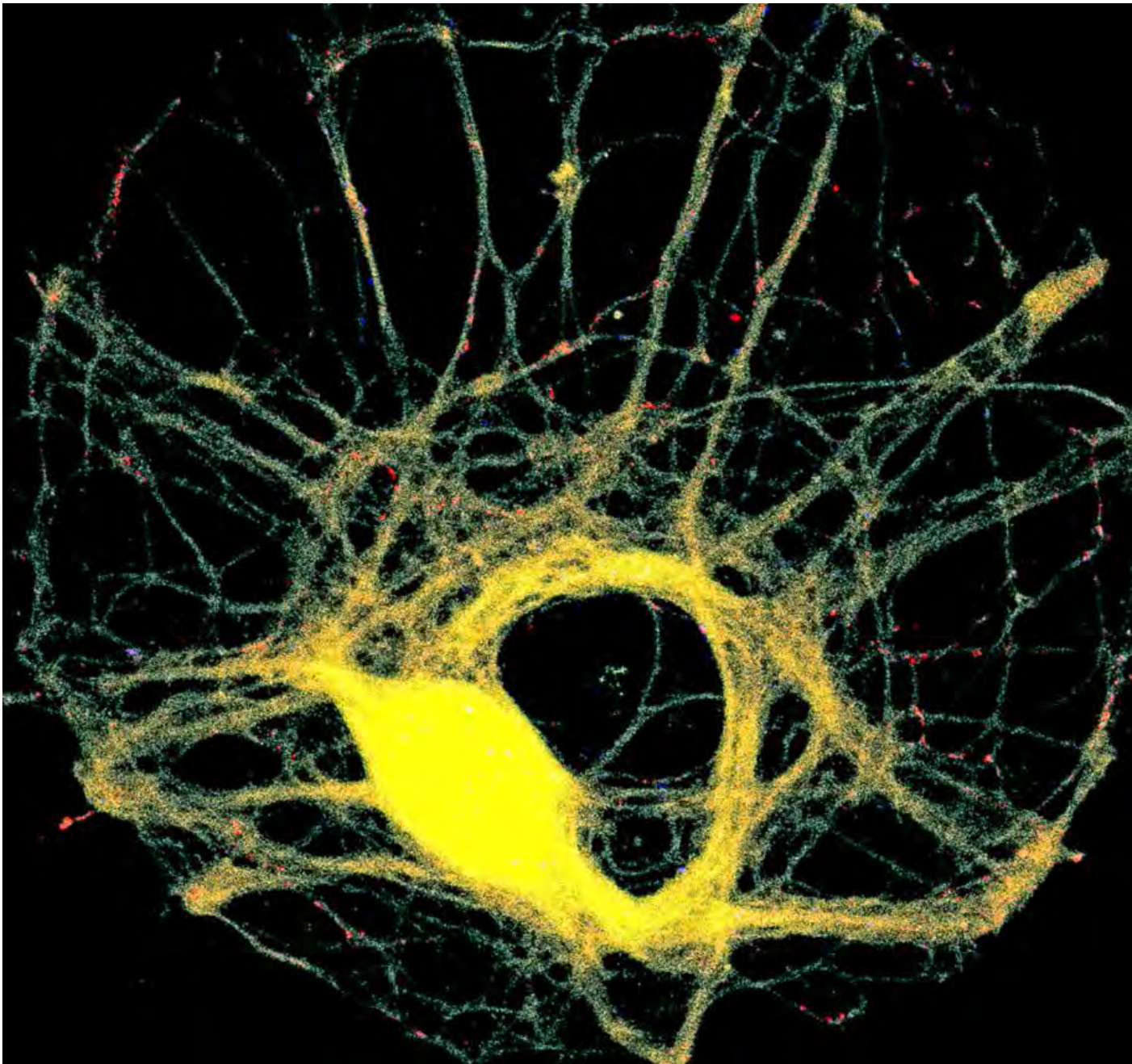
Neuroscience 2015

Chicago | October 17-21

Tuesday

Scientific Session Listings 452–638

Society for Neuroscience



Information at a Glance

Important Phone Numbers

Annual Meeting Headquarters Office
Logistics and Programming
Logistics
McCormick Place: Hall A, (312) 791-6700

Programming
McCormick Place: Hall A, (312) 791-6705

Volunteer Leadership Lounge
McCormick Place: S505A, (312) 791-6735

General Information Booths
McCormick Place:
Gate 3 Lobby, (312) 791-6724
Hall A (312) 791-6725

Press Offices
Press Room
McCormick Place: Room S501ABC
(312) 791-6730

Exhibit Management
McCormick Place: Hall A, (312) 791-6740

First Aid and Hospital Numbers
First Aid Station
McCormick Place: Level 2.5S, (312) 791-6060

Mercy Hospital
2525 S Michigan Avenue
Chicago, IL 60616
(312) 567-2000

Physicians Immediate Care
811 S. State Street
Chicago, IL 60605
(312) 566-9510

Walgreens Pharmacy
(closest to McCormick Place)
3405 S. Martin Luther King Drive
Chicago, IL 60616
(312) 326-4064

Venues
McCormick Place
2301 S. Martin Luther King Drive
Chicago, IL 60616

Fairmont Chicago, Millennium Park Hotel
200 N. Columbus Drive
Chicago, IL 60601
(312) 565-8000

Hyatt Regency Chicago Downtown Hotel
(not connected to McCormick Place)
151 E. Wacker Drive
Chicago, IL 60601
(312) 565-1234

Key to Poster Floor by Themes
The poster floor begins with Theme A and ends with Theme H. Refer to the poster floor map at the end of this booklet.

Theme

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

Note: Theme H Posters will be located in Hall A beginning at 1 p.m. on Saturday, Oct. 17, and will remain posted until 5 p.m., Sunday, Oct. 18.

Cover Image: Confocal image of a cholinergic single-cell microculture. This neuron has been partially depleted of clathrin by RNAi. It is expressing GFP (pseudocolored orange-yellow) and has been stained to show synapses (red) and clathrin (blue). Autaptic electrophysiological recordings in these cultures, together with electron microscopy, live cell imaging, or immunofluorescence, reveal that clathrin levels set limits for presynaptic plasticity.

Francisco J. López-Murcia, Stephen J. Royle, and Artur Llobet, 2014, *The Journal of Neuroscience*, 34(25): 8618-8629.

Complete Session Listing

Tuesday AM

SPECIAL LECTURE *McCormick Place*

452. ● Strange Synapses and Circuits of the Basal Ganglia — CME

Tue. 8:30 AM - 9:40 AM — Hall B1

Speaker: B. SABATINI*, Harvard Med. Sch.*

The basal ganglia are a phylogenetically old and evolutionarily conserved set of nuclei crucial for goal-oriented motor action. Nevertheless, many aspects of their circuitry, function, and regulation remain mysterious. Sabatini will present recent work from his group revealing complex and unexpected interactions between nuclei of the basal ganglia. These include the surprisingly widespread use of multiple fast acting neurotransmitters by neuromodulatory systems. The results will be discussed in terms of action initiation and reinforcement.

SYMPOSIUM *McCormick Place*

453. Synapse Formation and Neurodevelopmental Disorders — CME

Tue. 8:30 AM - 11:00 AM — S100A

Chair: L. MEI
Co-Chair: C. LEGAY

Neural transmission and plasticity are critical to how we perceive, think, and react to the world. This relies on synapses. Inappropriate formation of synapses has been implicated in neuropsychiatric disorders and loss of synaptic connection may lead to neurodegenerative disorders. This symposium will provide insights into mechanisms that govern synapse formation and stability in various model systems and shed light on pathophysiological mechanisms.

8:30 **453.01** Introduction.

8:35 **453.02** Molecular mechanisms controlling synapse formation and stability. J. PIELAGE. *Friedrich Miescher Inst. for Biomed. Res.*

9:10 **453.03** MuSK and Wnts, their roles in synapse formation and maintenance. C. LEGAY. *Paris Descartes Univ.*

9:45 **453.04** Genetic disorders of neuromuscular transmission. H. LOCHMÜLLER. *Newcastle Univ.*

10:20 **453.05** Powering the brain: Glycolytic enzymes localize to synapses under energy stress to support synaptic function. D. A. COLÓN-RAMOS. *Yale Univ.*

10:55 **453.06** Closing Remarks.

SYMPOSIUM *McCormick Place*

454. All-Optical Interrogation of Neural Circuits — CME

Tue. 8:30 AM - 11:00 AM — S100B

Chair: M. HAUSSER
Co-Chair: V. EMILIANI

This symposium will describe the nexus of dramatic recent developments in optogenetic probes, genetically encoded activity sensors, and novel microscopies, which together allow the activity of neural circuits to be recorded and manipulated using entirely light. Such an “all-optical” approach promises to illuminate many fundamental challenges in neuroscience, including transforming our search for the neural code and the links between neural circuit activity and behavior.

8:30 **454.01** Introduction.

8:35 **454.02** All-optical electrophysiology. A. COHEN. *Harvard Univ.*

9:10 **454.03** Spatially selective holographic photoactivation and functional fluorescence imaging in freely behaving mice. V. EMILIANI. *Univ. of Paris.*

9:45 **454.04** All-optical neurophysiology in the awake mouse. K. DEISSEROTH. *Stanford Univ.*

10:20 **454.05** Targeting functional cortical ensembles using all-optical interrogation during behaviour. M. HAUSSER. *Univ. Col. London.*

10:55 **454.06** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

455. Modern Approaches Toward More Predictive Mouse Models of Neurodegenerative Diseases — CME

Tue. 8:30 AM - 11:00 AM — S406A

Chair: G. R. HOWELL
Co-Chair: B. T. LAMB

Animal models of neurodegenerative diseases have provided important insights into the pathophysiology of disease and suggested potential avenues for therapies. However, translation of these findings to the clinic has been limited. The latest advances in modeling different neurodegenerative disease processes will be presented, as well as the cutting-edge technologies/methodologies that are revolutionizing the field and should provide more predictive models for neurodegenerative diseases.

8:30 **455.01** Introduction.

8:35 **455.02** ● Modeling disease for therapy development in amyotrophic lateral sclerosis and frontotemporal dementia with C9orf72 expansion. C. LAGIER-TOURENNE. *UC San Diego.*

8:55 **455.03** Conditional and controllable models of Alzheimer’s disease for improved spatial and temporal control of transgene expression. J. JANKOWSKY. *Baylor Col. of Med.*

9:15 **455.04** Novel animal models to study innate immunity and neurodegeneration. B. T. LAMB. *Cleveland Clin. Fndtn.*

Tues. AM

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

9:35 **455.05** Systems genetics of complex neurodegenerative diseases. G. CARTER. *The Jackson Lab.*

9:55 **455.06** Applications of CRISPR-Cas9 for genome editing in the mammalian brain. M. HEIDENREICH. *Broad Inst. of MIT and Harvard.*

10:15 **455.07** Integrated mouse genetic and genomic approach to dissect Huntington's disease pathogenesis. N. WANG. *UCLA.*

10:35 **455.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

456. Brainy and Handy: What Robotics and Prosthetics Can Learn from Touch Receptors in the Hand — CME

Tue. 8:30 AM - 11:00 AM — S105

Chair: E. P. GARDNER

To honor Vernon Mountcastle, experts from somatosensory neurophysiology, psychophysics, and bioengineering will present studies of how the sense of touch might be translated for use in prosthetic or robotic hands. Speakers will define the components of intelligent manipulative sensors based on biological models in the hand. Touch receptors detect object shape, edges and texture, and monitor grip force. Multisensor networks enhance touch information enabling translational application to adaptive mechanical hands.

8:30 **456.01** Introduction.

8:35 **456.02** Coding and use of tactile signals in object manipulation tasks. R. S. JOHANSSON. *Univ. Umea.*

8:55 **456.03** Mechanisms of mechanosensory signaling in discriminative touch receptors. E. A. LUMPKIN. *Columbia Univ. Col. of P&S.*

9:15 **456.04** Geometric feature extraction in the tactile periphery. A. PRUSZYNSKI. *Western Univ, Schulich Sch. Med. & Dent.*

9:35 **456.05** Processing of tactile information in parietal cortex during active touch. E. P. GARDNER. *New York Univ. Sch. of Med.*

9:55 **456.06** Restoring sensory function after upper-limb loss via microstimulation of residual nerve fibers with Utah Slanted Electrode Arrays. G. A. CLARK. *Univ. of Utah.*

10:15 **456.07** An advanced upper extremity prosthetic with sensory feedback for amputees and SCI subjects. M. S. JOHANNES. *Johns Hopkins Univ.*

10:35 **456.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

457. Mood and Reward Networks in Chronic Pain Conditions — CME

Tue. 8:30 AM - 11:00 AM — S103

Chair: V. ZACHARIOU
Co-Chair: I. YALCIN

This session presents new perspectives on mechanisms modulating sensory and affective components of chronic pain. The panel will emphasize studies on networks involved in mood, reward, and motivation. Speakers will cover areas of investigation related to adaptations in cortical and striatal networks under chronic pain conditions, the impact of pain in cortical plasticity and stress/anxiety disorders, the mechanisms by which the brain reward center modulates motivation under chronic pain states, and the intracellular targets of antidepressants in the brain reward center.

8:30 **457.01** Introduction.

8:35 **457.02** The impact of pain on motivation. N. SCHWARTZ. *UCSF.*

8:55 **457.03** How expectations, instructions, and beliefs shape pain and aversive learning. L. ATLAS. *NIH.*

9:15 **457.04** Presynaptic and postsynaptic mechanisms for chronic pain and anxiety. M. ZHUO. *Univ. of Toronto.*

9:35 **457.05** The anterior cingulate cortex as a substrate for chronic pain-induced depression: Molecular, lesional and optogenetic evidences. I. YALCIN. *UPR3212 CNRS.*

9:55 **457.06** Nucleus Accumbens subregions dissociate encoding of values for reward and pain. V. APKARIAN. *Northwestern Univ.*

10:15 **457.07** Intracellular pathways in the Nucleus Accumbens modulate the antiallodynic actions of antidepressants. V. ZACHARIOU. *Icahn Sch. of Med. at Mount Sinai.*

10:35 **457.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

458. Different Brains, Common Circuits? Visual Decision Making in Rodents and Primates — CME

Tue. 8:30 AM - 11:00 AM — S406B

Chair: D. J. FREEDMAN

Decision-making is a process by which sensory stimuli are evaluated and used to guide behavior. While much is known about activity within individual cortical areas during visual decision-making, recent advances are giving insight into the circuit mechanisms by which multiple brain areas interact to form decisions. This minisymposium will assemble a diverse group of researchers studying circuit mechanisms of decision-making with the goal of integrating recent findings from primate and rodent work.

8:30 **458.01** Introduction.

8:35 **458.02** Causal and correlational perspectives on perceptual decision-making. A. C. HUK. *Univ. of Texas at Austin.*

8:55 **458.03** Cortical circuit computations underlying stimulus perception. M. H. HISTED. *The Univ. of Chicago.*

9:15 **458.04** Decision-related computations in the monkey frontostriatal network. L. DING. *Univ. of Pennsylvania.*

9:35 **458.05** Neural circuits for multisensory decision-making. A. K. CHURCHLAND. *Cold Spring Harbor Lab.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:55 **458.06** Neuronal mechanisms of visual categorization and category learning. D. J. FREEDMAN. *The Univ. of Chicago.*

10:15 **458.07** Neuronal microcircuit dynamics in the mouse parietal cortex. C. D. HARVEY. *Harvard Med. Sch.*

10:35 **458.08** Closing Remarks.

SPECIAL LECTURE *McCormick Place*

459. ● Uncertainty, Choice, and Dopamine — CME

Tue. 10:00 AM - 11:10 AM — Hall B1

Speaker: S. B. FLORESCO*, Univ. of British Columbia.*

We routinely evaluate choices where decisions and actions may or may not yield different types of rewards. These situations trigger competitive decision biases that reflect interplay between different prefrontal cortical, amygdalar, striatal, and habenular nodes within dopaminergic circuitry. This lecture will discuss some of the interactions between these circuits that shape decision biases and underlie conflicting urges when evaluating options that vary in terms of potential risks and rewards.

SPECIAL LECTURE *McCormick Place*

460. Cortical Control of Arm Movements: A Dynamical Systems Perspective — CME

Tue. 11:30 AM - 12:40 PM — Hall B1

Speaker: K. V. SHENOY*, Stanford Univ.*

Investigating the neural control of arm movements has involved, primarily, either attempts to account for single-neuron responses in terms of tuning for movement parameters or attempts to decode movement parameters from populations of tuned neurons. These have led to many seminal advances but have not produced an agreed-upon conceptual framework. This lecture will review how a dynamical systems perspective may help researchers understand why motor cortical activity evolves the way it does, how it relates to movement parameters, and how a unified conceptual framework may result.

NANOSYMPOSIUM

461. Alzheimer's Disease: Risk Factors

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, S403

8:00 **461.01** ApoE3 expression prevent Abeta inhibition of insulin-stimulated AMPA receptor function. B. WONG*; E. S. CHAN. *Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

8:15 **461.02** ● Human and murine apolipoprotein E differentially facilitate and co-localize with cerebral amyloid angiopathy and amyloid plaques in APP transgenic mouse models. F. LIAO*; T. J. ZHANG; H. JIANG; K. B. LEFTON; G. O. ROBINSON; R. J. VASSAR; P. M. SULLIVAN; D. M. HOLTZMAN. *Washington Univ. In St. Louis, The Feinberg Sch. of Medicine, Northwestern Univ., Duke Univ. Med. Ctr.*

8:30 **461.03** Sleep deprivation disrupts apoE isoform specific radial diffusion from the penetrating arteries into brain by the glymphatic system: Implications for CAA and Alzheimer's disease. R. DEANE*; M. THIYAGARAGAN; B. LI; W. PENG; P. B. VERGHESE; E. MCCONNELL; A. BENRAISS; Y. SHI; T. KASPER; W. SONG; T. TAKANO; D. M. HOLTZMAN; M. NEDERGAARD. *Univ. of Rochester, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

8:45 **461.04** Apoe4-induced phospholipid dysregulation contributes to apoe4-associated cognitive deficits in Alzheimer's disease pathogenesis. D. CAI*; L. ZHU; M. ZHONG; M. OHLEMEYER; G. ELDER; M. SANO; S. GANDY; C. CARDOZO; V. HAROUTUNIAN; N. ROBAKIS. *Icahn Sch. of Med. At Mount Sinai, James J Peters VA Med. Ctr., James J Peters VA Med. Ctr., New York Med. Col. Westchester Med. Ctr., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. At Mount Sinai, James J Peters VA Med. Ctr., James J Peters VA Med. Ctr.*

9:00 **461.05** Effect of Aβ on release of exosome and apoE from astrocytes in culture. M. ABDULLAH; H. ENOMOTO; M. NUNOME; J. GONG; M. MICHIKAWA*. *Nagoya City University, Sch. of Med. Sci.*

9:15 **461.06** Expression of CR1 in Alzheimer's disease brain: Lack of association with disease. M. I. FONSECA*; S. CHU; A. PIERCE; W. BRUBAKER; R. HAUHART; D. MASTROENI; J. ROGERS; J. P. ATKINSON; A. J. TENNER. *Univ. California, SRI, Washington Univ. Sch. of Med., Banner Sun Hlth. Res. Inst.*

9:30 **461.07** ▲ Rs17518584 polymorphism in CADM2 gene accelerates brain and hippocampal atrophy in Alzheimer's disease and Mild Cognitive Impaired patients. B. MOHAJER*; N. ABBASI; A. ABDOLALIZADEH; M. H. AARABI; A. S. BAYANI ERSHADI; M. PISHNAMAZI. *Student's Scientific Res. Center, Tehran Unive.*

9:45 **461.08** The Alzheimer's risk factors Bin1 and CD2AP differentially regulate the endocytic generation of amyloid-β. F. UBELMANN; T. BURRINHA; C. G. ALMEIDA*. *CEDOC - Chronic Dis. Res. Ctr.*

10:00 **461.09** TREM2 deficiency results in exacerbated MAPT pathology in the hTau mouse model of tauopathy. S. M. BEMILLER*; G. XU; G. WILSON; O. KOKIKO-COCHRAN; S. CRISH; B. LAMB. *Cleveland Clin. Lerner Res. Inst., Cleveland Clin. Lerner Res. Inst., NEOMED.*

10:15 **461.10** ● Translating CD33 genetics to an Alzheimer's disease prophylactic. S. ESTUS*; M. MALIK; J. SIMPSON; J. TURCHAN. *Sanders-Brown Ctr. Aging.*

10:30 **461.11** Withdrawn.

10:45 **461.12** Using a series of novel genetically encodable tools to characterize apolipoprotein epsilon domain interaction through a förster resonance energy transfer-based assay. E. KARA*; E. HUDRY; Z. FAN; S. WEGMANN; M. MAESAKO; O. BEREZOVSKA; B. T. HYMAN. *Massachusetts Alzheimer Dis. Res. Ctr., Massachusetts Alzheimer Dis. Res. Center, Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
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* Indicates abstract's submitting author

NANOSYMPOSIUM

462. Imaging and Biomarkers in Neurodegenerative Disease

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, N226

8:00 **462.01** Fronto-parietal network efficiency accurately classifies underlying pathology in corticobasal syndrome. J. D. MEDAGLIA*; W. HUANG; S. SEGARRA; C. OLM; J. GEE; M. GROSSMAN; A. RIBEIRO; C. MCMILLAN; D. BASSETT. *Univ. of Pennsylvania, Moss Rehabil. Res. Inst., The Univ. of Pennsylvania.*

8:15 **462.02** Searching for treatable links between stroke and Alzheimer's disease in a new rat model: Quantitative imaging of ganglioside expression using MALDI mass spectrometry. N. WEISHAUPT*; D. F. CECHETTO; V. HACHINSKI; S. N. WHITEHEAD. *Univ. of Western Ontario, London Hlth. Sci. Ctr.*

8:30 **462.03** Structural MRI predicts conversion from healthy elderly individual to mild cognitive impairment (MCI). A. SIERRA-MARCOS; C. LONG*; E. ALFAYATE; M. MEDINA; B. STRANGE. *Queen Sofia Fndn. Alzheimers Ctr., MIT, Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas, Queen Sofia Fndn. Alzheimer Ctr., Technial Univ. of Madrid.*

8:45 **462.04** White matter dysintegrity in aging and mice transgenic for Alzheimer's pathology revealed by diffusion tensor imaging. D. J. CROSS*; M. M. CLINE; G. G. GARWIN; C. G. CROSS; S. MINOSHIMA. *Univ. of Washington, Brown Univ., Univ. of Utah.*

9:00 **462.05** White-matter shape attributes as biomarkers for Alzheimer's disease. T. GLOZMAN*; R. LE; L. GUIBAS; F. PESTILLI. *Stanford Univ., Indiana Univ.*

9:15 **462.06** Axonal transport is dependent on intact kinesin-1 in the important memory circuit from hippocampus to basal forebrain: A magnetic resonance imaging study. C. MEDINA*; O. BIRIS; T. L. FALZONE; X. W. ZHANG; R. E. JACOBS; E. L. BEARER. *Univ. of New Mexico Hlth. Sci. Ctr., Div. of Engineering, Brown Univ., IBYME-CONICET; IBCN, Facultad de Medicina, Univ. de Buenos Aires, Beckman Inst. at California Inst. of Technol., 4Beckman Inst. at California Inst. of Technol., Univ. of New Mexico Hlth. Sci. Ctr.*

9:30 **462.07** Increased D-serine levels as a potential biomarker in Alzheimer's disease. M. V. LOURENÇO*; C. MADEIRA; C. VARGAS-LOPES; C. K. SUEMOTO; C. O. BRANDÃO; T. REIS; R. E. P. LEITE; J. LAKS; W. JACOB-FILHO; C. A. PASQUALUCCI; L. T. GRINBERG; S. T. FERREIRA; R. PANIZZUTTI. *Fed Univ. of Rio De Janeiro, Univ. of São Paulo, Univ. of California San Francisco.*

9:45 **462.08** Dissociable impact of cholinergic system integrity and white matter lesion load on cognition in mild cognitive impairment. J. KUKOLJA*; A. MICHEL; N. RICHTER; Ö. ONUR; L. KRACHT; M. DIETLEIN; M. TITTGEMEYER; B. NEUMAIER; G. R. FINK. *Univ. Hosp. Cologne, Univ. Hosp. Cologne, Max-Planck-Institute for Metabolism Res., Univ. Hosp. Cologne.*

10:00 **462.09** Axonal diameter estimated with 7-tesla hybrid diffusion imaging in transgenic Alzheimer's rats. M. DAIANU*; Z. ABARYAN; R. E. JACOBS; T. TOWN; P. M. THOMPSON. *USC, USC, Caltech, USC.*

10:15 **462.10** Cerebrospinal fluid provides a prognostic marker for amyotrophic lateral sclerosis. C. MCMILLAN*; S. XIE; D. IRWIN; K. RASCOVSKY; X. HAN; E. MORAN; K. FIRN; J. WOO; L. SHAW; L. ELMAN; L. MCCLUSKEY; M. GROSSMAN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:30 **462.11** *In vivo* and *ex vivo* imaging in the same subjects of the human hippocampal formation. L. WISSE*; D. H. ADLER; R. ITTYERAH; J. B. PLUTA; J. L. ROBINSON; T. SCHUCK; J. Q. TROJANOWSKI; M. GROSSMAN; S. R. DAS; D. A. WOLK; P. A. YUSHKEVICH. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:45 **462.12** Functional brain activation patterns associated with preclinical Alzheimer's disease. B. T. GOLD*; J. HAKUN; C. BROWN; L. BROSTER; Y. JIANG. *Univ. of Kentucky.*

11:00 **462.13** Small vessel disease is a prominent feature of Alzheimer's disease. R. S. MILETICH*; D. WACK; M. HOURIHANE; B. AJTAI. *UB, SUNY, Dent. Neurologic Inst.*

11:15 **462.14** ● Resistance to Alzheimer's pathology in elderly with superior cognitive capacity. P. ABBASSIAN; A. REZVANIAN; J. SHI; S. WEINTRAUB; E. BIGIO; E. J. ROGALSKI; M. MESULAM; C. GEULA*. *Northwestern Univ. Med. Sch.*

NANOSYMPOSIUM

463. Therapeutics of Parkinson's Disease: Preclinical Studies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, N230

8:00 **463.01** Cell replacement therapy in Parkinson's disease utilizing trans-differentiation of mesenchymal stem cells. R. WELCHKO*; G. SHALL; L. SIEGEL; T. HULSE; S. PARKER; A. WADDLES; A. WRIGHT; M. LU; X. LEVEQUE; J. ROSSIGNOL; G. DUNBAR. *Field Neurosciences Inst. Lab. For Restorative Neurol., Central Michigan Univ., Central Michigan Univ. Col. of Med., Field Neurosciences Inst.*

8:15 **463.02** Adenosine A2A receptors as potential targets for Parkinson's disease-related cognitive deficits. T. F. OUTEIRO*; D. G. FERREIRA; V. L. BATALHA; H. VICENTE-MIRANDA; J. E. COELHO; F. Q. GONÇALVES; J. REAL; R. A. CUNHA; A. ALBINO-TEIXEIRA; L. V. LOPES. *Univ. Med. Ctr. Goettingen, Inst. de Medicina Molecular, Fac. of Medicine, Univ. of Lisbon, Fac. of Medicine, Univ. of Porto, CNC-Center for Neurosci. and Cell Biology, Univ. of Coimbra, Fac. of Medicine, Univ. of Coimbra, MedInUP - Ctr. for Drug Discovery and Innovative Medicines, Univ. of Porto.*

8:30 **463.03** Addressing a new target for L-DOPA induced dyskinesias. S. SANZ-BLASCO*; A. DAMIANICH; M. SABORIDO; G. GOMEZ; M. BORDONE; M. A. BERNARDI; S. CAMPANA; I. TARAVINI; D. HANGER; M. AVALE; O. GERSHANIK; J. FERRARIO. *ININFA-UBA-CONICET, INGEBI-CONICET, Inst. of Psychiatry.*

8:45 **463.04** Chemogenetic modulation of dopaminergic fetal grafts in Parkinson's disease elucidates therapeutic potential and a mechanism underlying graft induced dyskinesias. T. BJORKLUND*; P. ALDRIN-KIRK; A. HEUER; M. LUNDBLAD; G. WANG; B. MATTSSON; M. PARMAR. *Mol. Neuromodulation, Wallenberg Neurosci., Developmental and Regenerative Neurobiology, Wallenberg Neurosci. Ctr.*

9:00 **463.05** ● Preclinical development of a vaccine against alpha-synuclein for the treatment of Parkinson's disease. M. DOUCET*; A. EL-TURABI; T. DELTHEIL; M. CIOROCH; M. BACHMANN; R. WADE-MARTINS. *Univ. of Oxford, The Jenner Inst.*

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9:15 **463.06** ● A neural stem cell-based therapeutic approach for Parkinson's disease. R. A. SEMECHKIN*; R. GONZALEZ; I. GARITAONANDIA; M. POUSTOVOITOV; T. ABRAMIHINA; A. CRAIN; A. NOSKOV; C. R. S. MCENTIRE; B. CULP; J. ATTWOOD; L. C. LAURENT; J. D. ELSWORTH; E. Y. SNYDER; D. REDMOND. *Intl. Stem Cell Corp, Sanford-Burnham Med. Res. Inst., Axion Res. Fndn., UCSD, Yale Univ. Sch. of Med.*

9:30 **463.07** ● Targeting the toxic synergy of α-synuclein and tau with tau oligomer-specific antibodies. J. GERSON*; D. L. CASTILLO-CARRANZA; U. SENGUPTA; N. HENSON; A. NILSON; R. KAYED. *UTMB, UTMB, Univ. of Texas.*

9:45 **463.08** Using rAAV to interrogate the ability of Nurr1 to reverse levodopa-induced dyskinesia in parkinsonian rats. R. C. SELLNOW*; K. STEECE-COLLIER; N. M. KANAAN; C. E. SORTWELL; T. J. COLLIER; A. COLE-STRAUSS; J. W. LIPTON; F. P. MANFREDSSON. *Michigan State Univ., Michigan State Univ.*

10:00 **463.09** ● Sleep alterations as a biomarker of Parkinson's disease. A. RACHALSKI*; A. BOGSTEDT; S. TAI; D. CAUDAL; A. BJÖRKLUND; P. SVENNINGSSON; E. ÅBERG. *Astrazeneca Translational Sci. Ctr., Lab. of Translational Neuropharmacology, Ctr. for Mol. Medicine/ Translational Neuropharm., Wallenberg Neurosci. Center, Lund Univ.*

NANOSYMPOSIUM

464. Neuroprotection: *In Vivo* Studies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, N426A

8:00 **464.01** Targeting glutamate metabolism by glutamate oxaloacetate transaminase in the ischemic penumbra for protection against stroke injury. S. KHANNA*; S. GNYAWALI; R. STEWART; S. ROY; C. K. SEN; C. RINK. *Ohio State Univ.*

8:15 **464.02** The enhancement of the Unfolded Protein Response (UPR)-PERK pathway provides neuroprotection against global cerebral ischemia by increasing autophagy. D. PEREZ-RODRIGUEZ*; B. ANUNCIBAY-SOTO; E. GERACE; M. SANTOS GALDIANO; D. PELLEGRINI-GIAMPIETRO; A. FERNÁNDEZ-LÓPEZ. *Univ. de Leon, Inst. de Biomedicina, Univ. degli studi di Firenze.*

8:30 **464.03** A PAF-receptor antagonist plus docosanoids leads to remarkable neuroprotection in experimental stroke. N. G. BAZAN*; S. HONG; L. KHOUTOROVA; A. OBENAUS; N. A. PETASIS; L. BELAYEV. *LSU Hlth. New Orleans, Loma Linda Univ., USC.*

8:45 **464.04** Neuroprotective effects of sympathetic attenuation in the ischemic brain. R. H. LEE*; A. COUTO E SILVA; C. WILKINS; S. VALIDO; D. KLEIN; C. WU; D. DELLA MORTE; H. LIN. *Univ. of Miami, Florida Intl. Univ. Herbert Wertheim Col. of Med., Tzu Chi Univ., Univ. of Rome Tor Vergata.*

9:00 **464.05** Quality and quantity mononuclear cells protect neuronal cell death in stroke mice. T. NAKAYAMA*; E. NAGATA; H. MASUDA; S. KOHARA; H. YUZAWA; Y. TAKAHARI; T. ASAHARA; S. TAKIZAWA. *Tokai Univ., Tokai Univ., Tokai Univ.*

9:15 **464.06** Coenzyme Q10 supplementation during atorvastatin treatment modifies cellular oxidative state following focal cerebral ischemia. S. NASOOHI*; L. SIMANI; N. NADERI; M. FAIZI; F. KHODAGHOLI. *Shahid Beheshti Univ. of Med. Sci., Dept. of Pharmacol. and Toxicology, Sch. of Pharmacy, Shahid Beheshti Univ. of Med. Sci., Neurobio. Res. Center, Shahid Beheshti Univ. of Med. Sci.*

9:30 **464.07** ● Prothymosin-alpha concerns TLR4-TRIF signaling in the protection of ischemic retina. S. K. HALDER*; H. UEDA. *Nagasaki Univ.*

9:45 **464.08** Modulation of mitochondrial function with specific infrared light wavelengths: A novel approach to reduce cerebral reperfusion injury in the adult and neonatal brain. M. BUKOWSKI*; C. REYNOLDS; J. WIDER; E. GRULEY; K. PRZYKLENK; M. HUTTEMANN; T. SANDERSON. *Wayne State Univ., Wayne State Univ., Wayne State Univ., Wayne State Univ.*

10:00 **464.09** Docosahexaenoic acid therapy protects the ischemic penumbra after experimental stroke in female rats. L. S. BELAYEV*; L. KHOUTOROVA; A. OBENAUS; S. HONG; N. G. BAZAN. *LSUHSC, Loma Linda Univ.*

10:15 **464.10** Exploring MKK7 role in excitotoxicity and cerebral ischemia: Design novel pharmacological strategy against brain injury. A. E. VERCELLI*; A. SCLIP; S. BIGGI; I. E. REPETTO; S. CIMINI; F. FALLERONI; S. TOMASI; R. MONTI; N. TONNA; F. MORELLI; V. GRANDE; O. MARIN; F. BIANCO; D. DI MARINO; T. BORSELLO. *Neurosci. Inst. Cavalieri Ottolenghi, IRCCS -Istituto di Ricerche Farmacologiche "Mario Negri", Sanipedia S.r.l., Dept. of Biomed. Sci., Sapienza Univ. of Rome.*

10:30 **464.11** Neuroprotective effect of neuroserpin in non-tPA-induced intracerebral hemorrhage mouse models. L. WANG*; W. LI; T. ASAKAWA. *Huashan Hosp., Inst. of Neurol., Hamamatsu Univ. Sch. of Med.*

NANOSYMPOSIUM

465. Stress and Anxiety: Animal Models

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, S102

8:00 **465.01** ▲ Behavioral characterization of a modified single prolonged stress model of PTSD in rats: Developmental and longitudinal effects. A. L. GARRISON; C. E. UKPABY; E. N. WALSH; J. M. SMITH; T. E. KOELTZOW*. *Bradley Univ., Bradley Univ.*

8:15 **465.02** ● Stress reduces affective sensitivity to the distress of conspecifics in rats. Y. HAN*; M. CARRILLO; M. HEINEMANS; I. PRUIS; C. KEYSERS. *Netherlands Inst. For Neurosci., Netherlands Inst. for Neurosci., Univ. of Amsterdam, VU Univ. Amsterdam, Univ. of Amsterdam.*

8:30 **465.03** Central amygdala circuits underlying socially induced anxiety. E. A. KNAPSKA*; K. ROKOSZ; A. HAMED. *Nencki Inst. of Exptl. Biol. PAS, Inst. of Psychiatry and Neurol.*

8:45 **465.04** Plasticity related changes in response to stress in rats. W. M. VANDERHEYDEN*; L. KOCH; M. KEHOE; G. R. POE. *Univ. of Michigan, Univ. of Michigan.*

9:00 **465.05** ● Learned helplessness behavior in rat is associated with monocyte dysregulation. N. C. DERECKI*; L. FOURGEAUD; J. SHOBLOCK; B. ECKERT; G. CHEN; T. LOVENBERG; A. BHATTACHARYA. *Janssen Res. and Develop., Janssen Res. and Develop.*

9:15 **465.06** Ventromedlal hypothalamic neurons control defensive behaviors. P. S. KUNWAR*; M. ZELIKOWSKY; R. REMEDIOS; H. CAI; M. YILMAZ; M. MEISTER; D. ANDERSON. *Caltech.*

9:30 **465.07** Amygdala-dependent molecular mechanisms of the Tac2 pathway in fear learning. R. ANDERO GALI; S. DANIEL; J. GUO; D. G. RAINNIE*; K. RESSLER. *McLean Hospital, Harvard Med. Sch., Emory Univ., Emory Univiversity.*

9:45 **465.08** Anxiety-like behaviour in approach-avoidance conflict is instrumental, not pavlovian. D. R. BACH*. *Univ. of Zurich.*

10:00 **465.09** Fear extinction recall deficits in female rats with low estradiol are normalized by antagonism of angiotensin II type I receptors. J. N. PARRISH*; S. Y. LAM; M. M. TORREGROSSA. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

10:15 **465.10** FGF2 treatment differentially impacts GAD65 and GAD67 mRNA expression in the forebrain of selectively bred high-responder and low-responder rats. M. WASELUS*; D. M. KROLEWSKI; S. SCHRADE; R. A. ILAGAN; J. HUH; J. PEREZ; H. AKIL; S. J. WATSON, Jr. *Univ. of Michigan.*

10:30 **465.11** Estrous cycle surpasses sex differences' regulation of the medial prefrontal cortex transcriptome in rats and reveals an important underlying role of early growth response 1 (Egr1). F. DUCLOT*; M. KABBAJ. *Florida State Univ.*

10:45 **465.12** A cell-based screen identifies compounds that attenuate FKBP51 repression of glucocorticoid receptor activity. J. J. SABBAGH*; M. R. JONES; S. N. FONTAINE; C. A. DICKEY. *Univ. of South Florida.*

11:00 **465.13** Intergenerational transmission of trauma exposure through fkbp5 dna methylation in rhesus macaques. T. KLENGEL*; D. GUZMAN; B. HOWELL; Z. JOHNSON; E. B. BINDER; K. J. RESSLER; M. SANCHEZ. *Emory Univ., Max Planck Inst. of Psychiatry.*

NANOSYMPOSIUM

466. Auditory Processing: Cortical Encoding of Complex Sounds

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, S402

8:00 **466.01** Homology and specificity of natural sound-encoding in human and monkey auditory cortex. J. ERB*; M. ARMENDARIZ; F. DE MARTINO; W. VANDUFFEL; E. FORMISANO. *Fac. of Psychology and Neuroscience, Maastricht, Maastricht Brain Imaging Ctr. (MBIC), Lab. voor Neuro- en Psychofysiologie, KU Leuven, MGH Martinos Ctr., Harvard Med. Sch.*

8:15 **466.02** Cortical depth-dependent processing of natural sound features in human auditory cortex. M. MOEREL*; F. DE MARTINO; K. UGURBIL; E. YACOUB; E. FORMISANO. *Univ. of Minnesota, Maastricht Univ.*

8:30 **466.03** fMRI responses to natural and model-matched synthetic sounds reveal a hierarchy of auditory cortical computation. S. NORMAN-HAIGNERE; J. MCDERMOTT*. *MIT, MIT.*

8:45 **466.04** Functional organization of auditory cortex revealed by neural networks optimized for auditory tasks. A. J. KELL*; D. L. K. YAMINS; S. V. NORMAN-HAIGNERE; J. H. MCDERMOTT. *MIT.*

9:00 **466.05** Neural adaptation depends on temporal context in younger and older listeners. B. HERRMANN*; J. OBLESER; M. J. HENRY; I. S. JOHNSRUDE. *The Univ. of Western Ontario, Max Planck Inst. for Human Cognitive and Brain Sci., Univ. of Luebeck.*

9:15 **466.06** A new framework to investigate hemispheric asymmetries in speech. A. FLINKER*; D. POEPPEL. *New York Univ.*

9:30 **466.07** Melody discrimination task reveals functional activation deficits in a left posterior inferior frontal region in tone-deaf compared to typically developing individuals. L. ROGENMOSER*; P. LOUI; K. SCHULZE; S. MARCHINA; H. LI; G. SCHLAUG. *Harvard Med. Sch., Inst. of Psychology, Univ. of Zurich, 3. Neuroscience Ctr. Zurich, Univ. of Zurich and ETH Zurich, Dept. of Psychology, Wesleyan Univ., Inst. of Child Health, Univ. Col. London.*

9:45 **466.08** Phase-Locking Index of 40Hz Auditory Steady-State Response is not related to major personality trait dimensions. M. KOROSTENSKAJA*; O. RUKSENAS; I. GRISKOVA-BULANOVA. *Functional Brain Mapping and BCI Lab, Florida Hosp. For Children, MEG Lab, Florida Hosp. for Children, Comprehensive Pediatric Epilepsy Center, Florida Hosp. for Children, Dept. of Neurobio. and Biophysics, Vilnius Univ.*

NANOSYMPOSIUM

467. Visual-Motor Processing: Prediction and Adaptation

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, S401

8:00 **467.01** Saccade adaptation and perceived size after trans-saccadic manipulation of object size. A. BOSCO*; M. LAPPE; P. FATTORI. *Univ. of Bologna, Univ. of Munster.*

8:15 **467.02** Spike-frequency adaptation optimizes the tradeoff between efficiency and accuracy in a predictive coding model. G. J. GUTIERREZ*; S. DENEVE. *Ecole Normale Superieure.*

8:30 **467.03** The trajectory of fixational eye movements can be encoded at high resolution by cortical simple cells: A Hypothesis. E. AHISSAR*; A. ARIELI. *Weizmann Inst. Sci.*

8:45 **467.04** Inhibition normalises multisensory integration on gaze controlling neurons in the optic tectum. A. A. KARDAMAKIS*; J. PEREZ-FERNANDEZ; S. GRILLNER. *Karolinska Inst.*

9:00 **467.05** Eye-centered tuning is weak in dorsal premotor cortex when monkeys are not trained to fixate. B. ALEMAYEHU*; N. PAVLOVSKY; J. CHIOU; E. TYLER-KABARA; N. HATSOPOULOS; S. CHASE; A. BATISTA. *Univ. of Pittsburgh, Univ. of Chicago, Carnegie Mellon Univ.*

9:15 **467.06** Changes in local field potential-derived receptive fields within the frontal eye field before eye movements. X. CHEN*; M. ZIRNSAK; T. MOORE. *Stanford Univ., Howard Hughes Med. Institute, Stanford Univ. of Med.*

9:30 **467.07** Spatiotemporal transformations between sensory, memory, and movement responses in the primate frontal eye field. A. SAJAD*; M. SADEH; X. YAN; H. WANG; J. D. CRAWFORD. *York Univ.*

9:45 **467.08** A learning rule explaining how rewards teach attentional signals in frontal cortex. P. R. ROELFSEMA*; S. M. BOHTE; J. MARTINEZ-TRUJILLO; J. ROMBOUTS. *Netherlands Inst. for Neurosci., Centrum Wiskunde & Informatica, McGill Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

468. Hormones, Neurotransmitters and Social Behavior

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

Tue. 8:00 AM – *McCormick Place*, S405

8:00 **468.01** Uptake 2 transporter blockade ameliorates deficits in sociability in two mouse models. G. G. GOULD*; C. M. SMOLIK; C. MOTEN; M. A. JAVORS; W. KOEK; J. G. HENSLER; L. C. DAWS. *UT Hlth. Sci. Ctr, SA, UT Hlth. Sci. Ctr, SA, UT Hlth. Sci. Ctr, SA*.

8:15 **468.02** Influence of early social experience on sociability and brain serotonin function in common marmosets. C. YOKOYAMA*; A. KAWASAKI; C. TAKEDA; H. ONOE. *RIKEN Ctr. For Life Sci. Technologies (CLST).*

8:30 **468.03** Changes in social context induce extinction of amphetamine-seeking behavior in female prairie voles. D. F. FUKUSHIRO*; R. FRUSSA-FILHO; M. L. ANDERSEN; Y. LIU; Z. X. WANG. *Florida State Univ., Federal Univ. of Sao Paulo.*

8:45 **468.04** Supraoptic oxytocin-secreting system involves a switch of sexually-associated social behavior elicited by intranasal oxytocin. X. LIU; D. CUI; D. HOU; J. CHANG; Y. ZHANG; H. ZHU; Y. WANG*. *Harbin Med. Univ.*

9:00 **468.05** Central oxytocin regulates olfactory communication, scent marking, that involves affiliative signals between male mice. H. ARAKAWA*. *Case Western Reserve Univ.*

9:15 **468.06** ● Oxytocin and religious brain. J. R. KORENBERG*; L. DAI; J. S. ANDERSON; J. B. KING; M. A. FERGUSON; J. A. NIELSON; D. GIANGRASSO; C. S. CARTER; H. P. NAZARLOO. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Harvard Univ. & Massachusetts Gen. Hosp., Indiana University, Bloomington.*

9:30 **468.07** Non-neural androgen receptors affect sexual differentiation of brain and behavior. A. B. SWIFT-GALLANT*; L. A. COOME; F. RAMZAN; D. MONKS. *Univ. of Toronto Mississauga, Univ. of Toronto, Univ. of Toronto.*

9:45 **468.08** Cortisol in mother's milk in the neonatal period predicts later cognitive performance and social behavior in infant rhesus monkeys (Macaca mulatta). A. M. DETTMER*; A. M. MURPHY; E. SLONECKER; D. GUITARRA; K. L. ROSENBERG; S. J. SUOMI; J. S. MEYER. *NICHD/NIH, Univ. of Massachusetts Amherst.*

NANOSYMPOSIUM

469. Human Cognition and Behavior: Functional Mechanisms of Attention

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, N228

8:00 **469.01** Asymmetric spatial representation within attention filed. Y. ZHOU*; L. LIANG; M. ZHANG. *Beijng Normal Univ., The First Clin. Col. of Harbin Med. Univ.*

8:15 **469.02** Ocular exposure to short wavelength light modulates behavioural and electrophysiological markers of spatial attention bias. D. NEWMAN*; A. C. P. MARTINS; R. ABE; M. T. R. ZORATTI; M. H. O'NEILL; S. W. LOCKLEY; S. P. KELLY; G. M. LOUGHNANE; R. G. O'CONNELL; M. A. BELLGROVE. *Monash Univ., Federal Univ. of Parana, Federal Univ. of Mato Grosso, Monash Univ., Harvard Med. Sch., Univ. Col. Dublin, Trinity Col. Dublin, Trinity Col. Dublin.*

8:30 **469.03** Attention modulates reliability of neural responses to natural narrative stimuli. J. KI*. *City Col. of New York.*

8:45 **469.04** Expectancies about target-similar distractors impact target selection. J. LEE; C. LEONARD; S. J. LUCK; J. J. GENG*. *Univ. of California Davis, Univ. of California Davis.*

9:00 **469.05** Time course of activation of the posterior intraparietal sulcus during spatial attention: A single pulse TMS experiment. V. NEYENS*; N. CASPARI; M. SCHROOTEN; R. VANDENBERGHE. *Kuleuven, Lab. for Cognitive Neurol., UZ Leuven.*

9:15 **469.06** Neural basis of learned adjustments in attentional flexibility according to environmental statistical structure. A. W. SALI*; S. M. COURTNEY. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Kennedy Krieger Inst.*

9:30 **469.07** Constraints on temporal attention: Time-resolved decoding of brain activity during the Attentional Blink. S. MARTI*; S. DEHAENE. *INSERM / CEA Neurospin, Collège de France.*

9:45 **469.08** A role for the ventral striatum in selective awareness: An intracranial EEG study of the attentional blink. H. A. SLAGTER*; L. C. RETEIG; A. MAZAHERI; D. DENYS. *Univ. of Amsterdam, Univ. of Amsterdam, Univ. of Birmingham, Univ. of Amsterdam.*

10:00 **469.09** Alpha and gamma oscillations support parallel mechanisms for processing stimulus value associations. T. R. MARSHALL*; S. DEN BOER; R. COOLS; O. JENSEN; S. FALLON; J. M. ZUMER. *Donders Inst., Philips Res., Univ. of Oxford, Univ. of Birmingham.*

10:15 **469.10** Rewards boost sustained attention by inducing greater effort. S. A. MASSAR*; M. W. L. CHEE. *Duke-Nus Grad. Med. Sch.*

10:30 **469.11** Attentional gain modulation relies on local feature-tuned normalization. I. M. BLOEM*; S. LING. *Boston Univ., Ctr. for Computat. Neurosci. and Neural Technology, Boston Univ.*

10:45 **469.12** Spatial attention reduces noise in the fMRI response. W. J. CHANEY*; J. FISCHER; D. WHITNEY. *Univ. of California, Berkeley, MIT.*

11:00 **469.13** Arousal-associated dynamic functional connectivity patterns predict vigilance performance. C. WANG; J. ONG; K. NG; M. W. L. CHEE; J. ZHOU*. *Duke-Nus Grad. Med. Sch.*

11:15 **469.14** Fluctuations of fMRI activation patterns underlie the theta-band rhythmic effects of visual object priming. B. GUO*; J. GOOLD; H. LUO; M. MENG. *Dartmouth Col., Peking Univ.*

NANOSYMPOSIUM

470. Cognitive Changes During Ageing

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, S404

8:00 **470.01** Extraversion is associated with lower amyloid deposition in cognitively normal elderly. H. OH*; Q. R. RAZLIGHI; C. HABECK; Y. STERN. *Columbia Univ., Columbia Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:15 **470.02** White matter integrity mediates the relationship between cardiorespiratory fitness and cognitive function in older adults. L. E. OBERLIN*; T. D. VERSTYNEN; A. Z. BURZYNSKA; M. W. VOSS; R. S. PRAKASH; S. M. PHILLIPS; E. L. MAILEY; E. MCAULEY; A. F. KRAMER; K. I. ERICKSON. *Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. of Illinois at Urbana-Champaign, The Univ. of Iowa, Ohio State Univ., Northwestern Univ., Kansas State Univ., Univ. of Pittsburgh.*

8:30 **470.03** Modifiers of eight-year longitudinal change in frontal lobe cortical thickness. P. ROBINSON*; P. RAST; K. KENNEDY; K. SCHAIE; S. WILLIS. *Univ. of Washington, Univ. of Victoria, Univ. of Texas, Dallas.*

8:45 **470.04** MindCrowd: Web-based paired associates learning and reaction time testing demonstrates significant main effects of age, gender, education, and familial history of Alzheimer's disease on performance. M. J. HUENTELMAN; I. SCHRAUWEN; A. SINIARD; R. RICHHOLT; J. CORNEVEAUX; E. GLISKY; L. RYAN; M. DE BOTH*. *Translational Genomics Res. Inst. (TGen), Arizona Alzheimer's Consortium, Evelyn F. McKnight Brain Inst. at the Univ. of Arizona, Evelyn F. McKnight Brain Inst. at the Univ. of Arizona, Univ. of Arizona.*

9:00 **470.05** Attention control ability modulates neurobehavioral effects of episodic prospection on temporal discounting in aging. L. K. SASSE*; J. PETERS; C. BÜCHEL; S. BRASSEN. *Univ. Med. Ctr. Hamburg-Eppendorf.*

9:15 **470.06** The effects of age on proactive and reactive control during working memory. H. MACPHERSON*; D. WHITE; M. HUGHES. *Swinburne Univ., Deakin Univ.*

9:30 **470.07** Changes in association white matter tract integrity precede thinning of regional gray matter cortex: Four-year findings from the Seattle Longitudinal Study of aging. K. M. KENNEDY*; P. R. A. W. ROBINSON; K. M. RODRIGUE; P. RAST; K. W. SCHAIE; S. L. WILLIS. *Univ. Texas, Dallas, Univ. of Washington, Univ. Texas, Dallas, Univ. of Victoria, Univ. of Washington, Univ. of Washington.*

9:45 **470.08** Increased dopamine synthesis capacity in older adults is associated with cognitive inflexibility. A. S. BERRY*; V. D. SHAH; S. L. BAKER; J. W. VOGEL; H. SCHWIMMER; S. M. MARKS; W. J. JAGUST. *Lawrence Berkeley Natl. Lab., UC Berkeley.*

10:00 **470.09** Impact of white matter hyperintensity volume on cortical brain morphology in healthy cognitive aging. G. E. ALEXANDER*; P. K. BHARADWAJ; K. A. HAWS; L. A. NGUYEN; M. C. FITZHUGH; T. P. TROUARD; G. A. HISHAW. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

10:15 **470.10** Age-related differences in task load, response compatibility and selective attention in task switching: An fMRI study. S. QIN*; K. NASHIRO; M. O'CONNELL; X. CHEN; C. BASAK. *Univ. of Texas At Dallas.*

10:30 **470.11** Brooding is related to neurobehavioral changes during the construction and elaboration of autobiographical memories in non-depressed elderly. S. BRASSEN*; S. SCHNEIDER. *Univ. Med. Ctr. Hamburg-Eppendorf.*

10:45 **470.12** Regional differences in and predictors of age-related cortical thinning: Findings from the Longitudinal Healthy Aging Brain (LHAB) database project. S. MERILLAT*; P. RAST; F. LIEM; P. ROBINSON; C. ROECKE; S. L. WILLIS; M. MARTIN; L. JANCKE. *Univ. of Zurich, Univ. of Victoria, Univ. of Washington, Univ. of Washington, Univ. of Zurich, Univ. of Zurich.*

11:00 **470.13** Changes in white matter diffusion properties support the "last-in-first-out" hypothesis of brain aging. A. R. BENDER*; M. C. VOELKLE; N. RAZ. *Max Planck Inst. for Human Develop., Max Planck Inst. for Human Develop., Humboldt Univ., Wayne State Univ., Wayne State Univ.*

11:15 **470.14** Increased extrinsic and intrinsic connectivity maintains cognition across the lifespan coupled with age-related decay in regional neuronal activity. K. A. TSVETANOV*; R. N. A. HENSON; L. K. TYLER; A. RAZI; L. GEERLIGS; T. HAM; . CAM-CAN; J. B. ROWE. *Univ. of Camrbidge, Med. Res. Council Cognition and Brain Sci. Unit, Univ. Col. London, NED Univ. of Engin. and Technol., Cambridge Univ., Univ. of Camrbidge.*

NANOSYMPOSIUM

471. Molecular, Biochemical, and Genetic Techniques

Theme G: Novel Methods and Technology Development

Tue. 8:00 AM – *McCormick Place*, N227

8:00 **471.01** Dynamic, multi-color labeling of active synapses *in vivo* in *Drosophila*. L. J. MACPHERSON*; E. E. ZAHARIEVA; P. J. KEARNEY; T. LIN; Z. TURAN; C. LEE; M. GALLIO. *Columbia Univ., Northwestern Univ., Univ. of Massachusetts Med. Sch., NIH, Natl. Def. Med. Ctr., Caltech.*

8:15 **471.02** A correlative approach to study the *Drosophila* brain with light and electron microscopy. S. YANG*; M. WOLF. *Okinawa Inst. of Sci. and Technol.*

8:30 **471.03** Generation and characterization of STARS (stochastic gene activation with regulated sparseness) transgenic mouse line. L. IBRAHIM*; S. WANG; Y. J. KIM; H. W. TAO; L. I. ZHANG. *USC, UCSF.*

8:45 **471.04** ● Tracking gene expression in 3d: A look into the developing brain. N. DONOGHUE*; J. SCHEIMAN; J. LEE; Y. WANG; G. CHURCH. *Harvard Univ., Brown Univ., Harvard Univ., Cold Spring Harbor Lab., Harvard Univ.*

9:00 **471.05** Inversion of CTCF binding sites by CRISPR alters genome topology and gene expression in the brain. Q. WU*. *Shanghai Jiao Tong Univ.*

9:15 **471.06** Potent spinal parenchymal AAV9-mediated gene delivery by subpial injection in adult rats and pigs. M. MARSALA*; A. MIYANOHARA; K. KAMIZATO; S. JUHAS; M. R. NAVARRO; S. MARSALA; J. JUHASOVA; N. LUKACOVA. *UCSD, Inst. of Animal Physiol. and Genet., Inst. of Neurobio.*

9:30 **471.07** The pb-tet-goi inducible system for direct differentiation, regulated growth factor secretion, and *in vivo* identification of quiescent tumor cell populations. A. A. AKHTAR*; M. DUTRA-CLARKE; J. MOLINA; G. KIM; R. LEVY; W. SCHREIBER-STAINTHORP; B. SHELLEY; G. GOWING; C. SVENDSEN; M. DANIELPOUR; J. J. BREUNIG. *Cedars Sinai Med. Ctr. Regenerative Med. Inst.*

9:45 **471.08** Culture of isolated photoreceptors in hyaluronic acid based hydrogels enables their survival and maturation *in vitro*. N. MITROUSIS*; R. Y. TAM; D. VAN DER KOOY; M. S. SHOICHET. *Shoichet Lab., Univ. of Toronto.*

10:00 **471.09** Cell lines expressing known and putative CNS-expressed Gs-coupled GPCRs for screening of compounds for translational focusing and drug discovery. L. E. EIDEN*; M. FERRER; C. WESTOVER; R. A. ALVAREZ; W. XU; S. Z. JIANG; A. C. EMERY; M. V. EIDEN. *NIH, NIMH-IRP, Nat. Ctr. Accel Transl Sci., NIH, NIMH-IRP, NIH, NIMH-IRP.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:15 **471.10** Combinatorial genetic targeting of GABAergic neuron subpopulations in mouse neocortex. M. HE*; S. KELLY; J. TUCCIARONE; J. LEVINE; P. WU; M. NIGRO; I. KRUGLIKOV; Y. HASHIKAWA; S. LEE; Y. KIM; Y. HOU; Y. CHEN; A. ADLER; D. CAI; B. RUDY; P. OSTEN; W. GAN; J. W. LICHTMAN; J. R. SANES; Z. HUANG. *Cold Spring Harbor Lab., Inst. of Brain Science, State Key Lab. of Med. Neurobiology, Collaborative Innovation Ctr. for Brain Science, Fudan Univ., NYU Sch. of Med., Univ. of Michigan Med. Sch., Harvard Univ.*

10:30 **471.11** Characterization of TREM2-TYROBP signaling through novel real-time TREM2-TYROBP coupling reporter system with split-luciferase complementation. M. M. VARNUM*; G. YONEMOTO; H. ASAI; T. IKEZU. *Boston Univ., Boston Univ. Sch. of Med.*

10:45 **471.12** A phase I clinical trial of intraputaminal transplantation of human fetal-derived stem cells (hfSC) in patients with advanced Parkinson´s Disease: Six-month follow-up. I. MADRAZO*; O. KOPYOV; M. AVILA-RODRIGUEZ; H. CARRASCO; F. OSTROSKY; F. JIMENEZ; R. RIVERA; R. FRANCO-BOURLAND; T. VALENZUELA; A. KOPYOV; C. ZAMORANO; E. MAGALLÓN; F. PALMA; G. GUIZAR. *Hosp. Ángeles Del Pedregal, Celavie Biosci. Inc., Univ. Nacional Autonoma de Mexico, Hosp. Central Militar, Inst. Nacional de Rehabilitación, Inst. Mexicano del Seguro Social, Inst. Mexicano del Seguro Social, Camina Lab.*

11:00 **471.13** Connectivity of mouse somatosensory and prefrontal cortex examined with transsynaptic tracing. L. A. DENARDO*; D. S. BERNS; K. DELOACH; L. LUO. *Stanford Univ., Neurosciences Grad. Program, Howard Hughes Med. Inst.*

DYNAMIC POSTERS

DP06. Dynamic Posters–Tuesday Morning

Tue. 8:00 AM – *McCormick Place*, Hall A

All dynamic poster presentations will take place during the full four-hour session time. The theme of the dynamic poster being presented is indicated by the letter in the leftmost column.

