cortex in macaque monkeys. H. ISHIDA*; K. INOUE; M. TAKADA; E. HOSHI. *Tokyo Metropolitan Inst. of Med. Sci., Primate Res. Institute, Kyoto Univ.*

3:00 DD8 **56.07** Effects of the vertical-horizontal illusion on visual perceptions and manual estimations. S. YAN; J. M. HONDZINSKI*. *Louisiana State Univ., Sch. of Kinesiology; Louisiana State Univ.*

4:00 DD9 **56.08** Modulation of muscle synergy activation during arm movements in patients with hemiparesis. T. KAWASE*; A. NISHIMURA; A. NISHIMOTO; F. LIU; Y. KIM; H. KAMBARA; N. YOSHIMURA; Y. KOIKE. *Tokyo Inst. of Technol., Keio Univ. Sch. of Med.*

1:00 DD10 **56.09** Thalamocortical mechanisms controlling motor timing in behaving primates. A. NASHEF*; O. COHEN; Y. PRUT. *Hebrew Univ. of Jerusalem.*

2:00 DD11 **56.10** Task-dependent vestibular feedback corrections in reaching. J. KEYSER*; L. P. J. SELEN; W. P. MEDENDORP. *Radboud Univ. Nijmegen.*

3:00 DD12 **56.11** Effect of handedness on unilateral and bilateral reaching movements under the influence of the mirror illusion. K. YAMANAKA*. *Showa Women's Univ.*

4:00 DD13 **56.12** Sensorimotor transformation during reaching investigated with transcranial magnetic stimulation and biomechanical simulations. R. L. HARDESTY*, JR; E. OLESH; B. POLLARD; P. H. ELLAWAY; V. GRITSENKO. *West Virginia Univ., West Virginia Univ., Imperial Col. London.*

1:00 DD14 **56.13** Neural and kinematic effects of increased reliance on visual feedback in prosthesis users. J. T. JOHNSON*; L. A. WHEATON. *Georgia Inst. of Technol.*

2:00 DD15 **56.14** Gaze-dependent coding of proprioceptive reach targets is influenced by effector movement and availability of online information. S. MUELLER*; K. FIEHLER. *Justus-Liebig Univ. Giessen, Justus-Liebig-University Giessen.*

3:00 DD16 **56.15** Differential sensory control of the reach and the grasp in 12-month-old human infants: Increased visual guidance of the reach relative to the grasp in a skilled reach-to-eat task. J. M. KARL*; A. WILSON. *Thompson Rivers Univ.*

4:00 DD17 **56.16** Former unilateral amputees exhibit bilateral differences in the control of reach to grasp actions. D. MATTOS*; N. BAUNE; B. PHILIP; K. VALYEAR; C. KAUFMAN; S. FREY. *Washington Univ. Sch. of Med., Univ. of Bangor, Christine M. Kleinert Inst.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 EE1 **56.17** Intracortical microstimulation maps of motor, somatosensory, and posterior parietal cortex in macaque monkeys. M. K. BALDWIN*; D. F. COOKE; A. B. GOLDRING; L. KRUBITZER. *Univ. of California Davis, Unviersity of California Davis, Univ. of California.*

2:00 EE2 **56.18** Neural correlates of perceiving audiovisual consequences of voluntary movements. B. ARIKAN*; B. VAN KEMENADE; K. PODRANSKI; O. STEINSTRÄTER; B. STRAUBE; T. KIRCHER. *Philipps Univ. Marburg, Philipps Univ. Marburg.*

3:00 EE3 **56.19** Ultrasound imaging of upper limb muscle velocity during passive movements and involuntary reflex responses. E. MCKENNA*; N. AKHLAGHI; P. OTTO; M. HARRIS-LOVE; W. M. JOINER; S. SIKDAR. *George Mason Univ.*

4:00 EE4 **56.20** Muscle spindle discharges from lower leg muscles during active ankle movements in humans. E. JAROCKA*; B. B. EDIN. *Umea Univ.*

1:00 EE5 **56.21** ● Using robotics to assess sense of effort in the upper extremity. L. LOGAN; J. SEMRAU; S. H. SCOTT; S. P. DUKELOW*. *Univ. of Calgary, Queen's Univ., Univ. of Calgary.*

2:00 EE6 **56.22** Explorative motor learning is decision-making with motor noise. X. CHEN*; J. GALEA. *Univ. of Birmingham.*

3:00 EE7 **56.23** Rapid visuomotor corrections in reaching are modulated by gaze position. A. J. DE BROUWER*; T. JARVIS; J. P. GALLIVAN; J. R. FLANAGAN. *Queen's Univ.*

4:00 EE8 **56.24** Objects vs. hand: The effect of knuckle misconceptions on localization task distortions. A. SAULTON*; H. BÜLTHOFF; S. DE LA ROSA. *Max Planck Inst. For Biol. Cybernetics.*

1:00 EE9 **56.25** Facilitation of short latency responses in human arm muscles by stimuli targeting the reticular formation. I. S. GLOVER*; S. N. BAKER. *Inst. of Neurosci.*

2:00 EE10 **56.26** Absolute haptic cues mediate pantomime-grasping only when egocentric visual cues are delayed. S. DAVARPANAH JAZI*; J. CHAN; M. HEATH. *Univ. of Western Ontario, Univ. of Western Ontario.*

3:00 EE11 **56.27** Motor adaptation to experimentally extended bills in pigeons. H. MATSUI*; E. IZAWA. *Keio Univ., Keio Univ.*

POSTER

057. Reaching Movements: Movement Control and Strategy

Theme E: Motor Systems

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

1:00 EE12 **57.01** "Change of mind" (COM) of reach direction from one target to another during reach is more frequent and corrects for more initial target choice errors in speed than precision regimes. S. DUROCHER*; J. BEAULAC; L. AIT-ALI; J. F. KALASKA. *Univ. De Montreal.*

2:00 EE13 **57.02** Interaction torque control deficits in patients with stroke. A. SETHI*; S. RAJ; N. DOUNSKAIA. *Univ. of Pittsburgh, Univ. of PIttsburgh, Arizona State Univ.*

3:00 EE14 **57.03** Predictability and effort in complex object control. P. MAURICE*; F. YE; C. J. HASSON; D. STERNAD. *Northeastern Univ., Northeastern Univ., Northeastern Univ., Northeastern Univ.*

4:00 EE15 **57.04** The role of the vestibular system in eye-hand coordination. L. OOSTWOUD WIJDENES*; J. MASSELINK; W. P. MEDENDORP. *Radboud Univ. Nijmegen, Univ. of Muenster.*

1:00 EE16 **57.05** Speed and accuracy in reaching during full-body reaching tasks. S. T. LEITKAM*; M. E. APPLEGATE; A. HOYNACKE; J. S. THOMAS. *Ohio Univ.*

2:00 EE17 **57.06** Challenging rat motor skills: Development of a two-choice forelimb task. A. C. MOSBERGER*; O. LAMBERCY; N. HEIRI; N. BJELOPOLJAK; R. GASSERT; M. E. SCHWAB. *Brain Res. Institute, Univ. of Zurich, D-HEST ETH Zurich, Rehabil. Engin. Laboratory, ETH Zurich.*

3:00 EE18 **57.07** Spatially selective graded modulation of neural motor planning activity suggests biased competition between task rules in action selection. L. SURIYA-ARUNROJ*; A. GAIL. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci., Georg August Univ.*

4:00 FF1 **57.08** Interception of virtual dynamic objects in atypical gravitational accelerations. B. J. CHANG*; K. M. STUBBS; D. J. QUINLAN; J. C. CULHAM. *Western Univ.*

1:00 FF2 **57.09** Strength vs precision: What does the mouse automated reach task assess? A. BECKER*; D. BETZ; M. GOLDBERG. *UT Southwestern, Dept. of Neurol. and Neurotherapeutics, Univ. of Texas at Dallas, UT Southwestern.*

2:00 FF3 **57.10** Recalibration, heuristics, and learning *de novo*: On the multiple processes of sensorimotor learning and the role of the medial temporal lobe. S. D. MCDOUGLE*; N. B. TURK-BROWNE; J. A. TAYLOR. *Princeton Univ.*

3:00 FF4 **57.11** Exploring structure-specific knowledge in a visuomotor adaptation task. K. BOND*; J. A. TAYLOR. *Princeton Univ.*

4:00 FF5 **57.12** Assessing explicit strategies (or knowledge?) in force field adaptation experiments. J. A. TAYLOR*; S. D. MCDOUGLE. *Princeton Univ.*

1:00 FF6 **57.13** Measuring implicit adaptation to task-irrelevant clamped visual feedback. J. R. MOREHEAD*; M. A. SMITH. *Harvard Univ.*

2:00 FF7 **57.14** Motor memories are confined to distinct channels with differing stability across time and experience. A. E. BRENNAN*; M. A. SMITH. *Harvard Univ.*

3:00 FF8 **57.15** Implicit learning compensates for low-fidelity explicit strategy. Y. R. MIYAMOTO*; S. WANG; M. SMITH. *Harvard Univ., Harbin Inst. of Technol.*

4:00 FF9 **57.16** Intentional and automatic motor rhythm control in human and monkey. S. MIYACHI*. *Primate Res. Institute, Kyoto Univ.*

1:00 FF10 **57.17** Kinematically similar basketball free throws have surprisingly different muscle contraction velocity profiles. D. A. HAGEN*; S. CAJA; S. CHAKRAVARTHI; F. J. VALERO-CUEVAS. *USC, USC, USC.*

2:00 FF11 **57.18** Characterization of hand motor deficits in a marmoset 6-OHDA model of Parkinson's disease. J. H. SATO*; B. B. GARCIA; M. F. P. ARAUJO; H. P. G. SIMPLICIO. *Juliana Harumi Sato, Santos Dumont Inst., Santos Dumont Inst., State Univ. of Rio Grande do Norte.*

3:00 FF12 **57.19** Visual stimulus-locked responses on upper limb muscle are modulated by the upcoming reach trajectory. C. GU*; J. A. PRUSZYNSKI; P. L. GRIBBLE; B. D. CORNEIL. *Univ. of Western Ontario.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 FF13 **57.20** Are common motor modules activated in static and dynamic motor tasks in the human arm? K. D. WILGER*; J. ROH. *Temple Univ.*

1:00 FF14 **57.21** Motor planning flexibly optimizes performance under uncertainty about task goals. A. L. WONG*; A. M. HAITH. *Johns Hopkins Univ. Sch. of Med.*

2:00 FF15 **57.22** ● Mass decreases movement speed during arm reaching. G. BRUENING*; M. O'BRIEN; A. AHMED; R. SHADMEHR. *Univ. of Colorado Boulder, Johns Hopkins Univ.*

3:00 FF16 **57.23** Effect of the side of the brain lesion on arm reaching movements in upright position of stroke individuals. R. B. GARBUS*; A. G. NARDINI; S. R. ALOUCHE; S. M. S. F. FREITAS. *Univ. Cidade De São Paulo, Univ. Cidade De São Paulo.*

4:00 FF17 **57.24** On action intent: Behavioural correlates of reach-to-grasp actions. J. W. FLINDALL*; C. L. R. GONZALEZ. *Univ. of Lethbridge.*

1:00 FF18 **57.25** Gravity is used to minimize neural effort for joint coordination during arm movements. N. DOUNSKAIA*; W. WANG. *Arizona State Univ.*

2:00 GG1 **57.26** Age-related increases in reaction time: Slower preparation or sluggish initiation? R. M. HARDWICK*; M. COSTELLO; K. M. ZACKOWSKI; A. M. HAITH. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 GG2 **57.27** Distinct and common processes underlie impaired motor execution and inhibition following stroke. A. HARRISON*; C. PERRY; T. SINGH; A. ROSS; S. FRITZ; J. FRIDRIKSSON; T. HERTER. *Univ. of South Carolina.*

4:00 GG3 **57.28** The striatum encodes the full kinematic details of reaching movements. E. A. YTTRI*; B. PANIGRAHI; K. A. MARTIN; J. T. DUDMAN. *Janelia - HHMI, Janelia Res. Campus.*

1:00 GG4 **57.29** Impedance modulation as a strategy to control force and movement during object manipulation. S. D. KENNEDY*; N. HOGAN; A. B. SCHWARTZ. *Univ. of Pittsburgh, MIT, Univ. of Pittsburgh.*

2:00 GG5 **57.30** Options coding in the movement system. J. I. GLASER*; M. G. PERICH; P. N. LAWLOR; P. RAMKUMAR; D. K. WOOD; M. A. SEGRAVES; L. E. MILLER; K. P. KORDING. *Northwestern Univ., Rehabil. Inst. of Chicago.*

POSTER

058. Neuroprosthetics: Processing Techniques

Theme E: Motor Systems

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

1:00 GG6 **58.01** A micro-LED implant for long-term optogenetic stimulation of the rat spinal cord. S. E. MONDELLO*; M. D. SUNSHINE; A. E. FISCHEDICK; P. J. HORNER; C. T. MORITZ. *Univ. of Washington, Univ. of Washington, Ctr. for Sensorimotor Neural Engin. (CSNE), Univ. of Washington, Univ. of Washington, Univ. of Washington.*

2:00 GG7 **58.02** Stimulation strategies to convey sensory information directly to the cortex via intracortical microstimulation (ICMS). D. A. BJANES*; A. L. FAIRHALL; C. T. MORITZ. *Univ. of Washington, Univ. of Washington, Ctr. for Sensorimotor Neural Engin. (CSNE), Univ. of Washington, Univ. of Washington.*

3:00 GG8 **58.03** Identification of stage transitions of imagined hand movements with electrocorticography. J. WU*; L. BASHFORD; J. A. CRONIN; D. J. CALDWELL; N. R. WILSON; D. SARMA; B. W. BRUNTON; R. P. N. RAO; J. G. OJEMANN. *Univ. of Washington, Univ. of Washington, Imperial Col. London, Univ. of Freiburg, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

4:00 GG9 **58.04** Surface and penetrating glassy carbon integrated microelectrode array for recording low and high frequency neural signals. N. GOSHI; M. VOMERO; T. J. RICHNER; E. MAGGIOLINI; E. ZUCCHINI; E. CASTAGNOLA; D. BJANES; I. DRYG; W. SHAIN; S. I. PERLMUTTER; D. RICCI; L. FADIGA; C. T. MORITZ*; S. KASSEGNE. *San Diego State Univ., Ctr. for Sensorimotor Neural Engin. (CSNE), Univ. Washington, Univ. Washington, Inst. Italiano di Tecnologia, Univ. of Ferrara, Univ. Washington, Univ. Washington, Univ. Washington, Univ. Washington.*

1:00 GG10 **58.05** Unsupervised decoding of long-term, naturalistic human neural recordings with automated video and audio. X. WANG*; A. FARHADI; J. G. OJEMANN; B. W. BRUNTON; R. P. N. RAO. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

2:00 GG11 **58.06** Error-related potentials for co-adaptive cortical brain-computer interfaces. N. R. WILSON*; D. SARMA; J. D. WANDER; J. G. OJEMANN; R. P. N. RAO. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

3:00 GG12 **58.07** Somatosensory feedback via direct cortical electrical stimulation in humans. J. A. CRONIN*; J. WU; D. J. CALDWELL; K. L. COLLINS; D. SARMA; R. P. N. RAO; J. G. OJEMANN; J. D. OLSON. *Univ. of Washington, Ctr. for Sensorimotor Neural Engin., Univ. of Washington, Univ. of Washington, Univ. of Washington.*

4:00 GG13 **58.08** Intraspinal activation of respiratory muscles depends on phase of respiratory cycle. M. D. SUNSHINE*; C. N. GANJI; P. J. REIER; D. D. FULLER; C. T. MORITZ. *Univ. of Washington, Ctr. for Sensorimotor Neural Engin. (CSNE), Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Washington, Univ. of Washington.*

1:00 GG14 **58.09** A wireless bidirectional brain machine interface. Y. OZTURK*; Y. SU; K. S. MOON; S. PERLMUTTER; S. ZANOS; E. FETZ. *San Diego State Univ., San Diego State Univ., Univ. of Washington.*

2:00 HH1 **58.10** Exploration of the phase and dose dependence of cortico-cortical evoked potentials during β-oscillation triggered direct electrical stimulation in humans. D. J. CALDWELL*; J. D. OLSON; J. D. WANDER; S. ZANOS; D. SARMA; D. SU; J. A. CRONIN; K. COLLINS; J. WU; L. JOHNSON; K. WEAVER; K. CASIMO; E. FETZ; R. P. N. RAO; J. G. OJEMANN. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

3:00 HH2 **58.11** Closed-loop neural interfacing strategies for the bladder. T. J. RICHNER*; B. J. MAHONEY; S. D. BOYER; V. RANGANATHAN; M. D. SUNSHINE; G. MOORE; R. SOLINSKY; G. D. HORWITZ; P. O. ANIKEEVA; J. R. SMITH; J. W. FAWCETT; C. T. MORITZ. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Ctr. for Sensorimotor Neural Engin. (CSNE), Univ. of Washington, Univ. of Washington, MIT, Cambridge Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 HH3 **58.12** Cortical network changes in individuals learning a bimanual task in coordination with an electrocorticographic brain-computer interface. D. SARMA*; J. WU; J. G. OJEMANN; R. P. N. RAO. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

1:00 HH4 **58.13** ● Controlling false positives on a BCI implant for communication. M. P. BRANCO*; Z. V. FREUDENBURG; E. G. M. PELS; E. J. AARNOUTSE; S. LEINDERS; M. A. VAN DEN BOOM; T. DENISON; M. J. VANSTEENSEL; N. F. RAMSEY. *Univ. Med. Ctr. Utrecht, Medtronic Neuromodulation.*

1:00 DP04 **58.14** ● (Dynamic Poster) Autonomous communication at home by a person suffering from Locked In Syndrome achieved with a completely implanted permanent Brain-Computer Interface system. N. F. RAMSEY*; M. J. VANSTEENSEL; E. PELS; S. LEINDERS; M. P. BRANCO; M. A. VAN DEN BOOM; T. DENISON; E. J. AARNOUTSE. *Brain Ctr. Rudolf Magnus, Univ. of Utrecht, Brain Ctr. Rudolf Magnus, Univ. of Utrecht, Medtronic.*

3:00 HH5 **58.15** ● Demonstration of minimal invasive surgery for an invisible, permanent Brain-Computer Interface. E. J. AARNOUTSE*; M. J. VAN STEENSEL; E. G. M. PELS; T. DENISON; B. H. VERWEIJ; P. GOSSELAAR; P. C. VAN RIJEN; N. F. RAMSEY. *Brain Ctr. Rudolf Magnus, Medtronic Neuromodulation.*

4:00 HH6 **58.16** ● ECoG control signal optimization for use of a communication BCI implant in a person with Locked-In Syndrome. Z. V. FREUDENBURG*; M. P. BRANCO; E. J. AARNOUTSE; S. LEINDERS; M. A. VAN DEN BOOM; T. DENISON; M. J. VANSTEENSEL; N. F. RAMSEY. *UMC Utrecht-Rudolf Magnus Inst., Univ. Med. Ctr. Utrecht, Univ. Med. Center, Brain Ctr. Rudolf Magnus, Medtronic Neuromodulation, Univ. Med. Ctr. Utrecht, Brain Ctr. Rudolf Magnus.*

1:00 HH7 **58.17** A flexible modular neural recording and stimulation system for both surface and penetrating electrodes. R. LILJEMALM*; T. STIEGLITZ. *Univ. of Freiburg.*

2:00 HH8 **58.18** Multi-channel neural logger for recording neural activity in free behavior non-human primates. F. DE CARVALHO*; W. XU; A. JACKSON. *Newcastle Univ.*

3:00 HH9 **58.19** ● Implanted brain-computer interface signal stability over time. E. G. M. PELS*; E. J. AARNOUTSE; S. LEINDERS; Z. V. FREUDENBURG; M. P. BRANCO; M. A. VAN DEN BOOM; T. DENISON; M. J. VANSTEENSEL; N. F. RAMSEY. *Univ. Med. Ctr. Utrecht, Medtronic Neuromodulation.*

4:00 HH10 **58.20** ● OMNI: A distributed and modular device for wireless neural recording and closed-loop neuromodulation. G. ALEXANDROV*; S. R. SANTACRUZ; A. MOIN; A. J. ZHOU; F. BURGHARDT; B. C. JOHNSON; E. ALON; J. RABAEY; J. M. CARMENA; R. MULLER. *Univ. of California, Berkeley, Univ. of California, Berkeley, Cortera Neurotechnologies.*

1:00 HH11 **58.21** A real-time sense-and-stimulate intracranial system detects and slows impending movements. B. D. MOORE*, IV; A. R. ARON; N. TANDON. *Univ. of Texas McGovern Med. Sch., UCSD.*

2:00 HH12 **58.22** ● Wireless implantable multichannel myoelectric system with infrared data transmission. D. R. MERRILL*; S. HIATT; B. CROFTS; C. SMITH; K. S. GUILLORY; D. MCDONNALL. *Ripple.*

3:00 HH13 **58.23** Development of cortically-controlled muscle stimulation to restore treadmill locomotion and overground navigation in spinal cord injured rats. A. A. KINKHABWALA*; M. K. JANTZ; J. A. GALLEGO; T. A. VERNON; M. C. TRESCH; L. E. MILLER. *Northwestern Univ.*

4:00 HH14 **58.24** ● Body-wearable platform for untethered, closed-loop stimulation and recording for BCI and neuroprosthetic research with hundreds of electrodes. S. HIATT*; T. POULSON; E. BARCIKOWSKI; R. ROUNDY; S. BARRUS; C. SMITH; A. WILDER; K. S. GUILLORY; D. MERRILL; D. MCDONNALL. *Ripple.*

1:00 HH15 **58.25** A neuromodulation integrated circuit for high-channel count, bidirectional, and minimally invasive neural interface. S. JUNG*; T. L. HANSON; E. ALON; J. RABAEY. *Univ. of California, Berkeley, Univ. of California, San Francisco.*

2:00 HH16 **58.26** Design and testing of a low power neural interface module for the networked neuroprosthesis system. A. J. BULLARD*; Z. T. IRWIN; K. E. SCHROEDER; B. SMITH; A. CAMPEAN; P. G. PATIL; H. P. PECKHAM; K. L. KILGORE; C. A. CHESTEK. *Univ. of Michigan, Case Western Reserve Univ., Univ. of Michigan, MetroHealth Med. Ctr., Louis Stokes Cleveland Dept. of Veterans Affairs Med. Ctr.*

POSTER

059. Training, Rehabilitation, and Repair: Spinal Cord Injury Recovery

Theme E: Motor Systems

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

1:00 HH17 **59.01** Time-dependent bilateral cortical plasticity parallels locomotor recovery after unilateral spinal cord injury in rats. A. R. BROWN*; M. MARTINEZ. *Univ. de Montréal, Ctr. de recherche de l'Hôpital du Sacré-Coeur de Montréal.*

2:00 II1 **59.02** Short-term effect of repetitive electrical nerve stimulation on spinal reciprocal inhibition depends on the phase of passive stepping. H. OBATA*; T. OGAWA; T. KITAMURA; N. KAWASHIMA; K. NAKAZAWA. *Kyushu Inst. of Technol., The Univ. of Tokyo, Tokorozawa, national rehabilitation center for persons with disabilities.*

3:00 II2 **59.03** Suicide gene therapy - induced cell death using HSV-1tk for tackling tumorigenesis following human induced pluripotent stem cell-derived neural stem/progenitor cell transplantation for spinal cord injury. K. KOJIMA*; H. MIYOSHI; S. ITO; T. OKUBO; M. OZAKI; K. SUGAI; S. KAWABATA; Y. NISHIYAMA; G. ITAKURA; N. NAGOSHI; A. IWANAMI; M. MATSUMOTO; M. NAKAMURA; H. OKANO. *Keio Univ. Hosp., Keio Univ. Sch. of Med.*

4:00 II3 **59.04** Impact of complete spinal cord injury on skin pressure ulcer healing in a mouse model. S. KUMAR*; M. L. YARMUSH; F. BERTHIAUME. *Rutgers, The State Univ. of New Jersey, Massachusetts Gen. Hosp. and Shriners Burns Hosp.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 II4 **59.05** Contribution of propriospinal neurons to recovery of hand dexterity after corticospinal tract lesions in monkeys. T. TOHYAMA*; M. KINOSHITA; K. KOBAYASHI; K. ISA; D. WATANABE; K. KOBAYASHI; M. LIU; T. ISA. *NIPS, Keio Univ. Sch. of Med., Hirosaki Univ. Grad. Sch. of Med., NIPS, The Grad. Univ. for Advanced Studies (SOKENDAI), NIPS, Grad. Sch. of Biostudies, Kyoto Univ., Inst. of Biomed. Sciences, Fukushima Med. Univ. Sch. of Med., Grad. Sch. of Med. and Fac. of Medicine, Kyoto Univ.*

2:00 II5 **59.06** Lateral olfactory tract usher substance (LOTUS) enhanced axonal regeneration and functional recovery after spinal cord injury in adult mice. S. ITO*; A. IWANAMI; S. SHIBATA; M. SHINOZAKI; N. NAGOSHI; S. KAWABATA; M. MATSUMOTO; K. TAKEI; M. NAKAMURA; H. OKANO. *Keio Univ., Yokohama City Univ. Grad. Sch. of Med. Life Sci.*

3:00 II6 **59.07** Behavioral and histological effects of epothilone D after moderate spinal cord contusion injury in Fischer 344 rats. B. SANDNER*; M. MELANIE; R. PUTTAGUNTA; J. RUSCHEL; F. BRADKE; N. WEIDNER; A. BLESCH. *Heidelberg Univ. Hosp., Heidelberg Univ. Hosp., German Ctr. for Neurodegenerative Dis., Stark Neurosciences Res. Inst.*

4:00 II7 **59.08** Using serial cystometry to evaluate effectiveness of treadmill training on recovery of lower urinary tract function in a rat contusion model of SCI. F. QURESHI*; P. KUNG; H. CHO; N. P. PHAGU; S. A. SISTO; W. F. COLLINS. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

1:00 II8 **59.09** Post-synaptic effects of BDNF/TrkB signaling on functional recovery after cervical spinal cord injury. H. M. GRANSEE*; C. B. MANTILLA; P. SEKAR; W. ZHAN; G. C. SIECK. *Mayo Clin., Mayo Clin.*

2:00 II9 **59.10** Locomotor recovery after spinal contusion at T10 and following a complete spinalisation at T13 in the cat. H. DELIVET-MONGRAIN; M. DEA; L. AHMED; J. GOSSARD; S. ROSSIGNOL*. *Univ. Montreal Fac Med.*

3:00 II10 **59.11** Reorganization of respiratory motor control following cervical spinal cord injury. C. B. MANTILLA*; H. M. GRANSEE; W. ZHAN; G. C. SIECK. *Mayo Clin., Mayo Clin.*

4:00 II11 **59.12** Combined chronic θ burst stimulation of motor cortex and trans-spinal direct current stimulation in rats promote coticospinal tract outgrowth caudal to a cervical spinal contusion and motor recovery. M. SHINOZAKI; N. ZAREEN*; D. RYAN; H. ALEXANDER; S. NAEEM; J. H. MARTIN. *Keio Univ. Sch. of Med., The City Col. of the City Univ. of NY, The City Col. of the City Univ. of NY, The City Col. of the City Univ. of NY.*

1:00 II12 **59.13** Enhancing plasticity and recovery following spinal cord injury. P. D. GANZER*; E. C. MEYERS; B. R. SOLORZANO; K. S. ADCOCK; N. M. ROBERTSON; J. T. JAMES; A. RUIZ; A. M. BECKER; M. P. GOLDBERG; D. T. PRUITT; J. K. MOY; S. N. HASSLER; T. J. PRICE; M. A. LANE; W. M. GLUF; M. P. KILGARD; R. L. RENNAKER. *Univ. of Texas At Dallas, Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr., Drexel Univ. Col. of Med., Univ. of Texas Southwestern Med. Ctr.*

2:00 II13 **59.14** ● Recovery of voluntary control following spinal injury in rodents. L. S. URBAN*; H. ZHONG; J. BURDICK; R. EDGERTON. *Caltech, UCLA.*

3:00 II14 **59.15** The effect of CaV1.3 channel blocker on long-lasting root reflex. M. JIANG*; D. BIRCH; C. J. HECKMAN; V. M. TYSSELING. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

4:00 II15 **59.16** Can arm cycle training effect postural control and voluntary trunk muscle activation in people with spinal cord injury? J. BROUSSEAU*; R. MALIK; A. E. CHISHOLM; A. LYNN; A. WILLIAMS; T. LAM. *ICORD, Univ. of British Columbia.*

1:00 II16 **59.17** Time course of sprouting of hindlimb corticospinal fibers after thoracic spinal cord injury in rats. N. RUSSI*; A. K. ENGMANN; M. P. SCHNEIDER; A. HOFER; S. IMOBERSTEG; L. TRUSCELLO; K. FRICKE; R. SCHNEIDER; M. E. SCHWAB. *Univ. and ETH Zurich.*

2:00 II17 **59.18** Pharmacological targeting of ion channels leads to rapid and sustained behavioral improvements following spinal cord injury. H. NATOLA*; M. NOBLE; C. PROSCHEL. *Univ. of Rochester Med. Ctr., Univ. of Rochester Med. Ctr.*

3:00 JJ1 **59.19** *In vivo* direct neuronal reprogramming of fibroblasts grafted to fill sites of spinal cord injury. A. ADLER*; M. TUSZYNSKI. *UCSD.*

4:00 JJ2 **59.20** Investigating the long term changes in the spinal cord due to neuromuscular electrical stimulation through a dynamic learning mechanism. I. PEREZ; D. S. WON*; L. TONG; P. ARGUELLO. *California State University, Los Angeles, California State University, Los Angeles.*

1:00 JJ3 **59.21** Virtual anatomical biofeedback for motor rehabilitation in spinal cord injury patients. G. BAO*; S. SHOKUR; A. C. DONATI; Y. BYUN; D. CAMPOS; D. FISCHER; M. NICOLELIS. *Associacao Alberto Santos Dummont Para Apoio A Pes, Associação Assistência A Criança Deficiente, Duke Univ., IINELS Intl. Inst. For Neurosci., Duke Univ. Dept. Neurobiology, Biomed. Engineering, Psychology and Neurosci.*

2:00 JJ4 **59.22** Spinal to sciatic direct current stimulation caused long term reduction in spasticity in mice with spinal cord injury. W. MEKHAEL; M. HASSAN; S. SAMANDDAR; S. BEGUM; P. TORUNO; M. AHMED; M. SALEH; A. GORIN; M. MAISANO; M. AYAD; M. ANDRAWIS; Z. AHMED*. *The Col. of Staten Island, The Col. of Staten Island, Col. of Staten Island.*

3:00 JJ5 **59.23** Training induced muscular adaptations associated with improved cardiometabolic profiles in individuals with spinal cord injury (SCI). S. GUZMAN; J. RAMIREZ; S. KESLACY; K. YAMAZAKI; C. J. DY*. *California State University, Los Angeles, California State University, Los Angeles, California State University, Los Angeles.*

4:00 JJ6 **59.24** Acute intermittent hypoxia alters plasticity-related and hypoxia-related protein expression in a rat model of cervical spinal injury. B. M. ARNOLD; A. HASSAN; V. M. K. VERGE; G. D. MUIR*. *Univ. Saskatchewan, Univ. Saskatchewan.*

1:00 JJ7 **59.25** Dose estimate of low force exercise needed to alter gene expression in paralyzed human skeletal muscle. M. A. PETRIE*; C. L. MCHENRY; E. FAIDLEY; M. SUNEJA; R. K. SHIELDS. *The Univ. of Iowa, Univ. of Iowa, DVA.*

2:00 JJ8 **59.26** Low force electrically induced exercise regulates distinct metabolic transcription factors in people with spinal cord injury (SCI). R. K. SHIELDS*; M. A. PETRIE; A. SHARMA; M. SUNEJA. *The Univ. of Iowa, The Univ. of Iowa, The Univ. of Iowa, DVA.*

3:00 JJ9 **59.27** The performance and retention of a skilled walking task among among people with an incomplete spinal cord injury. A. E. CHISHOLM*; A. M. M. WILLIAMS; G. EGINYAN; T. LAM. *Intl. Collaboration On Repair Discoveries, Univ. of British Columbia.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 JJ10 **59.28** H-reflex depression in spinal cord injury: Impact of long term vibration training. S. DUDLEY-JAVOROSKI*; C. YEN; C. L. MCHENRY; M. A. PETRIE; R. K. SHIELDS. *Univ. of Iowa.*

1:00 JJ12 **59.30** Improvements in lower limb proprioceptive acuity as a result of end-point based training. T. QAISER*; T. LAM. *Univ. of British Columbia, Intl. Collaboration on Repair Discoveries.*

4:00 JJ11 **59.29** Trunk muscle activation patterns during walking with robotic exoskeletons in high thoracic motor-complete sci. R. ALAMRO; A. E. CHISHOLM; T. LAM*. *Univ. of British Columbia.*

POSTER

060. HPG Axis I

Theme F: Integrative Physiology and Behavior

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

1:00 JJ13 **60.01** ▲ Anabolic androgenic steroids modulate proteins related to glucose metabolism, stress response, GnRH and estrogen receptors in the GT1-7 hypothalamic cell line. A. G. ALEMÁN-REYES*; C. CALO-GUADALUPE; F. J. MARTÍNEZ-RIVERA; J. PÉREZ-LASPIUR; M. E. SANTIAGO-GASCOT; E. GARCÍA-SANTIAGO; I. OTERO-PAGÁN; Y. RODRÍGUEZ-PÉREZ; L. M. MELÉNDEZ; J. L. BARRETO-ESTRADA. *Univ. of Puerto Rico, Río Piedras Campus, Univ. del Este, Med. Sci. Campus, Univ. of Puerto Rico, Med. Sci. Campus, Univ. of Puerto Rico, Med. Sci. Campus, Univ. of Puerto Rico, Med. Sci. Campus, Univ. of Puerto Rico.*

2:00 JJ14 **60.02** AMH is mutated in patients with congenital hypogonadotropic hypogonadism and it regulates development and function of GnRH neurons. S. A. MALONE*; D. CASSATELLA; J. ACIERNO; C. XU; I. CIMINO; P. PIGNY; N. PITTELOUD; P. GIACOBINI. *INSERM U1172, Service of Endocrinology, Diabetes & Metabolism, CHUV, Lab. de Biochimie & Hormonologie, Ctr. de Biologie Pathologie, Ctr. Hospitalier Regional Universitaire.*

3:00 JJ15 **60.03** Prenatal Anti-Mullerian Hormone (AMH) treatment leads to hypothalamic neuroendocrine deregulations and PCOS-like phenotype in mice. B. TATA*; P. GIACOBINI. *INSERM U1172.*

4:00 JJ16 **60.04** Kappa opioid receptors are internalized in arcuate KNDy cells GnRH pulse termination in the ewe. P. W. WEEMS*; L. M. COOLEN; S. M. HILEMAN; S. HARDY; R. B. MCCOSH; R. L. GOODMAN; M. N. LEHMAN. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., West Virginia Univ., Univ. of Mississippi Med. Ctr.*

1:00 JJ17 **60.05** ● Effect of contraceptive residues at central and peripheral levels of the snail (Lymnaea stagnalis) reproductive system. Z. ZRINYI*; G. MAASZ; R. HORVATH; Z. PIRGER. *Hungarian Acad. of Sci. Balaton Limnological.*

2:00 KK1 **60.06** Immunohistochemical detection of kisspeptin in the mouse pituitary. Y. IKEDA*; A. TAGAMI. *Aichi-Gakuin Univ. Sch. of Dent.*

3:00 KK2 **60.07** ▲ Long term effects of prenatal stress on hypothalamic GnIH and GnRH expression. A. G. GARCÍA-SOTO*; L. GÓMEZ QUIROZ; W. PORTILLO MARTÍNEZ; L. JUÁREZ ROJAS; S. RETANA-MARQUEZ. *Grad. Biol. of Animal Reproduction Universida, Univ. Autonoma Metropolitana, Insituto de Neurobiología, UNAM, Univ. Autonoma Metropolitana.*

4:00 KK3 **60.08** The estradiol feedback in the regulation of spontaneous ovulation depends on the excised-ovary. M. B. CRUZ*; R. LIBRADO-OSORIO; A. ESPINOSA-VALDEZ; K. MACÍAS; I. ARRIETA-CRUZ; A. FLORES; R. DOMÍNGUEZ. *Univ. Autonoma De México, Natl. Inst. of Geriatrics.*

1:00 KK4 **60.09** Impact of timing and duration of low-dose Bisphenol A exposure on extra-hypothalamic GnRH Neurons, social and locomotor behavior in adult Japanese medaka. T. INAGAKI*; J. A. O'LEARY; S. RAMAKRISHNAN. *Univ. of Puget Sound.*

2:00 KK5 **60.10** Firing activity of gonadotropin-releasing hormone (GnRH) neurons across postnatal development in female mice is altered by prenatal androgenization. E. A. DULKA*; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan.*

3:00 KK6 **60.11** Gonadotropin-releasing hormone (GnRH) neuron excitability is increased during estradiol positive feedback. C. E. ADAMS*; S. SCHNELL; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

4:00 KK7 **60.12** Characterization of the HPG axis in Fgfr3-deficient mice. S. J. BONELLI*; L. R. BROOKS; S. N. KALAVITY; S. I. KAVANAUGH; P. TSAI. *Univ. of Colorado Boulder.*

1:00 KK8 **60.13** The effects of FOXL2 mutations on FSHβ transcription. S. M. NEWTON*; M. J. SUNSHINE; P. L. MELLON. *Univ. of California San Diego.*

2:00 KK9 **60.14** Gonadotropin-releasing hormone (GnRH) neuron firing activity is higher on the afternoon of proestrus than diestrus during the estrous cycle of mice. M. A. SILVEIRA*; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan.*

3:00 KK10 **60.15** Prenatal androgenization alters prepubertal development of gonadotropin-releasing hormone (GnRH) neuronal network function and connectivity. T. BERG*; S. M. MOENTER. *Univ. of Michigan Med. Sch., Univ. of Michigan Med. Sch.*

4:00 KK11 **60.16** Optical clearing of the intact rat brain permits three-dimensional imaging of the arcuate kisspeptin/neurokinin B/dynorphin (KNDy) neuron population. A. M. MOORE*; K. A. LUCAS; L. M. COOLEN; M. N. LEHMAN. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

1:00 KK12 **60.17** Estradiol-dependent suppression of gonadotropin-releasing hormone (GnRH) neuron firing activity by corticotropin-releasing hormone (CRH) in female mice. C. PHUMSATITPONG*; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan.*

2:00 KK13 **60.18** Study about the modulation of estrogen and food condition on the interaction of leptin and nitric oxide to control LH and FSH secretion. L. OLIVEIRA*; C. RODRIGUES FRANCI. *Ribeirão Preto Med. School, Univ. of São P, Ribeirão Preto Med. School, Univ. of São Paulo.*

3:00 KK14 **60.19** Development of gabaergic altered brain wiring and plasticity in a mouse model of polycystic ovary syndrome (pcos). M. S. SILVA*; M. PRESCOTT; R. CAMPBELL. *Univ. of Otago.*

4:00 KK15 **60.20** δ-$GABA_A$ receptors protect against the adverse effects of stress on reproductive function. L. C. MELON*; J. MAGUIRE. *Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 KK16 **60.21** The rescue of declining GnRH neurons in FGF signaling-deficient mice is associated with changes in diverse gene expression. P. TSAI*; S. I. KAVANAUGH; C. D. LINK; P. K. GONZALES; L. R. BROOKS. *Univ. of Colorado.*

POSTER

061. Oxytocin and Vasopressin

Theme F: Integrative Physiology and Behavior

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

1:00 KK17 **61.01** Activation of KNDy neurons triggers hot flashes in mice. A. A. KRULL*; S. L. PADILLA; S. A. LARSEN; C. W. JOHNSON; A. J. CABRERA; J. BLAZIER; J. A. CORREA; R. D. PALMITER; D. K. CLIFTON; R. A. STEINER. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

2:00 KK18 **61.02** Postnatal oxytocin production in infant mice. R. VAIDYANATHAN*; E. HAMMOCK. *Florida State Univ.*

3:00 LL1 **61.03** Neural activation of oxytocin receptor expressing circuits during pre-weaning development. M. TABBAA*; E. A. D. HAMMOCK. *Florida State Univ.*

4:00 LL2 **61.04** Oxytocin receptor in peripheral tissues of the neonatal mouse. M. A. GREENWOOD*; E. A. D. HAMMOCK. *Florida State Univ.*

1:00 LL3 **61.05** ▲ Sexually dimorphic oxytocin receptor expressing neurons in the hypothalamus. R. LEBLANC; K. SHARMA; M. HAQUE; K. NISHIMORI; R. TERUYAMA*. *Baton Rouge Community Col., Tohoku Univ., Louisiana State Univ.*

2:00 LL4 **61.06** Oxytocin receptor distribution in the prairie vole (Microtus ochrogaster) neocortex. A. M. SEELKE*; A. DUCHEMIN; T. C. SIMMONS; S. FREEMAN; K. L. BALES. *Univ. of California Davis, Ecole Normale Superieure de Cachan, Univ. of California Davis.*

3:00 LL5 **61.07** Oxytocin receptor activation depolarizes interneurons and induces GABA release in the rat olfactory cortex. S. W. HARDEN*; C. J. FRAZIER. *Univ. of Florida, Univ. of Florida.*

4:00 LL6 **61.08** Hypothalamic vasopressinergic innervation to amygdala: Functional implications in anxiogenesis. V. S. HERNANDEZ*; O. R. HERNÁNDEZ-PEREZ; L. ZHANG. *Natl. Autonomous Univ. of México, Natl. Autonomous Univ. of México.*

1:00 LL7 **61.09** The lateral retinohypothalamic tracts surround the vasopressin neurons in the supraoptic nucleus of hypothalamus. P. CHEN*; C. WANG. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ. and Academia Sinica.*

2:00 LL8 **61.10** The spatial topography of oxytocin and vasopressin neurons in the paraventricular nucleus of the hypothalamus in the prairie vole. R. J. ORTIZ*; A. N. PERRY; B. S. CUSHING. *Univ. of Texas At El Paso.*

3:00 MM1 **61.11** Connectome resilience, the effects of oxytocin administration on functional connectivity during resting-state fMRI in women. R. BETHLEHEM*; M. LOMBARDO; M. LAI; B. AUYEUNG; J. DEAKIN; S. SOUBRAMANIAN; A. SULE; S. BARON-COHEN. *Univ. of Cambridge, Autism Res. Ctr., Univ. of Cyprus, Univ. of Cyprus, Univ. of Toronto, Natl. Taiwan Univ. Hosp. and Col. of Med., Univ. of Toronto, Univ. of Edinburgh, Univ. of Cambridge, Cambridgeshire and Peterborough NHS Fndn. Trust, Cambridgeshire and Peterborough NHS Fndn. Trust.*