A DP01 **DP06.01** Combinatorial cadherin code governs retinal direction-selective circuit wiring. *X. DUAN; M. A. LABOULAYE; M. YAMAGATA; J. R. SANES. *Ctr. for Brain Sci., Harvard Univ.*

C DP02 **DP06.02** ● Closed-loop control of dopamine release evoked by deep brain stimulation. *J. LUJAN; J. K. TREVATHAN; K. E. BENNET; K. H. LEE. *Neurologic Surgery, Mayo Clin., Mayo Grad. Sch.*

C DP03 **DP06.03** Single-molecule imaging of PSD-95 mRNA translation in dendrites reveals its dysregulation in a mouse model of fragile X syndrome. *M. F. IFRIM; K. R. WILLIAMS; G. J. BASSELL. *Cell Biol., Cell Biol. and Neurol., Emory Univ.*

D DP04 **DP06.04** *In vivo* optogenetic manipulation of cells within the neurovascular unit leads to local changes in neural activity. *T. C. BROWN; C. BURLEY; E. MURPHY; T. KISHKOVICH; K. SALEHI; U. KNOBLICH; C. A. DEISTER; C. I. MOORE. *Dept. of Neurosci., Brown Univ., Allen Inst. for Brain Sci.*

D DP05 **DP06.05** A 4-dimensional virtual hand BMI using active dimension selection. *A. G. ROUSE; M. H. SCHIEBER. *Neurobio. and Anat., Univ. of Rochester Med. Ctr.*

F DP06 **DP06.06** Short-term intensive training recapitulates long-term hippocampal-neocortical functional reorganization during arithmetic learning. *M. J. ROSENBERG-LEE; D. JOLLES; S. BAE; J. RICHARDSON; S. QIN; T. IUCULANO; V. MENON. *Child & Adolescent Psychiatry, Stanford Univ., Educ. and Child Studies, Leiden Univ.*

F DP07 **DP06.07** TENASPIS: An image segmentation-based technique for extracting neuronal activity from single-photon epifluorescence imaging sequences. *D. W. SULLIVAN; N. R. KINSKY; H. EICHENBAUM. *Psychology, Boston Univ.*

F DP08 **DP06.08** Investigating the neural correlates of location-specific fear learning in humans. *B. SUAREZ-JIMENEZ; J. A. BISBY; A. J. HORNER; J. A. KING; D. S. PINE; N. BURGESS. *NIMH, Inst. of Cognitive Neurosci. (ICN), Clinical, Educational and Hlth. Psychology, UCL.*

G DP09 **DP06.09** Human connectome evaluation method to study brain individuality and variability. *F. PESTILLI; C. F. CAIAFA. *Psychology, Psychology, Stanford Univ., Psychological and Brain Sci., Indiana Univ., CONICET.*

G DP10 **DP06.10** Image libraries in the cloud: Interactive, multi-dimensional neuroanatomical atlases of the mouse, rat, and macaque. *G. A. JOHNSON; A. BADEA; E. CALABRESE; J. COOK; G. PAXINOS; C. WATSON. *Radiology, Duke Univ., Neurosci. Res. Australia, Hlth. Sci., Curtin Univ.*

POSTER

472. Molecular Mechanisms of Proliferation

Theme A: Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 A1 **472.01** Characterization of TRIP8b isoforms in the oligodendrocyte lineage. K. LYMAN*; A. P. ROBINSON; D. FISHER; R. HEUERMANN; Y. HAN; K. TIMMONS; X. CHENG; S. D. MILLER; D. M. CHETKOVICH. *Northwestern Univ.*

9:00 A2 **472.02** Characterization of the transcriptome of male and female hypothalamic neural/progenitor stem cells and the impact of glucocorticoids exposure. K. A. FRAHM*; M. E. PEFFER; J. Y. ZHANG; S. LUTHRA; A. B. CHAKKA; M. B. COUGER; U. R. CHANDRAN; A. P. MONAGHAN; D. B. DEFRANCO. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Oklahoma State Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

10:00 A3 **472.03** Microrna-128 regulates proliferation and neurogenesis of neural precursors by targeting pericentriolar material 1 (pcm1) in the developing neocortex. P. KIM*; W. ZHANG; Z. CHEN; H. LOKMAN; L. QIU; K. ZHANG; S. G. ROZEN; E. TAN; L. ZENG; S. JE. *Duke-Nus Grad. Med. Sch., Natl. Neurosci. Inst.*

11:00 A4 **472.04** Chmp1a is essential for progenitor cell proliferation in the developing brain. M. E. COULTER*; F. M. JACOBS; R. GAUDIN; V. GANESH; D. GONZALEZ; T. SCHLAEGER; M. THOMPSON; G. MOCHIDA; T. KIRCHHAUSEN; D. HAUSSLER; C. A. WALSH. *Harvard Med. Sch., Fac. of Science, Univ. of Amsterdam, Program in Cell. and Mol. Medicine, Boston Children's Hosp., Div. of Genetics, Boston Children's Hosp. & Howard Hughes Med. Inst., hESC Core Facility, Boston Children's Hosp., Mouse Transgenetic Core Facility, Boston Children's Hosp., Ctr. for Biomolecular Sci. and Engineering, Univ. of California & Howard Hughes Med. Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 A5 **472.05** Analysis of the Gpr56 e1m-EGFP transgenic marmoset. A. MURAYAMA*; J. OKAHARA; B. BYOUNG-IL; C. A. WALSH; E. SASAKI; H. OKANO. *RIKEN, BSI, Keio Univ. Sch. of Med., CIEA, Harvard Med. Sch.*

9:00 A6 **472.06** Dissecting the neurodevelopmental role of the microtubule-associated protein EML1, mutated in subcortical heterotopia. S. BIZZOTTO*; F. PHAN DINH TUY; M. KIELAR; D. ROMERO; A. HOULLIER; G. CANALI; E. WELKER; A. HOUDUSSE; A. CROQUELOIS; F. FRANCIS. *Inst. Du Fer À Moulin (INSERM), Ctr. Hospitalier Universitaire Vaudois and Univ. of Lausanne, Inst. Curie.*

10:00 A7 **472.07** The axon guidance receptor neogenin maintains adherens junction integrity by promoting assembly of the actin cytoskeleton. N. K. LEE*; A. WHITE; K. FOK; H. COOPER. *Univ. of Queensland.*

11:00 A8 **472.08** Role of rab18 in development and degeneration of cerebellum. P. WU*; H. WU; C. HONG; L. KAO. *Dept. of Life Sci. and Inst. of Genome Sciences, Natl. Yang-Ming, Brain Res. Center, Natl. Yang-Ming Univ., Dept. of Psychiatry, Taipei Veterans Gen. Hosp., Brain Res. Center, Natl. Univ.*

8:00 A9 **472.09** Role of microRNA in histogenesis of the cerebrum in mouse embryos. R. HASHIMOTO*; I. KIHARA; A. MATSUMOTO; H. OTANI. *Dept. of Clin. Nursing, Fac. of Medicine, Shimane Univ., Fac. of Medicine, Shimane Univ., Fac. of Medicine, Shimane Univ.*

9:00 A10 **472.10** NPAS1/NPAS3 regulation of DNA methylation in cortical inhibitory interneurons. R. GENOVA*; T. C. YIN; L. N. MCDANIEL; A. A. PIEPER. *Univ. of Iowa Carver Col. of Med., Univ. of Iowa.*

10:00 A11 **472.11** Understanding the role of minor spliceosome in mouse model for Microcephalic Osteodysplastic Primordial Dwarfism Type I. R. KANADIA*; M. BAUMGARTNER. *Univ. of Connecticut.*

11:00 A12 **472.12** Necdin downregulates EGFR signaling in cortical neural precursor cells to suppress gliogenesis. I. FUJIMOTO*; K. HASEGAWA; K. FUJIWARA; K. YOSHIKAWA. *Inst. for Protein Res.*

8:00 A13 **472.13** Guanine exchange factors regulate the neurogenic niche. J. T. CAIN*; S. KOH; D. TIMM; S. DUNCAN; R. O'TOOLE; T. SAMSON; E. S. WITTCHEN; K. BURRIDGE; J. M. WEIMER. *Sanford Res., UNC Sch. of Med.*

9:00 A14 **472.14** ▲ Rhox8 expression in the developing and adult mouse brain and spinal cord. H. G. HUFFMAN; G. R. PRATHER; J. A. MACLEAN, II; J. L. CHEATWOOD*. *SIU Sch. Med., SIU Sch. Med.*

10:00 A15 **472.15** Long-term survival of newly formed neurons in the adult rat hippocampus following electroconvulsive stimulation - a stereological study. M. V. OLESEN*; G. WÖRTWEIN; B. PAKKENBERG. *Bispebjerg Hosp., Univ. og Copenhagen, Univ. og Copenhagen.*

11:00 A16 **472.16** Gpr37l1-Ptch1 interaction in the murine cerebellum during postnatal development and adulthood. D. MARAZZITI*; C. DI PIETRO; G. LA SALA; Z. ABBASZADEH; R. MATTEONI; G. P. TOCCHINI-VALENTINI. *Inst. of Cell Biol. and Neurobio.*

8:00 A17 **472.17** Transgenic inhibition of synaptic transmission of new born neurons in dentate gyrus impairs learning and memory. N. TANG*. *Tongji Med. Col. Huazhong Univ. and Tec.*

9:00 A18 **472.18** The molecular basis of Mediator-linked neurodegenerative diseases. G. BANYAI*; Z. SZILAGYI; C. M. GUSTAFSSON. *Univ. of Gothenburg.*

10:00 A19 **472.19** ▲ Heparin Binding-Epidermal Growth Factor(HB-EGF) stimulates the proliferation of Müller glia-derived progenitor cells in avian and murine retinas. L. VOLKOV*; A. FISCHER; L. TODD. *Ohio State Univ.*

POSTER

473. Role of Adhesion in the Development of Neuronal Wiring

Theme A: Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 A20 **473.01** Directing neurite growth in collagen gel 3-dimensional neuronal culture. M. ANTMAN-PASSIG; K. BARANES; S. LEVI; O. SHEFI*. *Bar Ilan Univ., Fac. of Engin. and Inst. of Nanotechnologies and Advanced Materials.*

9:00 A21 **473.02** ▲ Lingual ephrin-A's and ephrin-B's repel embryonic geniculate and trigeminal neurites *in vitro.* R. W. TREFFY; D. CHO; M. L. RUSSO; M. W. ROCHLIN*. *Loyola Univ. Chicago.*

10:00 A22 **473.03** Examining the structural determinants of Protocadherin-19 function in brain morphogenesis and epilepsy. S. R. COOPER*; J. D. JONTES; M. SOTOMAYOR. *The Ohio State Univ., The Ohio State Univ.*

11:00 A23 **473.04** The role of Down syndrome cell adhesion molecule in mouse retinofugal circuit development. T. J. BURBRIDGE*; A. M. GARRETT; Y. LI; T. L. SPENCER-SALMON; M. R. GRACE; E. STEIN; R. W. BURGESS; M. C. CRAIR. *Yale Univ., The Jackson Lab.*

8:00 A24 **473.05** Glycoprotein M6a regulates laminin-inducing rapid determination of polarity in the cortical neuron. A. HONDA*; Y. ITO; M. IGARASHI. *Grad Sch. of Med. and Dent. Sci, Niigata Univ., Ctr. for Transdisciplinary Res, Niigata Univ.*

9:00 A25 **473.06** Massive expansion of protocadherin genes in the octopus genome. Z. Y. WANG*; C. B. ALBERTIN; O. SIMAKOV; T. MITROS; D. S. ROKHSAR; C. W. RAGSDALE. *Univ. of Chicago, Univ. of Chicago, Okinawa Inst. of Sci. and Technol. Grad. Univ., Univ. of Heidelberg, Univ. of California at Berkeley, Dept. of Energy Joint Genome Inst.*

10:00 A26 **473.07** Differential expression of δ-Protocadherins in identified neurons in zebrafish. J. D. JONTES*; S. COOPER; M. EMOND. *Ohio State Univ.*

11:00 A27 **473.08** Structural insights into the flrt/latrophilin complex in brain development. D. ARAC-OZKAN*. *Univ. of Chicago.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

474. Dendritic Growth and Branching

Theme A: Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 A28 **474.01** Role of Cdk5 in activity-induced gene expression and dendrite development. T. YE*; Z. LIANG; X. ZHOU; K. LAI; A. K. FU; N. Y. IP. *The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol., Univ. of Hong Kong.*

9:00 A29 **474.02** The Purkinje cell forest shapes the trees. B. TORBEN-NIELSEN*; E. DE SCHUTTER. *Okinawa Inst. of Sci. and Technol.*

10:00 A30 **474.03** E2F1 depletion in neurons results in loss of neurite arborization and changes in synaptic markers during neuron development. J. LYMBEROPOULOS*; J. H. TING; S. S. SCHLEIDT; J. N. WU; A. H. LEE; K. L. JORDAN-SCIUTTO. *Univ. of Pennsylvania.*

11:00 A31 **474.04** Dscams promote self-avoidance by masking cell adhesion through both PDZ-dependent and -independent mechanisms. A. M. GARRETT*; A. L. D. TADENEV; A. KHALIL; P. G. FUERST; R. W. BURGESS. *The Jackson Lab., Univ. of Maine, Univ. of Idaho.*

8:00 A32 **474.05** Consequences of malformed versus signaling-depleted neuronal cilia during cortical development. A. PARKER; M. LE; J. COLEMAN; M. R. SARKISIAN*. *Univ. Florida, Univ. Florida.*

9:00 A33 **474.06** Dendrite arborization in cortical neurons depends on γ-Protocadherin-mediated homophilic matching with surrounding neurons and astrocytes. M. J. MOLUMBY*; A. B. KEELER; J. A. WEINER. *Univ. of Iowa.*

10:00 A34 **474.07** The trafficking and localization of neuron-enriched endosomal protein (Neep21) in neurons. C. YAP*; L. C. DIGILIO; L. P. MCMAHON; B. WINCKLER. *Univ. of Virginia Sch. of Med.*

11:00 A35 **474.08** High-resolution analysis of semaphorin3A effects on the dynamics of filopodia on the tips and shafts of developing dendrites using SLIM imaging. A. JAIN*; T. KIM; G. POPESCU; M. U. GILLETTE. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

8:00 A36 **474.09** Mechanisms of dendritic trafficking and microtubule dynamic regulation. A. E. GHIRETTI*; E. L. F. HOLZBAUR. *Univ. of Pennsylvania.*

9:00 A37 **474.10** Ste20-like kinase is a regulator of dendritic arborization and excitation-inhibition balance in neocortical neurons. B. K. ROBENS*; R. MARESCH; A. GROTE; K. M. J. VAN LOO; H. BECK; S. SCHOCH; A. BECKER. *Univ. Bonn Med. Ctr., Univ. Bonn Med. Ctr., Univ. Bonn Med. Ctr.*

10:00 A38 **474.11** The leucine-rich repeat transmembrane protein Lrig1 regulates dendrite arborization and social interaction in mice. F. C. ALSINA*; F. J. HITA; P. FONTANET; D. IRALA; F. LEDDA; G. PARATCHA. *Inst. of Cell. Biol. and Neurosci.*

11:00 A39 **474.12** Assembly of the retinal direction-selective circuit is coordinated by starburst amacrine cells. T. RAY*; M. STOGSDILL; J. KAY. *Duke Univ.*

8:00 A40 **474.13** Dendritic remodeling by the Angelman syndrome and autism protein E6AP. N. KHATRI*; J. GILBERT; M. NEE; H. MAN. *Boston Univ.*

9:00 A41 **474.14** Role of ryanodine receptors in rat subventricular zone development. B. A. DOS SANTOS*; M. V. DAMICO; E. R. KINJO; G. S. HIGA; F. A. DOS SANTOS; A. H. KIHARA. *Univ. Federal Do ABC, Univ. de São Paulo.*

10:00 A42 **474.15** Requirement of neuronal ribosome synthesis for growth and maintenance of the dendritic tree. M. HETMAN*; L. SLOMNICKI; M. PIETRZAK; A. VASHISHTA. *Univ. of Louisville.*

11:00 A43 **474.16** Keeping filopodia dynamic: Exploring the role of miR-125b in dendrites using real time imaging. R. IYER*; T. KIM; G. POPESCU; M. U. GILLETTE. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

8:00 A44 **474.17** ▲ Purkinje neuron axonal and dendritic markers during development *in vivo* and *in vitro.* T. FAULL; J. N. BATTYANYI; L. M. ROBERTSON; A. R. DEMCHAK; M. E. MORRISON*. *Lycoming Col.*

9:00 A45 **474.18** *In vivo* imaging of Cerebellar Granule cell dendritic arborization and synaptogenesis. M. DHAR*; A. W. HANTMAN; N. NISHIYAMA; H. NISHIYAMA. *Univ. of Texas At Austin, Howard Hughes Med. Inst.*

10:00 A46 **474.19** Age-related changes of collapsin response mediator protein 4 (crmp4). T. KAWACHI*; A. TSUTIYA; H. MOTEGI; T. OKADA; R. OHTANI-KANEKO. *Toyo Univ., Toyo Univ.*

11:00 A47 **474.20** The mevalonate pathway in the development and survival of mouse Purkinje cells in culture. A. BARSZCZYK*; H. SUN; Y. QUAN; W. ZHENG; M. P. CHARLTON; Z. FENG. *Univ. of Toronto, Univ. of Toronto, Fac. of Hlth. Science, Univ. of Macau.*

8:00 A48 **474.21** ADD3 and KANK1: Roles in dendrite morphology. J. BRUDVIG*; N. SAHIR; J. CAIN; J. WEIMER; M. KRUER. *Sanford Res., Sanford Res.*

9:00 A49 **474.22** Effects of small peptides on protein interactions and dendrite branching. H. MENON*; H. CHAPMAN; M. SPALLER; B. FIRESTEIN. *Rutgers, Geisel Sch. of Med. at Dartmouth and Norris Cotton Cancer Ctr.*

10:00 A50 **474.23** Regulation of cortical gabaergic interneuron function by the mental disorder susceptibility molecule cntnap2. R. GAO*; G. ZHANG; D. M. D. SAAVEDRA; P. PENZES. *Northwestern Univ.*

11:00 A51 **474.24** The X-linked intellectual disability protein KIAA2022 in neuron morphogenesis and synapse formation. J. P. GILBERT*; H. MAN. *Boston Univ., Boston Univ.*

8:00 A52 **474.25** Morphological characteristics of cerebellar interneuron Lugaro cells using with GFP-expressing transgenic mice line. T. MIYAZAKI*; K. F. TANAKA; M. WATANABE. *Hokkaid Univ. Sch. Med., Sch. Med. Keio Univ.*

9:00 A53 **474.26** Neuronal PARP regulates dendritic morphology in developing neurons. J. Y. HUANG*; K. WANG; J. P. ADELMAN; M. S. COHEN. *Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

10:00 A54 **474.27** Cortactin binding protein 2 increases microtubule stability and regulates dendritic morphogenesis. P. SHIH*; Y. CHEN; S. LEE; Y. HSUEH. *Academia Sinica, Inst. of Mol. Biol.*

11:00 A55 **474.28** Pharmacological blockade of Na+/Ca^{2+} exchanger modulates the growth and development of Purkinje cell dendritic arbor in mouse cerebellar slice cultures. P. SHERKHANE; J. P. KAPFHAMMER*. *Univ. of Basel, Inst. of Anat., Univ. Basel.*

8:00 A56 **474.29** ● Nicotine facilitates neurite outgrowth of primary cultured cells in superior cervical ganglia (SCG) and PC12 cells. S. TAKATORI*; F. TAKAYAMA; H. HINO; K. KIMURA; N. ONO; H. KAWASAKI. *Matsuyama Univ., Okayama Univ., Fukuoka Univ.*

9:00 A57 **474.30** Postnatal development of dendritic structure of layer III pyramidal neurons in cerebral cortex of marmoset. T. SASAKI*; T. OGA; H. AOI; I. FUJITA; N. ICHINOHE. *Natl. Ctr. of Neurol. and Psychiatry, Brain Sci. Institute, RIKEN, Osaka Univ., Osaka Univ.*

POSTER

475. Neuronal Differentiation: Activity-Dependent Mechanisms

Theme A: Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 A58 **475.01** Activity-dependent regulation of radial glial cell proliferation by HDAC1 in the developing Xenopus tectum. W. SHEN*; Y. TAO; H. RUAN; X. GUO; L. LI. *Hangzhou Normal Univ., First Affiliated Hosp. of Nanjing Med. Univ.*

9:00 A59 **475.02** Disruption of cortical circuitry development in glycine receptor alpha 2 knockout mice. J. RIGO*; G. MORELLI; A. AVILA; N. AOURZ; I. SMOLDERS; B. BRÔNE; L. NGUYEN. *Hasselt Univ., The Hosp. for Sick Children, VUB, Univ. of Liège.*

10:00 A60 **475.03** Histamine modulates dopamine neuron differentiation and causes changes in epigenetic DNA marks. F. VARGAS*; E. SOTO-REYES; R. GONZÁLEZ-BARRIOS; L. GUERRA-CALDERAS; I. ESCOBEDO-AVILA; I. VELASCO. *Univ. Nacional Autonoma De Mexico, Inst. of Cell. Physiol., Inst. Nacional de Cancerología-Instituto de Investigaciones Biomédicas, Univ. Nacional Autónoma de México.*

11:00 A61 **475.04** Histamine impairs midbrain dopaminergic development *in vivo* by activating histamine type 1 receptors. I. ESCOBEDO*. *Univ. Nacional Autónoma De México.*

8:00 A62 **475.05** Effects of calcium influx on interleukin-6-mediated neuronal differentiation of neural progenitor cells. J. OH*. *Kyungpook Natl. Univ.*

9:00 A63 **475.06** Non-synaptic communication during early cortical column formation revealed by genetically encoded Ca^{2+} indicators. B. G. RASH*; J. B. ACKMAN; P. RAKIC. *Yale Univ., Yale Univ., Kavli Inst. for Neurosci. at Yale.*

10:00 A64 **475.07** Underlying mechanisms of learning: The contribution of mature spines and GluA2 expression in CA3. A. ALLIGER*; A. AUBRY; P. A. SERRANO. *Hunter Col., CUNY Grad. Ctr.*

11:00 A65 **475.08** Sonic hedgehog regulates motor neuron phenotype through calcium-dependent electrical activity in the embryonic spinal cord. Y. H. BELGACEM*; K. A. SPENCER; L. BORODINSKY. *UC Davis.*

8:00 A66 **475.09** ▲ The roles of gad1.1 regulation and calcium transients in neurotransmitter phenotype specification. E. ABLONDI*; A. CHALPHIN; M. SEHDEV; A. RAHMAN; L. SCHLEIFER; W. HERBST; M. LEFEW; L. ODORIZZI; P. KEMPER; M. SAHA. *The Col. of William and Mary.*

9:00 A67 **475.10** Environmental temperature influences spinal neuron differentiation *in vivo.* K. A. SPENCER*; L. N. BORODINSKY. *Univ. of California Davis.*

POSTER

476. Opiate, Cytokines, and Other Neuropeptides

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

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 A68 **476.01** Association of nitric oxide with the induction of interleukin 1 beta in microglia. K. NAKAJIMA*; K. SUDO; Y. TAKEZAWA; S. KOHSAKA. *Soka Univ., Natl. Inst. of Neurosci.*

9:00 A69 **476.02** ▲ Peripheral local activation of oxytocin receptors inhibits the nociceptive activity of the spinal dorsal horn wide dynamic range neurons. A. GONZALEZ-HERNANDEZ*; A. MANZANO-GARCÍA; I. A. TELLO-GARCÍA; G. MARTÍNEZ-LORENZANA; G. ROJAS-PILONI; M. CONDÉS-LARA. *Inst. de Neurobiologia, UNAM, Univ. Nacional Autónoma de México.*

10:00 A70 **476.03** Diverse postsynaptic signals produced by presynaptic somatostatin interneurons in the claustrum. Y. TANG*; G. J. AUGUSTINE. *Nanyang Technological Univ., Nanyang Technological Univ.*

11:00 A71 **476.04** ▲ Neuropeptide Y modulation of guinea pig intrinsic cardiac neurons. K. LUCKETT; E. A. POWERS; J. C. HARDWICK*. *Ithaca Col.*

8:00 A72 **476.05** Plasma opiates in subjects with chronic low back pain treated with Transcutaneous Electrical Nerve Stimulation. C. I. EZEMA*. *Univ. of Nigeria.*

9:00 A73 **476.06** Sedative effect of a neuropeptid obtained from the posterior salivary gland of the mexican red octopus (Octopus maya) in mice CD1. E. GARCÍA -RAMÍREZ; A. G. MARTINEZ*; R. BUSTAMANTE-GARCÍA; S. RODRÍGUEZ-MORALES. *Fac Quimica, UNAM, Fac Quimica, UNAM, UNAM. Facultad de Química, UNAM. SISAL.*

10:00 A74 **476.07** Modulation of dopamine release in the striatum by kappa opioid receptors. Q. QIN*; T. WESTERGARD; L. CHEN; G. LI; H. ZHANG. *Thomas Jefferson Univ., Harbin Med. Univ.*

11:00 A75 **476.08** Orexin/hypocretin exerts postsynaptic excitatory effects and inhibits presynaptic excitatory inputs on reticulospinal neurons of caudal potine reticular nucleus. J. ZHANG*; N. YANG; Q. QIAO. *Third Military Med. Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 A76 **476.09** Projection-target dependent effects of orexin and dynorphin on VTA dopamine neurons. C. BAIMEL*; S. L. BORGLAND. *Hotchkiss Brain Inst., Univ. of British Columbia.*

POSTER

477. GABAA Receptors

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

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 A77 **477.01** Pubertal expression of α4βδ GABAA receptors reduces discharge of CA1 hippocampus in an epilepsy model. L. YANG; H. SHEN; L. MERLIN; S. S. SMITH*. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

9:00 A78 **477.02** Kalirin-7 mediates α4βδ GABAA receptor-induced synaptic pruning in pubertal female mouse CA1 hippocampus. J. PARATO*; S. AFROZ; S. SMITH. *SUNY Downstate.*

10:00 A79 **477.03** Perinatal hypoxia increases GABA release in the auditory brainstem during early development. M. A. HAROON*; S. Y. LEE; J. XU; C. GRANADOS; J. H. KIM. *UTHSCSA.*

11:00 A80 **477.04** Rescue of a mutant GABA(A) receptor subunit by functional complementation. L. G. JACKSON*; R. L. MACDONALD; C. HERNANDEZ; N. HU. *Vanderbilt Univ.*

8:00 A81 **477.05** Understanding the low affinity actions of benzodiazepines on GABAA receptors. M. C. MALDIFASSI*; R. BAUR; E. SIGEL. *Univ. of Bern.*

9:00 A82 **477.06** Withdrawn.

10:00 A83 **477.07** Cysteine scanning of loop G residues in GABAA receptors. D. BAPTISTA-HON*; T. G. HALES. *Inst. of Academic Anaesthesia.*

11:00 A84 **477.08** Somatostatin gabaergic interneurons regulate gastric circuit activity within the dorsal vagal complex. A. LEWIN*; S. VICINI; R. GILLIS; N. SAHIBZADA. *Georgetown Univ. Med. Ctr.*

8:00 A85 **477.09** Characterizing the guanidine compound interaction site in the GABA-A rho1 receptor. H. D. SNELL*; E. B. GONZALES. *Univ. of North Texas Hlth. Sci. Ctr., Inst. for Aging and Alzheimer's Dis. Res.*

9:00 A86 **477.10** ● SGE-516, a novel neuroactive steroid mediates an increase in the efficacy of tonic inhibition via an increase in the trafficking of extrasynaptic GABAA Receptors. A. MODGIL*; M. PARAKALA; M. R. KELLEY; D. HINES; M. A. ACKLEY; J. J. DOHERTY; G. MARTINEZ-BOTELLA; F. G. SALITURO; P. A. DAVIES; S. J. MOSS. *Tufts Univ., Sage therapeutics, Inc.*

10:00 A87 **477.11** Unraveling the epileptogenic properties of GABAA receptor subunit interfaces. C. C. HERNANDEZ*; V. C. SATPUTE; R. L. MACDONALD. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr.*

11:00 A88 **477.12** Impermeant anions, fixed charges, and the driving force of GABAAR-mediated Cl- currents. J. T. VOIPIO*; K. KAILA. *Dept. of Biosciences, Univ. of Helsinki, Dept. of Biosci. and Neurosci. Center, Univ. of Helsinki.*

8:00 A89 **477.13** Novel benzodiazepines selectively binding to α5-containing GABAA receptors. P. SCHOLZE*; R. PUTHENKALAM; M. TREVEN; J. RAMERSTORFER; M. M. POE; K. R. METHUKU; G. LI; W. SIEGHART; J. M. COOK; M. ERNST. *Med. Univ. Vienna, Univ. of Wisconsin-Milwaukee.*

9:00 A90 **477.14** ● Flumazenil alters GABAergic neurotransmission via direct channel modulation and changes in post-synaptic protein expression. I. A. SPEIGEL*; Q. XU; V. CIAVATTA; A. JENKINS; P. S. GARCÍA. *Emory Univ., Atlanta VA Med. Ctr.*

10:00 A91 **477.15** Histone deacetylase inhibitors prevent chronic ethanol-induced adaptations in GABAA receptor subunit expression in cortical neurons. J. P. BOHNSACK*; A. L. MORROW. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill.*

11:00 A92 **477.16** Astrocytes selectively regulate the expression of different GABA-A receptor subunits in cortical neurons. A. BERRETTA*; A. N. CLARKSON. *Univ. of Otago, Brain Hlth. Res. Ctr., The Univ. of Sydney.*

8:00 A93 **477.17** A case for similarities between histamine receptor ligands and GABA-A receptor agonists. D. B. WILLIAMS*; J. P. CLAVIJO; J. J. KEITH-HARP. *Winston-Salem St Univ.*

9:00 A94 **477.18** Complex changes in GABAA receptor gating caused by mutations associated with alcohol preference. S. GULBINAITE; D. BAPTISTA-HON; F. ROBERTSON; T. G. HALES*. *Univ. of Dundee.*

10:00 A95 **477.19** The effect of varying ratios of α4, β2, and δ cRNA subunits on the receptor stoichiometry. L. Y. HARTIADI*; N. ABSALOM; P. K. AHRING; M. CHEBIB. *The Univ. of Sydney.*

11:00 A96 **477.20** Architecture and function of concatenated α4β2δ GABAA receptors. N. WONGSAMITKUL*; R. BAUR; E. SIGEL. *Univ. of Bern.*

8:00 A97 **477.21** Modulatory effects of neurosteroids and thyroid hormones on GABA-evoked currents in cultured dorsal root ganglion cells. G. PUIA*; L. RAVEGNANI; F. RAVAZZINI; R. AVALLONE; R. BARDONI. *Universty of Modena and Reggio Emilia.*

9:00 A98 **477.22** Regulation of Inhibitory neurotransmitter GABAA receptor subunit genes by nuclear respiratory factor 2 in neurons. B. A. NAIR*; M. WONG-RILEY. *Med. Col. of Wisconsin.*

10:00 A99 **477.23** ● New tools to characterize allosteric modulators at the GABAA receptors. S. BERTRAND*; E. NEVEU; D. BERTRAND. *Hiqscreen.*

11:00 A100 **477.24** Zolpidem enhances GABA-induced currents at (α1)3(β3)2 GABAA receptors via a novel binding interface. A. T. CHE HAS*; N. ABSALOM; A. CLARKSON; P. AHRING; M. CHEBIB. *Univ. of Sydney, Univ. of Otago.*

8:00 A101 **477.25** Characterisation of the pharmacological actions of kavain at $GABA_A$Rs. H. C. CHUA*; K. HØSTGAARD-JENSEN; E. CHRISTENSEN; A. JENSEN; I. RAMZAN; N. ABSALOM; M. CHEBIB. *Fac. of Pharm., Univ. of Copenhagen.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 A102 **477.26** Adolescent alcohol exposure induces layer-specific deficits in δ-GABAA receptor-mediated tonic currents in the adult prelimbic cortex. S. CENTANNI*; E. J. BURNETT; H. TRANTHAM-DAVIDSON; L. J. CHANDLER. *Med. Univ. of South Carolina.*

10:00 A103 **477.27** Novel compounds with anesthetic activity. R. BAUR; M. C. MALDIFASSI; S. A. FORMAN; E. SIGEL*. *Univ. Bern, Massachusetts Gen. Hosp.*

11:00 A104 **477.28** Postnatal development of subcompartmental inhibition in prefrontal layer 2/3 pyramidal cells. G. RINETTI VARGAS; K. J. BENDER*. *UCSF, Ctr. for Integrative Neurosci., Sandler Neurosciences Building.*

POSTER

478. Ion Channels

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

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 A105 **478.01** ● NR1/NR2A and NR1/NR2B NMDA receptor profiling in high-throughput patch clamp. G. KIRSCH; N. FEDOROV; Y. KURYSHEV; L. ARMSTRONG; C. MATHES*; A. M. BROWN. *Chantest Corp.*

9:00 A106 **478.02** Involvement of ENaC on initiation of mechanically-evoked swallows in anesthetized rats. T. TSUJIMURA*; K. TSUJI; S. SAKAI; T. SUZUKI; M. INOUE. *Niigata Univ. Grad. Sch. of Med. and Dent. Sci.*

10:00 A107 **478.03** Osmosensitivity in the enteric nervous system. P. KOLLMANN*; M. SCHEMANN; G. MAZZUOLI-WEBER. *Technische Univ. München.*

11:00 A108 **478.04** TRPM2 channels in octopus neurons of mice cochlear nucleus. R. BAL*; E. O. ETEM; Y. MORI. *Gaziantep Univ., Firat Univ., Kyoto Univ.*

8:00 B1 **478.05** Osmoregulatory inositol transporter SMIT1 modulates ion channels by adjusting PI(4,5)P2 levels. G. DAI; H. YU; M. KRUSE; A. TRAYNOR-KAPLAN; B. HILLE*. *Univ. Washington Sch. Med., Univ. Washington Sch. Med.*

9:00 B2 **478.06** Electrophysiological properties of mechanosensitive neurons of rat dorsal root ganglions. W. CHANG*; V. VIATCHENKO-KARPINSKI; H. KANDA; J. LING; J. GU. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

10:00 B3 **478.07** Magnesium influx triggered by neural depolarization. R. YAMANAKA*; Y. SHINDO; T. KARUBE; R. TANAMOTO; K. HOTTA; K. SUZUKI; K. OKA. *KEIO UNIVERSITY.*

11:00 B4 **478.08** A PANX1 loss-of-function mutation identified from a patient with intellectual disability, hearing loss and endocrine disorders. R. SHI*; Q. SHAO; K. LINDSTROM; J. KELLY; A. SCHROEDER; J. JUUSOLA; K. LEVINE; J. L. ESSELTINE; S. PENUELA; M. F. JACKSON; D. W. LAIRD. *Kleysen Inst. for Advanced Med., Univ. of Manitoba, Univ. of Western Ontario, Phoenix Children's Hosp., Univ. of Rochester Med. Ctr., GeneDx.*

8:00 B5 **478.09** Modulation of acid sensing ion channels by KB-R7943, a reverse $Na+/Ca^{2+}$ exchanger inhibitor. T. LENG*; H. SI; Z. XIONG. *Morehouse Sch. of Med., Sch. of Pharmacy, Anhui Med. Univ.*

9:00 B6 **478.10** On estimating ion channel densities in model neurons from simulated patch clamp data. S. G. CARVER*. *American Univ.*

10:00 B7 **478.11** ● A novel selective α7 nicotinic acetylcholine receptor allosteric modulator showing concentration dependent positive and negative allosteric modulation. K. VEYS*. *Janssen Pharmaceutica.*

11:00 B8 **478.12** ● α-dendrotoxin inhibits the ASIC current in dorsal root ganglion neurons from rat. E. SOTO*; A. BÁEZ; E. SALCEDA; M. FLÓ; M. GRAÑA; C. FERNÁNDEZ; R. VEGA. *Univ. Autonoma De Puebla, Univ. Autónoma de Puebla, Univ. de la República (UDELAR), Inst. Pasteur de Montevideo, Uruguay.*

8:00 B9 **478.13** Identification of a novel allosteric modulator of acid-sensing ion channel 3. A. AGHARKAR*; E. B. GONZALES. *UNT Hlth. Sci. Ctr., Inst. for Aging and Alzheimer's Dis. Res., Cardiovasc. Res. Inst.*

9:00 B10 **478.14** Afterhyperpolarization in thalamocortical neurons are mediated by calcium-activated chloride channels. G. HA*; K. SONG; H. KWAK; J. LEE; C. LEE; E. CHEONG. *Yonsei Univ., Korea Inst. of Sci. and Technol.*

10:00 B11 **478.15** Amyloid beta modulates opening of pannexin-1 channels during hypoxia. L. A. PALMER*; R. J. THOMPSON. *Univ. of Calgary, Univ. of Calgary.*

11:00 B12 **478.16** Calcium signals in spinal cord inhibitory and excitatory neurons. J. XIA*; X. GAO; R. JEAN-TOUSSAINT; R. GAO; R. PAN; Y. TIAN; J. BARRETT; H. HU. *Drexel Univ. Col. of Med., China Pharmaceut. Univ.*

8:00 B13 **478.17** STIMs and Orai1 are responsible for mGluR1/5-mediated ERK activation in spinal dorsal horn neurons. F. M. MUNOZ*; J. XIA; R. PAN; R. GAO; H. HU. *Drexel Univ. Col. of Med.*

POSTER

479. Oscillations and Synchrony: EEG Studies

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

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 B14 **479.01** Optimal sampling rate and anti-aliasing filter position for the detection of high frequency oscillations (HFOs). S. GLISKE*; W. C. STACEY. *Univ. of Michigan.*

9:00 B15 **479.02** Hilbert analysis of the relation between respiration and LFP/ECoG. R. KOZMA*; D. HECK; Y. LIU; S. MCAFEE; R. REZAIE; A. BABAJANI-FEREMI; A. PAPANICOLAOU; J. WHELESS. *Univ. of Memphis, Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr., LeBonheur Children's Hosp.*

10:00 B16 **479.03** Respiratory modulation of brain activity. Y. LIU*; S. MCAFEE; R. REZAIE; A. BABAJANI-FEREMI; R. KOZMA; A. C. PAPANICOLAOU; J. W. WHELESS; D. H. HECK. *Univ. Tennessee HSC, Univ. Tennessee HSC, Univ. Tennessee HSC and Le Bonheur Children's Hosp., Univ. of Memphis.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 B17 **479.04** Relations between alpha power and the stability of motion-induced blindness. H. SUN*; M. INYUTINA; R. VANRULLEN; C. WU. *Natl. Taiwan Univ., Univ. de Toulouse-Paul Sabatier, CNRS, UMR 5549, Sch. of Occup. Therapy, Natl. Taiwan Univ. Hosp. & Col. of Med.*

8:00 B18 **479.05** Enhanced thalamic GABAAR-mediated spill-over inhibition promotes electrocortical signatures associated with the induction of NREM sleep and anesthetic-induced loss-of-consciousness. L. MESBAH-OSKUI*; R. L. HORNER. *Univ. of Toronto, Univ. of Toronto.*

9:00 B19 **479.06** Resting-state EEG oscillatory connectivity between nodes of dorsal visual network as correlate of performance on embedded vs. ambiguous figure tasks in high functioning autism. I. SOLIS*; O. TRETIAK; C. BOUCHARD; S. MEYER; V. LUCE; J. M. STEPHEN; K. R. CIESIELSKI. *Pediatric Neurosci. Lab., Dept. of Psychology, UNM, The Mind Res. Network, Massachusetts Gen. Hospital, Harvard Med. Sch.*

10:00 B20 **479.07** ▲ Use of photic stimulation to manipulate resting-state brain activity: A pilot study using high-density eeg. P. HICKEY; M. WHITMIRE; E. J. WAMSLEY*. *Furman Univ., Furman Univ.*

11:00 B21 **479.08** ● Cortical network dynamics of hallucinatory and dissociative states induced by ketamine. L. D. LEWIS*; O. AKEJU; D. W. ZHOU; R. A. PETERFREUND; E. N. ESKANDAR; S. S. CASH; E. N. BROWN; P. L. PURDON. *Harvard Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., MIT.*

8:00 B22 **479.09** Modulation of high-frequency oscillations and beta coherence in striato-cortico-limbic circuits following repeated sub-anesthetic ketamine exposure. T. YE*; M. J. BARTLETT; J. WIEGAND; M. SCHMIT; S. J. SHERMAN; T. FALK; S. L. COWEN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

9:00 B23 **479.10** Exploring relationships between eeg theta/beta ratios, empathy, reward sensitivity, and anxiety. S. GARRETT-RUFFIN*; E. HERRING. *Bowling Green State Univ.*

10:00 B24 **479.11** OLM interneurons promote theta activity the ventral hippocampus. R. N. LEAO*; S. MIKULOVIC; E. RESTREPO; S. PUPE; K. KULLANDER; A. TORT. *Brain Institute, UFRN, Uppsala Univ.*

11:00 B25 **479.12** Entrainment of parvalbumin+ interneurons *in vivo* depends on movement rather than theta oscillations. A. M. BARTH*; I. MODY. *UCLA Sch. of Med., UCLA Sch. of Med.*

8:00 B26 **479.13** Phase synchronization analysis of K-complex and Sleep spindles using ensemble measure in healthy subjects. C. S. NAYAK*; N. MARIYAPPA; P. D. PRASAD; K. K. MAJUMDAR; T. KANDAVEL; A. B. TALY; S. SINHA. *Neurol. & Clin. Neurosciences, NIMHANS, NIMHANS, Indian Statistical Inst. (Bangalore Chapter), NIMHANS.*

9:00 B27 **479.14** P1 in the somatosensory evoked EEG response solely reflects neural excitation: A concurrent EEG and LFP study. M. BRUYNS-HAYLETT*; J. LUO; A. KENNERLEY; S. HARRIS; L. BOORMAN; E. MILNE; N. VAUTRELLE; B. WHALLEY; M. JONES; J. BERWICK; J. RIERA; Y. ZHENG. *Univ. of Reading, Univ. of Sheffield, Florida Intl. Univ.*

10:00 B28 **479.15** Efficient and comprehensive measurement of interregional phase-amplitude coupling and characterization through tensor decomposition. C. K. KOVACH*; P. E. GANDER; A. E. RHONE; M. J. SUTTERER; H. KAWASAKI; R. ADOLPHS; M. A. HOWARD, III. *Univ. of Iowa Hosp. and Clinics, Univ. of Iowa Hosp. and Clinics, Caltech.*

11:00 B29 **479.16** ● Postnatal development of spatial and temporal EEG characteristics of anesthetic state in infants 0-6 months. L. CORNELISSEN*; S. KIM; P. L. PURDON; E. N. BROWN; C. B. BERDE. *Boston Children's Hosp., MIT, Massachusetts Gen. Hosp., Boston Children's Hosp. & Harvard Med. Sch.*

8:00 B30 **479.17** ● Optimizing repetitive brain stimulation using direct electrical recordings in human neocortex. M. FINI*; C. KELLER; C. HONEY; F. LADO; A. MEHTA. *North Shore Lij-Hofstra Med. Ctr., Albert Einstein Col. of Med., Montefiore Med. Ctr., Univ. of Toronto.*

9:00 B31 **479.18** Conditions for explosive synchronization in human brain networks during general anesthesia. M. KIM; G. A. MASHOUR; U. LEE*. *POSTECH, Univ. of Michigan Med. Sch., Ctr. for Consciousness Sci., Univ. of Michigan Med. Sch.*

10:00 B32 **479.19** Effect of sleep restriction on EEG activity during deep isoflurane anesthesia. T. MARIAM; R. TADAVARTY; P. J. SOJA*. *Univ. British Columbia.*

11:00 B33 **479.20** ● Thalamocortical synchronization during propofol-induced unconsciousness. F. J. FLORES*; K. HARTNACK; A. B. FATH; S. E. KIM; N. KOPELL; M. A. WILSON; E. N. BROWN; P. L. PURDON. *Massachusetts Gen. Hosp., MIT, Harvard Med. Sch., Wellesley Col., Boston Univ., MIT.*

8:00 B34 **479.21** ● Intracranial alpha dynamics and correlates of anteriorization during propofol general anesthesia. D. W. ZHOU*; V. S. WEINER; R. A. PETERFREUND; M. D. SZABO; E. N. ESKANDAR; S. S. CASH; E. N. BROWN; P. L. PURDON. *Massachusetts Gen. Hosp., MIT, Harvard Med. Sch., Massachusetts Gen. Hosp., Harvard Med. Sch., Massachusetts Gen. Hosp., Harvard Med. Sch.*

9:00 B35 **479.22** ● Evidence for slow oscillations and coherent theta and gamma oscillations during ketamine-induced altered arousal. O. AKEJU*; F. J. FLORES; K. J. PAVONE; M. A. WILSON; P. L. PURDON; E. N. BROWN. *Massachusetts Gen. Hosp., Massachussetts Inst. of Technol.*

10:00 B36 **479.23** Effect of very deep isoflurane anesthesia on hippocampal plasticity. R. TADAVARTY*; T. MARIAM; P. SOJA. *The Univ. of British Columbia.*

11:00 B37 **479.24** Optogenetic and pharmacological manipulation of cortical excitatory/inhibitory balance: Rescuing the effects of acute ketamine on cortical gamma band oscillations. J. M. MCNALLY*; S. THANKACHAN; R. W. MCCARLEY; R. E. BROWN. *VABHS, Harvard Med. Sch.*

8:00 B38 **479.25** Visual encoding is gamma phase dependent. J. CSATLOS; S. LINNERT; E. KORMANN; Z. NADASDY*. *Eotvos Lorand Univ., Lancaster Univ., Univ. of Oxford, Neurotexas Inst. Res. Fndn., The Univ. of Texas at Austin.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 B39 **479.26** Intrinsic excitability measures track anti-epileptic drug action and uncover increasing/decreasing excitability over the wake/sleep cycle. C. MEISEL*; A. SCHULZE-BONHAGE; D. PLENZ. *NIMH, Univ. of Freiburg.*

10:00 B40 **479.27** Intrinsic frequency biases across the posterior-anterior cortical hierarchy. M. S. MELLEM*; A. GHUMAN; S. WOHLTJEN; A. MARTIN. *NIH, UPMC.*

11:00 B41 **479.28** Cooperation and specialization of the bilateral hippocampi in rodents. Y. SHINOHARA*; A. HOSOYA; H. HIRASE. *RIKEN.*

8:00 B42 **479.29** Exploring the neural basis of the electrophysiological power spectrum. R. GAO*; B. VOYTEK. *UCSD, UCSD.*

POSTER

480. Neural Oscillators and Activity-Dependent Plasticity of Intrinsic Membrane Properties

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

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 B43 **480.01** The characterization of calf brain cell nuclear membrane GlcNAc-specific lectin. T. MACHARADZE*; L. KHARAZISHVILI; G. KHAREBAVA; V. GVAKHARIA; N. MACHITADZE; R. AKHALKATSI. *Tbilisi State Univ., Iv. Javakhishvili Tbilisi Univ., Inst. of Biotecnology, Alexandre Janelidze Inst. of Geology.*

9:00 B44 **480.02** Intrinsic plasticity accompanies synaptic LTD in Purkinje cells. Z. YANG*; F. SANTAMARIA. *UTSA.*

10:00 B45 **480.03** Spatiotemporal dynamics of calcium flux in the axonal initial segment. M. POPOVIC; M. H. KOLE*. *Netherlands Inst. for Neurosci.*

11:00 B46 **480.04** Regulatory evolution and voltage-gated ion channel expression in squid axon: Selection-mutation balance and fitness cliffs. D. MCKINNON*; M. KIM; D. D. MCKINNON; T. MACCARTHY; B. ROSATI. *Stony Brook Univ.*

8:00 B47 **480.05** Circadian rhythm of redox state in hippocampal CA1 regulates neuronal membrane excitability. G. NASERI KOUZEHGARANI*; M. YU; M. U. GILLETTE. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

9:00 B48 **480.06** Plasticity of intrinsic firing patterns in midbrain dopaminergic neurons. U. COLLIENNE*; S. HESS; M. E. HESS; S. POPOVYCH; S. DAUN-GRUHN; J. C. BRÜNING; P. KLOPPENBURG. *Biocenter Cologne, Zoological Inst., Cologne Excellence Cluster on Cell. Stress Responses in Ageing-Associated Dis. (CECAD), Max Planck Inst. for Metabolism Res., Res. Group of Computat. Biol. (DFG-Heisenberg Programme), Ctr. for Mol. Med. (CMMC), Dept. I of Intrnl. Medicine, Ctr. for Endocrinology, Diabetology and Preventive Med. (CEDP).*

10:00 B49 **480.07** Axonal action potentials in hippocampal dendrite-targeting interneurons. J. WENG*; C. LIEN. *Natl. Yang-Ming Univ.*

11:00 B50 **480.08** Contribution of persistent Na+ current and muscarine-sensitive K+ current to perithreshold theta resonance in CA1 pyramidal neurons. J. A. VERA*; J. ALCAYAGA; J. BACIGALUPO; M. SANHUEZA. *Univ. De Chile.*

8:00 B51 **480.09** Cell-autonomous function of NMDA receptors in the development of intrinsic excitability of thalamocortical neurons. Z. ZHANG*; G. HOU; M. PETERSON; H. LIU. *The Jackson Lab.*

9:00 B52 **480.10** Aloe vera linn (liliacee) increases brain sodium-potassium atpase activity in streptozotocine-induced diabetic female wistar rats. A. O. MAHMUD-IMAMFULANI*; E. O. ALAYE; B. V. OWOYELE. *Univ. of Ilorin, Univ. of Ilorin.*

POSTER

481. Oligodendrocytes and Progenitor Biology

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

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 B53 **481.01** Novel systems for isolation and functional analysis of adult NG2 condroitin sulfate proteoglycan-expressing cells. N. KIKUCHI(NIHONMATSU)*; X. YU; Y. MATSUDA; M. WATANABE; Y. TATEBAYASHI. *Tokyo Metropolitan Inst. of Med. Sci.*

9:00 B54 **481.02** IL-1β impedes oligodendrocyte progenitor cell migration after chronic cerebral hypoperfusion. L. JIANG*; J. ZHANG; Z. CHEN; W. HU. *Zhejiang Univ., Sir Run Run Shaw Hosp.*

10:00 B55 **481.03** ▲ Molecular compartmentation of cerebral white matter revealed with Perls iron stain. N. M. SINGLETARY*; J. M. DOOYEMA; D. A. GUTMAN; T. M. PREUSS. *Emory Univ., Emory Univ., Emory Univ., Emory Univ. Sch. of Med.*

11:00 B56 **481.04** Olig2+ progenitors and gnas tumor suppressor in shh-medulloblastoma. H. XUELIAN*; L. ZHANG; R. LU. *Brain Tumor Ctr.*

8:00 B57 **481.05** Fkbp5/FKBP51 mediates excitotoxin-induced oligodendrocyte damage. S. LIN*; S. CHUANG; Y. GAN; Y. LEE. *Natl. Yang-Ming Univ., Natl. Yang-Ming Univ.*

9:00 B58 **481.06** Models of plasticity and learning employing adaptive temporal delays. S. PAJEVIC*; P. J. BASSER; R. D. FIELDS. *NIH, NIH.*

10:00 B59 **481.07** Role of A-type K^+ currents in synaptic integration and calcium signaling in NG2 glial cells. W. SUN*; D. DIETRICH. *Univ. Clin. Bonn.*

11:00 B60 **481.08** Probing intracellular zinc status in developing and mature oligodendrocytes. C. M. ELITT*; J. WANG; A. BACH; C. J. FAHRNI; P. A. ROSENBERG. *Boston Children's Hosp., Boston Children's Hosp. and Harvard Med. Sch., Georgia Inst. of Technol.*

8:00 B61 **481.09** Oligodendrocytes beyond the precursor stage generate $Na_v1.2$-driven action potentials into early adulthood. E. BERRET*; K. JUN HEE. *UTHSCSA.*

9:00 B62 **481.10** The integrated stress response in perinatal diffuse white matter injury. B. CLAYTON*; B. POPKO. *Univ. of Chicago.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 B63 **481.11** Experimental ablation of NG2-expressing glial progenitor cells induced neuronal cell death by pro-inflammatory pathway. M. NAKANO*; Y. TAMURA; A. EGUCHI; M. YAMATO; S. KUME; Y. KATAOKA. *RIKEN Ctr. for Life Sci. Technologies, Osaka City Univ. Grad. Sch. of Med., RIKEN Ctr. for Life Sci. Technologies.*

11:00 B64 **481.12** Gray matter NG2 cells release exosomes that contain non-alpha GFAP isoforms and NG2. R. JABS*; J. WALTER; M. VAN STRIEN; E. M. HOL; C. STEINHÄUSER; K. GLEBOV. *Inst. of Cell. Neurosciences, Univ. of Bonn, Univ. of Bonn, Univ. Med. Ctr. Utrecht.*

8:00 B65 **481.13** Jam2 inhibits somatodendritic myelination of neurons by oligodendroglia. S. REDMOND*; Y. ESHED-EISENBACH; F. MEI; L. OSSO; Y. SHEN; S. Y. C. CHONG; E. PELES; J. R. CHAN. *Univ. of California, San Francisco, Weizmann Inst. of Sci.*

9:00 B66 **481.14** Response of white matter oligodendrocyte precursor cells to different patterns of neuronal activity *in situ* and *in vivo.* B. NAGY*; A. HOVHANNISYAN; R. BARZAN; M. KUKLEY. *Werner Reichardt Ctr. For Integrative Neuroscien, Univ. of California.*

10:00 B67 **481.15** Functional role of AMPA receptors during differentiation of oligodendrocyte precursor cells in mouse corpus callosum. T. CHEN*; A. GALL; I. EHRLICH; M. KUKLEY. *Werner Reichardt Ctr. for Integrative Neuroscien, Hertie Inst. for Clin. Brain Res.*

11:00 B68 **481.16** Axo-glia interaction preceding CNS myelination is regulated by bidirectional Eph-ephrin signaling. L. S. LAURSEN*; C. LINNEBERG; M. HARBOE. *Aarhus Univ.*

8:00 B69 **481.17** Organization of oligodendroglial paranodal junctions requires the netrin-1 receptor Unc5b. O. DE FARIA*, JR; J. M. BIN; A. SADIKOT; T. E. KENNEDY. *Montreal Neurolog. Inst. / McGill Univ.*

POSTER

482. Alzheimer's Disease: Risk Factors and Biomarkers

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 B70 **482.01** Cerebrospinal fluid biomarkers are associated with medial temporal lobe pathology in preclinical AD. A. P. MERLUZZI*; D. C. DEAN, III; C. M. CARLSSON; S. C. JOHNSON; O. C. OKONKWO; J. M. OH; N. ADLURU; G. SURYAWANSHI; H. ZETTERBERG; K. BLENNOW; S. ASTHANA; H. ZHANG; A. L. ALEXANDER; B. B. BENDLIN. *Univ. of Wisconsin - Madison, Univ. of Gothenburg, Univ. Col. London.*

9:00 B71 **482.02** Validation of ADFlag®, a diagnostic blood-test for pre-dementia stages of Alzheimer's disease. B. BLANC; C. BISCARRAT; N. PELLETIER; P. MARTINASSO-PICAMAL; L. CURIEN; S. GALLUZZI; M. MARIZZONI; C. BAGNOLI; J. JOVICICH; G. FORLONI; D. ALBANI; J. RICHARDSON; F. NOBILI; L. PARNETTI; M. TSOLAKI; D. BARTREZ-FAZ; M. DIDIC; P. SCHOENKNECHT; P. PAYOUX; A. SORICELLI; P. ROSSINI; P. SCHELTENS; P. VISSER; U. FIEDLER; J. MICALLEF; L. LANTEAUME; J. DUPOUEY; O. BLIN; G. FRISONI; N. COMPAGNONE*. *ICDD, ICDD, IRCCS San Giovanni di Dio Fatebenefratelli, Univ. of Trento, "Mario Negri" Inst. for Pharmacol. Res., GSK, Univ. of Genoa, Univ. degli Studi di Perugia, Aristotle Univ. of Thessaloniki, Univ. of Barcelona, Fac. of Med., CHU de la Timone, Universitätsklinikum Leipzig AöR, CHU de Toulouse, Inst. di Ricerca Diagnostica e Nucleare, Univ. Cattolica del Sacro Cuore, VU university medical center, Kliniken/Institut der Univ. Duisburg-Essen, Aix-Marseille Univ., Aix-Marseille Univ., ICDD.*

10:00 B72 **482.03** Increasing class separation through isometric transformations in Alzheimer's disease diagnostic. F. V. CHIRILA*; D. L. ALKON. *Blanchette Rockefeller Neurosciences Inst.*

11:00 B73 **482.04** ● Serum biomarker candidates profiling in Mild Cognitive Impairment and Alzheimer's disease using iTRAQ quantitative proteomics. S. KANG*; H. JEONG; J. BAEK; S. HAN; H. CHO; W. LEE; H. KIM; S. SEO; D. NA; D. HWANG; I. MOOK-JUNG. *Seoul Natl. Univ., Inst. of Basic Science, DGIST, Medifron DBT, Inc., Sungkyunkwan University, Sch. of Med.*

8:00 B74 **482.05** Biomarkers of CSF: Alzheimer's progression tracking. M. CARNA*; D. HOLUB; M. VYHNALEK; V. LACOVICH; G. FORTE; M. HAJDUCH; J. HORT; R. MATEJ; G. STOKIN. *Intl. Clin. Res. Ctr. (FNUSA-ICRC, Fac. of Med. and Dent. Palacky Univ., Charles Univ. in Prague, 2nd Fac. of Med. and Motol Univ. Hosp., Inst. of Mol. and Translational Med., Third Med. Fac. of Charles Univ. in Prague and Kralovske Vinohrady Teaching Hosp., First Fac. of Medicine, Charles Univ. in Prague, and Gen. Univ. Hosp. in Praque.*

9:00 B75 **482.06** On-chip detection of tau mutants and 3R:4R tau ratio based on tau's binding affinity to taxol stablized microtubules. S. P. SUBRAMANIYAN*; M. C. TARHAN; S. L. KARSTEN; H. FUJITA; H. SHINTAKU; H. KOTERA; R. YOKOKAWA. *Kyoto Univ., LIMMS, Inst. of Industrial Science, The Univ. of Tokyo, NeuroInDx Inc., Signal Hill, CA, USA.*

10:00 B76 **482.07** Difference in prevalence of neurogenic markers and regulatory mirna in non-demented with Alzheimer's neuropathology. D. BRILEY*; B. KRISHNAN; R. WOLTJER; G. TAGLIALATELA; M. MICCI. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Oregon Hlth. & Sci. Univ., Univ. of Texas Med. Br.*

11:00 B77 **482.08** Neuro-cognitive mechanisms of simultanagnosia following posterior cortical atrophy. J. NEITZEL*; M. ORTNER; M. HAUPT; P. REDEL; C. SORG; K. FINKE. *Ludwig-Maximilians-Universität, Technische Univ. München, Technische Univ. München.*

8:00 B78 **482.09** Identification of exosomal proteins specifically released following Aβ1-42 protofibril treatment in co-cultures of primary neurons and glia. E. NIKITIDOU*; P. EMAMI KHOONSARI; G. SHEVCHENKO; L. LANNFELT; K. KULTIMA; A. ERLANDSSON. *Mol. Geriatrics, Cancer Pharmacol. and Computat. Med., Analytical Chem.*

Tues. AM

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 B79 **482.10** The effects of running on hippocampal vasculature and memory in a mouse model of amyloidosis. E. MALISZEWSKA-CYNA*; J. J. OORE; M. THEODORE; L. A. M. THOMASON; A. DORR; M. M. KOLETAR; J. STEINMAN; J. G. SLED; B. STEFANOVIC; I. AUBERT. *Sunnybrook Res. Inst., Lab. Med. and Pathobiology, Univ. of Toronto, Physical Sciences, Brain Sci. Res. Program, Sunnybrook Res. Institute, Toronto, ON, Canada, Mouse Imaging Centre, Hosp. for Sick Children, Dept. of Med. Biophysics; Univ. of Toronto.*

10:00 B80 **482.11** Evaluation of 11C-BU99008, a radioligand for the imidazoline-2 binding sites, as a marker of reactive astrocytosis in a mouse model of Alzheimer's disease. N. MIRZAEI*; R. J. TYACKE; D. J. NUTT; M. SASTRE. *Imperial Col. London.*

11:00 B81 **482.12** Disrupted rich club organization in Alzheimer's disease and subcortical vascular dementia. C. E. HAN*; H. KIM; W. LEE; S. SEO; J. SEONG. *Korea Univ., Samsung Med. Ctr.*

8:00 B82 **482.13** ● Comprehensive screening of amyloid-β aggregation inhibitors by a microliter-scale high-throughput screening system with quantum dot-based imaging technology. K. TOKURAKU*; T. TAKAHASHI; Y. BABA; R. TAGUCHI; Y. HASHI; K. UWAI. *Muroran Inst. of Technol.*

9:00 B83 **482.14** AD biomarker changes based on cortical thickness patterns. J. ROH*; J. HWANG; C. KIM. *Asan Med. Ctr.*

10:00 B84 **482.15** A novel multiplex immunoassay enables detection of Alzheimer's disease biomarkers in small volumes of cerebrospinal fluid. L. CHEN*; D. DROLL; A. J. SAPORITA; J. MISTRY; J. HWANG. *EMD Millipore.*

11:00 B85 **482.16** The effect of chronic neuroinflammation on cognition and the cholinergic system. E. GYENGESI*; A. RANGEL; O. KEKESI; P. YOON; K. V. K. GADALA; Y. BUSKILA; G. MUENCH. *Univ. of Western Sydney, MARCS Inst. Univ. of Western Sydney.*

8:00 B86 **482.17** Withdrawn.

9:00 B87 **482.18** ▲ Insulin resistance and APOE ε4 allele status are linked with altered myelin in asymptomatic middle-aged adults. J. P. O'GRADY*; C. CANDA; D. C. DEAN, III; J. SOJKOVA; E. J. STARKS; S. HURLEY; N. J. DAVENPORT; O. C. OKONKWO; S. ASTHANA; M. A. SAGER; S. C. JOHNSON; A. L. ALEXANDER; B. B. BENDLIN. *Wisconsin Alzheimer's Dis. Res. Ctr., Wisconsin Alzheimer's Dis. Res. Ctr., Waisman Ctr., Wisconsin Alzheimer's Inst., Oxford Ctr. for Functional Magnetic Resonance Imaging of the Brain, Geriatric Res. Educ. and Clin. Ctr.*

10:00 B88 **482.19** CSF biomarkers of the neurovascular unit and the impact of APOE4 genetic risk in mild Alzheimer's disease. M. D. SWEENEY*; A. P. SAGARE; D. A. NATION; M. R. HALLIDAY; A. M. FAGAN; J. C. MORRIS; B. V. ZLOKOVIC. *USC, Washington Univ. Sch. of Med.*

11:00 B89 **482.20** ● The role of ApoE-4 in hippocampal hyperactivity in amnestic mild cognitive impairment. T. TRAN*; C. SPECK; A. PISUPATI; M. GALLAGHER; A. BAKKER. *Johns Hopkins Univ., Johns Hopkins Sch. of Med.*

8:00 B90 **482.21** ● Effect of MMSE and ApoE4 allele on the LymPro Test®, a cell cycle based blood test for Alzheimer's disease. L. KIRBY; P. JORGENSEN; D. A. LOWE*; C. BIER; M. SABBAGH. *Amarantus Diagnostics, Neuroassets Sarl, Banner Sun Hlth. Res. Inst.*

9:00 B91 **482.22** IND-enabling acute and chronic preclinical safety and pharmacokinetics of allopregnanolone regenerative treatment regimen for Alzheimer's disease. R. W. IRWIN*; C. M. SOLINSKY; K. KIM; C. GREEN; G. BAUER; M. A. ROGAWSKI; K. E. RODGERS; R. D. BRINTON. *Univ. of Southern California, USC, SRI, Intl., Univ. of California, Davis, Univ. of California, Davis, USC, USC.*

10:00 B92 **482.23** The role of perimenopause, inflammation and apoe4 in the pathogenesis of Alzheimer's disease. A. MISHRA*; F. YIN; A. CHRISTENSEN; C. J. PIKE; E. CADENAS; R. D. BRINTON. *USC, USC, USC.*

11:00 B93 **482.24** APOE4 impairs cognitive performance in female APOE targeted-replacement and EFAD mice. A. CHRISTENSEN*; C. J. PIKE. *USC, USC.*

8:00 B94 **482.25** Sex and APOE in the amyloid burden and microbleeds of EFAD mice and humans. M. CACCIOTTOLO*; A. CHRISTENSEN; A. ALEXANDRA MOSER; J. LUI; C. J. PIKE; T. E. MORGAN; E. BACON; G. CHIANG; C. E. FINCH. *USC Davis Sch. of Gerontology, USC, Weill Cornell Med. Col.*

9:00 B95 **482.26** APOE and sex influence glial density and cytokines in EFAD mice. T. E. MORGAN*; C. E. FINCH; M. CACCIOTTOLO. *USC.*

10:00 B96 **482.27** Preclinical safety and efficacy of allopregnanolone in a mouse model for Alzheimer's disease. C. C. CALDWELL*; R. W. IRWIN; A. ROMANI; C. SOLINSKY; S. CHEN; R. D. BRINTON. *USC Sch. of Pharm., USC Sch. of Pharm., Univ. of Ferrara, Keck Sch. of Medicine, USC.*

11:00 B97 **482.28** Allopregnanolone and its analogues differentially potentiate mitochondrial function and gene expression in human neural stem cells. M. DESAI*; R. W. IRWIN; K. GEE; R. D. BRINTON. *USC, USC, USC, USC.*

8:00 B98 **482.29** Developing mitochondrial function and regenerative potential as biomarkers of patient response to allopregnanolone treatment. C. M. SOLINSKY*; M. K. DESAI; V. HENNES; H. C. CHUI; J. K. ICHIDA; R. D. BRINTON. *USC, USC, USC.*

POSTER

483. Alzheimer's Disease: Tau

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 B99 **483.01** Fine-mapping of the MAPT gene variation in progressive supranuclear palsy. C. LABBE*; M. G. HECKMAN; S. BAHETI; D. J. SERIE; M. ALLEN; O. LORENZO BETANCOR; A. I. ORTOLAZA; R. L. WALTON; Z. K. WSZOLEK; D. W. DICKSON; O. A. ROSS. *Mayo Clin., Mayo Clin.*

9:00 B100 **483.02** Age-related changes in [18F]GE-180 uptake in the rTg4510 mouse model of tauopathy. J. GARTLON*; S. KRAUSE; Z. LI; P. MCCRACKEN; A. GIBSON; W. TRIGG; A. KOYAMA. *Eisai Inc., Eisai Inc., GE Healthcare Ltd.*

10:00 B101 **483.03** Sigma-1 receptor regulates Tau phosphorylation by shaping p35 turnover via myristic acid. S. A. TSAI*; M. POKRASS; N. KLAUER; H. NOHARA; T. SU. *NIDA-IRP, NIH, Johns Hopkins Univ., Univ. of Minnesota Med. Sch., Komagino Hosp.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 B102 **483.04** Aβ Amyloidosis stimulates development of tau pathologies in a new Alzheimer's mouse model. K. E. BRAUNSTEIN*; P. C. WONG; T. LI. *Johns Hopkins Univ. Sch. of Med.*

8:00 B103 **483.05** The distinctive TDP-43 pathology of CTE is accelerated in areas of traumatic axonal injury and co-aggregates with tau. A. C. MCKEE*; V. E. ALVAREZ; B. HUBER; A. DEDEOGLU; L. GOLDSTEIN; N. W. KOWALL; T. STEIN. *Boston Univ., VA Boston Healthcare Syst., Boston Univ.*

9:00 B104 **483.06** ● Sleep disturbance progression in P301S tau transgenic mice. J. HOLTH*; G. ROBINSON; D. M. HOLTZMAN. *Washington Univ. Sch. of Med.*

10:00 B105 **483.07** Vascular β-amyloid and tau: Bidirectional influence in APP and MAPT bigenic mice. S. SAITO*; M. IHARA; Y. OKAMOTO; Y. HATTORI; Y. YAMAMOTO; A. KITAMURA; R. TAKAHASHI. *Grad. Sch. of Medicine, Kyoto Univ., Natl. Cerebral and Cardiovasc. Ctr., Natl. Cerebral and Cardiovasc. Ctr., Kansai Electric Power Hosp.*

11:00 B106 **483.08** BRI3 allelic variants are associated with cerebrospinal fluid levels of phosphorylated-tau in Alzheimer's disease. K. D. DETERS*; K. NHO; S. L. RISACHER; S. KIM; R. VIDAL; A. J. SAYKIN. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

8:00 B107 **483.09** Tau phosphorylation increases in Alzheimer's disease mice model with diabetes associated with altered expressions of the genes involved in inflammation, insulin signaling, glucose-energy metabolism and protein quality control. N. SATO*; M. TAKEYA-ONISHI; T. TANAKA; S. NAGANO; M. MUKOUZONO; Y. TAKEYA; T. IKEUCHI; S. MURAYAMA; H. RAKUGI; R. MORISHITA. *Osaka Univ. Grad Sch. Med., Osaka Univ. Grad Sch. Med., Osaka Univ. Grad Sch. Med., Natl. center for neurology and psychiatry, Osaka Univ. Grad Sch. Med., Niigata Univ., Tokyo metropolitan institute of gerontology.*

9:00 B108 **483.10** Increasing bioavailable copper targets Tau pathology via the phosphatase PP2A in a mouse model of Alzheimer's disease. S. MCKENZIE-NICKSON*; P. S. DONNELLY; L. W. HUNG; K. J. BARNHAM. *Bio21 Inst., Florey Inst. of Neurosci. and Mental Hlth., Univ. of Melbourne.*

10:00 B109 **483.11** α-Synuclein modulates amyloid-β oligomer toxicity, tau phosphorylation, and ectopic cell cycle re-entry in neurons. S. S. THOMAS*; G. S. BLOOM. *Univ. of Virginia.*

11:00 B110 **483.12** Early tau pathology within cholinergic nucleus basalis neurons coincides with neurotrophic gene dysregulation during the progression of Alzheimer's disease. C. T. TIERNAN*; S. M. WARD; A. L. GUILLOZET-BOGAARTS; N. M. KANAAN; B. HE; S. D. GINSBERG; E. J. MUFSON; L. I. BINDER; S. E. COUNTS. *Michigan State Univ., Allen Inst. for Brain Sci., Barrow Neurolog. Inst., Nathan Kline Inst., NYU Langone Sch. of Med., NYU Langone Sch. of Med.*

8:00 B111 **483.13** Disruption of 3R/4R tau ratio impairs APP axonal transport in human Embryonic Stem Cells (hESC) derived neurons. V. LACOVICH*; M. ALLOATTI; T. FALZONE; S. ESPINDOLA; M. E. AVALE; M. ČARNA; G. FORTE; G. B. STOKIN. *Intl. Clin. Res. Ctr. (FNUSA-ICRC, Inst. de Biologıa Celular y Neurociencias (UBA-CONICET), Facultad de Medicina, Univ. de Buenos Aires, Inst. de Ingeniería genética y Biología Mol. (INGEBI-CONICET).*

9:00 B112 **483.14** ● Motor speech phenotypes of frontotemporal dementia and primary progressive aphasia: A review of behavioral and brain imaging findings. M. L. POOLE*; A. BRODMANN; D. DARBY; A. P. VOGEL. *Univ. of Melbourne, Eastern Cognitive Disorders Clin., Florey Inst. of Neurosci. and Mental Hlth.*

10:00 C1 **483.15** Temperature is involved in tau exon 10 alternative splicing regulation. F. PETRY*. *CHUL Reserach Ctr.*

11:00 C2 **483.16** Comparative distribution of early and late appearing epitopes of tau in tauopathies. O. MELÉNDEZ-FERÁNDEZ*; E. Y. KAO; S. WEINTRAUB; E. BIGIO; M. MESULAM; C. GEULA. *Northwestern Univ.*

8:00 C3 **483.17** Association of tau with the stress granule RNA-binding protein TIA1 regulates tau pathology and neurodegeneration. D. APICCO*; T. VANDERWEYDE; P. ASH; K. YOUMANS-KIDDER; A. FRAME; B. WOLOZIN. *Boston Univ. Sch. of Med.*

9:00 C4 **483.18** The increase of L-type calcium channel density produced by overexpression of human tau might underlie augmentation of the afterhyperpolarization in rat hippocampal neurons. T. W. CHURCH*; E. M. RANDALL; J. R. MONTOMERY; J. T. BROWN; N. V. MARRION. *Univ. of Bristol, Takeda Cambridge Ltd, Univ. of Exeter.*

10:00 C5 **483.19** ● Mouse strain differences and tau pathology status contribute to variability in adeno-associated viral vector-mediated shRNA knockdown. T. A. DAY*; Z. YANG; D. L. CZILLI; J. M. WOLAK; Z. AHMED; S. BOSE; M. J. O'NEILL; P. C. MAY. *Eli Lilly & Co./Llc, Eli Lilly & Co./Llc.*

11:00 C6 **483.20** Effects of thyroid hormone upon insulin signaling pathway and tau protein in the hippocampus of diabetic rats. F. P. ALMEIDA*; A. PANVELOSKI-COSTA; S. S. TEIXEIRA; M. NUNES; A. S. TORRAO. *Inst. of Biomed. Sci.*

8:00 C7 **483.21** The effect of progranulin haploinsufficiency on an Alzheimer's mouse model. C. VOLLERT*; L. MARTINEZ; M. TEJADA-SIMON; J. ERIKSEN. *Univ. of Houston.*

9:00 C8 **483.22** Progranulin over expression in a mouse model of tauopathy. D. J. FINNERAN; M. N. GORDON*; D. MORGAN; K. R. NASH. *USF Hlth. Byrd Alzheimer Inst., USF Hlth. Byrd Alzheimer's Inst.*

POSTER

484. Abeta Toxicity

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 C9 **484.01** ● Metabotropic glutamate receptor 5 couples brain cellular prion protein physically and genetically to intracellular signaling. L. T. HAAS*; S. V. SALAZAR; S. M. STRITTMATTER. *Yale Univ.*

9:00 C10 **484.02** ● Prnp and Grm5 double heterozygous state rescues Aβo-dependent inhibition of long-term potentiation in hippocampal slices. S. V. SALAZAR*; L. T. HAAS; S. M. STRITTMATTER. *Yale Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 C11 **484.03** Impact of crfr1 ablation on amyloid-β production and accumulation in a mouse model of Alzheimer's disease. S. N. CAMPBELL*; C. ZHANG; A. D. ROE; N. LEE; K. U. LAO; L. MONTE; M. C. DONOHUE; R. A. RISSMAN. *UCSD.*

11:00 C12 **484.04** Pramlintide antagonizes beta amyloid (Aβ)- and human amylin-induced depression of hippocampal long-term potentiation. R. KIMURA*; D. MACTAVISH; J. YANG; D. WESTAWAY; J. JHAMANDAS. *Tokyo Univ. of Science, Yamaguchi, Univ. of Alberta, Univ. of Alberta.*

8:00 C13 **484.05** ● Alzheimer-associated Abeta oligomers impact the central nervous system to induce peripheral metabolic deregulation. N. D. SILVA*; J. H. R. CLARKE; C. P. FIGUEIREDO; R. FROZZA; J. H. LEDO; D. BECKMAN; C. KATASHIMA; D. RAZOLLI; B. CARVALHO; R. FRAZÃO; M. SILVEIRA; F. RIBEIRO; T. BOMFIM; F. NEVES; W. KLEIN; R. MEDEIROS; F. LAFERLA; J. CARVALHEIRA; M. SAAD; D. MUNOZ; L. VELLOSO; S. FERREIRA; F. DE FELICE. *Federal Univ. of Rio De Janeiro, Federal Univ. of Rio De Janeiro, Federal Univ. of Rio de Janeiro, State Univ. of Campinas, Univ. of São Paulo, Northwestern Univ., Univ. of California, Queen's Univ., Federal Univ. of Rio de Janeiro.*

9:00 C14 **484.06** Pyroglutamate-amyloid-11-42 peptide induces antibodies recognizing main pathological forms of amyloid present in human brain and protection without activation of autoreactive T cells. G. GEVORKIAN*; R. PEREZ GARMENDIA; G. ACERO; A. POMMER; E. GONZALEZ AVILA. *Universidad Nacional Autonoma De Mexico.*

10:00 C15 **484.07** Effects of unsaturated fatty acids on Aβ fibrillization. M. ETO*; T. HASHIMOTO; T. SHIMIZU; T. IWATSUBO. *The Univ. of Tokyo, Natl. Ctr. for Global Hlth. and Med.*

11:00 C16 **484.08** Neprilysin: Neurogenesis and ß-amyloid toxicity. S. KRAFT; B. HEIMRICH; C. KLEIN; M. MAITRE; H. HOFMANN; A. G. MENSAH-NYAGAN; M. KIRSCH*. *Univ. Freiburg, Univ. de Strasbourg, Univ. Freiburg.*

8:00 C17 **484.09** ● Circadian system influence on beta-amyloid diurnal oscillation. G. J. KRESS*; F. LIAO; D. M. HOLTZMAN; E. S. MUSIEK. *Washington Univ. Sch. of Med.*

9:00 C18 **484.10** Antibody-assisted determination of molecular mass and shape of neurotoxic Abeta oligomers. A. S. SEBOLLELA*; G. MUSTATA; P. T. VELASCO; E. N. CLINE; K. C. WILCOX; K. L. VIOLA; V. P. DRAVID; W. L. KLEIN. *Univ. of Sao Paulo, Simmons Col., Northwestern Univ.*

10:00 C19 **484.11** The deleterious impact of soluble amyloid-beta oligomers on memory and sleep in Alzheimer's disease. A. SAJADI; C. PROVOST; G. FERLAND; V. MONGRAIN; R. GODBOUT; J. BROUILLETTE*. *Univ. de Montréal.*

11:00 C20 **484.12** Expression of Calbindin is suppressed by Aβ peptide. H. CHOI*; E. JUNG; Y. KIM; I. MOOK-JUNG. *Seoul Natl. Univ. Col. of Med.*

8:00 C21 **484.13** Amyloid-β binds to cerebral proteins. D. M. RIDGLEY*; G. SUN; T. TENG; J. LEE. *Univ. of Missouri, Univ. of Missouri, Univ. of Missouri.*

9:00 C22 **484.14** Role of ABCA7 in clearance of amyloid-beta peptides. W. S. KIM*. *Neurosci. Res. Australia.*

10:00 C23 **484.15** Dependently concentration effects of Amyloid-beta (25-35) peptide on oxidative stress in septal-hippocampal pathway of rats. I. LIMON PEREZ DE LEON*; F. SÁNCHEZ-CANO; A. BÁEZ-CORDERO; A. PATRICIIO; L. MENDIETA. *Benemerita Univ. Autonoma De Puebla FCQ Lab. Neurofarma, Consejo Superior de Investigaciones Científicas (CSIC).*

11:00 C24 **484.16** Aggregation states of amyloid-β affect apolipoprotein E secretion and lipidation. D. S. CHERNICK*; L. LI. *Univ. of Minnesota, Univ. of Minnesota.*

8:00 C25 **484.17** ● Amyloid beta oligomers alter sensitivity of hippocampal neurons to optogenetic stimulation. G. J. PAGANDIAZ*; M. WANG; A. JOSE; P. SENGUPTA. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

9:00 C26 **484.18** Oligomeric Aβ42 toxicity induce ER calcium release in subicular pyramidal neurons. S. ANGULO*; H. MORENO. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

10:00 C27 **484.19** Aβ1-42 oligomers block the inward rectifier potassium currents from rat pyramidal neurons. M. CUAXOSPA; J. M. ARIAS*; U. GARCÍA. *CINVESTAV, FES Iztacala -UNAM.*

11:00 C28 **484.20** ROS recovery by HDAC6 inhibition rescues impaired axonal transport by amyloid beta. H. CHOI*; J. KIM; H. KIM; H. CHOI; J. YANG; I. MOOK-JUNG. *Seoul Natl. Univ.*

8:00 C29 **484.21** Hsp60 as a protective factor against Amyloid beta misfolding. C. MARINO*; M. R. MANGIONE; R. PASSANTINO; D. BULONE; P. SAN BIAGIO; G. TAGLIALATELA. *Univ. of Texas Med. Br., Univ. of Palermo, Natl. Res. Council.*

9:00 C30 **484.22** Recurrent herpes simplex type-1 (HSV-1) infections alter adult hippocampal neurogenesis in mice via amyloid-β protein (Aβ) production and accumulation. D. D. LI PUMA*; R. PIACENTINI; A. CAMPANELLI; A. MASTRODONATO; L. LEONE; G. DE CHIARA; A. PALAMARA; C. GRASSI. *Univ. Cattolica, Med. Sch., Natl. Res. Council, Sapienza Univ. of Rome, IRCCS San Raffaele Pisana.*

10:00 C31 **484.23** Development of new animal model of Alzheimer's diseases visualizing the intracellular dynamics of the amyloid-β protein. T. OCHIISHI*; M. DOI; K. YAMASAKI; A. KITAMURA; T. URABE; N. HATTORI; M. KINJO; T. EBIHARA; H. SHIMURA. *Natl. Inst. of Advanced Industrial Sci. and Technol. (AIST), Hokkaido Univ., Juntendo Univ. Urayasu Hosp., Juntendo Univ. Sch. of Med.*

11:00 C32 **484.24** A topological analysis in APP/PS1 mice reveals that astrocytes do not migrate to amyloid-beta plaques. E. GALEA*; W. MORRISON; E. HUDRY; M. ARBEL-ORNATH; B. J. BACSKAI; T. GÓMEZ-ISLA; H. E. STANLEY; B. T. HYMAN. *Univ. Autònoma de Barcelona, Institució Catalana de Recerca i Estudis Avançats, Boston Univ., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

8:00 C33 **484.25** Quantifying amyloid-β pathology in an Alzheimer's disease mouse model: An evaluation of supervised machine learning compared to thresholding. M. T. KIRKCALDIE*; A. R. O'MARA; A. E. KING; J. C. VICKERS. *Univ. of Tasmania, Univ. of Tasmania.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 C34 **484.26** ▲ Suppression of hSlo1.1 BK channel current by different Aβ42 conformations. B. E. ZUCHELKOWSKI; L. B. FRENCH*. *Allegheny Col., Allegheny Col.*

10:00 C35 **484.27** Protective roles of neuronal autophagy induction in an adult-onset *Drosophila* model of amyloid-β accumulation. N. S. WOODLING*; J. CASTILLO-QUAN; S. MASON; L. PARTRIDGE. *Univ. Col. London.*

11:00 C36 **484.28** Amyloid β-induced inhibition of protein prenylation causes autophagy dysfunction. K. T. SMITH*; E. M. GARCIA; A. MOHAMED; E. I. POSSE DE CHAVES. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

8:00 C37 **484.29** Degradation of the mdmx/mdm4 cell cycle regulatory protein as a mechanism of amyloid-β-induced neuronal damage. C. AKAY*; D. J. COLACURCIO; J. W. ZYSKIND; K. L. JORDAN-SCIUTTO. *Univ. Pennsylvania.*

9:00 C38 **484.30** Characterization of key regions for the aggregation process that determine the cytotoxic properties of the amyloid beta peptide. V. ZOMOSA*; A. TREVIÑO; R. VIDALTAMAYO. *UANL, Univ. de Monterrey.*

POSTER

485. Alzheimer's Disease: The Secretases

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 C39 **485.01** Re-acidification of Alzheimer's-associated presenilin 1 A246E fibroblasts by cAMP requires protein kinase A and exerts downstream effects on both mechanistic target of rapamycin (mTOR) and transcription factor EB (TFEB). E. E. COFFEY*; C. H. MITCHELL. *Univ. of Pennsylvania.*

9:00 C40 **485.02** ADAM10 endocytosis and Alzheimer's disease: Looking for new therapeutic strategies. S. MUSARDO; S. PELUCCHI; D. DI MARINO; A. TRAMONTANO; V. GRIECO; C. GIUDICE; F. GARDONI; E. MARCELLO; M. DILUCA*. *Univ. of Milan, Sapienza Univ. of Rome, Univ. of Milan, Univ. of Milano.*

10:00 C41 **485.03** Presenilin-dependent modulation of axodendritic outgrowth requires APP function. C. DEYTS; M. CLUTTER; S. HERRERA; N. JOVANOVIC; A. GODDI; A. PARENT*. *Univ. Chicago.*

11:00 C42 **485.04** Differentiation of basal forebrain cholinergic neurons from induced pluripotent stem cells derived from cells harboring familial Alzheimer's mutation PSEN2 N141I. M. ORTIZ-VIRUMBRALES*; A. A. SPROUL; S. JACOB; M. ZIMMER; R. E. TANZI; E. E. SCHADT; S. A. NOGGLE; S. GANDY. *Icahn Sch. of Med. At Mount Sinai, The New York Stem Cell Fndn. Res. Inst., Genet. and Aging Unit, Massachusetts Gen. Hosp., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

8:00 C43 **485.05** A mutation in presenilin1 promotes Alzheimer-associated phenotype without affecting Notch signaling. F. CAI*; S. ZHANG; Y. WU; W. SONG. *Univ. of British Colu, Univ. of British Columbia.*

9:00 C44 **485.06** Presenilin1 mutations impair neovascularization and increase vulnerability of brain to ischemia. A. GEORGAKOPOULOS*; Y. YOON; L. CHEN; N. K. ROBAKIS. *Icahn Sch. Med. At Mount Sinai, Icahn Sch. Med. At Mount Sinai.*

10:00 C45 **485.07** Gamma-secretase activating protein (GSAP) alterations in the frontal cortex during the progression of AD. M. NADEEM*; S. PEREZ; E. J. MUFSON. *St Josephs Hospital, Barrow Neurolog. Inst., Rush Univ. Med. Ctr., BARROW NEUROLOGICAL INST.*

11:00 C46 **485.08** Analysis of Presenilin-1 Asp385 knockin mice. Y. TAN; D. XIA; R. KELLEHER; J. SHEN*. *Brigham and Women's Hosp., Massachusetts Gen. Hosp., Harvard Med. Sch.*

8:00 C47 **485.09** Attenuation of capacitative calcium entry in familial Alzheimer's disease by gamma-secretase cleavage of stromal interaction molecule 1. C. TONG*; C. S. K. LEE; C. W. H. CHENG; K. CHEUNG. *The Univ. of Hong Kong, The Univ. of Hong Kong.*

9:00 C48 **485.10** Nicastrin and Pen-2 are required while Aph-1 is dispensable for gamma secretase catalyzed turnover of the C-terminal fragment of APP. C. HU*; T. LI; L. ZENG; M. CUI; X. XU. *The Univ. of Tennessee, The Univ. of Tennessee.*

10:00 C49 **485.11** Neuronal overexpresssion of GGA3 reduces BACE1 levels and BACE1-mediated APP processing in 5XFAD mice. W. KIM*; G. TESCO. *Tufts Univ. Sch. of Med.*

11:00 C50 **485.12** Soluble APPα decrease tau phosphorylation via BACE1 inhibition and GSK-3β-mediated inhibitory phosphorylation. A. HABIB; J. DENG; H. HOU; D. OBREGON; S. BARGER; B. GIUNTA; Y. WANG; D. SAWMILLER; J. TAN*. *Univ. of South Florida, Third Military Med. Univ., Univ. of South Florida, Univ. of Arkansas for Med. Sci.*

8:00 C51 **485.13** BACE expression and activity in rapidly autopsied brains with Alzheimer's disease from Caucasian and Asian patients. H. YAO*; Y. KONISHI; A. LEVY; R. LI; Y. SHEN. *Roskamp Inst., Dept. of Clin. Research,National Med. Ctr., Dept. of Neurology, Alzheimer's Dis. Res. Ctr., Ctr. for Hormones Advanced Sci. and Education, Roskamp Inst., Beijing Inst. for Brain Disorders, Res. Center, Sch. of Life Sciences, Univ. of Sci. and Technol. of China.*

9:00 C52 **485.14** Swedish mutant APP-based BACE1 binding site peptide reduces APP β-cleavage and cerebral Aβ levels in Alzheimer's mice. D. SAWMILLER*; S. LI; H. HOU; T. MORI; A. SMITH; J. TIAN; Y. WANG; B. GIUNTA; P. R. SANBERG; S. ZHANG; J. TAN. *Univ. of South Florida Med. Sch., Dalian Med. Univ., Saitama Med. Univ., KemPharm, Third Military Med. Univ., Univ. of South Florida Med. Sch., Univ. of South Florida Med. Sch., Shanghai Hosp.*

10:00 C53 **485.15** Brain-specific hBACE1 knock-in induces systemic diabetes via hypothalamic pathology in mice. K. PLUCINSKA*; R. DEKERYTE; D. KOSS; K. SHEARER; N. MODY; G. RIEDEL; M. DELIBEGOVIC; B. PLATT. *Univ. of Aberdeen.*

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* Indicates abstract's submitting author

11:00 C54 **485.16** Transmembrane interactions in APP structure, folding, and processing by γ-secretase. P. KIENLEN-CAMPARD*; C. MARINANGELI; M. DECOCK; B. TASIAUX; J. OCTAVE; I. DEWACHTER; S. O. SMITH; S. N. CONSTANTINESCU. *Univ. Catholique De Louvain, Stony Brook Univ.*

POSTER

486. Tau and Tauopathies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 C55 **486.01** Extracellular mechanisms of tfeb-mediated clearance of ptau in tauopathies. H. MARTINI-STOICA*; H. ZHENG. *Baylor Col. of Med., Baylor Col. of Med.*

9:00 C56 **486.02** Chronic treadmill exercise prevents tau pathology and behavioral deficits in P301S tau transgenic mice. J. L. ERIKSEN*; O. OHIA-NWOKO. *Univ. of Houston.*

10:00 C57 **486.03** Entorhinal tau pathology affects motor behavior but not spatial working memory. S. E. TANNINEN*; X. JI; A. D. SOKO; R. L. KLEIN; K. TAKEHARA-NISHIUCHI; P. J. FLETCHER. *Univ. of Toronto, Ctr. for Addiction and Mental Hlth., Louisiana State Univ.*

11:00 C58 **486.04** Active immunization with highly immunogenic tau epitope induced a strong immune response together with improvement in short memory but failed to significantly reduce tau pathology in a mouse model of tauopathy. A. JOLY AMADO*; H. DAVTYAN; K. SERRANEAU; K. ZAGORSKI; M. N. GORDON; D. H. CRIBBS; A. GHOCHIKYAN; N. PETROVSKY; M. G. AGADJANYAN; D. MORGAN. *USF Hlth. Byrd Alzheimer's Inst., The Inst. for Mol. Med., Univ. of California Irvine, Flinders Med. Ctr.*

8:00 C59 **486.05** ▲ Examining the intracellular breakdown of toxic tau fragments. A. SHEPARD; B. STEVENS; E. COOKSEY; M. L. STEINHILB*. *Central Michigan Univ., Central Michigan Univ.*

9:00 C60 **486.06** Enhanced tau phosphorylation in cold-exposed old mice: Linking thermoregulation deficit with Alzheimer's disease. M. TOURNISSAC*; M. VANDAL; A. FRANCOIS; E. PLANEL; F. CALON. *Ctr. De Recherche Du CHU De Québec, Univ. Laval, Univ. Laval.*

10:00 C61 **486.07** Neuroprotective effects of a novel Hsp90 C-terminal modulator in Abeta-treated neurons and mutant tau mice. M. L. MICHAELIS*; H. MENCHEN; R. PAL; H. ZHAO; R. H. SWERDLOW; E. K. MICHAELIS; B. S. J. BLAGG. *Univ. Kansas, Univ. Kansas, Univ. Kansas, Univ. Kansas.*

11:00 C62 **486.08** Bone loss as a predictor for brain disease? Decreased bone mineral density and osteoporosis early in the lifespan of htau Alzheimer's disease mice may be associated with pathology in the dorsal raphe. M. A. SMITH*; D. MARGEVICIUS; C. M. DENGLER-CRISH. *Northeast Ohio Med. Univ., Northeast Ohio Med. Univ.*

8:00 C63 **486.09** ● Behavioral tests identify early phenotypic changes in P301S tauopathy mice. L. VER DONCK*; M. MAHIEU; K. VAN KOLEN; R. WILLEMS. *Janssen Res. & Development, A Div. of Jans.*

9:00 C64 **486.10** Physiological tissue distributions of tau and MAP2 in mice brains. A. KUBO*; H. MISONOU; M. MATSUYAMA; Y. IHARA; M. TOMOHIRO. *Doshisha Univ., Doshisha Univ., Shigei Med. Res. Inst., Doshisha Univ.*

10:00 C65 **486.11** ▲ Emergence of early alterations of functional EEG oscillations and network connectivity in a Tau seeding mouse model of Alzheimer's disease. A. AHNAOU*; D. MOECHARS; L. RAEYMAEKES; R. BIERMANS; E. PEERAER; N. MANYAKOV; T. VAN DE CASTEELE; J. KEMP; W. DRINKENBURG. *Dept. of Neurosci. Discovery, Janssen Res.*

11:00 C66 **486.12** Rho kinase inhibition reduces tau protein level in a *Drosophila* model of tauopathy. E. G. GENTRY; B. W. HENDERSON; M. GEARING; Y. FENG; N. C. RIDDLE; J. H. HERSKOWITZ*. *Univ. of Alabama at Birmingham, Emory Univ., The Scripps Res. Inst., The Univ. of Alabama At Birmingham.*

8:00 C67 **486.13** The effects of caffeine on *Drosophila* expressing tau pathology. A. M. BOOTH*; A. H. JALALI; D. I. LAMBRECHT; D. D. LENT. *California State University, Fresno.*

9:00 C68 **486.14** Tau pathology-induced memory impairments: A role for T-cell infiltration ? D. BLUM*; C. LAURENT; G. DOROTHÉE; Y. MONNET; M. DUCHAMP; A. LEBOUCHER; S. BURNOUF; R. CAILLIEREZ; N. ZOMMER; D. DEMYER; N. JOUY; S. SCHRAEN-MASCHKE; S. HUNOT; L. BUÉE. *Inserm UMR_S1172, Inserm UMRS 938, ICM, Inserm/UMPC 1127, CNRS UMR 7225.*

10:00 C69 **486.15** The loss of FUS leads to brain atrophy accompanied with neuronal loss. Y. FUJIOKA*; S. ISHIGAKI; S. YOKOI; D. HONDA; T. UDAGAWA; H. OKADO; M. YOSHIKAWA; A. TAKASHIMA; H. WATANABE; M. KATSUNO; G. SOBUE. *Nagoya Univ., Tokyo Metropolitan Inst. of Med. Sci., Natl. Ctr. for Geriatrics and Gerontology.*

11:00 C70 **486.16** Targeting the mapt locus by TALEN to study the trafficking of endogenous tau. D. XIA*; J. GOTZ. *Queensland Brain Inst.*

8:00 C71 **486.17** ● Extracellular levels of tau protein, β-amyloid and neurotransmitters in cerebral structures of a mouse model of Alzheimer's disease. E. SCHENKER*; G. ROLLIN-JEGO; R. BILLIRAS; V. PASTEAU; J. C. RICHARDSON; S. DIX; C. CZECH; L. OZMEN; A. GOBERT. *Inst. De Recherches Servier, Inst. de Recherches Servier, GlaxoSmithKline R&D, Eli Lilly, Roche Pharma and Early Development, Roche Innovation Ctr. Basel, Roche Pharma Res. and Early Development, Roche Innovation Ctr. Basel.*

9:00 C72 **486.18** ● Electrical and network neuronal properties are preferentially disrupted in dorsal, but not ventral, medial entorhinal cortex in a mouse model of tauopathy. T. RIDLER*; C. BOOTH; T. K. MURRAY; M. A. WARD; M. GOODFELLOW; K. G. PHILLIPS; A. D. RANDALL; J. T. BROWN. *Univ. of Exeter, Univ. of Bristol, Eli Lilly, Univ. of Exeter.*

10:00 C73 **486.19** Early stage alterations to prefrontal cortex neurophysiology in the rTg4510 transgenic mouse model of tauopathy. L. E. STANIASZEK*; J. T. BROWN. *Univ. of Exeter, Univ. of Exeter.*

11:00 C74 **486.20** ▲ Correlating the expression of tau and ptau with behavioral dysfunction in *Drosophila* melanogaster. J. APARICIO VALENZUELA*; A. C. OLVERA; K. HWANG; D. D. LENT. *CSU Fresno.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
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* Indicates abstract's submitting author

8:00 C75 **486.21** Pioglitazone and memantine effects on memory impairment and tau hyperphosphorylation in intracerebroventricular-streptozotocin injected rats. T. PONCE-LOPEZ*; M. ABASCAL-DÍAZ; G. LIY-SALMERÓN; A. MENESES. *CINVESTAV, Univ. Anáhuac México Norte.*

9:00 C76 **486.22** Examining the role of the polyamine system in animal models of tauopathy. L. A. SANDUSKY*; W. J. D. FRASER; H. SHAIR; A. M. BARAKAT; N. M. SLOUHA; K. RATNASAMY; J. B. HUNT; K. NASH; D. C. LEE. *USF Hlth. Byrd Alzheimer's Inst., USF Hlth. Byrd Alzheimer's Inst.*

10:00 C77 **486.23** Tau-induced down-regulation of BDNF in transgenic mouse models of tauopathy. E. ROSA; S. MAHENDRAM; Y. KE; L. ITTNER; S. D. GINSBERG; M. FAHNESTOCK*. *McMaster Univ., The Univ. of New South Wales, New York Univ. Sch. of Med.*

11:00 C78 **486.24** Chronic *in vivo* imaging of tau aggregation and toxicity in the rtg4510 mouse model. R. E. BENNETT*; S. L. DEVOS; B. T. HYMAN. *Massachusetts Gen. Hosp.*

8:00 C79 **486.25** Suppression of mutant P301L tau in young neurons slows the course of tauopathy in the rTg4510 mouse model. C. VOLBRACHT*; P. JUL; L. HELBOE. *H. Lundbeck A/S.*

POSTER

487. Molecular and Protein Abnormalities in Neurodegeneration

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 C80 **487.01** Metallothionein-3 modulates Aβ endocytosis in astrocytes through its effect on actin polymerization. B. SEO*; S. LEE; J. KOH. *Neural Injury Res. Center, Asan Inst. For, Asan Med. Ctr.*

9:00 C81 **487.02** Identification of a novel regulatory mode for Alzheimer's disease-associated DSCR1 protein stability through USP22-mediated de-ubiquitination. A. HONG; D. KIM; H. RHIM*; K. C. CHUNG. *Yonsei Univ., Korea Inst. Sci. Tech. (KIST).*

10:00 C82 **487.03** Epigenetic and endosomal-lysosomal dysfunction in the basal forebrain during the progression of Alzheimer's disease. L. MAHADY*. *Barrow Neurolog. Inst.*

11:00 C83 **487.04** Alzheimer's disease-related vascular pathology in human and transgenic mouse brain. M. TEMMEL; J. NEDDENS*; D. HAVAS; C. SCHWEINZER; J. ATTEMS; H. HUTTER; B. HUTTER-PAIER. *QPS Austria Gmbh, Inst. for Ageing and Health, Univ. of Newcastle, Inst. of Cell Biology, Histology and Embryology, Med. Univ. of Graz.*

8:00 C84 **487.05** Shankopathis in Alzheimer's disease. Y. GONG*; F. E. CHOW; R. M. TSAI; C. F. LIPPA. *Nanjing Univ. Chinese Med., Drexel Univ. Col. of Med.*

9:00 C85 **487.06** Hippocampal cathepsin D and p62 association with APP/Aβ processing and tau pathology during the progression of AD. S. E. PEREZ*; H. CHOUDARY; E. J. MUFSON. *Rush Univ. Med. Ctr., Barrow Neurolog. Inst.*

10:00 C86 **487.07** An Alzheimer's disease-linked mutant T835M-UNC5C causes neuronal cell death by activating an intracellular death signal cascade. Y. HASHIMOTO*; M. MATSUOKA. *Tokyo Med. Univ.*

11:00 C87 **487.08** Transcriptomics profiling of Alzheimer's disease reveal neurovascular defects, altered amyloid β homeostasis and deregulated expression of long noncoding RNAs. M. MAGISTRI*; D. VELMESHEV; M. MAKHMUTOVA; M. FAGHIHI. *Univ. of Miami.*

8:00 C88 **487.09** Role of the RCAN1 isoforms on calcineurin activity and mitochondrial morphology. C. A. ZAMBRANO*; H. WONG; S. KIM; E. ZIFF; C. HOEFFER. *Univ. of Colorado, New York Univ., New York Univ., Univ. of Colorado, Linda Crnic Inst.*

9:00 C89 **487.10** Bri2, a gene mutated in Alzheimer-like dementias, is a functional partner of irisin. C. D. WRANN*; K. GERBER; M. JEDRYCHOWSKI; L. YANG; V. MOOTHA; M. SCHUMACHER; L. D'ADAMIO; H. TU; S. GYGI; B. SPIEGELMAN. *Dana-Farber Cancer Inst., Harvard Med. Sch., Massachusetts Gen. Hosp., Duke Med. Sch., Albert Einstein Col. of Med., Lakepharma Inc.*

10:00 C90 **487.11** Intraneuronal Abeta accumulation increases vulnerability to oxygen-glucose deprivation and excitotoxicity. L. CALZA*; V. A. BALDASSARRO; A. MARCHESINI; M. FERNÁNDEZ; L. GIARDINO. *CIRI-SDV, Univ. of Bologna, IRET Fndn.*

11:00 C91 **487.12** ADAM10-mediated shedding significantly impacts on prion disease. M. GLATZEL*; B. PUIG; P. SAFTIG; H. C. ALTMEPPEN. *Univ. of Hamburg, Univ. of Hamburg, Christian Albrechts Universit*.

8:00 C92 **487.13** Fus-regulated micrornas in fus proteinopathy. W. A. MCGEE*; J. DENG; Y. FU; H. CHENG; K. FUSHIMI; X. CHEN; S. KUROSAKA; T. TAKUMI; A. XU; J. Y. WU. *Northwestern Univ. Feinberg Sch. of Medicin, Northwestern Univ. Feinberg Sch. of Medicin, Northwestern Univ. Feinberg Sch. of Medicin, Sun Yat-sen Univ., Sun Yat-sen Univ., Sun Yat-sen Univ., Chinese Acad. of Sci., RIKEN Brain Sci. Inst.*

9:00 C93 **487.14** Aav-mediated overexpression of progranulin corrects social behavior deficits in grn+/- mice. A. E. ARRANT*; E. D. ROBERSON. *Univ. of Alabama At Birmingham.*

10:00 C94 **487.15** Endosomal pathway deficiencies in fibroblasts from FTD-3 patients. N. ROSTGAARD*; J. E. NIELSEN; T. T. NIELSEN. *Danish Dementia Res. Centre, Univ. Hospit, Danish Dementia Res. Centre, Univ. Hospit.*

11:00 C95 **487.16** Time-dependent formation and disappearance of TDP-43 inclusions in a conditional transgenic mouse model of FTLD. L. KUKREJA*; G. KIM; K. SADLEIR; L. WANG; H. DONG; J. CSERNANSKY; M. MESULAM; R. VASSAR; C. GEULA. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

8:00 C96 **487.17** Neuroinflammaging impairs the mechanisms of response against an acute inflammatory injury: A lipopolysaccharide study in the mouse model of neurodegeneration SAMP8. C. SANFELIU; P. MOLINA-MARTÍNEZ; R. CORPAS; P. KALIMAN; M. COSÍN-TOMÁS; R. CRISTÒFOL; C. SOLÀ; G. MENGOD*; M. PALLÀS; J. L. MOLINUEVO; A. LLADÓ. *IIBB-CSIC, IDIBAPS, IIBB-CSIC, UB, IIBB-CSIC, IDIBAPS, CIBERNED, UB, CIBERNED, HCB, IDIBAPS.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 D1 **487.18** ● Asymmetric distribution of activated microglia in a left-handed patient with primary progressive aphasia, TDP-43 pathology and right hemisphere language dominance. G. KIM; S. VAHEDI; S. WEINTRAUB; C. WU*; E. BIGIO; M. MESULAM; C. GEULA. *Northwestern University, Feinberg Sch. of Med., Texas Tech. Univ. Sch. of Med.*

10:00 D2 **487.19** Determining the role of TDP-43 in Alzheimer's disease-related neurodegeneration. K. D. LACLAIR*; P. C. WONG. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

11:00 D3 **487.20** Autophagy activation is a new light for treatment of TDP-43 proteinopathies- from *Drosophila* to mammalian FTLD-U and ALS disease models. C. CHENG; I. WANG; K. J. TSAI*; C. SHEN. *Academia Sinica, Natl. Taiwan Univ., Natl. Def. Med. Ctr., Natl. Cheng Kung University, Inst. of Clin. Med.*

POSTER

488. Network Oscillations in Parkinson's Disease: Human Studies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 D4 **488.01** ● Deep Brain Stimulation in Parkinson's disease reduces cortico-subthalamic oscillatory synchrony. V. LITVAK*; A. OSWAL; M. BEUDEL; A. JHA; T. FOLTYNIE; P. LIMOUSIN; L. ZRINZO; M. I. HARIZ; P. BROWN. *UCL Inst. of Neurol., Univ. of Oxford.*

9:00 D5 **488.02** Amplified movement-related cortical desynchronization and decoupling allow normal motor responses in patients with Parkinson's disease and essential tremor. E. D. KONDYLIS*; M. J. RANDAZZO; A. ALHOURANI; W. J. LIPSKI; T. A. WOZNY; A. S. GHUMAN; M. RICHARDSON; D. J. CRAMMOND. *Univ. of Pittsburgh.*

10:00 D6 **488.03** ● Phase-amplitude coupling between beta band and high-frequency oscillations as a marker for motor impairment in Parkinson's disease. B. C. M. VAN WIJK*; M. BEUDEL; A. JHA; A. OSWAL; T. FOLTYNIE; P. LIMOUSIN; L. ZRINZO; M. I. HARIZ; P. BROWN; V. LITVAK. *Univ. Col. London, Univ. Col. London, Univ. of Oxford.*

11:00 D7 **488.04** Homeostatic regulation of beta power with motor practice is present in normal subjects but not in patients with Parkinson's disease. C. MOISELLO*; A. B. NELSON; D. BLANCO; P. PANDAY; J. LIN; A. DI ROCCO; M. GHILARDI. *CCNY, NYU Med. Ctr.*

8:00 D8 **488.05** Dyskinesia occurring with by dopaminergic medication or DBS are Associated with a narrowband high Frequency oscillation in human chronic cortical and subcortical recordings. N. C. SWANN*; C. DE HEMPTINNE; S. MIOCINOVIC; S. QASIM; S. WANG; N. ZIMAN; J. OSTREM; M. SAN LUCIANO; N. GALIFIANAKIS; P. STARR. *Univ. of California, San Francisco, Univ. of California, San Francisco.*

9:00 D9 **488.06** Physiology of cueing in Parkinson's disease: Effects of rhythmic stimulus presentation on oscillatory brain activity. E. S. TE WOERD*; R. OOSTENVELD; B. R. BLOEM; F. P. DE LANGE; P. PRAAMSTRA. *Radboud Univ. Med. Ctr., Donders Inst. for Brain, Cognition and Behavior.*

10:00 D10 **488.07** The subthalamic nucleus processes emotion: Electrophysiological differences between Parkinson's disease and Obsessive-Compulsive Disorder patients. A. BUOT; B. LAU*; M. WELTER; J. YELNIK; E. BARDINET; S. FERNANDEZ-VIDAL; C. KARACHI; L. MALLET. *Inst. du cerveau et de la moelle épinière, Assistance Publique-Hopitaux de Paris, Ctr. de Neuroimagerie de recherche, Hôpitaux Universitaires Henri Mondor – Albert Chenevier.*

11:00 D11 **488.08** Beta oscillations and the generation of reaching movements: Lateralization of sub-cortical contribution. A. CANESSA*; C. MOISELLO; G. ARNULFO; F. STEIGERWALD; N. G. POZZI; M. M. REICH; M. M. FATO; M. F. GHILARDI; J. VOLKMANN; I. U. ISAIAS. *Univ. of Genoa, Univ. Hosp. and Julius-Maximilian-University, CUNY Med. Sch.*

8:00 D12 **488.09** Cortical phase-amplitude coupling in Parkinson's disease using magnetoencephalograpy. E. PEÑA*; L. ROSEDAHL; M. D. JOHNSON; J. BAJWA. *Univ. of Minnesota, Twin Cities, King Fahad Med. City.*

9:00 D13 **488.10** Thalamic oscillatory activity in patients with parkinsonian tremor and essential tremor. P. ZHUANG*; M. HALLETT; T. LIU; Y. ZHANG; J. LI; Y. LI. *Xuanwu Hosp, Capital Med. Uni, NINDS, NIH.*

10:00 D14 **488.11** The modulation of subcortical beta oscillations during motor learning in essential tremor and Parkinson's disease. D. BASHA*; S. ELLIS; S. KALIA; M. HODAIE; A. M. LOZANO; W. D. HUTCHISON. *Toronto Western Res. Inst., Univ. of Toronto, Toronto Western Hosp., Univ. of Toronto.*

11:00 D15 **488.12** Microstimulation-induced tremor oscillations in movement disorder patients. S. ELLIS*; D. BASHA; A. LOPEZ RIOS; S. KALIA; M. HODAIE; A. LOZANO; W. HUTCHISON. *Univ. of Toronto, Toronto Western Res. Inst., Univ. of Toronto, Hosp. Universitario San Vicente de Paul, Toronto Western Hosp., Univ. of Toronto, Univ. of Toronto.*

8:00 D16 **488.13** Apathy and depression networks in Parkinson's disease. H. MORGAN; E. A. DISBROW*; C. LEDBETTER; H. NAM; C. HIGGINSON; C. REYNOLDS. *LSUHSC Sch. of Med. in Shreveport, LSU Hlth. Sci. Ctr., LSUHSC Shreveport, LSUHSC Shreveport, Loyola Univ. of Maryland, LSU Hlth. Sci. Ctr.*

9:00 D17 **488.14** Cognitive and motor switching networks are disrupted in Parkinson's disease. A. M. PURI*; C. LEDBETTER; K. RUSSO; K. SIGVARDT; E. DISBROW. *Illinois State Univ., LSU Hlth. Sci. Ctr., UC Berkeley, UC Davis, LSU Hlth. Sci. Ctr.*