POSTER

062. Stress: Sex Differences

Theme F: Integrative Physiology and Behavior

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

1:00 MM2 **62.01** ▲ Early life stress modulates adult dendritic spine density in basolateral amygdala in a sex-specific manner. R. A. SKIPPER*; K. M. SWANSON; C. L. WELLMAN; M. R. HERBST; J. J. QUINN. *Indiana Univ., Miami Univ.*

2:00 MM3 **62.02** Sex-dependent effects of isolation rearing in tests of anxiety and depression. D. MUSKIEWICZ*; D. JOSHI; F. RESENDIZ GUTIERREZ; N. HALL; F. S. HALL. *The Univ. of Toledo.*

3:00 MM4 **62.03** Sex-dependent effects of isolation-rearing on pre-pulse inhibition of acoustic startle responses. Y. SABER; F. S. HALL*. *Univ. of Toledo Col. of Pharm. and Pharmaceut. Sci.*

4:00 MM5 **62.04** Gaba signaling in hippocampus may be modulated by early life stress in a sexually dimorphic manner. O. O. KALEJAIYE*; T. OBISESAN; M. C. GONDRÉ-LEWIS. *Howard Univ. Col. of Med., Howard Univ., Howard Univ.*

1:00 MM6 **62.05** Age and sex-dependent impact of repeated social stress on rat prefrontal cortical neuronal function and synaptic transmission. K. R. URBAN*; E. GENG; M. SUAREZ; R. VALENTINO. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 MM7 **62.06** Sex, stress, and migraine: Differential effects of stress on the migraine relevant responses of males and females. D. KAUFMANN*; K. C. BRENNAN. *Univ. of Utah, Univ. of Utah.*

3:00 MM8 **62.07** ▲ Sex differences in the subcellular distribution of corticotropin releasing factor 1 in the rat hippocampus in response to chronic stress. H. R. MCALINN*; R. POULTON-KAMAKURA; A. G. DYER; B. S. MCEWEN; E. M. WATERS; T. A. MILNER. *Weill Cornell Med., The Rockefeller Univ.*

4:00 MM9 **62.08** Sex differences and dynamics of neuroimmune and neuroendocrine responses to stressors. D. LOVELOCK*; A. S. VORE; T. DEAK. *Binghamton Univ.*

1:00 MM10 **62.09** Sex differences in- and stress effects on- microglial activation in brain regions critical for emotion regulation. J. L. BOLLINGER*; K. E. COLLINS; R. PATEL; C. L. WELLMAN. *Psychological and Brain Sci., Indiana Univ.*

2:00 MM11 **62.10** Sub-chronic variable stress induced sex-specific effects on glutamatergic signaling in the nucleus accumbens. G. E. HODES*; A. BRANCATO; D. BREGMAN; F. H. AHN; S. J. RUSSO. *Icahn Sch. of Med. at Mount Sinai, Univ. of Palermo.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 MM12 **62.11** Male experience, female investment and offspring anxiety behavior: Where father's nature meets mother's nurture. A. KORGAN*; E. O'LEARY; J. BAUER; A. FORTIER; T. PERROT; I. WEAVER. *Dalhousie Univ.*

POSTER

063. Cortical Hemodynamics

Theme F: Integrative Physiology and Behavior

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

1:00 DP05 **63.01** (Dynamic Poster) Endothelial dysfunction diminishes conducted vasodilation leading to abnormal functional hyperemia in the awake mouse cortex. M. A. SHAIK*; S. H. KIM; D. N. THIBODEAUX; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ.*

2:00 NN1 **63.02** Genetic mechanisms regulating connectivity and function of non-image-forming parallel visual circuits. O. S. DHANDE*; A. H. PHAN; T. A. SEABROOK; J. T. WANG; P. L. NGUYEN; A. D. HUBERMAN. *Dept. of Neurobiology, Stanford Univ., Univ. of California San Diego, Stanford Univ.*

3:00 NN2 **63.03** Mapping functional atlas of the awake rat brain: A resting-state fMRI study. Z. MA*; P. PEREZ; Z. MA; Y. LIU; C. HAMILTON; Z. LIANG; N. ZHANG. *Penn State Univ., Penn State Univ.*

4:00 NN3 **63.04** Investigating the development of functional and structural connectivity in the rodent brain during ontogeny. D. SHAH*; I. BLOCKX; C. ANCKAERTS; J. PRAET; M. VERHOYE; A. VAN DER LINDEN. *Bio-Imaging Lab/University of Antwerp.*

1:00 NN4 **63.05** A putative multiple-demand system in the macaque brain. D. J. MITCHELL*; A. H. BELL; M. J. BUCKLEY; A. S. MITCHELL; J. SALLET; J. DUNCAN. *MRC Cognition and Brain Sci. Unit, Univ. of Oxford.*

2:00 NN5 **63.06** Comparison of wide-field optical mapping (WFOM) of neural activity and hemodynamics in awake mouse brain to resting state fMRI. S. H. KIM*; Y. MA; M. A. SHAIK; V. VOLETI; E. M. C. HILLMAN. *Columbia Univ. Lab. For Functional Optical Imaging.*

3:00 NN6 **63.07** EEG dynamics suggest automatic detection of visual changes without attentional switch in hemianopic patients. V. HADID*; A. TRAN; D. K. NGUYEN; F. LEPORE. *Univ. De Montréal, Service de neurologie, CHUM Hôpital Notre-Dame, Dept. de psychologie, Univ. de Montréal.*

4:00 NN7 **63.08** Abnormal resting state BOLD fMRI lag structure in idiopathic Parkinson disease. A. MITRA; A. Z. SNYDER*; M. C. CAMPBELL; A. TANENBAUM; J. M. KOLLER; J. S. PERLMUTTER. *Washington Univ. Sch. of Med., Washington Univ. Sch. Med., Washington Univ. Sch. Med., Washington Univ. Sch. Med.*

1:00 NN8 **63.09** Effects of continuous θ-burst transcranial magnetic stimulation on hemodynamic lag measured by BOLD fMRI. D. J. LURIE*; A. TAMBINI; C. GRATTON; J. POLINE; M. D'ESPOSITO. *Univ. of California, Berkeley, Univ. of California, Berkeley, Washington Univ. in St Louis, Univ. of California, Berkeley.*

2:00 NN9 **63.10** Investigation of the 5-HT2A/1A-agonist psilocybin on global and regional cerebral blood flow. C. LEWIS*; K. H. PRELLER; R. KRÄHENMANN; L. MICHELS; F. VOLLENWEIDER. *Arizona State Univ., Univ. of Zurich, Univ. Hosp. Zurich.*

3:00 NN10 **63.11** Striatal dopamine transporter availability decreases throughout the day in healthy volunteers. C. E. WIERS*; E. SHOKRI-KOJORI; C. WONG; D. TOMASI; G. WANG; N. VOLKOW. *Natl. Inst. on Alcohol Abuse and Alcoholism, NIH/NIAAA.*

4:00 NN11 **63.12** Optimizing spatial and temporal resolution and coil selection for BOLD protocols on the Siemens 3T Prisma. S. A. MCMAINS*; R. W. MAIR. *Harvard Univ., Athinoula A. Martinos Ctr. for Biomed. Imaging Harvard Med. Sch.*

1:00 NN12 **63.13** BOLD is thicker than white matter: Surgically disconnected temporal pole exhibits resting functional connectivity with remote brain regions. M. J. SUTTERER*; D. E. WARREN; J. BRUSS; T. J. ABEL; A. JONES; H. KAWASAKI; M. W. VOSS; M. CASSELL; M. A. HOWARD, III; D. TRANEL. *Univ. of Iowa Hosp. and Clinics, Univ. of Nebraska Med. Ctr., Univ. of Iowa Hosp. and Clinics, Brown Univ., The Univ. of Iowa, The Univ. of Iowa.*

2:00 NN13 **63.14** Wide-field optical mapping of neural activity and cortical hemodynamics imaging during locomotion. Y. MA*; S. H. KIM; M. A. SHAIK; H. T. ZHAO; E. M. C. HILLMAN. *Columbia Univ.*

3:00 NN14 **63.15** Visual BOLD responses of dexmedetomidine-anesthetized rats to flashing light stimulation in an fMRI study. D. CHEN*; K. CHEN; K. LIANG. *Dept Psychology, Natl. Cheng Kung Univ., Natl. Taiwan Univ.*

4:00 OO1 **63.16** Correspondence of resting fMRI and electrophysiological connectivity dynamics following corpus callosotomy. E. M. YEAGLE*; M. ARGYELAN; P. MEGEVAND; J. HERRERO; S. BICKEL; V. DU; C. J. KELLER; D. GROPPE; M. MERCIER; L. ENTZ; A. D. MEHTA. *Feinstein Inst. For Med. Res., Feinstein Inst. for Med. Res., Univ. Hosp. Geneva, Feinstein Inst. for Med. Res., Stanford Univ., Hofstra North Shore LIJ Sch. of Med., Stanford Univ., Univ. of Toronto, Ctr. de Recherche Cerveau et Cognition, Natl. Inst. of Neurosci.*

1:00 OO2 **63.17** ● Accessing cortical inhibitory processes through the delay of the fMRI BOLD response. S. PROULX*; R. FARIVAR. *McGill Univ.*

POSTER

064. Molecular Mechanisms Underlying Sleep and Circadian Rhythms

Theme F: Integrative Physiology and Behavior

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

1:00 OO3 **64.01** Low density lipoprotein receptor-related protein 1 (LRP1) regulates glutamate signaling in the mammalian circadian clock. J. COOPER*; R. A. PROSSER. *Univ. of Tennessee, Univ. of Tennessee.*

2:00 OO4 **64.02** Mapping the co-expression of clock proteins BMAL1 and PER2 with Enkephalin and Substance P in the rodent forebrain. A. FREDERICK*; J. GOLDSMITH; N. DE ZAVALIA; S. AMIR. *Concordia Univ.*

3:00 OO5 **64.03** Continuous measurement of 28 neurotransmitters and other endogenous messengers for 24 hours in the striatum and prefrontal cortex by microdialysis in freely moving rats. N. MOORE; A. RASSOULPOUR; H. JANSSENS; L. YU; H. KOOIJKER; F. HELFRICH; J. ROESER; M. G. VAN DER HART*. *Brains On-Line, UCSF.*

4:00 OO6 **64.04** Dopamine regulation of clock gene expression in the olfactory bulb. N. DE ZAVALIA*; P. SOLIS; S. AMIR. *Concordia Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 OO7 **64.05** Using *Drosophila melanogaster* as a model to study age related changes in the circadian clock. J. A. CURRAN*; K. TSANEVA-ATANASOVA; J. J. L. HODGE. *Univ. of Bristol, Univ. of Exeter.*

2:00 OO8 **64.06** Characterization of innexin hemichannels in the circadian peacemaker neurons of *Drosophila melanogaster*. E. FRITZ*; P. FERNANDEZ; J. CAMPUSANO; J. C. SAEZ. *Pontificia Univ. Catolica De Chile, Ctr. Interdisciplinario de Neurociencia de Valparaiso.*

3:00 OO9 **64.07** Developmental lead, ecdysone-responsive genes, and circadian sleep in the fruit fly. A. VAZQUEZ-MONTES*; W. MELENDEZ-PACHECO; C. VALENTIN-RAMOS; P. CARRION-COLON; J. AGOSTO-RIVERA; H. ORTIZ-ZUAZAGA. *Univ. Del Turabo, Univ. of Puerto Rico, Univ. of Puerto Rico.*

4:00 OO10 **64.08** Functional imaging of sleep and wake states in zebrafish. A. ANDREEV*; T. V. TRUONG; S. E. FRASER. *USC, USC.*

1:00 OO11 **64.09** Pharmacological profiling of zebrafish sleep-awake states. Y. NISHIMURA*; S. OKABE; S. SASAGAWA; S. MURAKAMI; Y. ASHIKAWA; M. YUGE; K. KAWAGUCHI; R. KAWASE; Y. SHIMADA; T. TANAKA. *Mie Univ. Grad. Sch. of Med.*

2:00 OO12 **64.10** The effects of transient kcna2 knock-down on sleep-wake cycles in larval zebrafish. K. KARLSSON*, Dr.; S. SRDANOVIC; F. ÞÓR, 101; H. ÞORSTEINSSON. *Reykjavik Univ., 3Z.*

3:00 OO13 **64.11** Glutamate regulates bmal1 protein in cultured bergmann glia cells. L. D. CHI-CASTAÑEDA*; S. M. WALISZEWSKI; R. C. ZEPEDA; L. C. R. HERNÁNDEZ-KELLY; M. CABA; A. ORTEGA. *CINVESTAV, Univ. Veracruzana.*

4:00 OO14 **64.12** Ventral anterior homeobox 1 is required for suprachiasmatic nucleus development as well as circadian output in adulthood allowing female fertility. H. M. HOFFMANN*; C. TRANG; B. HEREFORD; K. BHARTI; D. K. WELSH; M. R. GORMAN; P. L. MELLON. *Dep. of Reproductive Medicine, UC San Diego, Ctr. for Circadian Biology, UC San Diego, NIH Unit of Ocular and Stem Cell Translational Res., Dept. of Psychiatry, UC San Diego, Veterans Affairs San Diego Healthcare Syst., Dept. of Psychology, UC San Diego.*

1:00 PP1 **64.13** ▲ Hypothalamic lesion of A11 area disturb clock genes. C. PIÑA-LEYVA; M. LARA-LOZANO; B. FLORÁN-GARDUÑO; J. A. GONZALEZ-BARRIOS*. *CINVESTAV, Hosp Regional Octubre, ISSSTE.*

2:00 PP2 **64.14** Predicting estrous state and pregnancy outcome: Applications of high temporal resolution temperature rhythm analysis in female mice. B. L. SMARR; I. ZUCKER; L. J. KRIEGSFELD*. *Univ. of California, Univ. of California, Univ. of California.*

3:00 PP3 **64.15** $CBP^{Kix/Kix}$ mice have decreased gene model 129 (CHRONO) expression and increased free-running circadian period. C. C. ANGELAKOS*; S. G. POPLAWSKI; S. CHATTERJEE; G. PORCARI; J. B. HOGENESCH; T. ABEL. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Cincinnati.*

4:00 PP4 **64.16** The RNA editing gene, Adar, suppresses sleep by regulating glutamatergic synaptic plasticity. N. HOFFNER; J. ROBINSON; J. PALUCH; D. DICKMAN; W. JOINER*. *Univ. of California San Diego, Univ. of California San Diego, USC.*

1:00 PP5 **64.17** Symptomatic narcolepsy among inherited disorders, such as myotonic dystrophy. T. KANBAYASHI*; Y. OHMORI; A. IMANISHI; T. ONO; K. TSUTSUI; J. TAKAHASHI; E. NARITA; Y. SAGAWA; Y. KIKUCHI; M. TAKESHIMA; Y. TAKAHASHI; R. SASAKI; D. FUJIWARA; Y. SATOH; Y. TAKEKOSHI; R. AIZAWA; H. ONO; S. UEMURA; S. SATO; S. IIJIMA; M. SATO; T. SHIMIZU. *Akita Univ. Sch. Med., WPI-IIIS, Univ. of Tsukuba, Osaka Aoyama Univ., Systems Pharmacology, Univ. of Tokyo, Physical Therapy, Akita Univ., Akita Kaiseikai Hosp.*

2:00 PP6 **64.18** Effect of “sleep-in-a-dish” on DISC1 protein homeostasis. C. KORTH*. *Heinrich Heine Univ. Dusseldorf.*

3:00 PP7 **64.19** Synchronization of cortical dendritic activity during sleep spindles in rodents. J. SEIBT*; C. RICHARD; J. SIGL-GLÖCKNER; N. TAKAHASHI; D. DENIS; C. BOCKLISCH; M. E. LARKUM. *Univ. of Surrey, Charité-Universitätsmedizin, Humboldt Univ. of Berlin, Univ. of Bern.*

4:00 PP8 **64.20** ▲ Nicotine induction of orexin gene expression in SH-SY5Y cells is modulated by glucose. J. L. SABO; J. K. MORRIS*. *Baldwin Wallace Univ., Baldwin Wallace Univ.*

1:00 PP9 **64.21** Assessing the effects of sleep and wakefulness on the metabolome of mouse cortex using ultra-performance liquid chromatography coupled with high-resolution mass spectrometry. A. K. BOURDON*; G. SPANO; M. BELLESI; G. TONONI; C. CIRELLI; P. A. SERRA; H. A. BAGHDOYAN; R. LYDIC; S. R. CAMPAGNA. *Univ. of Tennessee, Univ. of Wisconsin, Univ. of Sassari, Univ. of Tennessee, Univ. of Tennessee.*

2:00 PP10 **64.22** Effects of glycine injection into trigeminal motor nucleus on jaw-opening excitability duringsleep in rats. R. ODAI-IDE*; K. ADACHI; S. HINO; T. SHIMOYAMA; H. SAKAGAMI; S. WATANABE; G. J. LAVIGNE; B. J. SESSLE. *Meikai Univ. Sch. of Dent., Meikai Univ. Sch. of Dent., Saitama Med. Univ., Univ. de Montreal, Univ. of Tronto.*

3:00 PP11 **64.23** ▲ Sleep deprivation induces changes in dopamine actions & D1 receptor expression in the rat hippocampus. Q. NGUYEN; H. AZIZI; V. SUEN; A. KWOK; N. KANG; R. SOMVANSHI; U. KUMAR*; B. R. SASTRY. *Univ. of British Columbia, Univ. of British Columbia.*

4:00 PP12 **64.24** ● Noninvasive sleep monitoring in large scale screening of mouse knockouts (komp2) produces high hit rate with implications for sleep and behavioral studies. B. F. O’HARA*; M. SETHI; S. JOSHI; M. STRIZ; N. COLE; J. RYAN; S. RIZZO; M. E. LHAMON; A. AGARWAL; J. M. DENEGRE; R. E. BRAUN; V. KUMAR; K. D. DONOHUE; S. SUNDERAM; E. J. CHESLER; K. L. SVENSON. *Univ. of Kentucky, Univ. of Kentucky, The Jackson Lab., Signal Solutions LLC.*

1:00 PP13 **64.25** An intersectional strategy to target nitrergic neurons in the cerebral cortex. M. R. ZIELINSKI*; D. N. ATOCHIN; P. L. HUANG; D. GERASHCHENKO. *Harvard Univ., VA Boston Healthcare Syst., Harvard Univ., Massachusetts Gen. Hosp.*

2:00 PP14 **64.26** The neurochemical phenotype of lateral hypothalamic hypocretin/orexin and melanin-concentrating hormone neurons identified through single-cell transcriptional profiling. L. MICKELSEN*; F. W. KOLLING IV; B. CHIMILESKI; C. NORRIS; C. E. NELSON; A. C. JACKSON. *Univ. of Connecticut, Univ. of Connecticut.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

3:00 PP15 **64.27** Glutamate, nitric oxide, adenosine and sleep homeostasis: New development. A. A. LARIN; Y. KIM; S. A. KARPOVA; R. W. MCCARLEY; R. BASHEER; A. V. KALINCHUK*. *VA Boston Healthcare System-Harvard Med. Sch.*

4:00 PP16 **64.28** Tuberomammillary histaminergic neurons modulate pontine tegmentum areas involved in wakefulness and REM sleep generation. M. GARZON*; A. DÍEZ-GARCÍA; A. NUNEZ. *Dpt Anat, Histol and Neurosci. Fac Med. UAM.*

1:00 QQ1 **64.29** Electrophysiological phenotype and optogenetic silencing of histaminergic neurons of the hypothalamic tuberomammillary nucleus in a transgenic mouse line. A. FUJITA*; P. BONNAVION; M. WILSON; L. E. MICKELSEN; L. DE LECEA; A. C. JACKSON. *Univ. of Connecticut, Univ. of Connecticut, Univ. Libre de Bruxelles (ULB)-UNI, Stanford Univ. Sch. of Med.*

POSTER

065. Appetitive and Incentive Learning and Memory

Theme G: Motivation and Emotion

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

1:00 QQ2 **65.01** ▲ Adolescent exposure to nutritive or artificial sweeteners differentially alters the magnitude of adult sucrose-conditioned flavor preferences in BALB/c and C57BL/6 inbred mouse strains. S. LA MAGNA; D. WARSHAW; K. OLSSON; G. FAZILOV; B. ISKHAKOV; A. BURAS; B. RAPP; R. J. BODNAR*. *Queens Col.*

2:00 QQ3 **65.02** ▲ Prazosin alters fear and cocaine associated memories. K. E. REYES*; R. P. TODD; B. A. SORG. *Washington State Univ.*

3:00 QQ4 **65.03** Investigation of the necessity of medial prefrontal cortex pyramidal neurons for food reward seeking and ingestion. D. M. WARTHEN*; A. BRUNAL; K. L. GASSMANN; N. P. ROGERS; N. K. SRINIVASA; L. S. ZWEIFEL; M. M. SCOTT. *Univ. of Virginia, Univ. of Washington.*

4:00 QQ5 **65.04** ▲ Environmental and pharmacological modulation of novelty habituation in rats - The rising of self-grooming as a de-arousal indicator. M. ROJAS*; B. MÉNDEZ; J. FORNAGUERA; J. C. BRENES. *Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica.*

1:00 QQ6 **65.05** Incentive motivation and neurobehavioral plasticity: The effects of unpredictable environmental enrichment in rats. J. C. BRENES*; M. SÁNCHEZ; M. ROJAS-CARVAJAL; J. FORNAGUERA; A. SEQUEIRA. *Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica.*

2:00 QQ7 **65.06** Environmental enrichment alters perineuronal net staining in the rat prefrontal cortex following abstinence from sucrose self administration. B. A. SORG*; M. L. SLAKER; J. BARNES; J. W. GRIMM. *Washington State Univ., Washington State Univ., Western Washington Univ.*

3:00 QQ8 **65.07** Sign-tracking is difficult to extinguish and resistant to multiple cognitive enhancers. C. J. FITZPATRICK*; T. GEARY; J. F. CREEDEN; J. D. MORROW. *Univ. of Michigan, Univ. of Michigan.*

4:00 QQ9 **65.08** The orexin system is not involved in operant palatable food seeking. S. Y. KHOO*; G. P. MCNALLY. *Sch. of Psychology, Univ. of New South Wales, Univ. of New South Wales.*

1:00 QQ10 **65.09** Neuronal correlates of goal-directed and habitual reward seeking in dorsal striatum. Y. VANDAELE*; J. M. RICHARD; P. H. JANAK. *Johns Hopkins Univ., Johns Hopkins Sch. of Medecine.*

2:00 QQ11 **65.10** Blocking is unaffected by increasing outcome value via changes in satiety state - implications for the role of value-based errors and model free systems in regulating learning. M. P. GARDNER*; J. CONROY; G. SCHOENBAUM. *NIDA IRP.*

POSTER

066. Dopamine in Reward: *In Vivo* Activity Recording and Manipulation Studies

Theme G: Motivation and Emotion

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

1:00 QQ12 **66.01** ▲ *In vivo* electrochemical and optogenetic assessment of accumbal dopamine release events in a novel behavioral economics based food-seeking task. S. SCHELP*; K. J. PULTORAK; D. ISSACS; R. DAS; E. B. OLESON. *Univ. of Colorado, Denver.*

2:00 QQ13 **66.02** 99mTc-HMPAO SPECT imaging of brain-wide functional networks underlying optogenetic self- and passive stimulation in mice. M. J. BROCKA*; M. LIPPERT; A. KOLODZIEJ; T. WEIDNER; D. VINCENZ; J. TEGTMEIER; T. WANGER; A. OELSCHLEGER; F. STOEBER; F. ANGENSTEIN; J. GOLDSCHMIDT; F. OHL. *Leibniz Inst. For Neurobio., Leibniz Inst. for Neurobio.*

3:00 QQ14 **66.03** Exploring the neural mechanism by which optogenetic stimulation of ventral tegmental area dopamine neurons prevents extinction of cued approach behavior. C. M. REYES*; S. M. NICOLA. *Albert Einstein Col. of Med.*

4:00 QQ15 **66.04** ▲ *In vivo* electrochemical and optogenetic assessment of accumbal dopamine release events in a novel behavioral economics based footshock avoidance task. K. J. PULTORAK*; S. A. SCHELP; D. ISSACS; R. DAS; E. B. OLESON. *Univ. of Colorado Denver.*

1:00 QQ16 **66.05** Modulation of nucleus accumbens dopamine efflux and reward-seeking behaviour in rats following electrical and optogenetic stimulation of the afferent glutamate projection from the ventral subiculum. D. LINDENBACH*; G. VACCA; A. HARATIKIA; J. K. SEAMANS; A. G. PHILLIPS. *Univ. of British Columbia.*

2:00 QQ17 **66.06** On the forms of learning supported by rewarding optical stimulation of dopamine neurons. I. TRUJILLO-PISANTY*; P. SOLIS; K. CONOVER; P. DAYAN; P. SHIZGAL. *Concordia Univ., Univ. Col. London.*

3:00 QQ18 **66.07** Effect of chemogenetic inactivation of midbrain dopamine neurons and their projections to the nucleus accumbens on cue-induced alcohol-seeking behaviour. M. D. VALYEAR*; I. TRUJILLO-PISANTY; F. LACROIX; P. SHIZGAL; N. CHAUDHRI. *Concordia Univ.*

4:00 QQ19 **66.08** Reduced dopamine signaling changes the patterned activity of nucleus accumbens neurons in response to rewarding taste stimuli. C. CHAN*; D. S. WHEELER; E. A. PANTHER; S. M. CONWAY; M. F. ROITMAN; R. A. WHEELER. *Marquette Univ., The Univ. of Illinois at Chicago.*

1:00 QQ20 **66.09** Dynamics of the reward signal in the primary motor cortex (M1). A. TARIGOPPULA*; J. HESSBURG; D. B. MCNIEL; J. S. CHOI; B. T. MARSH; J. T. FRANCIS. *SUNY Downstate Med. Ctr., Cullen Col. of Engineering, Univ. of Houston.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 RR1 **66.10** Local control of dopamine release may produce reward-prediction rather than reward-prediction-error signals. A. HAMID*; A. MOHEBI; J. D. BERKE. *Univ. of Michigan, Univ. of Michigan, Univ. of California, San Francisco.*

3:00 RR2 **66.11** Anticipatory and reward-responsive neural activity of mesocorticolimbic DA circuitry in mice performing a sample-to-match task. M. T. VU*; C. J. BURRUS; M. VAGWALA; S. D. MAGUE; L. K. DAVID; J. WANG; G. E. THOMAS; R. ADCOCK; S. H. SODERLING; K. DZIRASA. *Duke Univ., Duke Univ. Sch. of Med., Duke Univ. Sch. of Med., Univ. of Maryland Baltimore County, Duke Univ. Sch. of Med., Duke Univ.*

4:00 RR3 **66.12** Nigrostriatal signal inhibits saccadic eye movement during countermanding task in monkeys. T. OGASAWARA; M. TAKADA; M. MATSUMOTO*. *Univ. of Tsukuba, Kyoto Univ., Univ. of Tsukuba, Univ. of Tsukuba.*

1:00 RR4 **66.13** Subsecond dopamine signaling of reward and punishment is modulated by social context. M. R. ROESCH*; B. LEE; M. A. MYERS; B. S. CHAPPA; M. S. WALTERS; S. KANTOR; M. G. PECUKONIS; E. A. GREEN; D. POTEMRI; D. A. LAGOWALA; E. G. MELLINGER; H. T. GIRMA; R. T. TESFAY. *Univ. of Maryland at Col. Park, Univ. of Maryland.*

2:00 RR5 **66.14** The ventral tegmental area encodes differential behavioral strategies towards reward-paired cues. L. FERGUSON*; A. M. AHRENS; L. G. LONGYEAR; J. ALDRIDGE. *Univ. of Michigan, Univ. of Texas at Austin, Univ. of Michigan.*

3:00 RR6 **66.15** Dopaminergic network dynamics during behavioral exploration. A. C. KORALEK*; R. M. COSTA. *Champalimaud Neurosci. Programme, Champalimaud Neurosci. Programme.*

4:00 RR7 **66.16** Analysis of dopamine-dependent circuit activity by functional and molecular MRI. N. LI*; A. P. JASANOFF. *MIT.*

1:00 RR8 **66.17** Dopamine signals the value of work selectively in accumbens core and ventral prelimbic cortex. J. R. PETTIBONE*; J. T. WONG; A. MOHEBI; R. T. KENNEDY; J. D. BERKE. *Univ. of Michigan, UCSF, Univ. of Michigan.*

2:00 RR9 **66.18** The role of the ventral pallidum in a nucleus accumbens dopamine-dependent sensorimotor transformation. J. D. LEDERMAN*; S. LARDEUX; S. NICOLA. *Yeshiva Univ. Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

POSTER

067. Motivation and Reward Mechanisms

Theme G: Motivation and Emotion

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

1:00 RR10 **67.01** Primate dorsal striatum signals uncertain object-reward associations. J. K. WHITE*; I. E. MONOSOV. *Washington Univ. In St. Louis.*

2:00 RR11 **67.02** Ventral tegmental area GABA neurons modulate motivation and attention to a cue predicting sucrose reward in a rat operant task. C. E. BASS*; P. M. FULLER; M. J. BRUNO; R. V. BHIMANI; J. PARK; K. HAUSKNECHT; R. SHEN; S. HAJ-DAHMANE; K. T. WAKABAYASHI. *Univ. At Buffalo SUNY, Beth Israel Deaconess Med. Ctr., Univ. at Buffalo, SUNY.*

3:00 RR12 **67.03** Chunked action sequences are sensitive to reward devaluation. E. GARR*; A. R. DELAMATER. *Grad. Center, CUNY, Brooklyn College, CUNY.*

4:00 RR13 **67.04** Nucleus Accumbens Shell neurons modulated by feeding do not encode palatability but they integrate external cues relevant to stop licking palatability but they integrate external cues relevant to stop licking. M. A. VILLAVICENCIO CAMARILLO*; A. I. HERNANDEZ-COSS; I. O. PEREZ; S. S. SIMON; R. GUTIERREZ. *Ctr. De Investigación Y Estudios Avanzados, Ctr. de Investigación y de Estudios Avanzados, Ctr. de Investigación y de Estudios Avanzados, Duke Univ., Ctr. de Investigación y de Estudios Avanzados.*

1:00 RR14 **67.05** ● Cell specific role of ΔFosB in aggressive behavior in male mice. H. ALEYASIN*; S. GOLDEN; A. TAKAHASHI; M. FLANIGAN; M. PFAU; C. MENARD; G. HODES; M. HESHMATI; J. MULTER; L. BICKS; J. TAI; E. HELLER; S. RUSSO. *Icahn Sch. of Med. Mount Sinai, Natl. Inst. of Drug Abuse (NIDA), Univ. of Tsukuba, Perelman Sch. of Medicine, Univ. of Pennsylvania.*

2:00 RR15 **67.06** Sex differences in behavioral and neural responses to palatable food reward. E. B. SINCLAIR*; K. L. KLUMP; C. L. SISK. *Michigan State Univ., Michigan State Univ.*

3:00 RR16 **67.07** A permissive role of serotonergic neurons on hedonic behavior. A. GIORGI*; G. MADDALONI; S. MIGLIARINI; M. GRITTI; R. TONINI; A. GOZZI; M. PASQUALETTI. *Univ. of Pisa, Italian Inst. of Technol., Italian Inst. of Technol.*

4:00 RR17 **67.08** ▲ No evidence of compulsive feeding in mice exposed to a junk food diet. T. LONDON*; K. H. LEBLANC; A. KRAVITZ. *Natl. Inst. of Health/ NIDDK.*

1:00 RR18 **67.09** High-running mice have reduced incentive salience for a sweet-taste reward. Z. THOMPSON*; E. M. KOLB; L. HIRAMATSU; M. CADNEY; T. GARLAND, Jr. *Univ. of California Riverside Dept. of Cell Biol. and Neurosci., USC, Univ. of California Riverside.*

2:00 RR19 **67.10** The effect of active or passive chocolate delivery on cue-induced responding following periods of forced abstinence and associated changes in δFosB labeling. E. W. TUPLIN*; M. R. HOLAHAN. *Carleton Univ.*

3:00 RR20 **67.11** Endocannabinoids control the neural substrates of interval timing in the nucleus accumbens. J. F. CHEER*; M. ANAYA; N. ZLEBNIK. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

4:00 RR21 **67.12** Temporal modulation of tonically active neurons (TANs) in monkey ventral striatum related to reward size and delay to obtain it. R. FALCONE*; D. WEINTRAUB; B. RICHMOND, 20814. *NIMH, NINDS, NIMH.*

1:00 RR22 **67.13** Learning and context shape the reward response patterns of serotonin and dopamine neurons. W. ZHONG*; Y. LI; M. LUO. *Natl. Inst. of Biol. Sciences, Beijing, Grad. Sch. of Peking Union Med. Col.*

2:00 SS1 **67.14** μ opioid receptor signaling in the nucleus accumbens drives cued approach to palatable food via excitation of NAc neurons only in the absence of hunger. K. CAREF*; S. M. NICOLA. *Albert Einstein Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 SS2 **67.15** ● Touchscreen tests of motivation reveal selective effects of reinforcer value, developmental and chemogenetic manipulations. B. PHILLIPS*; C. J. HEATH; N. C. PENFOLD; J. APERGIS-SCHOUTE; T. AITTA-AHO; J. ALSIÖ; S. E. OZANNE; T. J. BUSSEY; L. M. SAKSIDA. *Univ. of Cambridge, Wellcome Trust/MRC Behavioural and Clin. Neurosci. Institute, Univ. of Cambridge, Downing Street, Cambridge, CB2 3EB, UK, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK, Univ. of Cambridge Metabolic Res. Labs. and MRC Metabolic Dis. Unit, Inst. of Metabolic Science, Addenbrookes Hospital, Cambridge CB2 0QQ, UK, Dept. of Pharmacology, Univ. of Cambridge, Tennis Court Road, Cambridge, CB2 1QJ, UK, Pharmacology, Fac. of Medicine, Univ. of Helsinki, 00290 Helsinki Finland.*

4:00 SS3 **67.16** Social reward signals in primate lateral hypothalamic neurons: Comparison with prefrontal and midbrain dopamine neurons. A. NORITAKE*; M. ISODA. *Kansai Med. Univ., Kansai Med. Univ., Natl. Inst. for Physiological Sci.*

1:00 SS4 **67.17** Intact reward sensitivity in mothers undergoing long-term opioid maintenance treatment. M. EIKEMO*; M. L. PEDERSEN; P. LOBMAIER; N. KUNØE; M. SARFI; S. LEKNES. *Univ. of Oslo, Univ. of Oslo, Oslo Univ. Hosp., Univ. of Oslo.*

POSTER

068. Motivation: Risky Behaviors

Theme G: Motivation and Emotion

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

1:00 SS5 **68.01** Dynamic activity in affective circuits predicts choices to invest in risky ventures. L. TONG*; B. KNUTSON. *Stanford Univ.*

2:00 SS6 **68.02** Acute inactivation of the nucleus accumbens shell leads to long-lasting impairments in cue-paired choice behaviour. M. M. BARRUS*; M. TREMBLAY, V6T 1Z4; C. A. WINSTANLEY. *Univ. of British Columbia.*

3:00 SS7 **68.03** Engaging with salient win-paired cues blunts locomotor responding for cocaine: Implications for the reward deficiency hypothesis of addiction. J. N. FERLAND*; D. LINDENBACH; C. VONDER HAAR; C. D. HOUNJET; A. G. PHILLIPS; C. A. WINSTANLEY. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

4:00 SS8 **68.04** Deep-brain stimulation of the subthalamic nucleus leads to selective decreases in risky choice in risk preferring rats on a rodent analogue of the Iowa Gambling Task. P. J. COCKER*; W. K. ADAMS; O. VONDER HARR; M. TREMBLAY; C. BAUNEZ; C. A. WINSTANLEY. *Univ. of British Columbia, Institue de neurosciences.*

1:00 SS9 **68.05** Risky choice on a cued gambling task in rats is not associated with elevated responding for conditioned reinforcement. C. A. WINSTANLEY*; M. TREMBLAY. *Univ. British Columbia.*

2:00 SS10 **68.06** Reward-concurrent audiovisual cues increase risky decision-making in Iowa and Vancouver gambling tasks. M. V. CHERKASOVA*; J. J. S. BARTON; L. CLARK; A. J. STOESSL; C. A. WINSTANLEY. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

3:00 SS11 **68.07** Dissociable contributions of dorsal and ventral regions of the striatum on a rodent cost/benefit decision-making task requiring cognitive effort. M. SILVEIRA*; M. TREMBLAY; C. A. WINSTANLEY. *Univ. OF British Columbia.*

4:00 SS12 **68.08** A modified version of Lima-Dill model predicts approach-avoidance behavior of rats facing a predator-like robot. S. KIM*; H. JIE; J. CHOI. *Biopsy Lab, Korea Univ.*

1:00 SS13 **68.09** Behavioral differences between alcohol preferring AA rats and Wistar rats in rodent gambling task, focus in opioidergic mechanisms. V. OINIO*; M. SUNDSTRÖM; A. RAASMAJA; P. PIEPPONEN. *Univ. of Helsinki, Fac. of Pharm.*

2:00 SS14 **68.10** A dual role for the rostromedial tegmental nucleus in processing aversive costs. P. J. VENTO*; T. C. JHOU. *Med. Univ. of South Carolina.*

3:00 SS15 **68.11** 5α-reductase type 2 contributes to emotion and mood regulation. M. BORTOLATO*; L. J. MOSHER; S. C. GODAR; K. M. MCFARLIN. *Univ. of Utah, Univ. of Kansas.*

POSTER

069. Human Social Communication and Behavior

Theme G: Motivation and Emotion

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

1:00 SS16 **69.01** Effects of experiencing softness on empathy and memory. T. TAKANO*; K. MOGI. *Tokyo Inst. of Technol., Sony Computer Sci. Labs.*

2:00 SS17 **69.02** Anger produces an opposite effect on positive and negative memory previously associated with a transgressor: An evidence from facial electromyogram. T. MINAMOTO*; M. HARUNO. *Nat'l Inst. of Info and Comm Technol.*

3:00 SS18 **69.03** ● Vicarious reward enhances the mirror neuron system activity: An EEG study. T. INOMATA*; T. ZAMA; Y. INOUE; S. SHIMADA. *Meiji Univ.*

4:00 SS19 **69.04** Asymmetries of facial expressions and facial perception: An indication of Macchiavellian intelligence or of "grin and bear it" survival of the nicest. B. PREILOWSKI*. *Tuebingen Univ.*

1:00 SS20 **69.05** Social conditioned place preference in young children. B. L. THOMPSON*; M. CHOU; D. BARON; S. TAKATA. *USC.*

2:00 SS21 **69.06** Neurologic nudges to purchase health insurance. P. J. ZAK*; J. BARRAZA; E. TERRIS. *Claremont Grad Univ., Claremont Grad. Univ.*

3:00 SS22 **69.07** ▲ Burnout and mental health in a sample of university students. C. CAMILLERI; S. SAMMUT*. *Franciscan Univ. of Steubenville.*

4:00 SS23 **69.08** Relationship-specific encoding of social touch in the somatosensory corticessomatosensory cortices. J. T. SUVILEHTO; V. RENVALL*; L. NUMMENMAA. *Aalto Univ. Sch. of Sci., Univ. of Turku.*

1:00 SS24 **69.09** Vasopressin effects on human social responses are sex, dose, and context dependent. R. R. THOMPSON*; J. RILLING; D. PRICE. *Bowdoin Col., Emory Univ., Maine Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 SS25 **69.10** Performance decrement induced by increasing social incentive. A. SUGIURA*; Y. YOMOGIDA; K. IIJIMA; T. HASEGAWA; K. MATSUMOTO. *Dept. of Life Sciences, GSAS, Univ. of Tokyo, Japan Society for the Promotion of Sci., Brain Sci. Institute, Tamagawa Univ.*

3:00 SS26 **69.11** The influence of personality and genetic factors on peer pressure susceptibility. M. NICULESCU*; E. A. AGUILAR; C. R. PARSONS; P. V. CARPER; R. S. BOYLE; J. K. KUTCH; V. J. TRANCHITELLA. *Lebanon Valley Coll.*

4:00 TT1 **69.12** Observational learning computations in neurones of the human anterior cingulate cortex. M. R. HILL*; E. D. BOORMAN; I. FRIED. *Ctr. For Neuroprosthetics, Caltech, Caltech, Univ. of California Los Angeles, Caltech, Univ. of Oxford, Univ. of California Los Angeles, Tel-Aviv Univ.*

1:00 TT2 **69.13** Cultural values moderate neural predictors of giving. B. PARK*; J. L. TSAI; E. BLEVINS; B. KNUTSON. *Stanford.*

2:00 TT3 **69.14** Generalization learning mechanisms support adaptive decisions to trust. O. FELDMANHALL*; J. DUNSMOOR; L. HUNTER; S. LACKOVIC; A. TODOROV; E. A. PHELPS, 10003. *NYU, New York Univ., New York Univ., Princeton Univ.*

POSTER

070. Positive and Negative Emotional States

Theme G: Motivation and Emotion

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

1:00 TT4 **70.01** Dorsal raphe regulation of aggression via the medial orbital frontal cortex. J. NORDMAN*; Z. LI. *NIH.*

2:00 TT5 **70.02** Playback of 50-55 kHz ultrasonic vocalizations reduces alcohol intake and negative-affect in rats selectively bred for high- and low-alcohol consumption. C. L. DUVAUCHELLE*; J. M. RENO; N. THAKORE; W. T. MADDOX. *Univ. of Texas, Univ. of Texas.*

3:00 TT6 **70.03** Fight or escape: A novel paradigm to study approach/avoidance behavior to provocation. U. M. KRÄMER*; M. BUADES-ROTGER; F. BEYER. *Univ. of Luebeck, Univ. of Luebeck, Univ. Col. London.*

4:00 TT7 **70.04** Protein phosphatase 2A is required for rapid antidepressant responses of NMDA receptor blockade. C. CHANG*; P. GEAN. *Dept. of Pharmacology, Natl. Cheng-Kung Univ., Dept. of Pharmacology, Col. of Medicine, Natl. Cheng-Kung Univ.*

1:00 TT8 **70.05** ▲ Dopaminergic modulation of aggression and anxiety: A zebrafish model. E. HELMKE; Y. TAVERAS CRUZ; M. DOUMA; A. DE VENECIA; J. NEEDHAM; J. STEFANI; S. SASZIK*. *Northeastern Illinois Univ.*

2:00 TT9 **70.06** Role of hippocampal neurogenesis in behavioral responses to an operant model of frustrative nonreward. M. C. TSUDA*; R. KARLSSON; H. A. CAMERON. *NIMH/NIH.*

3:00 TT10 **70.07** Computational account of empathy toward human and computer: A study by reinforcement learning model. N. SAITO*; K. KATAHIRA; H. OHIRA. *Grad. Sch. of Envrn. Studies, Nagoya U.*

4:00 TT11 **70.08** Withdrawn.