10:00 D18 **488.15** Processing speed deficits have far reaching consequences in PD. B. HALL*; H. NGUYEN; C. HIGGENSON; K. SIGVARDT; L. ZHANG; N. MALHADO-CHANG; E. DISBROW. *LSUHSC Shreveport, LSU Shreveport Hlth. Sci. Ctr., Loyola Univ. Maryland, Univ. of California Davis, LSU Shreveport Hlth. Sci. Ctr.*

11:00 D19 **488.16** Differences in circle drawing rate in pd persons that show impairment in repetitive finger movement. A. F. ZAMAN*; E. STEGEMOLLER. *Iowa State Univ.*

8:00 D20 **488.17** Aberrant neural activity during cognitive control in association with Parkinson's disease. P. MANZA*; G. SCHWARTZ; S. ZHANG; C. R. LI; H. LEUNG. *Stony Brook Univ., Yale Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 D21 **488.18** Characterization of essential tremor throughout the upper limb. A. PIGG*; D. W. GEIGER; S. K. CHARLES. *Brigham Young Univ., Brigham Young Univ.*

10:00 D22 **488.19** ● A one-year phase I trial to evaluate the safety and feasibility of implanting autologous peripheral nerve grafts into the substantia nigra in subjects with Parkinson's disease undergoing Deep Brain Stimulation surgery and treatment. C. G. VAN HORNE; J. E. QUINTERO; J. T. SLEVIN; J. A. GURWELL; G. A. GERHARDT*. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky, Veterans Affairs Med. Ctr., Univ. Kentucky Med. Ctr.*

11:00 D23 **488.20** ● Using deep brain stimulation surgery as an avenue for providing neuroregenerative therapy to alter the progression of Parkinson's disease. J. R. LAMM; J. E. QUINTERO; A. J. ANDERSON; J. T. SLEVIN; G. A. GERHARDT; C. G. VAN HORNE*. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky, Veterans Affairs Med. Ctr.*

8:00 D24 **488.21** Two modalities of adaptive deep brain stimulation in Parkinson's disease patients implemented using the Activa® PC+S investigational neurostimulator and Nexus-D System Interface. A. VELISAR*; J. A. HERRON; Z. BLUMENFELD; E. J. QUINN; M. H. TRAGER; H. J. CHIZECK; H. BRONTE-STEWART. *Stanford Univ., Univ. of Washington, Stanford Univ.*

9:00 D25 **488.22** ● Subthalamic nucleus beta oscillations are attenuated for up to one hour OFF neurostimulation after six months of chronic deep brain stimulation. M. H. TRAGER*; E. J. QUINN; Z. BLUMENFELD; A. VELISAR; M. MILLER KOOP; L. SHREVE; C. KILBANE; J. M. HENDERSON; C. H. HALPERN; H. BRONTE-STEWART. *Stanford Univ., Case Western Reserve Univ., Stanford Univ.*

10:00 D26 **488.23** ● Characterization of resting state beta to high frequency oscillation phase amplitude coupling within the human subthalamic nucleus in Parkinson's disease. M. MALEKMOHAMMADI*; L. SHREVE; Z. BLUMENFELD; A. VELISAR; B. C. HILL; J. M. HENDERSON; C. H. HALPERN; H. BRONTE-STEWART. *Stanford Univ., Stanford Univ.*

POSTER

489. Huntington's Disease Mechanisms I

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 D27 **489.01** Aberrant nucleocytoplasmic transport in Huntington's disease. I. AHMED*; J. C. GRIMA; C. J. DONNELLY; R. SATTLER; S. H. SNYDER; J. D. ROTHSTEIN. *Johns Hopkins Univ. Sch. of Med.*

9:00 D28 **489.02** Cytoplasmic sphingosine-1-phosphate pathway modulates neuronal autophagy. J. F. MORUNO MANCHON*; E. E. FURR-STIMMING; S. FINKBEINER; A. S. TSVETKOV. *Univ. of Texas Med. Sch., Univ. of Texas Med. Sch., Gladstone Inst. of Neurolog. Dis. and the Taube/Koret Ctr. for Neurodegenerative Dis. Res., Univ. of California, The Univ. of Texas Grad. Sch. of Biomed. Sci.*

10:00 D29 **489.03** Mutant Huntingtin mediated repression of antioxidant gene expression is associated with sequestration of Nrf2 in aggresomes. R. C. CUMMING*; L. TINDALE; C. LI. *Univ. of Western Ontario.*

11:00 D30 **489.04** Studying turnover of mutant huntingtin in neuronal and glial cells at subcellular level. T. ZHAO*; Y. HONG; S. LI; X. LI. *Emory Univ., emory Univ., Emory Univ.*

8:00 D31 **489.05** Role of o linked beta n acetylglucosamine modification in Huntington's disease. K. MAROSI*; R. WU; M. P. MATTSON. *NIH.*

9:00 D32 **489.06** ● Lycium barbarum polysaccharide attenuates the cell toxicity of mutant huntingtin through activation of AKT pathway. F. FANG*. *Huazhong Univ. of Sci. & Technol.*

10:00 D33 **489.07** Regulation of endoplasmic reticulum stress and ribosome biogenesis in a yeast model of Huntington's disease. Y. JIANG*; P. LAJOIE. *The Univ. of Western Ontario.*

11:00 D34 **489.08** Molecular mechanism underlying defective BDNF secretion from astrocytes expressing mutant huntingtin. Y. HONG*; T. ZHAO; X. LI; S. LI. *Emory Univ., Emory Univ., Emory Univ.*

8:00 D35 **489.09** Calcium dependent regulation of Drp1 expression in Huntington's disease. J. JEON*; H. SEO. *Hanyang Univ.*

9:00 D36 **489.10** Cdk5-mediated mitochondrial fission: A key player in dopaminergic toxicity in Huntington´s disease. M. CHERUBINI; M. PUIGDELLIVOL; J. ALBERCH; S. GINES-PADROS*. *Med. School, Univ. of Barcelona.*

10:00 D37 **489.11** Neuroprotective effects of MicroNeurotrophins in Huntington's disease cellular models. K. A. MUELLER*; K. E. GLAJCH; V. PRABHAKAR; A. GRAVANIS; G. SADRI-VAKILI. *MassGeneral Inst. for Neurodegenerative Dis., Univ. of Crete.*

11:00 D38 **489.12** Uncoupling GluN2B-NMDA receptors from PSD-95 by Tat-NR2B9c peptide in Huntington's disease corticostriatal co-culture. C. BUREN*; L. ZHANG; L. RAYMOND. *The Univ. of British Columbia.*

8:00 D39 **489.13** Characterization of the role of N-type calcium channels in Huntington's disease. L. B. VIEIRA*; F. R. SILVA; R. P. M. SANTOS; E. M. L. BATISTA; F. M. RIBEIRO. *Univ. Federal de Minas Gerais (UFMG), Univ. Federal de Minas Gerais (UFMG), Univ. Federal de Minas Gerais (UFMG).*

9:00 D40 **489.14** Exploring the role of wild-type HTT in human oligodendrocytes by functional and microarray analyses. Y. TAY*; S. NAMA; P. SAMPATH; M. POULADI. *TLGM A*STAR, IMB A*STAR, Yong Loo Lin Sch. of Medicine, NUS, Yong Loo Lin Sch. of Medicine, NUS.*

10:00 D41 **489.15** Effect of total or allele-specific silencing of normal and mutant HTT in derivatives of Huntington's disease human pluripotent stem cells. M. CHERIF*; M. JARRIGE; S. GRIBAUDO; A. MARTEYN; A. PLANCHERON; S. AUBERT; M. REY; C. MONVILLE; N. DÉGLON; A. PERRIER. *Inserm/ UEVE UMR861, ISTEM, Inserm UMR861, ISTEM, CECS, ISTEM, Lausanne Univ. Hosp. (CHUV), Lausanne Univ. Hosp. (CHUV).*

11:00 D42 **489.16** ● Mitochondrial Division Inhibitor 1 and mitochondria-targeted molecules Mitoq and ss31 protects against mutant htt-induced mitochondrial toxicities in Huntington's disease neurons. X. L. YIN*; M. MANCZAK; Y. SUNEETHA; R. KANDIMALLA; A. PANDEY; C. KURUVA; P. REDDY. *TTUHSC.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 D43 **489.17** Role of TNFα in regulating corticostriatal synapses in the Huntington's disease. R. DUSEJA*; G. M. LEWITUS; H. F. ALTIMIMI; M. FRANQUIN; D. STELLWAGEN. *McGill Univ., Ctr. for Res. in Neurosci.*

9:00 D44 **489.18** ● Reduced Foxp1 expression as a contributor to Huntington's disease. A. LOUIS SAM TITUS*; S. D'MELLO. *UNIV OF TEXAS AT DALLAS, SOUTHERN METHODIST UNIVERSITY.*

10:00 D45 **489.19** Nuclear retention of full-length HTT RNA is mediated by splicing factors MBNL1. X. SUN*; P. P. LI; S. ZHU; R. COHEN; L. O. MARQUE; C. A. ROSS; R. L. MARGOLIS; D. D. RUDNICKI. *Jinan Univ., Johns Hopkins Univ. Sch. of Med.*

11:00 D46 **489.20** Altered lysosomal positioning in a cellular model of Huntington's disease. M. L. LU; J. WEI*. *Florida Atlantic Univ., Florida Atlantic Univ.*

8:00 D47 **489.21** Identification of Cellular Pathways that are Dysregulated in Huntington's disease. A. BAHARANI*; S. NAPPER. *Univ. of Saskatchewan, Univ. of Saskatchewan.*

9:00 D48 **489.22** PRC2 regulates transcriptional and behavioral phenotypes induced by mutant Huntingtin. R. J. FENSTER*; A. HEILBUT; R. KULICKE; A. POWERS; L. J. HACHIGIAN; J. P. MESIROV; E. D. KOLACZYK; M. HEIMAN. *The Broad Inst., Brown Univ., Picower Inst. for Learning and Memory, Boston Univ., MIT.*

10:00 E1 **489.23** Polyq loss of function in Huntington's disease. L. HACHIGIAN*; A. HEILBUT; R. FENSTER; R. KULICKE; E. KOLACZYK; J. MESIROV; M. HEIMAN. *MIT, Boston Univ., Broad Inst.*

POSTER

490. Autism Spectrum Disorder Models: Novel and Emerging

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 E2 **490.01** Frontal hypoconnectivity in the 16p11.2 microdeletion autism model. A. BERTERO*; G. DAVID; A. LISKA; A. GALBUSERA; M. PASQUALETTI; A. GOZZI. *Univ. of Pisa, Cnt. for Neurosci. and Cognitive Systems, Inst. Italiano di Tecnologia.*

9:00 E3 **490.02** Motor and behavioral phenotypes in a novel transgenic rat model of Rett Syndrome. K. PATTERSON*; K. ARPS; M. OLSEN. *Univ. of Alabama At Birmingham.*

10:00 E4 **490.03** Loss of MeCP2 in the rat uniquely models regression, impaired sociability, and transcriptional deficits of Rett syndrome. R. C. SAMACO*; S. VEERARAGAVAN; S. M. HAMIILTON; C. S. WARD; Y. WAN; S. SORIANO; M. R. PITCHER; C. M. MCGRAW; W. YAN; J. R. GREEN; L. YUVA; A. J. LIANG; J. L. NEUL; D. H. YASUI; J. M. LASALLE; Z. LIU; R. PAYLOR. *Baylor Col. of Medicine/ Jan and Dan Duncan Neurolog. Res. Inst., Baylor Col. of Med., UCSD, Baylor Col. of Medicine/Jan and Dan Duncan Neurolog. Res. Inst., Univ. of Texas Hlth. Sci. Ctr., Univ. of California, San Francisco, Univ. of California, Davis, Baylor Col. of Medicine/Jan and Dan Duncan Neurolog. Res. Inst.*

11:00 E5 **490.04** Neurobehavioral differences and similarities between genetic rodent models of ASD. S. VEERARAGAVAN*; J. R. GREEN; S. M. HAMIILTON; L. YUVA; R. C. SAMACO; R. PAYLOR. *Baylor college of medicine, Baylor Col. of Med., Baylor Col. of Medicine/Jan and Dan Duncan Neurolog. Res. Inst.*

8:00 E6 **490.05** ● Assessing the mecp2 (bird) model of rett syndrome across species, sex, and age. D. BRUNNER; P. A. KABITZKE*; M. OSBORNE; A. BARBOZA; L. THIEDE; N. ROBERTS; T. HANANIA. *Psychogenics, Psychogenics.*

9:00 E7 **490.06** Serotonin abnormalities in the mouse model of 16p11.2 deletion syndrome. C. M. PANZINI; A. M. ALCHAHIN; Y. GUO; K. G. COMMONS*. *Boston Children's Hosp., Second Affiliated Hospital, Harbin Med. Univ., Children's Hosp, Harvard Med.*

10:00 E8 **490.07** Absence of parvalbumin results in an Autism Spectrum Disorder-like phenotype in mice. F. FILICE*; B. SCHWALLER. *Anat. Unit, Univ. of Fribourg.*

11:00 E9 **490.08** Generation and analysis of autism model marmoset. N. KISHI*; K. SATO; M. OKUNO; H. J. OKANO; E. SASAKI; H. OKANO. *RIKEN BSI, Keio Univ. Sch. of Med., CIEA, Jikei Univ. Sch. of Med.*

8:00 E10 **490.09** Early postnatal treatment with lipopolysaccharide (LPS) as a mouse model of immune-mediated ASD. A. J. ALEXANDER; S. M. LANDINO; C. J. MCDOUGLE; B. C. FINGER*; W. A. CARLEZON. *Harvard Med. School, McLean Hosp., Lurie Ctr. for Autism, Massachusetts Gen. Hosp.*

9:00 E11 **490.10** ● Effects of cerium oxide nanoparticles on learning and motor behavior in the valproic acid rat model of autism spectrum disorder. W. E. DECOTEAU; A. E. FOX; J. LICATA; J. PARISE; A. Y. ESTEVEZ*. *St. Lawrence Univ., St. Lawrence Univ.*

10:00 E12 **490.11** The genetic intersection of neurodevelopmental disorders and shared medical comorbidities-relationships that translate from bench to bedside. A. J. STEVENSON; J. PLUMMER*; P. LEVITT. *The Saban Res. Institute, Children's Hosp. Los Angeles, Keck Sch. of Medicine, Univ. of Southern California.*

11:00 E13 **490.12** Dissecting autism heterogeneity in developing mice. M. KAS*. *Univ. Med. Ctr. Utrecht.*

8:00 E14 **490.13** Animal model module of AutDB aligns its PhenoBase with ASD phenotypes. I. DAS; M. A. ESTEVEZ*; S. BANERJEE-BASU. *Mindspec, Inc.*

9:00 E15 **490.14** Is the sympathetic hyperactivity involved in the cardioprotection against to myocardial lesions by ischemia and reperfusion in hypertensives animals? F. S. MENEZES RODRIGUES*; J. G. P. TAVARES; P. R. ERRANTE; M. C. M. REIS; R. MIRANDA-FERREIRA; L. DE PAULA; B. LUNA FILHO; A. CARICATI-NETO. *Univ. Federal De São Paulo - EPM, Univ. Federal de São Paulo - Escola Paulista de Medicina, Univ. Federal de São Paulo - Escola Paulista de Medicina.*

10:00 E16 **490.15** Rare inherited genetic variation in a multiplex family with autism and language disorders. L. JONSSON*; C. MINISCALCO; M. JOHNSON; T. MARTINSSON; J. MELKE. *Univ. of Gothenburg, Univ. of Gothenburg, Inst. of Biomedicine, Sahlgrenska Univ. Hospital, Univ. of Gothenburg.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 E17 **490.16** Rescuing forebrain commissure defects in a mouse model of autism: Can we also alter relevant behaviors? K. MANLEY; A. SNYDER-KELLER; G. W. BOTHE; K. KLUETZMAN; V. J. BOLIVAR*. *Wadsworth Ctr., State Univ. of New York.*

8:00 E18 **490.17** Changes in cortical wiring in a mouse model of autism. C. D. M. VARGAS; J. A. MAVITY-HUDSON; M. J. ROBSON; J. VEENSTRA-VANDER WEELE; M. T. WALLACE; R. D. BLAKELY; V. A. CASAGRANDE*. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Med. Sch., Vanderbilt Univ., Columbia Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

POSTER

491. Fragile X Syndrome

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 E19 **491.01** Detailed spectral analysis of Fragile X Syndrome mice vocalizations, a model to study speech deficits. A. BELAGODU*; A. JOHNSON; R. GALVEZ. *Univ. of Illinois Urbana-Champaign.*

9:00 E20 **491.02** Fragile x knockout mice show alterations in activity levels and ultrasonic vocalization behaviors. S. NOLAN; C. REYNOLDS; G. SMITH; A. HOLLEY; M. VOLQUARDSEN; T. JEFFERSON; A. PANDIAN; T. SMITH; J. HUEBSCHMAN; J. N. LUGO*, JR. *Baylor Univ.*

10:00 E21 **491.03** Fmr1 knockout rats express hippocampus-dependent, spatial and episodic-like memory, impairments. A. ASIMINAS*; S. M. TILL; S. CHATTARJI; D. J. A. WYLLIE; P. C. KIND; E. R. WOOD. *The Univ. of Edinburgh, The Univ. of Edinburgh, The Univ. of Edinburgh, Natl. Ctr. for Biol. Sci., Ctr. For Brain Develop. And Repair, The Univ. of Edinburgh.*

11:00 E22 **491.04** Study the fmr1 gene knock- out effects on the development of social- related behaviors by using zebrafish model. M. T. HSU*; Y. J. WU; Y. L. YANG; K. T. LU. *Natl. Taiwan Normal Univ., Natl. Chia-Yi Univ.*

8:00 E23 **491.05** Effects of reduced levels of BDNF expression on the differentiation of neural progenitors in Fragile X syndrome. V. S. ACHUTA*; G. TURCONI; M. CASTREN. *Univ. of Helsinki.*

9:00 E24 **491.06** Deficits in adult neurogenesis in Fragile X Syndrome. C. DAVIS*; M. DEMARS; J. LARSON; O. LAZAROV. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago, Univ. of Illinois At Chicago.*

10:00 E25 **491.07** Postnatal hippocampal neural precursor cells show an altered cell cycle profile in the Fragile X mouse. M. SOURIAL*; H. LIANG; L. C. DOERING. *McMaster Univ.*

11:00 E26 **491.08** ● ▲ Auditory stimulation differentially deactivates ERK in the amygdala of juvenile FMR1 KO mice susceptible to audiogenic seizure (AGS): Effect of GABA(A) modulation. M. H. DAVENPORT; A. A. ASHWORTH; M. S. STEGMAN; C. A. ERICKSON; T. L. SCHAEFER*. *Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati, Cincinnati Children's Hosp. Med. Ctr.*

8:00 E27 **491.09** Nmdar nr2a and nr2b specific pkc-dependent regulation of mglur is defective in the fragile x syndrome mouse model. T. G. BANKE*; A. K. H. TOFT. *Aarhus Univ.*

9:00 E28 **491.10** Network-level plasticity of Up states and evoked activity in Fragile X Syndrome circuits. H. MOTANIS*; D. BUONOMANO. *UCLA.*

10:00 E29 **491.11** Altered number of neural population activity patterns in Fragile-X mice. C. O'DONNELL*; J. T. GONCALVES; C. PORTERA-CAILLIAU; T. J. SEJNOWSKI. *Salk Inst. For Biol. Studies, UCLA, UCSD.*

11:00 E30 **491.12** Regulation of protein synthesis by Bcl-xL and its potential application in the treatment of Fragile X. P. LICZNERSKI*; P. MIRANDA; H. PARK; M. BROWN; L. K. KACZMAREK; R. J. LEVY; E. A. JONAS. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Children's Natl. Med. Center, The George Washington Univ. Sch. of Med. and Hlth. Sci.*

8:00 E31 **491.13** HDAC inhibition rescues cognitive impairments in a *Drosophila* Fragile X model. S. M. MCBRIDE*; B. SHOENFELD; C. CHOI; A. BELL; P. HINCHEY; M. KOLLAROS; A. TERLIZZI; N. FERRICK; D. LIEBELT; D. EMERSON; A. ROSTAIN; S. SIEGEL; T. MCDONALD; T. JONGENS. *Univ. of Pennsylvania, Albert Einstein Col. of Med. of Yeshiva Univ.*

9:00 E32 **491.14** Altered cellular physiology of astrocytes in a model of fragile x syndrome. A. L. SCOTT*; C. CHENG; L. C. DOERING. *McMaster Univ., McMaster Univ.*

10:00 E33 **491.15** Reduced cortical expression of astrocyte-secreted glypicans 4 and 6 in the fragile X mouse model. J. WALLINGFORD*; L. C. DOERING. *McMaster Univ.*

11:00 E34 **491.16** Developmental reductions in thrombospondin-1 expressing astrocytes characterize the fragile x mouse model. C. CHENG*; S. K. M. LAU; J. WALLINGFORD; L. C. DOERING. *McMaster Univ.*

8:00 E35 **491.17** Astroglial fragile X mental retardation protein contributes to pathogenesis of Fragile X Syndrome. H. HIGASHIMORI*; C. SCHIN; Y. YANG. *Tufts Univ., Tufts Univ.*

9:00 E36 **491.18** Effect of 5-HT7 receptor activation on dendritic spines in wild-type and Fmr1 knockout mice. M. SPATUZZA; S. D'ANTONI; G. LA QUATRA; C. M. BONACCORSO; M. LEOPOLDO; L. CIRANNA*; M. V. CATANIA. *Natl. Res. Council (CNR), Univ. of Catania, IRCCS Oasi Maria Santissima, Univ. of Bari.*

10:00 E37 **491.19** ● NKCC1 inhibitor rectifies critical period synaptic development and plasticity in Fragile X mice. Q. HE*; C. PIOCHON; A. CONTRACTOR. *Northwestern Univ. Feinberg Sch. of Medicin, Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Medicine,Northwestern Univ. Weinberg Col. of Arts and Sci.*

11:00 E38 **491.20** Gaba signaling in adult-born neurons in fragile x syndrome. C. REMMERS*; A. CONTRACTOR. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Weinberg Col. of Arts and Sci.*

8:00 E39 **491.21** Quantification of FMRP in human and mouse tissues by capture immunoassays. W. BROWN*; T. ADAYEV; R. KASCSAK; R. KASCSAK; C. DOBKIN; S. NOLIN; G. LAFAUCI. *Inst. Basic Res.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 E40 **491.22** A new proteomic profiling approach reveals dysregulation in ASD proteomes. S. ARYAL*; A. BHATTACHARYA; H. BOWLING; G. ZHANG; P. SMITH; K. KIRSHENBAUM; M. CHAO; T. NEUBERT; C. VOGEL; E. KLANN. *New York Univ. Sch. of Med., New York Univ., New York Univ., New York Univ.*

10:00 E41 **491.23** Defects in tactile stimulus evoked responses of layer 2/3 pyramidal neurons in the Fmr1-/y mouse model of Fragile X Syndrome. A. A. FRICK*; A. BHASKARAN; K. LE CORF; M. GINGER; G. BONY. *INSERM U862, Neurocentre Magendie.*

11:00 E42 **491.24** ● Dysregulated Dscam levels act through Abelson tyrosine kinase to enlarge presynaptic arbors. G. R. STERNE*; J. KIM; B. YE. *Univ. of Michigan.*

8:00 E43 **491.25** The actin-depolymerizing factor, cofilin, plays a critical role in the dendritic spine abnormalities associated with fragile x syndrome. A. PYRONNEAU*; R. S. ZUKIN. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

POSTER

492. Epilepsy Network and Synaptic Mechanisms

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 E44 **492.01** Thalamic hyperexcitability in the Scn8a model of absence epilepsy. C. D. MAKINSON*; J. SOROKIN; C. A. CHRISTIAN; J. R. HUGUENARD. *Stanford Univ., Stanford Univ.*

9:00 E45 **492.02** Excitability of CA3 hippocampal neurons in a mouse model of Dravet syndrome. H. B. FERNANDES*; J. A. KEARNEY; A. L. GEORGE, Jr.; A. CONTRACTOR. *Northwestern Univ., Northwestern Univ.*

10:00 E46 **492.03** Altered connectivity of the hippocampal CA2 region in temporal lobe epilepsy. U. HAUSSLER*; J. SULGER; K. RINAS; A. KILIAS; C. A. HAAS. *Exptl. Epilepsy Research, Dept. of Neurosurgery, Univ. of Freiburg, Dept. of Microsystems Engin. - IMTEK, Fac. of Engin., Univ. of Freiburg, Bernstein Ctr. Freiburg.*

11:00 E47 **492.04** Structural and functional plasticity of entorhinal input contributes to an epileptic hippocampal circuitry. P. JANZ*; S. SAVANTHRAPADIAN; U. HÄUSSLER; A. KILIAS; S. NESTEL; O. KRETZ; M. KIRSCH; M. BARTOS; U. EGERT; C. HAAS. *Univ. of Freiburg, Univ. of Freiburg, Univ. of Freiburg, Univ. of Freiburg, Univ. of Freiburg, Univ. of Freiburg.*

8:00 E48 **492.05** Theta oscillation impaired along the septo-temporal axis of the epileptic hippocampal formation. A. KILIAS*; U. HÄUSSLER; K. HEINING; U. P. FRORIEP; A. KUMAR; C. A. HAAS; U. EGERT. *Bernstein Ctr. Freiburg, Univ. of Freiburg, Univ. of Freiburg, Univ. of Freiburg, Univ. of Freiburg, MIT, KTH Royal Inst. of Technol.*

9:00 F1 **492.06** Two-photon imaging reveals the population dynamics of spatiotemporally compartmentalized ictal networks *in vivo*. M. WENZEL*; J. P. HAMM; D. S. PETERKA; R. YUSTE. *Columbia Univ. / Biol. Sci.*

10:00 F2 **492.07** Understanding the role of interneurons in seizure initiation, propagation, and termination using an optogenetic mouse model of seizures. S. KHOSHKHOO*; V. SOHAL. *Univ. of California, San Francisco, Univ. of California, San Francisco.*

11:00 F3 **492.08** Functional impact of minimal KCC2 in the reticular thalamus on regulation of thalamic oscillations. P. KLEIN*; M. E. HARPER; P. A. DAVOUDIAN; M. P. BEENHAKKER. *Univ. of Virginia.*

8:00 F4 **492.09** Optogenetic dissection of ictal propagation of temporal lobe epilepsy in hippocampal-entorhinal cortex circuitry. Y. LU*; C. ZHONG; Y. ZOU; L. WANG. *Chinese Acad. of Sci.*

9:00 F5 **492.10** ▲ Heterogeneous pyramidal cell dynamics of high-frequency oscillations in an experimental model of temporal lobe epilepsy. M. VALERO*; J. AGUILAR; E. CID; L. MENÉNDEZ DE LA PRIDA. *CSIC, Hosp. Nacional de Parapléjicos de Toledo.*

10:00 F6 **492.11** Some high frequency oscillations are more normal than others: PHFOs and ripples in chronic epilepsy. L. A. EWELL*; K. B. FISCHER; S. LEUTGEB; J. K. LEUTGEB. *UC-San Diego, Kavli Inst. for Brain and Mind.*

11:00 F7 **492.12** Dentate cannabinoid-sensitive interneurons develop selective strengthening of mutual synaptic inhibition in experimental epilepsy. V. SANTHAKUMAR*; A. PRODDUTUR; B. SWIETEK; J. YU. *New Jersey Med. School, Rutgers.*

8:00 F8 **492.13** ▲ Epileptic synapses trigger aberrant intrinsic plasticity in the dentate gyrus. V. CREPEL*; A. PERET; Y. MIRCHEVA; G. MARTI; J. ARTINIAN. *INMED, INSERM & Aix-Marseille Univ. UMR901.*

9:00 F9 **492.14** Epilepsy-induced dentate granule cell hyperactivation: Progression and mechanisms in a mouse model of temporal lobe epilepsy. C. G. DENGLER*; C. YUE; H. TAKANO; D. A. COULTER. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

10:00 F10 **492.15** A comparison of sparse activation in the dorsal and ventral dentate gyrus granule cells. J. B. KAHN*; H. TAKANO; D. A. COULTER. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

11:00 F11 **492.16** T-type calcium channels facilitate neuronal hyper-excitability in epileptic subiculum neurons. M. K. PATEL; B. BARKER; J. A. HOUNSHELL*. *Univ. of Virginia.*

8:00 F12 **492.17** Electrophysiological properties of age-defined dentate granule cells in a rodent model of temporal lobe epilepsy. A. L. ALTHAUS*; S. J. MOORE; H. ZHANG; G. G. MURPHY; J. M. PARENT. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

9:00 F13 **492.18** Altered GluA2 expression provides a mechanism for efficacy of AMPA receptor blockade in preventing acute post-seizure cellular changes in the developing hippocampus. J. J. LIPPMAN BELL*; H. SUN; C. ZHOU; F. E. JENSEN. *Univ. of Pennsylvania Perelman Sch. of Medi, Vanderbilt Univ. Med. Ctr.*

10:00 F14 **492.19** The brainstem is an independent generator of febrile seizures. M. PUSKARJOV; A. POSPELOV; A. YUKIN; M. S. BLUMBERG; S. BÄCK*; K. KAILA. *Univ. Helsinki, Univ. of Iowa.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 F15 **492.20** Cardiac arrhythmogenic leaky ryanodine receptor 2 mutation increases cortical excitability and lowers threshold for spreading depolarization in mouse brain. I. AIBA*; J. L. NOEBELS. *Baylor Col. of Med.*

8:00 F16 **492.21** Epileptic encephalopathy mutations in KCNQ2 disrupt expression and function of KCNQ channels and affects hippocampal excitability. J. P. CAVARETTA; K. LEE; D. JOSHI; M. HONG; W. PANG; S. WANG; N. TSAI; H. CHUNG*. *Univ. of Illinois At Urbana Champaign.*

9:00 F17 **492.22** Dynamic changes of depolarizing GABA in a computational model of epileptic brain: Insight for DRAVET syndrome. P. BENQUET*; P. KURBATOVA; F. WENDLING; A. KAMINSKA; C. CORNU; G. PONS; P. NONNY; O. DULAC; A. ROSATI; R. GUERRINI; R. NABBOUT; C. CHIRON. *INSERM U1099 -LTSI, Univ. Lyon 1, UMR U1129, Inserm-University Paris Descartes-CEA, Univ. Lyon 1, UMR 5558, CRNS, Pediatric Neurol. Unit and Laboratories, Children's Hosp. A. Meyer-University of Florence, UMR U1129, Inserm-University Paris Descartes-CEA, Paris.*

POSTER

493. Human Clinical Neurophysiology

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 F18 **493.01** High Frequency oscillations in patients with drug resistant temporal lobe epilepsy and hippocampal sclerosis. J. GONZALEZ-DAMIAN*; M. MONTES DE OCA BASURTO; R. J. STABA; A. BRAGIN; J. VELASCO CAMPOS; A. VELASCO MONROY. *Hosp. Gen. De Mexico, Univ. Nacional Autónoma de México, UCLA.*

9:00 F19 **493.02** Single-unit activities and local field potentials during spontaneous seizures in the human hippocampus and insular cortex. S. KOCHEN*; B. GORI; M. GRANADO; A. BLENKMANN. *Conicet, Conicet, Univ. of Buenos Aires.*

10:00 F20 **493.03** ● Evidence for the implant effect in chronic ambulatory human ECoGs. S. ARCOT DESAI*; F. T. SUN; T. K. TCHENG; M. J. MORRELL. *NeuroPace.*

11:00 F21 **493.04** Delay differential analysis: A framework for the analysis of large-scale epileptic electrocorticography recordings. J. WEYHENMEYER*; C. LAINSCSEK; S. S. CASH; T. J. SEJNOWSKI. *Indiana Univ. Sch. of Med., Salk Inst. for Biol. Studies, Univ. of California San Diego, Harvard Med. Sch., Massachusetts Gen. Hosp.*

8:00 F22 **493.05** Robust long-range high-gamma phase synchronization in human cortex. G. ARNULFO*; A. ZHIGALOV; J. HIRVONEN; L. NOBILI; P. PROSERPIO; M. M. FATO; G. LO RUSSO; S. PALVA; J. M. PALVA. *Univ. of Genoa, Neurosci. Center, Univ. of Helsinki, Ctr. of Epilepsy Surgery "C. Munari", Dept. of Neuroscience, Niguarda Hosp., "C. Munari", Dept. of Neuroscience, Niguarda Hosp.*

9:00 F23 **493.06** Characteristics of seizure termination in primary and secondarily generalized seizures. M. BORZELLO*; A. MAHESHWARI; C. CHU; M. KRAMER; B. M. WESTOVER; S. S. CASH. *Massachusetts Gen. Hospital, Harvard Med. Sc, Baylor Col. of Med., Boston Univ.*

10:00 F24 **493.07** Reactivation of neuronal ensemble spiking patterns during human focal seizures. F. GERHARD*; S. S. CASH; W. TRUCCOLO. *Brown Univ., Massachusetts Gen. Hosp. and Harvard Med. Sch., Brown Univ., DVA.*

11:00 F25 **493.08** Identification of epileptogenic network using intrinsic evoked potentials. S. KARUNAKARAN*; C. M. KADIPASAOGLU; G. P. KALAMANGALAM; B. AAZHANG; N. TANDON. *Univ. of Texas Med. Sch., Univ. of Texas Med. Sch., Univ. of Texas Med. Sch., Rice Univ., Mem. Herman Hosp. - TMC.*

8:00 F26 **493.09** Evaluation of the components of the cortico-cortical evoked potentials with single and paired pulse subdural electrical stimulation in epilepsy patients. B. HAJNAL; L. ENTZ*; E. TOTH; I. ULBERT; D. FABO; L. EROSS. *Natl. Inst. of Clin. Neurosciences, Semmelweis University, Sch. of PhD studies, Fac. of Information Technol. and Bionics,Pázmány Péter Catholic Univ., Inst. for Psychology,Hungarian Acad. of Sci.*

9:00 F27 **493.10** ● Robust threshold estimation for detection of discrete neural events in long-term human recordings. M. AGHAGOLZADEH*; F. GERHARD; W. TRUCCOLO. *Brown Univ., Ctr. for Neurorestoration and neurotechnology.*

10:00 F28 **493.11** Spectrum of seizures in patients with acute encephalopathy, biphasic seizures, and late reduced diffusion. Y. MURATA; K. MURAMOTO*; F. OKUTANI; N. HAMADA; Y. HATA; T. YAMAGAMI. *Kochi Med. Sch., Meikai Univ., Kochi Med. Sch., Kochi Hlth. Sci. Ctr.*

11:00 F29 **493.12** Automated ictal and postictal behavioral testing of epilepsy patients. G. TOULOUMES; W. CHEN; A. SIVARAJU; R. KHOZEIN; E. MORSE; C. CUNNINGHAM; L. J. HIRSCH; H. BLUMENFELD*. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

8:00 F30 **493.13** Mechanisms of seizure identified from causal connectivity inferred using directed information. R. MALLADI*; G. KALAMANGALAM; N. TANDON; B. AAZHANG. *Rice Univ., Univ. of Texas Hlth. Sci. Ctr., Univ. of Texas Hlth. Sci. Ctr.*

9:00 F31 **493.14** Hippocampal theta connectivity networks in normal and epileptic subjects demonstrated by magnetoencephalography. A. ALHOURANI*; M. J. RANDAZZO; T. A. WOZNY; E. D. KONDYLIS; M. J. WARD; A. NIRANJAN; A. BAGIC; A. S. GHUMAN; R. RICHARDSON. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

POSTER

494. Epilepsy Mechanisms

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 F32 **494.01** Differential activation of calpain-1 and calpain-2 following kainate-induced seizure activity in rats and mice. J. SEINFELD*; N. BAUDRY; X. XU; X. BI; M. BAUDRY. *Western Univ. of Hlth. Sci., USC.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 F33 **494.02** ▲ Signaling of β-catenin and neuronal death in cerebellum of kindling rats. A. ROSILES*; M. C. RUBIO-OSORNIO; C. TREJO-SOLÍS; J. J. GUTIÉRREZ; V. CUSTODIO; A. EGUILUZ-MELÉNDEZ; J. C. MARTÍNEZ; E. GONZÁLEZ; L. HERNÁNDEZ-LÓPEZ; C. CASTILLO; C. PAZ. *Inst. Nacional De Neurología y Neurocirugía, Inst. Nacional De Neurología y Neurocirugía, Inst. Nacional De Neurología y Neurocirugía.*

10:00 F34 **494.03** ▲ The effect of honokiol and magnolol on the inflammatory response mediated by il1-B and cox-2 in a recurrent convulsive seizures model during the neonatal period. A. VEGA GARCIA*; S. OROZOCO SUAREZ; A. MORALES OTAL; L. ROCHA ARRIETA; F. DOMINGUEZ AVILES. *Instituto Mexicano Del Seguro Social, Universidad Autónoma Metropolitana Campus Iztapalapa, Instituto Mexicano Del Seguro Social, Universidad Autónoma Metropolitana Campus Iztapalapa, Centro De Investigacion Y De Estudios Avanzados Cinvestav Campus Sur, Instituto Mexicano Del Seguro Social.*

11:00 F35 **494.04** A novel therapeutic strategy to reduce brain inflammation and injury after status epilepticus. J. JIANG*; R. DINGLEDINE. *Univ. of Cincinnati, Emory Univ. Sch. of Med.*

8:00 F36 **494.05** ▲ Spatiotemporal profile of microglial changes in the hippocampus following prolonged continuous seizure activity in an experimental model of acquired epilepsy. S. HERR*; N. SCHARTZ; L. MADESN; S. WYATT; J. WOODLIFF; A. BREWSTER. *Purdue Univ.*

9:00 F37 **494.06** ▲ The neuroprotective effect of antioxidant compounds in an *in vitro* model of epilepsy. L. P. MONTES; V. I. NAVARRO*; K. FENELON. *Univ. of Texas At El Paso.*

10:00 F38 **494.07** Early life seizures diminish silent synapses in developing cortex. H. SUN*; J. J. LIPPMAN-BELL; M. HANDY; T. K. HENSCH; F. E. JENSEN. *Univ. of Pennsylvania, Boston Children's Hosp. and Harvard Med. school.*

11:00 F39 **494.08** The effect of limbic and nonlimbic kindling on hippocampal interneuron populations. J. J. BOTTERILL*; H. J. CARUNCHO; L. E. KALYNCHUK. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan.*

8:00 F40 **494.09** Enhancing GABA signaling exacerbates febrile seizures and elicits axonal sprouting in the hippocampus. X. SUN*; R. KOYAMA; Y. IKEGAYA; H. UEDA. *Lab. of Chem. Pharmacol.*

9:00 F41 **494.10** Comparing microarray profiles of hippocampal subregions with amygdala cortical complex reveals distinct gene expression following multiple early life seizures. L. K. FRIEDMAN*; S. HU; A. M. SLOMKO; K. C. YEE; J. M. MANCUSO. *New York Med. Col., NYIT.*

10:00 F42 **494.11** ● Alterations in long-term potentiation (LTP) and gene expression of ionotropic glutamate receptors and neurotrophic factor caused by undernourishment, recurrent neonatal seizures and environmental enrichment. A. D. SEBBEN*; D. R. MARINOWIC; Z. S. M. COSTA-FERRO; S. D. SALAMONI; J. T. OLIVEIRA; V. H. OLIVEIRA; R. BREDA; M. L. NUNES. *Pontifícia Univ. Católica do Rio Grande do Sul.*

11:00 F43 **494.12** ● Effects of the intrahippocampal injection of dantrolene in the expression of synaptic plasticity-related proteins during epileptogenesis. P. X. ROYERO*; G. S. V. HIGA; B. A. SANTOS; E. R. KINJO; A. H. KIHARA. *Univ. Federal Do ABC, Univ. de São Paulo.*

8:00 F44 **494.13** Analysis of connexin expression during seizures induced by 4-aminopyridine in the rat hippocampus. L. G. MEDINA-CEJA*; C. R. SÁNCHEZ-CASTAÑEDA; X. N. FLORES-PONCE; A. MORALES-VILLAGRÁN. *Univ. de Guadalajara.*

9:00 G1 **494.14** Prolonged seizures trigger transient alterations in NeuN and Map2 expression in hippocampal CA1 cells. N. D. SCHARTZ; L. MADSEN; R. MURILLO; A. L. BREWSTER*. *Purdue Univ.*

10:00 G2 **494.15** The complex role of microRNA-124 in epileptogenesis. G. P. BRENNAN*; D. DEY; K. P. PATTERSON; E. J. MAGNETTA; A. HALL; Y. MEI; T. Z. BARAM. *Univ. of California Irvine, Univ. of California Irvine.*

11:00 G3 **494.16** Visualization of post-seizure vessel constriction in acute hippocampal slices. L. S. DAVID*; J. S. FARRELL; G. C. TESKEY. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

8:00 G4 **494.17** Does the ischemia/hypoxia that follows seizures contribute to brain damage? J. S. FARRELL*; G. C. TESKEY. *Univ. of Calgary, Hotchkiss Brain Inst., Univ. of Calgary.*

9:00 G5 **494.18** Long-term amelioration of seizure-induced hypoxia: Effect on epileptogenesis and behavioural disturbances. M. D. WOLFF*; S. C. SPANSWICK; J. S. FARRELL; G. C. TESKEY. *Univ. of Calgary.*

10:00 G6 **494.19** Glucose metabolism is unchanged despite impairments in TCA cycling in the chronic epileptic stage of the pilocarpine model. T. MCDONALD*; M. HODSON; C. CARRASCO-POZO; K. BORGES. *Univ. of Queensland, Univ. of Queensland, Univ. of Queensland, The Univ. of Chile.*

11:00 G7 **494.20** Neuropathology and morphological changes in dendritic spines caused by sarin-induced seizures in juvenile female rats. F. ROSSETTI*; L. K. WRIGHT; L. A. LANGE. *Walter Reed Army Inst. of Res., US Army Med. Res. Inst. of Chem. Def.*

8:00 G8 **494.21** Developmental plasticity of dentate gyrus granule cells following epileptiform activity *in vitro.* K. P. PATTERSON*; Y. CHEN; Y. NOAM; G. P. BRENNAN; C. LY; T. Z. BARAM. *Univ. of California- Irvine, UC- Irvine, UC-Irvine, UC- Irvine.*

9:00 G9 **494.22** Visual processing in a mouse model of focal neocortical epilepsy. A. PANARESE; A. MAZZONI; E. VANNINI; M. PIETRASANTA; S. LAI; S. MICERA; M. CALEO; L. RESTANI*. *CNR Neurosci. Inst., The BioRobotics Institute, Scuola Superiore Sant'Anna, Ecole Polytechnique Federale de Lausanne.*

10:00 G10 **494.23** Neuronal nitric oxide synthase contributes to pentylenetetrazole-kindling-induced hippocampal neurogenesis. X. ZHU*. *Med. Sch. of Southeast Univ.*

11:00 G11 **494.24** Serotonin receptor antagonists increase fast ripple activity in rats treated with kainic acid. C. G. GARCÍA-BARBA*; L. MEDINA-CEJA. *Ctr. Universitario De Ciencias Biológicas Y Agro.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 G12 **494.25** mTOR inhibition after controlled cortical impact alters hilar interneuron excitability. C. R. BUTLER*; J. A. BOYCHUK; B. N. SMITH. *Univ. of Kentucky, Epilepsy Ctr., Spinal Cord and Brain Injury Res. Ctr. (SCoBIRC).*

9:00 G13 **494.26** Exploring the role of p75NTR signaling pathway on GABAergic circuit maturation following neonatal hypoxia induced seizure. B. CHATTOPADHYAYA; M. BERRYER; D. DUFOUR-BERGERON; N. SANON; S. DESGENT; C. BOSOI; L. CARMANT; G. DI CRISTO*. *CHU Ste.justine-University of Montreal.*

10:00 G14 **494.27** The over-expression of BDNF on adult neurogenesis and seizure vulnerability using a transgenic mouse model. C. ISGOR*; P. COOMBS; D. JOSEPH; K. GUTHRIE. *Florida Atlantic Univ.*

POSTER

495. *In Vivo* and *In Vitro* Models of Acute and Chronic Seizures

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 G15 **495.01** Optically tracked interneuron dynamics during seizure initiation. M. L. MIRI; M. A. VINCK; J. A. CARDIN*. *Yale Univ., Yale Univ.*

9:00 G16 **495.02** An optogenetic kindling model of neocortical epilepsy. E. CELA*; A. J. CHUNG; T. WANG; P. J. SJÖSTRÖM. *Montreal Gen. Hosp., Integrated Program in Neuroscience, McGill Univ.*

10:00 G17 **495.03** ● Direct imaging of calcium pathology preceding kainic acid induced seizure activity in freely behaving mice. T. K. BERDYYEVA; L. ALUISIO; S. OTTE; R. M. WYATT*; C. DUGOVIC; J. SHELTON; K. GHOSH; M. J. SCHNITZER; T. LOVENBERG; P. BONAVENTURE. *Janssen Res. and Develop., Inscopix, Stanford Univ.*

11:00 G18 **495.04** An integrated platform for behavioral and electrophysiological phenotyping: Application to an epilepsy mouse model. J. PANG; D. VOLFSON*; Y. PI; J. DUERR; S. M. O'NEILL; T. SAMAD; L. SCOTT; D. L. BUHL. *Pfizer, Pfizer.*

8:00 G19 **495.05** Murine model of post-malarial epilepsy. P. SSENTONGO*; A. ROBUCCIO; D. G. SIM; G. THUKU; A. NABI; F. G. GILLIAM; S. L. WEISTEIN; F. BAHARI; B. SHANMUGASUNDARAM; K. SHORT; M. W. BILLARD; E. C. PRICE; P. J. DREW; J. A. STOUTE; A. F. READ; B. J. GLUCKMAN; S. J. SCHIFF. *PENNSYLVANIA STATE UNIVERSITY, PENNSYLVANIA STATE UNIVERSITY, PENNSYLVANIA STATE UNIVERSITY, CHILDREN'S NATIONAL MEDICAL CENTER.*

9:00 G20 **495.06** Histological analysis for a murine model of post-malarial epilepsy. A. ROBUCCIO*; P. SSENTONGO; D. SIM; A. GERONIMO; J. BACCON; E. C. PRICE; F. BAHARI; A. F. READ; S. J. SCHIFF; B. J. GLUCKMAN. *Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ. Col. of Med.*

10:00 G21 **495.07** Evidence of SUDEP in a murine model of Post-Malarial Epilepsy. F. BAHARI*; P. SSENTONGO; D. G. SIM; F. G. GILLIAM; S. L. WEINSTEIN; A. ROBUCCIO; E. C. PRICE; A. NABI; B. SHANMUGASUNDARAM; M. W. BILLARD; P. J. DREW; A. READ; S. J. SCHIFF; B. J. GLUCKMAN. *Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ., George Washington Univ.*

11:00 G22 **495.08** Activation of mTOR signaling pathway is secondary to neuronal excitability in a mouse model of mesio-temporal lobe epilepsy. N. NITTA*; F. SUZUKI; A. SHIMA; K. NOZAKI; A. DEPAULIS. *Neurosurg., Shiga Univ. of Med. Sci., Koto Mem. Hosp., Grenoble-Institut des Neurosciences.*

8:00 G23 **495.09** Brain site-specific suppression of glutamine synthetase in mice using an adeno-associated virus knockout approach. H. WANG*; R. DHAHER; M. FARINA; Y. ZHOU; S. YEE; N. C. DANBOLT; T. EID. *Yale Univ. Sch. of Med., Inst. of Basic Med. Sciences, Univ. of Oslo, Univ. of Connecticut Hlth.*

9:00 G24 **495.10** Seizure progression in a PTEN KO model. S. KHADEMI*. *Cincinnati Children's Hosp.*

10:00 G25 **495.11** Spontaneous recurrent seizures and hippocampal structural pathology in Ndel1 conditional knockout mice. C. N. GAVRILOVICI*; Y. JIANG; M. CHANSARD; F. GAO; R. H. LIU; K. PARSONS; S. K. PARK; R. TOBIAS; L. SCOTT; I. KIROSKI; G. C. TESKEY; L. H. TSAI; J. M. RHO; M. D. NGUYEN. *Univ. of Calgary, Hotchkiss Brain Institute, Univ. of Calgary, Picower Inst. for Learning and Memory, MIT, Univ. of Sci. and Technol., Hotchkiss Brain Institute, Univ. of Calgary, Alberta Children Hosp. Res. Institute, Hotchkiss Brain Institute, Univ. of Calgary, Hotchkiss Brain Institute, Univ. of Calgary.*

11:00 G26 **495.12** Modification of the focal kainate model in rats for the use in pharmacological studies on antiepileptogenesis. R. KLEE; C. BRANDT; K. TÖLLNER; W. LOSCHER*. *Univ. of Vet. Med. Hannover, Ctr. for Systems Neurosci.*

8:00 G27 **495.13** mir-124 as a potential biomarker of traumatic brain injury. N. VUOKILA*; N. PUHAKKA; K. LUKASIUK; A. PITKANEN. *Univ. of Eastern Finland, Nencki Inst. of Exptl. Biol.*

9:00 G28 **495.14** The impact of sex differences on the development of new antiepileptogenic treatments. K. TÖLLNER*; F. TWELE; C. BRANDT; W. LÖSCHER. *Univ. of Vet. Med., Ctr. for Systems Neurosci.*

10:00 G29 **495.15** Hippocampal volume and T2 signal changes in the pilocarpine model of temporal lobe epilepsy. R. BARBOSA*; A. S. VIEIRA; A. H. B. DE MATOS; B. M. DE CAMPOS; R. F. CASSEB; R. GILIOLI; I. LOPES-CENDES; F. CENDES. *Univ. of Campinas, Univ. of Campinas, Univ. of Campinas.*

11:00 G30 **495.16** Respiration-induced seizures in the adult naked mole-rat. M. ZIONS*; T. DZEDZITS; D. MCCLOSKEY. *CUNY CSI.*

8:00 G31 **495.17** Ictal patterns in limbic and cortical circuitry in an epilepsy model induced by perforant pathway long-term stimulation. A. S. BROGGINI*; I. M. ESTEVES; R. N. LEÃO; R. N. ROMCY-PEREIRA; J. P. LEITE. *Univ. of Sao Paulo, Univ. of Sao Paulo, Brain Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 G32 **495.18** Electrographic pattern of the kainic acid induced status epilepticus *in vivo.* F. M. NOÈ; C. ALESSI; A. CATTALINI; M. DE CURTIS; V. GNATKOVSKY*. *IRCCS Inst. Neurologico C. Besta.*

10:00 G33 **495.19** ▲ Histology of Epileptogenesis in Zebrafish. D. Q. PHAN*; M. BERBEROGLU; C. BEATTIE; C. W. HALL. *Johns Hopkins Univ., Ohio State Univ.*

11:00 G34 **495.20** Characteristics of a non-human primate model for electrically induced epileptic seizures. J. MYLIUS*; F. MARQUARDT; A. Y. KITAY; E. SELEZNEVA; L. BUENTJEN; C. KLUGE; J. VOGES; H. HEINZE; F. C. SCHMITT; M. BROSCH. *Leibniz Inst. for Neurobio., Otto-von-Guericke Univ., Otto-von-Guericke-University, Otto-von-Guericke Univ., Leibniz Inst. for Neurobio.*

8:00 G35 **495.21** ● Evaluation of acetylcholine and neuropathology following the administration of nerve agent and potential neuroprotective drugs in freely moving rats. C. ACON-CHEN; J. KOENIG; G. SMITH; A. TRUITT; T. THOMAS; T. SHIH*. *US Army Med. Res. Inst. Chem Defn.*

9:00 G36 **495.22** Somatostatin reverses kindling-induced increases in type-1 progenitor cells in the dentate gyrus of adult rats. J. A. LEIBOWITZ*; G. NATARAJAN; M. A. KING; P. R. CARNEY; B. K. ORMEROD. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

10:00 G37 **495.23** *In vivo* evidence of GABA-A receptor-mediated inhibition restraint in acute seizure model. J. LIOU*; M. ZHAO; E. SMITH; A. DANIEL; H. MA; C. SCHEVON; T. H. SCHWARTZ. *Columbia Univ., New York Presbyterian Hospital, Weill Med. Col. of Cornell Univ., Columbia Univ. Med. Ctr. and New York-Presbyterian Hosp., Columbia Univ. Med. Ctr. and New York-Presbyterian Hosp.*

11:00 G38 **495.24** A novel *in vitro* model for studying tetramethylenedisulfotetramine-induced neurotoxicity. L. R. VOSE*; M. LAUKOVA; J. VELISKOVA; L. VELISEK; M. P. SHAKARJIAN; P. K. STANTON. *New York Med. Col., New York Med. Col.*

8:00 G39 **495.25** Development and validation of a rat model of delayed treatment for nerve agent intoxication. H. S. MCCARREN; S. COSTINAS; E. DUNN; W. DRIWECH; A. HUBBARD; C. JACKSON; R. KREMPEL; E. MCFARLAND; C. OPPEL; J. H. MCDONOUGH*, Jr. *US Army Med. Res. Inst. of Chem. Def., US Army Med. Res. Inst. Chem Def.*

9:00 G40 **495.26** Transcriptome and proteome profile of dorsal and ventral dentate gyrus of a rat epilepsy model induced by electrical stimulation that presents classical hippocampal sclerosis. A. S. VIEIRA*; A. M. CANTO; A. H. B. MATOS; C. S. ROCHA; B. CARVALHO; V. PASCOAL; R. GLIOLI; I. LOPES-CENDES. *Univ. Estadual De Campinas - FCM, Univ. Estadual De Campinas - FCM, Univ. Federal Fluminense, Univ. Estadual De Campinas.*

10:00 G41 **495.27** A *Drosophila* model of neonatal epileptic encephalopathy. W. CHI; M. ALBERSEN; Q. YANG; M. BOSMA; S. TURKSON; N. M. VERHOEVEN-DUIF; X. ZHUANG*. *Univ. Chicago, Univ. Med. Ctr. (UMC) Utrecht.*

11:00 G42 **495.28** ▲ Dose-response curve for pentylentetrazol-induced convulsions in developing rats. E. VELAZCO*; I. ZAMORA; A. A. PUIG; R. A. MEDEL; M. L. LOPEZ-MERAZ. *Ctr. De Investigaciones Cerbrales, Univ. Veracruzana.*

8:00 G43 **495.29** The absence seizures in the myelin mutant taiep rat are sexually- and circadian- dependent. M. CORTES*; Y. SILVA; J. R. EGUIBAR. *B. Univ. Autonoma de Puebla, Benemerita Univ. Autonoma de Puebla.*

9:00 G44 **495.30** Abnormal steady-state visual responses in a *Drosophila* model of epilepsy. S. A. ALAMRI*; A. WADE; C. ELLIOTT. *Univ. of York, Univ. of York, Univ. of York.*

POSTER

496. Antiseizure Therapies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 H1 **496.01** The role of regulatory T cells in the modulation of heightened neuronal excitability in epilepsy. D. XU; S. D. MILLER; S. KOH*. *Feinberg Sch. of Medicine, Northwestern Univ., Northwestern University, Feinberg Sch. of Med.*

9:00 H2 **496.02** Neuromodulation induced by low-intensity direct current stimulation: Impact on interictal epileptic discharges. F. WENDLING*; F. MINA; G. DIEUSET; P. BENQUET. *Inserm U1099.*

10:00 H3 **496.03** Application of closed-loop optogenetics to uncover the role of hippocampal dentate gyrus microcircuits in temporal lobe epilepsy. A. BUI*; E. KROOK-MAGNUSON; C. ARMSTRONG; S. LEW; M. OIJALA; I. SOLTESZ. *Univ. of California, Irvine, Univ. of Minnesota.*

11:00 H4 **496.04** Intracerebroventricular transplantation of human fetal brain-derived neural stem/progenitor cells restrains seizures in the lithium-pilocarpine model of rat temporal lobe epilepsy. H. LEE*; S. YUN; I. KIM; I. LEE; J. SHIN; K. PARK. *Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med.*

8:00 H5 **496.05** Neuronal mechanisms of the antiepileptic effects of human pluripotent stem cell-derived maturing GABAergic interneurons. J. CHO*; M. CUNNINGHAM; S. CHUNG. *Univ. of California, Riverside, McLean Hosp, Harvard Med. Sch.*

9:00 H6 **496.06** ▲ Neurogenic stem cell behavior in models of epilepsy with and without brain damage. T. WILSON; G. KIM; K. W. THOMPSON*. *Occidental Col.*

10:00 H7 **496.07** GABAA receptor activation in newborn female rats increases the expression level of several GABAergic markers in the hippocampus and entorhinal cortex, and diminishes seizure susceptibility. M. E. URENA-GUERRERO*; K. FLORES-HUITRADO; J. MURGUÍA-CASTILLO; C. BEAS-ZÁRATE; A. FERIA-VELASCO. *Univ. De Guadalajara (CUCBA).*

11:00 H8 **496.08** Time-restricted feeding inhibits seizure susceptibility in a pharmacological seizure model by means of metabolic and epigenetic changes. J. LANDGRAVE-GÒMEZ*; O. MERCADO-GOMEZ; M. VAZQUEZ-GARCIA; V. RODRIGUEZ-MOLINA; R. GUEVARA-GUZMAN. *Facultad de Ciencias, U.N.A.M., Univ. Nacional Autonoma de Mexico.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 H9 **496.09** ● Lysophosphatidylinositol (LPI), an agonist of the noncanonical cannabinoid receptor GPR55, increases excitatory neurotransmitter release and reduces inhibitory synaptic strength. E. C. ROSENBERG*; O. DEVINSKY; R. W. TSIEN. *NYU Sch. of Med., NYU Sch. of Med., NYU Sch. of Med.*

9:00 H10 **496.10** Responsive transcranial focal electrical stimulation via tripolar concentric ring electrodes delayed the development of electrical amygdaliod kindling in the cat. A. VALDÉS-CRUZ*; W. G. BESIO; B. VILLASANA-SALAZAR; V. M. MAGDALENO-MADRIGAL; D. MARTÍNEZ-VARGAS; S. ALMAZÁN-ALVARADO; R. FERNÁNDEZ-MAS. *Inst. Nacional De Psiquiatría RFM, Univ. of Rhode Island.*

10:00 H11 **496.11** Dual-site pontine and thalamic neurostimulation to restore consciousness during and after seizure. A. J. KUNDISHORA*; A. GUMMADAVELLI; C. MA; M. LIU; C. MCCAFFERTY; J. GERRARD; H. BLUMENFELD. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med.*

11:00 H12 **496.12** ▲ Effect of vagus nerve stimulation on PTZ-induced seizures in rats with thalamic reticular nucleus lesion. E. VELÁZQUEZ-MIRANDA*; R. D. CONTRERAS-LÓPEZ; S. ALMAZÁN-ALVARADO; R. FERNÁNDEZ-MAS; V. M. MAGDALENO-MADRIGAL. *Inst. Nacional De Psiquiatría Ramón De La Fuen, Inst. Nacional De Psiquiatría Ramón De La Fuen.*

POSTER

497. Anticonvulsant Pharmacological Therapies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 H13 **497.01** Staged anticonvulsant screening for chronic epilepsy. Y. SAPONJIAN*; Y. BERDICHEVSKY; K. PARK; W. SWIERCZ; K. LU; T. JACOB; F. DUDEK; K. STALEY. *Massachusetts Gen. Hosp., Harvard Med. Sch., Lehigh Univ., Seoul Paik Hosp., Inje Univ., Univ. of Utah.*

9:00 H14 **497.02** Neuronal sodium elevation and COX-2 activation in post-traumatic epileptogenesis *in vitro*. T. BALENA*; Y. SAPONJIAN; K. PARK; K. J. STALEY. *Massachusetts Gen. Hosp.*

10:00 H15 **497.03** Pharmacological targeting of the WNK-SPAK kinase complex to modulate neuronal Cl- homeostasis and cell volume in recurrent seizures. V. I. DZHALA*; Y. SAPONJIAN; K. KAHLE; K. STALEY. *Massachusetts Gen. Hosp., Boston Children's Hosp. and Harvard Med. Sch.*

11:00 H16 **497.04** ● An *in vitro* epileptogenesis mouse model for anticonvulsant drug screening. C. EHNERT*; A. GRAMOWKI-VOSS; B. M. BADER; O. H. SCHROEDER. *Neuroproof Gmbh.*

8:00 H17 **497.05** ▲ Prediction of drug-induced seizure-liability in human iPSC-derived neuronal networks compared to primary mouse networks - functional, phenotypic *in vitro* assessment using micro-electrode arrays. A. GRAMOWSKI-VOSS*; A. PIELKA; C. EHNERT; K. JUEGELT; O. H. SCHROEDER; B. M. BADER. *NeuroProof GmbH.*

9:00 H18 **497.06** Interaction between cannabinoid type 1 and serotonin 2C receptors in the pilocarpine model of status epilepticus in rat. R. COLANGELI*; M. PIERUCCI; R. DI MAIO; G. DI GIOVANNI. *Univ. of Malta, Pittsburgh Inst. for Neurodegenerative Dis. and Dept. of Neurology, Univ. of Pittsburgh, USA.*

10:00 H19 **497.07** Major impact of the first-line antiepileptic treatment choice on the second-line treatment efficacy in a mouse model of absence epilepsy. B. MARTIN*; M. KUCHENBUCH; S. HADJADJ; G. DIEUSET; N. COSTET; L. JAVAUDIN; F. WENDLING; A. BIRABEN. *LTSI - INSERM U1099, Univ. de Rennes 1, CHU de Rennes - hôpital sud, CHU de Rennes-Pontchaillou, CHU de Rennes-Pontchaillou, CHU de Rennes-Pontchaillou.*

11:00 H20 **497.08** BUM13, a novel bumetanide derivative with reduced diuretic but enhanced anticonvulsant activity. C. BRANDT*; K. TÖLLNER; P. W. FEIT; M. GABRIEL; W. LÖSCHER; T. ERKER. *Univ. of Vet. Medicine/Dept. of Pharmacol., Univ. of Vienna.*

8:00 H21 **497.09** Effects of Calpain Inhibition on Epileptogenesis. M. I. GONZALEZ*; J. CARLSEN; P. LAM. *Univ. of Colorado, Denver.*

9:00 H22 **497.10** Glycine transporter 1 is a target for the treatment of epilepsy. H. SHEN*; E. V. VLIET; K. BRIGHT; M. HANTHORN; N. LYTLE; J. GORTER; E. ARONICA; D. BOISON. *R.S. Dow Neurobio. Labs, Academic Med. Center, Univ. of Amsterdam, Ctr. for Neuroscience, Univ. of Amsterdam, SEIN- Stichting Epilepsie Instellingen Nederland.*

10:00 H23 **497.11** Propylparaben decreases neuronal damage induced by Status Epilepticus in rat: Correlations with epileptiform oscillations. C. E. SANTANA*, SR; S. OROZCO; A. TALEVI; L. BRUNO-BLANCH; V. M. MADRIGAL; L. ROCHA. *Ctr. of Res. and Advanced Studies of the Natl. Polytechnic Inst., Specialty Hospital. Med. Res. Unit in Neurolog. Diseases. Natl. Med. Center, Century XXI, IMSS., Dept. of Medicinal Chemistry. Fac. of Exact Sciences, Natl. Univ. of La Plata, Dept. of Neurosci. Research, Natl. Inst. of Psychiatry Ramon de la Fuente Muñiz.*

11:00 H24 **497.12** Lactate dehydrogenase is a molecular target to regulate seizures. N. SADA*; T. INOUE. *Okayama Univ.*

8:00 H25 **497.13** Antiepileptic effects of rutin on picrotoxin-induced seizures in female rats. H. GERGERLIOGLU*; A. OZTURK; F. SEFIL; C. TUMER; R. DOKUYUCU; I. KAHRAMAN; O. TUTUK; H. DOGAN. *Selcuk Univ., Mustafa Kemal Univ., Mustafa Kemal Univ.*

9:00 H26 **497.14** Diphenhydramine and latrepirdone effects on seizures and brain injury in rats rollowing exposure to the chemical warfare nerve agent soman. J. W. SKOVIRA*; T. L. DAO; J. A. LEUSCHNER; R. K. KAN. *United States Army Med. Res. Inst. of Chem. Def.*

10:00 H27 **497.15** ● Efficacy of a second generation neuroactive steroid, SAGE-217, in a mouse model of chronic medial temporal lobe epilepsy. R. S. HAMMOND; G. M. BELFORT*; A. J. ROBICHAUD; J. J. DOHERTY. *Sage Therapeut.*

11:00 H28 **497.16** Revealing strategies to combat pharmacoresistance epilepsy by understanding neurochemistry for resistance to PTZ kindling: A complimentary study. R. K. GOEL*; N. K. BHANGU. *Professor,, Punjabi Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 H29 **497.17** ▲ Effect of spartein on the Status Epilepticus induced in rats by Pentylenetetrazole, Kainic Acid and Pilocarpine. F. V. VILLALPANDO VARGAS*; L. MEDINA-CEJA. *Univ. De Guadalajara.*

9:00 H30 **497.18** Antioxidant effects of tridecanoin, the triglyceride of decanoate, appear to contribute to its anticonvulsant effects. K. TAN*; C. CARRASCO-POZO; K. BORGES. *The Univ. of Queensland, The Univ. of Chile.*

10:00 H31 **497.19** Mechanistic approach to neuroprotective potential of Lacosamide in seizures. B. KUMAR*; B. MEDHI. *Postgraduate Inst. of Med. Educ. and Re, Postgraduate Inst. of Med. Educ. and Res.*

11:00 H32 **497.20** Diazepam and midazolam effectively terminate tetramethylenedisulfotetramine-induced status epilepticus and enhance survival in mice. D. ZOLKOWSKA*; D. A. BRUUN; C. A. BOOSALIS; B. HAMMOCK; P. J. LEIN; M. A. ROGAWSKI. *Univ. of California, Davis, Univ. of California, Univ. of California.*

8:00 H33 **497.21** Ketogenic diet reduces the magnitude, but not maintenance, of hippocampal long-term potentiation in freely behaving juvenile rats. J. L. KORANDA; D. N. RUSKIN*; J. BLAISE; S. A. MASINO. *Trinity Col.*

9:00 H34 **497.22** Is targeting P2X7 receptor an effective strategy to control seizure induction and recurrence? L. LIBRIZZI*; F. M. NOÈ; M. DE CURTIS. *Fondazione Inst. Neurologico C. Besta.*

10:00 H35 **497.23** Sleep alterations in the gamma2R43Q mouse model of absence epilepsy, and treatment with ganaxolone. E. WALLACE; K. MANGAN; A. NELSON; J. PFAMMATTER; R. MAGANTI; C. CIRELLI; M. V. JONES*. *Univ. Wisconsin-Madison, Cell. Dynamics Intl., CUNY Med. Sch., Univ. Wisconsin-Madison, Univ. Wisconsin-Madison, Univ. Wisconsin-Madison, Univ. Wisconsin-Madison.*

11:00 H36 **497.24** ● Evaluation of synthetic derivatives of medium chain triglyceride (MCT) fatty acids in mice. J. A. ARAUJO*; J. CASKENETTE; A. PATRICK; W. LAU; L. BALENCI; J. S. ANDREWS; S. ANNEDI; G. A. HIGGINS. *InterVivo Solutions, Vivocore, Inc, Ketogen Pharma, Inc., Vibrant Pharma.*

8:00 H37 **497.25** The tolerability and efficacy of an mTOR inhibitor Torin1 on spasms in the multiple-hit rat model of infantile spasms. T. BRIMA; W. MOWREY; S. L. MOSHE*; A. S. GALANOPOULOU. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

9:00 H38 **497.26** Paradoxical effects of subchronically and acutely administered cyclooxygenase-2 inhibitors on pentylenetetrazol (PTZ)-induced seizures. C. F. MELLO*; F. R. TEMP; J. R. MARAFIGA; A. C. JESSE; L. H. MILANESI; A. T. HESSEL; L. M. RAMBO. *Fed Univ. S. Maria (UFSM), Fed Univ. S. Maria (UFSM).*

10:00 H39 **497.27** Attenuation of corneal kindling progression by 2-deoxy-D-glucose treatment is reflected in 18-F-fluoro-deoxy-D-glucose brain kinetics. I. LEITER*; P. BASCUÑANA ALMARCHA; A. THOMER; F. BENGEL; J. BANKSTAHL; M. BANKSTAHL. *Univ. of Vet. Med. Hannover, Hannover Med. Sch.*

11:00 H40 **497.28** Dexamethasone and losartan fail to protect blood-brain barrier integrity during early epileptogenesis. H. BREUER*; M. MEIER; W. HÄRTIG; M. BANKSTAHL; J. P. BANKSTAHL. *Dept of Nuclear Medicine, Hannover Med. Sch., Univ. of Vet. Med., Hannover Med. Sch., Univ. of Leipzig.*

POSTER

498. Human Epilepsy

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 H41 **498.01** Seven year retrospective analysis of acute seizure management in children with intravenous levetiracetam. B. F. KIRMANI*, ESQ; P. LAKIREDDY; A. SARODE; O. KHAN. *T, Scott and White Neurocience Institutexas A & M Hlth. Sci. Ctr. Col. of Med., McLane Children's Hosp. and Texas A & M Col. of Med., Baylor Univ., Univ. of Chicago.*

9:00 H42 **498.02** Evaluating the seizure suppression effect induced by electrical stimulation: An *in vitro* study using human hippocampal tissue. M. HSIAO*; P. YU; D. SONG; C. LIU; C. HECK; T. W. BERGER. *USC, USC.*

10:00 H43 **498.03** Clinic0-radiological profile of neurocysticercosis patients & outcomes at bpkm cancer hospital. Q. H. ANSARI*. *BPKM Cancer Hosp.*

11:00 H44 **498.04** Therapeutic drug monitoring of oxcarbamazepine in mexican epileptic patients. N. CASTRO*; D. GONZÁLEZ-ESQUIVEL; H. JUNG. *Inst. Nacional De Neurología.*

8:00 H45 **498.05** ▲ Peripherals biomarkers indicators by neuronal damage and neuronal remodeling in patients with refractory epilepsy. M. FLORES-MENDOZA*; J. GALLARDO; A. VEGA GARCÍA, Jr; L. LORIGADOS P.; L. MORALES CHACON; S. OROZCO SUAREZ. *Inst. Mexicano Del Seguro Social, Inst. Politecnico Nacional, Inst. Mexicano del Seguro Social, Univ. Autonoma Metropolitana Campus Iztapalapa, Ctr. Internacional de Restauracion Neurologica, Ctr. Internacional de Restauracion Neurologica, Inst. Mexicano Del Seguro Social.*

9:00 H46 **498.06** Parvalbumin expression in the hippocampus of patients with mesial temporal lobe epilepsy and psychiatric comorbidities. J. B. DE ROSS*; L. KANDRATAVICIUS; M. R. MONTEIRO; R. C. SCANDIUZZI; C. G. CARLOTTI, Jr; J. A. ASSIRATI, Jr; J. E. C. HALLAK; J. P. LEITE; J. A. S. CRIPPA. *Univ. of Sao Paulo.*

10:00 H47 **498.07** ● Stereological estimates of expression of KCC2 inmunoreactive cells in tissue of patients with chronic medically intractable epilepsy. L. GRANADOS*; T. E. JUÁREZ-ZEPEDA; M. RUÍZ-GARCÍA; A. MARHX-BRACHO; R. R. RODRÍGUEZ-JURADO; M. ROJAS-MARURI; K. JERONIMO-CRUZ; L. CARMONA-APARICIO; E. COBALLASE-URRUTIA; P. DURÁN-HERNÁNDEZ. *Inst. Naciona de Pediatría, UNAM.*

11:00 H48 **498.08** High expression levels of inflammatory-related molecules and nitric oxide synthase 2 and 3 in surgical resection tissue from frontal lobe epilepsy of patients. O. F. MERCADO-GOMEZ*; L. CÓRDOVA-DÁVALOS; D. GARCÍA-BETANZO; L. ROCHA; M. ALONSO-VANEGAS; R. GUEVARA-GUZMÁN. *Natl. Autonomous Univ. of Mexico, Ctr. of Res. and Advanced Studies, Natl. Inst. of Neurol. and Neurosurg. "Manuel Velasco Suárez".*

8:00 I1 **498.09** Impact of temporal lobe epilepsy with hippocampal sclerosis upon expression of 5-HT3 receptors: Potential novel antiepileptic target. H. A. ALOMAR*; M. SHEILABI; A. PRINCIVALLE; A. MASSOURA; R. CHELVARAJAH; H. PALL; N. BARNES. *Univ. of Birmingham, King Saud Univ., Sheffield Hallam Univ., Queen Elizabeth Hosp. Birmingham, Queen Elizabeth Hosp. Birmingham.*

9:00 I2 **498.10** Long-term human brain cell primary culture from neurosurgical patients. J. LEE; A. ULYANOVA; J. SINGH; T. BELL; M. GARCIA; S. BREM; T. LUCAS; D. O'ROURKE; J. WANG; Y. NA; D. SMITH; J. KIM; S. GRADY; J. WOLF; J. SUL; J. H. EBERWINE*. *Univ. Pennsylvania Med. Ctr., Univ. Pennsylvania Med. Ctr., Univ. Pennsylvania Med. Ctr., Univ. Pennsylvania Med. Ctr., Univ. Pennsylvania Med. Ctr.*

10:00 I3 **498.11** ● ▲ Findings morphological of the cortex on patients with drug-refractory temporal lobe epilepsy: His involvement with the background in childhood. J. VILLEDA*, SR; J. DE JESUS-CARPANTA, Jr; F. FERNANDEZ-VALVERDE; M. ALONSO-VANEGAS. *Home, Inst. Nacional de Neurología and The Metropolitan Autonomous Univ., INSTITUTO NACIONAL DE NEUROLOGIA, INSTITUTO NACIONAL DE NEUROLOGIA.*

11:00 I4 **498.12** Mutation in mtDNA investigation in children mitochondrial disorders. O. V. GLOBA*; L. KUZENKOVA; E. KOLESNIKOVA; K. SAVOST'YANOV. *Scientific Ctr. of Children's Hlth., Scientific Ctr. of Children's Hlth., Scientific Ctr. of Children's Hlth.*

8:00 I5 **498.13** ● Pharmocogenomics: A new tool to predict efficacy of anti-seizure drug treatment. C. J. MARCUCCILLI*; T. ZEMBLES; T. SANDER; P. MONRAD; D. P. BICK; S. O'CONNOR; M. ZUPANC; A. K. TRYBA. *The Univ. of Chicago, Children's Hosp. of Wisconsin, Children's Hosp. of Wisconsin, Med. Col. of Wisconsin, Northwestern Univ., UC Irvine, The Univ. of Chicago.*

9:00 I6 **498.14** Subcortical shape modeling provides sensitive markers of structural abnormality in non-lesional temporal lobe epilepsy. C. WHELAN*; C. R. K. CHING; B. A. GUTMAN; Z. ABARYAN; S. ALHUSAINI; A. FAGAN; C. P. DOHERTY; N. DELANTY; G. L. CAVALLERI; P. M. THOMPSON. *USC, Royal Col. of Surgeons in Ireland, Trinity Col., St. James's Hosp., Beaumont Hosp.*

10:00 I7 **498.15** ▲ Hippocampal and cortical expression of heat shock proteins in mesial temporal lobe epilepsy and their relation to seizure outcome. A. P. NEBREDA-CORONA*; M. ARROYO-TIBURCIO; A. FLEURY; M. ALONSO-VANEGAS; J. VILLEDA-HERNANDEZ. *THE NATIONAL INSTITUTE OF NEUROLOGY AND NEUROSURGE, THE NATIONAL INSTITUTE OF NEUROLOGY AND NEUROSURGE, THE NATIONAL INSTITUTE OF NEUROLOGY AND NEUROSURGE.*

11:00 I8 **498.16** The first dedicated epilepsy brain bank in Canada. L. E. KALYNCHUK*; J. F. TELLEZ-ZENTENO; F. MOIEN-AFSHARI; C. TAGHIBIGLOU; F. CAYABYAB; R. BOROWSKY; H. AFTAB; M. VRBANIC; A. SAAD; C. ROBINSON; M. HIKEN; M. J. MICKLEBOROUGH; R. HUNTSMAN; L. HERNANDEZ RONQUILLO; A. WU. *Univ. of Saskatchewan.*

8:00 I9 **498.17** Epilepsy as a model of brain plasticity. E. ROGGENHOFER*; E. SANTARNECCHI; S. MULLER; G. VATTI; D. MARINO; F. KHERIF; R. WIEST; M. SEECK; B. DRAGANSKI. *Lab. De Recherche En Neuroimagerie (LREN), Max Planck Inst. for Human Cognitive and Brain Sci., Harvard Med. Sch., Siena Brain Investigation & Neuromodulation Lab., Siena Robotics and Systems Lab., Epilepsy Surgery Center, Dept. of Medicine, Surgery and Neurosci., Inst. for Diagnos. and Interventional Neuroradiology, EEG and Epilepsy Unit, Neurol. Dept.*

POSTER

499. Ischemia: Inflammation

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 I10 **499.01** ● Effects of Antalarmin treatment on the neuroinflammatory response to hippocampal injury post transient global cerebral ischemia in male rats. P. BARRA DE LA TREMBLAYE*; K. L. ROSS; H. PLAMONDON. *Univ. of Ottawa.*

9:00 I11 **499.02** Secondary pathology in rat cortical stroke model. J. E. ANTTILA*; T. KUAN-YIN; K. MÄTLIK; M. AIRAVAARA. *Univ. of Helsinki, Inst. of Biotech.*

10:00 I12 **499.03** Pro-inflammatory and anti-inflammatory profile of microglia and macrophages after experimental cerebral ischemia in mice. J. G. ZARRUK*; S. DAVID. *McGill Univ. Hlth. Ctr.*

11:00 I13 **499.04** Pharmacologically induced hypothermia reduces inflammatory response after ischemic stroke in mice. M. WINTER*; J. H. LEE; W. CAO; Z. Z. WEI; X. GU; L. WEI; S. P. YU. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med.*

8:00 I14 **499.05** Protease-Activated anti-inflammatory therapy for ischemic stroke changed distribution and activation of microglia cell. S. ZHANG*; L. KOJIC; Y. WEN; D. QIANG; F. MORIN; A. O. BEUKERS; K. REN; M. S. CYNADER; W. JIA. *Brain Res. Center, UBC.*

9:00 I15 **499.06** TREM2 presence in margins of ischemic brain lesions. C. SEGOVIA; C. ZURHELLEN; L. BELAYEV; R. C. SWITZER III*. *NeuroScience Associates, Louisiana State Univ. Sch. of Med.*

10:00 I16 **499.07** Delayed administration of fingolimod or minocycline attenuates neuroinflammation in a stroke model. J. KIM; M. KAWABORI; D. BINGHAM; S. WON; Z. ZHENG; R. BISHOP; S. HAWLEY; J. LIU; R. A. SWANSON; M. A. YENARI*. *Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. California, San Francisco and San Francisco Veterans Affairs Med. Ctr.*

11:00 I17 **499.08** Differential roles of microglia and monocytic cells in the ischemic brain. K. GERTZ*; N. RICHTER; R. UHLEMANN; F. KLEMPIN; L. STAERCK; S. WOLF; W. UCKERT; H. KETTENMANN; M. ENDRES; G. KRONENBERG. *Charité-Universitätsmedizin Berlin, MDC.*

8:00 I18 **499.09** Post-ischemic tracking and quantification of immune cell migration from the small intestine to lymph nodes and meninges. D. BREA*; C. BENAKIS; M. MURPHY; C. IADECOLA; J. ANRATHER. *Feil Family Brain and Mind Res. Inst.*

9:00 I19 **499.10** Osteopontin regulates neural stem cells and microglia to support regeneration after stroke. M. RABENSTEIN*; S. U. VAY; J. HUCKLENBROICH; A. WILLUWEIT; K. LANGEN; G. R. FINK; M. SCHROETER; M. A. RUEGER. *Dept. of Neurology, Univ. Hosp. of Cologne, Juelich Res. Ctr.*

10:00 I20 **499.11** Age-dependent cytoplasmic TDP- 43 accumulation in cerebral ischemia. S. THAMMISETTY*; J. KRIZ; F. CALON. *CRIUSMQ, Univ. Laval, Univ. Laval, Univ. Laval.*

11:00 I21 **499.12** Interleukin-4, which promotes alternative activation of microglia, increases neutrophil infiltration and exacerbates neuron damage if injected into the brain at the onset of ischemia. S. LIVELY*; S. HUTCHINGS; L. C. SCHLICHTER. *Toronto Western Res. Inst., Natl. Univ. of Ireland Galway.*

8:00 I22 **499.13** Gestational inflammation and neonatal arterial ischemic stroke, a causal connection? C. GUIRAUT*; N. CAUCHON; M. LEPAGE; G. SEBIRE. *Univ. De Sherbrooke, Mc Gill Univ.*

9:00 I23 **499.14** Salvia miltiorrhiza protects white matter and the hippocampus from damage induced by chronic cerebral hypoperfusion. M. KIM*; J. BANG; J. LEE; H. KIM; J. HAN; W. JEON. *Korea Inst. of Oriental Med., Konkuk Univ., Keimyung Univ., Seoul Natl. Univ.*

10:00 I24 **499.15** Targeting ischemic brain injury with cocktail drugs during reperfusion ameliorates delayed neuronal cell death following transient global cerebral ischemia. I. I. YU*; J. YEN; P. KUO; B. C. HONG-GOKA; R. D. SWEAZEY; F. CHANG. *Indiana Univ. Sch. of Med., Univ. of California, San Francisco - Fresno.*

11:00 I25 **499.16** Blood-borne monocytes amplify inflammation and transform into microglia after LPS sensitized hypoxic-ischemic brain injury in rodent neonates. Y. SUN*; J. LEE; C. BRANDON; N. ANTHONY; C. KUAN. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., The Georgia Inst. of Technol.*

8:00 I26 **499.17** Systemic immune responses to cardiac arrest in mice. N. BRANDON; H. DOU; Y. XU*. *Univ. Pittsburgh Sch. Med., Texas Tech. Univ. Hlth. Sci. Ctr.*

9:00 I27 **499.18** Modification of commensal gut bacteria induces protection from ischemic brain injury. C. BENAKIS*; D. BREA; J. MOORE; M. MURPHY; G. SITA; G. RACCHUMI; C. IADECOLA; J. ANRATHER. *Weill Cornell Med. Col.*

10:00 I28 **499.19** Dysregulated cytokine released by activated microglia in the hippocampus of diabetes associated recurrent hypoglycemic rat brain exacerbate ischemic damage. V. SHUKLA*; A. K. REHNI; K. R. DAVE. *MILLER SCHOOL OF MEDICINE, UNIVERSITY OF MIAMI.*

11:00 I29 **499.20** Recombinant tissue plasminogen activator promotes, and progesterone attenuates, microglia/macrophage M1 polarization and recruitment of microglia after MCAO stroke in rats. S. WON; J. LEE; D. STEIN; L. WEI*. *Emory Univ., Emory Univ., Emory Univ.*

8:00 I30 **499.21** ▲ Age-dependent microglial responses to hypoxia-ischemia in the developing brain. A. WALDMAN; V. CHANANA; L. COVERT; T. DEWALL; P. ROWLEY; E. UDHO; U. CIKLA; G. GAVIN; D. KINTNER; P. CENGIZ; P. FERRAZZANO*. *Univ. of Wisconsin, Univ. of Wisconsin, Waisman Ctr.*

9:00 I31 **499.22** Eriodictyol improves memory deficits in pMCAO mice by anti inflammatory pathways. A. P. F. M. MENDONCA; E. O. FERREIRA; N. M. R. LIMA; M. Y. S. D. FERNANDES; K. R. T. NEVES; A. A. FONTELES; F. A. V. LIMA; G. M. ANDRADE*. *Federal Univ. of Ceara, Federal Univ. of Ceara, Federal Univ. Ceara.*

10:00 I32 **499.23** ● The effect of transcutaneous vagus nerve stimulation on inflammatory markers in acute stroke. I. AY*; B. SIMON; H. AY. *Mass Gen. Hosp., electroCore LLC.*

11:00 I33 **499.24** Examining cannabinoid neuroprotection, inflammation and hippocampal function in a mouse model of stroke. D. J. KALAMARIDES*; P. B. SIEGELE; K. M. KING; B. K. WELLANDER; R. F. TUMA; S. J. WARD; L. G. KIRBY. *Temple Univ. Sch. of Med.*

8:00 I34 **499.25** Shaoyao-gancao decoction ameliorates neurodegeneration in cerebral ischaemia-reperfusion by inhibiting the inflammation. Y. ZHANG; J. YANG; X. JIA; H. DING; G. YAN; Q. LI; Z. XU; J. WANG; Z. KE*. *Shanghai Clin. Center, Chinese Acad. of Sciences/Shanghai Xuhui Central Hosp., Shanghai Univ. of Traditional Chinese Medicin, Shanghai Jiao Tong Univ. Sch. of Med., Shanghai Punan Hosp., Shanghai Dahua Hosp.*

POSTER

500. Traumatic Brain Injury: Therapeutic Strategies III

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 I35 **500.01** ● Targeting thalamic circuits during deep brain stimulation for traumatic brain injury. A. JANSON*; N. SCHIFF; J. BAKER; K. PURPURA; J. HENDERSON; B. RUTT; C. R. BUTSON. *Scientific Computing and Imaging Inst., Univ. of Utah, Brain and Mind Res. Inst., Stanford Univ., Stanford Univ.*

9:00 I36 **500.02** ● Circuit-level modulation of arousal using central thalamic deep brain stimulation. C. R. BUTSON*; A. JANSON; A. QUINKERT; J. BAKER; K. PURPURA; N. SCHIFF; D. PFAFF. *Univ. of Utah, Scientific Computing & Imaging (SCI) Inst, Univ. of Utah, Rockefeller Univ., Weill Cornell Med. Col.*

10:00 I37 **500.03** Sex-dependent changes in depression and facial allodynia in the chronic period following mild TBI in the mouse. S. ECKERT; J. SHAW; S. KODURI; A. HERMANN; R. PRASAD; R. ESPANA; R. RAGHUPATHI*. *Drexel Univ. Col. Med.*

11:00 I38 **500.04** Determining mean heart rate at symptomatic threshold in post-concussion syndrome. M. LETOURNEAU*; C. ALARIE; D. MOORE; D. ELLEMBERG. *Neurodevlab, Univ. of Montreal, Univ. of Montreal.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 I39 **500.05** Delayed thymosin beta 4 treatment improves functional recovery via neurovascular remodeling in rats after traumatic brain injury. Y. XIONG*; Y. ZHANG; Y. MENG; Z. LIU; D. C. MORRIS; Z. G. ZHANG; A. MAHMOOD; M. CHOPP. *Henry Ford Hlth. Syst., Henry Ford Hlth. Syst., Henry Ford Hlth. Syst., Oakland Univ.*

9:00 I40 **500.06** Deletion of aquaporin-4 is neuroprotective during the acute stage of micro traumatic brain injury in mice. Z. PEI*; F. LIANG; C. LUO. *The First Affiliated Hospital, Sun Yat-Sen Univ., State Key Lab. of Quality Res. in Chinese Medicine, Inst. of Chinese Med. Sciences, Univ. of Macau.*

10:00 I41 **500.07** The use of the dig task to explore the effectiveness of magnesium on recovery of function after traumatic brain injury. J. YOUNG*; M. R. HOANE. *Southern Illinois Univ.*

11:00 I42 **500.08** Restoration of enzymatic activity of energy related proteins in traumatically brain injured rats following the administration of gamma-glutamylcysteine ethyl ester. T. T. REED*; B. B. RICE. *Eastern Kentucky Univ.*

8:00 I43 **500.09** ● Etifoxine reduces neuroinflammation in a model of traumatic brain injury in rats. E. SIMON O'BRIEN; D. GAUTHIER; V. RIBAN*; M. VERLEYE. *Biocodex.*

9:00 I44 **500.10** A "neet" target for traumatic brain injury: Pioglitazone and mitoneet interactions improve tbi related mitochondrial dysfunction. H. M. YONUTAS*; J. PANDYA; A. SEBASTIAN; W. GELDENHUYS; R. CARROLL; P. G. SULLIVAN. *Univ. of Kentucky, Univ. of Kentucky, Northeast Ohio Med. Univ.*

10:00 I45 **500.11** Minocycline plus N-acetylcysteine have a clinically useful therapeutic window in two animal models of traumatic brain injury. M. A. SANGOBOWALE*; N. M. GRIN'KINA; K. WHITNEY; P. J. BERGOLD. *SUNY Downstate Med. Ctr.*

11:00 I46 **500.12** Multi-modal interventions for improving recovery after TBI assessed by a data-driven multivariate approach. J. HAEFELI*; A. R. FERGUSON; D. BINGHAM; A. ORR; S. WON; T. I. LAM; J. SHI; S. HAWLEY; J. LIU; R. A. SWANSON; S. M. MASSA. *UCSF, San Francisco Veterans Affairs Med. Ctr.*

8:00 I47 **500.13** effect of aspirin and clopidogrel on bleeding, platelet aggregation, and neuronal damage following traumatic brain injury. F. H. KOBEISSY*; M. NASSER; D. SERHAN; F. DAKROUB; Z. DALLOUL; E. HAMADE; K. ZIBARA; H. DARWICHE. *Univ. of Florida, American Univ. of Beirut, American Univ. of Beirut, Lebanese Univ.*

9:00 I48 **500.14** Galantamine as an effective co-adjuvant medical countermeasure to counter the delayed neurotoxic effects of the organophosphorus compound sarin. E. F. PEREIRA*; Y. ARACAVA; J. D. PESCRILLE; D. CARTER; L. RICHARDSON; D. MCKOY; L. MCCOWAN; E. ALEXANDROVA; N. PHAM; E. LUMSDEN; R. CLARK; J. MAMCZARZ; S. XU; R. P. GULLAPALLI; M. LANE; I. MERCHENTHALER; G. W. BASINGER, Jr.; E. X. ALBUQUERQUE. *Univ. Maryland Sch. Med., Countervail Corp.*

10:00 J1 **500.15** Efficacy of oral galantamine pre-treatment against soman toxicity in guinea pigs. Y. ARACAVA*; J. D. PESCRILLE; D. CARTER; R. CLARK; L. RICHARDSON; M. LANE; E. F. PEREIRA; E. X. ALBUQUERQUE; G. W. BASINGER, Jr. *Univ. Maryland Sch. Med., Countervail Corp.*

11:00 J2 **500.16** Pharmacokinetics of galantamine following oral administration to guinea pigs. W. P. FAWCETT; R. H. COOMBES; Y. ARACAVA; J. D. PESCRILLE; G. W. BASINGER, Jr.; E. F. PEREIRA; E. X. ALBUQUERQUE*. *Univ. Maryland Sch. Med., Countervail Corp.*

8:00 J3 **500.17** Hyperbaric oxygen therapy as a potential treatment for traumatic brain injury. C. G. PICK*; R. BARATZ-GOLDSTEIN; V. RUBOVITCH; S. TOUSSIA-COHEN. *Tel Aviv Univ., Tel Aviv Univ.*

9:00 J4 **500.18** Wnt3a protects against autophagic cell death after traumatic brain injury. J. Y. ZHANG*; J. LEE; S. P. YU; L. WEI. *Emory Univ.*

10:00 J5 **500.19** Acute intrathecal baclofen (ITB) and therapeutic exercise provide effective rehabilitation for TBI-Induced spasticity without adversely affecting cognitive performance. F. J. THOMPSON*; J. HOU; R. NELSON; G. MUSTAFA; A. SINHAROY; R. PANDEY; Z. WILKIE; S. TSUDA; L. PAGE; P. BOSE. *North Florida/South Georgia Veterans Hlth. Syst., Univ. of Florida, Univ. of Florida, Univ. of Florida, Medtronic, Univ. of Florida.*

11:00 J6 **500.20** Post-traumatic pain in a rodent model of mild-traumatic brain injury (mTBI) and treatment with transcranial magnetic stimulation (TMS). G. MUSTAFA*; J. HOU; S. TSUDA; R. NELSON; R. M. CAUDLE; J. K. NEUBERT; F. J. THOMPSON; P. BOSE. *North Florida/ South Georgia Veterans Hlth. Syst., Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

8:00 J7 **500.21** Altered noradrenergic innervation in the amygdala-bed nucleus of the stria terminalis and the ventral subiculum-paraventricular nucleus of hypothalamus anxiety pathways following closed-head traumatic brain injury in rats. S. TSUDA*; J. HOU; R. NELSON; G. MUSTAFA; Z. WILKIE; F. J. THOMPSON; P. BOSE. *Malcom Randal VA Med. Ctr., Univ. of Florida, Univ. of Florida, Univ. of Florida.*

9:00 J8 **500.22** New therapy in experimental TBI-induced motor (e.g. spasticity and balance), cognitive and anxiety disorders. J. HOU*; R. NELSON; Z. WILKIE; G. MUSTAFA; S. TSUDA; R. J. BERGERON, Jr.; P. BOSE; F. J. THOMPSON. *NF/SG Veterans Hlth. Syst., Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

10:00 J9 **500.23** Neurobiological markers of aberrant aversive learning in the traumatic brain injury rodent model. R. P. MEARS*; H. C. CROMWELL; P. K. BOSE; F. J. THOMPSON. *Univ. of Florida, Bowling Green State Univ., Brain Rehabil. Res. Ctr. (151), North Florida/South Georgia VA Hlth. Syst., Univ. of Florida, Univ. of Florida.*

POSTER

501. Cell Death Mechanisms: Oxidative Stress

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 J10 **501.01** Role of d-serine in nadph oxidase-induced oxidant/antioxidant imbalance in early stage vascular dementia. N. LI*; W. ZHANG; Y. ZHU; D. BRANN; R. WANG. *North China Univ. of Sci. and Technol., Med. Col. of Georgia.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 J11 **501.02** Role of oxidative cysteine protein modification in Amphetamine induced neurotoxicity. V. BHARTI; H. TAN; Z. ZHOU; Y. WANG; J. WANG*. *Dept. of Pharmacol. & Therapeutics, Fac. of Medicine, Univ. of Manitoba.*

10:00 J12 **501.03** Neuroprotection by valproic acid and spermidine in a mouse model of normal tension glaucoma. T. HARADA*; A. KIMURA; T. NORO; X. GUO; K. NAMEKATA; C. HARADA. *Visual Res. Project, Tokyo Metropolitan Inst. of Med. Sci.*

11:00 J13 **501.04** Molecular mechanisms activated by iron in neuroblastoma SH-SY5Y cells. E. BAUTISTA*; P. VERGARA; J. SEGOVIA-VILA. *CINVESTAV.*

8:00 J14 **501.05** Acute binge ethanol exposure induces brain proinflammatory cytokines, NADPH oxidase, microglial activation and neurodegeneration. L. QIN*; F. T. CREWS. *Univ. North Carolina, Sch. Med.*

9:00 J15 **501.06** Novel function of amyotrophic lateral sclerosis-associated fus in oxidative dna damage repair by enhancing the ligation activity of ligase iii. H. WANG*; T. ALAN E.; P. HEGDE; S. MITRA; M. HEGDE. *Houston Methodist Hosp. Res. Inst., Univ. of New Mexico Cancer Center,University of New Mexico, Houston Methodist Res. Inst., Houston Methodist Res. Inst.*

10:00 J16 **501.07** Sirt3-mediated deacetylation of SOD2 contributes to neuronal survival during excitotoxicity. C. C. ALANO*; S. KIM. *VAMC/UCSF.*

11:00 J17 **501.08** Neuronal activity and the astrocytic Nrf2 pathway cooperate to provide neuroprotection against oxidative stress. N. M. MARKUS*; K. F. S. BELL; P. S. BAXTER; B. AL-MUBARAK; M. MARTEL; N. WHEELAN; S. MCKAY; R. F. DEIGHTON; P. HASEL; S. CHOWDHRY; P. J. MEAKIN; A. M. KAINDL; R. H. SCANNEVIN; D. J. A. WYLLIE; J. D. HAYES; G. E. HARDINGHAM. *The Univ. of Edinburgh, The Univ. of Dundee, Universitatsmedizin Berlin, Biogen Idec.*

8:00 J18 **501.09** TGF-β1 upregulates system xc- through ERK mediated increased oxidative stress. R. ALBANO*; J. HJELMHAUG; D. LOBNER. *Marquette Univ.*

9:00 J19 **501.10** Effect post-lesion of curcumin on quinolinic acid-induced dysregulation of MAPK pathway signaling in a model of striatal neurodegeneration. R. A. SANTANA MARTINEZ*; D. BARRERA; P. D. MALDONADO. *Natl. Inst. of Neurol. and Neurosurg., Univ. Nacional Autónoma de México.*

10:00 J20 **501.11** The impact of reactive oxygen species (ROS) on mitochondrial transport in axons. P. LIAO*; P. J. HOLLENBECK. *Purdue Univ.*

11:00 J21 **501.12** ● Inhibition of HDAC6 protects neuronal cells against oxidative stress-induced cell death. L. MA*; Y. HU; C. A. GRETZULA; S. NIROOMAND; J. J. RENGER; S. M. SMITH. *Merck Res. Labs.*

8:00 J22 **501.13** Inorganic mercury-mediated cytotoxicity and oxidative injury in human astrocytes. D. OSPONDPANT*; P. CHIVICHIT; N. SIBMOOH; S. SOODVILAI; P. VIVITHANAPORN. *Fac. of Science, Mahidol Univ., Fac. of Science, Mahidol Univ.*

9:00 J23 **501.14** Hippo/MST1 signaling regulates neuronal cell death and microglial activation. Z. YUAN*; S. ZHAO; L. ZHOU; R. WU. *Inst. of Biophysics.*

10:00 J24 **501.15** Maternal vitamin B12 deficiency is associated with increased oxidative stress and DNA damage in brain regions of C57BL/6 mouse offspring. S. GHOSH*; J. K. SINHA; M. RAGHUNATH. *NATIONAL INSTITUTE OF NUTRITION.*

11:00 J25 **501.16** Flavanoid (-)-epicatechin inhibits hemoglobin-induced oxidative stress in astrocytes via nrf2 and ap1 pathways. X. LAN*; J. WANG. *Johns Hopkins.*

8:00 J26 **501.17** Characterization of the Nrf2 activation pathway, independent of oxidative stress. C. A. SILVA*; P. MALDONADO. *Natl. Inst. of Neurol. and Neurosurg., Natl. Inst. of Neurol. and Neurosurg.*

9:00 J27 **501.18** The ketone body b-hydroxybutyrate (BHB) reduces the production of reactive oxygen species and prevents neuronal death induced by glucose deprivation in cortical cultured neurons. T. MONTIEL*; E. SOTO TINOCO; C. GERONIMO-OLVERA; S. FLORES; L. MASSIEU T. *Inst. de Fisiologia Celular.*

10:00 J28 **501.19** Novel acrolein scavenger dimercaprol mitigates acrolein-mediated PC-12 cell death, reduces acrolein concentration and offers neuroprotection in a rat contusive spinal cord injury model. R. TIAN*; R. SHI. *Purdue Univ., Purdue Univ.*

POSTER

502. Major Mental Disorders: Experimental Therapeutics

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 J29 **502.01** ● Deleting PDE11A4 improves efficacy of the mood stabilizer lithium. M. P. KELLY*; B. IBRAHIM; K. BISHARA; W. CAPELL; J. FISHER; N. PATEL; G. PATHAK. *Univ. of South Carolina Sch. of Med., Univ. of South Carolina Sch. of Med.*

9:00 J30 **502.02** Development of kinome-wide and isoform selective inhibitors of GSK3α and GSK3β for the treatment of psychiatric disorders. M. C. LEWIS*; F. F. WAGNER; J. GALE; A. J. CAMPBELL; J. SACHER; D. WALPITA; D. FEI; M. WEIWER; L. ROSS; A. J. HEYNEN; L. STOPPEL; M. WALK; S. NGUYEN; D. BARKER; F. AN; M. PALMER; S. J. HAGGARTY; M. BEAR; K. STEGMAIER; E. SCOLNICK; Y. ZHANG; J. Q. PAN; E. B. HOLSON. *Broad Inst., Broad Inst., Dana Farber Cancer Inst., MIT, Massachusetts Gen. Hosp.*

10:00 J31 **502.03** Development of b-arrestin biased D2R antagonists for the treatment of schizophrenia. A. A. AMAYA*; M. WEÏWER; J. GALE; M. LEWIS; J. Q. PAN; Y. ZHANG; Q. XU; L. LI; A. SKEPNER; M. WALK; D. FEI; F. A. SCHROEDER; J. M. HOOKER; G. C. VAN DE BITTNER; K. DENNEHY; L. DORDEVIC; S. NGUYEN; F. F. WAGNER; M. PALMER; E. SCOLNICK; E. B. HOLSON. *Broad Inst. of MIT and Harvard Med. Sch., Broad Inst. of MIT/Harvard, MGH, MGH.*

11:00 J32 **502.04** Limbic regulation of prefrontal glutamate and dopamine release is mediated by stimulation of cortical alpha7 nicotinic receptors. V. VALENTINI*; D. M. BORTZ; V. PERRA; G. P. PIETRO; D. PHENIS; G. DI CHIARA; J. P. BRUNO. *Univ. of Cagliari-Dept. Biomed. Sci., Natl. institute of Neurosci., Univ. of Cagliari, The Ohio State Univ., Inst. of Neurosci., The Ohio State Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 J33 **502.05** Positive allosteric modulators of the alpha7 nicotinic acetylcholine receptor potentiate glutamate levels in prefrontal cortex *in vivo.* D. M. BORTZ*; B. A. UPTON; J. D. MIKKELSEN; J. P. BRUNO. *Dept. of Psychology- The Ohio State Universit, Univ. Hosp. Copenhagen, The Ohio State Univ.*

9:00 J34 **502.06** Dose dependent effects of delta-9-tetrahydrocannabinol on correlates of schizophrenia in the sub-chronic PCP rat model. A. SEILLIER*; S. A. PEREZ; A. A. MARTINEZ; D. J. LODGE; A. GIUFFRIDA. *UTHSCSA.*

10:00 J35 **502.07** ● The effects of PDE4 and PDE10 inhibition on auditory processing in mice. L. SCOTT*; C. BUZBY; Z. HUGHES. *Pfizer, Northeastern Univ.*

11:00 J36 **502.08** Phosphorylation of Heterochromatin Protein 1 (HP1gamma) and H3S10 by antipsychotics. B. M. FEINER*; K. A. CHASE; J. MELBOURNE; C. ROSEN; R. P. SHARMA. *UIC Psychiatry, Univ. of Chicago, Jesse Brown Veterans Affairs Med. Ctr.*

8:00 J37 **502.09** ● ▲ Glycinamide blocks MK-801-induced hyperlocomotion in an inverted U-shaped fashion in an animal model of positive-like symptoms of schizophrenia. E. BASURTO*; K. L. HOFFMAN; O. GONZALEZ-FLORES. *Univ. Autónoma de Tlaxcala - CINVESTAV.*

9:00 J38 **502.10** ● NSX-0527: A novel M1/M4 selective muscarinic agonist with antipsychotic and cognition-enhancing properties. J. C. OCKULY; J. D. BECK; S. A. HANSON; M. L. HENDRICKSON*. *NeuroSolis, Inc.*

10:00 J39 **502.11** Pharmacological blockade of Lingo-1 in combination with olanzapine administration reverses phencyclidine induced effects on dendritic morphology, cognitive performance and locomotor activity. J. L. ANDREWS*; R. P. SULLIVAN; K. A. NEWELL; X. HUANG; F. FERNANDEZ-ENRIGHT. *Illawarra Hlth. and Med. Res. Inst., Fac. of Science, Med. and Hlth., Schizophrenia Res. Inst., ARC Ctr. of Excellence for Electromaterials Science, Intelligent Polymer Res. Inst., Fac. of Social Sci.*

11:00 J40 **502.12** ▲ Pharmacotherapeutic potential of disrupting neuromodulation of hyper-dopaminergic neural activity in the co-morbid expression of schizophrenia and drug addiction. T. COOMER*; J. GALLEGOS; N. RAUSCHER; P. ELLO; K. SANDERS; R. DAS; E. OLESON. *Univ. of Colorado Denver.*

8:00 J41 **502.13** Positive allostery: A new approach to the treatment of schizophrenia. R. P. DAYA*; J. K. BHANDARI; S. K. KOONER; R. L. JOHNSON; R. K. MISHRA. *McMaster Univ., Univ. of Minnesota.*

9:00 J42 **502.14** The ergoline 2-bromoterguride produces antipsychotic-like effects and mild hyperprolactinemia in rats. J. BROSDA*; E. A. TARLAND; R. T. FRANKE; H. H. PERTZ; H. FINK. *FU Berlin, FU Berlin.*

10:00 J43 **502.15** Effects of chronic haloperidol treatment on the nigrostriatal dopamine system. D. GROOS; F. ZHENG*; C. P. MÜLLER; C. ALZHEIMER. *Univ. of Erlangen-Nürnberg, Univ. of Erlangen-Nürnberg, Univ. of Erlangen-Nürnberg.*

11:00 J44 **502.16** Green tea polyphenol, EGCG, attenuates phencyclidine-induced HSP70 expression and hyperlocomotion in the rat. A. S. DARVESH*; W. J. GELDENHUYS; P. SADANA; C. PAXOS; A. PRUS; H. BERGSTROM; C. K. MESHUL; S. P. BERGER. *Northeast Ohio Med. Univ. (NEOMED), Northern Michigan Univ., NIH, Oregon Hlth. & Sci. Univ., Skybridge Pharmaceuticals Inc.*

8:00 J45 **502.17** Effects of tianeptine on adults offspring rats exposed prenatally stressed rats: Evaluation prenatally preventive antipsychotic and antidepressant drug treatment. H. LEE; H. WON; J. IM; H. KIM; J. KWON; H. KIM*. *Soonchunhyang Univ.*

9:00 J46 **502.18** Embryonic stem cell transplants as a therapeutic strategy in a rodent model of schizophrenia. J. J. DONEGAN*; J. TYSON; S. ANDERSON; D. LODGE. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Univ. of Pennsylvania Sch. of Med.*

10:00 J47 **502.19** The glutathione cycle: An access point to target neural glutamate and oxidative stress. T. W. SEDLAK*; M. KOGA; C. HIGGS; P. TALALAY; A. SAWA. *Johns Hopkins Sch. of Med.*

POSTER

503. Cognition and Anxiety: Human Studies

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 J48 **503.01** A stimulus-invariant threat encoding in human sensory cortex. M. STAIB*; D. R. BACH. *Univ. of Zurich.*

9:00 K1 **503.02** ▲ Increase thalamic modulation of cortical targets in obsessive-compulsive disorder: Network dysfunction as a basis for obsessive-compulsive symptoms. H. PAREKH*; D. BATTEPATI; A. BURGESS; C. RIX; P. ARNOLD; G. HANNA; D. ROSENBERG; V. A. DIWADKAR. *Wayne State Univ., Wayne State Univ., Univ. of Toronto, Univ. of Michigan.*

10:00 K2 **503.03** Racial differences in the emotional response to aversive threat. N. G. HARNETT*; J. C. LADNIER; M. D. WHEELOCK; K. H. WOOD; M. A. SCHUSTER; M. N. ELLIOT; S. TORTOLERO; S. MRUG; D. C. KNIGHT. *Univ. of Alabama At Birmingham, Harvard Med. Sch., Boston Children's Hosp., RAND, Univ. of Texas.*

11:00 K3 **503.04** Deconstructing white matter connectivity of human amygdala and thalamus subdivisions *in vivo.* A. ABIVARDI*; D. R. BACH. *Psychiatrische Universitätsklinik Zürich.*

8:00 K4 **503.05** Meta-analysis of sex difference in human amygdala volume. D. MARWHA; M. HALARI; L. S. ELIOT*. *Rosalind Franklin Univ.*

9:00 K5 **503.06** Contextual fear conditioning in humans using painful laser. J. CHIEN; F. A. LENZ; A. SCHMID; J. KIM; D. T. CHENG; W. S. ANDERSON; C. LIU*. *Johns Hopkins Univ. Sch. of Med., Korea Univ. Guro Hosp., Johns Hopkins Univ. Sch. of Med.*

10:00 K6 **503.07** Biases guiding preference between painful sequences. J. S. WINSTON*; C. NORD; K. OHRNBERGER; Y. TSENG; R. B. RUTLEDGE; G. REES; I. VLAEV; R. J. DOLAN. *Univ. Col. London, Univ. of Warwick.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 K7 **503.08** Temporal integration of social and emotional cues in social anxiety disorder. S. DUBAL*; N. GEORGE; A. PELISSOLO; V. KRIEGER. *CNRS, APHP Henri-Mondor, Univ. Paris Est, APHP Pitie-Salpetriere, Univ. Paris 6.*

8:00 K8 **503.09** The tipping point: Anterior cingulate and gating of human approach-avoidance decision making. M. W. SCHLUND*; A. T. BREWER; S. MAGEE; D. M. RICHMAN; S. DYMOND. *Univ. of North Texas, Florida Inst. of Technol., Texas Tech. Univ., Swansea Univ.*

9:00 K9 **503.10** ● Use of a control task battery to control for pharmacological fMRI investigation of pain responses. L. DEMETRIOU*; M. B. WALL; E. CONSTANTINOU; M. ANTONIADES; J. HOWARD; P. D. WHITE; E. A. RABINER; J. BOURKE. *Imanova, Queen Mary Univ. of London.*

10:00 K10 **503.11** Human fear conditioning follows ideal bayesian learning. A. TZOVARA*; D. R. BACH. *Univ. of Zurich, Univ. of Zurich.*

11:00 K11 **503.12** He likes me, he likes me not: Differences in the neural processing of positive and negative social feedback in depressed and healthy women. A. YTTREDAHL*; B. J. SANFORD; E. MCROBERT; B. SHELER; B. J. MICKEY; T. M. LOVE; R. C. WELSH; S. A. LANGENECKER; J. ZUBIETA; D. T. HSU. *Stony Brook Univ., Univ. of Michigan, Univ. of Michigan, Univ. of Illinois at Chicago, Stony Brook Univ.*

8:00 K12 **503.13** Simultaneous appetitive and aversive classical conditioning: An fMRI study. D. TALMI*; R. HOSKIN. *Sch. of Psychological Sciences, Univ. of Manchester, Univ. of Manchester.*

9:00 K13 **503.14** A genome-wide association study of the long-term clinical response to SSRI or SSRI with antipsychotics in obsessive-compulsive disorder in the Japanese population. H. UMEHARA*; S. NUMATA; A. TAJIMA; A. NISHI; I. IMOTO; S. SUMITANI; T. OHMORI. *Tokushima Univ. Grad. Sch., Inst. of Biomed. Sciences, Tokushima Univ. Grad. School,, Grad. Sch. of Med. Sciences, Kanazawa Univ.*

10:00 K14 **503.15** Computer-based “avatar” to assess avoidant behaviors in participants with symptoms of posttraumatic stress disorder (PTSD). C. E. MYERS*; Y. T. EBANKS-WILLIAMS; M. L. RADELL; K. D. BECK; M. W. GILBERTSON. *Dept. of Veterans Affairs, New Jersey Healthcare Syst., Rutgers-New Jersey Med. Sch., Dept. of Veterans Affairs, Manchester VA Med. Ctr.*

11:00 K15 **503.16** Gender differences in avoidance behavior in individuals with post-traumatic stress disorder (PTSD) symptoms. M. L. RADELL*; J. SHEYNIN; K. D. BECK; K. C. H. PANG; C. E. MYERS. *VA New Jersey Hlth. Care Syst., Veterans Affairs Ann Arbor Healthcare Syst., Univ. of Michigan, New Jersey Med. Sch.*

8:00 K16 **503.17** Differential effects of us alone trials: Pre-exposures, but not interpolated trials, disrupt acquisition of conditioned eyeblinks in anxiety vulnerable individuals. T. ALLEN*; D. P. MILLER; R. J. SERVATIUS. *Univ. Northern Colorado, Stress and Motivated Behavior Inst., Carthage Col., Syracuse Veterans Affairs Med. Ctr.*

9:00 K17 **503.18** Assessing behavioral flexibility in anxiety vulnerable rats using of a novel aversive strategy shifting task. J. E. CATUZZI*; K. C. H. PANG; K. D. BECK. *Dept. of Veterans Affairs, NJHCS, Rutgers Univ., Rutgers Univ.*

10:00 K18 **503.19** Decision making under risk in anxiety: A prospect theory model. J. SHEYNIN*; S. A. GEORGE; R. GONZALEZ; I. LIBERZON; J. L. ABELSON. *Veterans Affairs Ann Arbor Healthcare Syst., Univ. of Michigan, Univ. of Michigan.*

11:00 K19 **503.20** Functional changes in brain activity in response to recent traumatic experiences: A trauma specific fMRI study. A. S. NILSEN*; I. BLIX; S. LEKNES; T. HEIR. *Norwegian Ctr. For Violence and Traumatic Stress, Oslo Univ. Hosp.*

POSTER

504. Mood Disorders Animal Models I

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 K20 **504.01** Time-dependent changes induced by acute stress in function and architecture of excitatory synapses in prefrontal and frontal cortex. M. POPOLI*; L. MUSAZZI; P. TORNESE; N. SALA; G. TRECCANI; C. BAZZINI; G. WEGENER; J. NYENGAARD; N. NAVA. *Univ. Degli Studi Di Milano, Aarhus Univ. - Dept. of Clin. Med., Aarhus Univ. - Ctr. for Stochastic Geometry and Advanced Bioimaging.*