1:00 TT12 **70.09** Negative affect-associated USV acoustic characteristics predict future excessive alcohol drinking and alcohol avoidance in P and NP male rats. J. M. RENO*, JR; N. THAKORE; L. K. CORMACK; T. SCHALLERT; R. BELL; W. T. MADDOX; C. L. DUVAUCHELLE. *Univ. of Texas At Austin, Univ. of Texas, Univ. of Texas, Indiana Univ. Sch. of Med.*

2:00 TT13 **70.10** How do rats learn to fear alarm calls? S. C. FURTAK*; C. CALUB; T. H. BROWN. *California State Univ., Yale Univ.*

3:00 TT14 **70.11** Brain serotonin and the mediation of early life stress. M. T. WEIDNER*; C. AUTH; J. WAIDER; A. G. SCHMITT; D. L. A. VAN DEN HOVE; K. LESCH. *Maastricht Univ., Univ. of Wuerzburg.*

4:00 UU1 **70.12** The role of central interleukin 1 in aggressive behavior of male mice. A. TAKAHASHI*; H. ALEYASIN; M. E. FLANIGAN; A. BRANCATO; C. MENARD; M. L. PFAU; V. KANA; J. WANG; G. E. HODES; B. S. MCEWEN; S. J. RUSSO. *Univ. of Tsukuba, Icahn Sch. of Med. at Mount Sinai, The Rockefeller Univ., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

1:00 UU2 **70.13** Profiles of animals exposed to an incentive downshift. I. D. ANNICCHIARICO ISEDA*; L. CUENYA. *Texas Christian Univ., Inst. de Investigaciones Médicas Alfredo Lanari - Univ. de Buenos Aires.*

2:00 UU3 **70.14** Central amygdala circuits controlling feeding and appetitive behaviours. A. DOUGLASS*; H. KÜCÜKDERELI; M. PONSERRE; M. MARKOVIC; J. GRÜNDEMANN; P. ALCALA MORALES; C. STROBEL; A. LÜTHI; R. KLEIN. *Max Planck Inst. For Neurobio., Grad. Sch. of Systemic Neurosciences (LMU), Intl. Max Planck Res. Sch. for Mol. and Cell. Life Sci., Friedrich Miescher Inst. for Biomed. Res.*

3:00 UU4 **70.15** iRat as a tool for social neuroscience. L. F. SCHUSTER; N. W. BUTLER; D. BALL; S. HEATH; J. TAUFATOFUA; L. K. QUINN*; J. WILES; A. A. CHIBA. *Univ. of California San Diego, Univ. of Queensland, UCSD.*

4:00 UU5 **70.16** The role of estrogen receptors in response to positive emotional stimuli in rats observed in a seminatural environment. O. LE MOENE*; A. ÅGMO. *Univ. of Tromso Fac. of Hlth. and Sci.*

1:00 UU6 **70.17** Gender effect of humor on decision-making: A behavioral and electrophysiological report. J. A. FLORES*; I. RUBIO; G. CAMPOS; E. RODRIGUEZ. *Pontificia Univ. Católica De Chile, Pontificia Univ. Católica de Chile, Pontificia Univ. Católica de Chile, Pontificia Univ. Católica de Chile.*

2:00 UU7 **70.18** Investigating rapid versus delayed onset antidepressant action in rodents: A behavioural and computational approach. C. A. HALES*; E. S. J. ROBINSON; C. J. HOUGHTON. *Univ. of Bristol, Univ. of Bristol, Univ. of Bristol.*

3:00 UU8 **70.19** When focal brain damage is a good thing: Neural correlates of improvements in personality and behavior following a neurological event. M. KING*; J. BRUSS; D. TRANEL. *The Univ. of Iowa.*

4:00 UU9 **70.20** The neural underpinnings of adolescent emotion regulation in the context of reward pursuit. S. J. DEWITT; F. FILBEY*. *The Univ. of Texas at Dallas, Univ. of Texas At Dallas.*

1:00 UU10 **70.21** Autonomic responses during Pavlovian learning in monkeys with orbitofrontal cortex lesions. J. HWANG*; P. L. NOBLE; E. A. MURRAY. *Lab. of Neuropsychology, NIMH/NIH.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 UU11 **70.22** Neural mechanisms of mood induced modulation of reality monitoring in schizophrenia. K. SUBRAMANIAM*; D. MATHALON; S. NAGARAJAN; S. VINOGRADOV. *UCSF.*

POSTER

071. Antidepressants in Animal Models of Depression

Theme G: Motivation and Emotion

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

1:00 UU12 **71.01** Sex differences and commonalities in the epigenetic modulation of mGlu2-dependent structural plasticity of key limbic brain regions by rapid and slow acting antidepressants. C. NASCA*; B. BIGIO; T. LAU; D. ZELLI; H. CATES; J. NI; L. BRICHTA; P. GREENGARD; E. J. NESTLER; B. S. MCEWEN. *The Rockefeller Univ., Mount Sinai Sch. of Med., The Rockefeller Univ.*

2:00 UU13 **71.02** ● Effects of the multimodal antidepressant vortioxetine on the psychostimulant effects of MK-801-induced changes in locomotor activity and attentional processes. D. SMITH*; T. M. HILLHOUSE; C. R. MERRITT; A. L. PEHRSON; C. SANCHEZ; J. H. PORTER. *Virginia Commonwealth Univ., Univ. of Michigan, Weber State Univ., Virginia Commonwealth Univ., Lundbeck Res. USA, Inc.*

3:00 UU14 **71.03** Evaluation of the role of transcription factor CREB in noradrenergic neurons in response to antidepressant treatment: Study on novel transgenic mouse model. G. KREINER*; K. RAFA-ZABLOCKA; W. BUCZEK; M. BAGINSKA; I. NALEPA. *Inst. of Pharmacology, PAS.*

4:00 VV1 **71.04** Epigenetic regulation of adult hippocampal structural neuroplasticity by chronic stress and antidepressants: Is there a role for DNA 5hmC? A. MATEUS PINHEIRO*; P. PATRICIO; N. ALVES; A. MACHADO-SANTOS; M. MORAIS; J. CORREIA; J. BESSA; J. MARQUES; M. BRANCO; N. SOUSA; L. PINTO. *Life and Hlth. Sci. Res. Inst. (ICVS), ICVS/3B's - PT Government Associate Lab., Blizard Institute, Barts and The London Sch. of Medicine, Queen Mary Univ. of London.*

1:00 VV2 **71.05** Signatures of central metabolic syndrome are associated with depressive-like phenotypes and rescued by an antidepressant candidate. B. BIGIO*; D. ZELLI; A. A. MATHE'; V. C. SOUSA; P. SVENNINGSSON; B. S. MCEWEN; C. NASCA. *Rockefeller Univ., The Rockefeller Univ., Rockefeller Univ., Karolinska Institutet.*

2:00 VV3 **71.06** Sex differences in antidepressant effects of κ opioid receptor antagonists. A. LAMAN-MAHARG*; M. ZUFELT; T. COPELAND; R. SNYDER; T. FENNELL; F. I. CARROLL; B. C. TRAINOR. *Univ. of California, Davis, Res. Triangle Inst.*

3:00 VV4 **71.07** Changes in cortical astroglial cells in response to stress and antidepressant treatment. S. SIMARD*; G. COPPOLA; S. ABDIRASHID; R. THEDE; S. LAHAIE; S. HAYLEY; N. SALMASO. *Carleton Univ., Yale Univ.*

4:00 VV5 **71.08** Antidepressant effects of AMPA receptor potentiation in a model of treatment-resistant depression. S. W. WHITE*; R. S. GADEPALLI; J. M. RIMOLDI; K. J. SUFKA. *Univ. of Mississippi, Univ. of Mississippi, Univ. of Mississippi, Univ. of Mississippi.*

1:00 VV6 **71.09** ● A novel δ opioid receptor agonist NC-2800 produces the anxiolytic-like and antidepressant-like effects in animal models. A. SAITOH*; E. NAKATA; L. GOTOH; M. HIROSE; J. SAKAI; T. KOMATSU; H. FUJII; M. YAMADA; H. NAGASE; T. YAMAKAWA. *Natl. Ctr. of Neurol. and Psychiatry, Nippon Chemiphar Co. Ltd., Sch. of Pharmacy, Kitasato Univ., Intl. Inst. for Integrative Sleep Med. (WPI-IIIS), Univ. of Tsukuba.*

2:00 VV7 **71.10** Boosting glutamatergic tone in infralimbic -but not prelimbic- cortex evokes antidepressant-like effects in rats through AMPA receptor activation. J. GASULL-CAMÓS; F. ARTIGAS; A. CASTAÑE*. *IIBB-CSIC, IDIBAPS, CIBERSAM.*

3:00 VV8 **71.11** Transcriptomic evidence for dematuration of the mouse hippocampus and frontal cortex by chronic antidepressant treatment. H. HAGIHARA*; K. OHIRA; T. MIYAKAWA. *Fujita Hlth. Univ., Mukogawa Women's Univ., Natl. Inst. for Physiological Sci.*

4:00 VV9 **71.12** Uncoupling DAPK1 from NMDA receptor NR2B subunit exerts rapid antidepressant-like effects. S. LI*; L. XU; Y. HAN; R. ZHANG; L. LU. *Natl. Inst. On Drug Dependence,Peking Univ., Inst. of Mental Health, Natl. Clin. Res. Ctr. for Mental Disorders, Key Lab. of Mental Hlth. and Peking Univ. Sixth Hospital, Peking University, Beijing, 100191, China, Peking-Tsinghua Ctr. for Life Sci. and PKU-IDG/McGovern Inst. for Brain Research, Peking University, Beijing 100871, China.*

1:00 VV10 **71.13** Sex differences in the antidepressant effect of scopolamine in rats. B. WICKS*; M. SHORE; S. KHANTSIS; A. CERETTI; S. COHEN; A. FRITZ; Y. KAWASUMI; D. BANGASSER. *Temple Univ.*

2:00 VV11 **71.14** Cell cycle regulation of the hippocampal progenitor cells in depression and by antidepressants. P. PATRICIO*; A. MATEUS-PINHEIRO; A. MACHADO-SANTOS; N. ALVES; M. MORAIS; J. BESSA; N. SOUSA; L. PINTO. *Sch. of Hlth. Sciences, Univ. of Minho, ICVS/3B's - PT Government Associate Lab.*

3:00 VV12 **71.15** ● Effect of the antidepressant agomelatine on the IL-6 pathway in rats exposed to chronic mild stress: Role of suppressor of cytokine signaling 3 (SOCS3). A. C. ROSSETTI*; M. PALADINI; C. A. BRUNING; G. RACAGNI; M. PAPP; M. A. RIVA; R. MOLTENI. *Univ. of Milan, Federal Univ. of Santa Maria, Polish Acad. of Sci.*

4:00 VV13 **71.16** Peripheral administration of Lactate produces antidepressant-like effects. A. CARRARD; M. ELSAYED; M. MARGINEANU; B. BOURY-JAMOT; L. FRAGNIÈRE; E. MEYLAN; J. PETIT; H. FIUMELLI; P. J. MAGISTRETTI; J. MARTIN*. *Ctr. For Psychiatric Neurosci., Brain Mind Inst. Ecole Polytechnique de Lausanne, King Abdullah Univ. of Sci. and Technol. (KAUST) BESE Div.*

1:00 VV14 **71.17** Role of medial prefrontal cortical Brain-Derived Neurotrophic Factor in the rapid antidepressant effects of scopolamine in mice. M. RAMAKER*; M. ZHANG; K. VU; M. HAWKINS; S. L. THOMPSON; S. C. DULAWA. *Univ. of California-San Diego, Univ. of Chicago.*

2:00 VV15 **71.18** ▲ Antidepressant-like effects of the atypical antipsychotic amisulpride in the differential-reinforcement-of-low-rate (drl) 72 sec operant procedure and in the forced swim task. M. KHAN*; H. NANGUNURI; S. E. CARLAN; S. E. YOUNG; S. E. YOUNG; A. R. GRANT; D. SMITH; K. A. WEBSTER; T. M. HILLHOUSE; J. H. PORTER. *Virginia Commonwealth Univ., Virginia Commonwealth Univ., Univ. of Michigan, Weber State Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 VV16 **71.19** Evaluation of home-cage social behaviors in a mouse model of mood disorders by chronic treatment with imipramine. G. KURATOMI*; Y. ARIME; S. SUZUKI; K. AKIYAMA. *Dokkyo Med. Univ. Sch. of Med.*

4:00 VV17 **71.20** Maternal-fetal transfer of the SSRI Citalopram: Pharmacokinetics and effects on fetal brain development. J. C. VELASQUEZ*; N. GOEDEN; L. GALINDO; S. HEROD; C. SIMASOTCHI; T. FOURNIER; S. GIL; A. BONNIN. *Keck Sch. of Med. of USC, Univ. of Paris Descartes, PremUp Fndn., Federal Univ. of Pernambuco, Azusa Pacific Univ.*

1:00 VV18 **71.21** Altered sensitivity to the rewarding properties of cocaine in adult female c57bl/6 mice exposed to fluoxetine during adolescence. F. J. FLORES-RAMIREZ; D. O. SANCHEZ; I. GARCIA; C. GONZALEZ; A. R. ZAVALA; S. D. INIGUEZ*. *Univ. of Texas at El Paso, California State Univ.*

2:00 VV19 **71.22** ▲ Effect of amygdaloid kindling and the fluoxetine in the depressive behavior and the susceptibility tonic-clonic seizures in rats. A. DÍAZ*; A. VALDÉS-CRUZ; J. D. AYALA-RODRIGUÉZ; L. MARTÍNEZ-MOTA; B. A. GARAY-CORTÉS; S. ALMAZÁN-ALVARADO; R. FERNÁNDEZ-MAS. *Inst. Nacional De Psiquiatría Ramón De La Fuen.*

3:00 VV20 **71.23** Behavioural and hippocampal changes across the pre- to postpartum transition within a postpartum depression model with and without the effects of a serotonin reuptake inhibitor in rats. A. OVERGAARD*; S. E. LIEBLICH; R. RICHARDSON; L. A. M. GALEA; V. G. FROKJAER. *Copenhagen Univ. Hosp. Rigshospitalet, Univ. of British Columbia, Mental Hlth. Services.*

4:00 VV21 **71.24** Depressive and anxiety-like behaviors in Akt3 KO mice are rescued by chronic lithium treatment. Y. BERGERON*; G. BUREAU; M. LAURIER-LAURIN; E. ASSELIN; G. MASSICOTTE; M. CYR. *Univ. du Quebec a Trois-Rivieres.*

POSTER

072. Neural Circuits in Animal Models of Depression

Theme G: Motivation and Emotion

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

1:00 VV22 **72.01** Prefrontal cortex and amygdala oscillatory and single-unit activity during escapable and inescapable stress in the learned helplessness model. M. T. ROSSIGNOLI*; D. B. MARQUES; R. N. RUGGIERO; L. S. BUENO-JUNIOR; J. P. LEITE. *Univ. of São Paulo.*

2:00 VV23 **72.02** Taurine reduces oxidative stress and DNA damage in the frontal cortex and in the hippocampus of diabetic rats. H. M. BARROS*; G. CALETTI; S. BANDIERA, 90050-171; A. W. HANSEN; A. M. MORÁS; L. STEFFENS, 90050-171; D. J. MOURA; R. GOMEZ. *UFCSPA, UFCSPA, UFRGS, UFCSPA.*

3:00 VV24 **72.03** Sex-dependent alterations in habenular endocannabinoid signaling following exposure to chronic unpredictable stress. A. L. BERGER*; A. M. HENRICKS; L. N. BAXTER-POTTER; J. M. LUGO; M. A. STITCH; M. N. HILL; R. J. MCLAUGHLIN. *Washington State Univ., Washington State Univ., Univ. of Calgary.*

4:00 VV25 **72.04** Interferon-γ and galectin-9 interact to induce indoleamine-2,3-dioxgenase 1 and 2 expression in the mouse hippocampus. A. K. BROOKS; M. A. LAWSON; J. L. RYTYCH; K. C. YU; T. M. JANDA; A. J. STEELMAN; R. H. MCCUSKER*. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

1:00 VV26 **72.05** Amygdala Cholecystokinin-Nucleus accumbens circuit control depression-related behaviors. S. CHENJIE*; K. LI; X. YU; J. FU; H. WANG; K. PENG; H. PAN; Y. ZHANG; Y. LI; H. GENG; S. DUAN; X. LI. *Zhejiang Univ. Sch. of Med., Howard Hughes Med. Institute, Departments of Physiology, Biochem. and Biophysics.*

2:00 WW1 **72.06** ● RNAseq on FACS-isolated medium spiny neurons reveals distinct roles for D1 and D2 cells at baseline and in response to chronic stress. H. KRONMAN*; B. LABONTÉ; E. RIBEIRO; I. PURUSHOTHAMAN; C. PEÑA; O. ENGMANN; M. CAHILL; O. ISSLER; D. FERGUSON; H. SUN; E. NESTLER. *Icahn Sch. of Med. At Mount Sinai, Univ. of Arizona Col. of Medicine-Phoenix, Columbia Univ.*

3:00 WW2 **72.07** Reversal of the durable consequences of adolescent social isolation. E. A. HINTON*; A. G. ALLEN; S. L. GOURLEY. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Emory Univ., Emory Univ.*

4:00 WW3 **72.08** Perineuronal nets in the medial prefrontal cortex regulate vulnerability to stress. J. SHI*; N. CHEN; D. HU; Y. HAN; L. LU. *Natl. Inst. On Drug Dependence of Peking Un, Inst. of Mental Health, Natl. Clin. Res. Ctr. for Mental Disorders, Key Lab. of Mental Hlth. and Peking Univ. Sixth Hospital, Peking Univ., Peking-Tsinghua Ctr. for Life Sci. and PKU-IDG/McGovern Inst. for Brain Res.*

1:00 WW4 **72.09** Unfolded protein response activity in hippocampus of rodent models of depression. M. TIMBERLAKE*; Y. DWIVEDI. *UAB.*

2:00 WW5 **72.10** Cell type and projection specific roles of ventral pallidal neurons in depression. D. KNOWLAND*; V. LILASCHAROEN; C. PACIA; S. SHIN; B. LIM. *UCSD.*

POSTER

073. New Molecular Targets in Animal Models of Depression

Theme G: Motivation and Emotion

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

1:00 WW6 **73.01** β-hydroxybutyrate, endogenic NLRP3 inflammasome inhibitor, ameliorates neuro inflammation caused by stress. T. YAMANASHI*; M. IWATA; K. TSUNETOMI; N. KAJITANI; A. MIURA; R. S. DUMAN; K. KANEKO. *Tottori Univ., Yale Univ. Sch. of Med.*

2:00 WW7 **73.02** ● Ryanodine receptor type 2, a potential therapeutic target for bipolar disorder & major depressive disorder. J. YAO*; F. HIESS; R. WANG; S. W. CHEN. *Univ. of Calgary.*

3:00 WW8 **73.03** Reduced Slc6a15 in nucleus accumbens D2 expressing neurons mediates depression susceptibility. L. M. RIGGS*; R. CHANDRA; T. C. FRANCIS; H. NAM; H. SUN; C. A. TAMMINGA; G. TURECKI; M. LOBO. *Univ. of Maryland Sch. of Med., Mount Sinai Sch. of Med., Univ. of Texas Southwestern Med. Ctr., McGill Group for Suicide Studies, McGill Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 WW9 **73.04** Haploinsufficiency of the affective disorders associated Cacna1c gene results in altered emotional behavior in rats: Developmental trajectories and inflammatory markers. M. D. BRAUN*; T. M. KISKO; R. KAYUMOVA; C. RAITHEL; C. HOHMEYER; M. RIETSCHEL; S. H. WITT; R. K. W. SCHWARTING; H. GARN; M. WÖHR. *Philipps-University Marburg, Central Inst. of Mental Health, Med. Fac. Mannheim/Heidelberg Univ., Philipps-University Marburg.*

1:00 WW10 **73.05** Effects of κ-opioid receptor antagonist on depression-like behavior. A. WILLIAMS*; B. C. TRAINOR. *Univ. of California Davis.*

2:00 WW11 **73.06** Reduced enkephalin signaling in the nucleus accumbens D2 - MSN circuit regulates depression-like phenotype in social defeat stress. H. NAM*; R. CHANDRA; T. C. FRANCIS; S. DAS; M. K. LOBO. *Univ. of Maryland, Baltimore.*

3:00 WW12 **73.07** Hippocampal α7 nAChR is a critical component for cholinergic regulation of anxiety and depression-like behaviors in C57BL/6J male and female mice. T. MOSE*; Y. S. MINEUR; S. BLAKEMAN; S. A. NEWBOLD; M. R. PICCIOTTO; M. R. PICCIOTTO. *Yale Univ., Yale Univ. Sch. of Med.*

4:00 WW13 **73.08** P11, a possible mood regulator, is essential for dopamine responses to reward in the nucleus accumbens. Y. HANADA*; Y. KAWAHARA; Y. OHNISHI; T. SHUTO; M. KUROIWA; N. SOTOGAKU; Y. SAGI; P. GREENGARD; A. NISHI. *Kurume Univ. Sch. of Med., The Rockefeller Univ.*

1:00 WW14 **73.09** Depressive phenotype in N-acetylaspartate synθse Shati/Nat8l-overexpressed mice. Y. MIYAMOTO*; K. FU; N. IEGAKI; K. SUMI; Y. FURUKAWA-HIBI; S. MURAMATSU; T. NABESHIMA; K. UNO; A. NITTA. *Univ. of Toyama, Nagoya Univ. Grad. Sch. of Med., Jichi Med. Univ., Fujita Hlth. Univ.*

2:00 WW15 **73.10** Transcriptional regulation of dendritic complexity mediates susceptibility to social stress. T. C. FRANCIS*; R. CHANDRA; P. KONKALMATT; L. M. RIGGS; A. SERAFINI; M. LOBO. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore, George Washington Univ., Johns Hopkins Univ.*

3:00 WW16 **73.11** Anxiety and depression in Setdb1 histone H3K9 methyltransferase mutant mice. Y. JIANG*; E. LOH; B. KASSIM; I. MAGRO; B. JAVIDFAR; I. PURUSHOTHAMAN; L. SHEN; S. AKBARIAN. *Mount Sinai Sch. of Med., Mount Sinai Sch. of Med.*

4:00 WW17 **73.12** TNF-α antagonism restores deficits in neurogenesis and hippocampal and prefrontal cortex-dependent memory in an animal model of depression. K. BRYMER*; E. FENTON; H. J. CARUNCHO; L. E. KALYNCHUK. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan.*

1:00 WW18 **73.13** Tet1 in nucleus accumbens regulates stress responses. J. FENG*; C. PENA; I. PURUSHOTHAMAN; O. ENGMANN; D. WALKER; O. ISSLER; A. BROWN; M. DOYLE; E. HARRIGAN; E. MOUZON; V. VIALOU; L. SHEN; M. M. DAWLATY; R. JAENISCH; E. J. NESTLER. *Florida State Univ., icahn school of medicine at mount sinai, icahn school of medicine at mount sinai, Albert Einstein Col. of Med., Whitehead Inst. for Biomed. Res.*

2:00 WW19 **73.14** Ablation of interferon inducible IFITM genes leads to anxiety- and depression- like behaviors. S. CHEN*; W. LIN; H. CHANG; Y. WEE; P. CHU. *Natl. Chengchi Univ., Univ. of Utah, Natl. Chengchi Univ.*

3:00 WW20 **73.15** Expression of inflammatory cytokine genes in the Disc1 mouse model of major mental illness. C. R. LAPSLEY; B. LANG; D. ST. CLAIR; C. MCCAIG; A. J. BJOURSON; E. K. MURRAY*. *Univ. of Ulster, Univ. of Aberdeen, Univ. of Ulster.*

4:00 WW21 **73.16** Role of Heat shock protein 105 on depression-like behavior in mice. Y. UTAKA*; R. TANOUE; Y. MORITA; S. YAMAMOTO; N. HASHIKAWA-HOBARA; N. HASHIKAWA. *Okayama Univ. of Sci.*

1:00 WW22 **73.17** ▲ Role of $Ca_v1.2$ calcium channel in hippocampal neurons of animals with depression-like behaviors. C. MORENO NARANJO*; P. HARDY; D. PINO; M. BASUÑAN; T. HERMOSILLA; D. VARELA; P. ROJAS. *Univ. De Santiago De Chile, Univ. de Chile.*

2:00 XX1 **73.18** ● Neural cell adhesion molecule peptide mimetics modulate affective behavior. C. A. TURNER*; S. J. WATSON, Jr.; H. AKIL. *Univ. of Michigan, Univ. of Michigan.*

3:00 XX2 **73.19** siRNA-mediated suppression of astroglial glutamate transporters GLT-1 and GLAST in infralimbic, but not prelimbic cortex, induces depressive-like behaviors in mice. N. FULLANA; A. FERRÉS-COY; E. RUIZ-BRONCHAL; A. BORTOLOZZI; F. ARTIGAS*. *IIBB-CSIC, CIBERSAM, IDIBAPS.*

4:00 XX3 **73.20** A cell-type specific role for nucleus accumbens neuroligin-2 in depression and stress susceptibility. M. HESHMATI*; H. ALEYASIN; C. MENARD; M. E. FLANIGAN; M. L. PFAU; P. H. GOFF; G. E. HODES; A. TAKAHASHI; A. LEPACK; L. BICKS; D. J. CHRISTOFFEL; R. CHANDRA; A. K. FRIEDMAN; G. TURECKI; M. HAN; M. LOBO; I. MAZE; S. A. GOLDEN; S. J. RUSSO. *Icahn Sch. of Med. at Mount Sinai, Stanford Univ., Univ. of Maryland, McGill Univ., Natl. Inst. on Drug Abuse.*

1:00 XX4 **73.21** Effects of norbinaltorphimine (nor-BNI) on depressive-like and habit formation behavior in the IFN-α-induced depression model. J. ROUINE*; C. K. CALLAGHAN; S. M. O'MARA. *Trinity Col. Inst. of Neurosci.*

2:00 XX5 **73.22** Dissecting the contribution of intracellular estrogen receptor subtypes to chronic stress resilience in female mice. R. MAHMOUD*; J. A. CHAITON; C. CHOW; S. E. LIEBLICH; L. A. M. GALEA. *Univ. of British Columbia.*

3:00 XX6 **73.23** Esr1 is an upstream regulator of pro-resilient transcriptional changes in mouse models of depression. Z. S. LORSCH*; R. BAGOT; I. PURUSHOTHAMAN; D. WALKER; O. ISSLER; B. LABONTÉ; H. KRONMAN; P. J. HAMILTON; C. J. PEÑA; M. E. CAHILL; L. SHEN; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai.*

4:00 XX7 **73.24** Loss of SIRT1 in hippocampal and cortical glutamatergic neurons leads to depressive-like behaviors and hypoexcitability of pyramidal neurons. Y. LEI*; J. J. YOU; J. G. WANG; X. Y. LU. *UT Hlth. Sci. Ctr. At San Antonio.*

1:00 XX8 **73.25** Cell-type specific actions of SIRT1 in the nucleus accumbens mediate depression-like behaviors. H. KIM*; J. HESTERMAN; T. CALL; S. CAROTENUTO; K. ARMENTA; D. FERGUSON. *The Univ. of Arizona Col. of Med.*

2:00 XX9 **73.26** TonEBP regulates psychotomimetic behaviors of mice through modulating brain dopaminergic neurotransmission. S. KIM*; H. PARK; S. PARK; Y. KIM; H. KWON. *Dongguk Univ. Intl. Hosp., Seoul Natl. Univesity, Ulsan Natl. Inst. of Sci. and Technol.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 XX10 **73.27** Sirt1 mediates depression-like behaviors in the nucleus accumbens. T. CALL*; H. KIM; J. HESTERMAN; S. MAGAZU; E. KEELEY; K. ARMENTA; R. NEVE; E. NESTLER; D. FERGUSON. *Univ. of Arizona Col. of Med., Icahn Sch. of Med. at Mount Sinai, MIT.*

4:00 XX11 **73.28** Role of pde1b in depressive-like behavior: A mouse model. J. R. HUFGARD*; M. T. WILLIAMS; C. V. VORHEES. *Univ. of Cincinnati Med. Ctr., Cincinnati Children's Hosp. Med. Ctr.*

1:00 XX12 **73.29** Morc1, a gene associated with early-life stress and depression, in the rodent brain. N. B. FREUND*; A. MUNDORF; D. BEYER. *Universitaetsklinikum Tuebingen.*

2:00 XX13 **73.30** Susceptibility and resilience to the effects of prolonged social defeat in adolescent male mice: A study of neuronal nitric oxide synthase. S. CHIAVEGATTO*; L. S. RESENDE; M. N. MUSCARA; S. A. TEIXEIRA; M. R. ARAUJO; P. E. N. S. VASCONCELOS; J. F. S. CARRILLO. *Biomed. Sci. Inst. - Univ. of Sao Paulo.*

POSTER

074. Treatment of Depression: Exercise and Physical Therapies

Theme G: Motivation and Emotion

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

1:00 XX14 **74.01** Social interaction rescued abnormal mood and attention behaviors caused by acute stress in adolescent mice through ERK1/2 modulation. J. KIM*; M. KO; E. L. GONZALES. *Konkuk Univ.*

2:00 XX15 **74.02** ● Repetitive transcranial magnetic stimulation (rTMS) side effect characterization for treatment resistant depression. Non-inferiority rTMS trial. C. DOBEK*; J. THAM; C. NORTHCOTT; J. DOWNAR; Z. J. DASKALAKIS; A. DIPINTO; R. W. LAM; D. M. BLUMBERGER; F. VILA-RODRIGUEZ. *Univ. of British Columbia, Univ. Hlth. Network, Ctr. for Addiction and Mental Hlth.*

3:00 XX16 **74.03** Magnetic seizure therapy in geriatric depression: Neurophysiological characteristics. M. LY*; S. B. ROWNY; L. CASAL-ROSCUM; J. GOWATSKY; P. SEHATPOUR; J. PRUDIC; D. C. JAVITT; C. A. CHEN. *Univ. of Connecticut, Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr.*

4:00 XX17 **74.04** Improved outcomes in treatment-resistant depression with concurrent rTMS and CBT. A. D. SNYDER*; M. SPIVEY; C. BLEDOWSKI; A. PANDURANGI. *Virginia Commonwealth Univ.*

1:00 XX18 **74.05** Using seizure adequacy measures to inform clinical decisions in magnetic seizure therapy. F. A. BACKHOUSE*; Y. NODA; J. DOWNAR; Z. J. DASKALAKIS; D. M. BLUMBERGER. *Ctr. For Addiction and Mental Hlth., Temerty Ctr. for Therapeut. Brain Intervention, Ctr. for Addiction and Mental Hlth., Temerty Ctr. for Therapeut. Brain Intervention, Ctr. for Addiction and Mental Hlth., Toronto Western Hospital, Univ. Hlth. Network.*

2:00 XX19 **74.06** Next-generation sequencing of the rat hippocampal miRNome following chronic electroconvulsive stimulation. K. M. RYAN*; P. SMYTH; G. BLACKSHIELDS; O. SHEILS; D. M. MCLOUGHLIN. *Trinity Col. Inst. of Neurosci., Dept. of Psychiatry, Trinity Col. Dublin, St. Patrick's Univ. Hosp., Dept. of Histopathology, Sir Patrick Dun Res. Laboratory, Trinity Col. Dublin, St. James's Hosp.*

3:00 XX20 **74.07** An open pilot study of non-pharmacological augmentation therapy in major depressive patients using inaudible high-frequency sounds. M. HONDA*; R. YAGI; N. KAWAI; O. UENO; Y. YAMASHITA; T. OOHASHI. *Dept. Functional Brain Research, Natl. Ctr. of Neurol. and Psychiatry, Tokyo Seitoku Col., Dept. of Res. and Development, Fndn. for Advancement of Intl. Sci.*

4:00 XX21 **74.08** Anti-depressant deep brain stimulation - How controlled animal experiments help to improve stimulation protocols in the clinic. M. VOGET*; J. RUMMEL; F. WIESKE; R. HADAR; S. EWING; A. SARTORIUS; A. A. MATHÉ; B. VOLLMAYR; C. WINTER. *Universitätsklinikum Carl Gustav Carus, TU Dresden, Charité - Universitätsmedizin Berlin, Zentralinstitut für Seelische Gesundheit, Karolinska Institutet.*

1:00 XX22 **74.09** Cellular mechanisms of simulated deep brain stimulation (sDBS) in rat infralimbic cortex. F. LUO*; Z. H. T. KISS. *Univ. of Calgary, Univ. of Calgary.*

2:00 YY1 **74.10** Mechanical stimulation at PC6 acupoint suppresses stress-induced depressive behavior in rats. J. MOON*; S. KANG; O. KWON; Y. RYU. *Korea Inst. of Oriental Med.*

3:00 YY2 **74.11** The potential protective role of communal nesting on the behavioral consequences of prenatal infection in adult mouse offspring. M. CHAVEZ*; H. NORRIS; K. L. D'ANNA-HERNANADEZ. *California State Univ. San Marcos, California State Univ. San Marcos.*

4:00 YY3 **74.12** The effects of mild chronic variable stress and hypocretin in lactating dams during the postpartum period. A. J. CASTANEDA*; E. LANE; M. CHAVEZ; H. NORRIS; M. HAMLIN; K. L. D'ANNA-HERNANDEZ. *California State Univ. San Marcos.*

1:00 YY4 **74.13** Contingency training influences neurobiological responses to environmental threats and cognitive uncertainty in male and female rats: A potential rat model of behavioral therapy. M. H. KENT*; S. SCOTT; S. LAMBERT; E. KIRK; B. TERHUNE-COTTER; B. THOMPSON; S. NEAL; B. DOZIER; M. BARDI; K. LAMBERT. *Randolph Macon Col., Arizona State Univ., Furman Univ., Randolph Macon Col.*

POSTER

075. Anxiety Disorders

Theme G: Motivation and Emotion

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

1:00 YY5 **75.01** Under watchful eyes: Social observation modulates feedback processing in social anxiety disorder. J. PETERBURS*; R. VOEGLER; C. BELLEBAUM; T. STRAUBE. *Univ. of Muenster, Univ. of Duesseldorf.*

2:00 YY6 **75.02** Impact of anxiety on neural and behavioral responses to incentives. B. FUCHS*; C. GRILLON; M. ERNST; A. GORKA. *NIH.*

3:00 YY7 **75.03** Susceptibility to 7.5% CO_2-evoked panic is associated with hypersensitivity to unpredictable threat. J. Y. LIU*; N. L. BALDERSTON; M. ERNST; C. GRILLON. *Natl. Inst. of Mental Hlth.*

4:00 YY8 **75.04** Threat of shock engages the dlPFC during a wide variety of cognitive paradigms. N. L. BALDERSTON*; A. HSIUNG; J. LIU; M. ERNST; C. GRILLON. *NIH.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 YY9 **75.05** Anxiety enhances right dorsolateral prefrontal cortex activity during retrieval in behavioral pattern separation paradigm. A. HSIUNG*; N. BALDERSTON; M. ERNST; C. GRILLON. *NIH.*

2:00 YY10 **75.06** Investigation of grey matter volume in Social Anxiety Disorder: An independent replication. M. R. STEFANESCU*; S. BOEHME; T. STRAUBE; U. LUEKEN. *Univ. Hosp. Wuerzburg, Univ. Hosp. Muenster.*

3:00 YY11 **75.07** Not everything that looks like change is change: Anxious individuals show over-reactivity to uncertainty in a change point detection task. H. HUANG*; M. PAULUS. *Laureate Inst. for Brain Res.*

4:00 YY12 **75.08** Relationship between cholesterol & number of suicide attempts. O. H. HERNANDEZ*; B. CARMONA-RUIZ; F. A. LEON-CRUZ. *UNIVERSIDAD AUTONOMA DE CAMPECHE, HOSPITAL GENERAL DE ESPECIALIDADES "DR. JAVIER BUENFIL OSORIO". SSA, HOSPITAL PSIQUIATRICO DE CAMPECHE.*

1:00 YY13 **75.09** Increased prefrontal activation to negative stimuli associated with clinical improvement following emotion regulation therapy for generalized anxiety disorder. H. A. RAAB*; C. F. SANDMAN; S. H. SEELEY; E. GARCÍA-LESY; D. M. FRESCO; D. S. MENNIN; C. LISTON. *Weill Cornell Grad. Sch. of Med. Sci., Hunter College, City Univ. of New York, Univ. of Arizona, City Univ. of New York, Kent State Univ., Weill Cornell Med. Col., Weill Cornell Med. Col., Weill Cornell Med. Col.*

2:00 YY14 **75.10** Effects of benzodiazepine receptor agonists on pentobarbital-induced sleep latency in lipopolysaccharide-treated mice. Y. KITAMURA*; S. HONGO; K. OTSUKI; Y. YAMASHITA; A. MACHIDA; H. KANZAKI; I. MIYAZAKI; M. ASANUMA; T. SENDO. *Okayama Univ. Hosp., Okayama Univ. Grad. Sch. of Medicine, Dent. and Pharmaceut. Sci.*

3:00 ZZ1 **75.11** ▲ Are gulf war illness related symptoms unique to Gulf War I veterans? K. LEI*; V. METZGER-SMITH; J. JAVORS; S. GOLSHAN; A. LEUNG. *Univ. of California San Diego, Veterans Med. Res. Fndn., Veterans Admin. San Diego Healthcare, Veteran Admin. San Diego Healthcare Syst., Univ. of California, Sch. of Medicine, San Diego.*

4:00 ZZ2 **75.12** Investigation of brain oscillation under academic stress in the classroom setting. S. LIU*; L. KO; O. KOMAROV; C. LIN; T. JUNG. *Natl. Chiao Tung Univ., Natl. Chiao Tung Univ., Natl. Chiao Tung Univ., Natl. Chiao Tung Univ., UCSD.*

1:00 ZZ3 **75.13** Translational evidence for dysregulation of acid-sensing TDAG8 receptor evoked inflammation in panic disorder. L. L. VOLLMER*; R. AHLBRAND; J. R. STRAWN; R. SAH. *Univ. Of Cincinnati.*

2:00 ZZ4 **75.14** Neurological predictors of treatment outcome in social anxiety disorder: A Neurosynth-aided review. J. CURTISS*; S. M. NOBLE. *Boston Univ., Yale Univ.*

3:00 ZZ5 **75.15** Compulsive behavior of sapap3 mutants in the signal attenuation task. I. EHMER*; L. CROWN; W. VAN LEEUWEN; I. WILLUHN; M. FEENSTRA; D. DENYS. *Netherlands Inst. For Neurosci., Academic Med. Ctr.*

4:00 ZZ6 **75.16** Identifying mechanisms underlying behavioral effects of putative OCD risk gene BTBD3. S. L. THOMPSON*; E. V. HO; M. E. KLINGER; M. J. RAMAKER; A. HAJEISSA; W. R. KATZKA; J. A. KNOWLES; S. C. DULAWA. *UC San Diego, Univ. of Chicago, Univ. of Michigan, USC.*

1:00 ZZ7 **75.17** Juvenile onset of stereotypy with loss of BDNF signaling in D1R expressing striatal neurons. M. ENGELN*; R. CHANDRA; A. LA; S. HAIDER; T. FRANCIS; M. LOBO. *Univ. of Maryland Baltimore, Univ. of Maryland, Col. Park, Johns Hopkins Univ.*

2:00 ZZ8 **75.18** Striatal D1-medium spiny neurons in L-Dopa-induced dyskinesias. S. L. ALBERICO*; T. LENCE; Y. KIM; N. NARAYANAN. *Univ. of Iowa, Univ. of Iowa.*

3:00 ZZ9 **75.19** Functional shift in noradrenergic control over behaviour between the development and the expression of compulsivity. A. BELIN-RAUSCENT*; S. A. TORRISI; B. J. EVERITT; D. BELIN. *Univ. of Cambridge, Univ. of Cambridge.*

4:00 ZZ10 **75.20** Evidence of maladaptive goal-directed system in obsessive-compulsive disorder (OCD) as indexed by abnormal instrumental contingency. M. M. VAGHI*; A. M. APERGIS-SCHOUTE; A. SULE; N. A. FINEBERG; R. N. CARDINAL; T. W. ROBBINS. *Dept. of Psychology, Behavioural and Clin. Neurosci. Inst., Univ. of Cambridge, Cumbria Partnership NHS Fndn. Trust, Hertfordshire Partnership Univ. NHS Fndn. Trust and Univ. of Hertfordshire.*

1:00 ZZ11 **75.21** Disruption of cognitive flexibility in models with disturbances in cortico-striatal circuit function: Relevance to OCD. E. E. MANNING*; J. SHEN; B. BIZUP; M. TORREGROSSA; S. E. AHMARI. *Univ. of Pittsburgh, Tsinghua Univ.*

2:00 ZZ12 **75.22** Voxel-wise predictors of response to stereotactic capsulotomy for OCD. P. NANDA*; G. P. BANKS; Y. PATHAK; D. L. PAULO; G. HORGA; M. Q. HOEXTER; Z. XU; A. C. LOPES; N. C. MCLAUGHLIN; B. GREENBERG; J. P. SHEEHAN; E. C. MIGUEL; A. A. GORGULHO; A. A. DE SALLES; E. T. FONOFF; S. A. RASMUSSEN; S. A. SHETH. *Columbia Univ., Columbia Univ., Univ. of Sao Paulo, Univ. of Virginia, Brown Univ.*

3:00 ZZ13 **75.23** Acquisition and extinction of avoidance behaviors: The role of context. T. K. JACOBSON*; J. R. PHILLIPS; R. D. BURWELL. *Brown Univ., Brown Univ.*

4:00 ZZ14 **75.24** ▲ Exploring activation-connectivity relationships in Obsessive-Compulsive Disorder: Conjoint assessment of task-based activation profiles and resting state functional connectivity. H. PAREKH*; K. RAMASESHAN; A. BURGESS; G. HANNA; P. ARNOLD; D. ROSENBERG; V. DIWADKAR. *Wayne State Univ., Wayne State Univ., Univ. of Michigan, Univ. of Calgary.*

1:00 AAA1 **75.25** Influence of Tourette Syndrome associated SNP on cortical thickness and behavior in children and young adults. T. K. HSU*; A. KRAFNICK; A. TOGA; K. CLARK. *Keck USC Sch. of Med.*

2:00 AAA2 **75.26** Attenuation of compulsivelike behavior through positive allosteric modulation of α4β2 nicotinic acetylcholine receptors in noninduced compulsive-like mice. S. MITRA*; M. MUCHA; S. N. KHATRI; R. GLENNON; M. K. SCHULTE; A. BULT-ITO. *Univ. of Alaska Fairbanks, Univ. of Alaska Fairbanks, Univ. of the Sci. Philadelphia, Virginia Commonwealth Univ., Univ. of the Sci. Philadelphia, Univ. of Alaska Fairbanks.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

076. Addictive Drugs and Development

Theme G: Motivation and Emotion

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

1:00 AAA3 **76.01** Consideration of hemispheric asymmetry in addiction research. H. W. GORDON*. *Natl. Inst. Drug Abuse.*