9:00 K21 **504.02** Transcriptomic ‘hyper-maturity’ of the hippocampus in mice. H. KOSHIMIZU*; H. HAGIHARA; K. OHIRA; K. TAKAO; T. MIYAKAWA. *ICMS, Fujita Hlth. Univ., CREST, JST, Ctr. for Gene. Anal. of Behav.,NIPS.*

10:00 K22 **504.03** Paternal transmission of stress-induced phenotypes are transmitted via male germ cells. D. M. WALKER*; M. A. DOYLE; R. C. BAGOT; D. BUREK; E. J. HARRIGAN; G. E. HODES; J. RABKIN; E. S. CALIPARI; H. M. CATES; O. ISSLER; M. E. CAHILL; B. LABONTE; E. A. HELLER; J. FENG; C. J. PENA; E. RIBEIRO; O. ENGMANN; Z. LORSCH; P. J. HAMILTON,; E. J. NESTLER. *Mt Sinai Sch. of Med.*

11:00 K23 **504.04** Dissociative depression-related behavioral effects of cholinergic signaling in the ventral tegmental area versus the nucleus accumbens. K. M. SMALL*; E. J. NUNES; N. A. ADDY. *Yale Univ.*

8:00 K24 **504.05** ▲ Antidepressant screening of a novel glun2b-specific n-methyl-d-aspartate receptor antagonist ro 8-4304. N. PROWSE*; K. FARMER; S. HAYLEY. *Carleton Univ.*

9:00 K25 **504.06** Mechanism of lithium-induced recovery of memory and emotional impairment in DGKbeta KO mice. W. OKIMOTO*; M. ISHISAKA; H. NAKANISHI; S. UEDA; M. YAMANOUE; T. SASAKI; H. HARA; Y. SHIRAI. *Kobe Univ., Gifu Pharmaceut. Univ., Akita Univ.*

10:00 K26 **504.07** ▲ Interpeduncular nucleus neurons innervate dorsal raphe nucleus serotonergic neurons preferentially. Y. LI*; X. LI. *Zhejiang Univ., Zhejiang Univ.*

11:00 K27 **504.08** Pre-existing variability in functional connectivity predicts behavioral response to acute social defeat in mice. Y. GROSSMAN*; D. DUMITRIU. *Icahn Sch. of Med. At Mount Sinai.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

8:00 K28 **504.09** Behavioral and physiological effects of oxytocin treatment in a rat model of post-traumatic stress disorder. D. P. DABERKOW*; M. D. RENICKER; N. G. CYSEWSKI; S. M. PALMER; D. V. NAKONECHNYY; A. J. KEEF. *Eastern Washington Univ.*

9:00 K29 **504.10** ▲ Comparison of behaviors under Light versus Dark conditions in the neoclomipramine rodent model of Obsessive Compulsive Disorder (OCD). L. S. LAIKS; A. M. BARNES; E. C. GRONSETH; A. M. SOLIN; L. BURKE; L. J. KASPARSON; C. MATTHIJSSEN; A. SCALZO; D. S. KREISS*. *Colgate Univ., Texas A & M Inst. for Neurosci., Ithaca Col.*

10:00 K30 **504.11** Behavioral effects of enhancing GABAergic neurotransmission through disinhibition of somatostatin-positive interneurons in mice. S. J. JEFFERSON*; T. FUCHS; A. HOOPER; J. MAGUIRE; B. LUSCHER. *The Pennsylvania State Univ., Tufts Univ. Sch. of Med., The Pennsylvania State Univ.*

11:00 K31 **504.12** Adult neurogenesis in the hippocampus is responsible for the transition from depressive to manic behavior. S. KIM*; J. LEE; D. GEUM. *Korea Univ. Col. of Med.*

8:00 K32 **504.13** A depressive-like brain state caused by GABAergic deficits involves a homeostatic adaptation of glutamatergic synapses that is normalized by ketamine. Z. REN; H. PRIBIAG; M. SHOREY; T. FUCHS; D. STELLWAGEN; B. LUSCHER*. *Penn State Univ., McGill Univ., Penn State Univ., Penn State Univ.*

9:00 K33 **504.14** Voluntary wheel running alters intermittent swim stress-induced ultrasonic vocalizations. R. C. DRUGAN*; I. STRIBLING; N. P. STAFFORD. *Univ. New Hampshire.*

10:00 K34 **504.15** Left cortical activity modulates stress effects on social behavior. J. HONG*; S. CHAE; E. LEE; Y. PARK; K. KANG; Y. KIM; D. KIM. *KAIST, Dankook Univ., Rockefeller Univ.*

11:00 K35 **504.16** ▲ Behavioral differences due to recent de novo mutations among C57BL/6 and C57BL/10 mouse substrains. C. ST. PIERRE*; N. M. GONZALES; A. A. PALMER. *Univ. of Chicago.*

8:00 K36 **504.17** ▲ Effect of amygdaloid kindling and administration of fluoxetine in the rat forced swim test. A. DÍAZ*; A. VALDÉS-CRUZ; D. U. GONZÁLEZ-MÉNDEZ; J. D. AYALA-RODRÍGUEZ; L. A. MARTÍNEZ-MOTA; S. ALMAZÁN-ALVARADO; R. FERNÁNDEZ-MAS. *Inst. Nacional De Psiquiatría Ramón De La Fuen.*

9:00 K37 **504.18** Cannabinoid receptor 1 blockade in the lateral habenula exerts anxiolytic effects in sprague dawley rats. A. BERGER*; A. M. WILLIAMS; R. J. MCLAUGHLIN. *Washington State Univ., Washington State Univ.*

10:00 K38 **504.19** Sex specific stress regulation of the microRNA transcriptome in mouse nucleus accumbens. M. L. PFAU*; G. E. HODES; I. PURUSHOTHAMAN; J. FENG; S. A. GOLDEN; H. M. CATES; H. ALEYASIN; M. FLANIGAN; L. SHEN; S. RUSSO. *Icahn Sch. of Med. at Mount Sinai.*

11:00 K39 **504.20** Underlying molecular circuitry of miR-124-mediated glutamatergic pathway regulation by corticosterone: Role in stress-related pathophysiology. B. ROY*; R. C. SHELTON; G. TURECKI; Y. DWIVEDI. *Univ. of Alabama At Birmingham, Douglas Mental Hlth. Res. Inst.*

8:00 K40 **504.21** Differential impact of maternal protein insufficiency on 5-HT1A receptor function in adult offspring: Increased risk for affective disorders? W. YE*; B. J. THOMPSON; J. G. HENSLER. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Oakland Univ. Sch. of Med., Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

9:00 K41 **504.22** Characterizing rat model of post-traumatic stress disorder using neuroimaging approaches. P. D. PEREZ*; J. RUDDY; Y. YAM; J. KUHN; N. ZHANG. *Pennsylvania State Univ.*

10:00 K42 **504.23** Neuronal features involved in depresive disorders are found in CB1receptor knockout mice. H. A. BRUSCO*; D. SORIANO; F. CONDE; L. CALTANA. *IBCN (UBA-CONICET).*

11:00 L1 **504.24** Modeling the role of Akt kinase in resilience to stress. C. D. WILLOCK; N. C. BERDUX; T. F. FRANKE*. *NYU Sch. of Med., NYU Sch. of Med.*

8:00 L2 **504.25** Long-lasting alterations in microglial HMGB1 expression correlates with increased vulnerability to depressive-like behaviors after chronic unpredictable stress. T. C. FRANKLIN*; E. S. WOHLEB; R. S. DUMAN. *Yale Univ. Sch. of Med.*

9:00 L3 **504.26** Anhedonia in the Chick Anxiety-Depression Model. A. L. SALMETO-JOHNSON*; M. K. JOURDAN; K. J. SUFKA. *Graceland Univ., Univ. of Mississippi.*

10:00 L4 **504.27** Light modulates spatial learning and memory in an animal model of SAD. J. E. SOLER*; T. IKENO; L. YAN. *Michigan State Univ.*

POSTER

505. Mood Disorders Animal Models II

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 L5 **505.01** Serotonergic markers clustering in blood lymphocytes from animals exposed to corticosterone parallels the alterations found in depressed patients. E. Y. FENTON*; R. ROMAY-TALLON; M. A. MITCHELL; T. RIVERA-BALTANAS; K. LEBEDEVA; L. E. KALYNCHUK; J. OLIVARES; H. J. CARUNCHO. *Ctr. for Drug Res. and Develop., Univ. of Saskatchewan, Univ. of Saskatchewan, Meixoeiro Univ. Hosp., Univ. of Saskatchewan.*

9:00 L6 **505.02** Neural circuitry underlying the ketamine-like antidepressant effect of infralimbic prefrontal cortex optogenetic stimulation. A. M. THOMAS*; E. S. WOHLEB; R. J. DILEONE; R. LIU; G. K. AGHAJANIAN; R. S. DUMAN. *Yale Sch. of Med., Yale Sch. of Med.*

10:00 L7 **505.03** Role of neuronal vascular endothelial growth factor signaling in the actions of antidepressants. S. DEYAMA*; X. LI; E. S. WOHLEB; S. DUTHEIL; A. BECKER; R. S. DUMAN. *Yale Univ. Sch. of Med.*

11:00 L8 **505.04** Effect of repeated restraint stress on depression-like behavior and protein level of FKBP5 in the amygdala in rats. T. IZUMI*; R. GHEBREAB; C. WANG; Y. OHMURA; T. YOSHIDA; M. YOSHIOKA. *Hokkaido University, Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 L9 **505.05** NR2B-containing NMDA receptors on prefrontal cortex interneurons and the rapid antidepressant effects of ketamine. D. M. GERHARD*; E. S. WOHLEB; K. T. OTA; S. R. TAYLOR; M. R. PICCIOTTO; R. S. DUMAN. *Yale Univ., Yale Univ.*

9:00 L10 **505.06** Ketamine reverses helpless behavior in rats exposed to acute mild stress. D. LOPRESTO*; T. C. FRANKLIN; M. J. GIRGENTI; R. S. DUMAN. *Yale Univ.*

10:00 L11 **505.07** Chronic corticosterone-mediated dysregulation of microrna network in prefrontal cortex of rats: Relevance to depression pathophysiology. Y. DWIVEDI*; B. ROY; G. LUGLI; H. ZHANG; H. RIZAVI; N. SMALHEISER. *Univ. of Alabama At Birmingham, Univ. of Illinois at Chicago.*

11:00 L12 **505.08** Efferents of the mouse anterior cingulate cortex. P. VEINANTE*; C. FILLINGER; M. BARROT; I. YALCIN. *INCI CNRS UPR3212.*

8:00 L13 **505.09** Rapid acting antidepressants cause activity dependent release of BDNF and stimulate mTORC1 signaling in primary neuronal cultures. E. BANG*; A. E. LEPACK; M. FUCHIKAMI; J. M. DWYER; A. TROG; M. BANASR; R. S. DUMAN. *Yale Univ.*

9:00 L14 **505.10** Transcriptional networks of resilience in a mouse model of depression. Z. S. LORSCH*; R. C. BAGOT; I. PURUSHOTHAMAN; J. SCARPA; B. LABONTÉ; P. J. HAMILTON; D. WALKER; C. J. PEÑA; M. WANG; L. SHEN; A. KASARSKIS; B. ZHANG; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

10:00 L15 **505.11** Inhibitory modulation of orbitofrontal cortical activation on medial prefrontal cortex-amygdala information flow: Implication of interacting systems of obsessive-compulsive disorder and major depressive disorder. C. CHANG*; A. A. GRACE. *Univ. of Pittsburgh.*

11:00 L16 **505.12** Norepinephrine regulates hippocampal gene expression after acute stress. J. BOHACEK*; M. ROSZKOWSKI; F. MANUELLA; L. VON ZIEGLER; I. M. MANSUY. *ETH Zurich, Univ. Zurich.*

8:00 L17 **505.13** Electrophysiological changes in the anterior cingulate cortex in neuropathic pain-induced depression. J. SELLMEIJER*; F. BARTHAS; M. BARROT; A. AERTSEN; P. VEINANTE; I. YALCIN. *UPR3212 CNRS Inst. Des Neurosciences Cellulaire, Bernstein Ctr. Freiburg.*

9:00 L18 **505.14** ● GLYX13 increases mTORC1 signaling and synaptogenesis in the prefrontal cortex. C. H. DUMAN*; D. LOPRESTO; R. LIU; R. TERWILLIGER; E. BANG; S. DUTHEIL; J. DWYER; A. BECKER; J. BURGDORF; J. R. MOSKAL; G. K. AGHAJANIAN; R. S. DUMAN. *Yale Univ., Naurex Inc.*

10:00 L19 **505.15** Afferents to the mouse anterior cingulate cortex. C. FILLINGER*; M. BARROT; I. YALCIN; P. VEINANTE. *Cnrs - Upr3212 (inci).*

11:00 L20 **505.16** Comparison of intermittent and continuous swim stress-induced behavioral depression: A levels of analysis approach. N. P. STAFFORD*; K. M. SPENCER; M. R. ARNOLD; N. J. PAGLUICA; D. H. TOWNSON; C. A. LOWRY; R. C. DRUGAN. *Univ. of New Hampshire, Univ. of Colorado at Boulder, Univ. of New Hampshire.*

8:00 L21 **505.17** Development of the rat late-onset depression model related to white matter lesion. H. ONO*; H. IMAI; S. MIYAWAKI; S. MIYATA; H. NAKATOMI; M. MIKUNI; M. FUKUDA; N. SAITO. *Dept. of Neurosurgery, Grad. Sch. of Medicine, The Univ. of Tokyo, Dept. of Psychiatry and Neuroscience, Gunma Univ. Grad. Sch. of Med.*

9:00 L22 **505.18** Behavioral changes in a neuroprogression model for bipolar disorder. M. R. PITCHER*; A. N. SHARMA; G. R. FRIES; G. Z. REUS; T. BARICHELLO; J. C. SOARES; J. L. DE QUEVEDO. *Univ. of Texas Hlth. Sci. Ctr. at Houst.*

10:00 L23 **505.19** Differential effects of corticosterone on the colocalization of reelin and neuronal nitric oxide synthase in the adult hippocampus in wild type and heterozygous reeler mice. R. ROMAY-TALLON*; T. RIVERA-BALTANAS; L. E. KALYNCHUK; H. J. CARUNCHO. *Univ. of Saskatchewan, Meixoeiro Univ. Hosp., Univ. of Saskatchewan, Univ. of Saskatchewan.*

11:00 L24 **505.20** The involvement of NOX1/nicotinamide adenine dinucleotide phosphate, reduced form oxidase in anxiety- and depressive-like behaviors induced by stress. M. IBI*; J. LIU; C. YABE-NISHIMURA. *Kyoto Prefectural Univ. Med.*

8:00 L25 **505.21** Lysine-specific demethylase1 modulates anxiety-related behavior regulating stress-evoked transcription of immediate early genes. F. S. RUSCONI*; B. GRILLO; L. PONZONI; S. BASSANI; E. TOFFOLO; L. PAGANINI; A. MALLEI; D. BRAIDA; M. PASSAFARO; M. POPOLI; M. SALA; E. BATTAGLIOLI. *Univ. of Milan, CNR Inst. of Neurosci., Univ. of Milan.*

9:00 L26 **505.22** High fat food induces anxiety and anhedonia: First steps towards identifying the common neural pathological mechanisms linking type 2 diabetes and depression in rat models. S. DUTHEIL*; K. T. OTA; E. S. WOHLEB; R. S. DUMAN. *Yale Univ.*

10:00 L27 **505.23** Treatment with the rapid acting antidepressant ketamine accelerates fear extinction in rodents. M. J. GIRGENTI*; D. LOPRESTO; J. R. TAYLOR; R. S. DUMAN. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

11:00 L28 **505.24** Social bonds, cardiac function, and serotonin: An investigation using the prairie vole. N. MCNEAL*; A. DAGNER; E. IHM; M. WOODBURY; W. COLBURN; J. WARDWELL; A. J. GRIPPO. *Northern Illinois Univ.*

8:00 L29 **505.25** Circuit-wide transcriptional profiling reveals opposing prefrontal cortical and ventral-hippocampal gene co-expression networks regulating depression susceptibility in mice. R. C. BAGOT*; H. M. CATES; I. PURUSHOTHAMAN; Z. S. LORSCH; D. M. WALKER; C. J. PEÑA; I. S. MAZE; E. A. HELLER; M. A. DOYLE; O. ISSLER; X. LIU; J. L. STEIN; K. N. SCOBIE; R. NEVE; L. SHEN; B. ZHANG; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, UCLA, MIT, Icahn Sch. of Med. At Mount Sinai.*

9:00 L30 **505.26** Exposure to a novel environment inhibits nucleus accumbens dopamine response to palatable food in mice. S. A. ROBINSON*; T. E. HILL-SMITH; I. LUCKI. *Univ. of Pennsylvania.*

10:00 L31 **505.27** Altered dendritic spine plasticity in a mouse depression model. L. H. L. NG*; R. C. C. CHANG; C. S. W. LAI. *The Univ. of Hong Kong, The Univ. of Hong Kong.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 L32 **505.28** M1-type muscarinic acetylcholine receptors on prefrontal cortex interneurons mediate the rapid antidepressant effects of scopolamine. E. S. WOHLEB*; K. T. OTA; D. M. GERHARD; J. M. DWYER; S. R. TAYLOR; M. R. PICCIOTTO; R. S. DUMAN. *Yale Univ.*

8:00 L33 **505.29** "Nature and nature" in a genetic model of depression. N. S. MEHTA*; S. L. WERT; C. MORLEY; E. N. GRAF; E. E. REDEI. *Northwestern Univ.*

POSTER

506. Cocaine: Reward, Sensitization, and Locomotion

Theme C: Disorders of the Nervous System

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 L34 **506.01** Effect of neuron-specific deletion of Rbfox1 on learning and cocaine-related behaviors in mice. J. DRGONOVA*; G. R. UHL. *Natl. Inst. Drug Abuse, NIH, NMVAHCS and BRINM.*

9:00 L35 **506.02** Relationship between altered vesicular monoamine function and complex behavior. R. A. CLIBURN*; K. LOHR; L. RAJAN; J. SCHROEDER; D. WEINSHENKER; G. MILLER. *Emory Univ.*

10:00 L36 **506.03** VTA Lamotrigine microinfusions accelerate the development of cocaine sensitization. B. SANTOS VERA*; F. ARENCIBIA-ALBITE; A. VAQUER-ALICEA; R. VÁZQUEZ-TORRES; C. E. MARÍA-RÍOS; A. MONTIEL-RAMOS; M. DEVARIE-HORNEDO; C. A. JIMÉNEZ-RIVERA. *Univ. of Puerto Rico Med. Sci. Campus Sch. of Med., Univ. of Puerto Rico Río Piedras Campus, Univ. of Puerto Rico Med. Sci. Campus.*

11:00 L37 **506.04** Effects of PKMζ inhibitor (ZIP) on the initiation and expression of cocaine sensitization. A. VAQUER-ALICEA*; R. VÁZQUEZ-TORRES; B. SANTOS-VERA; C. MARÍA-RÍOS; A. MONTIEL-RAMOS; M. DEVARIE; M. VÉLEZ-HERNÁNDEZ; T. C. SACKTOR; C. A. JIMÉNEZ-RIVERA. *UPR Med. Sci. Campus, UPR Med. Sci. Campus, Univ. of Puerto Rico Río Piedras Campus, UPR Med. Sci. Campus, Univ. of Houston-Victoria, State Univ. of New York Downstate Med. Ctr.*

8:00 L38 **506.05** A within-animal assessment of neural ensembles associated with novelty and cocaine. N. N. NAWARAWONG*; M. J. MUELBL; H. ZHU; Y. LIM; B. L. ROTH; C. M. OLSEN. *Med. Col. of Wisconsin, Med. Col. of Wisconsin, Univ. of North Carolina at Chapel Hill.*

9:00 L39 **506.06** Behavioral and physiological effects of a novel kappa opioid receptor based DREADD in rats. S. ADHIKARY*; N. J. MARCHANT; L. R. WHITAKER; B. K. HARVEY; B. T. HOPE; K. KAGANOVSKY; T. E. PRISINZANO; E. VARDY; B. L. ROTH; Y. SHAHAM; J. M. BOSSSERT. *IRP/NIDA/NIH, Florey Inst. of Neurosci. & Mental Health, Univ. of Melbourne, IRP/NIDA/NIH, Sch. of Pharmacy, Univ. of Kansas, Dept. of Pharmacology, Sch. of Medicine, Univ. of North Carolina Chapel Hill, Merck Pharmaceuticals.*

10:00 L40 **506.07** Oxidative stress response exacerbates cocaine addiction after social defeat stress. Y. N. OHNISHI*; Y. KAWAHARA; Y. H. OHNISHI; M. KUROIWA; V. F. VIALOU; R. L. NEVE; E. J. NESTLER; A. NISHI. *Kurume Univ. Sch. of Med., Kurume Univ. Sch. of Med., Inst. Natl. de la Santé et de la Recherhe Médicale, MIT, Icahn Sch. of Med. at Mount Sinai.*

11:00 L41 **506.08** Systematic investigation of toxicokinetics and neurobehavioral effects of cocaine in zebrafish larvae. K. T. KIRLA*; K. GROH; A. STEUER; M. POETZSCH; R. EGGEN; K. SCHIRMER; T. KRAEMER. *Univ. of Zurich, Eawag, Swiss Federal Inst. of Aquatic Sci. and Technology, Dept. of Envrn. Toxicology, ETHZ, Dept. of Chem. and Applied Biosci., ETHZ, Inst. of Biogeochemistry and Pollutant Dynamics, EPFL, Sch. of Architecture, Civil and Envrn. Engin.*

8:00 L42 **506.09** The role of DNA methylation and demethylation in the expression of cocaine-induced behavioral sensitization. K. ANIER*; M. URB; T. MATSALU; K. KIPPER; K. HERODES; T. TIMMUSK; A. KALDA. *Univ. of Tartu, Tallinn Univ. of Technol.*

9:00 L43 **506.10** Glycogen synthase kinase 3 in the rat ventral hippocampus is necessary for the development of cocaine-induced behavioral sensitization. J. L. BARR*; E. M. UNTERWALD. *Temple Univ.*

10:00 L44 **506.11** ● Behavioral sensitization following concurrent exposure to MDPV and cocaine in CF-1 mice. M. D. BERQUIST*, JR; L. E. BAKER. *Western Michigan Univ.*

11:00 M1 **506.12** A role for nucleus accumbens somatostatin interneurons in cocaine induced plasticity. E. A. RIBEIRO*; B. JUAREZ; R. BAGOT; I. PURUSHOTHAMAN; B. LABONTE; E. CALIPARI; J. FENG; J. SCARPA; H. CATES; M. HESHMATI; A. KASARSKIS; S. RUSSO; L. SHEN; M. HAN; J. KOO; E. NESTLER. *Icahn Sch. of Med. At Mount Sinai, Korea Brain Res. Inst.*

8:00 M2 **506.13** Cocaine regulates monoubiquitination of histones H2A and H2B in nucleus accumbens. J. RABKIN*; D. M. WALKER; E. S. CALIPARI; O. ENGMANN; H. M. CATES; H. SUN; E. A. RIBEIRO; D. BUREK; R. NEVE; E. J. NESTLER. *Dept. of Neurosci. and Friedman Brain Inst., Columbia Univ. Med. Ctr., McGovern Inst. for Brain Res. at MIT.*

9:00 M3 **506.14** Cocaine augments local synaptic translation in the nucleus accumbens through a small GTPase network. M. E. CAHILL*; R. C. BAGOT; D. WALKER; J. FENG; H. SUN; J. KOO; R. NEVE; A. GANCARZ; G. L. SCHROEDER; Z. WANG; D. M. DIETZ; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai, Massachusetts Insititute of Technol., SUNY Buffalo.*

10:00 M4 **506.15** Cocaine-induced enhancement of D1, and suppression of D2, medium spiny neuron activity in the nucleus accumbens is associated with cocaine seeking. E. S. CALIPARI*; R. C. BAGOT; I. PURUSHOTHAMAN; T. J. DAVIDSON; S. T. PIRPINIAS; K. GUISE; K. DEISSEROTH; E. J. NESTLER. *Mount Sinai Sch. of Med., Icahn Sch. of Med. at Mount Sinai, Stanford Sch. of Med., Stanford Univ.*

11:00 M5 **506.16** Activation of estrogen receptors in the nucleus accumbens enhances the development of cocaine conditioned place preference in female mice. R. SATTA*; A. W. LASEK. *Univ. of Illinois at Chicago.*

8:00 M6 **506.17** A time and a region-specific role of astrocytic lactate in the formation and maintenance of positive affective memories associated with cocaine-associated cues. B. BOURY JAMOT*; A. CARRARD; J. MARTIN; O. HALFON; P. J.MAGISTRETTI; B. BOUTREL. *Ctr. For Psychiatric Neurosci., Ctr. for Psychiatric Neurosci., Div. of Child and Adolescent Psychiatry, King Abdullah Univ. of Sci. and Technol. (KAUST), Ecole Polytechnique Fédérale de Lausanne (EPFL), Ctr. for Psychiatric Neurosci.*

9:00 M7 **506.18** *In vivo* use of dopamine aptamers designed to cross the blood brain barrier in a preclinical mouse model of cocaine exposure. K. VENTURA*; M. HOLAHAN; E. MCCONNELL; M. DE ROSA. *Carleton Univ., Carleton Univ.*

10:00 M8 **506.19** Effect of acupuncture on prefronto-cortical modulation of VTA GABA neuron activity in acute cocaine-treated rats. S. KIM*; M. KIM; Y. FAN; B. LEE; Y. GWAK; H. KIM; C. YANG. *Daegu Hanny Univ., Wonkwang University, Sch. of Med. Iksan.*

11:00 M9 **506.20** Mediation of lateral habenula in acupuncture inhibition of cocaine-induced locomotor activity. S. CHANG*; D. KIM; Y. RYU; Y. GWAK; Y. FAN; H. KIM; S. BANG; C. YANG; H. KIM. *Daegu Haany Univ., Korea Inst. of Oriental Med.*

8:00 M10 **506.21** Molecular and behavioral contributions to cocaine action arising from SERT inhibition as studied in the SERT I172M mouse model. L. D. SIMMLER*; M. H. LEVIN; N. M. VASWANI; J. WANG; B. ZHANG; R. D. BLAKELY. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

9:00 M11 **506.22** GIRK channels in VTA DA neurons regulate the sensitivity of the mesolimbic DA system to cocaine. L. A. KOTECKI*; N. M. MCCALL; N. C. VICTORIA; N. CARLBLOM; K. WICKMAN. *Univ. of Minnesota, Univ. of Minnesota.*

10:00 M12 **506.23** Ablation of the patch compartment reduces cocaine-induced stereotypy. K. A. HORNER*; M. LOGAN; R. C. MURRAY. *Mercer Univ. Sch. Med.*

11:00 M13 **506.24** Contribution of stress to the effects of a 5-HT1B receptor agonist on cocaine-induced locomotion before and after abstinence from repeated injections in C57BL/6 mice. T. DER-GHAZARIAN*; K. DAI; S. BRUNWASSER; R. GARCIA; K. STEFANKO; N. PENTKOWSKI; J. NEISEWANDER. *Arizona State Univ., Arizona State Univ.*

POSTER

507. Auditory Processing: Subcortical Circuits

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 M14 **507.01** Ambient GABA release is detrimental to neurons in the deafferented cochlear nucleus. B. J. CARROLL*; R. L. HYSON. *Florida State Univ.*

9:00 M15 **507.02** The ventral cochlear nucleus in humans. J. S. BAIZER*; S. WITELSON; K. WONG. *Univ. at Buffalo, McMaster Univ.*

10:00 M16 **507.03** Quantification of auditory and non-auditory input to the dorsal cochlear nucleus. C. NEAL*; H. STAECKER; D. DURHAM. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

11:00 M17 **507.04** Postnatal refinement of conduction velocity of inputs to the medial nucleus of the trapezoid body is accompanied by changes in intrinsic cell characteristics. J. L. SINCLAIR*. *Ludwig Maximilians Univ. Munich.*

8:00 M18 **507.05** Ultrastructure of the mature calyx of held revealed by serial blockface electron scanning microscopy. D. R. JACKSON*; P. S. HOLCOMB; B. CHEN; T. J. DEERINCK; L. CAMPANOLA; M. H. ELLISMAN; H. VON GERSDORFF; G. A. SPIROU. *West Virginia Univ., West Virginia Univ., West Virginia Univ., Univ. of California at San Diego, Univ. of North Carolina at Chapel Hill, Oregon Hlth. & Sci. Univ.*

9:00 M19 **507.06** Source of monoaminergic and CART-ergic afferents to the elementary circuitry of the acoustic startle reflex. A. V. DA SILVA*; K. R. TORRES DA SILVA; N. O. BARIONI; S. A. RODRIGUES; C. R. PADOVANI; R. S. BEDUSCHI; M. S. FERREIRA; R. GOMEZ-NIETO; D. E. LÓPEZ; J. A. C. HORTA-JUNIOR. *São Paulo State Univ. - UNESP, Federal Univ. of Mato Grosso do Sul, Tecnology Sch. of São Paulo State, Neurosci. Inst. of Castilla y León, Inst. de Investigación Biomédica de Salamanca (IBSAL).*

10:00 M20 **507.07** Long-term potentiation of glycinergic inhibition in the medial superior olive of Mongolian gerbils. B. D. WINTERS; N. L. GOLDING*. *Univ. of Texas at Austin, Univ. of Texas at Austin.*

11:00 M21 **507.08** Altered synaptic balance and impaired sound processing in auditory brainstem neurons of the fragile x mouse model. E. GARCIA-PINO; N. GESSELE; U. KOCH*. *FU Berlin, FU Berlin.*

8:00 M22 **507.09** Glycinergic circuitry in the Inferior Colliculus. A. B. LOPEZ*; S. RODRIGUEZ; S. LAVANIA; M. MIRANDA. *Univ. of Texas At El Paso.*

9:00 M23 **507.10** Nitrergic signaling in the inferior colliculus. A. W. STAFFORD*; A. HARTMAN; J. HALL. *Univ. of Tennessee, Univ. of Tennessee.*

10:00 M24 **507.11** Differences in GABAergic cell types distinguish the rostral pole of the inferior colliculus and the medial and lateral intercollicular areas. N. L. FOSTER*; W. A. NOFTZ; B. R. SCHOFIELD. *Northeast Ohio Med. Univ., Kent State Univ.*

11:00 M25 **507.12** Withdrawn.

8:00 M26 **507.13** Projections from the auditory midbrain to the superior colliculus and the thalamus have separate origins. J. G. MELLOTT*; B. R. SCHOFIELD. *NEOMED.*

9:00 M27 **507.14** Neurons projecting from the mouse lateral cortex of the inferior colliculus to the auditory thalamus are organized into distinct clusters correlating with glutamic acid decarboxylase-positive modules. A. M. LESICKO*; D. A. LLANO. *Univ. of Illinois At Urbana-Champaign.*

10:00 M28 **507.15** The role of cortical feedback in modulating sensory representations in the midbrain. R. S. WILLIAMSON*; C. VILA; K. SIKAH; K. E. HANCOCK; D. B. POLLEY. *Massachusetts Eye and Ear Infirmary, Boston Univ., Ecole Polytechnique Fédérale de Lausanne, Harvard Med. Sch.*

11:00 M29 **507.16** Making inhibition work for you: An electrophysiological study of chemical and photochemical stimulation of the thalamic reticular nucleus. B. SLATER*; D. LLANO. *Univ. of Illinois, Univ. of Illinois.*

8:00 M30 **507.17** Synaptic contacts between auditory Golgi cells. D. B. YAEGER*; L. O. TRUSSELL. *Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 M31 **507.18** Mechanisms of auditory gain enhancement following acute noise trauma. B. D. AUERBACH*; K. E. RADZIWON; P. V. RODRIGUES; G. CHEN; R. J. SALVI. *SUNY At Buffalo, Univ. of Wisconsin.*

POSTER

508. Auditory Perception, Cognition, and Action

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 M32 **508.01** ● Nonlinear resonance and plasticity as a basis for musical consonance. J. KIM*; E. W. LARGE. *Univ. of Connecticut.*

9:00 M33 **508.02** Neural mechanisms of temporal prediction in naturalistic auditory stimuli. B. MANISCALCO*; P. ABRY; T. HOLROYD; B. J. HE. *NIH, CNRS, NIH.*

10:00 M34 **508.03** Brief restraint in mice alters stress levels, vocal behavior and the neural representation of sound in the basolateral amygdala. J. M. GRIMSLEY*; E. G. HAZLETT; N. VALLABH; S. SHETH; C. A. GRIMSLEY; M. LATSKO; A. JASNOW; J. J. WENSTRUP. *Northeast Ohio Med. Univ. (NEOMED), Kent State Univ., Kent State Univ.*

11:00 M35 **508.04** Synaptic signature of optimal and suboptimal states for sensory signal detection. M. J. MCGINLEY*; S. V. DAVID; D. A. MCCORMICK. *Yale Univ., Oregon Hlth. & Sci. Univ.*

8:00 M36 **508.05** Long-lasting recalibration to auditory listening conditions. N. C. RABINOWITZ*; M. SCHEMITSCH; O. BRIMIJOIN; E. P. SIMONCELLI. *NYU, Howard Hughes Med. Inst., MRC Inst. of Hearing Res.*

9:00 M37 **508.06** Measurement of acoustic frequency discrimination thresholds in common marmosets (Callithrix jacchus). Y. GUO*; M. S. OSMANSKI; X. SONG; X. WANG. *Johns Hopkins Univ.*

10:00 M38 **508.07** Musical interpretation in blind pediatric subjects. An MR study. B. DE CELIS ALONSO*; S. HIDALGO TOBÓN; P. DIES SUAREZ; C. GUERRERO ARENAS; E. CASTRO-SIERRA. *BUAP (Benemérita Univ. Autónoma de Puebla), Hosp. Infantil, Federico Gómez, Escuela Nacional de Musica, UNAM, Hosp. Infantil, Federico Gómez.*

11:00 M39 **508.08** Is there an effect of long-lasting exposure to industrial noise in the adult auditory system of rats. B. GOURÉVITCH*; F. OCCELLI; J. EDELINE. *Inst. De Neurosci. Paris-Saclay (neuropsi).*

8:00 M40 **508.09** Flexible scripted software system for delivery and analysis of F0 perturbation experiments. B. ROGERS*; C. L. CHAN; A. B. NEW; C. R. LARSON; D. A. ROBIN. *Univ. of Texas Hlth. Sci. Ctr., Northwestern Univ.*

9:00 M41 **508.10** Effects of poor hearing acuity on gait during dual-task execution: Data from cognitively healthy older adults. C. RODRIGUEZ-ARANDA*; M. MITTNER; K. WATERLOO; O. VASYLENKO; M. M. GORECKA. *Dept. of Psychology, Univ. of Tromsø.*

10:00 M42 **508.11** Task-specific electrophysiological differences between musical pitch and valence judgment. F. FOO*; J. HIROTA; R. MALZYNER; R. T. KNIGHT. *Univ. of California.*

11:00 M43 **508.12** Dissociation between spiking activity and local field potentials in the auditory cortex during auditory decision-making. J. TSUNADA*; A. S. K. LIU; J. I. GOLD; Y. E. COHEN. *Univ. of Pennsylvania Sch. of Med., Univ. of Pennsylvania Sch. of Med.*

8:00 M44 **508.13** A synaptic and circuit logic for task engagement in auditory cortex. K. KUCHIBHOTLA*; J. V. GILL; R. C. FROEMKE. *NYU Sch. of Med.*

9:00 M45 **508.14** Contribution of primary auditory cortex to auditory-streaming behavior. K. L. CHRISTISON-LAGAY*; Y. E. COHEN. *Perelman Sch. of Med. At the Univ. of Pennsylvania, Perelman Sch. of Med. at the Univ. of Pennsylvania.*

10:00 M46 **508.15** ● In-ear-EEG indicates neural signatures of effortful auditory processing. L. FIEDLER*; T. LUNNER; A. BRANDMEYER; M. WÖSTMANN; C. GRAVERSEN; J. OBLESER. *Max Planck Institute, Cognitive & Brain Sci., Eriksholm Res. Ctr., Linköping University,, Univ. of Lübeck.*

11:00 M47 **508.16** The role of parvalbumin-positive interneurons in auditory gap detection. L. OSTERHAGEN*; K. J. HILDEBRANDT. *Univ. of Oldenburg.*

8:00 M48 **508.17** How do anesthetics affect fMRI responses to auditory stimuli ? L. UHRIG*; M. DUPONT; B. JARRAYA. *INSERM, CEA Neurospin, INSERM Unicog, Necker-Enfants Malades Hospital, Descartes Univ., Neuromodulation unit, Dept. of Neurosurgery, Foch Hospital, UVSQ, Univ. Paris-Saclay.*

9:00 N1 **508.18** Differences in EEG activity between right and left handed on a sound localization task: An exploratory study. M. CASTRO GONZÁLEZ*; Y. DEL RÍO-PORTILLA. *Univ. Nacional Autónoma De México, Univ. Nacional Autónoma de México.*

10:00 N2 **508.19** Misophonia: Reflecting on self-generated trigger sounds. M. EDELSTEIN*; D. BRANG; B. MONK; R. ROUW; V. S. RAMACHANDRAN. *UC San Diego, Northwestern Univ., Univ. of Amsterdam.*

11:00 N3 **508.20** Primacy of frequency over amplitude modulation rate in retrieval of auditory memory. P. YIN*; S. A. SHAMMA; J. B. FRITZ. *Univ. Maryland.*

8:00 N4 **508.21** Neural substrate for sound symbolism: Visual size judgment with combinations of voiced and voiceless plosives with a vowel “o” or “i”. S. ITAGAKI*; S. MURAI; K. I. KOBAYASI; J. AURACHER; H. RIQUIMAROUX. *Doshisha Univ., Doshisha Univ., Konan Univ.*

9:00 N5 **508.22** A brain system for auditory working memory. S. KUMAR*; S. JOSEPH; P. GANDER; N. BARASCUD; A. HALPERN; T. D. GRIFFITHS. *Newcastle Univ., Inst. of Cognitive Neurosci., Human Brain Res. Laboratory, Dept. of Neurosurgery, The Univ. of Iowa, UCL Ear Inst., Dept. of Psychology, Bucknell Univ.*

10:00 N6 **508.23** White matter microstructure correlates with sensorimotor synchronization. T. BLECHER*; I. TAL; M. BEN-SHACHAR. *Bar Ilan Univ., Bar Ilan Univ.*

11:00 N7 **508.24** Object-based sound signal classification. Y. LIM*; J. CHOI. *Korea Inst. of Sci. and Technol.*

Tues. AM

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

8:00 N8 **508.25** An acoustic discrimination task can be used to monitor psychical stress and enhanced cognitive demands in hearing impaired people. C. GORF; R. HUONKER; E. EMMERICH; F. RICHTER*. *Univ. Hosp. Jena, Univ. Hosp. Jena.*

9:00 N9 **508.26** Combined effects of frequency and location differences on auditory streaming. J. LEE; S. BENNUR; Y. I. FISHMAN; Y. E. COHEN*. *Univ. of Pennsylvania, Albert Einstein Col. of Med., Univ. of Pennsylvania Sch. of Med.*

10:00 N10 **508.27** Temporal dynamics of processing task-relevant and irrelevant sound feature changes. S. PUSCHMANN; R. J. HUSTER; C. M. THIEL*. *Univ. of Oldenburg, Univ. of Oslo.*

11:00 N11 **508.28** Hierarchical neuronal representations of sound categories in human brain. Y. ZHANG; Y. DING; J. HUANG*; W. ZHOU; Z. LIN; B. HONG; X. WANG. *Tsinghua Univ., Johns Hopkins Univ., Tsinghua Univ., Chinese PLA Gen. Hosp., Johns Hopkins Univ., Tsinghua Univ.*

8:00 N12 **508.29** Perceptual restoration of missing speech sounds in human auditory cortex. M. K. LEONARD*; M. J. SJERPS; M. O. BAUD; E. F. CHANG. *UCSF, UC Berkeley, UCSF.*

9:00 N13 **508.30** Sensorimotor representations in the language network during sentence repetition. K. MÜSCH*; T. A. VALIANTE; K. HIMBERGER; C. J. HONEY. *Univ. of Toronto, Toronto Western Res. Inst.*

POSTER

509. Cross-Modal Processing: Temporal Factors

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 N14 **509.01** ● Temporal ensemble coding in sub-second sensory events: Simultaneous EEG and fNIRS signatures. L. CHEN*; L. GUO; H. YILTIZ; M. BAO. *Peking Univ., Key Lab. of Machine Perception (Ministry of Education), Peking Univ., Inst. of Acoustics, Chinese Acad. of Sci.*

9:00 N15 **509.02** Perceived timing of multisensory events during a fall. M. BARNETT-COWAN*; K. DUGGAN; J. LUPO. *Univ. of Waterloo.*

10:00 N16 **509.03** ● Audiovisual integration in cochlear implant users. I. BUTERA*; R. A. STEVENSON; R. H. GIFFORD; M. T. WALLACE. *Vanderbilt Univ., Univ. of Toronto, Vanderbilt Univ.*

11:00 N17 **509.04** Crossmodal interactions in the timing of a visual event: An EEG study. H. KAFALIGONUL*; U. KAYA. *Natl. Magnetic Resonance Res. Ctr. (UMRAM), Bilkent Univ., Interdisciplinary Neurosci. Program, Bilkent Univ., Informatics Institute, METU.*

8:00 N18 **509.05** Electrophysiological correlates of performance variability in multisensory detection. A. THELEN*; M. M. MURRAY; M. T. WALLACE. *Vanderbilt Brain Inst., The Lab. for Investigative Neurophysiol. (The LINE), Electroencephalography Brain Mapping Core.*

9:00 N19 **509.06** Audiovisual spatiotemporal binding windows in depth. J. NOEL*; M. WALLACE. *Vanderbilt Univ.*

10:00 N20 **509.07** Discrimination of auditory and audio-visual time intervals_an event-related potential study on effects of task difficulty. E. HASUO*; E. GONTIER; T. MITSUDO; Y. NAKAJIMA; S. GRONDIN. *Kyushu Univ., Univ. Laval, Kyushu Univ.*

11:00 N21 **509.08** Non-symmetric auditory-visual interactions at perceptual and cortical levels in mice. T. DENEUX*; A. KEMPF; B. BRICE. *CNRS UPR 3293.*

8:00 N22 **509.09** Investigating the influence of visual deprivation on multisensory processing in the superior colliculus. L. KURELA*; J. KRUEGER-FISTER; M. WALLACE. *Vanderbilt Univ., Vanderbilt Univ.*

9:00 N23 **509.10** Neural and behavioural signatures of the temporal integration window for auditory and facial-tactile stimulation. J. M. ZUMER*; T. P. WHITE; U. NOPPENEY. *Univ. of Birmingham.*

10:00 N24 **509.11** Differential visual modulation of auditory activity in cat A1 between supra- and infragranular layers. J. KRUEGER FISTER*; L. R. KURELA; A. R. NIDIFFER; T. A. HACKETT; M. T. WALLACE. *Vanderbilt Univ., Vanderbilt Univ.*

11:00 N25 **509.12** Exploring the role of synchrony in auditory-visual integration in ferrets and humans. G. P. JONES*; S. M. TOWN; K. C. WOOD; H. ATILGAN; S. DUNN; J. K. BIZLEY. *Univ. Col. London.*

8:00 N26 **509.13** Cross-modal interactions rescue temporally suppressed saliency of visual stimuli: A computational model. G. GILLARY*; E. NIEBUR. *The Johns Hopkins Univ., The Johns Hopkins Univ., The Johns Hopkins Univ.*

9:00 N27 **509.14** Enhanced tactile perception in musicians. S. P. LANDRY*; S. PAGE; F. CHAMPOUX. *Univ. de Montréal.*

10:00 N28 **509.15** How attention modulates neural excitation and inhibition. J. LUO*; M. BRUYNS-HAYLETT; A. KENNERLEY; S. HARRIS; L. BOORMAN; E. MILNE; B. WHALLEY; M. JONES; J. BERWICK; D. COCA; S. A. BILLINGS; J. RIERA; Y. ZHENG. *Univ. of Reading, The Univ. of Sheffield, The Univ. of Sheffield, Univ. of Reading, Florida Intl. Univ.*

11:00 N29 **509.16** Crossmodal perceptual adaptation implies neuronal convergence of auditory and tactile frequency signals. L. CROMMETT*; A. PÉREZ-BELLIDO; J. M. YAU. *Baylor Col. of Med.*

8:00 N30 **509.17** Decoding modality-specific and modality-invariant temporal frequency representations in the human brain. A. PEREZ-BELLIDO; K. A. BARNES*; M. TOMMERDAHL; J. M. YAU. *Baylor Col. of Med., Baylor Col. of Med., Univ. of North Carolina.*

9:00 N31 **509.18** Multisensory temporal processing in the inferior colliculus. A. R. NIDIFFER*; R. RAMACHANDRAN; M. T. WALLACE. *Vanderbilt Univ.*

10:00 N32 **509.19** Perceptual training enhances temporal acuity for audiovisual speech. M. A. DE NIEAR*; P. B. GUPTA; M. T. WALLACE. *Vanderbilt Univ., Vanderbilt Univ.*

11:00 N33 **509.20** Connecting individual differences in sensory and cognitive function in healthy aging. S. H. BAUM*; R. A. STEVENSON; P. A. NEWHOUSE; M. T. WALLACE. *Vanderbilt Univ., Univ. of Toronto, Vanderbilt Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 N34 **509.21** Speeded microstate transitions are associated with multisensory perceptual segregation. D. M. SIMON*; A. THELEN; M. T. WALLACE. *Vanderbilt Univ.*

9:00 N35 **509.22** Multisensory processing within thalamocortical networks occurs by temporal coupling of neuronal firing and oscillatory activity. M. BIELER*; N. CICHON; K. SIEBEN; I. L. HANGANU-OPATZ. *Univ. Med. Ctr. Hamburg-Eppendorf.*

10:00 N36 **509.23** fMRI adaptation reveals population tuning for tactile and auditory stimulus frequency in human cortex. K. A. BARNES; M. TOMMERDAHL; J. M. YAU*. *Baylor Col. of Med., Univ. of North Carolina.*

POSTER

510. Striate Cortex Circuitry

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 N37 **510.01** Phase selectivity of simple and complex cells in visual cortex. C. PONS*; M. JANSEN; X. LI; Y. BERESHPOLOVA; H. SWADLOW; J. ALONSO. *State Univ. of New York, Univ. of Connecticut, State Univ. of New York.*

9:00 N38 **510.02** Changes in the balance of ON and OFF cortical responses with the spatial-frequency content of the visual scene. M. JANSEN*; X. LI; R. LASHGARI; J. KREMKOW; Y. BERESHPOLOVA; H. SWADLOW; Q. ZAIDI; J. ALONSO. *SUNY Col. of Optometry, SUNY Col. of Optometry, Iran Univ. of Sci. and Technol., Univ. of Connecticut, SUNY Col. of Optometry.*

10:00 N39 **510.03** Classification of GABAergic interneurons in turtle visual cortex. C. M. MUELLER*; J. FOURNIER; G. LAURENT. *Max-Planck-Institute For Brain Res.*

11:00 N40 **510.04** Estimating synaptic density using 3D FIB/SEM and 3D confocal microscopy of LGN afferents in monkey V1. V. GARCIA-MARIN*; M. J. HAWKEN. *Ctr. For Neural Science. New York Universty.*

8:00 N41 **510.05** Spontaneously c-Fos-positive neurons are spatial clustered in mouse primary visual cortex. K. MAKINO*; K. FUNAYAMA; Y. IKEGAYA. *The Univ. of Tokyo, The Univ. of Tokyo, Natl. Inst. of Information and Communications Technol.*

9:00 N42 **510.06** Advancing a biomarker of reduced GABAergic action in the autistic brain. C. E. ROBERTSON*; A. MYNICK; S. RAJA; E. RATAI; N. KANWISHER. *Harvard Society of Fellows, 2McGovern Inst. for Brain Research, MIT, 3Martinos Imaging Center, MGH.*

10:00 N43 **510.07** Probing excitatory/inhibitory dynamics in awake visual cortex. I. LIN*; M. OKUN; M. CARANDINI; K. D. HARRIS. *Univ. Col. London.*

11:00 N44 **510.08** Thalamocortical input to putative fast-spike interneurons in layer 4 of rabbit visual cortex. X. HEI*; Y. BERESHPOLOVA; C. R. STOEZEL; J. ALONSO; H. A. SWADLOW. *Univ. of Connecticut, State Univ. of New York.*

8:00 N45 **510.09** Acetylcholine drives cortical microcircuit and modulates temporal dynamics in V1. H. SUGIHARA*; N. CHEN; M. SUR. *MIT, Biomed. Sci. Institutes, Agency for Science, Technol. and Res., McGovern Institute, MIT.*

9:00 N46 **510.10** What does cytochrome oxidase histochemistry truly represent in the visual cortex? T. TAKAHATA*. *Zhejiang Univ., Vanderbilt Univ.*

10:00 N47 **510.11** A developmental model of salt-and-pepper type orientation map in visual cortex. C. LEE*; J. JANG; S. PAIK. *KAIST.*

11:00 N48 **510.12** Withdrawn.