2:00 AAA4 **76.02** Repeated administration of ketamine in adolescence produces affective changes that last into adulthood. T. ZAFAR*; A. ROCHA; T. TOWNER; K. A. TRUJILLO. *California State Univ. San Marcos.*

3:00 AAA5 **76.03** ▲ Oxycodone reward in male and female adolescent rats: Effects of dose. N. SOLLENBERGER*; A. MANOOGIAN; H. K. PARK; A. R. ZAVALA. *California State University, Long Beach, California State University, Long Beach.*

4:00 AAA6 **76.04** Early-life experience decreases opioid self-administration in adulthood through anti-inflammatory IL-10 signaling in nucleus accumbens. M. J. LACAGNINA*; A. M. KOPEC; S. S. COX; C. WELLS; S. SLADE; P. M. GRACE; L. R. WATKINS; E. D. LEVIN; S. D. BILBO. *Duke Univ., Duke Univ. Med. Ctr., Univ. of Colorado Boulder.*

1:00 AAA7 **76.05** The effects of prenatal stress on cocaine reward, cocaine locomotion and sensorimotor processing are heritable in the BXD recombinant inbred strain panel. J. R. BAGLEY*; R. BOZADJIAN; L. BUBALO; K. L. PLOENSE; P. A. VIEIRA; T. E. KIPPIN. *UC Santa Barbara.*

2:00 AAA8 **76.06** One-trial methamphetamine-induced locomotor sensitization in male and female adolescent rats. B. SALINAS*; E. BATES; B. SCHUESSLER; A. SU; L. TRAN; A. R. ZAVALA. *California State University, Long Beach.*

3:00 AAA9 **76.07** Developmental methamphetamine exposure causes lasting changes to mesolimbic dopamine signaling. D. TORRES*; S. BARAYUGA; R. RUELI; J. YORGASON; M. ANDRES; S. STEFFENSEN; F. BELLINGER. *Univ. of Hawai'i at Manoa Dept. of Cell and Mol. Biol., Oregon Hlth. and Sci. Univ., Univ. of Hawaii at Manoa, Brigham Young Univ.*

4:00 AAA10 **76.08** The influence of prenatal buprenorphine exposure on the nociceptin/orphan FQ system in the locus coeruleus of offspring rats. Y. CHIANG*; J. WU; C. LEE; I. HO. *China Med. Univ. Hosp., China Med. Univ., Chang Gung Inst. of Technol., Chang Gung Inst. of Technol.*

1:00 AAA11 **76.09** ▲ Effects of late gestational cannabinoid exposure on behavioral development in rats. B. ZAMUDIO*; K. R. BREIT; J. D. THOMAS. *San Diego State Univ., San Diego State Univ., San Diego State Univ.*

2:00 AAA12 **76.10** ▲ Adolescent THC exposure following stress induces synaptic changes in adult rats. E. REPO; N. LANDRY; T. BENT; A. STILLAR; M. SAARI; A. C. WEEKS*. *Nipissing Univ.*

3:00 AAA13 **76.11** Permanent disruptions of hippocampal GABAergic neurotransmission in adult rats following perinatal Δ^9-THC exposure. S. BEGGIATO*; M. C. TOMASINI; A. C. BORELLI; T. ANTONELLI; L. FERRARO; S. TANGANELLI. *Univ. of Maryland Baltimore, Univ. of Ferrara, Univ. of Ferrara.*

4:00 AAA14 **76.12** Nandrolone during adolescence increases the response to cocaine in adulthood. A. C. SEGARRA*; C. J. RIVERO QUILES; J. A. FREIRE ARVELO; S. RIVERA BERMUDEZ; I. SANTIAGO MARRERO; J. DIAZ RIVERA. *Univ. of Puerto Rico, Univ. of Puerto Rico, Med. Sci. Campus, Univ. of Puerto Rico, Rio Piedras Campus, Univ. of Puerto Rico, Humacao Campus.*

1:00 AAA15 **76.13** ▲ Fluoxetine exposure during adolescence, in female C57bl/6 mice, does not influence Morris water maze performance in adulthood. J. B. ALIPIO*; L. M. RIGGS; S. D. IÑIGUEZ. *Univ. of Maryland Baltimore, Univ. of Texas at El Paso.*

2:00 AAA16 **76.14** Effects of chronic caffeine exposure on rat brain serotonergic systems. M. ARNOLD*; T. M. SMITH; S. R. ARCHULETA; P. H. WILLIAMS; J. A. MCARTHUR; C. E. O'NEILL; C. A. LOWRY; R. K. BACHTELL. *Univ. of Colorado Boulder, Univ. of Colorado Boulder.*

POSTER

077. Cannabinoids: Neural Mechanisms and Addiction

Theme G: Motivation and Emotion

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

1:00 AAA17 **77.01** Cannabidiol mediated regulation of alcohol consumption. M. GARCÍA-GUTIÉRREZ*, SR; A. VIUDEZ-MARTÍNEZ; C. NAVARRON; M. MORALES-CALERO; F. NAVARRETE; A. TORRES-SUÁREZ; J. MANZANARES. *Inst. De Neurociencias, Univ. Miguel Her, Inst. de Neurociencias, Univ. Miguel Hernandez, Facultad de Farmacia, Univ. Complutense.*

2:00 AAA18 **77.02** Cannabidiol a drug lacking reinforcing activity. J. MANZANARES*; J. MEDRANO-RELINQUE; A. VIUDEZ-MARTÍNEZ; C. NAVARRÓN; A. ARACIL-FERNÁNDEZ; F. NAVARRETE; M. GARCÍA-GUTIÉRREZ. *Inst. De Neurociencias, Univ. Miguel Hernandez-Csic.*

3:00 AAA19 **77.03** Social environment prevents alcohol intake and modifies dopaminergic and endocannabinoid systems in maternal care deprived rats. O. AMANCIO-BELMONT*; A. BECERRIL-MELÉNDEZ; M. MÉNDEZ-DÍAZ; A. E. RUIZ-CONTRERAS; Ó. PROSPÉRO-GARCÍA. *UNAM, UNAM.*

4:00 AAA20 **77.04** Behavioral and neural markers of craving regulation in marijuana-dependent adolescents. D. G. GHAHREMANI*; A. ELIAZ; K. KATO; A. DEAN; M. HUESTIS; E. LONDON. *UCLA, UCSF, UCLA, NIDA NIH.*

1:00 AAA21 **77.05** Preclinical evaluation of the potential utility of neutral cb1 receptor antagonists and negative allosteric cb1 receptor modulators in treatment of drug abuse and addiction. Z. XI*; G. BI; X. HE; G. THAKUR; A. MAKRIYANNIS; H. H. SELTZMAN; E. GARDNER. *Natl. Inst. on Drug Abuse Intramural Res. Program, Northeastern Univ., Northeastern Univ., Res. Triangle Inst.*

2:00 AAA22 **77.06** Adolescent cannabinoid agonist exposure impairs learned timing in adult rats. J. H. FREEMAN*; M. ELKIN; B. DE CORTE. *Univ. of Iowa, Univ. of Iowa.*

3:00 AAA23 **77.07** A comparison between δ-9-tetrahydrocannabinol and a Jamaican marijuana tea extract in an animal model of addiction. L. E. YOUNG*; K. P. CHIN-QUEE. *The Univ. of the West Indies.*

1:00 DP06 **77.08** (Dynamic Poster) δ^9-THC withdrawal induces somatic and emotionality-related behaviors in mice. S. G. KINSEY*; K. R. TREXLER; S. R. NASS; M. S. CROWE; A. W. MCKITRICK. *West Virginia Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 AAA24 **77.09** Diacylglycerol lipase-α expression increases in the coeruleo-cortical pathway in dopamine-β-hydroxylase knockout mice as well as rats treated with DSP-4. M. URQUHART*; B. A. S. REYES; S. A. THOMAS; K. MACKIE; E. J. VAN BOCKSTAELE. *Col. of Medicine, Drexel Univ., Perelman Sch. of Medicine, Univ. of Pennsylvania, Indiana Univ.*

2:00 AAA25 **77.10** ● Sex differences in δ-9-Tetrahydrocannabinol-induced hypothermia and hypolocomotion in rats. M. JAVADI PAYDAR*; J. D. NGUYEN; Y. GRANT; S. A. VANDEWATER; M. COLE; M. A. TAFFE. *The Scripps Res. Inst., La Jolla Alcohol Res. Inc.*

3:00 AAA26 **77.11** EEG resting state analysis of cannabis users with and without rTMS. S. PRASHAD*; E. DEDRICK; T. RHINEHARDT; W. T. TO; J. EROH; S. VANNESTE; J. HART, Jr.; F. FILBEY. *Univ. of Texas at Dallas.*

4:00 BBB1 **77.12** Endocannabinoid signaling as a modifier of zebrafish stress responses. R. G. KRUG*; M. O. PETERSEN; K. J. CLARK. *Mayo Clin.*

1:00 BBB2 **77.13** Colocalization of estrogen receptor α and cannabinoid receptor type 1 in the medial prefrontal cortex of female rats. J. ZHANG*; B. A. S. REYES; R. D. SHADE; E. J. VAN BOCKSTAELE. *Col. of Medicine, Drexel Univ.*

2:00 BBB3 **77.14** Acute δ-9-tetrahydrocannabinol reduces loss sensitivity in a binary choice task. S. WONG*; S. R. RANDOLPH; V. E. IVAN; A. J. GRUBER. *Univ. of Lethbridge.*

3:00 BBB4 **77.15** On the role of TRPV1 receptors within the brain in anxiety elicited by cocaine cues. W. NORZE*; A. LOYOLA; E. TORRES; C. MALDONADO-VLAAR. *Univ. of Porto Rico, Univ. of Puerto Rico-Rio Piedras.*

4:00 BBB5 **77.16** Cocaine-induced endocannabinoid mobilization disinhibits mouse midbrain dopamine neurons. D. I. DRYANOVSKI*; C. R. LUPICA. *Natl. Inst. On Drug Abuse, NIH.*

1:00 BBB6 **77.17** From LTD to LTP and back again - Changes in synaptic metaplasticity after extinction from THC self-administration and cue induced relapse. D. NEUHOFER*; S. SPENCER; P. KALIVAS. *MUSC.*

2:00 BBB7 **77.18** Alterations in glutamatergic transmission after cannabinoid self-administration: Parallels and distinctions with cocaine. S. M. SPENCER*; D. NEUHOFER; C. GARCIA-KELLER; M. D. SCOFIELD; D. SCHWARTZ; P. W. KALIVAS. *Med. Univ. of South Carolina.*

3:00 BBB8 **77.19** The phytocannabinoid THC mimics effects of chronic mild stress to reduce dendritic spine density in the vocal learning-essential brain region Area X of zebra finch striatum. T. L. HOLLAND*; K. SODERSTROM. *East Carolina Univ.*

4:00 BBB9 **77.20** Identification of cannabinoid CB_1 receptors in midbrain dopamine neurons. H. ZHANG*; X. HAN; G. BI; Q. LIU; E. S. ONAIVI; E. L. GARNDER; Z. XI. *Natl. Inst. on Drug Abuse Intramural Res. Program, William Paterson Univ.*

1:00 BBB10 **77.21** Activation of GPR55 receptor attenuates nicotine self-administration in rodents. Y. HE; H. ZHANG; J. GAO; G. BI; E. L. GARDNER*; Z. XI. *NIDA/IRP, Jilin Med. Collage.*

2:00 BBB11 **77.22** Darylureas as allosteric modulators of the cannabinoid CB1 receptor. Y. ZHANG*; T. NGUYEN; A. DECKER; J. LI; B. THOMAS; J. WILEY; T. KEN AKIN. *Res. Triangle Inst., Univ. at Buffalo, Univ. of North Carolina.*

3:00 BBB12 **77.23** Cannabinoid type 2 receptors in brain dopamine neurons modulates anxiety-like and psychostimulant behaviors in floxed DAT-Cnr2 mouse model. E. S. ONAIVI*; H. ZHANG; E. L. GARDNER; H. ISHIGURO; Z. XI; Q. LIU. *William Paterson Univ., NIDA-IRP/NIH, Univ. of Yamanashi.*

4:00 BBB13 **77.24** Distinctive sufficiency of cannabinoid CB1 receptor functions: Contributions of GABAergic and glutamatergic components of the endocannabinoid system. F. REMMERS*; V. ENK; M. HÄRING; M. D. LANGE; S. RUEHLE; G. MARSICANO; H. PAPE; B. LUTZ. *Inst. of Physiological Chemistry, UMC Mainz, Westfaelische Wilhelms-University, Neurocentre Magendie INSERM U1215, Univ. of Bordeaux*.

1:00 BBB14 **77.25** Macro extracellular vesicles, a novel transport system in the human brain. H. PANTAZOPOULOS*; M. ARDELT; A. BOYER-BOITEAU; S. A. MAUNEY; T. W. WOO; M. MARKOTA; C. BERCIU; S. BERRETTA. *Harvard Med. School, McLean Hosp., Mclean Hosp., Mclean Hosp.*

POSTER

078. Opioid Abuse

Theme G: Motivation and Emotion

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

1:00 BBB15 **78.01** Context-induced relapse to the prescription opioid oxycodone in rats. J. M. BOSSERT*; S. ADHIKARY; H. WANG; M. MORALES; Y. SHAHAM. *NIH, NIDA, IRP, NIH, NIDA, IRP.*

2:00 BBB16 **78.02** Attenuated conditioned place preference for buprenorphine in stress-exposed mice. C. A. BROWNE*; R. NUSSBAUM; W. PALMER; I. LUCKI. *Uniformed Services Univ. of Hlth. Sci., Univ. of Pennsylvania.*

3:00 BBB17 **78.03** Modulating remifentanil choice. J. J. CHOW*; J. S. BECKMANN. *Univ. of Kentucky.*

4:00 BBB18 **78.04** Modulation of traumatic memory acquisition and recall via prefrontal cortical dopamine d4 and d1 receptor transmission differentially controls opiate reward sensitivity: Implications for addiction comorbidity in post traumatic stress disorder. J. LI*; J. RENARD; H. SZKUDLAREK; S. LAVIOLETTE. *Univ. Of Western Ontario.*

1:00 BBB19 **78.05** The effects of orexin-1 receptor antagonist into the ventral tegmental area on forced swim stress-induced reinstatement of morphine in rats. R. AZIZBEIGI*; M. MORADI; A. HAGHPARAST. *Islamic Azad University, Sanandaj Br., Neurosci. Res. Center, Shahid Beheshti Univ. of Med. Sciences, P.O. Box 19615-1178.*

2:00 BBB20 **78.06** Relationship between locomotor activity and individual differences in morphine self-administration in rats. A. C. HARRIS*; P. MUELKEN; M. G. LESAGE; J. C. GEWIRTZ. *Minneapolis Med. Res. Fndn., Univ. of Minnesota.*

3:00 BBB21 **78.07** Inhibitory effects of SB366791, a selective TRPV1 antagonist, on morphine self-administration and anxiety-like behavior in rats after withdrawal of morphine. S. MA*; S. LEE; C. JANG. *Sungkyunkwan Univ., Sungkyunkwan Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 BBB22 **78.08** Cerebral glucose utilization (^{18}F-FDG-PET) following intravenous morphine self-administration in rats. K. CHOI*; T. PARK; K. NISHIDA; C. WILSON; S. JAISWAL; J. SCOTT; A. HOY; R. SELWYN; B. DARDZINSKI. *Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci.*

1:00 BBB23 **78.09** Oxycodone self-administration in male and female rats. M. MAVRIKAKI*; M. PRAVETONI; S. PAGE; D. POTTER; E. CHARTOFF. *Harvard Med. School, McLean Hosp., Departments of Med. and Pharmacology, Univ. of Minnesota.*

2:00 BBB24 **78.10** μ opioid receptors in striatal medium spiny neurons are not necessary for opiate reward but contribute to heroin and food seeking. P. CHARBOGNE*; O. GARDON; E. MARTÍN-GARCÍA; H. L. KEYWORTH; A. MATSUI; A. ROBÉ; L. MOQUIN; A. MATIFAS; K. BEFORT; C. GAVÉRIAUX-RUFF; A. GRATTON; I. KITCHEN; A. BAILEY; V. A. ALVAREZ; R. MALDONADO; B. L. KIEFFER. *Douglas Mental Hlth. Univ. Inst., Inst. de Génétique et de Biologie Moléculaire et Cellulaire, Univ. Pompeu Fabra, PRBB, Fac. of Hlth. and Med. Sci., Section on Neuronal Structure, Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. of Hlth., CNRS, LNCA – UMR7364, Faculté de Psychologie, Neuropôle de Strasbourg – Univ. de Strasbourg, Inst. of Med. & Biomed. Educ.*

3:00 BBB25 **78.11** μ opioid receptors in the habenula: Dissecting reward and aversion in addiction. L. BOULOS*; E. DARCQ; C. GAVÉRIAUX-RUFF; B. L. KIEFFER. *McGill - Douglas Inst., Douglas Mental Hlth. Inst., Inst. de Génétique et de Biologie Moléculaire et Cellulaire, Ctr. Natl. de la Recherche Scientifique.*

4:00 BBB26 **78.12** Pretreatment with low dose naltrexone prevents death due to heroin overdose in rats. P. S. GRIGSON*; C. B. JENNEY; P. J. MCLAUGHLIN; I. S. ZAGON; M. VARVARIS. *Pennsylvania State Univ. Col. of Med.*

1:00 CCC1 **78.13** ● VK4-116, a highly selective and metabolically stable D3R antagonist, inhibits oxycodone addiction-like behaviors in rodents. Z. YOU*; G. BI; V. KUMAR; E. L. GARDNER; Z. XI; A. H. NEWMAN. *NIDA-IRP/NIH/DHHS.*

2:00 CCC2 **78.14** Environmental enrichment reduces heroin seeking; a novel approach to treat heroin relapse. E. J. GALAJ*; M. MANUSZAK; R. RANALDI. *City Univ. of New York, Queens College/CUNY, Queens College/CUNY.*

3:00 CCC3 **78.15** Identification of a major qtl influencing oxycodone behavioral sensitivity and dependence. L. R. GOLDBERG*; S. KIRKPATRICK; N. YAZDANI; K. LUTTIK; M. MULLIGAN; C. BRYANT. *Boston Univ. Sch. of Med., Univ. of Tennessee Hlth. Sci. Ctr.*

4:00 CCC4 **78.16** Choice between delayed food and immediate oxycodone in rats. M. SECCI*; J. FACTOR; C. W. SCHINDLER; L. V. PANLILIO. *Natl. Inst. on Drug Abuse Intramural Res. Program.*

1:00 CCC5 **78.17** Using ipsc derived human dopamine neurons from opioid dependent subjects to study dopamine dynamics. Y. LUO; P. TESAR; K. L. PRESTON; K. A. PHILLIPS; Z. LIN; Y. SHENG; B. J. HOFFER*. *Case Western Reserve Univ., Case Western Reserve Univ., Natl. Inst. on Drug Abuse, Natl. Inst. on Drug Abuse, Harvard Univ. Mclean Hosp., NIDA/NIH.*

2:00 CCC6 **78.18** Determination of κ opioid receptor contributions to re-escalation of oxycodone self-administration under extended access conditions. J. D. NGUYEN*; D. KIRSON; F. P. VARODAYAN; S. KHOM; M. ROBERTO; M. A. TAFFE. *Scripps Res. Inst.*

3:00 CCC7 **78.19** Evaluation of a novel “e-vape” system as a model of opioid self-administration in rats. J. C. M. VENDRUSCOLO; L. F. VENDRUSCOLO*; B. J. TUNSTALL; S. A. CARMACK; M. COLE; S. VANDEWATER; M. TAFFE; O. GEORGE; G. F. KOOB. *NIH - NIDA - IRP, NIH - NIDA - IRP, TSRI, NIH - NIAAA.*

4:00 CCC8 **78.20** Examination of potential sex differences in the behavior of Rictor knockout mice. S. KASKA*; R. BRUNK; M. S. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ., Michigan Stat Univ.*

1:00 CCC9 **78.21** Chronic heroin use in humans alters striatal histone H3 hyperacetylation that regulates glutamatergic synaptic plasticity and addiction behavior. G. EGERVARI*; J. LANDRY; J. CALLENS; J. FULLARD; P. ROUSSOS; Y. L. HURD. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

POSTER

079. Nicotine Abuse and Effects on the Brain

Theme G: Motivation and Emotion

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

1:00 CCC10 **79.01** ▲ Zolmotriptan, a serotonin-1B receptor agonist, modulates the rewarding properties of nicotine in female and male adolescent rats. K. HERNANDEZ*; B. J. SALINAS; A. V. ABELLA; S. D. IÑIGUEZ; N. S. PENTKOWSKI; A. R. ZAVALA. *California State University, Long Beach, The Univ. of Texas at El Paso, Univ. of New Mexico.*

2:00 CCC11 **79.02** Chronic exposure to nicotine during adolescence not adulthood triggers long term changes in mesolimbic expression of stress related genes. L. F. ALCANTARA*; C. BOLAÑOS-GUZMAN. *Texas AM Univ.*

3:00 CCC12 **79.03** Altered gene expression (RNA-Seq) and response to nicotine in F1 offspring of paternal stress exposure. N. L. YOHN*; M. S. BARTOLOMEI; J. A. BLENDY. *Univ. of Pennsylvania, Perelman Sch. of Med., Univ. of Pennsylvania, Perelman Sch. of Med.*

4:00 CCC13 **79.04** A second update on susceptibility genes for nicotine dependence identified by genome-wide linkage, candidate gene association, genome-wide association, and targeted sequencing approaches. M. D. LI*; J. YANG; T. J. PAYNE; J. Z. MA. *Seton Hall Univ., Zhejiang Univ., Univ. of Mississippi Med. Ctr., Univ. of Virginia.*

1:00 CCC14 **79.05** Adolescent and adult nicotine exposure: Precipitated withdrawal and conditioned place aversion. R. J. KEELEY*; T. E. MAYER; L. HSU; H. LU; Y. YANG; E. A. STEIN. *NIDA, NIDA IRP.*

2:00 CCC15 **79.06** Potential interactive effects of prenatal alcohol exposure combined with adolescent nicotine and/or ethanol exposure on ethanol and nicotine reward during adulthood. K. DIXON; J. L. WAGNER; S. DAVIES; D. D. SAVAGE; N. PENTKOWSKI*. *Univ. of New Mexico.*

3:00 CCC16 **79.07** Genetic variations of nicotinic receptor genes as predictors of nicotine dependence: A machine-learning approach. S. LEE*; W. AHN; E. S. BARRIE; K. HARTMANN; J. FRATER; W. SADEE. *The Ohio State Univ., The Ohio State Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

4:00 CCC17 **79.08** Modulation of κ opioid receptor activity by nicotine and ethanol in adolescent and adult male rats. S. J. CROSS*; J. VAN; A. HO; D. BE; F. M. LESLIE. *Univ. of California Irvine, Univ. of California Irvine.*

1:00 CCC18 **79.09** ● Attenuating reinstatement of drug-seeking using selective κ opioid receptor antagonists. J. K. DASILVA*; E. DUNN-SIMS; C. TYSZKIEWICZ; A. SAWANT-BASAK; Z. HUGHES; J. HEDDE; A. N. MEAD. *Pfizer, Inc., Pfizer, Pfizer, Pfizer, AstraZeneca.*

2:00 CCC19 **79.10** Post-treatment with cotinine alleviates symptoms in a mouse model of chronic stress. A. IARKOV; V. ECHEVERRIA*; N. PEREZ-URRUTIA; C. MENDOZA; N. ALVAREZ-RICARTES; F. ECHEVERRIA. *Univ. San Sebastián, Univ. San Sebastián,Bay Pines VA Healthcare S, Univ. San Sebastián.*

3:00 CCC20 **79.11** Nicotine induces change in estrus cycle phase. L. WENNING*; R. PHILLIP; P. BRODERICK. *City Col. of New York, Bronx High Sch. of Sci.*

POSTER

080. Decision Making: Pharmacology and Genetics

Theme H: Cognition

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

1:00 CCC21 **80.01** Oxytocin flattens social order and enhances behavioral reciprocity via anterior cingulate cortex. Y. JIANG*; M. L. PLATT. *Univ. of Pennsylvania.*

2:00 CCC22 **80.02** A rodent model of negative urgency predicts acquisition of amphetamine self-administration. V. WEISS*; M. T. BARDO. *Univ. of Kentucky, Univ. of Kentucky.*

3:00 CCC23 **80.03** ▲ Voluntary alcohol consumption can impair reversal learning in rats in a go/no-go task that allows for multiple responses/trial. L. AURAND; M. RAY; H. FISHER; C. HARMON; C. L. PICKENS*. *Kansas State Univ.*

4:00 CCC24 **80.04** Foxp2 disruption during development but not adulthood causes deficits in model-based decision-making. C. A. FRENCH*; T. AKAM; M. CORREIA; S. E. FISHER; R. M. COSTA. *Champalimaud Ctr. for the Unknown, Univ. of Oxford, Max Planck Inst. for Psycholinguistics, Radboud Univ.*

1:00 CCC25 **80.05** ▲ Neural basis of ovipositional preference in fruit fly, *Drosophila melanogaster*. L. MUSKETT*; D. SITARAMAN. *Univ. of San Diego, Univ. of San Diego.*

2:00 CCC26 **80.06** Identification of an amygdala-cortical circuit for cue-directed action. N. T. LICHTENBERG*; V. Y. GREENFIELD; Z. T. PENNINGTON; K. M. WASSUM. *UCLA.*

3:00 DDD1 **80.07** Glutamate released into the basolateral amygdala tracks reward value encoding and the use of this information to guide reward seeking. M. MALVAEZ*; H. G. MONBOUQUETTE, 90095; K. M. WASSUM. *UCLA, UCLA.*

4:00 DDD2 **80.08** Frontalstriatal BDNF overflow and cognitive control deficits following spontaneous nicotine withdrawal. R. COLE*; M. ZIMMERMAN; M. G. KUTLU; A. MATCHANOVA; T. J. GOULD; V. PARIKH. *Temple Univ.*

1:00 DDD3 **80.09** A sex-specific role for glutamate trafficking in reversal learning. M. M. WICKENS*; J. D. LENZ; R. D. COLE; V. PARIKH; L. A. BRIAND. *Temple Univ.*

2:00 DDD4 **80.10** Adult neurogenesis regulates delay-based decision-making. J. S. SNYDER*; R. Q. YU; D. ESPINUEVA; O. PRINCZ-LEBEL; E. CHAHLEY; S. B. FLORESCO; D. R. SEIB. *Univ. of British Columbia.*

3:00 DDD5 **80.11** Discriminative signaling of outcomes using stimuli attributed with incentive value promotes suboptimal risky choice. A. P. SMITH*; T. R. ZENTALL; J. S. BECKMANN. *Univ. of Kentucky Dept. of Psychology.*

POSTER

081. Neural Networks for Executive Functioning

Theme H: Cognition

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

1:00 DDD6 **81.01** ● Structural and functional connectivity associated with weight loss and omega-3 fatty acid supplementation in women at high-risk for breast cancer. L. MARTIN*; R. J. LEPPING; W. M. BROOKS; C. R. SAVAGE; I. CHOI; P. LEE; B. C. MCPHERSON; V. B. PAPA; M. G. BRUCKS; A. T. FOX; J. L. NYDEGGER; B. F. KIMLER; C. J. FABIAN. *Univ. of Kansas Med. Ctr., Banner Hlth., Indiana Univ. Bloomington, Univ. of Kansas Med. Ctr.*

2:00 DDD7 **81.02** Functional MRI of macaque monkeys during task switching. E. PREMEREUR*; P. JANSSEN; W. VANDUFFEL. *KU Leuven, Harvard Med. Sch., Athinoula A. Martinos Ctr. for Biomed. Imaging.*

3:00 DDD8 **81.03** ● Cortico-hippocampal contribution to the generation of contextual information. S. BERNARDI*; J. MUNUERA; M. RIGOTTI; S. FUSI; D. SALZMAN. *Columbia Univ., New York State Psychiatric Inst., Columbia Univ., IBM T.J. Watson Res. Ctr.*

4:00 DDD9 **81.04** Population dynamics of excitatory and inhibitory neurons in mouse parietal cortex during decision-making. F. NAJAFI*; G. F. ELSAYED; E. A. PNEVMATIKAKIS; J. P. CUNNINGHAM; A. K. CHURCHLAND. *Cold Spring Harbor Lab., Columbia Univ. Med. Ctr., Simons Fndn., Columbia Univ.*

1:00 DDD10 **81.05** Complementary contributions of high-dimensional representation and noise correlation to cognitive processes. M. ABOLGHASEMI-DEHAQANI*; A. VAHABIE; B. NOUDOOST; A. SOLTANI. *Inst. For Res. In Fundamental Sci., Montana State Univ., Dartmouth Col.*

2:00 DDD11 **81.06** Neurophysiological mechanisms for representing abstract components of mental states. J. MUNUERA*; M. RIGOTTI; S. FUSI; C. D. SALZMAN. *Columbia Univ., IBM T.J. Watson Res. Ctr., Columbia Univ., NYPSI.*

3:00 DDD12 **81.07** Prefrontal cortico-thalamic networks for cognitive control. J. M. PHILLIPS*; N. A. KAMBI; L. FISH; Y. B. SAALMANN. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

4:00 DDD13 **81.08** A fine-timescale investigation of ventral tegmental area neuronal signalling in working memory. V. GLYKOS*; S. FUJISAWA. *RIKEN Brain Sci. Inst.*

1:00 DDD14 **81.09** Information coding by large scale neural ensembles from the macaque prefrontal cortex. R. BARTOLO*; R. C. SAUNDERS; P. G. BROWNING; A. R. MITZ; B. B. AVERBECK. *NIMH/NIH.*

2:00 EEE1 **81.10** Fast dopaminergic modulation of prefrontal neuronal circuit activity. K. TAO*; S. FUJISAWA. *RIKEN Brain Sci. Inst.*

3:00 EEE2 **81.11** Frontal ensemble dynamics signal shifts between distinct modes of sensorimotor behavior. M. J. SINISCALCHI*; V. PHOUMTHIPPHAVONG; F. ALI; M. LOZANO; A. C. KWAN. *Yale Univ., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 EEE3 **81.12** Frontal cortical local field potentials (LFPs) reflect working memory processing over long delays. C. D. HOLMES*; C. PAPADIMITRIOU; L. H. SNYDER. *Washington Univ. in St. Louis, Washington Univ. in St. Louis.*

1:00 EEE4 **81.13** How is neural activity in premotor and parietal cortex influenced by bottom-up and top-down information about the value of reach choices? A. NAKAHASHI*; P. CISEK. *Univ. De Montreal.*

2:00 EEE5 **81.14** Neural constraints on the cognitive capacity of crows. J. M. ROSE*; D. BALAKHONOV. *Univ. of Tuebingen, Univ. of Tuebingen.*

3:00 EEE6 **81.15** Functional characterization of specific interneuron subtypes in the prefrontal cortex for memory-guided behavior. T. KAMIGAKI*; Y. DAN. *Univ. of California, Berkeley.*

4:00 EEE7 **81.16** Distinct roles of orbitofrontal cortex in response execution and inhibition during a stop-signal task. J. YOSHIDA*; A. SAIKI; S. SOMA; K. YAMANAKA; S. NONOMURA; A. A. R. DAVILA; M. KAWABATA; M. KIMURA; Y. SAKAI; Y. ISOMURA. *Tamagawa Univ.*

1:00 EEE8 **81.17** Thallium, a chemical warfare neurotoxic agent, is removed by metallothionein and Prussian blue, without a redistribution to brain effect in rats. L. N. ANAYA RAMOS*; A. MONROY; S. GRACIA; S. GALVAN; A. DÍAZ; S. MONTES; C. RÍOS. *Univ. Autonoma Del Estado De Morelos, Univerisidad Autónoma del Estado de Morelos, Inst. Nacional de Neurología y Neurocirugía.*

POSTER

082. Memory Consolidation and Reconsolidation: Neural Circuit Mechanisms

Theme H: Cognition

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

1:00 EEE9 **82.01** Synaptic mechanisms of memory consolidation during NREM sleep. Y. WEI*; G. PRASHANTH; M. BAZHENOV. *Univ. of California San Diego.*

2:00 EEE10 **82.02** Slow-wave sleep improves learning through spike sequence replay. G. P. KRISHNAN*; M. KOMOROV; S. SKORHEIM; M. BAZHENOV. *Univ. of California San Diego, HRL Labs.*

3:00 EEE11 **82.03** Discrete-time approach to large-scale simulations of realistic brain networks. N. RULKOV*; M. KOMAROV; G. P. KRISHNAN; I. TIMOFEEV; S. CHAUVETTE; M. BAZHENOV. *UCSD, Laval Univ.*

4:00 EEE12 **82.04** Modeling of coordinated sequence replay in CA3 and CA1 during sharp wave-ripples. P. MALERBA*; A. L. FODDER; M. W. JONES; M. BAZHENOV. *UC San Diego, Univ. of Bristol.*

1:00 EEE13 **82.05** Precise timing of sharp wave - ripple complexes affects spatio-temporal pattern of sleep slow oscillations in a model of memory consolidation. P. SANDA*; P. MALERBA; G. KRISHNAN; M. BAZHENOV. *UCSD.*

2:00 EEE14 **82.06** Effect of learning cues on sleep-related memory consolidation depends on the phase of sleep slow oscillation. Y. WEI; G. PRASHANTH; M. V. BAZHENOV*. *Univ. of California San Diego.*

3:00 FFF1 **82.07** Effects of surface electrical stimulation on the cortical neurons. M. KOMAROV*; P. MALERBA; P. NUNEZ; E. HALGREN; M. BAZHENOV. *Univ. of California San Diego, Univ. of California San Diego, Tulane Univ.*

4:00 FFF2 **82.08** Pre-activation of neural activity patterns during REM sleep corresponds with rapid learning of a novel motor skill in rats. M. J. ECKERT*; M. TATSUNO. *Univ. of Lethbridge.*

1:00 FFF3 **82.09** Parvalbumin-expressing interneurons coordinate hippocampal oscillatory dynamics that promote network stability. N. OGNJANOVSKI*; J. WU; M. ZOCHOWSKI; S. J. ATON. *Univ. of Michigan Aton Lab., Univ. of Michigan, Univ. of Michigan Aton Lab., Univ. of Michigan.*

2:00 FFF4 **82.10** Hippocampal influence of anterior cingulate activity for memory consolidation. D. V. WANG*; S. IKEMOTO. *NIH.*

3:00 FFF5 **82.11** Neurophysiological correlates of the influences of spatial context on hippocampal reactivation in a rodent reconsolidation paradigm. S. NAGL*; B. HARPER; P. MALERBA; M. BAZHENOV; J. FELLOUS. *Univ. of Arizona Dept. of Psychology, UC San Diego.*

4:00 FFF6 **82.12** Physiological correlates of forgetting of long-term memory in the hippocampus. D. E. ARKELL*; S. MARTIN; O. HARDT. *Univ. of Edinburgh, Univ. of Dundee.*

1:00 FFF7 **82.13** The role of adult born neurons in memory consolidation during sleep-wake cycles. D. KUMAR*; M. HAYASHI; X. HAYASHI; G. CHANGARATHIL; M. WINTZER; T. J. MCHUGH; T. SAKURAI; M. YANAGISAWA; M. SAKAGUCHI. *Univ. Tsukuba, WPI-IIIS, RIKEN Brain Sci. Inst.*

2:00 FFF8 **82.14** The role of adult hippocampal neurogenesis in spatial memory reconsolidation. M. LODS*; G. FERREIRA; E. PACARY; A. GORON; N. D. ABROUS; S. TRONEL. *Neurocentre Magendie, UMR1286 NutriNeuro.*

3:00 FFF9 **82.15** Validation and biological relevance of a real-time ripple detection module for open-ephys. C. L. AGUIAR*; E. F. OLIVEIRA; L. R. ZACHARIAS; L. B. PERES; K. DIBA; D. C. SORIANO; J. P. LEITE. *Univ. of Sao Paulo, Federal Univ. of ABC, Univ. of Sao Paulo, Univ. of Wisconsin Milwaukee, Federal Univ. of ABC.*

4:00 FFF10 **82.16** Optical stimulation of the pathway from the basolateral amygdala to the entorhinal cortex in rats impairs retention of cued response learning in a Barnes maze. K. L. WAHLSTROM*; R. T. LALUMIERE. *Dept. of Psychological and Brain Sci.*

1:00 FFF11 **82.17** Synaptic connections and electrical coupling within reverberating cell assemblies triggered by chandelier neurons in rodent amygdala. M. BHAGAVATHI PERUMAL*; R. SULLIVAN; P. STRATTON; P. SAH. *Queensland Brain Insititute.*

POSTER

083. Learning and Memory: Basal Forebrain Circuits

Theme H: Cognition

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

1:00 FFF12 **83.01** Activation of purinergic P2 receptors in basal forebrain promotes wakefulness by exciting basal forebrain cortically-projecting neurons. C. YANG*; A. KALINCHUK; K. A. JACOBSON; R. E. STRECKER; R. W. MCCARLEY; R. BASHEER; R. E. BROWN. *VA Boston Healthcare Syst., NIH/NIDDK.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 FFF13 **83.02** Temporal backpropagation of basal forebrain neuronal activity during associative learning reveals stepwise expansion of the reward prediction model. H. MANZUR; K. VLASOV; S. LIN*. *Natl. Inst. On Aging (NIA), NIH.*

3:00 FFF14 **83.03** Optogenetic dissection of basal forebrain neuronal circuitry reveals GABAergic identity of salience-encoding neurons. A. SCAGLIONE*; J. LIANG; R. LAM; S. LIN. *NIA-NIH-IRP.*

4:00 FFF15 **83.04** Forebrain cholinergic and midbrain dopaminergic neurons broadcast related but distinct signals during reinforcement learning. J. F. STURGILL*; A. KEPECS. *Cold Spring Harbor Lab.*

1:00 FFF16 **83.05** High density recording in rat basalo-cortical networks. P. GOMBKOTO*; M. GIELOW; C. CHAVEZ; L. ZABORSZKY. *Rutgers The State Univ. of New Jersey.*

2:00 FFF17 **83.06** Connectome of the basal forebrain corticopetal system. P. VARSANYI*; L. ZABORSZKY. *Rutgers Univ. Newark.*

3:00 FFF18 **83.07** Basal forebrain cholinergic-auditory cortical network: Primary versus belt auditory cortical areas. C. M. CHAVEZ*; L. ZABORSZKY. *Rutgers, The State Univ. of New Jersey.*

4:00 FFF19 **83.08** Input-output organization of the cholinergic basal forebrain. M. R. GIELOW*; L. ZABORSZKY. *Rutgers Univ.*

1:00 FFF20 **83.09** Functional integration and segregation of magnocellular cell groups in human basal forebrain: Resting state study at ultra-high field, meta-analysis, and test-retest reliability. R. YUAN*; B. BISWAL; L. ZABORSZKY. *New Jersey Inst. of Technol., Rutgers Univ.*

2:00 FFF21 **83.10** ● Optogenetic stimulation of cortically projecting basal forebrain parvalbumin neurons cause short latency arousals in mice. J. T. MCKENNA*; S. THANKACHAN; C. SHUKLA; J. M. MCNALLY; J. C. ZANT; S. WINSTON; K. DEISSEROTH; R. E. BROWN; R. BASHEER; R. W. MCCARLEY. *VA Boston Healthcare System/Harvard Med. Sch., Stanford Univ., VA Boston Healthcare System/Harvard Med. Sch.*

3:00 FFF22 **83.11** ● Basal forebrain glutamate neurons studied using vGluT2-tdTomato mice: Intrinsic membrane properties, cholinergic sensitivity, calcium binding protein content and projections. R. E. BROWN*; C. YANG; J. T. MCKENNA; J. M. MCNALLY; M. GAMBLE; A. HULVERSON; T. BELLIO; J. MCCOY; M. ANDERSON-CHERNISOF; S. WINSTON; K. DEISSEROTH; S. THANKACHAN; R. BASHEER; R. W. MCCARLEY. *VA BHS & Harvard Med. Sch., VA Boston Healthcare Syst. and Harvard Med. Sch., Stonehill Col., Stanford Univ.*

4:00 FFF23 **83.12** Reward-timing prediction errors in the brain. C. CHEN*; I. MONOSOV. *Washington Univ. In St. L.*

POSTER

084. Learning and Memory: Parahippocampal and Related Cortical Circuits

Theme H: Cognition

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

1:00 FFF24 **84.01** Impaired familiarity discrimination after neonatal perirhinal lesions in rhesus macaques. A. R. WEISS*; W. GUO; J. BACHEVALIER. *Emory University/ YNPRC.*

2:00 FFF25 **84.02** Lesions of the postrhinal cortex impair extinction learning in a latent inhibition paradigm. N. E. DEANGELI*; T. P. TODD; D. J. BUCCI. *Dartmouth Col.*

3:00 FFF26 **84.03** Representations of context in the postrhinal cortex. V. R. HEIMER-MCGINN*; B. KENT; R. D. BURWELL. *Brown Univ.*

4:00 GGG1 **84.04** Emergence of object-location conjunctive coding in the postrhinal cortex and hippocampus. V. J. ESTELA*; R. D. BURWELL. *Brown Univ., Brown Univ.*

1:00 GGG2 **84.05** Inactivation of the lateral posterior thalamic nucleus on neuronal correlates in rat posterior parietal cortex during performance on a visuospatial attention task. F. YANG*; R. D. BURWELL. *Brown Univ., Brown Univ.*

2:00 GGG3 **84.06** The role of the rodent retrosplenial cortex in context-guided behavior. E. HWANG*; F. YANG; R. D. BURWELL. *Brown Univ., Brown Univ.*

3:00 GGG4 **84.07** Encoding of episodic events by the retrosplenial cortex. G. FOX*; J. Z. TSIEN. *Med. Col. of Georgia, Augusta Univ.*

4:00 GGG5 **84.08** ▲ Retrosplenial cortex lesions produce retrograde and anterograde context amnesia following overtraining. R. HUSZAR; M. C. EDDY; N. E. DEANGELI; D. J. BUCCI, 03755; T. P. TODD*. *Dartmouth Col.*

1:00 GGG6 **84.09** ● Pde4d regulates spine plasticity and memory in the retrosplenial cortex. K. BAUMGAERTEL*; D. WHEELER; A. GREEN; J. LAPIRA; D. ELOW; K. MARUYAMA; R. JOHNSON; R. BARIDO; M. PETERS. *Dart Neurosci., Dart Neurosci. LLC.*

2:00 GGG7 **84.10** Going the distance: The effect of geometry on spatial representations. M. V. KURUVILLA*; J. A. AINGE. *Univ. of St Andrews.*

3:00 GGG8 **84.11** Object representation along the proximodistal axis of CA1. J. A. AINGE*; B. M. VANDREY. *Univ. of St Andrews.*

4:00 GGG9 **84.12** Investigating the molecular organisation of superficial layers of the lateral entorhinal cortex. B. M. VANDREY*; D. L. F. GARDEN; J. A. AINGE; M. F. NOLAN. *Univ. of St Andrews, Univ. of Edinburgh.*