8:00 O1 **510.13** Polyploidy shapes the cellular and areal diversity of cortical layer 5. M. BRECHT*; J. SIGL-GLOECKNER. *Humboldt University/ BCCN Berlin, BCCN Berlin.*

9:00 O2 **510.14** The 50-ms window of opportunity in V1 microcircuits. V. BHARMAURIA*; L. BACHATENE; S. CATTAN; N. CHANAURIA; J. ROUAT; S. MOLOTCHNIKOFF. *Univ. De Montreal, Univ. de Sherbrooke.*

10:00 O3 **510.15** Gain modulation by serotonin in the macaque primary visual cortex. L. HRUBA*; T. OTT; A. NIEDER; P. POURRIAHI; H. NIENBORG. *Ctr. For Integrative Neurosci. (AG Nienborg), Univ. of Tuebingen, Inst. of Neurobio.*

POSTER

511. Mapping Connectivity and Function of Extrastriate Cortex

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 O4 **511.01** Topographic organization of the “third tier” dorsomedial visual cortex in the macaque monkey. K. HADJIDIMITRAKIS*; O. ALANAZI; T. A. CHAPLIN; J. CHAN; H. YU; S. BAKOLA; M. G. P. ROSA. *Monash Univ., Monash Vision Group, ARC Ctr. of Excellence for Integrative Brain Function, Vision, Touch and Hearing Res. Centre, The Univ. of Queensland.*

9:00 O5 **511.02** Evaluating the correspondence between category-selective and retinotopic organization of the lateral human occipitotemporal cortex. E. H. SILSON*; I. I. A. GROEN; D. J. KRAVITZ; C. I. BAKER. *Natl. Inst. of Mental Hlth., The George Washington Univ.*

10:00 O6 **511.03** Mapping spatial patterns of whole brain MRI using simultaneously recorded single neurons. D. C. GODLOVE*; B. E. RUSS; S. PARK; C. S. MPAMAUGO; F. Q. YE; D. B. T. MCMAHON; D. A. LEOPOLD. *NIMH/NIH.*

11:00 O7 **511.04** Dissecting the wiring diagram and function of cortico-cortical feedback from LM to V1 in mice. S. SHEN*; X. JIANG; J. REIMER; A. TOLIAS. *Baylor Col. of Med.*

8:00 O8 **511.05** Cortex based alignment improves the intersubject alignment of cytoarchitectonic regions in the human ventral stream. M. ROSENKE*; K. S. WEINER; M. FROST; M. BARNETT; K. ZILLES; K. AMUNTS; R. GOEBEL; K. GRILL-SPECTOR. *Brain Innovation BV, Stanford Univ., Maastricht Univ., Inst. for Neurosci. and Med. (INM-1), and JARA Brain, Res. Ctr. Jülich, Univ. Hosp. Aachen, RWTH Aachen, C. and O. Vogt Inst. for Brain Research, Heinrich Heine Univ. Düsseldorf, Netherlands Inst. for Neurosci., Stanford Neurosci. Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

9:00 O9 **511.06** GCaMP6 fluorescence-based retinotopic mapping reveals medial areas and complementaryrepresentations in the mouse visual cortex. J. ZHUANG*; D. WILLIAMS; M. VALLEY; M. GARRETT; J. WATERS. *Allen Inst. for Brain Sci., Allen Inst. for Brain Sci.*

10:00 O10 **511.07** 3D interactive anatomical connectivity atlas of the claustrum in the macaque monkey. K. S. SALEEM*; D. GLEN; Z. SAAD; M. MISHKIN; J. L. PRICE. *Natl. Inst. of Mental Hlth. (NIMH/NIH), Natl. Inst. of Mental Hlth. (NIMH/NIH), Washington Univ. Sch. of Med.*

11:00 O11 **511.08** Comparing fMRI maps derived from seed voxels, local field potential, and spiking activity during rest. C. S. MPAMAUGO*; D. C. GODLOVE; B. E. RUSS; S. PARK; F. Q. YE; D. B. T. MCMAHON; D. A. LEOPOLD. *NIMH/NIH.*

8:00 O12 **511.09** Calcium-binding proteins immunoreactivity in macaque V2 indicates differential population expression across cortical regions. J. J. COPPOLA*; A. A. DISNEY. *Vanderbilt Univ.*

9:00 O13 **511.10** Effects of TBS on visual cortex excitability depend on intensity as well as on coil geometry. S. BRÜCKNER; T. KAMMER*. *Univ. of Ulm.*

10:00 O14 **511.11** Functional MRI mapping based on responses of face-selective neurons during free viewing of natural videos. S. PARK*; B. E. RUSS; D. B. T. MCMAHON; D. C. GODLOVE; D. A. LEOPOLD. *SCNI, Lab. of Neuropsychology, NIMH, NIH, Lab. of Sensorimotor Research, NEI, NIH.*

11:00 O15 **511.12** Macromolecular tissue properties of human high-level visual cortex develop with age and may shape cortical function. J. GOMEZ*; M. BARNETT; V. NATU; A. MEZER; K. GRILL-SPECTOR. *Stanford Univ., Hebrew Univ. of Jerusalem.*

8:00 O16 **511.13** V1 population activity can drive development of highly diverse receptive fields in extrastriate cortex. B. W. MEL*; R. JAIN. *USC, USC.*

9:00 O17 **511.14** Visual cortex in birds? Anatomical and physiological evidence favors a cortical organization for the intrinsic neural circuitry of the avian visual pallium. M. FERNANDEZ; P. AHUMADA; C. NORAMBUENA; J. LETELIER*; G. MARIN; J. MPODOZIS. *Univ. de Chile, Univ. of Chile, Univ. Finis Terrae.*

10:00 O18 **511.15** Mapping the visual system devoid of visual stimuli. A. MENDELSOHN*; S. GABAY. *Univ. of Haifa, Univ. of Haifa.*

11:00 O19 **511.16** Distinct balance of excitatory and inhibitory drive within feedforward and feedback pathways in mouse visual cortex. R. D'SOUZA*; Q. WANG; A. M. MEIER; A. BURKHALTER. *Washington Univ. Sch. of Med., Allen Inst. for Brain Sci.*

POSTER

512. Sensorimotor Transformation: Higher Order Functional Organization

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 O20 **512.01** State-dependent processing in the brain. A. MARREIROS*; N. LOGOTHETIS; O. ESCHENKO. *Max Planck Inst. For Biol. Cybernetics.*

9:00 O21 **512.02** Brain-wide mapping of functional neuron groups in larval zebrafish. X. CHEN*; Y. MU; Y. HU; J. WITTENBACH; J. FREEMAN; F. ENGERT; M. B. AHRENS. *Harvard Univ., Janelia Res. Campus.*

10:00 O22 **512.03** Modulation of the pupil light reflex by frontal eye field microstimulation. B. A. EBITZ*; T. MOORE. *Stanford Univ., Stanford Univ.*

11:00 O23 **512.04** Comparison of BOLD activity induced by microstimulation of pulvinar and LIP in a behaving monkey. L. GIBSON*; M. WILKE; I. KAGAN. *Deutsches Primatenzentrum, Univ. Med. Sch.*

8:00 O24 **512.05** Effector-specific cortical mechanisms for memory-guided reaches and saccades: Progression from target memory through motor planning and execution. D. C. CAPPADOCIA*; S. MONACO; Y. CHEN; J. CRAWFORD. *York Univ., Univ. of Trento.*

9:00 O25 **512.06** Reduction of cortical activity during task learning reflects representation efficiency in the motor cortices. G. SPIGLER*; R. TIMMERS; S. WILSON. *The Univ. of Sheffield, The Univ. of Sheffield.*

10:00 O26 **512.07** Prosthetic limb usage relates to increased visuo-motor functional coupling and enhanced visual processing of prosthetic limbs in hand-selective cortical regions. F. M. Z. VAN DEN HEILIGENBERG; T. ORLOV; S. MACDONALD; E. P. DUFF; D. HENDERSON SLATER; H. JOHANSEN-BERG; J. C. CULHAM; T. R. MAKIN*. *Univ. of Oxford, Hebrew Univ. of Jerusalem, Univ. of Western Ontario, Oxford Ctr. for Enablement.*

11:00 O27 **512.08** Functional modulation of corticospinal excitability in motor mirror neurons after observational skill learning. M. VESIA*; R. PELLICCIARI; R. F. CASH; R. ISAYAMA; R. CHEN. *Toronto Western Res. Inst.*

8:00 O28 **512.09** Encoding action affordances during passive observation of graspable objects. S. SIMON*; R. GILRON; R. MUKAMEL. *Tel Aviv Univ., Tel Aviv Univ.*

9:00 O29 **512.10** Seeing another speak actives Spt and neighboring parietal area PFm. D. CORBO*; G. ORBAN. *Univ. of Parma.*

10:00 O30 **512.11** Neural mechanisms of body language: Does body language share common neural mechanisms with vocal language? Y. SATO*; A. MATSUO; S. MORIOKA. *Kio Univ.*

11:00 O31 **512.12** Investigating interhemispheric transmission with tRNS. J. R. MCINTOSH*; C. MEHRING. *Freiburg Univ., Imperial Col. London.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

513. Inflammatory Pain

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 O32 **513.01** Chronic inflammation causes reduced peripheral drive in primary afferents in both young and aged mice. A. WEYER*; C. L. O'HARA; C. STUCKY. *Med. Col. of Wisconsin, Med. Col. of Wisconsin.*

9:00 O33 **513.02** Mechanisms of complement C5a-induced mechanical sensitization in mouse: The roles of macrophages, cytokines and TRPV1. C. WARWICK*; L. P. SHUTOV; Y. M. USACHEV; D. J. CLARK; X. SHI. *Univ. of Iowa, VA Palo Alto Healthcare Syst. and Stanford Univ.*

10:00 O34 **513.03** Modulation of nociceptive synaptic transmission by PAR2 receptors at spinal cord level in a model of peripheral inflammation. P. MRÓZKOVÁ*; J. PALECEK. *Inst. of Physiol. Acad. of Sci.*

11:00 O35 **513.04** Neuronal gene therapy of murine carrageenan-induced inflammatory pain with human carbonic anhydrase-8 using AAV8 virus. G. Z. ZHUANG*; B. KEELER; J. GRANT; L. BIANCHI; D. M. ERASSO; A. S. PANTRY; S. BANDREMER; E. S. FU; W. TIM; K. D. SARANTOPOULOS; L. DIATCHENKO; S. SMITH; W. MAIXNER; E. R. MARTIN; R. C. LEVITT. *Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med., Univ. North Carolina, Algynomics Inc., Univ. Miami Miller Sch. of Med., Univ. Miami Miller Sch. of Med., Univ. Miami Miller Sch. of Med., Bruce W. Carter Miami Healthcare Syst.*

8:00 O36 **513.05** Phosphatidylinositol 3-kinase and phospholipase C mediate Epac-induced sensitization of rat sensory neurons. B. SHARIATI*; G. D. NICOL; M. R. VASKO. *Dept. of Pharmacol. and Toxicology, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

9:00 O37 **513.06** Expression of NIPSNAP1, a neuropeptide nocistatin-interacting protein, following inflammatory pain. E. OKUDA-ASHITAKA*; K. OKAMOTO; M. OHASHI; K. OHNO; T. MINAMI; S. ITO. *Osaka Inst. of Technol., Osaka Med. Col., Kansai Med. Univ.*

10:00 O38 **513.07** DNA hydroxymethylation by Tet1 and Tet3 regulates chronic inflammatory pain. Z. PAN*; Z. XUE; L. HAO; Q. TANG; M. ZHANG; X. YANG; Y. LI; J. CAO. *Xuzhou Med. Univ., Xuzhou Med. Univ.*

11:00 O39 **513.08** Toluene pronociceptive effect is increased after repeated exposures but is reduced by metamizol in the rat formalin test. L. F. ORTEGA-VARELA*; E. ALFARO-PEDRAZA; C. CERVANTES-DURÁN; M. Y. GAUTHEREAU-TORRES. *UMSNH, Lic. En Salud Publica, UMSNH, Facultad de Químico Farmacobiología, UMSNH, Facultad de Ciencias Médicas y Biológicas "Dr. Ignacio Chávez".*

8:00 O40 **513.09** Antinociceptive properties of selective melatonin MT2 receptor partial agonists. G. GOBBI*; M. LOPEZ-CANUL; S. COMAI; S. DOMINGUEZ-LOPEZ; V. GRANADOS-SOTO. *McGill Univ., Inst. of Neuroethology,University Veracruzana, Neurobio. of Pain Laboratory, Dept. of Pharmacobiology,CINVESTAV.*

9:00 O41 **513.10** The role of activated peripheral kappa opioid receptors on the alleviation of arthritis pain. S. O. MOON*; H. HAN, male; E. PARK, male; H. SUH, female. *Col. of Med., korea university.*

10:00 O42 **513.11** ● Role of trace metal-generated oxidative stress in Toll-like receptor 4 signaling (TLR-4) in synovial fibroblasts. A. A. ALSOUSI*; O. J. IGWE. *Univ. of Missouri.*

11:00 O43 **513.12** The alpha 5 subunit-containing GABAA receptors contribute to chronic pain. M. BRAVO HERNANDEZ*; J. A. CORLETO; P. BARRAGÁN-IGLESIAS; R. GONZÁLEZ-RAMÍREZ; J. B. PINEDA-FARIAS; R. FELIX; N. A. CALCUTT; R. DELGADO-LEZAMA; M. MARSALA; V. GRANADOS-SOTO. *Dept. De Farmacobiología, Cinvestav, Sede S, Univ. of California San Diego, Cinvestav, Hosp. Gen. "Dr. Manuel Gea González", Univ. of California San Diego, Cinvestav, Inst. of Neurobio.*

8:00 O44 **513.13** Participation of the potassium channels (K+) on the antinociceptive effect of peripheral administration of docosahexaenoico acid (DHA). A. Y. LANDA*; A. E. CHÁVEZ PÍÑA. *Escuela Nacional De Medicina Y Homeopatía, Natl. Polytechnic Inst. (IPN).*

9:00 O45 **513.14** SHANK3 regulates pain via possible peripheral and presynaptic mechanisms: Implication in pain dysregulation in autism. Q. HAN*; Y. KIM; X. WANG; W. CHANG; Y. ZHANG; T. BERTA; F. TANG; Y. JIANG; R. JI. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

10:00 O46 **513.15** Local sympathetic denervation reduces pain behaviors and inflammation in the CFA model. S. CHEN; W. XIE; A. LI; J. A. STRONG; J. ZHANG*. *Univ. Cincinnati Coll Med.*

11:00 O47 **513.16** Anti-cancer and analgesic effects of resolvin D-series in head and neck cancer. Y. YE*; J. CURTIN; D. BERNABE; B. SCHMIDT. *New York Univ., New York Univ., Univ. Estadual Paulista, New York Univ.*

8:00 O48 **513.17** Characterization of the immune cell infiltrate in oral squamous carcinoma-induced cancer pain. N. SCHEFF*; B. L. SCHMIDT. *New York Univ.*

9:00 P1 **513.18** Investigating the role of microglia and P2X7 receptors in monosodium iodoacetate induced joint pain. M. J. MOUSSEAU*; A. PILAPIL; N. BURMA; J. MATYAS; T. TRANG. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

10:00 P2 **513.19** Potentiation of phase II formalin responses in zinc transporter-3 knockout mice. C. Y. FAN*; B. B. MCALLISTER; R. H. DYCK; T. TRANG. *Univ. of Calgary, Univ. of Calgary.*

11:00 P3 **513.20** Mechanical allodynia following disc herniation requires intraneural macrophage infiltration and can be blocked by systemic selenium delivery or attenuation of bdnf activity. Y. TU*; M. SHAMJI; M. SALTER. *The Hosp. For Sick Children, Toronto Western Hosp., The Hosp. For Sick Children.*

8:00 P4 **513.21** Cytokines of the IL-6/gp130 family increase the cAMP-ERK crosstalk in sensory neurons. A. GARZA CARBAJAL*; S. BROSIG; A. THIEL; T. HUCHO. *Uniklinik Köln (aör).*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 P5 **513.22** F-actin links Epac-PKC signaling to sensitization of purinergic P2X3 receptors after inflammation. Y. GU*; C. WANG; G. LI; Y. CHEN; L. M. HUANG. *Univ. Texas Med. Br.*

10:00 P6 **513.23** Preferred recycling pathway by internalized PGE2 EP4 receptor following agonist stimulation in cultured dorsal root ganglion neurons contributes to nociceptor sensitization. W. MA*; B. ST-JACQUES. *McGill Univ., McGill Univ.*

11:00 P7 **513.24** Targeted overexpression of Tumor Necrosis Factor-alpha increased Cyclin-dependent kinase 5 activity and the subsequent calcium influx in trigeminal ganglia neurons. E. UTRERAS PURATICH*; P. ROZAS; P. LAZCANO; R. PIÑA; A. CHO; A. TERSE; R. MADRID; C. GONZALEZ-BILLAULT; A. B. KULKARNI. *Univ. of Chile. Fac. of Sci., Univ. of Santiago, NIDCR.*

8:00 P8 **513.25** The role of neuronal Fc-gamma receptor I in antigen-specific pain. H. JIANG; X. SHEN; Z. CHEN; F. LIU; T. WANG; B. YUAN; Y. XIE; C. MA*. *Inst. of Basic Med. Sciences, CAMS&PUMC.*

9:00 P9 **513.26** The cellular and molecular identity of “silent” nociceptors. S. G. LECHNER*; A. ARCOURT; V. PRATO. *Heidelberg Univ.*

10:00 P10 **513.27** Elucidating the role of anti-inflammatory cytokine interleukin-10 in peripheral neuropathic pain. A. G. VANDERWALL*; S. NOOR; N. W. HARRIS; J. J. SANCHEZ; M. S. SUN; R. A. WHITEHEAD; X. O. YANG; E. D. MILLIGAN. *Univ. of New Mexico Sch. of Med., Univ. of New Mexico Sch. of Med., Univ. of New Mexico Sch. of Med.*

11:00 P11 **513.28** MicroRNA-219 in ventral tegmental area regulates pain by targeting CC2D1A. S. ZHANG*; X. YANG; T. ZANG; Z. PAN; H. LIU; Y. LI; H. ZHANG; J. CAO. *Xuzhou Med. Col.*

8:00 P12 **513.29** Protein and transcript levels for Gα proteins in the rostral ventromedial medulla and dorsal horn of the spinal cord of rats with peripheral inflammatory injury. A. WATTIEZ*; C. M. SANDE; R. Y. WALDER; D. L. HAMMOND. *Univ. of Iowa.*

9:00 P13 **513.30** High fat diet increases pain behaviors in a rat model of low back pain. J. A. STRONG*; W. XIE; M. PRINT; Y. M. ULRICH-LAI; J. ZHANG. *Univ. Cincinnati, Univ. Cincinnati.*

POSTER

514. Opioids and other Analgesics

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 P14 **514.01** Attenuation of opioid analgesia in T-cell deficient mice. S. F. ROSEN*; I. WALTERS; S. SOTOCINAL; J. S. MOGIL. *McGill Univ.*

9:00 P15 **514.02** AAV-mediated human arginine decarboxylase (hADC) overexpression modulates opioid tolerance and reinstatement of opioid self-administration. C. PETERSON*; C. C. CHURCHILL; S. A. SCHNELL; M. RIEDL; K. F. KITTO; J. WEINHOLD; L. VOLCHANOVA; G. L. WILCOX; C. A. FAIRBANKS. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

10:00 P16 **514.03** CaMKIIα controls the biogenesis of let-7 microRNAs in opioid tolerance. Y. HE*; Z. J. WANG. *Univ. of Illinois at Chicago.*

11:00 P17 **514.04** Study of neuropeptides involved in opioid induced hyperalgesia through liquid chromatography mass spectrometry. N. YANG*; S. RUBAKHIN; E. ROMANOVA; J. SWEEDLER; A. PRADHAN. *Univ. of Illinois At Urbana Champaign, Univ. of Illinois at Chicago.*

8:00 P18 **514.05** Delta opioid receptor functional competence is inhibited by lipoxygenase metabolites in the carrageenan model of inflammatory pain. L. C. SULLIVAN; W. P. CLARKE*; K. A. BERG. *Univ. Texas Hlth. Sci. Ctr., Univ. Texas Hlth. Sci. Ctr.*

9:00 P19 **514.06** 6’ -Guanidinonaltrindole (6’-GNTI) targets DOR-KOR heteromers in peripheral sensory neurons. B. A. MCGUIRE*; W. P. CLARKE; K. A. BERG. *UT Hlth. Sci. Ctr.*

10:00 P20 **514.07** Prolonged functional competence of delta opioid-kappa opioid receptor (DOR-KOR) heteromers in the rat carrageenan model of inflammatory pain. M. M. PANDO; B. A. JACOBS; L. C. SULLIVAN; R. J. JAMSHIDI; P. M. LOCOCO; T. A. CHAVERA; W. P. CLARKE; K. A. BERG*. *Univ. of Texas Hlth. Sci. Ctr.*

11:00 P21 **514.08** Epigenetic regulation of spinal cord gene expression contributes to enhanced postoperative pain and analgesic tolerance after continuous opioid exposure. P. SAHBAIE*; D. LIANG; X. SHI; Y. SUN; J. CLARK. *Stanford Univ., VA Palo Alto HCS.*

8:00 P22 **514.09** An allosteric modulator of the mu-opioid receptor promotes opioid-mediated antinociception. T. M. HILLHOUSE*; J. E. HALLAHAN; K. E. LIVINGSTON; C. MEURICE; M. LI; S. L. INGRAM; J. R. TRAYNOR. *Univ. of Michigan, Univ. of Pennsylvania, Oregon Hlth. & Sci. Univ.*

9:00 P23 **514.10** BK channel in microglia as a promising molecular target for the treatment of opioid-induced hyperalgesia. Y. HAYASHI*; H. NAKANISHI. *Fac of Dent. Sci. Kyushu Univ.*

10:00 P24 **514.11** ● Examination of classical and non-classical opioid receptor binding of neuroimmune targeted agents using radioligands. M. R. HUTCHINSON*; J. THOMAS; K. C. RICE; D. KYLE; A. A. SOMOGYI. *Univ. Adelaide, ARC Ctr. of Excellence for Nanoscale BioPhotonics, Inst. on Drug Abuse and Natl. Inst. on Alcohol Abuse and Alcoholism, Purdue Pharma.*

11:00 P25 **514.12** ▲ Nitric Oxide implicated in the reduced inhibitory response of the distal colon in mice lacking TLR2/4 receptors. V. STAIKOPOULOS*; E. A. H. BECKETT; X. Z. ZHANG; S. HENG; M. R. HUTCHINSON. *Univ. of Adelaide, Univ. of Adelaide, Univ. of Adelaide.*

8:00 P26 **514.13** Expression of an alternative delta-opioid receptor transcript in the mouse spinal cord. M. H. PILTONEN*; A. CHABOT-DORÉ; M. PARISIEN; L. S. STONE; L. DIATCHENKO. *McGill Univ.*

9:00 P27 **514.14** Awakening the delta opioid receptor in peripheral sensory neurons. A. P. DOYLE*; N. A. JESKE. *UTHSCSA, UTHSCSA, UTHSCSA, UTHSCSA.*

10:00 P28 **514.15** Implication of COPB1 in intracellular retention of the delta opioid receptor. L. GENDRON*; E. ST-LOUIS; J. PARENT. *Univ. De Sherbrooke.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

11:00 P29 **514.16** The delta opioid receptor agonist SNC80 preferentially recruits beta-arrestin 1 to promote analgesic tolerance. A. VICENTE-SANCHEZ*; A. F. TIPTON; H. AKBARI; L. SEGURA; M. L. SMITH; A. A. PRADHAN. *Univ. of Illinois At Chicago, Univ. of California.*

8:00 P30 **514.17** Intracellular signaling pathway underlying Cannabinoid Receptor-2 activation-induced β-endorphin production in HaCaT cells. F. GAO*; L. ZHANG; R. ZHOU; H. PAN; M. LI. *Sch. of Basic Medicine, Tongji Med. Col., Huazhong Univ. of Sci. and Technol., The Univ. of Texas MD Anderson Cancer Ctr.*

9:00 P31 **514.18** ● Knockdown of the secretory protein secretogranin III results in a loss of NTS2 receptor-mediated spinal analgesia. M. ROUX*; M. LEMIRE; J. LAINÉ; J. LONGPRÉ; A. M. JACOBI; S. D. ROSE; M. A. BEHLKE; P. SARRET. *Univ. De Sherbrooke, Integrated DNA technologies.*

10:00 P32 **514.19** Effect of eugenol in histamine-induced itch and hapten-induced atopic dermatitis. S. LEE*; P. CHO; J. LIM; S. OH; S. JUNG. *Physiol. of Dept. Dept. Med. of Col. Hanyang Univ., Natl. Res. Lab. for Pain, Dent. Res. Inst. and Dept. of Physiol. Sch. of Dentistry, Seoul Natl. University, Seoul, Korea, Republic of.*

11:00 P33 **514.20** Targeting putative mu opioid/chemokine receptor type 5 heteromers potently attenuates nociception in a murine model of chemotherapy-induced peripheral neuropathy. G. CATALDO*; M. M. LUNZER; E. AKGUN; P. S. PORTOGHESE; D. A. SIMONE. *Univ. of Minnesota, Univ. of Minnesota.*

8:00 P34 **514.21** β-arrestin-2-biased apelin receptor agonists as novel potent analgesics. É. BESSERER-OFFROY*; M. LAFRANCE; M. OUIRZANE; A. MURZA; J. LONGPRÉ; É. MARSAULT; R. LEDUC; P. SARRET. *Univ. de Sherbrooke.*

9:00 P35 **514.22** Site-selective modifications of the neurotensin hexapeptide fragment lead to the generation of highly active and metabolically stable NT(8-13) analogs. M. VIVANCOS*; E. BESSERER-OFFROY; R. BROUILLETTE; A. RENÉ; R. FANELLI; M. LAFRANCE; P. TÉTREAULT; J. COLERETTE-TREMBLAY; J. LONGPRÉ; J. MARTINEZ; F. CAVELIER; P. SARRET. *Univ. De Sherbrooke, Univ. de Montpellier.*

10:00 P36 **514.23** Botulinum neurotoxin derivatives as pain specific inhibitors. R. RAMACHANDRAN*; S. PELLETT; W. H. TEPP; C. L. PIER; E. A. JOHNSON; T. L. YAKSH. *UCSD, Univ. of Wisconsin, Madison.*

11:00 P37 **514.24** The granulocytes-derived chemokine bv8/pk2 is involved in g-csf induced pain. L. NEGRI*, Prof; R. LATTANZI. *Univ. La Sapienza.*

8:00 P38 **514.25** CYP-derived lipids in Chemotherapy-induced neuropathic pain. M. SISIGNANO; C. ANGIONI; C. PARK; S. ZINN; S. HOHMANN; A. SCHMIDTKO*; C. J. WOOLF; R. JI; K. SCHOLICH; G. GEISSLINGER. *Goethe Univ., Duke Univ. Med. Ctr., Univ. Witten/Herdecke, Harvard Med. Sch.*

POSTER

515. Somatosensory Cortex

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 P39 **515.01** The role of multi-whisker integration during active sensation to the cortical representation of somatotopic space. S. PLUTA*; E. H. LYALL; E. S. RYAPOLOVA-WEBB; G. I. TELIAN; H. ADESNIK. *Univ. of CA - Berkeley, Univ. of CA - Berkeley, Univ. of CA - Berkeley.*

9:00 P40 **515.02** A direct translaminar inhibitory circuit tunes cortical output. A. NAKA*; S. R. PLUTA; J. VEIT; G. I. TELIAN; L. YAO; R. M. HAKIM; D. TAYLOR; H. A. ADESNIK. *UC Berkeley.*

10:00 P41 **515.03** Predicting the spatial resolution of thalamocortical input from a detailed model. M. W. REIMANN*; E. MULLER; H. MARKRAM. *Blue Brain Project.*

11:00 P42 **515.04** Predictive in silico reconstruction of cell-type specific synaptic anatomy and physiology in the neocortical microcircuit. S. RAMASWAMY*; J. G. KING; E. MULLER; J. RAHMON; M. REIMANN; H. MARKRAM. *EPFL - Blue Brain Project.*

8:00 Q1 **515.05** Data-driven construction of mouse whole-brain models. C. EROE; D. KELLER; H. MARKRAM; M. GEWALTIG*. *EPFL - Ctr. For Brain Simulation.*

9:00 Q2 **515.06** Data-driven in silico reconstruction of rat somatosensory cortex: Comparison to recent *in vivo* findings. E. B. MULLER*; G. CHINDEMI; T. NEWTON; M. NOLTE; S. RAMASWAMY; M. W. REIMANN; H. MARKRAM. *EPFL - Blue Brain Project.*

10:00 Q3 **515.07** Recent improvements towards the accurate modeling of the rat brain using detailed morphologies on supercomputing technologies. J. G. KING*; F. DELALONDRE; B. MAGALHAES; P. KUMBHAR; T. EWART; A. OVCHARENKO; S. YATES; F. CREMONESI; A. DEVRESSE; M. HINES; E. MULLER; H. MARKRAM; F. SCHUERMANN. *Blue Brain Project, Brain Mind Institute, EPFL, Yale Univ.*

11:00 Q4 **515.08** Ipsilateral sensorimotor integration: Is it an upper limb phenomenon? K. L. RUDDY*; W. TAUBE; E. JASPERS; M. KELLER; N. WENDEROTH. *ETH Zurich, Univ. of Fribourg.*

8:00 Q5 **515.09** Complementary role of intra- and inter-areal cortical connections in somatosensory processing in primates. L. NEGYESSY*; E. PÁLFI; M. ASHABER; L. ZALÁNYI; C. T. PALMER; O. KÁNTOR; R. M. FRIEDMAN; A. W. ROE. *Wigner Res. Ctr. For Physics, Hungarian Acad. of Sci., Semmelweis Univ., Univ. of Montana, Vanderbilt Univ.*

9:00 Q6 **515.10** Visual responsiveness of neurons in the secondary somatosensory area and its surrounding parietal operculum regions in awake macaque monkeys. M. TAOKA*; S. HIHARA; M. TANAKA; A. IRIKI. *RIKEN Brain Sci. Inst., Tokyo Med. and Dent. Univ.*

10:00 Q7 **515.11** Human secondary somatosensory cortex detects tactile novelty under the predictive coding theory. G. NAEIJE; V. WENS; B. MARTY; T. VAULET; M. OP DE BEECK; S. GOLDMAN; X. DE TIÈGE*. *Unité De Magnetoencephalographie, ULB-Hôpital Erasme.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 Q8 **515.12** Prestimulus oscillatory state differentially influences cerebral processing of attended versus unattended somatosensory stimuli. N. FORSCHACK*; T. NIERHAUS; M. M. MÜLLER; A. VILLRINGER. *MPI For Human Cognitive and Brain Sci., Dept. of Psychology, Max-Planck-Institute for Human Cognitive and Brain Sci., Mind Brain Inst. and Berlin Sch. of Mind and Brain.*

8:00 Q9 **515.13** Simultaneous calcium imaging of identified feedforward and feedback cortico-cortical neurons during behavior. J. L. CHEN; F. F. VOIGT; R. KRÜPPEL; F. HELMCHEN*. *Brain Res. Inst. / Univ. of Zurich, Deutsche Forschungsgemeinschaft (DFG).*

9:00 Q10 **515.14** Sevoflurane modifies information transfer across the cerebral cortex. J. KURATA*. *Tokyo Med. and Dent. Univ.*

10:00 Q11 **515.15** Disrupted sensorimotor communication during ketamine anesthesia. K. E. SCHROEDER*; Z. T. IRWIN; M. GAIDICA; J. BENTLEY; P. G. PATIL; G. A. MASHOUR; C. A. CHESTEK. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan Med. Sch., Univ. of Michigan Med. Sch., Univ. of Michigan, Univ. of Michigan Med. Sch.*

11:00 Q12 **515.16** Characterization of the resonance responses in eeg and forepaw movements to the rhythmic peripheral versus cortical stimulations. D. LEE*; J. CHOI. *Korea Inst. of Sci. and Technol.*

8:00 Q13 **515.17** Intrinsic and synaptic properties of excitatory neurons in layer 2/3 somatosensory cortex of CK1d migraine mice. P. M. SAWANT*; K. BRENNAN. *Univ. of Utah, Univ. of Utah Sch. of Med.*

9:00 Q14 **515.18** Identifying hand, foot and face sensorimotor U-fibers using DTI. E. BORDBAR*; C. BUCKLESS; D. PETERSON; S. MOSTOFSKY; D. CROCETTI. *Johns Hopkins Sch. of Medicine/ Kennedy Krieger, Kennedy Krieger Inst., Univ. of Washington, Kennedy Krieger Inst.*

10:00 Q15 **515.19** Optogenetic mapping of translaminar functional connectivity in the somatosensory cortex of rodents. M. C. QUIQUEMPOIX*; S. L. FAYAD; K. BOUTOURLINSKY; N. LERESCHE; R. C. LAMBERT; T. BESSAIH. *Univ. Pierre & Marie Curie, CNRS, INSERM.*

11:00 Q16 **515.20** Morphological and Functional Characterization of Non-fast spiking GABAergic Interneurons in layer 4 microcircuitry of rat barrel cortex. V. SIVARAJAN*; G. QI; D. FELDMEYER. *RWTH Aachen Univ. Hosp., Inst. of Neurosci. and Med. - 2, Forschungszentrum, Jülich Aachen Res. Alliance.*

8:00 Q17 **515.21** Behavioral rewards impact sensory cortical representations via their effect on apical dendrites in Layer 1 of mouse barrel cortex. C. LACEFIELD*; E. PNEVMATIKAKIS; L. PANINSKI; R. M. BRUNO. *Columbia Univ., Simons Ctr. for Data Analysis, Simons Fndn., Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ.*

9:00 Q18 **515.22** VIP interneurons in the barrel cortex of VIPcre/tdTomato mice. A. PRÖNNEKE; B. SCHEUER; R. J. WAGENER; M. MOECK; M. WITTE; J. F. STAIGER*. *Georg-August-University, Georg-August-Univ.*

10:00 Q19 **515.23** Fast modulatory activity of serotonergic cortical afferents mediated by $5HT3_AR$-expressing interneurons. F. MARKOPOULOS*; S. PAGÈS; V. KEHAYAS; C. GILLET; S. FRAZER; A. DAYER; A. HOLTMAAT. *Univ. of Geneva.*

11:00 Q20 **515.24** ● ▲ The effect of sensory deprivation and the role of perineuronal nets. P. CHU; K. BUDHU; J. C. BRUMBERG*. *The Grad. Center, CUNY, Queens College, CUNY, Queens Col.*

8:00 R1 **515.25** Inter-barrel synaptic connections involving layer 4 spiny neurons and interneurons in rat barrel cortex. G. QI*; D. FELDMEYER. *Res. Ctr. Jülich, RWTH Aachen Univ.*

9:00 R2 **515.26** Excitatory and inhibitory inputs to vasoactive intestinal polypeptide-expressing neurons in the mouse barrel cortex. J. SOHN*; S. OKAMOTO; N. KATAOKA; K. NAKAMURA; T. KANEKO; H. HIOKI. *Kyoto Univ. Grad. Sch. of Med., Nagoya Univ. Grad. Sch. of Med., PRESTO, JST.*

10:00 R3 **515.27** Circuit mechanisms underlying tactile gating during active sensation. J. YU*; D. GUTNISKY; A. HIRES; K. SVOBODA. *HHMI Janelia Res. Campus.*

11:00 R4 **515.28** Laminar specific membrane potential dynamics of forepaw primary somatosensory cortical neurons during behavior. W. ZHAO*; J. KREMKOW; J. F. A. POULET. *Neurosci. Res. Ctr. and Cluster of Excellence NeuroCure, Charité-Universitätsmedizin Berlin, Dept. of Neuroscience, Max Delbrück Ctr. for Mol. Med. (MDC), Berlin-Buch, Germany, Inst. for Theoretical Biology, Humboldt-University of Berlin.*

POSTER

516. Somatosensory Response Properties

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 R5 **516.01** Effects of excitation wave induced by forelimb stimulation on the propagation pattern of excitation wave induced by hindlimb stimulation in the rat sensorimotor cortex recorded with an optical recording system. N. HAMA*; M. KAWAI; S. ITO; A. HIROTA. *Shimane University, Sch. of Med.*

9:00 R6 **516.02** Representation of two-whisker sequences in L2/3 of mouse S1. K. J. LABOY-JUAREZ*; D. E. FELDMAN. *Univ. of California, Berkeley, UC Berkeley.*

10:00 R7 **516.03** Sensory stimulus evoked responses in layer 2/3 pyramidal neurons of the hind paw-related mouse primary somatosensory cortex. G. BONY*; A. A-BHASKARAN; K. LE CORF; A. FRICK. *INSERM.*

11:00 R8 **516.04** Feedforward motor information enhance sensory responses in S1 barrel cortex neurons. M. KHATEB; J. SCHILLER; Y. SCHILLER*. *Technion Med. Sch.*

8:00 R9 **516.05** Sensory modulation by whisker movement in the rat brainstem trigeminal complex. S. CHAKRABARTI; C. SCHWARZ*. *Univ. Tuebingen.*

● Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 R10 **516.06** Receptive fields and response characteristics of neurons in the S1 whisker representation of the short-tailed opossum, Monodelphis domestica. D. L. RAMAMURTHY*; L. A. KRUBITZER. *UC Davis, Univ. of California, Davis.*

10:00 R11 **516.07** Perception of partial slips under tangential loading of the fingertip. A. BARREA*; B. DELHAYE; P. LEFEVRE; J. THONNARD. *Univ. Catholique De Louvain, Univ. of Chicago.*

11:00 R12 **516.08** ● Differential modulation of sensory input from three forearm afferent nerves to the spinal cord of the primate during delayed wrist movements. J. CONFAIS*; G. KIM; S. TOMATSU; T. TAKEI; K. SEKI. *Natl. Ctr. For Neuroscience, NCNP, Natl. institute for physiological science, Japan Sci. and Technol. Agency.*

8:00 R13 **516.09** Predictions for parietal cortex from a neural-network model of state estimation. J. G. MAKIN*; B. K. DICHTER; P. N. SABES. *Univ. of California, San Francisco.*

9:00 R14 **516.10** Stick-slip movements of whisker depend on multiple variables - some determined by the touched object and some by the actively touching subject. M. OLADAZIMI*; C. SCHWARZ. *Systems Neurophysiology, Werner Reichardt Ctr. F, Hertie Inst. for Clin. Brain Res., IMPRS for Cognitive and Systems Neurosci.*

10:00 R15 **516.11** Modulation of somatosensory evoked potentials after transcranial static magnetic field stimulation over primary and supplementary motor cortices. H. KIRIMOTO*; H. TAMAKI; H. ONISHI. *Niigata Univ. of Hlth. & Welfare.*

POSTER

517. Axonal Regeneration

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 R16 **517.01** Regression of the expression of growth associated genes after chronic nerve injuries. T. GORDON*; W. TETZLAFF. *Univ. of Alberta, Univ. of British Columbia.*

9:00 R17 **517.02** Chronic electrical muscle stimulation (EMS) immediately after nerve transection and repair increases reinnervated muscle force but does not prevent misdirection of regenerating nerves. M. WILLAND*; J. CATAPANO; T. GORDON; G. H. BORSCHEL. *The Hosp. For Sick Children.*

10:00 R18 **517.03** Optical activation of cut axons in mouse peripheral nerves enhances regeneration and muscle reinnervation. A. W. ENGLISH*; P. J. WARD; S. PARK. *Emory Univ. Sch. Med.*

11:00 R19 **517.04** Pharmacogenetic enhancement of functional recovery from sciatic nerve transection. P. B. JAISWAL*; A. W. ENGLISH. *Emory Univ.*

8:00 R20 **517.05** A glial cell line derived neurotrophic factor delivery system enhances nerve regeneration in acellular nerve allografts. K. TAJDARAN*; M. D. WOOD; M. S. SHOICHET; T. GORDON; G. H. BORSCHEL. *Univ. of Toronto/Sickkids Hosp., Univ. of Washington, Univ. of Toronto, Sickkids Hosp., Univ. of Toronto/Sickkids Hosp.*

9:00 S1 **517.06** Large-diameter sensory neurons require androgen receptor signaling for activity-enhanced axon regeneration. P. J. WARD*; A. ENGLISH. *Dept of Cell Biology, Emory Univ.*

10:00 S2 **517.07** Modulation and inhibition of M-response and H- reflex activity using kilohertz electrical stimulation. Y. PATEL*; R. J. BUTERA; A. W. ENGLISH. *Georgia Inst. of Technol., Emory Univ.*

11:00 S3 **517.08** Network medicine for retrograde motoneurodegeneration after peripheral nerve lesion. D. ROMEO-GUITART*; M. HERRANDO-GRABULOSA; T. LEIVA-RODRÍGUEZ; R. VALLS; J. MAS; M. COMA; J. FORÉS; C. CASAS. *Univ. Autònoma De Barcelona, Anaxomics Biotech SL, Hand and Peripheral Nerve Unit, Hosp. Clin. i Provincial, Barcelona, Spain.*

8:00 S4 **517.09** VEGF administration maintains normal discharge characteristics on axotomized abducens motoneurons in adult cats. R. M. DE LA CRUZ*; P. M. CALVO; A. M. PASTOR. *Univ. de Sevilla, Facultad de Biología.*

9:00 S5 **517.10** Peripheral injury induces Ca^{2+} permeable AMPA receptor-mediated maladaptive spinal plasticity. J. R. HUIE*; K. MORIOKA; E. STUCK; D. FONG; L. VAN CITTERS; C. GUANDIQUE; J. HAEFELI; V. DEGOS; M. MAZE; H. SU; A. FERGUSON. *UCSF, UCSF.*

10:00 S6 **517.11** Investigation of the neuroprotective actions of CD4+ T cells and interleukin-10 after facial nerve axotomy in mice. D. N. OLMSTEAD*; M. M. HAULCOMB; N. A. MESNARD-HOAGLIN; R. J. BATKA; N. D. SCHARTZ; V. M. SANDERS; K. J. JONES. *Indiana Univ. Sch. of Med., Richard L Roudebush VAMC, Loyola Univ. Med. Ctr., Hines VA Hosp., The Ohio State Univ.*

11:00 S7 **517.12** Adipose-derived stem cell-conditioned medium as a systemic therapy in a mouse model of amyotrophic lateral sclerosis. C. L. WALKER*; R. M. MEADOWS; Y. DU; K. MARCH; K. J. JONES. *Indiana Univ. Sch. of Med., Richard L Roudebush VAMC, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

POSTER

518. Cerebellum: Cortex and Nuclei Neurophysiology

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 S8 **518.01** Dealing with uncertainty: Binary decision making in the cerebellum. A. KHILKEVICH*; J. E. CANTON-JOSH; M. D. MAUK. *Univ. of Texas At Austin.*

9:00 S9 **518.02** Following learning-related activity in Purkinje cells and interpositus nucleus during the transition from delay to trace eyelid conditioning. H. E. HALVERSON*; A. KHILKEVICH; M. D. MAUK. *Univ. of Texas At Austin, The Univ. of Texas at Austin.*

10:00 S10 **518.03** Functional characterization of identified mossy fiber synaptic inputs in the input layer of cerebellar cortex. F. LANORE*; A. HANTMAN; A. SILVER. *UCL, Janelia Farm Res. Campus, Howard Hughes Med. Inst.*

11:00 S11 **518.04** Multimodal sensorimotor processing in mammalian cerebellar granule cells. T. K. DOYKOS*; B. D. HOUCK; A. L. PERSON. *Univ. of Colorado Denver.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 S12 **518.05** Granular cells CRFR1 depletion expedites cerebellar associative learning. G. EZRA-NEVO*; H. BOELE; M. TSOORY; A. CHEN. *Weizmann Inst. of Sci., Max Planck Inst. of Psychiatry, Erasmus Univ.*

9:00 S13 **518.06** Synaptic interactions between interneurons and Purkinje cells in cerebellar cortex *in vivo.* C. ARLT*; C. D. WILMS; M. HAUSSER. *Univ. Col. London.*

10:00 S14 **518.07** Responses of Purkinje cells in Crus I/II to repetitive whisker pad stimulation in anesthetized mice. S. BROWN*; I. M. RAMAN. *Northwestern Univ.*

11:00 S15 **518.08** Inhibition of Purkinje cell firing induces motor learning. H. L. PAYNE*; B. NGUYEN-VU; J. L. RAYMOND. *Stanford Univ., Stanford Univ.*

8:00 S16 **518.09** Skilled voluntary motions activate a cerebellar state of intrinsically synchronized neural dynamics. M. J. WAGNER*; J. SAVALL; J. LI; M. J. SCHNITZER. *Stanford Univ., HHMI.*

9:00 S17 **518.10** Encoding of action by the Purkinje cells of the cerebellum. D. J. HERZFELD*; Y. KOJIMA; R. SOETEDJO; R. SHADMEHR. *Johns Hopkins Univ., Washington Natl. Primate Ctr.*

10:00 S18 **518.11** Application of antagonist drugs of inhibitory receptors in the macaque ventral paraflocculus changes the response of Purkinje cells during oculomotor behaviors. P. M. BLAZQUEZ*; T. A. YAKUSHEVA. *Washington Univ.*

11:00 S19 **518.12** Temporal integration in an interneuron circuit model. R. MAEX*; B. GUTKIN. *Ecole Normale Superieure, Higher Sch. of Econ.*

8:00 S20 **518.13** Encoding of virtual reality locomotion kinematics in vermis lobules V and VI of the mouse cerebellum. S. MITOLO*; T. MUZZU; S. R. SCHULTZ. *Imperial Col. London.*

9:00 T1 **518.14** Response of the cerebellar nodulus and uvula Purkinje cells to vestibular stimulation in wild-type and LTD-deficient mice. T. A. YAKUSHEVA*; R. G. HERNANDEZ; C. I. DE ZEEUW; P. M. BLAZQUEZ. *Washington Univ. in St.Louis, Sch. of Medi, Univ. de Sevilla, Erasmus Univ. Med. Ctr.*

10:00 T2 **518.15** Selective encoding of unexpected head tilt by the deep cerebellar nuclei. J. CARRIOT*; M. JAMALI; J. X. BROOKS; K. E. CULLEN. *McGill Univ., McGill Univ.*

11:00 T3 **518.16** Most caudal fastigial neurons of the monkey respond to saccades as well as smooth-pursuit eye movements. Z. SUN*; P. W. DICKE; P. THIER. *Hertie Inst. for Clin. Brain Research, Univ. of Tübingen, Univ. of Tübingen, Univ. of Tübingen, Hertie Inst. for Clin. Brain Res.*

8:00 T4 **518.17** Cerebellar nuclear neurons use time and rate coding to transmit Purkinje neuron pauses. S. SUDHAKAR*; B. TORBEN-NIELSEN; E. DE SCHUTTER. *OIST, Univ. of Antwerp.*

9:00 T5 **518.18** A functional monosynaptic connection from the cerebellum to the ventral tegmental area. C. H. CHEN*; S. DORIZON; I. CARTA; K. KHODAKHAH. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

10:00 T6 **518.19** ▲ Synchrony is key. Olivocerebellar control of deep cerebellar nuclear (DCN) activity. T. TANG*; C. Y. SUH; T. A. BLENKINSOP; E. J. LANG. *New York University, Sch. of Med., Mount Sinai, Sch. of Med.*

11:00 T7 **518.20** Cellular classification of fastigial/medial cerebellar nucleus output circuits. H. FUJITA*; T. KODAMA; S. DU LAC. *Johns Hopkins Univ.*

8:00 T8 **518.21** Lobule-specific contribution of cerebellum to executive functions in mice. A. M. BADURA*; J. W. METZGER; B. DEVERETT; S. KOAY; J. L. VERPEUT; D. W. TANK; S. S. WANG. *Princeton Univ., Netherlands Inst. for Neurosci.*

9:00 T9 **518.22** Cerebellar projections to VTA: A potential role for cerebellum in reward and social behavior. I. CARTA*; C. H. CHEN; S. DORIZAN; K. KHODAKHAH. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

POSTER

519. Gait: Muscle Activity, Exercise and Biomechanics

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 T10 **519.01** Speed modulation of locomotor gait in the adult mouse. N. JOSSET*; M. LEMIEUX; M. ROUSSEL; S. COURAUD; F. BRETZNER. *Ctr. De Recherche Du CHU De Québec, Univ. laval.*

9:00 T11 **519.02** Motor control of forward accelerations versus steady swimming in bluegill sunfish. M. A. SCHWALBE*; A. L. BODEN; T. N. WISE; V. VIKAS; E. D. TYTELL. *Tufts Univ.*

10:00 T12 **519.03** The Quakemill: A computer vision based actuated treadmill for rapid, precisely controlled mechanical perturbations of freely running animals. A. VAHEDIPOUR*; C. D. VALENTI; B. D. ROBERTSON; O. HAJI MAGHSOUDI; A. J. SPENCE. *Temple Univ.*

11:00 T13 **519.04** Applying mediolateral pelvis force perturbation during treadmill training improves dynamic balance and overground walking in Children with Cerebral Palsy. M. WU*; J. KIM; D. J. GAEBLER-SPIRA; P. ARORA. *Northwestern Univ., Rehabil. Inst. of Chicago.*

8:00 T14 **519.05** Constraints on stance-phase force production and muscle coordination during overground walking in persons with chronic incomplete spinal cord injury. H. B. HAYES*; S. L. TIRADO; R. D. TRUMBOWER. *Emory Univ.*

9:00 T15 **519.06** Muscle actions on task performance and joint integrity in the rat hindlimb. M. C. TRESCH*; T. SANDERCOCK; Q. WEI; Y. DHAHER; D. K. PAI. *Northwestern Univ., Northwestern Univ., George Mason Univ., Rehabil. Inst. of Chicago, Univ. of British Columbia.*

10:00 T16 **519.07** Feedback and feedforward control during walking in individuals with chronic ankle instability. S. YEN*; M. B. CORKERY; A. DONOHOE; M. GROGAN; Y. WU. *Northeastern Univ., Univ. of Massachusetts Lowell.*

11:00 T17 **519.08** Locomotor control in mutant mice lacking DSCAM: A kinematic and EMG study. M. LEMIEUX*; F. BRETZNER. *Ctr. De Recherche Du CHU De Québec, Ctr. De Recherche Du CHU De Québec.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 T18 **519.09** Kinematic and histological changes after a penetrating injury in the hippocampus. J. R. LOPEZ RUIZ*; L. P. OSUNA CARRASCO; E. G. MENDIZABAL RUIZ; I. JIMÉNEZ ESTRADA; J. M. DUEÑAS JIMÉNEZ; S. H. DUEÑAS JIMÉNEZ. *Univ. De Guadalajara, CINVESTAV-IPN.*

9:00 T19 **519.10** Predictive and one-step-behind algorithms for self-paced split-belt treadmill. M. BOOTS*; S. YAKOVENKO. *West Viriginia Univ., WVU.*

10:00 T20 **519.11** Auditory cue modifies the fractal dynamics of human gait during treadmill walking. K. MASANI*; H. ROUHANI; M. O. ABE; K. NAKAZAWA; D. NOZAKI. *Toronto Rehab Inst., Univ. of Toronto, Hokkaido Univ., The Univ. of Tokyo, The Univ. of Tokyo.*

11:00 U1 **519.12** Use of inertial sensors for determining kinematic characteristics of infant leg movement. I. A. TRUJILLO PRIEGO*; B. A. SMITH. *USC Div. of Biokinesiology and Physical Therap, Univ. Of Southern California.*

8:00 U2 **519.13** Stepwise shifts in the set of modules for human locomotion with speed change. H. YOKOYAMA*; T. OGAWA; N. KAWASHIMA; K. NAKAZAWA. *The Univ. of Tokyo, Res. Inst. of Natl. Rehabil. Ctr. for Persons with Disabilities.*

9:00 U3 **519.14** Knee joint impedance optimizations for design of transfemoral prostheses. H. ARGUNSAH BAYRAM*; M. B. BAYRAM; B. L. DAVIS. *Acibadem Univ., Univ. of Akron.*

10:00 U4 **519.15** Reducing gait asymmetry after stroke with strength training. J. W. STINEAR*; A. J. C. MCMORLAND; M. JEON. *Univ. of Auckland.*

11:00 U5 **519.16** Alterations in sagittal and frontal gait kinematics in patients with subacute stroke following high-intensity stepping training. T. G. HORNBY*; G. MAHTANI; M. CONNOLLY; C. HOLLERAN; P. HENNESSY; J. WOODWARD. *Univ. of Illinois at Chicago, Rehabil. Inst. of Chicago, Rehabil. Inst. of Chicago.*

8:00 U6 **519.17** ● Visual feedback allows altered muscle phasing during pedaling for both the paretic and non-paretic leg following stroke. C. H. MULLENS*; D. A. BROWN. *Northwestern Univ., Univ. of Alabama, Birmingham.*

9:00 U7 **519.18** Dynamics inherent to bipedal locomotion constrain active control of foot placement. S. L. BARTON*; J. S. MATTHIS; B. R. FAJEN. *Rensselaer Polytechnic Inst., Univ. of Texas, Austin, Rensselaer Polytechnic Inst.*

POSTER

520. Gait and Posture: Aging, Injury, and Disease

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 U8 **520.01** Effect of cue timing and modality on gait initiation in Parkinson's disease. C. LU*; S. L. AMUNDSEN HUFFMASTER; P. J. TUITE; J. M. VACHON; C. D. MACKINNON. *Univ. of Minnesota, Univ. of Minnesota.*

9:00 U9 **520.02** Effects of external cue timing on the variability of gait initiation in people with Parkinson's disease. S. L. AMUNDSEN HUFFMASTER*; C. LU; J. M. VACHON; P. J. TUITE; C. D. MACKINNON. *Univ. of Minnesota, Univ. of Minnesota.*

10:00 U10 **520.03** The feasibility and efficacy of a standing continuous tracking task: Exploring the dosing of postural task practice in Parkinson's disease. S. Y. SCHAEFER*; H. A. HAYES; L. E. DIBBLE. *Utah State Univ., Univ. of Utah.*

11:00 U11 **520.04** Effectiveness of self-triggered versus externally-triggered cueing for improving gait initiation in persons with Parkinson's disease and freezing of gait. M. PETRUCCI*; C. MACKINNON; E. HSIAO-WECKSLER. *Univ. of Illinois Urbana-Champaign, Univ. of Minnesota.*

8:00 U12 **520.05** Variability in frequent, objective postural sway measures in mild cognitive impairment. J. M. LEACH*; M. MANCINI; J. A. KAYE; T. L. HAYES; F. B. HORAK. *Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

9:00 U13 **520.06** Balance control is improved in children with cerebral palsy through classical-ballet based instruction. C. LOPEZ-ORTIZ*; T. EGAN; D. J. GAEBLER-SPIRA. *Univ. of Illinois At Urbana-Champaign, Feinberg Sch. of Medicine, Northwestern Univ., Joffrey Ballet Academy, The Official Sch. of the Joffrey Ballet, Rehabil. Inst. of Chicago.*

10:00 U14 **520.07** Feasibility and effect of task-specific fall prevention training strategies to improve postural and stepping responses in patients with cerebellar dysfunction. S. IM*; J. PARK. *Korea Univ.*

11:00 U15 **520.08** Synergistic changes in muscle activity post-stroke during split-belt treadmill walking. P. ITURRALDE*; D. DE KAM; G. TORRES-OVIEDO. *Univ. of Pittsburgh, Radboud Univ. Med. Ctr.*

8:00 U16 **520.09** Missing muscle synergies for balance control in paretic side after stroke. D. DE KAM*; V. WEERDESTEYN; G. TORRES-OVIEDO. *Radboud Univ. Med. Ctr., Univ. of Pittsburgh.*

9:00 U17 **520.10** It's all uphill from here: Incline split-belt walking increases locomotor adaptation in unimpaired subjects and post-stroke patients. C. J. SOMBRIC*; J. S. CALVERT; P. A. ITURRALDE; D. M. MARISCAL; D. DE KAM; G. TORRES-OVIEDO. *Univ. of Pittsburgh, Radboud Univ. Med. Ctr.*

10:00 U18 **520.11** Effects of strength training the hip abductor-adductor muscles on protective stepping: A pilot study. M. MILLE*; M. PAPAIORDANIDOU; G. FLORENT; K. EL KOULALI; R. C. FITZPATRICK. *Inst. of Movement Sciences, UMR 7287, Toulon Univ., Northwestern Univ., Univ. of New South Wales.*

11:00 U19 **520.12** ▲ Time course of nanoparticle drug delivery to prevent or reverse functional and structural changes of proprioceptors in short-term hyperglycemic rats. V. K. HAFTEL*; J. LAKE; R. BUTLER; T. JOHNSON; M. PRIEST; K. MOTON-MELANCON; C. EADDY. *Morehouse Col., Morehouse Col., Spelman Col.*

8:00 U20 **520.13** A novel use of commerically available technology to assess balance impairment in mild traumatic brain injury. W. WRIGHT*; J. MCDEVITT; R. TIERNEY; F. J. HARAN; K. APPIAH-KUBI. *Temple Univ., US Navy.*

9:00 U21 **520.14** Assessing the effect of repeated sub-concussive head blows on balance control in football defensive linemen. M. CINELLI*; N. FIGUEIRA. *Wilfrid Laurier Univ.*

10:00 U22 **520.15** Locomotion and interhemispheric motor connectivity in mTBI. L. A. KING*; B. W. FLING; C. SWANSON; J. CHESNUTT. *Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

11:00 U23 **520.16** Neural correlates of dual-tasking in young and old adults. S. PAPEGAAIJ*; T. HORTOBÁGYI; B. GODDE; P. ERHARD; C. VOELCKER-REHAGE. *Univ. of Groningen, Univ. Med. Ctr., Univ. of Groningen, Univ. Med. Ctr. Groningen, Jacobs Univ., Univ. Bremen.*

8:00 U24 **520.17** Dynamic parameters of postural control during reaching tasks: Which are linked to fall risks for older adults living in the community? M. HUANG*; K. NEWMAN; T. SHILLING; A. RIGHTER; K. MILLER; K. SMITH; K. FREDRICKSON. *Univ. of Michigan-Flint, Beaumont Hlth. Syst., Life In Balance Physical Therapy, Mary Free Bed Rehabil. Hosp.*

9:00 U25 **520.18** Does aging with a cortical lesion increase fall-risk: Examining effect of age versus stroke on intensity modulation of reactive balance responses from slip-like perturbations. P. PATEL*; T. BHATT. *The Univ. of Illinois At Chicago.*

10:00 U26 **520.19** Thinking and walking while thinking outcomes of exercise interventions in older adults with age-related psychomotor slowing. K. A. LOWRY; W. J. FARRINGTON; J. M. VAN SWEARINGEN*. *Des Moines Univ., Univ. Pittsburgh.*

11:00 U27 **520.20** Interaction effect of Vision and Unstable base of support with Age on postural sway frequency. E. PARK*; G. SCHÖNER; D. REISMAN. *Georgia Inst. of Technol., Ruhr-Universität, Univ. of Delaware.*

8:00 U28 **520.21** Age-related deterioration in multi-joint coordination increases center of mass acceleration during quiet standing in humans. S. SASAGAWA*; H. OBATA; N. KAWASHIMA; T. OGATA; K. NAKAZAWA. *Dept. of Human Sciences, Kanagawa Univ., The Univ. of Tokyo, Dept. of Rehabil. for the Movement Functions, Res. Inst. of Natl. Rehabil. Ctr. for Persons with Disabilities.*

9:00 U29 **520.22** Deficits in medio-lateral balance control, leg strength and reaction time contribute to the increased risk of falling in persons with multiple sclerosis. S. MORRISON*; J. J. SOSNOFF; C. RYNDERS. *Old Dominion Univ., Univ. of Illinois, Univ. of Colorado.*

10:00 U30 **520.23** ● Effect of assistive force applied to the center of mass during walking on peak plantarflexor kinetics of older adults and an individual with poststroke hemiparesis. C. HURT*; D. BROWN. *Univ. of Alabama At Birminghma.*

11:00 U31 **520.24** Atypical muscle coordination present in hemiparetic walking as an explanation for impairment. W. BOEHM*; K. G. GRUBEN. *Univ. of Wisconsin Madison, Univ. of Wisconsin.*

8:00 U32 **520.25** The influence of sensorimotor deficits on unexpected lateral perturbations after stroke. V. L. GRAY*; C. YANG; S. MCCOMBE WALLER; M. W. ROGERS. *Univ. of Maryland Baltimore.*

9:00 U33 **520.26** Compensatory stepping in people with multiple sclerosis. D. S. PETERSON*; J. HUISINGA; F. HORAK. *Oregon Hlth. & Sci. Univ., Veterans Affairs Portland Hlth. Care Syst., Univ. of Kansas Med. Ctr.*

10:00 U34 **520.27** Preferred sense for static balance in people with diabetes and sensation loss. R. WILKINS; M. MARTIN; S. D. MOTTS*. *Arkansas State Univ., Arkansas State Univ.*

POSTER

521. Reaching and Motor Learning

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 U35 **521.01** Determination of the optimal error-augmented feedback schedules for enhancing acquisition of novel motor skills. P. N. PARMAR*; J. L. PATTON. *Rehabil. Inst. of Chicago, Univ. of Illinois at Chicago.*

9:00 U36 **521.02** Introducing variability to elicit changes in bimanual coordination. R. RANGANATHAN*. *Michigan State Univ.*

10:00 U37 **521.03** Inverse identification of motor deficits using movement distributions and mixtures of expert models. J. R. LANCASTER*; F. C. HUANG; J. L. PATTON. *Univ. of Illinois At Chicago, Rehabil. Inst. of Chicago.*

11:00 U38 **521.04** Customized forces using distributions of error improve learning a visual-motor transformation. M. FISHER*; F. C. HUANG; V. KLAMROTH-MARGANSKA; R. RIENER; J. PATTON. *Rehabil. Inst. of Chicago, Univ. of Illinois at Chicago, Northwestern Univ., ETH Zürich, Univ. of Zürich.*

8:00 U39 **521.05** Analysis of simple motor performance and complex procedural skill in simulated surgery tasks. F. C. HUANG*; D. RUTHERFORD; R. RAY; F. A. MUSSA-IVALDI; C. PUGH. *Rehabil Inst. of Chicago, Univ. of Wisconsin Sch. of Med. and Publ. Hlth.*

9:00 U40 **521.06** Methods to train a Kalman filter to decode body motions into the control of a 2D cursor. I. SEÁÑEZ-GONZÁLEZ*; C. PIERELLA; E. THORP; A. FARSHCHIANSADEGH; F. ABDOLLAHI; F. MUSSA-IVALDI. *Northwestern Univ., Univ. of Genoa.*

10:00 U41 **521.07** A predictive model pointing to speed for post-stroke neurorehabilitation. Y. ABDEL MAJEED*; J. L. PATTON. *Univ. of Illinois At Chicago, Univ. of Illinois at Chicago, Rehabil. Inst. of Chicago.*

11:00 U42 **521.08** Effect of intermittent isometric contractions on transcranial direct current stimulation induced alterations in force generating capacity. E. P. WASHABAUGH*, IV; L. SANTOS; E. CLAFLIN; C. KRISHNAN. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

8:00 V1 **521.09** The “queen” computational model: Learning new distributions through costly encounters. A. K. SHAH*; J. L. PATTON. *Univ. of Illinois @ Chicago, Rehabil. Inst. of Chicago.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

9:00 V2 **521.10** Optimal design of a passive planar multi-directional resistive robot for upper-extremity rehabilitation. A. GWOZDZIOWSKI; E. P. WASHABAUGH; C. D. REMY; C. KRISHNAN*. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

10:00 V3 **521.11** Real-time feedback of estimated intent in the presence of random disturbances increases operator performance and reduces arm stiffness. J. R. HOROWITZ*; T. MADHAVAN; C. MASSIE; J. L. PATTON. *Rehab Inst. of Chicago, Univ. of Illinois at Chicago.*

11:00 V4 **521.12** Customized force field training based on stroke survivors' individual movement distributions. Z. WRIGHT*; J. L. PATTON; F. C. HUANG; E. LAZZARO. *Univ. of Illinois At Chicago, Rehabil. Inst. of Chicago.*

8:00 V5 **521.13** A computational model of learning in a body-machine interface. F. A. MUSSA-IVALDI*; C. PIERELLA; M. CASADIO. *Rehabil. Instiotute of Chicago, Northwestern Univ., Univ. of Genoa.*