1:00 GGG10 **84.13** Efferent projections of the calbindin-positive entorhinal neurons in the rat: Connectional differences between the medial and lateral entorhinal cortex. S. OHARA*; K. ITOU; M. SHIRAISHI; M. GIANATTI; Y. SOTA; S. KABASHIMA; M. ONODERA; K. TSUTSUI; M. WITTER; T. IIJIMA. *Tohoku Univ. Grad Sch. Life Sci., NTNU.*

2:00 GGG11 **84.14** Cholinergic modulation of neuronal network activity in the entorhinal cortex. S. DESIKAN; D. E. KOSER; A. NEITZ; H. MONYER*. *German Cancer Res. Ctr., Univ. of Heidelberg, DKFZ / A230.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 GGG12 **84.15** Cellular evidence for the lack of contribution of CA1 and CA3 to familiarity and the selective involvement of the deep layers of the perirhinal and lateral entorhinal cortices. E. ATUCHA TREVINO*; A. KAREW; T. KITSUKAWA; M. SAUVAGE. *Leibniz Inst. For Neurobio., Ruhr Univ., Osaka Univ.*

POSTER

085. Human Cognition: Temporal Processing I

Theme H: Cognition

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

1:00 GGG13 **85.01** Entrainment without boundaries: Thalamocortical mechanisms of parsing and grouping complex auditory patterns. A. BARCZAK*; M. N. O'CONNELL; T. MCGINNIS; D. ROSS; P. LAKATOS. *Nathan S. Kline Inst. For Psychiatric Res., New York Univ. Sch. of Med.*

2:00 GGG14 **85.02** Beat perception induces fluctuations in motor system excitability. D. CAMERON*; J. EVERLING; T. CHIANG; J. A. GRAHN. *Univ. of Western Ontario, Univ. of Western Ontario.*

3:00 GGG15 **85.03** Sensory expectation of time and space is modulated by task relevance: Evidence of neural and behavioral effects from model-based MEG. R. AUKSZTULEWICZ*; K. FRISTON; A. NOBRE. *Univ. of Oxford, Univ. of Oxford, Univ. Col. London.*

4:00 GGG16 **85.04** Are humans aware of their timing errors: Temporal error monitoring. B. AKDOGAN*; F. BALCI. *Koc Univ.*

1:00 GGG17 **85.05** Hemispheric asymmetries in the temporal processing of spatial targets. R. XU*; L. WELCH. *Brown Univ.*

2:00 GGG18 **85.06** Hyperscanning study on synchronized singing between two people using fNIRS. N. OSAKA*; T. MINAMOTO; K. YAOI; M. AZUMA; M. OSAKA. *Kyoto Univ., NICT Cinet Osaka Univ., Osaka Univ.*

3:00 GGG19 **85.07** Rhythm processing deficits in nonfluent variant primary progressive aphasia relate to atrophy of the supplementary motor area. J. SCHAEVERBEKE*; M. GRUBE; R. BRUFFAERTS; V. NEYENS; E. DRIES; T. GRIFFITHS; R. VANDENBERGHE. *KU Leuven, Newcastle Univ., Tech. Univ. of Berlin, UZ Leuven.*

4:00 GGG20 **85.08** Optogenetic stimulation of frontal D1 neurons compensates for impaired temporal control of action in dopamine-depleted mice. Y. KIM*; S. HAN; R. RUGGIERO; S. ALBERICO; K. CHEN; N. S. NARAYANAN. *Univ. of Iowa, Univ. of Iowa.*

1:00 GGG21 **85.09** A Synergistic model of the cerebellum and the basal ganglia for temporal information processing. O. KATAKURA*; T. YAMAZAKI. *The Univ. of Electro-Communications, Artificial Intelligence Res. Center, AIST.*

2:00 GGG22 **85.10** Interval timing in adult stutters - Role of β connectivity in default mode-related functional segregation. A. GHADERI; M. NAZARI; W. H. MECK*. *Univ. of Tabriz, Duke Univ. Dept. of Psychology and Neurosci.*

3:00 GGG23 **85.11** Prefrontal-subthalamic δ/θ coherence shapes temporal processing during interval timing. R. KELLEY*; J. GREENLEE; N. NARAYANAN. *Univ. of Iowa.*

4:00 GGG24 **85.12** The influence of frequency on perceived temporal rate is larger in demanding listening situations. B. HERRMANN*; I. S. JOHNSRUDE. *The Univ. of Western Ontario.*

1:00 GGG25 **85.13** Regulation of electrophysiological surprise responses by temporal ordering. M. SCHWARTZE*; S. A. KOTZ. *Maastricht Univ.*

2:00 GGG26 **85.14** Temporal averaging: Geometric or arithmetic mean. Y. REN*; Z. SHI. *Ludwig-maximilians-Universität.*

3:00 HHH1 **85.15** Brain oscillations in perception, timing and action. D. S. GUPTA*; L. CHEN. *Camden County Col., Peking Univ., Peking Univ.*

1:00 DP08 **85.16** (Dynamic Poster) Resolving the dopamine paradox in interval timing: How a phasic dopamine release can reset the clock, whereas tonic dopamine fluctuations alter perceived time. H. VAN RIJN*; P. MOSTERT; P. A. M. MEDIANO; Z. FOUNTAS. *Univ. of Groningen, Donders Inst. for Brain, Cognition and Behavior, Imperial Col.*

1:00 HHH2 **85.17** ▲ A neural correlate of human time sense. C. K. DESAI; M. I. LEON*. *California State University, Bakersfield, Cal State Univ, Bakersfield.*

2:00 HHH3 **85.18** The links between perceptual timing and language skill in mid- vs. early adolescence: The St Thomas More School Project. M. GRUBE*; C. DAVISON; F. SMITH; S. KUMAR; T. D. GRIFFITHS. *TU Berlin, Newcastle Univ.*

3:00 HHH4 **85.19** Midbrain adaptation may set the stage for the perception of a musical beat. V. G. RAJENDRAN*; J. A. GARCIA-LAZARO; N. S. HARPER; N. A. LESICA; J. W. H. SCHNUPP. *Univ. of Oxford, UCL, City Univ. of Hong Kong.*

4:00 HHH5 **85.20** The action congruency effect on the feelings of agency. R. VASTANO*; T. POZZO; M. BRASS. *Fondazione Inst. Italiano Di Tecnologia, Ghent Univ., INSERM U1093 Cognition, Action et Plasticité Sensorimotrice.*

1:00 HHH6 **85.21** Temporal expectation biases duration judgment. T. W. KONONOWICZ*; V. VAN WASSENHOVE. *CEA, NeuroSpin Center, INSERM, Univ. Paris-Sud.*

2:00 HHH7 **85.22** Role of interhemispheric cortical connections in time perception: A case study with agenesis of the corpus callosum. M. OKAJIMA*; A. FUTAMURA; M. HONMA; M. KAWAMURA; Y. YOTSUMOTO. *The Univ. of Tokyo, Showa Univ. Sch. of Med.*

3:00 HHH8 **85.23** ▲ Time-perception training modulates fMRI activity in the cortical basal ganglia circuit. I. C. SÁNCHEZ*; H. MERCHANT. *Inst. of Neurobio., Inst. of Neurobio.*

4:00 HHH9 **85.24** Reversal of tactile temporal order judgment correlates with the phase of posterior α rhythm. T. TAKAHASHI*; S. KITAZAWA. *Osaka Univ., Ctr. for Information and Neural Networks (CiNet), Natl. Inst. of Information and Communications Technol.*

1:00 HHH10 **85.25** Neural entrainment during beat perception and its relation to psychophysical performance. M. J. HENRY*; J. A. GRAHN. *The Univ. of Western Ontario.*

2:00 HHH11 **85.26** Neural oscillatory entrainment to auditory rhythmic stimuli represents pitch as well as time. A. CHANG*; K. CLAYWORTH; D. J. BOSNYAK; L. J. TRAINOR. *McMaster Univ.*

3:00 HHH12 **85.27** Neurofunctional coupling in tactile simultaneity judgment. T. KIMURA; T. KOCHIYAMA; T. KURODA; M. IWATA; H. KADOTA; M. MIYAZAKI*. *Kochi Univ. of Technol., ATR, Shizuoka Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 HHH13 **85.28** Temporal and numerical magnitude processing: Two dimensions, one processing system? N. SCHLICHTING*; R. DE JONG; H. VAN RIJN. *Univ. of Groningen.*

1:00 HHH14 **85.29** Preserved rhythm-based temporal predictions in cerebellar degeneration. A. BRESKA*; R. B. IVRY. *Univ. of California Berkeley.*

POSTER

086. Human Cognition: Aging I

Theme H: Cognition

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

1:00 HHH15 **86.01** Can coordinated movement training enhance scores on tests of cognitive function in older adults? I. A. CREMEN*; R. G. CARSON. *Trinity Col. Dublin, Trinity Col. Dublin.*

2:00 HHH16 **86.02** Aging brain structure is related systemic inflammation & metabolic risk factors. F. W. CORLIER*; G. HAFZALLA; L. H. KULLER; O. L. LOPEZ; J. T. BECKER; P. M. THOMPSON; M. N. BRASKIE. *USC, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 HHH17 **86.03** Forced-choice and old/new test formats reveal a stable age-related impairment of performance on the Mnemonic Similarity Task. D. J. HUFFMAN*; C. E. L. STARK. *Univ. of California Irvine, Univ. of California, Irvine.*

4:00 HHH18 **86.04** ▲ Management of prospective memory deficits in mild cognitive impairment. T. HUM-HYDER; S. A. RASKIN*. *Trinity Col.*

1:00 HHH19 **86.05** Familiar context effects on pattern separation in aging. A. LAWRENCE; L. RYAN*. *Univ. of Arizona, Univ. of Arizona.*

2:00 HHH20 **86.06** The influence of alertness training on visual processing speed in healthy older adults. M. PENNING*; P. REDEL; H. J. MÜLLER; T. SALMINEN; T. STROBACH; S. MOELBERT; T. SCHUBERT; K. FINKE. *Ludwig-Maximilians-Universität München, Grad. Sch. of Systemic Neurosciences, Ludwig-Maximilians-Universitaet Muenchen, Humboldt-Universitaet zu Berlin, Med. Sch. Hamburg, Univ. of Tuebingen.*

3:00 HHH21 **86.07** Medial temporal lobe structure, function, and protein aggregation affect memory encoding in aging. S. M. MARKS*; S. N. LOCKHART; W. J. JAGUST. *Helen Wills Neurosci. Inst., Lawrence Berkeley Natl. Lab.*

4:00 HHH22 **86.08** Vulnerability and integrity of von economo neurons in human anterior cingulate cortex across the cognitive lifespan. T. GEFEN*; S. PAPASTEFAN; F. RAHMANI; E. ROGALSKI; S. WEINTRAUB; E. H. BIGIO; M. MESULAM; C. GEULA. *Feinberg Sch. of Medicine, Northwestern Univ.*

1:00 HHH23 **86.09** A study on the utilizing status and demand for smartphone and mobile healthcare application in elderly adults. J. AHN*; S. KIM; J. HEO; W. CHOI; J. PARK. *Yonsei Univ., Dept. of Psychiatry and Inst. of Behavioral Sci. in Medicine, Yonsei Univ. Col. of Med., Inst. of Behavioral Sci. in Medicine, Yonsei Univ. Col. of Med., Dept. of Psychiatry, Yonsei University, Col. of Medicine, Gangnam Severance Hosp.*

2:00 HHH24 **86.10** Objective electrophysiological evidence for reduced efficiency of face identity processing in aging. S. LITHFOUS*; J. LIU-SHUANG; B. ROSSION. *Univ. of Louvain.*

3:00 HHH25 **86.11** The relationships between age, fMRI correlates of familiarity and recognition memory. M. A. DE CHASTELAINE*; J. T. MATTSON; T. H. WANG; B. E. DONLEY; M. D. RUGG. *Univ. of Texas at Dallas.*

4:00 HHH26 **86.12** ▲ Training the aging brain: A multi-level network analysis. J. M. HICKS*; R. NENERT; L. A. ROSS; K. M. VISSCHER. *Univ. of Alabama At Birmingham, The Pennsylvania State Univ.*

1:00 HHH27 **86.13** Cortisol and limbic system volumetrics across the adult lifespan. S. D. MOFFAT*; G. ENNIS; E. QUINTIN; U. SAELZLER; C. HERTZOG. *Georgia Inst. of Technol., McGill Univ.*

2:00 HHH28 **86.14** Investigating the interaction of expectation and entropy in speech comprehension by young and older adults using eye-tracking. N. D. AYASSE; A. WINGFIELD*. *Brandeis Univ.*

3:00 HHH29 **86.15** Inferring the intentions of others across the lifespan. A. REITER*; A. DIACONESCU; B. EPPINGER; S. LI. *TU Dresden, ETH Zürich, TU Dresden.*

4:00 HHH30 **86.16** Reduced white matter integrity and aberrant increases of cerebral blood flow in the episodic memory network in cognitively normal older adults with β-amyloid pathology. H. OH*; A. E. LEVITANUS. *Columbia Univ., Columbia Univ.*

1:00 HHH31 **86.17** Reduced acetylcholinesterase activity is associated with impaired deactivation of the precuneus and the temporoparietal junction during episodic memory encoding in prodromal Alzheimer's disease. J. KUKOLJA*; N. RICHTER; Ö. A. ONUR; L. KRACHT; M. TITTGEMEYER; B. NEUMAIER; M. SCHMIDT; M. DIETLEIN; G. R. FINK. *Univ. Hosp. Cologne, Max-Planck-Institute for Metabolism Res., Res. Ctr. Jülich, Univ. Hosp. Cologne.*

2:00 HHH32 **86.18** Changes in functional connectivity across the lifespan reflect declines in cognitive efficiency. M. P. TURNER*; N. A. HUBBARD; L. M. HIMES; M. A. MOTES; B. RYPMA. *Univ. of Texas at Dallas.*

3:00 HHH33 **86.19** Neuromodulatory effects on memory networks in aging are topographically selective and modulated by structural network density. S. W. DAVIS*; D. MURPHY; B. LUBER; S. H. LISANBY; R. CABEZA. *Duke Univ., Duke Univ., NIH, NIH.*

4:00 HHH34 **86.20** Age-related white matter micro- and macro-structural changes associated with functional connectivity decline in resting state network. L. HIMES; N. A. HUBBARD; M. TURNER; B. P. RYPMA*. *Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr.*

1:00 HHH35 **86.21** Changes in functional organization of the human brain with age. S. HRYBOUSKI*; F. OLSEN; J. MCGONIGLE; R. CARTER; P. SERES; N. MALYKHIN. *Univ. of Alberta, Univ. of Alberta, Imperial Col. London.*

2:00 HHH36 **86.22** GABA levels in occipital cortex decline with age and correlate with fluid processing ability. T. A. POLK*; J. M. CARP; B. R. FOERSTER; L. OSSHER; M. PETROU; M. SIMMONITE; D. H. WEISSMAN. *Univ. of Michigan Dept. of Psychology, 18F, Univ. of Michigan, Univ. of Oxford, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 HHH37 **86.23** Differences in execution efficiency between young and elderly healthy adults during an incidental/ intentional learning/memory visuospatial task. M. JUNCO-MUÑÓZ; O. MEJÍA-RODRÍGUEZ; J. CERVANTES-ALFARO; M. OLVERA-CORTES*. *Ctr. de investigación Biomédica de Michoacán, Inst. Mexicano Del Seguro So, Ctr. de investigación Biomédica de Michoacán, Inst. Mexicano Del Seguro So, Univ. Michoacana de San Nicolás de Hidalgo, Ctr. de investigación Biomédica de Michoacán, Inst. Mexicano Del Seguro So.*

4:00 HHH38 **86.24** Prefrontal gray matter volume mediates age effects on self-initiated encoding strategies. R. A. HUSA; B. A. GORDON; B. A. KIRCHHOFF*. *St. Louis Univ., Washington Univ. in St. Louis.*

1:00 HHH39 **86.25** Moderation effect of serum cortisol on neurocognitive association in non-demented elderly subjects. A. C. LAW*; W. K. W. LAU; M. LEUNG; T. M. C. LEE. *The Univ. of Hong Kong, The Univ. of Hong Kong, The Univ. of Hong Kong, The Univ. of Hong Kong.*

2:00 HHH40 **86.26** Influence of age, hearing acuity and speech prosody on processing effort revealed through pupil dilation. N. M. AMICHETTI*; E. ATAGI, 02454; Z. BROWN; A. WINGFIELD. *Brandeis Univ., Brandeis Univ.*

3:00 III1 **86.27** The relationship of glucose metabolism to cognition in non-diabetic older adults. G. E. ENNIS*; U. SAELZLER; G. UMPIERREZ; S. D. MOFFAT. *Georgia Inst. of Technol., Emory Univ.*

4:00 III2 **86.28** Behavioural and neural deficits in error detection related to higher age. E. NIESSEN*; G. R. FINK; H. HOFFMANN; P. H. WEISS; J. STAHL. *Res. Ctr. Juelich, Univ. Hosp. Cologne, Univ. of Cologne.*

POSTER

087. Human Long-Term Memory: Spatial and Episodic

Theme H: Cognition

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

1:00 III3 **87.01** Patients with hippocampal damage demonstrate impairments in spatiotemporal binding and precision but not spatial strategy. B. KOLARIK*; T. L. BAER; K. SHAHLAIE; G. GURKOFF; A. P. YONELINAS; A. D. EKSTROM. *Univ. of California, Davis, Univ. of California Davis Med. Ctr.*

2:00 III4 **87.02** Novel episodic memory paradigm reveals common and dissociable brain areas involved in processing spatial and temporal information. J. S. LIEBERMAN*; A. M. SCHEDLBAUER; A. D. EKSTROM. *Univ. of California Davis.*

3:00 III5 **87.03** A graph theory approach to spatiotemporal contextual encoding and retrieval in human episodic memory. A. SCHEDLBAUER*; J. S. LIEBERMAN; A. D. EKSTROM. *Univ. of California Davis, Univ. of California, Davis, Univ. of California, Davis.*

4:00 III6 **87.04** Navigation in virtual reality with vestibular and proprioceptive input diminishes orientation-dependent spatial representations. M. J. STARRETT*; J. D. STOKES; O. KREYLOS; A. D. EKSTROM. *Univ. of California, Davis, Univ. of California, Davis.*

1:00 III7 **87.05** A novel, network-based approach to memory modulation. K. KIM*; A. SCHEDLBAUER; M. ROLLO; A. D. EKSTROM; N. TANDON. *Univ. of Texas Houston, Univ. of California Davis.*

2:00 III8 **87.06** Mental simulation of routes during navigation involves adaptive temporal compression. A. E. ARNOLD*; G. IARIA; A. D. EKSTROM. *Univ. of California Davis, Univ. of Calgary, Univ. of California Davis.*

3:00 III9 **87.07** Low-frequency oscillations in the human hippocampus during real-world and virtual navigation. M. COPARA*; A. D. EKSTROM; J. GOTMAN; V. D. BOHBOT. *UC Davis, UC Davis, McGill Univ., Douglas Inst. - McGill Univ.*

4:00 III10 **87.08** Evidence for oscillatory coding akin to phase precession in the human hippocampus. S. E. QASIM*; A. J. WATROUS; I. FRIED; J. JACOBS. *Columbia, UCLA.*

1:00 III11 **87.09** Recurring spatiotemporal patterns in cortical high γ and their behavioral correlates: Evidence for human memory replay. X. JIANG*; I. SHAMIE; S. CASH; T. THESEN; E. HALGREN. *Univ. of California San Diego, UCSD, Massachusetts Gen. Hospital, Harvard Med. Sch., New York Univ. Sch. of Med., UCSD.*

2:00 III12 **87.10** Multivariate pattern analysis of human intracranial electrocorticography predicts speed during virtual navigation. A. A. ROBBINS*; P. HORAK; A. C. CONNOLLY; B. JOBST. *Geisel Sch. of Med., Dartmouth-Hitchcock Med. Ctr.*

3:00 III13 **87.11** An isotropic 3D spatial representation of a multi-level building in the human brain. M. KIM*; E. A. MAGUIRE. *Univ. Col. London.*

4:00 III14 **87.12** The role of the human hippocampus in map reading and route following. Z. J. URGOLITES*; S. KIM; R. O. HOPKINS; L. R. SQUIRE. *UCSD, Veterans Affairs San Diego Healthcare Syst., Univ. of California, Irvine, Brigham Young Univ., Intermountain Med. Ctr., UCSD, UCSD.*

1:00 III15 **87.13** Functional connectivity in the human medial temporal lobe during memory-guided spatial navigation. S. WANG*; V. CARR; S. E. FAVILA; J. BAILENSON; A. D. WAGNER. *Stanford Univ., San Jose State Univ., New York Univ., Stanford Univ.*

2:00 III16 **87.14** The hippocampus operates in a continuous manner during spatial memory. B. M. JEYE*; J. M. KARANIAN; S. D. SLOTNICK. *Boston Col.*

3:00 III17 **87.15** ▲ Use of hippocampally-dependent navigation strategies is associated with low self-reported stress and high trait mindfulness. D. BOWES; A. RAINS; K. KONISHI; L. DAHMANI; V. D. BOHBOT; N. C. SCHMITZER-TORBERT*. *Wabash Col., Douglas Mental Hlth. Univ. Inst.*

4:00 III18 **87.16** The functional role of hippocampal subregions: A high-resolution fMRI study of memory. M. C. MACGILLIVRAY*; S. HRYBOUSKI; Y. HUANG; C. R. MADAN; P. SERES; R. CARTER; N. V. MALYKHIN. *Neurosci. and Mental Hlth. Inst., Univ. of Alberta, Univ. of Alberta, Boston Col., Univ. of Alberta.*

1:00 III19 **87.17** Hippocampal-cortical fMRI network distinctions between two types of item-context memory. S. KIM*; M. HERMILLER; J. VOSS. *Northwestern Univ., Northwestern Univ.*

2:00 III20 **87.18** Identifying optimal transcranial magnetic stimulation sequences for enhancement of hippocampal-cortical network connectivity and memory. M. HERMILLER*; S. VANHAERENTS; T. RAIJ; D. BRIDGE; J. VOSS. *Northwestern Univ., Rehabil. Inst. of Chicago, Northwestern Univ.*

3:00 III21 **87.19** The role of dorsolateral prefrontal cortex in viewing behaviors guided by episodic memory. D. R. O'YOUNG*; D. J. BRIDGE; J. L. VOSS. *Northwestern Univ. - Chicago, Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 III22 **87.20** Intranasal insulin modulates networks involved in an episodic memory task: An fMRI study. D. C. COCKRELL*; S. E. ADAMS; R. J. MORAN. *Virginia Tech. Carilion Sch. of Med., Virginia Tech. Carilion Res. Inst.*

1:00 III23 **87.21** Ultra-high resolution imaging of the medial temporal lobe at holistic episodic recollection. X. GRANDE*; J. A. BISBY; D. BERRON; E. DÜZEL; N. BURGESS. *Inst. f. Kogn. Neurologie u. Demenzforschung, German Ctr. for Neurodegenerative Dis., Univ. Col. London, Univ. Col. London, Univ. Col. London.*

2:00 III24 **87.22** Hippocampal subfield volumes contribute to episodic memory development. A. KERESZTES*; A. R. BENDER; N. C. BODAMMER; M. WERKLE-BERGNER; Y. L. SHING. *Max Planck Inst. for Human Develop., Univ. of Stirling.*

3:00 III25 **87.23** ● Episodic and autobiographical memory in humans and robots. T. J. PRESCOTT*; D. CAMILLERI; A. DAMIANOU; U. MARTINEZ; N. LAWRENCE. *Univ. Sheffield, Univ. of Leeds.*

POSTER

088. Attentional Networks

Theme H: Cognition

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

1:00 III26 **88.01** Modelling trans-thalamic coherence of cortical γ-band activity in MEG. F. ROUX*; P. J. UHLHAAS; J. GROSS. *Univ. of Birmingham, Univ. of Glasgow.*

2:00 III27 **88.02** Whole brain dynamic resting state functional connectivity of the basal nucleus of Meynert & ventral striatum. S. ZHANG*; S. HU; C. R. LI, 06519. *Yale Univ. Sch. of Med.*

3:00 III28 **88.03** δ phase-amplitude coupling in cued-attention task reflects task behavior. R. CHACKO*; E. C. LEUTHARDT. *Washington Univ. In St. Louis SOM, Washington Univ. Sch. of Med.*

4:00 III29 **88.04** Rapid network reconfigurations within the α band following single pulses of TMS. J. O. GARCIA*; Q. K. TELESFORD; A. ASHOURVAN; D. S. BASSETT; J. M. VETTEL. *U.S. Army Res. Lab., Univ. of Pennsylvania, Univ. of California, Santa Barbara.*

1:00 III30 **88.05** Attention-related spatially-selective α suppression is correlated with high frequency broadband power in the human visual system. A. B. MARTIN*; L. WANG; Y. B. SAALMANN; A. SHESTYUK; N. E. CRONE; J. PARVIZI; R. T. KNIGHT; S. KASTNER. *Princeton Univ., Princeton Univ., Chinese Acad. of Sci., Univ. of Wisconsin – Madison, Univ. of California, Berkeley, The Johns Hopkins Hosp., Stanford Univ., Univ. of California, Berkeley, Univ. of California, San Francisco.*

2:00 III31 **88.06** Changes in lateral prefrontal cortex oxygenation as a function of oddball task difficulty: A near-infrared spectroscopy study. W. RIZER*; J. ADAY; S. CONGER; J. CARLSON. *Northern Michigan Univ.*

3:00 III32 **88.07** Decoding attentional states using multi-voxel pattern analysis. S. MEYYAPPAN*; A. RAJAN; Y. LIU; R. SITARAM; G. R. MANGUN; M. DING. *Univ. of Florida, Univ. of California, Pontifical Catholic Univ. of Chile.*

4:00 III33 **88.08** Informational connectivity reveals representation-specific gating of information in object-based attention. A. D. SHELDON*; E. SAAD; B. R. POSTLE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin - Madison, Univ. of Wiscosin-Madison.*

1:00 III34 **88.09** Do brain regions activated by unexpected outcomes represent the content of predictions? K. R. VELNOSKEY*; G. MCCARTHY. *Yale Univ.*

2:00 III35 **88.10** Difference in phase synchrony pattern between spatial and non-spatial attention based on electrocorticography. Y. PARK*; T. KIM; J. PARK; J. KANG; D. JANG. *Hanyang Univ., Univ. of Ulsan, Col. of Medicine, Asan Med. Ctr.*

3:00 III36 **88.11** Neural mechanisms of attentional control in spatial and feature attention. A. RAJAN*; S. MEYYAPPAN; H. WALKER; Y. LIU; G. MANGUN; M. DING. *Univ. of Florida, Univ. of California.*

4:00 III37 **88.12** Orienting of spatial attention with event-related functional magnetic resonance imaging. T. S. CONTENÇAS*; M. N. SILVA; L. RIBEIRO-DO-VALLE; R. M. AZEVEDO, Neto; E. AMARO, Júnior. *UNIP, USP, USP.*

1:00 III38 **88.13** Suppression impairment in aging during bimodal selective attention. A. ATHREYA*; C. HUMPHRIES; M. T. KASSEL; K. A. ALTONJI; M. SABRI. *Med. Col. of Wisconsin, Univ. of Wisconsin Milwaukee.*

2:00 III39 **88.14** White matter integrity of executive control networks predicts selective attention performance in healthy aging. M. T. KASSEL*; C. HUMPHRIES; K. A. ALTONJI; D. C. OSMON; M. SABRI. *Univ. of Wisconsin - Milwaukee, Med. Col. of Wisconsin.*

3:00 III40 **88.15** Control of spatial attention by α and γ neurofeedback in human cortex. Y. BAGHERZADEH BIOKI*; D. BALDAUF; D. PANTAZIS; R. DESIMONE. *McGovern Inst. For Brain Res. at MIT.*

4:00 III41 **88.16** ● Modulating performance on a sustained attention task with network targeted brain stimulation. S. LAGANIERE*; A. PASCUAL-LEONE; M. HALKO. *Beth Israel Deaconess Med. Ctr., Berenson_Allen center for non-invasive brain stimulation, Berenson-Allen center for non-invasive brain stimulation.*

1:00 III42 **88.17** Neural practice effect during cross-modal selective attention: General and modality-specific effects. J. XIA; Y. LI; Y. JIANG; L. SHEN; Q. CHEN*. *South China Normal Univ.*

2:00 III43 **88.18** Functional changes in early latency medial prefrontal cortex activity following attention bias modification training: A near-infrared spectroscopy study. J. ADAY*; W. RIZER; J. CARLSON. *Northern Michigan Univ.*

3:00 III44 **88.19** Effects of attention state regulation training on resting-state functional connectivity. A. EICHENBAUM*; S. M. YOUSEF; C. GALLEN; E. S. POOL; A. J. W. CHEN; M. A. SILVER; M. D'ESPOSITO. *Univ. of California, Univ. of California, Univ. of California, Veterans Admin. Northern California Hlth. Care Syst., Univ. of California.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 III45 **88.20** Association study of the genetic variations of the CNR1 gene and executive attention. E. I. ORTEGA MORA*; U. CABALLERO-SANCHEZ; C. B. ROSAS-ESCOBAR; T. V. ROMÁN-LÓPEZ; J. A. GONZALEZ-BARRIOS; S. ROMERO-HIDALGO; F. VADILLO-ORTEGA; M. MENDEZ-DIAZ; O. PROSPÉRO-GARCÍA; A. E. RUIZ-CONTRERAS. *Univ. Nacional Autónoma De México; Fac. Psi, Inst. de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE), Insituto Nacional de Medicina Genomica (INMEGEN), Facultad de Medicina, UNAM, INMEGEN, Univ. Nacional Autonoma de Mexico.*

1:00 DP07 **88.21** (Dynamic Poster) The AttentionTrip: A game-based assessment of attention networks in autism. L. E. MASH; J. TOWNSEND*; Q. LUO; R. KLEIN; L. CHUKOSKIE. *SDSU/UCSD Jt. Program in Clin. Psychology, UCSD, UCSD, Dalhousie Univ., UCSD.*

2:00 III46 **88.22** Greater flanker effects for real vs. images of action-based stimuli. M. A. GOMEZ*; R. SKIBA; J. C. SNOW. *The Univ. of Nevada, Reno, The Univ. of Nevada, Reno.*

3:00 III47 **88.23** Investigating the influence of expertise and familiarity on segmentation of dance movements and working memory. P. M. DI NOTA*; M. P. OLSHANSKY; J. F. X. DESOUZA. *York Univ., York Univ., York Univ., York Univ., Canadian Action and Percpetion Network (CAPNet).*

4:00 III48 **88.24** How crossing hands modulates neural processes involved in directing attention to painful and tactile stimuli. K. J. SWIDER*; E. WRONKA; C. VAN RIJN; J. OOSTERMAN. *Jagiellonian Univ., Univ. Nijmegen.*

1:00 III49 **88.25** Investigating the scale invariance and global connectivity of BOLD when viewing natural versus man made scenes. O. KARDAN*; M. G. BERMAN; J. JONIDES. *Univ. of Chicago, Univ. of Michigan.*

2:00 III50 **88.26** Implicit discrimination of natural versus built environments as evidenced by p3 elicitation. S. P. MAHAMANE*; A. PORTER; A. HANCOCK; N. WAN; K. E. JORDAN. *Utah State Univ., Carnegie Mellon Univ., Utah State Univ.*

3:00 III51 **88.27** ● Acute effects of a proprietary spearmint extract on cognition in healthy men and women. K. A. HERRLINGER*; B. J. LEWIS; J. A. LASRADO; K. D. SANOSHY; J. M. BALDWIN; E. MAH; B. A. FONSECA. *Kemin Foods, L.C., Biofortis Inc.*

POSTER

089. Decision Making: Avoidance and Uncertainty

Theme H: Cognition

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

1:00 III52 **89.01** ▲ Effects of unilateral lesions of the insula and of the medial temporal lobe on taking risky decision: A study of epileptic patients. Z. VON SIEBENTHAL*; O. BOUCHER; I. ROULEAU; M. LASSONDE; F. LEPORE; D. K. NGUYEN. *Univ. De Montreal, Univ. De Montreal, Univ. du Québec à Montréal, Montréal, Univ. de Montreal, Univ. de Montréal, Ctr. Hospitalier de l'Université de Montréal.*

2:00 JJJ1 **89.02** Context and outcome uncertainty in anterior insula. W. H. ALEXANDER*; E. VASSENA. *Univ. Gent.*

3:00 JJJ2 **89.03** Noradrenergic manipulations of dynamic uncertainty computations. L. MARSHALL*; A. O. DE BERKER; R. SOUTHWELL; G. QUATTROCCHI; S. LITTLE; S. BESTMANN. *Univ. Col. London, Univ. Col. London, Univ. Col. London.*

4:00 JJJ3 **89.04** ● Acute and chronic effects of noradrenergic enhancement on transcranial direct current stimulation-induced neuroplasticity in humans. M. A. NITSCHE*; A. JAMIL; W. PAULUS; G. BATSIKADZE; M. KUO; L. KUO. *Leibniz Res. Ctr. For Working Envrn. An, Univ. Med. Ctr.*

1:00 JJJ4 **89.05** ● Serotonin depletion impairs instrumental avoidance. H. E. DEN OUDEN*; K. SCHMIDT; J. C. SWART; D. E. M. GEURTS; N. D. DAW; R. COOLS. *Radboud Univ., Oxford Univ., Princeton Univ.*

2:00 JJJ5 **89.06** Neural systems supporting demand avoidance. C. Z. SAYALI*; N. HAMZAH; B. CIULLO; D. BADRE. *Brown Univ.*

3:00 JJJ6 **89.07** Neural mechanisms of avoidance behavior for high cognitive demands. A. M. NAGASE*; K. MORITA; K. ONODA; J. C. FOO; T. HAJI; S. YAMAGUCHI; K. SAKAI. *Shimane Univ., Grad. Sch. of Education, The Univ. of Tokyo, Shimane Univ., ATR-Promotions, Brain Sci. Inst.*

4:00 JJJ7 **89.08** ● Behavioral and neural correlates of cognitive control during out-group encounters under threat. E. RUBIEN-THOMAS*; A. O. COHEN; A. LI; D. V. DELLARCO; M. RHEINSCHMIDT-SAME; N. M. DAUMEYER; N. CAMP; B. L. HUGHES; D. A. FAIR; K. A. TAYLOR-THOMPSON; J. L. EBERHARDT; J. A. RICHESON; B. J. CASEY. *Yale Univ., Sackler Institute, Weill Cornell Med. Col., Northwestern Univ., Stanford Univ., Oregon Hlth. and Sci. Univ., NYU Sch. of Law.*

1:00 JJJ8 **89.09** Neural basis of social learning under incomplete payoff information. P. KRUEGER; P. KARASHCHUK; I. SÁEZ; M. HSU*. *Univ. of California, Berkeley, Univ. of California, Berkeley.*

2:00 JJJ9 **89.10** The neural correlates of trauma-related symptom severity in combat veterans: A neuroeconomic approach. L. RUDERMAN; R. JIA; D. B. EHRLICH; P. SALHOTRA; I. HARPAZ-ROTEM; I. LEVY*. *Yale Sch. of Med.*

3:00 JJJ10 **89.11** Neuroanatomical correlates of loss of economic rationality in aging- Testing Generalized Axiom of Revealed Preference. H. CHUNG*; P. GLIMCHER; A. TYMULA. *New York Univ., New York Univ., New York Univ., Univ. of Sydney.*

4:00 JJJ11 **89.12** Endocrine modulation of value representations in mesocorticolimbic circuits following short-term fasting. J. RIHM*; H. SCHULTZ; J. PETERS. *Univ. Med. Ctr. Hamburg-Eppendorf, Freie Univ. Berlin, Univ. of Cologne.*

1:00 JJJ12 **89.13** Neural mechanisms of risky choice framing effects: A test of predictions by prospect theory versus fuzzy-trace theory. C. CHICK*; V. REYNA; R. WELDON; D. BLANSKY. *Stanford Univ., Cornell Univ.*

2:00 JJJ13 **89.14** A Bayesian model-based fMRI investigation of temporal expectancy in inhibitory control. O. RACCAH*; J. S. IDE; N. MA; S. HU; C. LI; A. J. YU. *UCSD, Stony Brooks Univ., Yale Univ.*

3:00 JJJ14 **89.15** Can dynamic normalization models with asymmetric inhibition account for the "attraction" effect in choice? C. XU*; J. ZIMMERMANN; K. LOUIE; P. W. GLIMCHER. *New York Univ. Ctr. for Neural Sci.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 JJJ15 **89.16** EEG correlates of evidence accumulation during dynamic discrimination decisions across two spatial locations. N. J. WISPINSKI*; J. K. BERTRAND; A. SINGHAL; C. S. CHAPMAN. *Univ. of Alberta, Univ. of Alberta.*

1:00 JJJ16 **89.17** Pupil dynamics during prolonged performance of a cued stroop task. I. BABU HENRY SAMUEL*; S. BURKE; J. CAGLE; M. DING. *Univ. of Florida, Univ. of Florida.*

2:00 JJJ17 **89.18** Mental representations of covert intentions on 'like' and 'dislike' are differentiated in α-band neural synchronies. J. CHOI*; D. YEO; K. CHA; K. KIM. *Yonsei Univ.*

3:00 JJJ18 **89.19** Midbrain to cerebral dopaminergic and serotonergic white-matter fiber tracts identified on the ntu-dsi-122 template. U. HSIEH*; W. TSENG; Y. LO; Y. HSU; J. GOH. *Col. of Medicine, Natl. Taiwan Univ., Col. of Medicine, Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

POSTER

090. Cognitive Development

Theme H: Cognition

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

1:00 JJJ19 **90.01** ▲ Total Intracranial volume growth across the third trimester using longitudinal fetal MRI. S. COHEN, 06513; S. KWON; S. CROSS; C. LACADIE; G. SZE; T. CONSTABLE; L. R. MENT*; D. SCHEINOST, 06513. *Yale Univ., Yale Univ. Sch. Med.*

2:00 JJJ20 **90.02** Altered white matter development in very preterm children. J. M. YOUNG*; B. R. MORGAN; M. SMITH; M. J. TAYLOR. *Univ. of Toronto, Hosp. for Sick Children.*

3:00 JJJ21 **90.03** Reduced grey matter concentrations in infants with transposition in the great arteries. R. ELWARD*; M. SAINI; D. GADIAN; D. CARMICHAEL; A. GIARDINI; M. DE HAAN; T. BALDEWEG; F. VARGHA-KHADEM. *Univ. Col. London, Great Ormond Street Hosp.*

4:00 JJJ22 **90.04** Cross-sectional comparison of spontaneous electrocortical α-γ cross-frequency coupling in infancy. S. HEIM*; G. MUSACCHIA; S. PETERS; S. ORTIZ-MANTILLA; A. A. BENASICH. *Rutgers Univ. - Newark, Univ. of the Pacific, Rutgers Univ. - Newark.*

1:00 JJJ23 **90.05** Resting brain interactions during natural sleep in typically developing toddlers are biased to the left hemisphere. S. J. GOTTS*; E. REDCAY; S. C. MILLEVILLE; A. THURM; S. SHUMWAY-MANWARING; A. MARTIN. *Lab. of Brain and Cognition, NIMH/NIH, Univ. of Maryland, NIMH/NIH, Univ. of Utah.*

2:00 JJJ24 **90.06** Structural connectivity of language tracts in 6-week-old infants. J. LIU*; C. PONTING; T. TSANG; S. BOOKHEIMER; M. DAPRETTO. *UCLA, UCLA, UCLA, UCLA.*

3:00 JJJ25 **90.07** ● Structural brain correlates of global motion sensitivity in typically developing children: Parietal surface area and TBSS measures of the superior longitudinal fasciculus. O. J. BRADDICK*; J. ATKINSON; N. AKSHOOMOFF; E. NEWMAN; L. B. CURLEY; A. M. DALE; T. L. JERNIGAN. *Univ. Oxford, Univ. Col. London, Univ. of California San Diego.*

4:00 JJJ26 **90.08** White matter damage associated with motor, attention and working memory deficits in children with congenital hyperinsulinism. G. PITTS*; K. HUSSAIN; A. KUMARAN; J. BULLOCK; D. GADIAN; F. VARGHA-KHADEM. *UCL Inst. of Child health, Great Ormond Street Hosp.*

1:00 JJJ27 **90.09** Newborn insula gray matter volume is prospectively associated with early life fat gain. J. RASMUSSEN*; S. ENTRINGER; F. KRUGGEL; D. COOPER; M. STYNER; J. H. GILMORE; S. G. POTKIN; P. D. WADHWA; C. BUSS. *Univ. of California, Irvine, The Charité Berlin, Univ. of California Irvine, Univ. of North Carolina.*

2:00 JJJ28 **90.10** Gut microbiome associated with cognitive and brain imaging outcomes in human infants. A. L. CARLSON*; K. XIA; M. A. AZCARATE-PERIL; B. D. GOLDMAN; M. A. STYNER; A. L. THOMPSON; X. GENG; J. H. GILMORE; R. C. KNICKMEYER. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of Hong Kong.*

3:00 JJJ29 **90.11** ● Added sugar intake is inversely related to creativity among preadolescents. K. M. HASSEVOORT*; A. S. LIN; S. E. KHAZOUM; C. H. HILLMAN; N. A. KHAN; N. J. COHEN. *The Beckman Inst. of Sci. and Technol., Univ. of Illinois at Urbana-Champaign, Northeastern Univ.*

4:00 JJJ30 **90.12** Developmental and familial characteristics of top-down inhibitory control networks and performance strategies: ERPs to the Blue Man Stop-Response Task. C. BOUCHARD*; I. SOLIS; B. COFFMAN; B. SEAMAN; J. C. PESKO; K. R. CIESIELSKI. *Pediatric Neurosci. Laboratory, UNM, Dept. of Psychology, UNM, Dept. of Mathemetics & Statistics, UNM, Massachusetts Gen. Hosp.*

1:00 JJJ31 **90.13** From joint attention to mentalization: β oscillatory activity predicts theory of mind skill in typically developing children. P. SOTO-ICAZA; L. VARGAS-BECERRA; F. ABOITIZ; P. BILLEKE*. *Pontificia Univ. Católica de Chile, Hosp. Luis Calvo Mackenna, Univ. del Desarrollo.*

2:00 JJJ32 **90.14** Independent components of neural activation during reading and their relationship to behavior. M. SIMMONITE*; C. WENG; T. POLK. *Univ. of Michigan, Univ. of California San Francisco.*

3:00 JJJ33 **90.15** Altered functional connectivity of hippocampus with premotor area in internet gaming disorder. J. KIM*. *Addiction Res. Inst.*

4:00 JJJ34 **90.16** ● Correlation of cognitive training gains and resting state functional connectivity. C. LEDBETTER*; M. FAISON; O. HILL; J. PATTERSON. *LSU Hlth. Sci. Ctr. - Shreveport, Virginia State Univ.*

1:00 JJJ35 **90.17** ● Intensive, metronome-based, one-on-one cognitive training improves cognitive skills in children. A. L. MOORE*; C. LEDBETTER; D. M. CARPENTER. *Gibson Inst. of Cognitive Res., LSU, Univ. of Colorado Colorado Springs.*

2:00 JJJ36 **90.18** Assessing the development of episodic memory and future thinking through verbal and behavioral tests. K. L. DICKERSON*; E. BRYANT; A. M. SEED; J. A. AINGE. *Univ. of St Andrews.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 JJJ37 **90.19** Effects of 6 weeks motor-enrichment-intervention to improve math performance in preadolescent children. J. WIENECKE*; M. BECK; R. LIND; J. LUNDBYE-JENSEN; S. GEERTSEN. *Univ. of Copenhagen, Univ. of Copenhagen.*

4:00 JJJ38 **90.20** Development of neural stability for four basic arithmetic operations. T. CHANG*; P. LEE; A. W. S. METCALFE. *Natl. Chengchi University., Natl. Chengchi Univ., Sunnybrook Res. Inst.*

1:00 JJJ39 **90.21** The Neural underpinnings of arithmetic learning in children are different from those in adults. M. SOLTANLOU*; C. ARTEMENKO; T. DRESLER; A. EHLIS; A. J. FALLGATTER; H. NUERK. *Dept. of Psychology, Univ. of Tuebingen, Grad. Training Ctr. of Neuroscience/ IMPRS for Cognitive and Systems Neurosci., Leibniz-Institut für Wissensmedien, LEAD Grad. Sch. and Res. Network, Univ. of Tuebingen, Dept. of Psychiatry and Psychotherapy, Univ. Hosp. of Tuebingen.*

2:00 JJJ40 **90.22** Number comparison efficiency mediates the relationship between the linearity of the mental number line and math achievement. N. KIM*; S. CHO. *Chung-Ang Univ.*

3:00 JJJ41 **90.23** Finding the neural correlates of middle childhood "slump" in creativity. M. SAGGAR*; A. STANKOV; M. SCHREIER; A. REISS. *Stanford Univ.*

4:00 JJJ42 **90.24** The functional brain architecture of own- and other-race face processing in children and adults. G. ANZURES*; C. J. MONDLOCH; F. HAIST. *UC San Diego, Brock Univ., UC San Diego.*

1:00 JJJ43 **90.25** The impact of emotional cues on short-term and long-term memory during adolescence. A. COHEN*; D. V. DELLARCO; M. I. CONLEY; B. CASEY. *Weill Cornell Grad. Sch. of Med. Sci., Weill Cornell Med. Col., Yale Univ.*

2:00 JJJ44 **90.26** Neural predictors of educational attainment in adolescence. D. FUHRMANN*; M. SPEEKENBRINK; S. BLAKEMORE. *UCL Inst. of Cognitive Neurosci., Univ. Col. London, Univ. Col. London.*

POSTER

091. Schizophrenia: Behavior and Symptoms

Theme H: Cognition

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

1:00 JJJ45 **91.01** ● Cognitive functions negatively correlate to the angular gray matter volume in schizophrenia. T. UENO*; H. KUGA; N. ORIBE; K. TAKAO; R. HAYASHIDA; N. NAKAYAMA; H. MIZUHARA; T. YUZURIHA. *Hizen Seishin Iryo Ctr., Grad. Sch. of Informatics, Kyoto Univ.*

2:00 JJJ46 **91.02** Hemispheric silencing of phospholipase C-β1 in the right anterior cingulate cortical neurons leads to impaired observational fear learning in mice. S. KIM*; M. KIM; J. BYUN; T. CHO; Y. KIM; H. SHIN. *Inst. for Basic Sci. (IBS), Grad. Sch. of New Drug Discovery & Development, Chungnam Natl. Universit.*

3:00 JJJ47 **91.03** Perceptual rivalry as Bayesian inference : Accumulating evidences towards circular inferences in schizophrenia. P. LEPTOURGOS*; C. NOTREDAME; R. JARDRI; S. DENEVE. *Ecole Normale Superieure, CNRS UMR9193 (SCALab), Lille Univ.*

4:00 JJJ48 **91.04** Lower resilience against surprising information predicts hallucination proneness in healthy individuals. H. STUKE*; H. STUKE; V. WEILNHAMMER; K. SCHMACK. *Charité - Universitätsmedizin Berlin, Freie Univ.*

1:00 JJJ49 **91.05** Test-retest reliability of the metrics cognitive consensus battery (MCC) in persons with schizophrenia and healthy volunteers: A non-interventional study. N. SHAAFI KABIRI*; A. C. COTE; B. N. DUPEE; P. J. FRIED; M. H. KRENGEL; K. C. THOMAS. *Boston Univ. Sch. of Med., Boston Univ., Simmons Col., Beth Israel Deaconess Med. Ctr., Boston Univ. Sch. of Med.*

2:00 JJJ50 **91.06** Schizophrenia polygenic burden is significantly associated with cognitive performance in nonpsychotic individuals. R. SHAFEE*; P. NANDA; N. TANDON; J. PADMANABHAN; N. ALLIEY-RODRIGUEZ; E. GERSHON; B. CLEMENTZ; G. PEARLSON; C. TAMMINGA; M. KESHAVAN; S. MCCARROLL. *Harvard Med. Sch., Broad Inst. of MIT and Harvard, Columbia Univ. Med. Ctr., Beth Israel Deaconess Med. Ctr., Baylor Col. of Med., Beth Israel Deaconess Med. Ctr., McLean Hosp., Univ. of Chicago, Univ. of Chicago, Univ. of Georgia, Yale Univ. Sch. of Med., UT Southwestern Med. Sch., Harvard Med. Sch.*

3:00 JJJ51 **91.07** Behavioral response to LPS treatment in heterozygous Disc1 mutant mice. Y. CHANG*; C. LAI; L. LEE. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

4:00 JJJ52 **91.08** DISC1 KO as model for bipolar disorders? Correlations of behavior and MR spectroscopy in mice. M. A. VOGT*; A. SARTORIUS; W. WEBER-FAHR; A. SAWA; A. MEYER-LINDENBERG; P. GASS. *Univ. Hosp. Tuebingen, Central Inst. of Mental Hlth., Johns Hopkins Univ. Sch. of Med., Central Inst. of Mental Hlth., Central Inst. of Mental Hlth.*

1:00 JJJ53 **91.09** A pilot study to assess the effects of γ neurofeedback on working memory in schizophrenia patients. F. SINGH; A. SMITH; N. DUDECK; R. CHENG; R. GOSLA; E. HERRERA; Y. QIU; Z. YANG; J. A. PINEDA*. *Univ. of California San Diego Dept. of Cognitive Sci., Univ. of California San Diego Dept. of Cognitive Sci.*

2:00 JJJ54 **91.10** Influence of schizophrenia-associated gene Egr3 on circadian rhythms in mice. A. M. MAPLE*; R. K. ROWE; J. L. HARRISON; J. LIFSHITZ; F. FERNANDEZ; A. L. GALLITANO. *Univ. of Arizona Col. of Med., Barrow Neurolog. Inst. at Phoenix Children's Hosp., Univ. of Arizona Col. of Med., Phoenix Veteran Affairs Healthcare Syst., Arizona State Univ., Univ. of Arizona.*

3:00 JJJ55 **91.11** ● Speech-in-noise perception deficits reflect central auditory dysfunction in schizophrenia. S. RACKELMANN, 92093; M. TARASENKO*; A. SHILUK; W. ZHANG; S. T. PIANKA; A. W. BISMARK; M. L. THOMAS; J. SPROCK; C. KAUFFMAN; G. A. LIGHT. *UCSD, VA San Diego Healthcare Syst. / UCSD Dept. of Psy, UCLA, Alpine Special Treatment Ctr.*

4:00 JJJ56 **91.12** Cognition predicts treatment engagement among inpatients with schizophrenia. A. SHILUK*; M. L. THOMAS; S. RACKELMANN; W. ZHANG; S. T. PIANKA; C. KAUFFMAN; J. SPROCK; A. W. BISMARK; M. TARASENKO; G. A. LIGHT. *UCSD, UCLA, Alpine Special Treatment Ctr., VA San Diego Healthcare Syst.*

1:00 JJJ57 **91.13** ● Genome-wide gene expression analysis reveals molecular phenotypes related to schizophrenia in Neurogranin knockout mice. S. HATTORI*; H. HAGIHARA; T. KAMEYAMA; Y. OUCHI; H. INAGAKI; H. KURAHASHI; F. L. HUANG; K. HUANG; T. MIYAKAWA. *Fujita Hlth. Univ., NICHD, NIH.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 JJJ58 **91.14** Predicting cognition in schizophrenia patients using novel reverse-translated tasks. A. W. BISMARK*; A. SHILUK; S. RACKELMANN; W. ZHANG; S. T. PIANKA; C. KAUFFMAN; M. TARASENKO; M. L. THOMAS; J. W. YOUNG; G. A. LIGHT. *VA San Diego Healthcare Syst., UCSD, UCLA, Alpine Special Treatment Ctr.*

3:00 JJJ59 **91.15** ● Frontal neural dysfunction is implicated in executive inflexibility in psychosis. L. HUANG*; D. A. PARKER; S. K. HILL; M. S. KESHAVAN; G. D. PEARLSON; C. A. TAMMINGA; J. A. SWEENEY; B. A. CLEMENTZ. *Univ. of Georgia, Rosalind Franklin Univ. of Med. and Sci., Harvard Med. Sch., Olin Neuropsychiatric Res. Ctr., Univ. of Texas Southwestern Med. Ctr.*

POSTER

092. Optogenetic Approaches to Studying Neural Circuit Function

Theme I: Techniques

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

1:00 JJJ60 **92.01** Tapered and nano-patterned optical fiber for customized light delivery geometries *in vivo*. M. PISANELLO*; L. SILEO; A. DELLA PATRIA; B. L. SABATINI; M. DE VITTORIO; F. PISANELLO. *Inst. Italiano Di Tecnologia, Univ. del Salento, Harvard Med. School, Howard Huges Med. Inst.*

2:00 JJJ61 **92.02** *In-vivo* characterization of excitatory opsins in different regions of the mouse brain. J. TEGTMEIER*; K. JANITZKY; K. TAKAGAKI; F. W. OHL; M. T. LIPPERT. *Leibniz Inst. For Neurobio.*

3:00 KKK1 **92.03** Optogenetic tools with varying kinetics differentially engage intrinsic network resonance *in vivo*. N. JUN*; J. A. CARDIN. *Yale Univ., Yale Univ.*

4:00 KKK2 **92.04** Chloride indicator protein for non-invasive functional bioluminescence imaging. K. BERGLUND*; J. K. TUNG; R. E. GROSS. *Emory Univ., Emory Univ.*

1:00 KKK3 **92.05** Bioluminescent control of optogenetics in acute brain slices. R. ST. LAURENT*; C. I. MOORE; D. LIPSCOMBE; B. W. CONNORS; U. HOCHGESCHWENDER; J. A. KAUER. *Brown Univ., Central Michigan Univ., Central Michigan Univ., Brown Univ.*

2:00 KKK4 **92.06** ▲ Bioluminescence activated optogenetic stimulation in a rat model of spinal cord injury. P. OTERO; E. D. PETERSEN; A. PAL; J. ZENCHAK; U. HOCHGESCHWENDER*. *Central Michigan Univ., Central Michigan Univ.*

3:00 KKK5 **92.07** Split Gaussia luciferase based genetically encoded calcium indicator. A. PAL*; Z. ZAIDI; W. E. MEDENDORP; J. A. KAUER; B. W. CONNORS; C. I. MOORE; D. LIPSCOMBE; U. HOCHGESCHWENDER. *Central Michigan Univ., Brown Univ., Brown Univ., Central Michigan Univ.*

4:00 KKK6 **92.08** Bioluminescent optogenetics (BL-OG): A systematic investigation of the neurophysiological effects of BL-OG *in-vivo*. M. GOMEZ-RAMIREZ*; A. I. MORE; B. W. CONNORS; J. A. KAUER; D. LIPSCOMBE; U. HOCHGESCHWENDER; C. I. MOORE. *Brown Univ., Central Michigan Univ.*

1:00 KKK7 **92.09** All-optical activity-guided single-cell-resolution behavioral investigation of reward in neocortical networks. J. H. JENNINGS*; C. KIM; L. YE; J. MARSHEL; M. RAFFIEE; C. RAMAKRISHNAN; A. WANG; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Howard Hughes Med. Inst.*

2:00 KKK8 **92.10** Multimodal image registration and analysis via clarity-based light-microscopy (MIRACL). M. GOUBRAN*; C. LEUZE; B. HSUEH; M. ASWENDT; L. YE; Q. TIAN; M. CHENG; G. STEINBERG; K. DEISSEROTH; J. MCNAB; M. ZEINEH. *Stanford Univ., Stanford Univ.*

3:00 KKK9 **92.11** Crystal structure of a light gated anion channel. Y. KIM*; H. E. KATO; A. BERNDT; S. LEE; D. HILGER; B. KOBILKA; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Howard Hughes Med. Inst., Stanford Univ., Stanford Univ.*

4:00 KKK10 **92.12** ● Pathways to clinical CLARITY: Quantitative methodologies for transparent-volume analysis of irregular, soft, and heterogenous tissues in development and disease. B. HSUEH*; V. BURNS; P. PAUERSTEIN; L. YE; K. ENGBERG; A. WANG; X. GU; H. CHAKRAVARTHY; E. ARDA; G. CHARVILLE; K. HOLZEM; I. EFIMOV; H. VOGEL; S. KIM; K. DEISSEROTH. *Stanford Univ., Washington Univ., The George Washington Univ.*

1:00 KKK11 **92.13** Probing large-scale network dynamics at high speed in the brain of behaving flies. S. AIMON*; T. KATSUKI; L. GROSENICK; M. BROXTON; K. DEISSEROTH; T. SEJNOWSKI; R. J. GREENSPAN. *Kavli Inst. For Brain and Mind UCSD, Stanford Univ., Salk Inst. for Biol. Studies.*

2:00 KKK12 **92.14** ● Methods for comparison of MRI and CLARITY data in human tissue specimen. C. LEUZE*; M. GOUBRAN; M. ASWENDT; Q. TIAN; B. HSUEH; M. ZEINEH; K. DEISSEROTH; J. MCNAB. *Stanford Univ. Dept. of Radiology, Radiology, Stanford Univ., Neurosurgery, Stanford Univ., Bioengineering, Stanford Univ., Howard Hughes Med. Inst., Psychiatry & Behavioral Sci.*

3:00 KKK13 **92.15** Stable, chronic two-photon imaging in awake, behaving rhesus macaque. X. SUN*; E. TRAUTMANN; D. O'SHEA; S. RYU; J. MARSHEL; W. ALLEN; I. KAUVAR; C. RAMAKRISHNAN; K. DEISSEROTH; K. SHENOY. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

4:00 KKK14 **92.16** Focused ultrasound facilitates non-invasive AAV delivery for optogenetics. S. WANG; T. KUGELMAN; A. BUCH; S. HUSSAINI; M. HERMAN; M. KARAKATSANI; Y. HAN; K. DUFF; E. KONOFAGOU*. *Columbia Univ.*

1:00 KKK15 **92.17** Tailoring light-delivery depth for optogenetic control of neural activity in deep-brain structures with tapered optical fibers. F. PISANELLO*; G. MANDELBAUM; M. PISANELLO; L. SILEO; A. DELLA PATRIA; I. A. OLDENBURG; T. HAYNES; M. S. EMARA; B. SPAGNOLO; B. L. SABATINI; M. DE VITTORIO. *Inst. Italiano Di Tecnologia, Harvard Med. School, Howard Hughes Med. Inst., Univ. del Salento, Univ. del Salento.*

2:00 KKK16 **92.18** Comparison of network effects of optogenetic and electrical stimulation on the synchronized oscillations in a computational model of Parkinsonian basal ganglia. S. RATNADURAI-GIRIDHARAN; C. C. CHEUNG; L. L. RUBCHINSKY*. *Indiana Univ. Purdue Univ. Indianapolis, Indiana Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 KKK17 **92.19** Opto-panx1: Engineering a new, optically-controlled pannexin 1 channel. A. W. LOHMAN*; W. ZHANG; R. E. CAMPBELL; R. J. THOMPSON. *Univ. of Calgary, Univ. of Alberta.*

4:00 KKK18 **92.20** Comparison of optogenetic and electrical intracranial self-stimulation of the mouse VTA. T. C. WEIDNER*; D. VINCENZ; M. J. BROCKA; J. TEGTMEIER; A. KOLODZIEJ; K. TAKAGAKI; F. W. OHL; J. GOLDSCHMIDT; M. T. LIPPERT. *Leibniz Inst. for Neurobio.*

1:00 KKK19 **92.21** Coupling optogenetic stimulation and microdialysis *in vivo* to investigate how distinct stimulation patterns regulate dopamine levels. M. SKIRZEWSKI*; I. KARAVANOVA; A. BUONANNO. *NIH/NICHD.*

2:00 KKK20 **92.22** Transparent microelectrodes eliminating light-induced artifacts for simultaneous optogenetics and electrophysiology. H. LYU; X. LIU; D. KUZUM*. *Univ. of California San Diego, Univ. of California San Diego.*

3:00 KKK21 **92.23** ● Vision restoration - neuronal imaging of red-shifted channelrhodopsin responses in the living eye. S. K. CHEONG*; J. M. STRAZZERI; D. R. WILLIAMS; W. H. MERIGAN. *Univ. of Rochester, Univ. of Rochester, Univ. of Rochester.*

4:00 KKK22 **92.24** Flexible multifunctional polymer fibers for integrated optogenetics. S. PARK*; Y. GUO; X. JIA; H. CHOE; B. GRENA; J. KANG; H. YOON; G. B. CHOI; Y. FINK; P. ANIKEEVA. *Massachusetts Inst. of Technol. (MIT), Tohoku Univ., Virginia Polytechnic Inst. and State Univ., Massachusetts Inst. of Technol. (MIT), Massachusetts Inst. of Technol. (MIT), Massachusetts Inst. of Technol. (MIT).*

1:00 KKK23 **92.25** Selective optogenetic control of Purkinje cells in monkey cerebellum. Y. EL-SHAMAYLEH*; Y. KOJIMA; R. SOETEDJO; G. D. HORWITZ. *Univ. of Washington, Washington Natl. Primate Res. Ctr.*

2:00 KKK24 **92.26** Efficient ArchT-mediated optogenetic inhibition by red-shifted off-peak 594-nm light *in vivo*. R. SETSUIE*; K. TAMURA; M. TAKEDA; K. MIYAMOTO; Y. MIYASHITA. *The Univ. of Tokyo Sch. of Med., Grad. Sch. of Medicine, Juntendo Univ.*

3:00 KKK25 **92.27** *In vivo* all-optical electrophysiology of neuronal structures via two-photon microscopy of genetically-encoded calcium indicators and optogenetics. J. R. MESTER*; P. BAZZIGALUPPI; P. L. CARLEN; J. G. SLED; B. STEFANOVIC. *Sunnybrook Hlth. Sci. Ctr., Univ. of Toronto, Toronto Western Hosp., Univ. of Toronto, Hosp. for Sick Children.*

4:00 KKK26 **92.28** Simultaneous two-photon calcium imaging and optogenetics using GCaMP6 and ChrimsonR. E. M. GOLDBERG*. *Children's Hosp. of Philadelphia.*

1:00 KKK27 **92.29** ● Integration of optogenetic stimulation with neuronal and neurotransmitter recordings. D. A. JOHNSON*; E. NAYLOR; S. GABBERT; D. V. AILLON; D. A. JOHNSON. *Pinnacle Technology, Inc.*

2:00 KKK28 **92.30** Two-photon holographic control of single neurons expressing somatic opsins. O. A. SHEMESH*; D. TANESE; V. ZAMPINI; C. LINGHU; E. PAPAGIAKOUMOU; E. RONZITTI; K. D. PIATKEVICH; V. EMILIANI; E. S. BOYDEN. *MIT, Neurophotonics Laboratory, CNRS UMR8250 Paris Descartes Univ., MIT.*

POSTER

093. Genomics, Proteomics, and Systems Biology

Theme I: Techniques

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

1:00 KKK29 **93.01** Quantitative analysis of phosphoproteome in hippocampal neurons from mouse model of developmental delay. S. LIM; S. CHOI; J. MOON; J. LEE*. *KRIBB.*

2:00 KKK30 **93.02** Multi-dimensional characterization of the brain's immune populations. B. KORIN*; T. BEN-SHANNAN; T. DUBOVIK; A. ROLLS. *Technion - Israel Inst. of Technol.*

3:00 KKK31 **93.03** Explore the exocytotic proteins that interact with Synapsin Ia in a phosphorylation-dependent manner. H. YANG*; C. WANG. *Natl. Taiwan Univ. and Academia Sinica, Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

4:00 KKK32 **93.04** Effects of aged garlic extract and fruarg on lipopolysaccharide induced gene profiling and signaling pathways in microglial cells. H. SONG*; Y. LU; Z. QU; V. V. MOSSINE; J. HOU; J. CUI; B. PECULIS; T. P. MAWHINNEY; J. CHENG; M. C. GREENLIEF; K. FRITSCHE; F. J. SCHMIDT; R. B. WALTER; D. B. LUBAHN; G. Y. SUN; Z. GU. *Univ. of Missouri, Columbia, Univ. of Missouri Sch. of Med., Univ. of Missouri, Columbia, Texas State Univ., Univ. of Missouri, Columbia, Univ. of Missouri, Columbia, Univ. of Missouri, Columbia, Univ. of Missouri, Columbia.*

1:00 KKK33 **93.05** Dynamic DNA methylation landscape of neurons from hippocampus and frontal cortex during postnatal development. Y. HE*; E. A. MUKAMEL; M. HARIHARAN; C. LUO; J. LUCERO; R. CASTANON; J. R. NERY; T. J. SEJNOWSKI; J. R. ECKER; M. M. BEHRENS. *The Salk Inst. For Biol. Studies, UCSD, UCSD, The Salk Inst. for Biol. Studies, The Salk Inst. for Biol. Studies, UCSD.*

2:00 KKK34 **93.06** A novel electrochemical detection method for aptamer biosensors of thrombin. H. YOO*; W. SUN; S. YANG; J. PARK; C. JI; S. JUN. *Ewha Womans Univ., Ewha Womans Univ., Ewha Womans Univ.*

3:00 KKK35 **93.07** Complex microbiota targeted rederivation: A method to study effects of gut microbiota on model phenotypes. M. L. HART*; A. C. ERICSSON; C. L. FRANKLIN. *Univ. of Missouri, Univ. of Missouri, Univ. of Missouri.*

4:00 KKK36 **93.08** Transcriptional identities of major cell types in the human brain. K. W. KELLEY*; M. C. OLDHAM. *Univ. of California San Francisco, Univ. of California San Francisco.*

1:00 KKK37 **93.09** A customized comparative genomic hybridization array for the analysis of copy number variations and exon-dosage anomalies in neurological disorders. V. LA COGNATA*; G. MORELLO; G. GENTILE; V. D'AGATA; S. CAVALLARO. *Natl. Res. Council, Univ. of Catania.*

2:00 KKK38 **93.10** Profiling serotonergic neurons from donors at different states of satiation with single-neuron transcriptomics. E. C. DABE*; A. B. KOHN; R. GILLETTE; L. L. MOROZ. *Univ. of Florida Whitney Lab., Univ. of Florida McKnight Brain Inst., Univ. of Illinois Urbana-Champaign.*

3:00 KKK39 **93.11** Perinatal Inflammatory imprinting in a neonatal animal model of white matter injury: A DNA methylation study. S. MCGRAW*; W. C. PIERRE; L. LEGAULT; V. BERTRAND-LEHOUILLIER; I. LONDONO; G. A. LODYGENSKY. *Ctr. De Recherche Du CHU Ste-Justine, Univ. de Montréal.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 KKK40 **93.12** Discovery proteomics for small neuronal populations using mass spectrometry: Toward single cell proteomics. P. NEMES*; S. B. CHOI; M. ZAMARBIDE; M. MANZINI. *George Washington Univ., George Washington Univ.*

1:00 KKK41 **93.13** Single-cell RNAseq of human cerebral cortical neurons reveals transcriptional heterogeneity. G. E. KAESER; J. J. CHUN*; Y. C. YUNG; B. B. LAKE; R. AI; N. S. SALATHIA; A. CHEN; X. SHENG; J. FAN; W. WANG; K. ZHANG. *The Scripps Res. Inst., Scripps Resch Inst., Univ. of California San Diego, Illumina.*

2:00 KKK42 **93.14** The endogenous disrupted in schizophrenia 1 (DISC1) interactome in human neural progenitor cells. B. J. WILKINSON*; M. P. COBA. *USC, Zilkha Neurogenetic Inst., USC.*

3:00 KKK43 **93.15** Single neuronal methylomes reveal epigenomic diversity in the mammalian brain. C. LUO*; E. A. MUKAMEL; R. CASTANON; J. LUCERO; J. R. NERY; C. L. KEOWN; Y. HE; L. KURIHARA; C. SCHUMACHER; T. HARKINS; M. BEHRENS; J. R. ECKER. *Salk Inst. For Biol. Studies, UCSD, The Salk Inst. for Biol. Studies, UCSD, Swift Biosci. Inc, Swift Biosci. Inc.*

POSTER

094. Light Microscopy: Advances in Technologies, Software, and Analysis

Theme I: Techniques

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

1:00 KKK44 **94.01** Fast recording of whole mouse brains with aspheric light sheet microscopy. H. DODT*; S. SAGHAFI; C. HAHN; K. BECKER; M. PENDE; I. SABDYUSHEVA-LITSCHAUER; M. WANIS. *Tech. Univ. Vienna, Med. Univ. Vienna.*

2:00 KKK45 **94.02** Adaptive correction of defocus in light sheet microscopy of cleared mouse brains. L. SILVESTRI*; M. MÜLLENBROICH; A. DI GIOVANNA; L. SACCONI; F. PAVONE. *European Lab. For Non-Linear Spectroscopy, Natl. Inst. of Optics, Univ. of Florence.*

3:00 KKK46 **94.03** Integrated dual approach for 3D reconstruction of myelinated fibers orientation: Combination of polarized light imaging and two-photon fluorescence microscopy. I. COSTANTINI; L. SILVESTRI; M. AXER; M. MENZEL; D. GRÄßEL; K. AMUNTS; F. S. PAVONE*. *LENS - European Lab. for Non-Linear Spectroscopy, Inst. of Neurosci. and Med. - INM-1, C. and O. Vogt Inst. of Brain Res., LENS, Natl. Inst. of Optics, Dept. of Physics.*

4:00 KKK47 **94.04** 3D reconstruction of mouse white matter tracts in a Common Coordinate Framework with a combined approach. S. DING*; J. ROYALL; P. LESNAR; Y. LI; B. FACER; Q. WANG; N. DEE; A. BERNARD; J. PHILLIPS; C. KOCH; S. SUNKIN; H. ZENG; J. A. HARRIS; L. NG. *Allen Inst. For Brain Sci.*

1:00 KKK48 **94.05** Ribbon imaging: High-speed scanning of specialized 3d ROIs fitted to neuronal structures using an electrical tunable lens. M. S. SMIRNOV*; L. YAN; R. YASUDA. *Max Planck Florida Inst.*

2:00 KKK49 **94.06** ● Helmholtz phase tomography for label-free imaging of neuronal intracellular transport. M. E. KANDEL; H. SHAKIR; C. A. BEST; G. POPESCU*. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

3:00 KKK50 **94.07** Third harmonic generation imaging of intact human cerebral organoids to assess key components of early neurogenesis in Rett Syndrome. M. YILDIRIM*; D. FELDMAN; T. WANG; D. OUZOUNOV; S. CHOU; J. M. SWANEY; K. CHUNG; C. XU; P. SO; M. SUR. *MIT, MIT, Cornell Univ., MIT.*

4:00 KKK51 **94.08** Algorithmic optimization of DIC microscopy images for electrophysiology and neuronal-tissue reconstruction. B. COLLYER*; M. G. THOMAS; M. J. WALL; P. BANIUKIEWICZ; T. BRETSCHNEIDER; A. SHMYGOL; M. J. E. RICHARDSON. *Univ. of Warwick, Univ. of Warwick, Univ. of Warwick.*

1:00 KKK52 **94.09** High-throughput whole mouse brain vasculature imaging with micrometric resolution using light sheet microscopy. A. P. DI GIOVANNA*; A. TIBO; L. SILVESTRI; M. C. MÜLLENBROICH; L. SACCONI; P. FRASCONI; F. S. PAVONE. *LENS - European Lab. For Non-Linear Spectros, Univ. of Florence, Natl. Res. Council, Univ. of Florence.*

2:00 KKK53 **94.10** C-DSLM: Cleared tissue digital scanned light-sheet microscopy. D. SHEPHERD*; D. RYAN; E. GOULD; J. SINGH; G. SEEDORF; P. PARSA; O. MASHIZADEH; S. ABMAN; S. VIJAYARAGHAVAN; W. MACKLIN; D. RESTREPO. *Univ. of Colorado Denver, Univ. of Colorado Anschutz Med. Campus, Colorado State Univ., Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

3:00 KKK54 **94.11** An integrated photonic probe for light sheet microscopy. F. YE*; B. AVANTS; J. ROBINSON. *Rice Univ., RICE UNIVERSITY, Baylor Col. of Med.*

1:00 DP09 **94.12** (Dynamic Poster) Design and implementation of multi-signal, time-lapse digital reconstructions of neuronal morphology. S. NANDA*; H. CHEN; R. DAS; H. PENG; D. N. COX; G. A. ASCOLI. *Krasnow Inst. For Advanced Studies, The Univ. of Georgia, Cortical Architecture Imaging and Discovery Lab., Georgia State Univ., Allen Inst. for Brain Sci.*

1:00 KKK55 **94.13** Automated 3D analysis of confocal microscopy images by 3D-ACE reveals widespread molecular and cellular adaptions in the spinal nociceptive circuitry of monoacylglycerol lipase knockout mice. C. I. PONGOR*; S. G. WOODHAMS; B. BENJAMIN; B. DUDOK; L. BARNA; M. KANO; K. SAKIMURA; M. WATANABE; I. KATONA. *Inst. of Exptl. Med., Inst. of Exptl. Med., Univ. of Tokyo, Niigata Univ., Hokkaido Univ. Sch. of Med.*

2:00 KKK56 **94.14** VividSTORM: A novel open-source software for super-resolution and confocal microscopy images. V. MICZÁN*; L. BARNA; B. DUDOK; A. HORVÁTH; J. R. GLAVINICS; Z. I. LÁSZLÓ; I. KATONA. *Inst. of Exptl. Medicine, HAS, Pázmány Péter Catholic Univ., Semmelweis Univ.*

3:00 KKK57 **94.15** HeadLight: Plug & play tool for visualization andanatomical analysis of whole brain datasets. K. U. VENKATARAJU, 11724; P. OSTEN*. *Cold Spring Harbor Lab., Cold Spring Harbor Lab.*

4:00 KKK58 **94.16** Smartscope 2: Automated imaging for morphological reconstruction of fluorescently-labeled neurons. B. R. LONG*; Z. ZHOU; X. LIU; J. TING; E. LEIN; M. HAWRYLYCZ; H. PENG. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 KKK59 **94.17** The structural alteration of medial prefrontal cortex of a genetic rat model of depression subjected to maternal separation. A. H.RAFATI*; F. SAFAVIMANESH; G. WEGENER; M. ARDALAN; A. A. MATHE; J. GULDDAHL RASMUSSEN; J. MØLLER; E. B. VEDEL JENSEN; J. R. NYENGAARD. *Aarhus Univ., Ctr. for Stochastic Geometry and Advanced Bioimaging (CSGB), Aarhus Univ., Translational Neuropsychiatry Unit, Dept. of Clin. Medicine, Aarhus Univ., Stereology and Electron Microscopy Laboratory, Dept. of Clin. Medicine, Aarhus Univ., Dept. of Mathematical Sciences, Aalborg Univ., Pharmaceut. Res. Ctr. of Excellence, Sch. of Pharm. (Pharmacology), North-West Univ., Dept. of Pharmacology, Karolinska Inst., Dept. of Mathematics, Aarhus Univ.*

2:00 KKK60 **94.18** A high volume throughput of 3D morphometrics of the CNS. M. C. WU*; J. HO; D. D. QUACH. *Neurodigitech, Neurodigitech.*

POSTER

095. New Approaches for Neuromodulation

Theme I: Techniques

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

1:00 KKK61 **95.01** Wireless control of cellular function by activation of EPG, a novel gene responsive to electromagnetic fields. J. BANERJEE*; S. PARK; M. SORRELL; J. PEVSNER; W. GUGGINO; A. GILAD; G. PELLED. *Kennedy Krieger Inst., Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 KKK62 **95.02** Neuromodulation of hippocampus function by EPG, a novel gene responsive to electromagnetic fields, decreases seizure activity in the kainic acid rat model of epilepsy. B. E. THEISEN*; G. BAR-KLEIN; H. DIETZ; A. FATEMI; A. GILAD; G. PELLED. *Kennedy Krieger Inst., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

3:00 KKK63 **95.03** Wireless ultrasonically-powered neurostimulators with bioimpedance measurement capacity. D. CELINSKIS*; B. C. TOWE. *Brown Univ., Arizona State Univ.*

4:00 KKK64 **95.04** Studying the effects of focal 3mhz ultrasound on neural activity in transgenic mice. T. SATO*; D. WU; M. FLANNERY; M. SHAPIRO; D. TSAO. *Caltech.*

1:00 KKK65 **95.05** High-frequency deep brain stimulation of the fornix improves memory consolidation and causes network-level neuroanatomical remodelling in an Alzheimer's mouse model. D. R. GALLINO*; G. A. DEVENYI; J. GERMANN; S. FREY; A. P. MATHIEU; M. CHAKRAVARTY. *Douglas Mental Hlth. Univ. Inst., Douglas Mental Hlth. Univ. Institute, McGill Univ., Douglas Mental Hlth. Univ. Inst., Rogue Res., Cerebral Imaging Center, Douglas Mental Hlth. Univ. Institute, McGill Univ.*

2:00 KKK66 **95.06** A new paradigm for neural restoration: Low level random electrical stimulation can enhance vibration perception in diabetic neuropathy. E. GIOKAS*; K. MIGDAL; J. MICHALIK; L. REYES; P. BREEN; J. M. SERRADOR. *New York Col. of Podiatric Med., Dept of Veteran Affairs, Western Sydney Univ., Rutgers.*

3:00 KKK67 **95.07** Modulation of body mass composition using galvanic vestibular stimulation. J. MCKEOWN*; P. D. MCGEOCH; H. PETERSON; V. S. RAMACHANDRAN. *UC San Diego.*

4:00 KKK68 **95.08** Blood pressure and heart rate responses to vestibular stimulation in aged and young-adult male and female rats. G. P. MARTINELLI*; G. R. HOLSTEIN. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

1:00 KKK69 **95.09** Vestibular nuclear neurons of the vestibulo-sympathetic reflex (VSR) activated by pulsed infrared stimulation of vestibular end organs. G. R. HOLSTEIN*; G. P. MARTINELLI; R. D. RABBITT; S. M. RAJGURU. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Univ. of Utah, Univ. of Miami.*

2:00 KKK70 **95.10** Pulsed infrared stimulation of the vestibular system evokes vestibulo-ocular and vestibulo-sympathetic reflex responses. S. RAJGURU*; W. JIANG; G. R. HOLSTEIN; G. P. MARTINELLI; C. RICHTER; R. D. RABBITT. *Univ. of Miami, Univ. of Miami, Icahn Sch. of Med. at Mount Sinai, Northwestern Univ., Univ. of Utah.*

POSTER

096. Automation

Theme I: Techniques

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

1:00 LLL1 **96.01** An automatic method for segmenting brain nucleus boundaries on cell-resolution cytoarchitectural image sequence. Z. FENG*; A. LI; H. GONG; Q. LUO. *Wuhan Natl. Lab. For Optoelectronics.*

2:00 LLL2 **96.02** Unbiased automated phenotyping of rodent behavior in nonsocial and social contexts. Y. KWON*; G. K. ADAMS; G. J. BERMAN; R. C. LIU. *Emory Univ.*

3:00 LLL3 **96.03** Template-based interactive registration, segmentation and quantification workflows for light microscopy images. I. BOWMAN*; K. COTTER; M. BAY; M. ZHU; M. Y. SONG; N. N. FOSTER; M. S. BIENKOWSKI; S. YAMASHITA; A. W. TOGA; H. HINTIRYAN; H. DONG. *USC Stevens Neuroimaging and Informatics Inst., Broad CIRM Ctr. and Dept. of Stem Cell Biol. and Regenerative Medicine, USC Keck Sch. of Med.*

4:00 LLL4 **96.04** Circuitry profiling in the *Drosophila* brain through machine learning. R. ARMANANZAS*; S. NANDA; G. A. ASCOLI. *George Mason Univ.*

1:00 LLL5 **96.05** A fine-grained parallel method for reformatting terabyte-scale volumetric images into hierarchical data. Y. LI*; A. LI; H. GONG; Q. LUO. *Huazhong Univ. of Sci. and Technol.*

2:00 LLL6 **96.06** Modulating the hippocampal functional connectivity using real-time optimization of distributed microstimulation. B. MAHMOUDI*; M. CONNOLLY; R. GROSS. *Emory Univ., Emory Univ.*

3:00 LLL7 **96.07** ▲ Bio-inspired handwritten digit classification by a spiking neural network with synapse pruning. S. JOSHI*; S. KALYAN; S. SHEIK; E. NEFTCI; G. CAUWENBERGHS. *Univ. of California San Diego, UCSD, Univ. of California, Irvine.*

4:00 LLL8 **96.08** ● GeNN: Accelerated spiking neural network simulations on GPUs. T. NOWOTNY*; J. P. TURNER; E. YAVUZ. *Univ. of Sussex.*

1:00 LLL9 **96.09** Automatic detection of putative contacts between *in-vivo* labelled neurons. M. M. SEETHARAMA*. *Max Planck Inst. For Biogical Cybernetics.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 LLL10 **96.10** A neurobehavioral evaluation system using 3d depth tracking and computer vision: The case of stroke-kinect. V. RAMESH*; S. RICK; K. AGRAWAL; B. MEYERS; G. CAUWENBERGHS; N. WEIBEL. *UC San Diego.*

3:00 LLL11 **96.11** Real-time reconfigurable event-driven emulation of integrate-and-fire neural networks with STDP. B. PEDRONI; F. D. BROCCARD*; S. SHEIK; G. CAUWENBERGHS. *Univ. of California San Diego, UCSD.*

4:00 LLL12 **96.12** Simultaneous state and parameter estimation with coupled data assimilation for tracking state of vigilance in rats. F. BAHARI*; M. W. BILLARD; C. R. TULYAGANOVA; K. D. ALLOWAY; B. J. GLUCKMAN. *Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ.*

1:00 LLL13 **96.13** ● SciBot and Hypothes.is: A method for pulling properly cited key biological resources, RRIDs, from the literature. A. E. BANDROWSKI*; M. MARTONE; J. GRETHE; T. GILLESPIE; G. PINE. *UCSD.*

2:00 LLL14 **96.14** ● Tablet based virtual reality system for research purposes. L. A. MOLINA*; M. A. NEEDHAM; M. H. MOHAJERANI; B. L. MCNAUGHTON. *Univ. of Lethbridge, Interphaser Ltd.*

3:00 LLL15 **96.15** Curating central injection studies from the literature using a general-purpose knowledge management strategy. G. A. BURNS*; A. E. HERNANDEZ; A. M. KHAN. *Information Sci. Inst., Univ. of Texas at El Paso.*

4:00 LLL16 **96.16** NeuroGPU, a GPU framework for neuron-based simulation. R. BEN-SHALOM; N. S. ATHREYA; C. S. KI; H. SANGHVI; K. J. BENDER*. *UCSF, Sandler Neurosciences Building.*

1:00 LLL17 **96.17** ● A neurally inspired spiking temporal processing unit computational architecture. C. M. VINEYARD*; J. B. AIMONE; M. R. SMITH; S. J. VERZI; J. DONALDSON; G. POPOOLA; F. WANG; D. R. FOLLETT; C. D. JAMES; J. H. NAEGLE. *Sandia Natl. Labs., Lewis Rhodes Labs.*

2:00 LLL18 **96.18** Open science at the Montreal Neurological Institute - LORIS & CBRAIN. S. DAS*. *Montreal Neurolog. Inst.*

3:00 LLL19 **96.19** A high performance computing web service for the analysis of local field potentials in Neurodata Without Borders-fomatted datasets. S. MACKESEY*; P. PRABHAT; F. SOMMER. *Univ. of California Berkeley, Lawrence Berkeley Natl. Lab., Univ. of California, Berkeley.*

4:00 LLL20 **96.20** NSG-R: Seamlessly integrating neuroscience tools with high performance computing. N. T. CARNEVALE*; P. GLEESON; R. A. SILVER; S. SIVAGNANAM; K. YOSHIMOTO; A. MAJUMDAR. *Yale Univ. Sch. Med., Univ. Col. London, Univ. of California.*

POSTER

097. Data Analysis and Statistics: Software Tools I

Theme I: Techniques

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

1:00 LLL21 **97.01** Neurovascular Network Explorer 2.0: A database of 2-photon single-vessel diameter measurements in response to optogenetic stimulation of inhibitory neurons. P. A. SAISAN; P. TIAN; K. KıLıÇ; M. THUNEMANN; V. B. SRIDHAR; H. BARTSCH; A. M. DALE; A. DEVOR; H. UHLIROVA*. *Univ. of California, John Carroll Univ., Univ. of California, Univ. of California, Harvard Med. Sch., Brno Univ. of Technol., Inst. of Physical Engineering, Fac. of Mechanical Engin.*

2:00 LLL22 **97.02** Development of mind monitoring system using call voice. Y. OMIYA*; N. HAGIWARA; S. SHINOHARA; M. NAKAMURA; S. MITSUYOSHI; S. TOKUNO. *PST Corporation, Inc., The Univ. of Tokyo.*

3:00 LLL23 **97.03** ● Psychological impact of Kumamoto earthquake by voice analysis using a smart phone application. S. TOKUNO*; Y. OMIYA; S. SHINOHARA; M. NAKAMURA; N. HAGIWARA; S. MITSUYOSHI. *The Univ. of Tokyo, PST Corporation, Inc.*

4:00 LLL24 **97.04** ● Improvements to automatic detection and classification of dendritic spines. S. TAPPAN*; A. RODRIGUEZ; M. A. A. KARIM; D. HOPPES; P. J. ANGSTMAN; J. R. GLASER. *MBF Biosci. - MicroBrightField Inc.*

1:00 LLL25 **97.05** SwarmSight: Open-source software module for real-time, paint-free tracking of insect appendage movements using commodity hardware. J. BIRGIOLAS*; C. M. JERNIGAN; R. C. GERKIN; B. H. SMITH; S. M. CROOK. *Arizona State Univ., Arizona State Univ., Arizona State Univ., Arizona State Univ.*

2:00 LLL26 **97.06** T-SNE as a visualization step in the spike sorting pipeline. J. NETO; G. DIMITRIADIS*; A. KAMPFF. *Sainsbury Wellcome Ctr.*

3:00 LLL27 **97.07** Efficient and accurate extraction of *in vivo* calcium signals from microendoscopic video data. P. ZHOU*; S. RESENDEZ; G. STUBER; R. E. KASS; L. PANINSKI. *Carnegie Mellon Univ., The Univ. of North Carolina at Chapel Hill, Columbia Univ.*

4:00 LLL28 **97.08** Reliable identification of the same neurons across multiple days in calcium imaging data. L. SHEINTUCH*; A. RUBIN; N. GEVA; Y. ZIV. *Weizmann Inst. of Sci.*

1:00 LLL29 **97.09** ● Detection of repetitive spike sequences in neural ensemble based on edit similarity. K. F. WATANABE*; T. HAGA; T. FUKAI. *Riken BSI, The Univ. of Tokyo, RIKEN BSI.*

2:00 LLL30 **97.10** Improvements to information theory analysis techniques throughout neuroscience with matlab support. N. TIMME*; D. N. LINSENBARDT; M. MYROSHNYCHENKO; C. C. LAPISH. *IUPUI.*

3:00 LLL31 **97.11** Alyx: An open-source database for efficient data organisation and collaboration in neurophysiology. M. L. HUNTER*; C. P. BURGESS; K. D. HARRIS. *Univ. Col. London.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 LLL32 **97.12** ▲ NDIO: Neuroscience discovery input and output. J. MATELSKY*; S. BERG; A. EUSMAN; K. LILLANEY; J. T. VOGELSTEIN; G. D. HAGER; R. BURNS; W. R. GRAY RONCAL. *Johns Hopkins Univ., Howard Hughes Med. Institute, Janelia Res. Campus, Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., JHU Applied Physics Lab.*

1:00 LLL33 **97.13** Quantitative tract integrity profile (Q-TIPS) as a novel toolbox for assessing tract-based white matter integrity. S. YOUNAS*; S. M. COURTNEY; M. MARTIN; C. R. FIGLEY. *Univ. of Manitoba, Johns Hopkins University, Univ. of Winnipeg, Univ. of Manitoba.*

2:00 LLL34 **97.14** ● Automatic anatomic orientation from the atlas to histological sections and back. N. J. O'CONNOR*; B. S. EASTWOOD; S. J. TAPPAN; M. FAY; K. E. DAY; P. J. ANGSTMAN; C. GERFEN; J. R. GLASER. *MBF Biosci., Natl. Inst. of Mental Hlth.*

3:00 LLL35 **97.15** Digital imaging library of brain CRF distribution in serial sections. H. J. KARTEN*; N. O'CONNOR; T. KAWAMURA; P. E. SAWCHENKO; P. SANNA. *UCSD, MBF Bioscience, Inc., The Scripps Res. Inst., Salk Inst. for Biol. Studies.*

4:00 LLL36 **97.16** Disseminating Vaa3D and its high-performance, open-source, cross-platform neuron image toolbox. Y. WANG*; Z. ZHOU; X. LIU; A. BRIA; Y. GUO; H. PENG. *Shanghai Univ., Allen Inst. for Brain Sci., Univ. of Cassino and Southern Lazio, Imperial Col. London.*

1:00 LLL37 **97.17** Baseline drift detrending techniques for fast scan cyclic voltammetry. M. DEWAELE*; Y. OH; C. PARK; Y. KANG; H. SHIN; I. KIM; K. BENNET; K. LEE; D. P. JANG. *Hanyang Univ., Mayo Clin., Mayo Clin.*

2:00 LLL38 **97.18** ▲ Optimizing cage-based training for non-human primates. M. D. CURRY*; M. PARSA; A. CILKER; L. VIOLETTI; M. A. DEHAQANI; B. NOUDOOST. *Montana State Univ., Montana State Univ., Montana State Univ., Inst. for Res. in Fundamental Sci.*

3:00 LLL39 **97.19** Feeding Experimentation Device Pus (FED+): An open-source behavior device for monitoring rodent home cage feeding in real-time. J. A. LICHOLAI*; K. P. NGUYEN; A. V. KRAVITZ. *NIDDK, NCCIH, NIDA.*

4:00 LLL40 **97.20** The neuroscience lexicon: Return of the STD. T. GILLESPIE*; M. E. MARTONE; A. E. BANDROWSKI; J. S. GRETHE. *UCSD, UCSD.*

1:00 LLL41 **97.21** EEG as an imaging tool: Which inverse method can successfully disentangle sources in proximity? K. KALOGIANNI*; J. C. DE MUNCK; G. NOLTE; A. VARDY; A. C. SCHOUTEN; F. C. T. VAN DER HELM; A. DAFFERTSHOFER. *Tech. Univ. of Delft, VU Univ. Med. Ctr., Univ. Med. Ctr. Hamburg-Eppendorf, Tech. Univ. of Delft, MIRA Inst. for Biomed. Technol. and Tech. Medicine, Univ. of Twente, MOVE Res. Institute, VU Univ. Amsterdam.*

2:00 LLL42 **97.22** Label free capillary velocimetry in mouse cerebral cortex using dynamic laser speckle. A. SAFI*; C. YEON; J. HONG; E. CHUNG. *Gwangju Inst. of Sci. and Technol. (GIST), Gwangju Inst. of Sci. and Technol. (GIST), Gwangju Inst. of Sci. and Technol. (GIST).*

3:00 LLL43 **97.23** A novel method for automated cytoarchitectonic parcellation of the rhesus monkey neocortex. A. NAZARAN*; J. J. WISCO; N. K. BANGERTER. *Brigham Young Univ., Brigham Young Univ., Univ. of Utah Sch. of Med., Brigham Young Univ.*

4:00 LLL44 **97.24** Accurate detection of muscle activation onset based on surface EMG using a maximum profile likelihood approach. E. S. SUVISESHAMUTHU; D. ALLEXANDRE*; G. H. YUE. *Kessler Fndn., Rutgers New Jersey Med. Sch.*

1:00 LLL45 **97.25** Minimizing ROI crosstalk in neuronal activity data from miniature microscope calcium imaging. A. LUCHETTI*; A. BOTA; Y. HAYASHI. *RIKEN BSI.*

• Indicated a real or perceived conflict of interest, see page 75 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

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.

PRESENTATION NUMBER	STATEMENT
2.04	**D. 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; Pfizer. F. Consulting Fees (e.g., advisory boards); Sunovion.
6	**A. Sridhar:** A. Employment/Salary (full or part-time); Full. Other; Full time employee of GSK Bioelectronics.
6.02	**J. Hokanson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GlaxoSmithKline.
6.03	**Y. Hsieh:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GlaxoSmithKline.
6.04	**B. Canning:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GlaxoSmithKline. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Attenua, Cerecor.
6.05	**S. Conde:** 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; GLaxoSmithKline.
6.06	**P. Blancou:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GlaxoSmithKline.
6.07	**J. Ardell:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GlaxoSmithKline. F. Consulting Fees (e.g., advisory boards); LivaNova.
11.09	**S.W. Barger:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sigma-Aldrich Chemical Company (royalties from the sale of APP related products).
12.14	**D.W. Ethell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Principal, Leucadia Therapeutics.
13.04	**A. Ashrafi:** A. Employment/Salary (full or part-time); University of Luxembourg. **P. Garcia:** A. Employment/Salary (full or part-time); University of Luxembourg. **M. Ostaszewski:** A. Employment/Salary (full or part-time); University of Luxembourg- LCSB. **P. Gawron:** A. Employment/Salary (full or part-time); University of Luxembourg. **E. Glaab:** A. Employment/Salary (full or part-time); University of Luxembourg. **R. Balling:** A. Employment/Salary (full or part-time); University of Luxembourg. **M. Buttini:** A. Employment/Salary (full or part-time); University of Luxembourg. **S. Gebel:** A. Employment/Salary (full or part-time); University of Luxembourg.
13.06	**A. Pandraud:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **C. Kerridge:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **P. Craig:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **S. Bose:** A. Employment/Salary (full or part-time); Eli Lilly and Company.
14.01	**H.B. Kordasiewicz:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **K.M. Ikeda-Lee:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **T. Zanardi:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **M. Stephan-Gueldner:** A. Employment/Salary (full or part-time); Roche. **D. Norris:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **A. Smith:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **R. Lane:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **C.F. Bennett:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **E. Swayze:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals.
14.03	**S. Dolinsky:** A. Employment/Salary (full or part-time); General Electric. **M. Rishel:** A. Employment/Salary (full or part-time); GE.
16.09	**F. Brandl:** A. Employment/Salary (full or part-time); Department of Neuroradiology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, TUM-NIC Neuroimaging Center, Klinikum rechts der Isar, Technische Universität München, Munich, Germany. **S. Mulej Bratec:** A. Employment/Salary (full or part-time); Department of Neuroradiology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, TUM-NIC Neuroimaging Center, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, Ludwig-Maximilians-Universität München, Graduate School of Systemic Neurosciences, Planegg-Martinsried, Germany. **X. Xie:** A. Employment/Salary (full or part-time); Ludwig-Maximilians-Universität München, Graduate School of Systemic Neurosciences, Planegg-Martinsried, Germany, Ludwig-Maximilians-Universität München, Department of Psychology, Munich, Germany. **A.M. Wohlschläger:** A. Employment/Salary (full or part-time); Department of Neuroradiology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, TUM-NIC Neuroimaging Center, Klinikum rechts der Isar, Technische Universität München, Munich, Germany. **V. Riedl:** A. Employment/Salary (full or part-time); Department of Neuroradiology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, TUM-NIC Neuroimaging Center, Klinikum rechts der Isar, Technische Universität München, Munich, Germany. **C. Meng:** A. Employment/Salary (full or part-time); Department of Neuroradiology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, TUM-NIC Neuroimaging Center, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, University of Cambridge, Behavioural and Clinical Neuroscience Institute, Cambridge, United Kingdom. **C. Sorg:** A. Employment/Salary (full or part-time); Department of Neuroradiology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, TUM-NIC Neuroimaging Center, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, Department of Psychiatry, Klinikum rechts der Isar, Technische Universität München, Munich, Germany.
17.02	**G.A. Kerchner:** A. Employment/Salary (full or part-time); Genentech, Inc..
17.05	**A.R. Bender:** Other; * Indicates joint first authorship. **A. Keresztes*:** Other; * Indicates joint first authorship.
21.03SA	**J. Collins:** A. Employment/Salary (full or part-time); Biopico Systems.
21.08SA	**K. Schleisman:** A. Employment/Salary (full or part-time); Andamio Games LLC. **H. Shackleton:** A. Employment/Salary (full or part-time); Adventium Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual

PRESENTATION NUMBER	STATEMENT
	property rights/patent holder, excluding diversified mutual funds); Andamio Games LLC. **A. Schwerdfeger:** A. Employment/Salary (full or part-time); Adventium Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Andamio Games LLC. **M. Michalowski:** A. Employment/Salary (full or part-time); Adventium Labs. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Andamio Games LLC.
22.26SU	**H.I. Thorsheim:** Other; author of published ebook.
24.11SA	**Z. Fountas:** A. Employment/Salary (full or part-time); Imperial College London.
24.14SA	**A. Pascual-Leone:** F. Consulting Fees (e.g., advisory boards); Nexstim, Neuronix, Starlab Neuroscience, Neuroelectrics, Axilum Robotics, Magstim, Neurosync.
24.18SA	**P. Maria Isabel:** A. Employment/Salary (full or part-time); 2Castellanos-Alvarado A. B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; 1Pérez-Vega MI,. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); 1Miranda-Beltran ML. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 1 Valdez-Jiménez L. F. Consulting Fees (e.g., advisory boards); 1Soria-Fregozo C. Other; 1Gutierrez-Coronado O.
25.02SU	**E. Larson:** A. Employment/Salary (full or part-time); North Coast Concussion Program/part-time.
25.09SU	**M.R. Uncapher:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Institute for Applied Neuroscience. **K.S. Weiner:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Institute for Applied Neuroscience.
26.12SU	**A. Adams:** A. Employment/Salary (full or part-time); National Institutes of Health. **B. Cuthbert:** A. Employment/ Salary (full or part-time); National Institutes of Health. **G. Farber:** A. Employment/Salary (full or part-time); National Institutes of Health. **W. Koroshetz:** A. Employment/Salary (full or part-time); National Institutes of Health. **M. Mott:** A. Employment/Salary (full or part-time); National Institutes of Health. **K. Ramos:** A. Employment/Salary (full or part-time); National Institutes of Health. **N. Talley:** A. Employment/ Salary (full or part-time); National Institutes of Health. **S.L. White:** A. Employment/Salary (full or part-time); National Institutes of Health. **A. Willard:** A. Employment/Salary (full or part-time); National Institutes of Health.
26.19SU	**A.L. Caldwell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Co-creator of Neuro Transmissions YouTube Channel. **M.J.R. Caldwell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-creator of Neuro Transmissions YouTube Channel.
27.11SU	**C. Stanford:** A. Employment/Salary (full or part-time); University College London.
27.17SU	**D.E. O'Brien:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); AstraZeneca.
29.08	**B.A. Fonseca:** A. Employment/Salary (full or part-time); Kemin Foods, LC. **K.A. Herrlinger:** A. Employment/Salary (full or part-time); Kemin Foods, LC..
30.12	**S.S. Jeste:** F. Consulting Fees (e.g., advisory boards); Roche Pharmaceuticals.
31.11	**L. Goetzl:** Other; Patent application. **E.J. Goetzl:** Other; Patent application.
32.08	**J.D. Esko:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TEGA Therapeutics Inc..
34.05	**N. Absalom:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NHMRC Project Grant, Australia. **M. Chebib:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NHMRC Project Grant, Australia. **P.K. Ahring:** A. Employment/Salary (full or part-time); Imk Almene Fond, Denmark. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Saniona A/S, Denmark.
34.24	**J. Assis Manuel:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; This research was funded by a PhD studentship from GW Pharmaceuticals to JAM, AJR and RJH. **R.A. Gray:** A. Employment/ Salary (full or part-time); GW Employee. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); **T.D.M. Hill:** A. Employment/Salary (full or part-time); GW Employee. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); **A.J. Ruiz:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; This research was funded by a PhD studentship from GW Pharmaceuticals to JAM, AJR and RJH. **R.J. Harvey:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; This research was funded by a PhD studentship from GW Pharmaceuticals to JAM, AJR and RJH.
34.26	**J.L. Maguire:** F. Consulting Fees (e.g., advisory boards); SAGE Therapeutics.
34.28	**J. Parato:** A. Employment/Salary (full or part-time); SUNY Downstate. **S. Smith:** A. Employment/Salary (full or part-time); SUNY Downstate.
35.11	**E. Perdona':** A. Employment/Salary (full or part-time); Aptuit Center for Drug Discovery & Development, Verona, Italy. **F. Faggioni:** A. Employment/Salary (full or part-time); Aptuit Center for Drug Discovery & Development, Verona, Italy. **M.A. Corsi:** A. Employment/Salary (full or part-time); Aptuit Center for Drug Discovery & Development, Verona, Italy.
35.14	**S. Miller:** A. Employment/Salary (full or part-time); Amgen Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc. **H. Liu:** A. Employment/Salary (full or part-time); Amgen Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc. **J.K. Pretorius:** A. Employment/Salary (full or part-time); Amgen Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc. **H. Sun:** A. Employment/Salary (full or part-time); Amgen Inc.. E. Ownership Interest (stock, stock options, royalty,

PRESENTATION NUMBER	STATEMENT
	receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc. **G. Hill della Puppa:** A. Employment/Salary (full or part-time); Amgen Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc. **D.W. Smith:** A. Employment/Salary (full or part-time); Amgen Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc. **C. Xu:** A. Employment/Salary (full or part-time); Amgen Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc..
37.23	**Q. Chen:** A. Employment/Salary (full or part-time); Astellas Research Institute of America, Astellas Pharma. **B.V. Cheung:** A. Employment/Salary (full or part-time); intern in Astellas Research Institute of America. **T. Shimada:** A. Employment/Salary (full or part-time); Astellas Research Institute of America, Astellas Pharma. **M. Matsumoto:** A. Employment/Salary (full or part-time); Neuroscience Research Unit, Drug Discovery Research, Astellas Pharma Inc. **H. Ito:** A. Employment/Salary (full or part-time); Astellas Research Institute of America, Astellas Pharma. **K. Tajinda:** A. Employment/Salary (full or part-time); Astellas Research Institute of America, Astellas Pharma.
37.27	**A. Morales-Villagrán:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 309696-335409.
38.04	**M. Shamloo:** Other; Cortice Biosciences has licensed a patent for xamoterol from Stanford University..
38.05	**N. Nishimura:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; L'Oreal Fellowship for Women in Science, American Heart Association 09POST22250177, NIH F32AG031620. **C.B. Schaffer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 AG049952.
39.01	**D.C. Park:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Avid Radiopharmaceuticals.
40.09	**J. Brewer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CorTechs Labs, Inc., Human Longevity, Inc.. F. Consulting Fees (e.g., advisory boards); Elan, Bristol-Myers Squibb, Avanir, Novartis, Genentech, Eli Lilly.
40.16	**J. Rowe:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIHR Cambridge Dementia Biomedical Research.
40.17	**M. Gallagher:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Agenebio. **S. Mori:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AnatomyWorks. F. Consulting Fees (e.g., advisory boards); AnatomyWorks. **M.I. Miller:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AnatomyWorks. F. Consulting Fees (e.g., advisory boards); AnatomyWorks.
40.20	**C. Wintmolders:** A. Employment/Salary (full or part-time); Janssen. **A. Bottelbergs:** A. Employment/Salary (full or part-time); Janssen. **J. Marïen:** A. Employment/Salary (full or part-time); Janssen. **D. Moechars:** A. Employment/Salary (full or part-time); Janssen. **X. Langlois:** A. Employment/Salary (full or part-time); Janssen.
41.07	**J.A. Herron:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic.
41.11	**W.M. Howe:** A. Employment/Salary (full or part-time); Employee of Pfizer, Inc. **K. Dlugolenski:** A. Employment/Salary (full or part-time); Pfizer, Inc. **A. Rossi:** A. Employment/Salary (full or part-time); Pfizer, Inc. **D. Volfson:** A. Employment/Salary (full or part-time); Pfizer, Inc. **P. Tierney:** A. Employment/Salary (full or part-time); Pfizer, Inc. **R. Kozak:** A. Employment/Salary (full or part-time); Pfizer, Inc.
42.12	**C. Silky:** A. Employment/Salary (full or part-time); Full Time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock. **C. Rehak:** A. Employment/Salary (full or part-time); Part-time. **K. Mozzoni:** A. Employment/Salary (full or part-time); Salary. **R. Yurko:** A. Employment/Salary (full or part-time); Part-time. **N. Izzo:** A. Employment/Salary (full or part-time); Salary. **G. Rishton:** A. Employment/Salary (full or part-time); Salary. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock. **G. Look:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **H. Safferstein:** A. Employment/Salary (full or part-time); Salary. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock. **S.M. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cognition Therapeutics Inc.
43.01	**D.E. Vaillancourt:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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, Bachmann-Strauss Foundation, Tyler's Hope Foundation. F. Consulting Fees (e.g., advisory boards); UT Southwestern Medical Center, University of Illinois at Chicago, Scott & White, Great Lakes NeuroTechnologies. Other; Neuroimaging Solutions, LLC.
43.11	**L. Moore:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Ionis Pharmaceuticals. **H. Kordasiewicz:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Ionis Pharmaceuticals. **H.L. Paulson:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Ionis Pharmaceuticals.
43.15	**D. Amrutkar:** A. Employment/Salary (full or part-time); Saniona A/s.
44.01	**R. Chhabra:** A. Employment/Salary (full or part-time); International Graduate School in Molecular Medicine, Ulm University, Ulm, Germany.
44.08	**K. Borges:** A. Employment/Salary (full or part-time); The University of Queensland.
44.12	**Z.T. McEachin:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Above & Beyond, LLC. **N.M. Boulis:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Above & Beyond, Inc. **R. Bowser:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iron Horse Daignostics, Inc.. F. Consulting Fees (e.g., advisory boards); Above & Beyond, LLC..
44.14	**R. Bowser:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iron Horse Diagnostics.
44.16	**R. Bowser:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iron Horse Diagnostics, Inc..

PRESENTATION NUMBER	STATEMENT
45.01	**M. Syka:** A. Employment/Salary (full or part-time); Bioinova s.r.o. **S. Konradova:** A. Employment/Salary (full or part-time); Bioinova s.r.o. **K. Ruzickova:** A. Employment/Salary (full or part-time); Bioinova s.r.o..
45.09	**T.F. Gendron:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Licensed for distribution of an antibody to the poly(GP) dipeptide. **C. Mueller:** F. Consulting Fees (e.g., advisory boards); Consultant for Voyager. Inventor on a patent filed for the use of rAAV mediated silencing of C9ORF72. **R.H. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Consultant for Voyager. Inventor on a patent filed for the use of rAAV mediated silencing of C9ORF72.
45.11	**S. Pozzi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Project is founded by Packard Center for ALS Research at Johns Hopkins and CIHR. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); papent with Laval University. **C. Gravel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); patent with Laval University. **J. Julien:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Project is founded by Packard Center for ALS Research at Johns Hopkins and CIHR. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); patent with Laval University. Other; Imstar therapeutics.
46.04	**J.R. Hedde:** A. Employment/Salary (full or part-time); Pfizer Inc.
47.08	**D. Carlson:** A. Employment/Salary (full or part-time); Recombinetics Inc. **S. Fahrenkrug:** A. Employment/ Salary (full or part-time); Recombinetics Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Recombinetics Inc. **W. Low:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Recombinetics Inc..
47.12	**R. Caviedes:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); RC declares patent protection on RCCCM cell line. **P. Caviedes:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PC declares patent protection on RCCCM cell line.
47.22	**R.B. Aramant:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ocular Transplantation LLC. **M.J. Seiler:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Ocular Transplantation LLC (patents).
49.12	**Y. Hua:** A. Employment/Salary (full or part-time); Max-Planck-Institute for Brain Research. **V. Pawlak:** A. Employment/Salary (full or part-time); research center caesar. **J.N.D. Kerr:** A. Employment/Salary (full or part-time); research center caesar. **M. Helmstaedter:** A. Employment/Salary (full or part-time); Max-Planck-Institute for Brain Research.
50.07	**E.G. Fonseca de la Cruz:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484, Fronteras de la Ciencia Grant 63, Medix Grant 1275. **A.S. Matsumoto:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484, Fronteras de la Ciencia Grant 63, Productos Medix Grant 1275. **M. Villavicencio:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484,, Fronteras de la Ciencia Grant 63, Productos Medix Grant 1275. **A.I. Hernandez-Coss:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484, Fronteras de la Ciencia Grant 63, Productos Medix Grant 1275. **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; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484, Fronteras de la Ciencia Grant 63, Productos Medix Grant 1275.
50.09	**N. Chaudhari:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Ajinomoto co., Inc. **S.D. Roper:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Ajinomoto Co., Inc..
50.16	**A.S. Matsumoto:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484, Fronteras de la Ciencia Grant 63, Productos Medix Grant 1275. **E.G. Fonseca:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484, Fronteras de la Ciencia Grant 63, Productos Medix Grant 1275. **S.A. Simon:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484, Fronteras de la Ciencia Grant 63, Medix Grant 1275. **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; Consejo Nacional de Ciencia y Tecnologla of Mexico Grant 179484, Fronteras de la Ciencia Grant 63, Medix Grant 1275.
50.18	**R.K. Palmer:** A. Employment/Salary (full or part-time); Opertech Bio, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership in the company and listed as inventor on the patents covering the invention. **M.K. Stewart:** A. Employment/Salary (full or part-time); Opertech Bio.
50.19	**M.M. Stewart:** A. Employment/Salary (full or part-time); Opertech Bio.

PRESENTATION NUMBER	STATEMENT
50.21	**A.R. Hirsch:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Owner.
50.26	**A.R. Hirsch:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Smell and Taste Treatment and Research Foundation.
50.29	**A. Hirsch:** A. Employment/Salary (full or part-time); Smell and Taste Treatment and Research Foundation.
54.14	**W. Ridder:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Allergan, Inc. **K. Zhang:** A. Employment/Salary (full or part-time); Allergan, Inc. **J. Burke:** A. Employment/Salary (full or part-time); Allergan, Inc..
54.28	**J. Hill:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent applied for: OptokineSys: A Method for Automatic Real-Time Detection of Smooth Eye Movements (application #62/185,983b, 2015). **J.B. Carmel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Patent applied for: OptokineSys: A Method for Automatic Real-Time Detection of Smooth Eye Movements (application #62/185,983b, 2015). **G.T. Prusky:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cerebral Mechanics, Inc., Patent applied for: OptokineSys: A Method for Automatic Real-Time Detection of Smooth Eye Movements (application #62/185,983b, 2015).
56.21	**S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Scott is the Chief Scientific Officer for the company (BKIN Technologies Ltd.) that manufactures the robot used in the present study..
57.22	**G. Bruening:** A. Employment/Salary (full or part-time); University of Colorado - Boulder. **M. O'Brien:** A. Employment/Salary (full or part-time); University of Colorado - Boulder. **A. Ahmed:** A. Employment/Salary (full or part-time); University of Colorado - Boulder. **R. Shadmehr:** A. Employment/Salary (full or part-time); Johns Hopkins.
58.13	**E.G.M. Pels:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe. **E.J. Aarnoutse:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe. **T. Denison:** A. Employment/Salary (full or part-time); Medtronic Neuromodulation USA. **N.F. Ramsey:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe.
58.14	**N.F. Ramsey:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic. **E. pels:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic. **T. denison:** A. Employment/Salary (full or part-time); Medtronic Inc. **E.J. aarnoutse:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic.
58.15	**E.J. Aarnoutse:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe. **E.G.M. Pels:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe. **T. Denison:** A. Employment/Salary (full or part-time); Medtronic Neuromodulation. **N.F. Ramsey:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe.
58.16	**E.J. Aarnoutse:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe. **T. Denison:** A. Employment/Salary (full or part-time); Medtronic Neuromodulation USA. **N.F. Ramsey:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe.
58.19	**E.G.M. Pels:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe. **E.J. Aarnoutse:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe. **T. Denison:** A. Employment/Salary (full or part-time); Medtronic. **N.F. Ramsey:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe.
58.20	**J. Rabaey:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cortera Neurotechnologies. **R. Muller:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cortera Neurotechnologies.
58.22	**D.R. Merrill:** A. Employment/Salary (full or part-time); Ripple LLC. **S. Hiatt:** A. Employment/Salary (full or part-time); Ripple LLC. **B. Crofts:** A. Employment/Salary (full or part-time); Ripple LLC. **C. Smith:** A. Employment/ Salary (full or part-time); Ripple LLC. **K.S. Guillory:** A. Employment/Salary (full or part-time); Ripple LLC. **D. McDonnall:** A. Employment/Salary (full or part-time); Ripple LLC.
58.24	**S. Hiatt:** A. Employment/Salary (full or part-time); Ripple LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ripple LLC. **T. Poulson:** A. Employment/Salary (full or part-time); Ripple LLC. **E. Barcikowski:** A. Employment/Salary (full or part-time); Ripple LLC. **R. Roundy:** A. Employment/Salary (full or part-time); Ripple LLC. **S. Barrus:** A. Employment/Salary (full or part-time); Ripple LLC. **C. Smith:** A. Employment/ Salary (full or part-time); Ripple LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ripple LLC. **A. Wilder:** A. Employment/Salary (full or part-time); Ripple LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ripple LLC. **K.S. Guillory:** A. Employment/Salary (full or part-time); Ripple LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ripple LLC. **D. Merrill:** A. Employment/Salary (full or part-time); Ripple LLC. **D. McDonnall:** A. Employment/Salary (full or part-time); Ripple LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ripple LLC.
59.14	**J. Burdick:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. **R. Edgerton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies.
60.05	**Z. Pirger:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Hungarian Brain Project (KTIA_NAP_13-2014-0006).

PRESENTATION NUMBER	STATEMENT
63.17	**R. Farivar:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Güdform Neurotechnology Inc..
64.24	**B.F. O'Hara:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal solutions LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions LLC. **M.E. Lhamon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions LLC. **A. Agarwal:** A. Employment/Salary (full or part-time); Signal solutions LLC. **K.D. Donohue:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions LLC.
67.05	**H. Aleyasin:** A. Employment/Salary (full or part-time); Icahn School of Medicine at Mount Sinai.
67.15	**T.J. Bussey:** F. Consulting Fees (e.g., advisory boards); Campden Instruments Ltd. **L.M. Saksida:** F. Consulting Fees (e.g., advisory boards); Campden Instruments Ltd..
69.03	**T. Inomata:** A. Employment/Salary (full or part-time); Honda Racing Corporation.
71.02	**J.H. Porter:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 Research USA, Inc..
71.09	**A. Saitoh:** A. Employment/Salary (full or part-time); National Center of Neurology and Psychiatry. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; The Japan Agency for Medical Research and Development. **E. Nakata:** A. Employment/Salary (full or part-time); Nippon Chemiphar Co. Ltd.. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; The Japan Agency for Medical Research and Development. **L. Gotoh:** A. Employment/Salary (full or part-time); National Center of Neurology and Psychiatry. **M. Hirose:** A. Employment/Salary (full or part-time); Nippon Chemiphar Co. Ltd. **J. Sakai:** A. Employment/Salary (full or part-time); Nippon Chemiphar Co. Ltd. **T. Komatsu:** A. Employment/Salary (full or part-time); Nippon Chemiphar Co. Ltd. **H. Fujii:** A. Employment/Salary (full or part-time); Kitasato 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; The Japan Agency for Medical Research and Development. **M. Yamada:** A. Employment/Salary (full or part-time); National Center of Neurology and Psychiatry. **H. Nagase:** A. Employment/Salary (full or part-time); University of Tsukuba. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Japan Agency for Medical Research and development. **T. Yamakawa:** A. Employment/Salary (full or part-time); Nippon Chemiphar Co. Ltd.. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; The Japan Agency for Medical Research and Development.
71.15	**G. Racagni:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Servier, Otsuka, Jansenn. **M.A. Riva:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Servier, Eli Lilly, Lundbeck, Sumitomo Dainippon Pharma Co. Ltd, Sunovion.
72.06	**E. Nestler:** F. Consulting Fees (e.g., advisory boards); PsychoGenics.
73.02	**J. Yao:** A. Employment/Salary (full or part-time); Eyes High Postdoc Fellowship of University of Calgary.
73.18	**C.A. Turner:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); The authors are members of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **S.J. Watson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); The authors are members of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **H. Akil:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); The authors are members of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C..
74.02	**J. Downar:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Magventure. **Z.J. Daskalakis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Brainsway Inc, Merck, Ontario Mental Health Foundation, Canadian Institutes of Health Research, Brain and Behaviour Research Foundation, Temerty Family, Grant Family, Centre for Addiction and Mental Health (CAMH) Foundation, Campbell Institute. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Sepracor Inc, AstraZeneca, Eli Lilly. F. Consulting Fees (e.g., advisory boards); Hoffmann-La Roche Limited, Merck. **R.W. Lam:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Brain Canada, Bristol Myers Squibb, Canadian Institutes of Health Research,, Canadian Depression Research and Intervention Network, Canadian Network for Mood and Anxiety Treatments, Janssen, Lundbeck, Movember Foundation,, Pfizer, St. Jude Medical, University Health Network Foundation, Vancouver Coastal Health Research Institute. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); AstraZeneca, Canadian Network for Mood and Anxiety Treatments, Canadian Psychiatric Association, Lundbeck, Lundbeck Institute, Otsuka. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cambridge University Press, Informa Press, Oxford University Press, Lam Employment Absence and Productivity Scale (LEAPS). F. Consulting Fees (e.g., advisory boards); Asia-Pacific Economic Cooperation, Bristol Myers Squibb, Canadian Depression Research and Intervention Network, Canadian Network for Mood and Anxiety Treatments, Janssen, Lundbeck, Medscape, Pfizer, Takeda. **D.M. Blumberger:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Brainsway Ltd., Tonica/ Magventure.

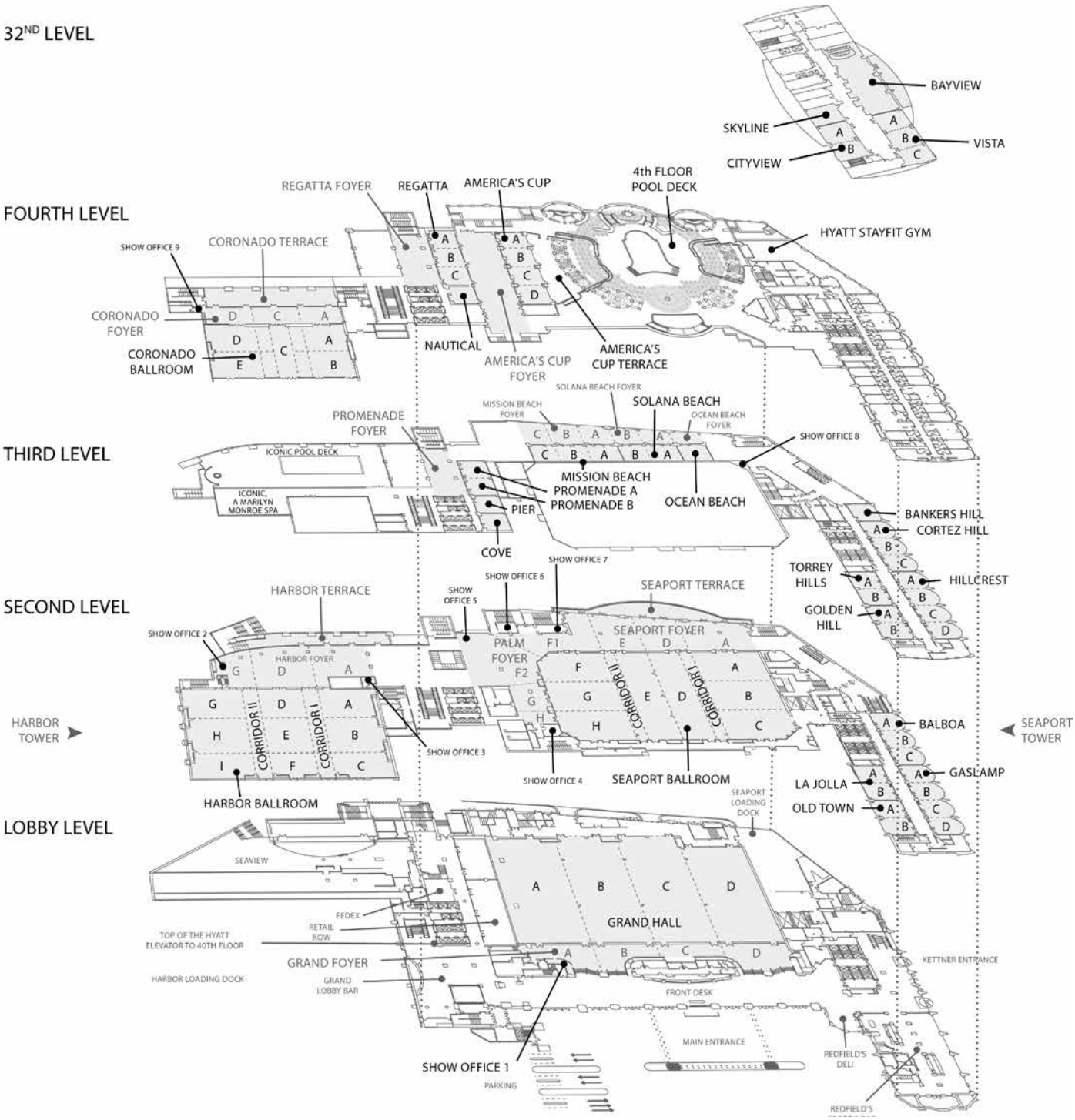
PRESENTATION NUMBER	STATEMENT
77.10	**M. Cole:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); La Jolla Alcohol Research Inc, La Jolla, CA, USA..
78.13	**Z. You:** A. Employment/Salary (full or part-time); Molecular Targets and Medications Development Branch, NIDA-IRP, NIH, Baltimore MD 21224.
79.09	**J.K. DaSilva:** A. Employment/Salary (full or part-time); Pfizer, Inc. **E. Dunn-Sims:** A. Employment/Salary (full or part-time); Pfizer, Inc. **C. Tyszkiewicz:** A. Employment/Salary (full or part-time); Pfizer, Inc. **A. Sawant-Basak:** A. Employment/Salary (full or part-time); Pfizer, Inc. **Z. Hughes:** A. Employment/Salary (full or part-time); Pfizer, Inc. **J. Hedde:** A. Employment/Salary (full or part-time); Pfizer, Inc. **A.N. Mead:** A. Employment/Salary (full or part-time); AstraZeneca.
81.01	**C.J. Fabian:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); DSM provides study drug.
81.03	**S. Bernardi:** A. Employment/Salary (full or part-time); NIMH T32. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; American Psychiatric Association. **D. Salzman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 R01-MH082017, Gatsby Foundation, Swartz Foundation, Fyssen Foundation.
83.10	**J.T. McKenna:** A. Employment/Salary (full or part-time); Merck MISP. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 MISP. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Merck MISP.
83.11	**J.T. McKenna:** A. Employment/Salary (full or part-time); Merck MISP. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 MISP, Merck MISP.
84.09	**K. Baumgaertel:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC. **D. Wheeler:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC. **A. Green:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC. **J. Lapira:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC. **D. Elow:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC. **K. Maruyama:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC. **R. Johnson:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC. **R. Barido:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC. **M. Peters:** A. Employment/Salary (full or part-time); Dart Neuroscience LLC.
87.23	**T.J. Prescott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Director of Consequential Robotics.
88.16	**A. Pascual-Leone:** F. Consulting Fees (e.g., advisory boards); Nexstim, Neuronix, Starlab Neuroscience, Neuroelectrics, Axilum Robotics, Neosync Inc, Magstim Inc..
88.27	**K.A. Herrlinger:** A. Employment/Salary (full or part-time); Kemin Foods, LC. **B.J. Lewis:** A. Employment/Salary (full or part-time); Kemin Foods, L.C. **J.A. Lasrado:** A. Employment/Salary (full or part-time); Kemin Foods, L.C. **K.D. Sanoshy:** A. Employment/Salary (full or part-time); Biofortis Inc. **J.M. Baldwin:** A. Employment/Salary (full or part-time); Biofortis Inc. **E. Mah:** A. Employment/Salary (full or part-time); Biofortis Inc. **B.A. Fonseca:** A. Employment/Salary (full or part-time); Kemin Foods, L.C..
89.04	**M.A. Nitsche:** F. Consulting Fees (e.g., advisory boards); Neuroelectrics.
89.05	**H.E. Den Ouden:** F. Consulting Fees (e.g., advisory boards); Consultant Eleusis Benefit Corp..
89.08	**B.J. Casey:** F. Consulting Fees (e.g., advisory boards); John D. and Catherine T. MacArthur Foundation.
90.07	**A.M. Dale:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CorTechs Laboratories.
90.11	**C.H. Hillman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Abbott Nutrition. **N.J. Cohen:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Abbott Nutrition.
90.16	**C. Ledbetter:** F. Consulting Fees (e.g., advisory boards); GIBSON INSTITUTE.
90.17	**A.L. Moore:** A. Employment/Salary (full or part-time); Gibson Institute of Cognitive Research. **C. Ledbetter:** F. Consulting Fees (e.g., advisory boards); LearningRx Scientific Advisory Board.
91.01	**T. Ueno:** A. Employment/Salary (full or part-time); full, Hizen Psychiatric Center.
91.11	**G.A. Light:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Astellas, Boehringer-Ingelheim, Merck, NeuroSig.
91.13	**T. Miyakawa:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; ASTELLAS RESEARCH INSTITUTE OF AMERICA LLC, TOYAMA CHEMICAL CO.,LTD..
91.15	**M.S. Keshavan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Sunovion. F. Consulting Fees (e.g., advisory boards); Forum Pharmaceuticals. **C.A. Tamminga:** Other; American Journal of Psychiatry. **J.A. Sweeney:** F. Consulting Fees (e.g., advisory boards); Taketa, Roche, and Lilly.
92.12	**K. Deisseroth:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Clearlight Diagnostics.
92.14	**J. McNab:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Research support provided by GE healthcare.
92.23	**D.R. Williams:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Polgenix Inc., Canon Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); University of Rochester.
92.29	**D.A. Johnson:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **E. Naylor:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **S. Gabbert:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **D.V. Aillon:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc. **D.A. Johnson:** A. Employment/Salary (full or part-time); Pinnacle Technology, Inc..

PRESENTATION NUMBER	STATEMENT
94.06	**G. Popescu:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Phi Optics.
96.08	**T. Nowotny:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NVIDIA Corporation.
96.13	**A.E. Bandrowski:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Scicrunch Inc. **M. Martone:** A. Employment/Salary (full or part-time); Hypothes.is. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Scicrunch Inc. **J. Grethe:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Scicrunch Inc.
96.14	**L.A. Molina:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); This method will be marketed by its author. **B.L. McNaughton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); This method will be marketed by its author.
96.17	**D.R. Follett:** Other; Co-founder and owner of Lewis Rhodes Labs.
97.03	**Y. Omiya:** A. Employment/Salary (full or part-time); PST Corporation, Inc. **N. Hagiwara:** A. Employment/Salary (full or part-time); PST Corporation, Inc..
97.04	**S. Tappan:** A. Employment/Salary (full or part-time); MBFBioscience. **A. Rodriguez:** A. Employment/Salary (full or part-time); MBF Bioscience. **M.A.A. Karim:** A. Employment/Salary (full or part-time); MBF Bioscience. **D. Hoppes:** A. Employment/Salary (full or part-time); MBF Bioscience. **P.J. Angstman:** A. Employment/Salary (full or part-time); MBF Bioscience. **J.R. Glaser:** A. Employment/Salary (full or part-time); MBF Bioscience.
97.09	**K.F. Watanabe:** A. Employment/Salary (full or part-time); Riken Brain Science Institution. **T. Haga:** A. Employment/Salary (full or part-time); Riken BSI. **T. Fukai:** A. Employment/Salary (full or part-time); Riken Brain Science Institution.
97.14	**N.J. O'Connor:** A. Employment/Salary (full or part-time); MBF Bioscience. **B.S. Eastwood:** A. Employment/Salary (full or part-time); MBF Bioscience. **S.J. Tappan:** A. Employment/Salary (full or part-time); MBF Bioscience. **M. Fay:** A. Employment/Salary (full or part-time); MBF Bioscience. **K.E. Day:** A. Employment/Salary (full or part-time); MBF Bioscience. **P.J. Angstman:** A. Employment/Salary (full or part-time); MBF Bioscience. **J.R. Glaser:** A. Employment/Salary (full or part-time); MBF Bioscience.

Hotel Floor Plans

MANCHESTER GRAND HYATT

1 Market Pl
San Diego, CA 92101

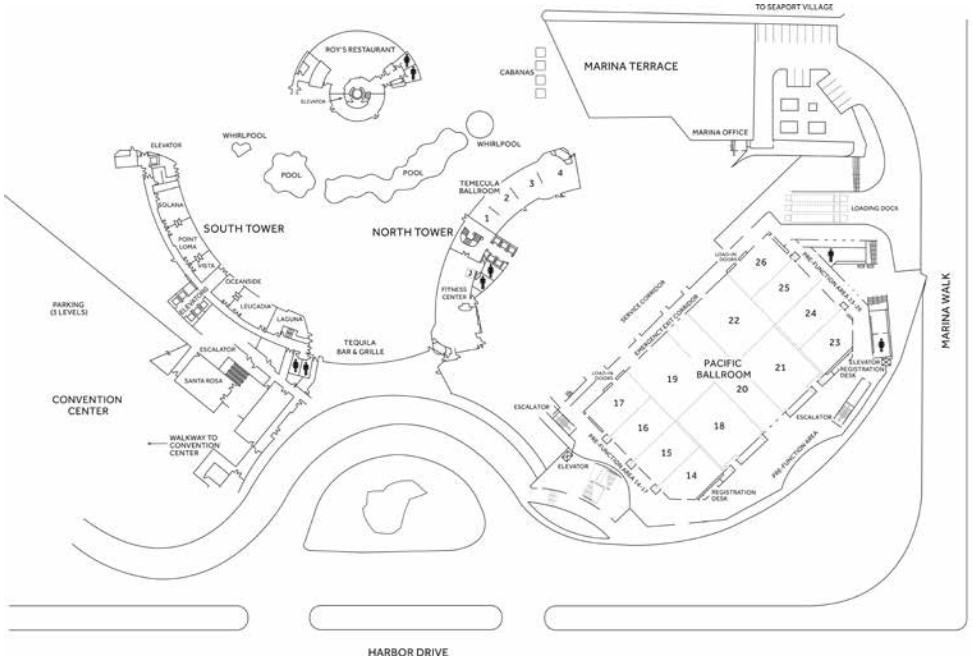


MARRIOTT MARQUIS SAN DIEGO MARINA

333 W Harbor Dr
San Diego, CA 92101

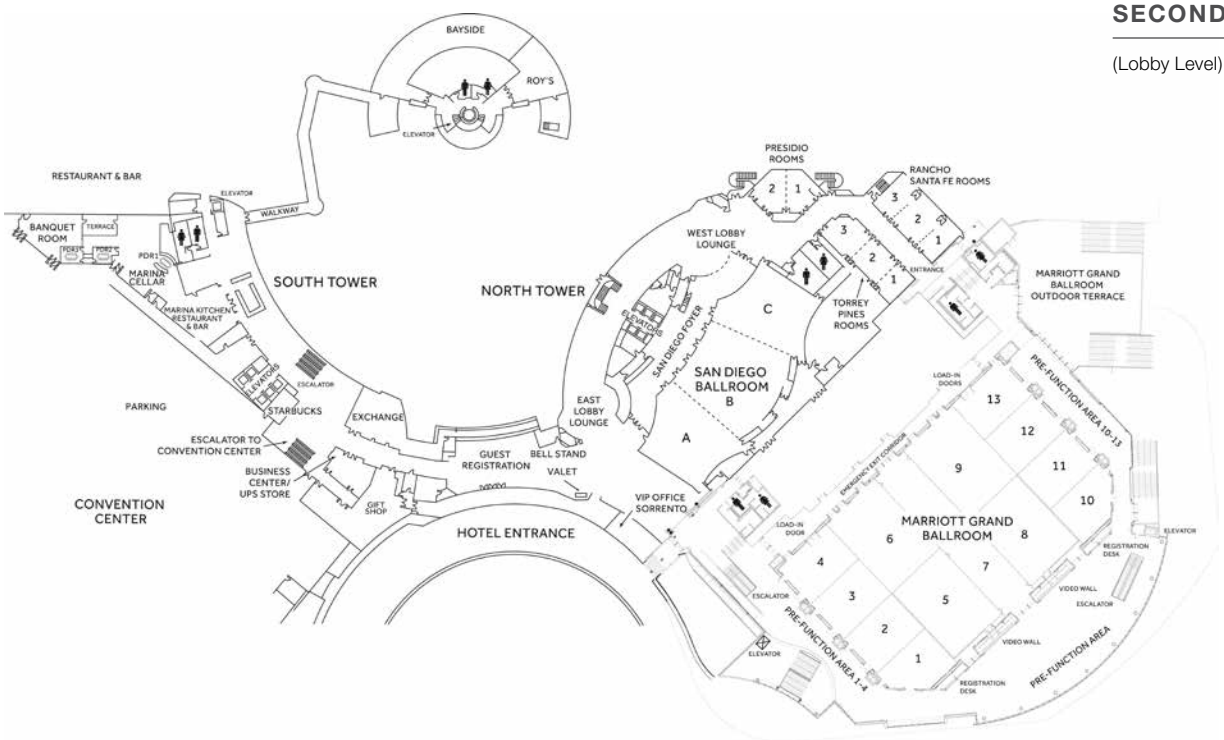
FIRST FLOOR

(Ground Level)



SECOND FLOOR

(Lobby Level)



SOUTH TOWER

Second Floor

Bayside

1st Floor

Laguna
Leucadia
Oceanside
Point Loma
Santa Rosa
Solana
Vista

3rd Floor

Balboa
Cardiff
Carlsbad
Del Mar
Encinitas
Marina Ballroom D–G
Miramar
Mission Hills
Palomar

4th Floor

Catalina
Coronado
Dana Point
La Costa
La Jolla
La Mesa
Malibu
Newport Beach

NORTH TOWER

Lobby Level

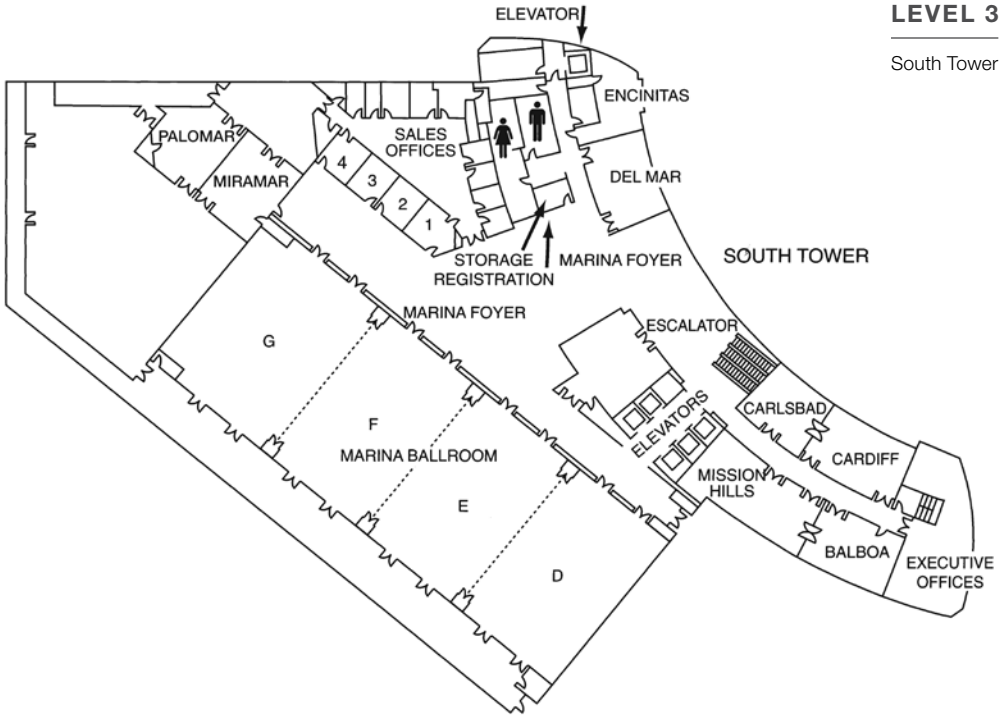
Presidio 1–2
Rancho Santa Fe 1–3
Marriott Ballroom 1–13
San Diego Ballrooms A–C
Torrey Pines 1–3

1st Floor

Temecula

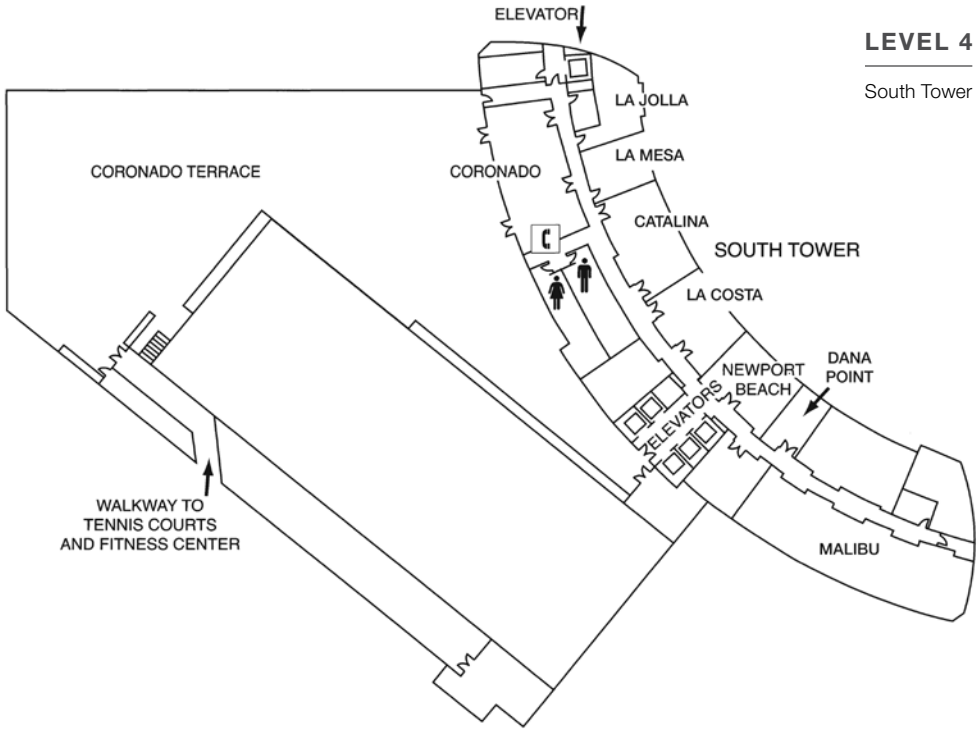
LEVEL 3

South Tower



LEVEL 4

South Tower

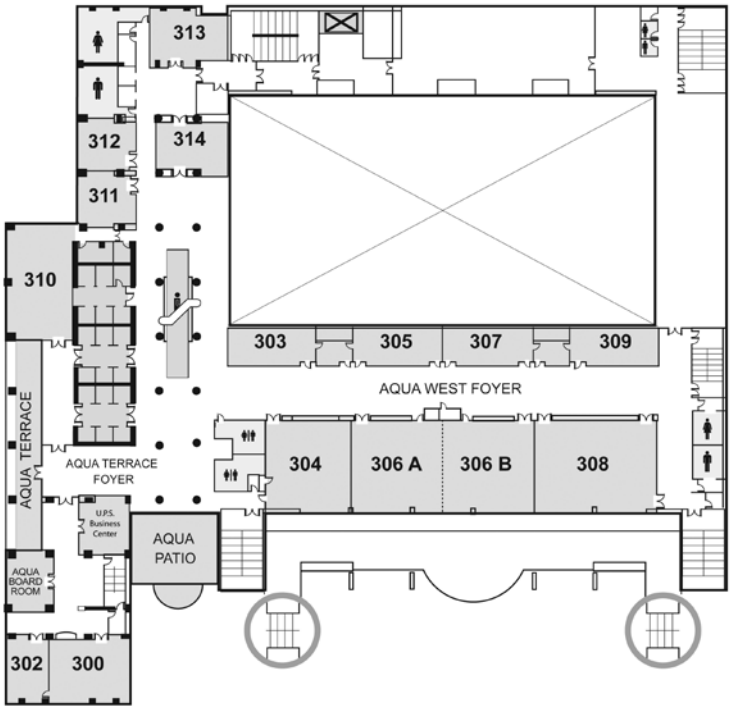


HILTON SAN DIEGO BAYFRONT

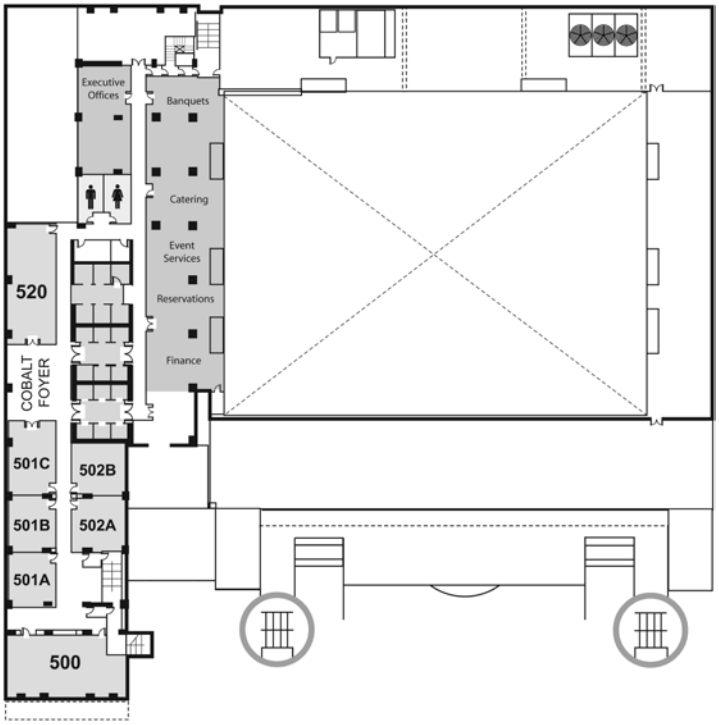
1 Park Blvd
San Diego, CA 92101

= Function Space
= Elevators and Escalators
= Restrooms
= Stairs

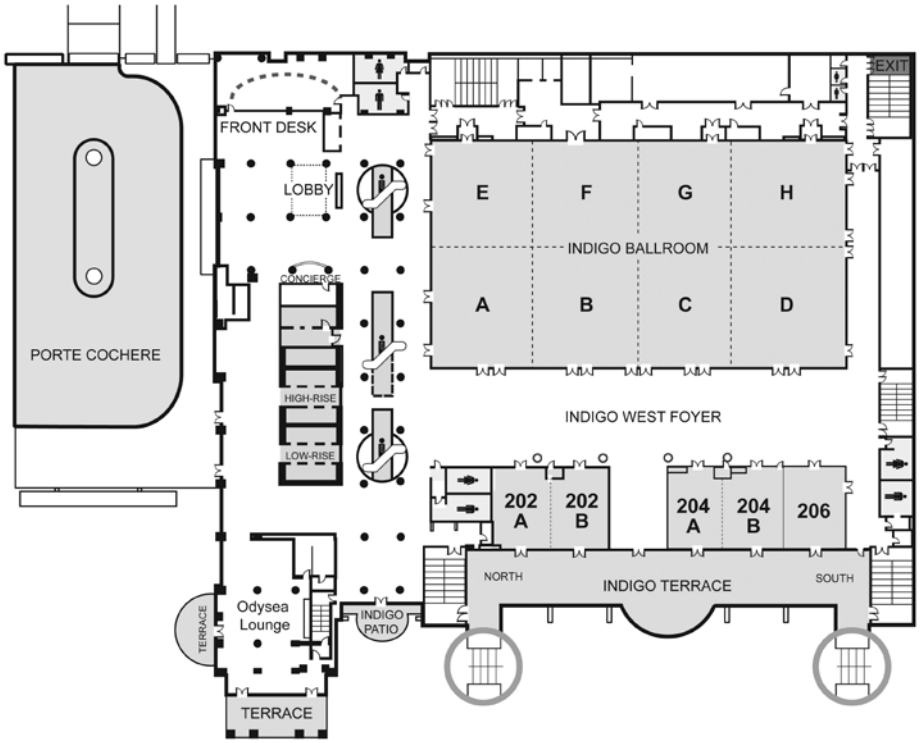
AQUA LEVEL



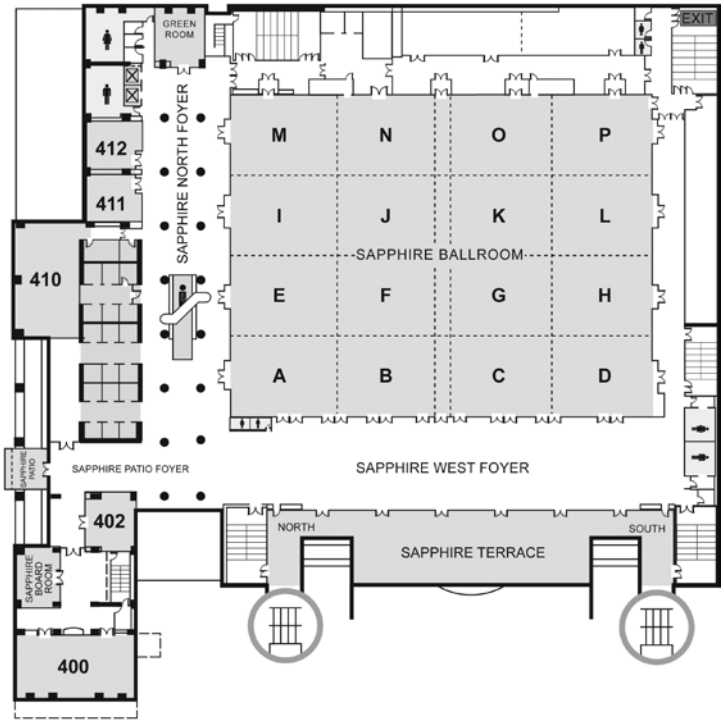
COBALT LEVEL



INDIGO LEVEL

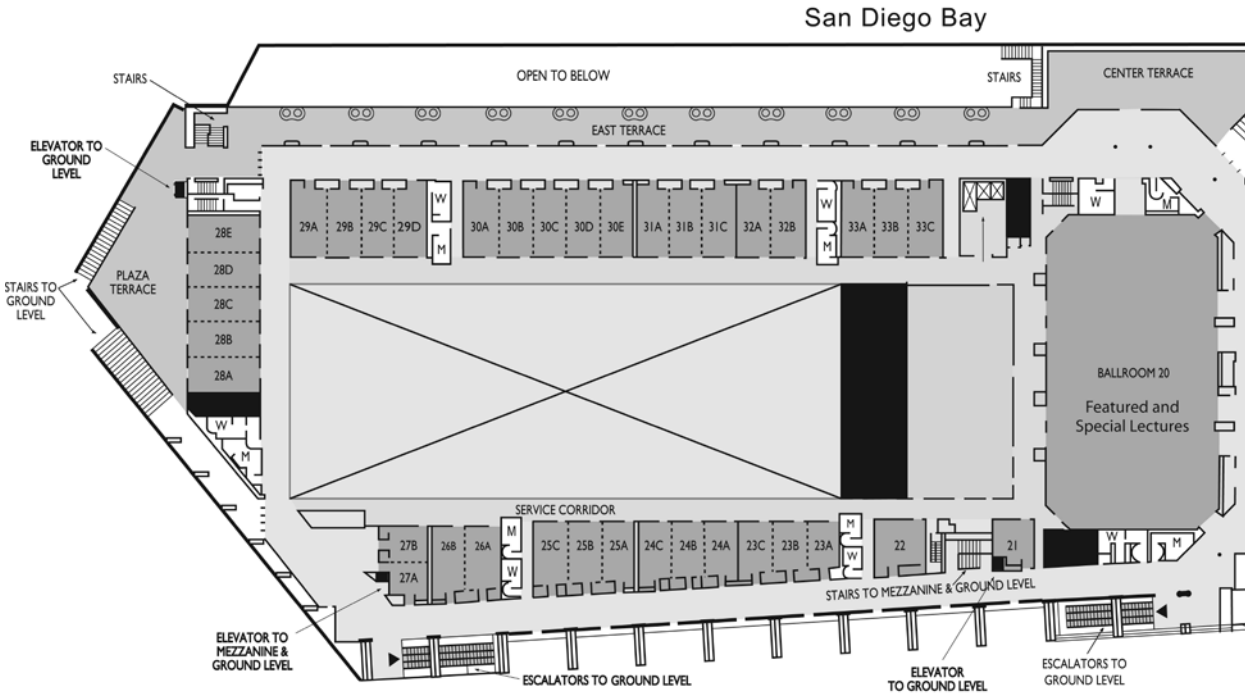


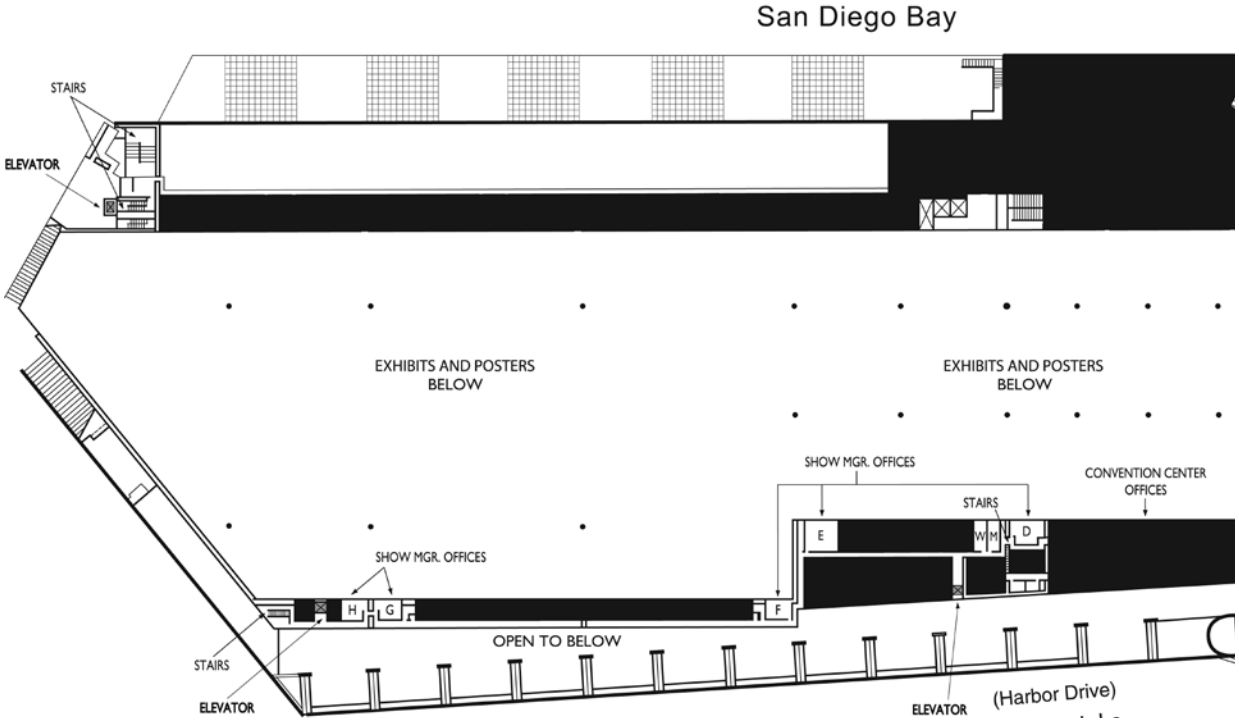
SAPPHIRE LEVEL



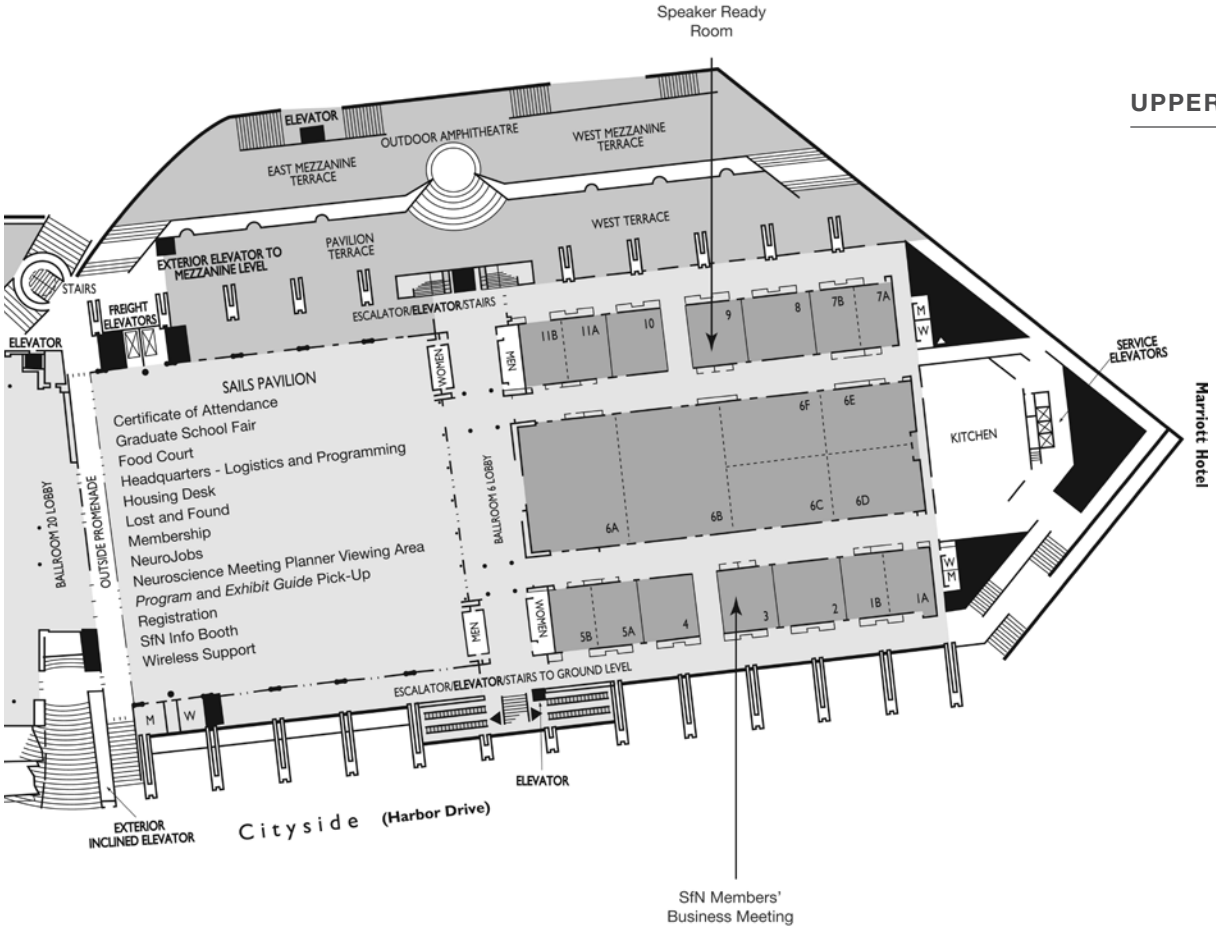
SAN DIEGO CONVENTION CENTER

111 W Harbor Dr
San Diego, CA 92101

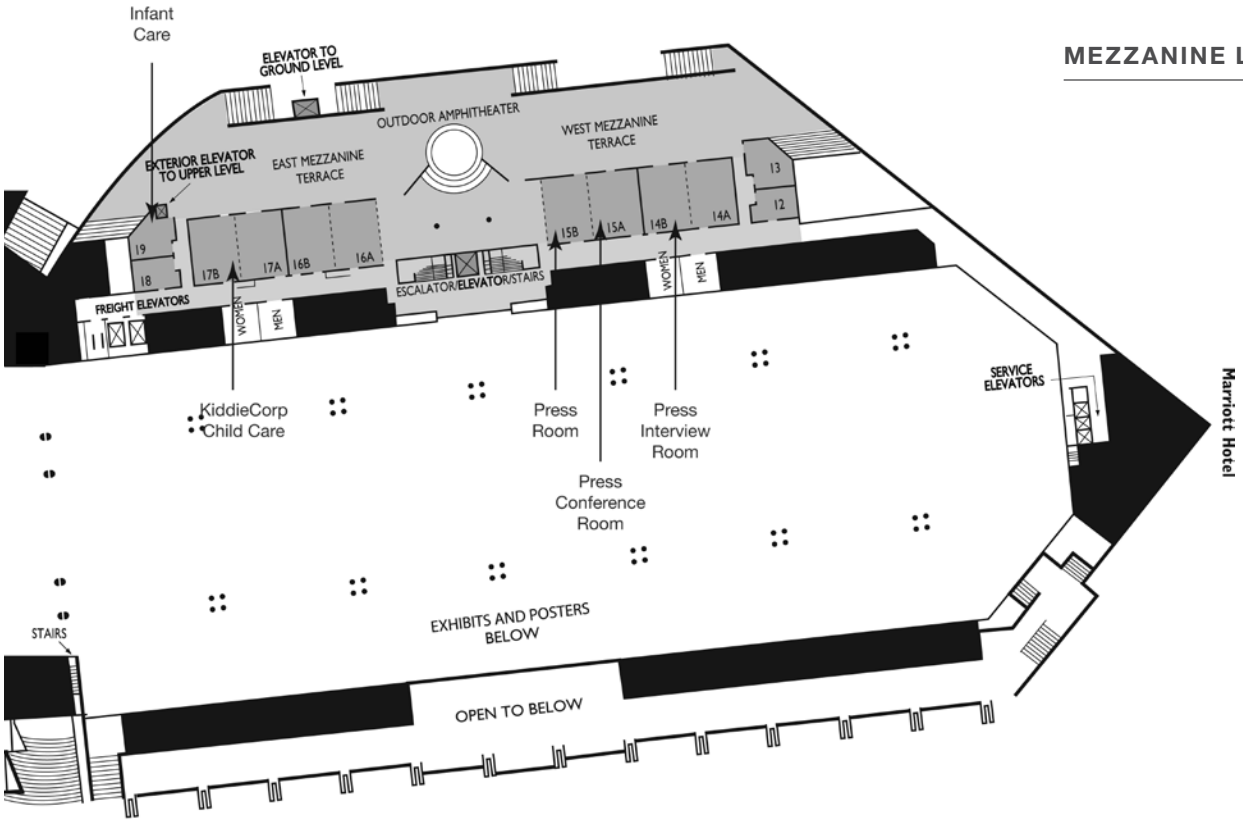




UPPER LEVEL



MEZZANINE LEVEL



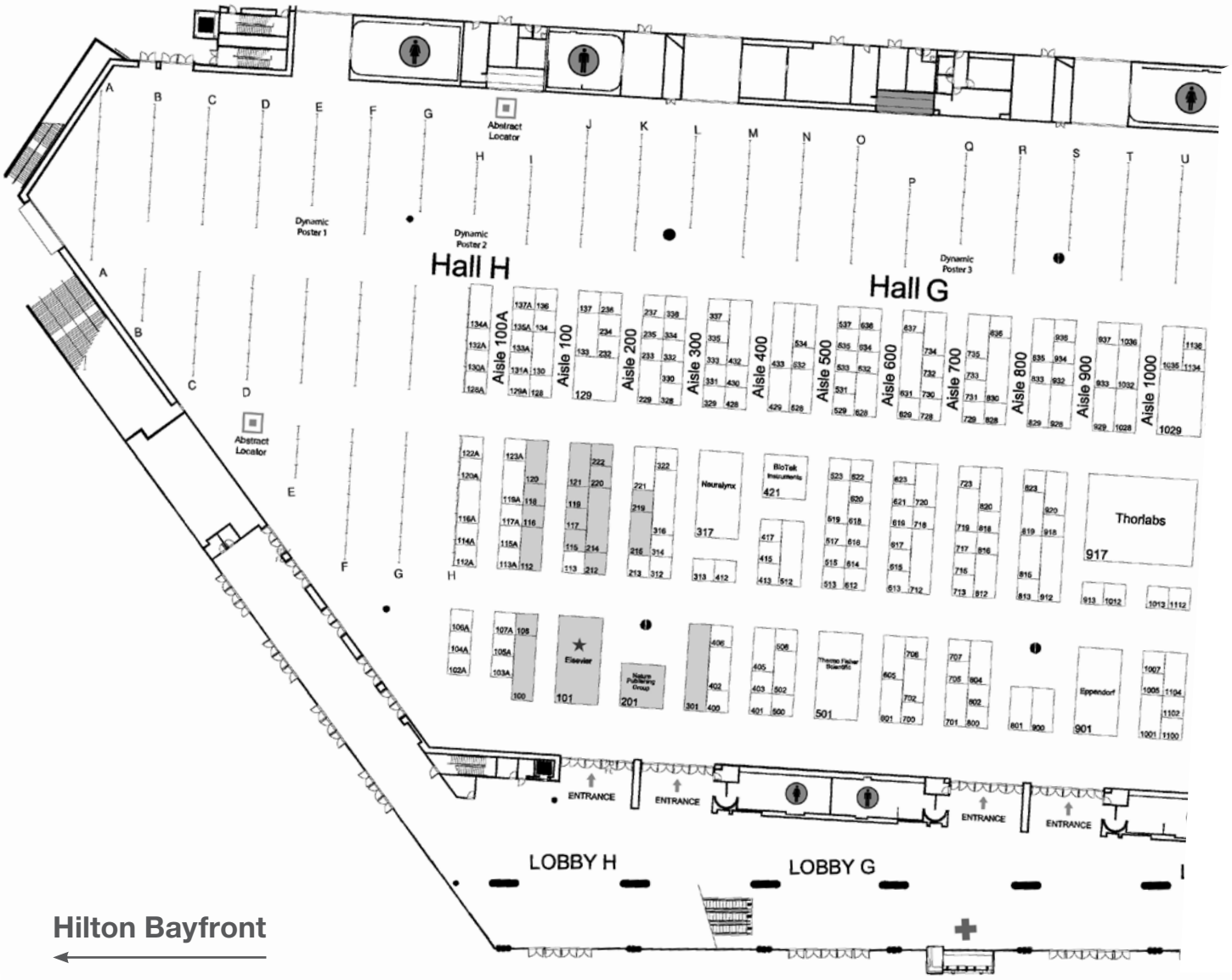
Exhibits and Poster Sessions

SAN DIEGO CONVENTION CENTER

Meeting Dates: November 12–16

Exhibit Dates: November 13–16

Note: Entrances will open at noon on Saturday and at 7 a.m. Sunday through Wednesday for poster presenter setup only. Poster sessions are open for all attendees at 1 p.m. on Saturday and 8 a.m. Sunday through Wednesday. Pending fire marshal approval. Floor plans subject to change. For current floor plan, visit **SfN.org/exhibits.**



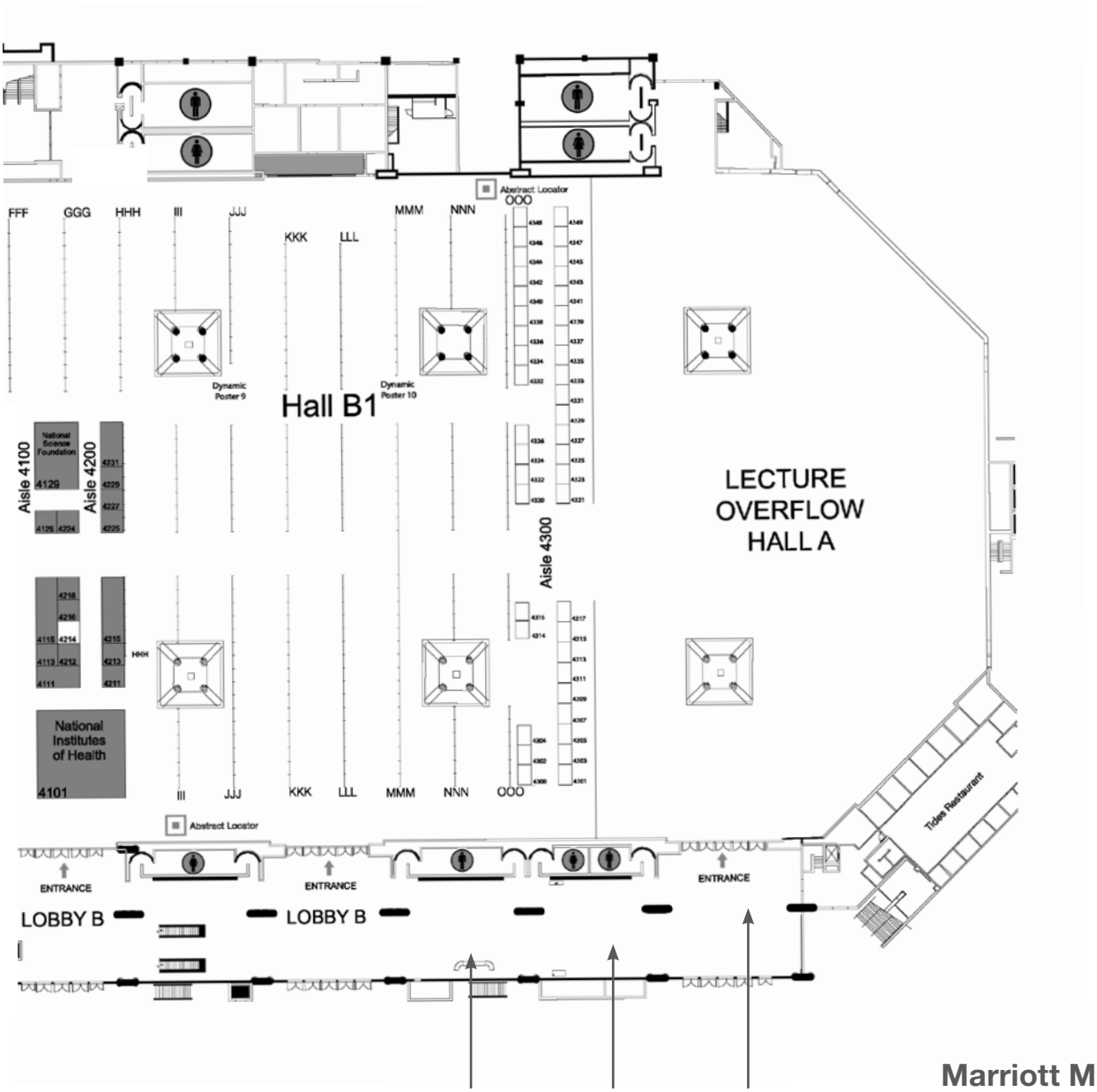
KEY

- Publishers Row
- SfN Booth
- Nonprofits/ U.S. Government Agencies
- ★ Sustaining Associate Members
- Abstract Locator
- Concession Area
- Women's Restroom
- Men's Restroom
- Entrance

SAN DIEGO CONVENTION CENTER

KEY

- Publishers Row
- SfN Booth
- Nonprofits/ U.S. Government Agencies
- ★ Sustaining Associate Members
- Abstract Locator
- Concession Area
- Women's Restroom
- Men's Restroom
- Entrance



Info Booth

Express Badge Pick-Up

Program & Exhibit Guide Pick-Up

Marriott Marquis and Marina

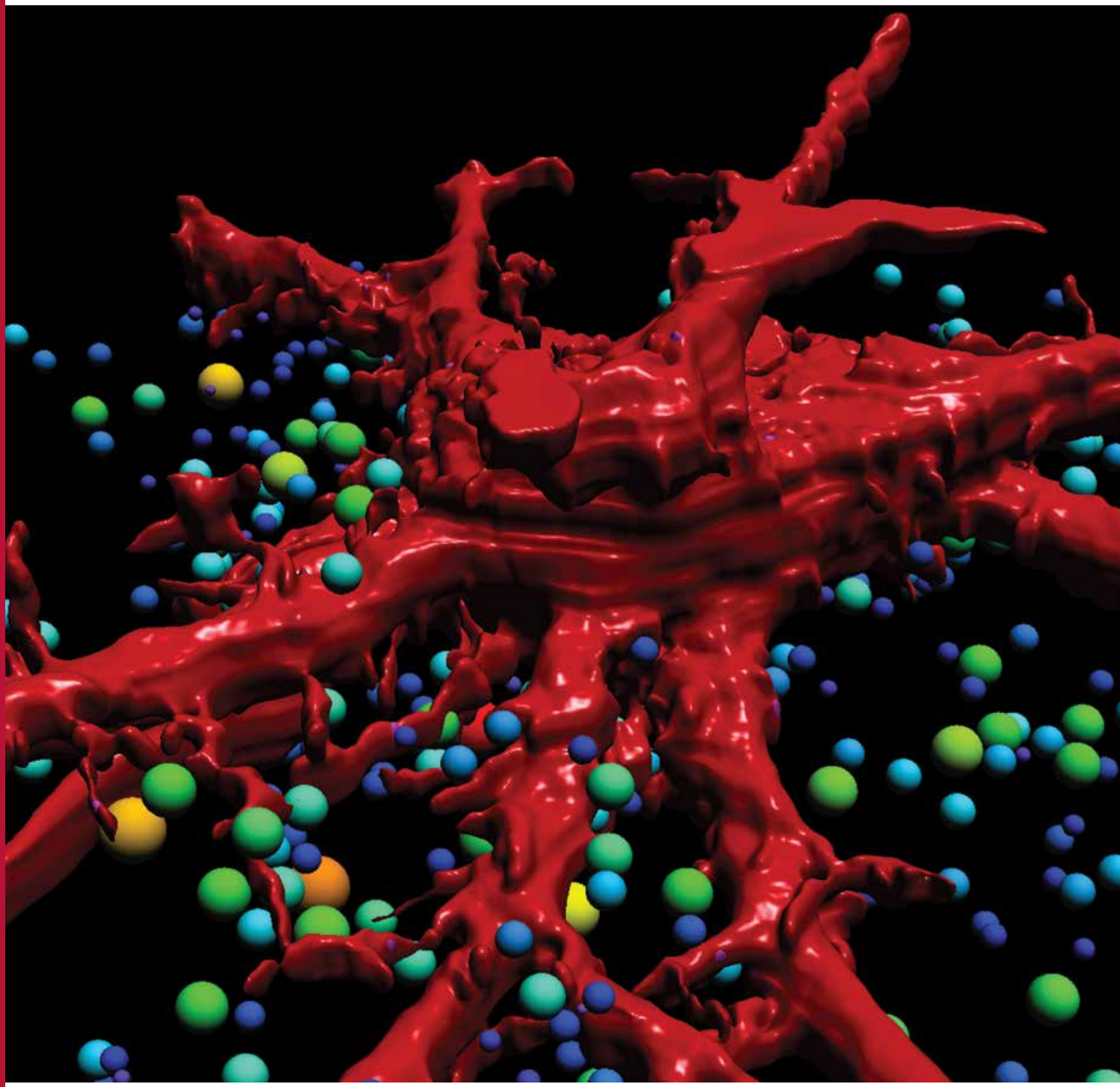
NEUROSCIENCE
2017

SEE YOU IN WASHINGTON, DC

NOVEMBER 11–15

SFN Society *for* Neuroscience

Neuroscience
2016



SfN.org

SOCIETY *for* NEUROSCIENCE
1121 14th Street NW, Suite 1010
Washington, DC 20005