9:00 V6 **521.14** Evaluation of the efficacy of body machine interface for rehabilitation of spinal cord injury survivors: A pilot study. C. PIERELLA*; A. DE LUCA; F. CERVETTO; E. TASSO; S. GAMBA; L. LOSIO; A. VENEGONI; S. MANDRACCIA; I. MULLER; A. MASSONE; F. A. MUSSA-IVALDI; M. CASADIO. *Rehabil. Inst. of Chicago, Univ. of Genoa, Unità Spinale Unipolare, Ospedale Santa Corona, ASL2 Savonese, Northwestern Univ.*

10:00 V7 **521.15** Kinetic energy optimization in object manipulation. A. FARSHCHIANSADEGH*; R. RANGANATHAN; F. MUSSA-IVALDI. *Rehabil. Inst. of Chicago, Michigan state university, Northwestern Univ.*

11:00 V8 **521.16** Spinal cord injury survivors take control with a novel Body-Machine Interface. F. ABDOLLAHI*; A. FARSHCHIANSADEGH; C. PIERELLA; I. SEÁÑEZ-GONZÁLEZ; E. THORP; M. LEE; R. RANGANATHAN; J. PEDERSON; D. CHEN; E. J. ROTH; M. CASADIO; F. A. MUSSA-IVALDI. *Rehabil. Inst. of Chicago, Northwestern Univ., Univ. of Genoa, Michigan State Univ.*

8:00 V9 **521.17** Differences in motor skill learning across lifespan. M. LEE*; A. FARSHCHIANSADEGH. *Michigan State Univ., Northwestern Univ.*

9:00 V10 **521.18** Is signal dependent noise an effective tool for shaping motor learning? E. B. THORP*; F. A. MUSSA-IVALDI. *Rehabil. Inst. of Chicago, Northwestern Univ., Northwestern Univ.*

10:00 V11 **521.19** The dynamics of kinematic, kinetic and electromyography parameters of competitive exercise bench press powerlifting in athletes with disabilities. A. B. TREMBACH*; D. LEVCHENKO; I. FEDOROVA; I. PAVELYEV; I. KOMLEV; Y. SHKABARNYA. *Univ. of Physical Educ.*

POSTER

522. Neuroprosthetics for Limb Control

Theme D: Sensory and Motor Systems

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 V12 **522.01** Functional electrical stimulation arm and hand neuroprosthesis controlled by an intracortical brain-computer-interface. B. AJIBOYE*; F. WILLET; D. YOUNG; W. MEMBERG; B. MURPHY; J. MILLER; J. SWEET; B. WALTER; J. SIMERAL; L. HOCHBERG; R. KIRSCH. *Case Western Reserve Univ., Louis Stokes Cleveland Dept. of Veterans Affairs Med. Ctr., Univ. Hosp. Case Med. Ctr., Univ. Hosp. Case Med. Ctr., Providence Dept. of Veterans Affairs Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ.*

9:00 V13 **522.02** Local field potentials in the motor cortex of people with tetraplegia: Comparison using unsupervised methods. A. A. SARMA*; D. M. BRANDMAN; T. MILEKOVIC; B. JAROSIEWICZ; J. SAAB; D. BACHER; V. GILJA; C. PANDARINATH; N. J. SCHMANSKY; F. WILLETT; D. YOUNG; J. BARRESE; C. BLABE; B. FRANCO; W. D. MEMBERG; B. SORICE; K. TRINGALE; S. S. CASH; B. EDLOW; S. MERNOFF; B. WALTER; E. ESKANDAR; J. MILLER; J. M. HENDERSON; K. V. SHENOY; A. AJIBOYE; R. F. KIRSCH; J. P. DONOGHUE; J. D. SIMERAL; L. R. HOCHBERG. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Brown Univ., Brown Univ., Univ. of California San Diego, Stanford Univ., Stanford Univ., Case Western Reserve Univ., Univ. of California San Diego, Harvard Med. Sch., UH Case Med. Ctr., CWRU Sch. of Med., Massachusetts Gen. Hosp., UH Case Med. Ctr., CWRU Sch. of Med., Stanford Univ., Stanford Univ., Stanford Univ., Case Western Reserve Univ., Louis Stokes Cleveland Dept. of VA Med. Ctr.*

10:00 V14 **522.03** Multi-day self-calibration of a point-and-click communication BCI for people with tetraplegia. B. JAROSIEWICZ*; A. A. SARMA; J. D. SIMERAL; D. BACHER; J. SAAB; B. SORICE; C. H. BLABE; S. S. CASH; E. N. ESKANDAR; K. V. SHENOY; J. M. HENDERSON; L. R. HOCHBERG. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Stanford Univ., Harvard Med. Sch., Massachusetts Gen. Hosp., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

11:00 V15 **522.04** User state-based modulation of intracortical activity: Distinguishing the idle state. D. LESENFANTS*; J. SAAB; B. JAROSIEWICZ; D. M. BRANDMAN; B. SORICE; A. A. SARMA; E. N. ESKANDAR; S. S. CASH; J. D. SIMERAL; J. P. DONOGHUE; L. R. HOCHBERG. *Brown Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Harvard Med. Sch.*

8:00 V16 **522.05** Comparing coordinate frame representations in human primary motor cortex for control of reaching. D. YOUNG*; R. F. KIRSCH; L. R. HOCHBERG; A. AJIBOYE. *Case Western Reserve Univ., Louis Stokes Cleveland Dept. of Veterans Affairs Med. Center, FES Ctr. of Excellence, Rehab. R&D Service, Dept. of Veterans Affairs Med. Center, Ctr. for Neurorestoration and Neurotechnology, Rehab. R&D Service, Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 V17 **522.06** Multiple grasp types can be reliably decoded from the precentral gyrus in people with ALS using implanted intracortical electrodes. D. BRANDMAN*; J. SAAB; C. E. VARGAS-IRWIN; S. E. FASOLI; C. H. BLABE; B. SORICE; S. S. CASH; E. N. ESKANDAR; J. M. HENDERSON; K. V. SHENOY; B. JAROSIEWICZ; L. R. HOCHBERG. *Brown Univ., Brown Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Stanford Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Massachusetts Gen. Hosp., Stanford Univ., Stanford Univ.*

10:00 V18 **522.07** Low dimensional dynamics of the primary motor cortex during natural locomotion captures kinematic information and improves decoding performance for brain machine interfaces. D. Y. XING*; M. AGHAGOLZADEH; D. BRANDMAN; C. VARGAS-IRWIN; W. TRUCCOLO; D. BORTON. *Brown Univ., Brown Univ., Brown Univ., DVA.*

11:00 V19 **522.08** Decoding grip type from cortical ensemble activity in humans and non-human primates: Improving classification using training data bootstrapping. C. E. VARGAS-IRWIN*; J. B. ZIMMERMANN; D. M. BRANDMAN; B. SORICE; C. H. BLABE; E. N. ESKANDAR; K. V. SHENOY; J. M. HENDERSON; S. S. CASH; M. J. BLACK; L. R. HOCHBERG; J. P. DONOGHUE. *Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Stanford Univ., Stanford Univ., Massachusetts Gen. Hosp., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Harvard Med. Sch., Max Planck Inst. for Intelligent Systems, Dept. of VA Med. Ctr., Brown Univ.*

8:00 V20 **522.09** Mechanical fatigue testing of an implantable intrafascicular electrode system. A. E. PENA; S. S. KUNTAEGOWDANAHALLI*; J. J. ABBAS; R. JUNG. *Florida Intl. Univ., Florida Intl. Univ., Arizona State Univ.*

9:00 V21 **522.10** Experimental assessment of fitting procedures for a neural enabled prosthetic hand system. L. RINCON GONZALEZ*; S. S. KUNTAEGOWDANAHALLI; J. J. ABBAS; K. W. HORCH; R. JUNG. *Florida Intl. Univ., Arizona State Univ.*

10:00 V22 **522.11** Evaluation of an implantable intrafascicular electrode System in rodents. A. K. THOTA*; S. KUNTAEGOWDANAHALLI; R. SIU; J. ABBAS; R. JUNG. *Florida Intl. Univ., Arizona State Univ.*

11:00 V23 **522.12** Biocompatibility testing of an implantable intrafascicular electrode system in rabbits. A. THOTA; S. KUNTAEGOWDANAHALLI; K. HORCH; J. ABBAS; R. JUNG*. *Florida Intl. Univ., Arizona State Univ.*

8:00 V24 **522.13** A brainet for whole-body navigation. R. SANKARANARAYANI*; P. TSENG; A. YIN; M. LEBEDEV; M. NICOLELIS. *Duke Univ., Duke Univ.*

9:00 V25 **522.14** A brainet for cortico-spinal communication. A. P. YADAV*; M. A. L. NICOLELIS. *Duke Univ., Duke Univ., Duke Univ., Duke Univ., Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal.*

10:00 V26 **522.15** ▲ Wireless brain-machine interface operated by freely behaving monkeys. M. J. LEE*; S. RAJANGAM; L. OLIVEIRA; M. LEBEDEV; M. NICOLELIS. *Ctr. For Neuroengineering, Duke Univ.*

11:00 V27 **522.16** Steady-state visual evoked potentials in monkey somatosensory and motor cortical areas. M. ORDIKHANI-SEYEDLAR*; A. RAMAKRISHNAN; M. A. LEBEDEV; S. PUTHUSSERYPADY; M. A. L. NICOLELIS. *Tech. Univ. of Denmark, Hvidovre Hosp., Duke Univ., Duke Univ., Duke Univ., Edmond and Lily Safra Intl. institute of Neurosci.*

8:00 V28 **522.17** Extracting high-frequency features of neural activity from µECoG surface electrodes. C. BARTON*; S. KELLIS; P. HOUSE; B. GREGER. *Arizona State Univ., Caltech, Univ. of Utah.*

9:00 V29 **522.18** Multiclass support vector machine decoding of spoken words from micro-electrocorticography recordings over Wernicke's area and face motor cortex. D. OSWALT*; S. KELLIS; P. HOUSE; B. GREGER. *Arizona State Univ., Caltech, Univ. of Utah.*

10:00 V30 **522.19** ▲ Shared control system between a robotic arm and user intent decoded from posterior parietal cortex. D. BROWN*; T. DOBREVA; S. KELLIS; K. D. KATYAL; M. S. JOHANNES; C. KLAES; R. A. ANDERSEN. *Caltech, The Johns Hopkins Univ.*

11:00 V31 **522.20** Hand specificity in human parietal neurons and local fields. B. REVECHKIS*; T. N. S. AFLALO; C. Y. ZHANG; N. POURATIAN; E. R. ROSARIO; K. PEJSA; D. S. OUELLETTE; R. A. ANDERSEN. *Caltech, Caltech, UCLA, Casa Colina Hosp. and Centers for Healthcare.*

8:00 V32 **522.21** Representation of executed, attempted, and imagined actions in a tetraplegic subject and implications for brain-machine interfaces. C. Y. ZHANG*; T. N. S. AFLALO; B. REVECHKIS; R. A. ANDERSEN; E. R. ROSARIO; D. OUELLETTE; N. POURATIAN; K. PEJSA; S. KELLIS; C. KLAES. *Caltech, Casa Colina Hosp. and Centers for Healthcare, Univ. of California Los Angeles.*

9:00 V33 **522.22** Representation of decision variables in the human posterior parietal cortex. C. KLAES*; S. KELLIS; T. AFLALO; B. LEE; B. REVECHKIS; C. ZHANG; K. PEJSA; K. SHANFIELD; S. HAYES-JACKSON; M. AISEN; C. HECK; C. LIU; R. A. ANDERSEN. *Caltech, USC, Rancho Los Amigos Natl. Rehabil. Ctr.*

10:00 V34 **522.23** Single-unit dynamics match decoder filter dynamics during closed-loop brain-machine interface operation. I. BADRELDIN*; M. VAIDYA; K. BALASUBRAMANIAN; J. SOUTHERLAND; A. ELERYAN; A. H. FAGG; N. HATSOPOULOS; K. OWEISS. *Univ. of Florida, Univ. of Chicago, Univ. of Oklahoma, Michigan State Univ., Univ. of Florida.*

11:00 V35 **522.24** ● Wireless multichannel implant for neuromuscular interfaces. D. MCDONNALL*; C. SMITH; D. MERRILL; S. GUILLORY; S. HIATT. *Ripple.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

523. Stress: Factors Affecting Sensitivity, Protection, and Recovery

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

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 V36 **523.01** Corticosterone primes the neuroinflammatory responses to Gulf War Illness associated exposures: Effects of irreversible vs. reversible acetylcholinesterase inhibitors. A. R. LOCKER*; K. A. KELLY; L. T. MICHALOVICZ; D. B. MILLER; J. P. O'CALLAGHAN. *CDC/NIOSH.*

9:00 V37 **523.02** Acute stress activates neurons and microglia across multiple brain regions: Impact of adolescent intermittent ethanol treatment. T. J. WALTER*; R. VETRENO; F. CREWS. *Univ. of North Carolina - Chapel Hill.*

10:00 V38 **523.03** Combined electrophysiological and behavioral approaches in evaluation of neuro-toxicity due to repeated jet fuel exposure in rats. J. G. ROHAN*; M. K. MIKLASEVICH; S. M. MCINTURF; C. P. GUT, Jr.; K. L. MUMY. *Naval Med. Res. Unit, Oak Ridge Inst. for Sci. and Educ., CAMRIS.*

11:00 V39 **523.04** Methamphetamine regulates stress-related neuropeptides via diverse epigenetic mechanisms. S. JAYANTHI*; B. GONZALEZ; P. WONGPRAYOON; M. T. MCCOY; B. LADENHEIM; A. GODINO; J. L. CADET. *NIDA-IRP, Inst. de Investigaciones Farmacológicas, Inst. of Mol. Biosciences, Mahidol University,, École Normale Supérieure de Lyon.*

8:00 V40 **523.05** Choline supplementation to pregnant mice mitigates the neuroinflammatory effects of prenatal diesel exposure to fetal brain. S. V. MAURER*; J. L. BOLTON; C. E. TYBOUT; S. D. BILBO; C. L. WILLIAMS. *Duke Univ.*

9:00 V41 **523.06** Behavioral effects of whole body hyperthermia and the phenomenon of hormesis. M. DEVDARIANI*. *I.Beritashvili Ctr. of Exptl. Biomedicine.*

10:00 V42 **523.07** Longitudinal impact of high altitude exposure: From brain imaging to transcriptome. N. P. CRAMER*; A. KOROTCOV; D. HOLMAN; A. BOSOMTWI; X. XU; M. K. JAISWAL; C. TANKERSLEY; D. P. PERL; S. JONES; B. J. DARDZINSKI; Z. GALDZICKI. *Uniformed Services Univ. of the Hlth. Sci., Ctr. for Neurosci. and Regenerative Med., Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci.*

11:00 V43 **523.08** Dietary copper reduction and zinc supplementation: An examination of body weight and its mediating effects on fear extinction. C. NEELY*; S. WILKINS; M. SMITH; J. FLINN. *George Mason Univ.*

8:00 V44 **523.09** ▲ Chronic exposure to environmental noise during puberty, improves the execution of a working memory task and the astrocyte proliferation. T. G. MORALES*; G. YAÑEZ-DELGADILLO; P. HERNANDEZ; G. CHIPRES-TINAJERO; R. RAMOS-ZUÑIGA; J. ESTRADA-GARCÍA; S. LUQUÍN; Y. RUVALCABA-DELGADILLO. *Univ. De Guadalajara, Univ. de Guadalajara.*

9:00 V45 **523.10** ▲ The proteomic profile of chronic stress and recovery in the hippocampus and amygdala. M. M. KACHEMOV*; P. R. PAODE; V. DAVID; K. A. TSANTILAS; M. ROSENOW; J. MOLINARO; C. D. CONRAD; P. PIRROTTE; M. ORCHINIK. *Arizona State Univ., Translational Genomics Res. Inst., Arizona State Univ.*

10:00 V46 **523.11** ▲ TrkB mediates the recovery from chronic stress-induced spatial memory deficits and CA3 dendritic retraction. J. M. ANGLIN; J. B. ORTIZ; P. R. PAODE; S. B. TAYLOR; N. E. MAALOUF; S. KEMMOU; K. NISHIMURA; C. D. CONRAD*. *Arizona State Univ.*

11:00 V47 **523.12** Downregulating hippocampal BDNF expression blocks recovery from chronic stress-induced hippocampal CA3 dendritic retraction. J. B. ORTIZ*; E. J. DAAS; A. N. HOFFMAN; E. FONSECA-TRUJILLO; P. R. PAODE; S. KEMMOU; N. E. MAALOUF; E. F. TERWILLIGER; C. D. CONRAD. *Arizona State Univ., Beth Israel Deaconess Med. Center, Harvard Med. Sch.*

8:00 V48 **523.13** Repetitive oxytocin treatment following traumatic stress blocks stress-induced reinstatement of methamphetamine-seeking and neuroadaptations in the prefrontal cortex and hypothalamus. C. L. FERLAND*; E. L. HERZIG; J. F. MCGINTY. *Med. Univ. of South Carolina.*

9:00 W1 **523.14** The effects of the TrkB agonist, 7,8-dihydroxyflavone, on rats' stress response to predator odor. J. KOERBER*; C. L. FERLAND; T. S. DENNIS; S. M. BARRY; E. L. HERZIG; J. F. MCGINTY. *Med. Univ. of South Carolina.*

10:00 W2 **523.15** ▲ EEG-mediated perceived stress reduction through guided subtraction meditation. G. Z. SOGHOYAN*; G. K. SCHEINER; R. J. GOUGELET; A. M. VAHID; J. A. PINEDA. *UC San Diego, UC San Diego, UC San Diego, UC San Diego.*

11:00 W3 **523.16** ● Modeling cognitive therapy in the rat: Plasticity associated with fear extinction may underly reversal of chronic stress-induced behavioral deficits. E. A. FUCICH*; D. A. MORILAK. *Univ. of Texas Hlth. Sci. Ctr., Univ. of Texas Hlth. Sci. Ctr.*

8:00 W4 **523.17** Do new neurons in the hippocampus buffer long-lasting effects of traumatic stress on anxiety-like behavior and learning? T. J. SCHOENFELD*; H. A. CAMERON. *NIMH/NIH.*

9:00 W5 **523.18** Daily amount of spontaneous running volume influences stress responses and corticotrophin-releasing hormone levels. S. YANAGITA*; N. KUBOTA; Y. TAKANO; K. TAKEDA. *Tokyo Univ. of Sci.*

10:00 W6 **523.19** Exercise modifies orexin receptor, BDNF, and TrKB receptor gene expression during social stress: Ventral versus dorsal hippocampal regions. T. R. SUMMERS*; J. K. ACHUA; J. P. SMITH; M. A. PRINCE; J. M. ROBERTSON; C. H. SUMMERS. *Univ. of South Dakota, Sanford Sch. of Medicine, USD, Inst. of Possibility, Sanford Hlth.*

11:00 W7 **523.20** Exploring the effects of curcumin on morphological changes in the lateral amygdala following chronic corticosterone exposure in rats. H. KHANDAKER*; M. A. BRIONES; M. SELIGSOHN; T. WINER; S. CHIN; K. LOPEZ; G. SCHAFE. *The Grad. Center, Behavioral and Cognitive Neur, Hunter Col.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 W8 **523.21** Dietary curcumin enhances extinction of a pavlovian fear memory. M. A. BRIONES*; H. KHANDAKER; M. SELIGSOHN; A. SEENAUTH; M. HUSSAIN; G. SCHAFE. *The Grad. Ctr. CUNY, Hunter College, CUNY.*

9:00 W9 **523.22** Coping strategies influence emotional resilience and neurobiological markers of depressive symptoms in male and female rats. M. KENT; M. BARDI; A. HAZELGROVE; K. SEWELL; E. KIRK; B. THOMPSON; K. TREXLER; B. TERHUNE-COTTER; S. SCOTT; K. G. LAMBERT*. *Randolph Macon Col., Randolph Macon Col.*

10:00 W10 **523.23** Chronic Ouabain counteracted the effects of CUS in the HPA axis and CREB signaling. J. A. LEITE*; A. ORELLANA; P. KINOSHITA; L. DE SÁ LIMA; D. ANDREOTI; E. KAWAMOTO; C. MUNHOZ; C. SCAVONE. *USP, Univ. of São Paulo, Univ. of São Paulo.*

11:00 W11 **523.24** Attenuating epigenetic alterations following exposure to caregiver maltreatment: A role for HDAC inhibition? T. S. DOHERTY*; A. K. OHARA; T. L. ROTH. *Univ. of Delaware.*

8:00 W12 **523.25** ● Prior injection of ketamine produces an enduring blockade of the effects of an uncontrollable stress. S. TILDEN; K. BARTHOLOMAY; K. SPERR; N. CIANCIO; J. AMAT; S. F. MAIER*; L. WATKINS. *Univ. of Colorado, Univ. Colorado.*

9:00 W13 **523.26** Protective effect of s-allyil cysteine in a chronic restraint model in rats. A. L. COLÍN GONZÁLEZ*; H. BECERRIL-CHAVÉZ; A. SANTAMARIA. *Inst. Nacional De Neurologia Y Neurocirugia.*

10:00 W14 **523.27** Stress, mindfulness meditation and theta/beta ratio: A study on EEG oscillation. S. YUAN*; R. M. ATCHLEY; S. D. GARRETT-RUFFIN; H. C. CROMWELL. *Psychology Dept.*

11:00 W15 **523.28** ▲ Effect of Aged Garlic Extract on mRNA levels of GLUT1, GLUT3 and GLUT4 in brain of diabetic rats. J. MENDOZA-BELLO; P. AGUILERA*; M. BARRAGAN-BONILLA; B. DE LA CRUZ; P. BARRERA-NAVARRETE; M. ESPINOZA-ROJO. *Univ. Autonoma de Guerrero, Inst. Nacional de Neurologia y Neurocirugia.*

8:00 W16 **523.29** ▲ Effects of early cortisol exposure on the developing GnRH neuron system in zebrafish. D. SKINNER; S. RAMAKRISHNAN*. *Univ. of Puget Sound, Univ. of Puget Sound.*

9:00 W17 **523.30** Effects of voluntary nicotine self-administration on fear conditioning in rats. E. RIDENER; C. WEBBER; C. W. ADAM; K. STOLL; E. MELONI; S. B. CAINE; W. A. CARLEZON*, Jr. *Harvard Med. Sch./Mclean Hosp., McLean Hosp.*

POSTER

524. Food Intake and Energy Balance: Monoamines and Other Regulators

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

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 W18 **524.01** ▲ Dopamine modulation of sleep and feeding in *Drosophila.* A. PAVIN*; D. SITARAMAN. *Univ. of San Diego, Univ. Of San Diego.*

9:00 W19 **524.02** ▲ Central mechanism of rosiglitazone induced food intake. J. MATIAS*; E. R. GILBERT; M. A. CLINE. *Virginia Tech.*

10:00 W20 **524.03** The interaction of binge-eating and stress-responsivity in mice. T. A. CZYZYK*; T. M. TANG; N. K. BARKER; A. N. POLITO; P. A. SMITH; J. KRANTZ; Y. E. GEDA; P. TELENSKY. *Penn State Univ. Col. of Med., Mayo Clin. Arizona.*

11:00 W21 **524.04** Effect of strawberry extracts on GABA concentration and oxidative stress in the frontal cortex of rats high fat diet fed. C. SANDOVAL SALAZAR*; C. OVIEDO-SOLÍS; S. SOLÍS-ORTÍZ; H. AGUILAR-ZAVALA; V. BELTRAN-CAMPOS; J. RAMIREZ-EMILIANO. *Univ. De Guanajuato, Univ. De Guanajuato, Univ. De Guanajuato, Univ. De Guanajuato.*

8:00 W22 **524.05** NMDA antagonism and acquisition and expression of fat-conditioned flavor preferences in BALB/c and SWR mice. T. T. KRAFT*; D. HUANG; S. LAMAGNA; D. WARSHAW; E. NATANOVA; A. SCLAFANI; R. J. BODNAR. *Home, Queens College, CUNY, Brooklyn College, CUNY.*

9:00 W23 **524.06** The role of lateral septum opioid receptors in feeding behavior. M. CALDERWOOD*; B. STANLEY. *Univ. of California Riverside.*

10:00 W24 **524.07** Endocannabinoids and nitric oxide interactions in stress-induced feeding. K. M. CROSBY*; J. THEBEAU; N. COCHKANOFF; A. SMITHERS; T. BROOKS. *Mount Allison Univ., Mount Allison Univ.*

11:00 W25 **524.08** The endocannabinoid system into the Prelimbic Cortex modulates food intake in rats. A. A. SCOPINHO*; L. B. M. RESSTEL; F. M. A. CORRÊA. *FMRP-USP, Univ. of São Paulo.*

8:00 W26 **524.09** ▲ Intrahypothalamic administration of 8-oht promotes chocolate-intake in rats. M. SALAS-CRISOSTOMO*; A. SARRO-RAMÍREZ; A. POOT-AKÉ; A. SUÁREZ-MONTESINOS; G. ARANKOWSKY-SANDOVAL; E. MURILLO-RODRÍGUEZ. *Univ. Anahuac Mayab, Lab. de Neurociencias Moleculares e Integrativas Escuela de Medicina, División Ciencias de la Salud Univ. Anáhuac Mayab. Mérida. Yucatán, México, Ctr. de Investigaciones Regionales.*

9:00 W27 **524.10** Long chain fatty acids regulate electrical activity of NPY and POMC neurons in the arcuate nucleus. N. J. MICHAEL; M. VAN DEN TOP; F. ZHAO; V. R. HAYNES; M. WATT; D. SPANSWICK*. *Monash Univ., NeuroSolutions Ltd.*

10:00 W28 **524.11** Muscarinic and nicotinic cholinergic receptor antagonists differentially mediate rat acquisition of fructose-conditioned flavor preference and quinine-conditioned flavor avoidance. F. M. ROTELLA*; K. OLSSON; V. VIG; J. PAGIRSKY; I. YENKO; I. KOHEN; A. AMINOV; T. DINDYAL; R. J. BODNAR. *Queens College, CUNY.*

11:00 W29 **524.12** ▲ Rapamycin increases cognition and protects against the depressive symptoms associated with chronic food restriction. T. KENNY*; M. HEBERT; P. MACCALLUM; J. WHITEMAN; G. MARTIN; J. BLUNDELL. *Mem. Univ. of Newfoundland.*

8:00 W30 **524.13** Nitric oxide produces excitation and inhibition of feeding in satiated rats via different mechanisms. N. HAZUT; A. WELLER; A. J. SUSSWEIN*. *Bar-Ilan Univ., Bar-Ilan Univ., Bar-Ilan Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 W31 **524.14** ▲ Influence of glycine in food and water intake, body weigth, transaminases levels and sleep architecture in rats. F. ALBERTO-PATRICIO; S. A. ZAVALA-RIVAS; A. K. LEON-OLGUIN; I. JASSO-VILLAGOMEZ; G. BLANCAS-FLORES; J. VELAZQUEZ-MOCTEZUMA; A. JIMENEZ-ANGUIANO*. *Univ. Autonoma Metropolitana-Iztapalapa, Univ. Autonoma Metropolitana-Iztapalapa, Univ. Autonoma Metropolitana-Iztapalapa.*

10:00 W32 **524.15** Energy balance regulation by GABA neurons of the lateral hypothalamus. C. KOSSE*; P. IORDANIDOU; D. BURDAKOV. *The Francis Crick Inst.*

11:00 W33 **524.16** ● ▲ Treating obesity and related metabolic disorders through a sympathetic approach. C. YANG*; L. SIPE; J. HIRSH; C. DEPPMANN. *Univ. of Virginia.*

8:00 W34 **524.17** ● Feeding effect of 5-HT1A receptor stimulation on PVN with and without inhibition of HPA axis. M. RITO*; V. LÓPEZ ALONSO; K. REYES SANTOS; G. AMBROSIO SEGUNDO; K. CRUZ GARCÍA; J. MANCILLA DÍAZ. *Univ. Nacional Autonoma De México.*

9:00 W35 **524.18** ▲ Baclofen, a GABA-B receptor agonist differentially mediates rat acquisition of fructose-conditioned flavor preference and quinine-conditioned flavor avoidance. K. OLSSON; F. M. ROTELLA; V. VIG; I. YENKO; J. PAGIRSKY; A. AMINOV; I. KOHEN; S. EHRENBERG; R. J. BODNAR*. *Queens College, CUNY, Queens Col. & Grad Ctr, CUNY.*

10:00 W36 **524.19** Effects of chronicle central insulin infusion on food intake, glucose metabolism, and adiposity of male and female Wistar rats. A. C. KISS*; M. C. D. DE MACEDO; D. W. DA SILVA; G. C. DE SOUZA; M. O. KLEIN; L. F. FELÍCIO; B. C. WOODSIDE. *Sao Paulo State University, UNESP Botucatu, Sao Paulo State University, UNESP Botucatu, Univ. of São Paulo, Sch. of Vet. Med., Univ. of São Paulo, Biomed. Sci. Inst., Concordia University, Ctr. for Studies in Behavioral Neurobio.*

11:00 W37 **524.20** ▲ The diet-induced obesity modifies the sensitivity of receptors CB1. F. CORTÉS SALAZAR*; O. J. SUÁREZ-ORTÍZ; D. DÍAZ-URBINA; J. M. MANCILLA-DÍAZ; R. E. ESCARTÍN-PÉREZ. *Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México.*

8:00 W38 **524.21** ▲ Intrahypothalamic injection of SCH 23390 enhances chocolate intake but does not modify extracellular levels of dopamine in nucleus accumbens in rats. A. SARRO-RAMIREZ*; J. PASTRANA-TREJO; G. ARANKOWSKY; E. MURILLLO-RODRIGUEZ. *Univ. Anahuac Mayab, Univ. Autonoma de Yucatan, Univ. Anahuac Mayab, Univ. Anahuac Mayab.*

9:00 W39 **524.22** ▲ Free access to running wheels normalizes hyperphagia and obesity in human growth hormone transgenic rats. M. KOMATSUDA*; K. YAMANOUCHI; T. MATSUWAKI; M. NISHIHARA. *Vet. Physiology, The Univ. of Tokyo.*

10:00 W40 **524.23** Effect of frequent intake of steviol glycosides on the JAK2/STAT3 signaling pathway in the central nervous system of mice. A. A. BARRIOS*; J. A. ESTRADA; I. CONTRERAS. *Univ. Autónoma Del Estado De México.*

11:00 W41 **524.24** Pharmacological treatment as part of inward psychiatric treatment of anorexia nervosa patients; a clinical retrospective study. A. H. LECKLIN*. *Univ. of Eastern Finland.*

8:00 W42 **524.25** Decreased dopamine levels in overweight young women. M. SOLIS-ORTIZ*; C. SANDOVAL-SALAZAR; J. RAMIREZ-EMILIANO; A. P. ROMERO-LÓPEZ. *Inst. Invest Med, Univ. Guanajuato, Univ. de Guanajuato, Univ. de Guanajuato.*

POSTER

525. Hippocampus, Functional Networks, and Human Memory

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 W43 **525.01** Intracranial EEG of hippocampal-amygdala dynamics during emotional memory discrimination. J. J. LIN; R. F. STEVENSON; S. L. LEAL; J. ZHENG; J. ROBERTS; J. RILEY; M. A. YASSA*. *Univ. of California, Irvine Sch. of Med., Univ. of California, Irvine.*

9:00 W44 **525.02** High-resolution fMRI of hippocampal-amygdala dynamics during emotional memory discrimination in healthy aging and late-life depression. S. L. LEAL*; J. A. NOCHE; E. A. MURRAY; M. A. YASSA. *Johns Hopkins Univ., Univ. of California, Irvine.*

10:00 W45 **525.03** Sequential priming interferes with mnemonic discrimination of similar objects. J. M. ROBERTS*; K. A. KERNODLE; J. A. NOCHE; E. A. MURRAY; M. A. YASSA. *Univ. of California, Irvine.*

11:00 W46 **525.04** Network mechanism of amygdala and ventromedial prefrontal cortex during labeling of negative emotion. J. ZHENG; H. ERKOL; J. RILEY; G. GULSEN; K. ANDERSON; S. VADERA; M. YASSA; R. KNIGHT; J. LIN*. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Irvine, Univ. of California, Irvine.*

8:00 W47 **525.05** Changes in temporal context memory precision along the hippocampal longitudinal axis. M. MONTCHAL*; M. A. YASSA. *UC Irvine.*

9:00 W48 **525.06** Repeated study engages neocortex but disengages the hippocampus: Evidence for rapid systems consolidation? Z. REAGH*; H. D. HO; E. A. MURRAY; M. A. YASSA. *The Univ. of California, Irvine, The Univ. of California, Irvine.*

10:00 X1 **525.07** ▲ Remembering emotional gist and detail information: Individual differences in age-related memory loss. J. A. NOCHE*; S. L. LEAL; E. A. MURRAY; M. A. YASSA. *Univ. of California, Irvine, Johns Hopkins Univ.*

11:00 X2 **525.08** High-resolution fMRI of source memory and mnemonic discrimination. R. STEVENSON*; Z. M. REAGH; A. P. CHUN; E. A. MURRAY; M. A. YASSA. *UC Irvine.*

8:00 X3 **525.09** Hippocampus and medial prefrontal cortex show activity and functional connectivity during memory for sequences of events. V. K. BOUCQUEY*; T. A. ALLEN; D. J. HUFFMAN; N. J. FORTIN; C. E. L. STARK. *Univ. of California.*

9:00 X4 **525.10** ● Acute moderate exercise improves pattern separation in young adults. K. SUWABE*; K. HYODO; K. BYUN; G. OCHI; M. YASSA; H. SOYA. *Univ. of Tsukuba, Univ. of California-Irvine.*

10:00 X5 **525.11** Cross-linguistic activation in hippocampal neurons of Spanish-English bilinguals. E. K. HUSSEY*; K. CHRISTIANSON; P. N. STEINMETZ. *Univ. of Illinois At Urbana-Champaign, Nakamoto Brain Res. Inst.*

11:00 X6 **525.12** Hippocampal contributions to configural probabilistic learning. K. D. DUNCAN*; B. B. DOLL; N. D. DAW; D. SHOHAMY. *Univ. of Toronto, New York Univ., Columbia Univ., New York Univ., Columbia Unversity, Columbia Univ.*

8:00 X7 **525.13** First-episode schizophrenia is associated with disrupted network connectivity across separable hippocampal subsystems. V. P. MURTY*; A. TOMPARY; B. ZENG; J. WANG; D. GOFF; L. DAVACHI. *NYU, New York Univ., Shanghai Mental Hlth. Ctr., Nathan Kline Inst., New York Univ.*

9:00 X8 **525.14** Category specific modulation of resting state networks predicts memory performance. J. A. COLLINS*; B. C. DICKERSON. *Massachusetts Gen. Hosp.*

10:00 X9 **525.15** ● Proactive brain network dynamics predicts episodic memory in children. S. QIN*; S. PRATHAP; J. KOCHALKA; S. RYALI; V. MENON. *Stanford Univ., Stanford Unversity.*

11:00 X10 **525.16** Deactivation of brain regions associated with subsequent forgetting predicts effects of value on recognition memory in both young and older adults. M. S. COHEN*; B. J. KNOWLTON; A. D. CASTEL; J. RISSMAN. *Northwestern Univ., UCLA.*

8:00 X11 **525.17** Combined physical exercise and cognitive training enhances hippocampal-dependent memory in young adults. J. J. HEISZ*; I. B. CLARK; M. FAHNESTOCK. *McMaster Univ.*

9:00 X12 **525.18** Hippocampal contributions to the large-scale episodic memory network predict vivid visual memories. M. STANLEY*; B. GEIB; E. WING; R. CABEZA. *Duke Univ.*

10:00 X13 **525.19** Motor responses modulate episodic memory encoding in humans. M. YEBRA*; A. GALARZA; V. SOTO-LEÓN; J. GONZALEZ-ROSA; A. OLIVIERO; M. C. W. KROES; B. A. STRANGE. *CTB, Hosp. Nacional Parapléjicos, New York Univ.*

11:00 X14 **525.20** The effect of sedation on reconsolidation of emotional episodic memory in humans. A. I. GALARZA VALLEJO*; M. C. W. KROES; E. REY DÍAZ-RUBIO; M. ACEDO; G. FERNANDEZ; B. STRANGE. *Ctr. De Tecnologia Biomedica CTB, New York Univ., Hosp. Clínico San Carlos, Donders Inst. for Brain, Cognition, and Behaviour.*

8:00 X15 **525.21** Hippocampal theta during memory guided virtual navigation in human intracranial EEG. D. BUSH*; J. A. BISBY; C. M. BIRD; S. GOLLWITZER; R. RODINOV; C. SCOTT; B. DIEHL; A. W. MCEVOY; M. C. WALKER; N. BURGESS. *UCL Inst. of Cognitive Neurosci., Univ. of Sussex, Univ. Hosp. Erlangen, UCL Inst. of Neurol., Natl. Hosp. for Neurol. and Neurosurg.*

POSTER

526. Human Memory Retrieval and Reactivation

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 X16 **526.01** Reactivation and anterograde disruption of recently encoded memories: A variant of reconsolidation. R. B. BAUDO*; B. A. WRIGHT. *Northwestern Univ.*

9:00 X17 **526.02** The effects of anticipatory stress on the neural correlates of associative memory retrieval. S. A. GAGNON*; A. D. WAGNER. *Stanford.*

10:00 X18 **526.03** Structural and functional contributions to context-dependent relational memory. H. SCHWARB*; C. L. JOHNSON; J. L. HOLTROP; J. X. WANG; P. D. WATSON; J. L. VOSS; N. J. COHEN. *Univ. of Illinois, Univ. of Illinois Urbana-Champaign, Northwestern Univ.*

11:00 X19 **526.04** Evidence for the representation of context in human parahippocampal cortex and retrosplenial cortex. D. J. HUFFMAN*; C. E. L. STARK. *Univ. of California, Irvine.*

8:00 X20 **526.05** Impairments in associative inference following damage to the ventromedial prefrontal cortex. K. SPALDING*; M. L. SCHLICHTING; D. ZEITHAMOVA; A. R. PRESTON; M. C. DUFF; D. TRANEL; D. E. WARREN. *Univ. of Iowa, Univ. of Texas at Austin, Univ. of Oregon.*

9:00 X21 **526.06** The core recollection network dissociates as a function of phenomenal and objective recollection. P. P. THAKRAL*; S. S. YU; M. D. RUGG. *Univ. of Texas at Dallas.*

10:00 X22 **526.07** Latent variable modeling of temporal profiles of neural activity during the processing of continuous natural stimuli. M. CHOW*; J. CHEN; U. HASSON. *Princeton Univ., Princeton Neurosci. Inst.*

11:00 X23 **526.08** Distributed cortical representations of visual features in perception and memory. S. E. FAVILA*; R. SAMIDE; B. A. KUHL. *New York Univ., New York Univ.*

8:00 X24 **526.09** Visual memories are stored on a Weber-Fechner timeline. I. SINGH*; A. OLIVA; M. HOWARD. *Boston Univ., MIT, Boston Univ.*

9:00 X25 **526.10** Identifying the core recollection network based on single-trial measures of neural pattern reactivation. E. K. LEIKER*; J. D. JOHNSON. *Univ. of Missouri.*

10:00 X26 **526.11** Memory reactivation during sleep promotes better consolidation of event episodes linked by overlapping memories. J. P. OYARZÚN*; J. MORÍS; D. LUQUE; R. DE DIEGO-BALAGUER; L. FUENTEMILLA. *Univ. of Barcelona, IDIBELL (Bellvitge Biomed. Res. Institute), UNSW Australia, Univ. of Málaga, ICREA (Catalan Inst. for Res. and Advanced Studies).*

11:00 X27 **526.12** Quantitative analysis of sleep and learning; insights into cortical development and retention abilities in infants. K. C. NEWMAN-SMITH*; D. WERCHAN; M. GOLDSTEIN; L. SWEENEY; L. NADEL; R. BOOTZIN; R. GOMEZ. *Univ. of Arizona, Brown Univ.*

8:00 X28 **526.13** The effect of inhibitory brain stimulation on recognition-induced forgetting. A. M. MAXCEY*; J. BOSTIC; H. GLENN; C. LEGGETT; R. M. G. REINHART. *Tennessee State Univ., Ball State Univ., Manchester Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 X29 **526.14** Increased response competition does not affect implicit memory in schizophrenic patients. C. M. ROSSI-ARNAUD*; V. REZENDE SILVA MARQUES; P. SPATARO; A. SCIARRETTA; V. CESTARI. *Sapienza Univ., San Giovanni Evangelista Hosp., IBCN - CNR.*

10:00 X30 **526.15** Alpha oscillations track the content of representations retrieved from long term memory. D. W. SUTTERER*; J. J. FOSTER; J. T. SERENCES; E. K. VOGEL; E. AWH. *Univ. of Oregon, UCSD.*

11:00 X31 **526.16** Oscillatory theta entrainment enhances source memory retrieval: Neural and behavioural consequences. A. CLARKE*; B. M. ROBERTS; J. CRIVELLI-DECKER; C. RANGANATH. *Univ. of California Davis.*

8:00 X32 **526.17** Theta-alpha oscillations bind the hippocampus, prefrontal cortex and striatum during recollection: Evidence from simultaneous EEG-fMRI. N. A. HERWEG*; T. APITZ; G. LEICHT; C. MULERT; L. FUENTEMILLA; N. BUNZECK. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. Med. Ctr. Hamburg, Inst. of Biomed. Res. of Bellvitge, Univ. of Barcelona, Univ. of Lübeck.*

9:00 X33 **526.18** ▲ The BDNF val66met polymorphism affects the Level of Processing effect of memory: A deep and shallow behavioral and rTMS study. A. SHPEKTOR*; E. F. PAVONE; N. VUKOVIC; A. LEBEDEVA; M. FEURRA. *Natl. Res. Univ. Higher Sch. of Econ, Braintrends ltd.*

10:00 X34 **526.19** Directional coding during imagination. J. BELLMUND*; L. DEUKER; T. NAVARRO SCHROEDER; C. F. DOELLER. *Donders Institute, Radboud Univ.*

11:00 X35 **526.20** Representational clustering of associative memories. A. R. BACKUS*; L. S. SCHURMANN; L. HIMMER; C. F. DOELLER. *Donders Institute, Radboud Univ., Univ. of Amsterdam.*

8:00 X36 **526.21** Narrative remapping in the hippocampus. B. MILIVOJEVIC; M. VARADINOV; A. VICENTE GRABOVETSKY; C. F. DOELLER*. *Donders Institute, Radboud Univ.*

9:00 X37 **526.22** Age-related recognition memory deficits explained by hippocampal pattern completion at 7T-fMRI. P. VIEWEG*; C. BILSING; J. FABER; R. STIRNBERG; D. BRENNER; T. STÖCKER; T. WOLBERS. *German Ctr. For Neurodegenerative Dis. DZNE, German Ctr. For Neurodegenerative Dis. DZNE, Univ. Hosp. Bonn, Ctr. for Behavioral Brain Sci.*

10:00 X38 **526.23** Consolidating and expanding mnemonic networks. S. H. COLLIN*; B. MILIVOJEVIC; C. F. DOELLER. *Donders Institute, Radboud Univ.*

11:00 X39 **526.24** Time is memory: Dissociating temporal and sequence coding. L. DEUKER*; N. MONTIJN; L. SCHURMANN; C. F. DOELLER. *Donders Institute, Radboud Univ.*

8:00 X40 **526.25** Navigating memories: How episodes and space combine in the hippocampal formation. N. DE HAAS*; L. DEUKER; B. MILIVOJEVIC; C. F. DOELLER. *Donders Institute, Radboud Univ.*

POSTER

527. Human Cognition: Networks and Dynamics

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 X41 **527.01** Structural connections of the medial prefrontal cortex: Dividing motor, semantic and default mode networks. R. JACKSON*; C. J. BAJADA; M. A. LAMBON RALPH; L. L. CLOUTMAN. *Univ. of Manchester.*

9:00 X42 **527.02** Multivariate structure-function relationships in human brain networks. B. MISIC*; R. BETZEL; M. DE REUS; M. VAN DEN HEUVEL; M. BERMAN; O. SPORNS. *Indiana Univ., Indiana Univ., Rudolf Magnus Inst. of Neurosci., Univ. of Chicago.*

10:00 X43 **527.03** Hippocampal connectivity with the visual and motor systems reflects the cognitive requirements of the task. D. D. BURMAN*; T. D. HOPKINS. *Northshore Univ. Healthsystem, NorthShore Univ. HealthSystem.*

11:00 X44 **527.04** Multivariate pattern analysis of resting state activity reveals spontaneously organized brain state dynamics. R. H. CHEN*; P. SHAFTO; M. W. COLE. *Rutgers University, Newark, Univ. of Louisville, Rutgers University, Newark.*

8:00 X45 **527.05** Segregated and integrated brain dynamics underlying higher cognitive reasoning in humans. L. HEARNE*; L. COCCHI; J. B. MATTINGLEY. *Queensland Brain Inst., Sch. of Psychology, Univ. of Queensland.*

9:00 X46 **527.06** Hub-centric prefrontal network predicts lesion-effective site for contextual memory in macaques. T. OSADA*; Y. ADACHI; K. MIYAMOTO; K. JIMURA; R. SETSUIE; T. WATANABE; Y. MIYASHITA. *Dept Physiol, Univ. Tokyo Sch. Med., Dept Physiol, Juntendo Univ. Sch. Med., Prec Intel Lab, Tokyo Inst. of Tech.*

10:00 X47 **527.07** An em algorithm to predicit cognitive state dynamics from behavioral signals. A. YOUSEFI*; A. C. PAULK; T. DECKERSBACH; N. NOSSENSON; D. I. VALLEJO; S. S. CASH; D. D. DOUGHERTY; E. N. ESKANDAR; A. S. WIDGE; U. T. EDEN. *MGH, Boston Univ., MGH, MGH, Picower Inst. for Learning & Memory.*

11:00 X48 **527.08** Feature-based attention during sequential tasks. T. M. DESROCHERS*; A. G. COLLINS; D. BADRE. *Brown Univ., Brown Univ.*

8:00 Y1 **527.09** Cortical patterns of alpha power in auditory sensory memory. A. WILSCH*; M. J. HENRY; B. HERRMANN; J. OBLESER. *Max Planck Inst. For Human Cognitive and Brain Sci., Univ. of Lübeck.*

9:00 Y2 **527.10** Probing functional connectivity between default and salience networks using single pulse electrical brain stimulation. J. HSIANG*; B. L. FOSTER; S. GATTAS; V. RANGARAJAN; J. PARVIZI. *Washington Univ. In St. Louis, Stanford Human Intracranial Cognitive Electrophysiology Program (SHICEP) Stanford Univ.*

10:00 Y3 **527.11** Spatiotemporal motifs of correlated interactions across resting state networks. M. KAFASHAN; S. CHING; B. A. PALANCA*. *Washington Univ. in St. Louis, Washington Univ. Sch. Med.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

528. Working Memory Assessment and Modulation

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 Y4 **528.01** Facilitating spatial working memory in patients with diabetic polyneuropathy by transcranial direct current stimulation. Y. WU*; P. TSENG; H. HUANG; J. HU; C. JUAN; K. HSU; C. LIN. *Natl. Cheng Kung Univ. Hosp., Inst. of Clin. Medicine, Col. of Medicine, Natl. Cheng Kung Univ., Dept. of Neurology, Natl. Cheng Kung Univ. Col. of Med. and Hospital, Dou-Liou Br., Brain and Consciousness Res. Center, Taipei Med. Univ. - Shuang Ho Hosp., Dept. of Psychology, Natl. Cheng Kung Univ., Inst. of Cognitive Neuroscience, Natl. Central Univ., Dept. of Pharmacology, Col. of Medicine, Natl. Cheng Kung Univ.*

9:00 Y5 **528.02** Integration of Ebbinghaus Functions, Signal Detection Theory, and the Weber-Fechner Law for understanding component processes of working memory. J. L. REILLY*; V. VISWANATHAN; T. KARPOUZIAN; D. STERN; B. KIM; F. ZHANG; H. BREITER. *Northwestern Univ. Feinberg Sch. of Medicin, Kellogg Sch. of Management, Northwestern Univ., Drexel Univ.*

10:00 Y6 **528.03** Electrophysiological correlates of attentional capture by to-be-remembered and to-be-forgotten visual stimuli. E. SASIN*; M. NIEUWENSTEIN. *Univ. of Groningen, Univ. of Groningen.*

11:00 Y7 **528.04** Investigating the role of attention in the time course of visual working memory. J. JACOB*; C. JACOBS; B. G. BREITMEYER; J. SILVANTO. *Univ. of Westminster, Univ. of Houston.*

8:00 Y8 **528.05** Dietary saturated fat versus monounsaturated fat has reversible effects on brain function and the secretion of pro-inflammatory cytokines in young women. J. A. DUMAS*; J. BUNN; J. NICKERSON; K. CRAIN; D. EBENSTEIN; E. TARLETON; J. MAKAREWICZ; M. E. POYNTER; C. L. KIEN. *Univ. of Vermont Col. of Med., Univ. of Vermont Col. of Med., Univ. of Vermont Col. of Med., Univ. of Vermont Col. of Med., Univ. of Vermont Col. of Med.*

9:00 Y9 **528.06** Load-dependent versus training-induced power changes within the working memory network - An EEG study. H. GUDI*; J. M. RIMMELE; P. BRUNS; A. K. ENGEL; B. ROEDER. *Univ. of Hamburg, Univ. Med. Ctr. Hamburg-Eppendorf.*

10:00 Y10 **528.07** Response speed and contextual congruency affect visual short term memory introspection. C. JACOBS*; J. JACOB; J. SILVANTO. *Univ. of Westminster.*

11:00 Y11 **528.08** Contralateral delay activity tracks fluctuations in working memory success. K. C. ADAM*; E. K. VOGEL. *Univ. of Chicago.*

8:00 Y12 **528.09** (Un)conscious working memory? - Disentangling the relationship between conscious perception and working memory. D. TRÜBUTSCHEK*; S. MARTI; A. OJEDA; S. DEHAENE. *CEA Saclay, Univ. Pierre et Marie Curie, Ecole des Neurosciences de Paris, Univ. Paris-Sud, Collège de France.*

9:00 Y13 **528.10** Attenuation of the p300 in patients with psychosis using a novel serial order oddball paradigm. J. AXELROD*; W. C. HOCHBERGER; T. A. CARRATHERS; S. K. KEEDY; S. K. HILL. *Rosalind Franklin Univ. of Med. and Scien, Univ. of Chicago.*

10:00 Y14 **528.11** Cognitive interference effects during manual force production in adults with Type II Diabetes. S. L. GORNIAK*; B. LEE; J. WANG. *Univ. of Houston, Univ. of Houston, Univ. of Texas Hlth. Sci. Ctr. at Houston.*

11:00 Y15 **528.12** Revealing hidden states in working memory using EEG. M. WOLFF*; J. DING; N. MYERS; M. G. STOKES. *Univ. of Groningen, Oxford Ctr. for Human Brain Activity, Univ. of Oxford.*

8:00 Y16 **528.13** Working memory during pregnancy: Prefrontal and parietal eeg correlation. M. L. ALMANZA*; M. GUEVARA; M. HERNANDEZ-GONZALEZ. *Inst. De Neurociencias.*

9:00 Y17 **528.14** Task related functional connectivity within varieties of complex skill learning. M. A. O'CONNELL; C. BASAK*. *Univ. of Texas at Dallas, Univ. of Texas At Dallas.*

10:00 Y18 **528.15** Motion-related noise in structural brain images may be revealed with independent estimates of in-scanner head motion. N. K. SAVALIA; P. F. AGRES; M. Y. CHAN; K. M. KENNEDY; D. C. PARK; G. S. WIG*. *Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr.*

POSTER

529. Social Cognition: Behavior, Neural Basis and Pharmacology

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 Y19 **529.01** The interaction rating scale advanced brief (IRSA-Brief) as an index of social competence development. T. ANME*; E. TANAKA; S. OKAZAKI; N. SADATO. *Univ. of Tsukuba, Natl. Inst. for Physiological Sci.*

9:00 Y20 **529.02** Testosterone administration modulates neural responses to morally-laden scenarios in females. C. CHEN*. *Natl. Yang-Ming Univ.*

10:00 Y21 **529.03** Actor-observer bias in moral evaluation: An fmri. Y. CHEN*. *Natl. Yang-Ming Univ.*

11:00 Y22 **529.04** Oxytocin differentially affects moral judgment of permissibility and punishment. M. LEE*; S. SUL; E. KIM; K. LIM; N. SHIN; S. KIM; J. KWON; H. KIM. *Korea Univ., Dartmouth Col., Yonsei Univ., Seoul Natl. Univ. Col. of Med., Seoul Natl. Univ. Med. Res. Ctr., Seoul Natl. Univ. Col. of Med., Korea Universiy.*

8:00 Y23 **529.05** The role of individual differences on the effect of intranasal oxytocin on perceived social and non-social stimuli. E. E. HECHT*; D. L. ROBINS; T. Z. KING. *Georgia State Univ., Drexel Univ.*

9:00 Y24 **529.06** Social interaction affects how we think about others: An fMRI study. A. REYES AGUILAR*; J. FERNÁNDEZ RUÍZ; E. PASAYE ALCARAZ; M. GONZÁLEZ LÓPEZ; F. A. BARRIOS ÁLVAREZ. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autonoma De Mexico, Univ. de Guadalajara.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 Y25 **529.07** Advisors adapt their confidence reports strategy to increase their future influence. U. HERTZ*; B. BAHRAMI. *Univ. Col. London, Univ. Col. London.*

11:00 Y26 **529.08** Extrapolation of social information to physically similar individuals contributes to stereotyping. B. A. LEVY*; C. I. BAKER. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*

8:00 Y27 **529.09** Visual preference for images of primate faces in non-human primates. D. DZIOBEK; S. ZHANG; J. ASHE; X. LU*. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Veterans Affaris Med. Ctr., VA Med. Center, Minneapolis, Univ. of Minnesota.*

9:00 Y28 **529.10** Withdrawn.

10:00 Y29 **529.11** Dopamine mediates human maternal bonding. A behavioral PET-fMRI study. S. ATZIL*; C. CATANA; B. C. DICKERSON; R. FELDMAN; J. HOOKER; L. F. BARRETT. *Massachusetts Gen. Hosp., Bar-Ilan Univ., Northeastern Univ.*

11:00 Y30 **529.12** Early attention orienting effect and implicit liking effect during an eye gaze cueing task: A magnetoencephalography study. N. GEORGE*; S. DUBAL; J. ULLOA. *Inst. du Cerveau et de la Moelle Epiniere (ICM), CNRS, Inserm, Sorbonne Universités - UPMC Univ. Paris 6, Ctr. MEG-EEG, ICM/CNRS/Inserm/UPMC/ENS, ICM, CNRS / Inserm / UPMC.*

8:00 Y31 **529.13** ERP evidence of the implicit evaluation of self-relevance for everyday objects. G. TRUONG*; T. S. T. HUANG; T. C. HANDY. *Univ. of British Columbia.*

9:00 Y32 **529.14** Brain response to overhearing one's own name: An fMRI study. T. NAKANE*. *Nagoya Univ. Sch. of Med.*

10:00 Y33 **529.15** Know thyself; aberrant neural activity during self-reflective processing of depressed youth with trauma history. R. NG*; H. SCOTT; G. SMYDA; S. MALONE; K. QUEVEDO. *Univ. of Minnesota, Twin Cities, Univ. of Minnesota, Univ. of Pittsburgh, Univ. of Minnesota.*

11:00 Y34 **529.16** Neural responses to heartbeats in the default-mode network encode the self-relatedness of spontaneous thoughts. M. BABO REBELO*; C. RICHTER; C. TALLON-BAUDRY. *Lab. De Neurosciences Cognitives, ENS.*

POSTER

530. Pharmacology of Executive Function

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 Y35 **530.01** NMDA receptors in noradrenergic neurons regulate tonic activity of locus coeruleus and facilitate attentional set shifting in mice. P. E. CIESLAK*; N. LLAMOSAS; T. KOS; L. UGEDO; M. TORRECILLA; J. RODRIGUEZ PARKITNA. *Inst. of Pharmacol. PAS, Univ. of the Basque Country.*

9:00 Y36 **530.02** Nicotinic α4β2 receptor stimulation strengthens both working memory- and attention-related neuronal activity in prefrontal cortex. M. WANG*; Y. YANG; Y. SUN; S. YANG; L. E. JIN; V. C. GALVIN; A. F. T. ARNSTEN. *Yale Univ. Sch. of Med., Peking Univ. First Hosp.*

10:00 Y37 **530.03** Behavioral phenotyping of mice deficient in CHRNA7. J. YIN*; C. SCHAAF. *Jan and Dan Duncan Neurolog. Res. Inst., Baylor Col. of Med.*

11:00 Y38 **530.04** Optogenetic silencing of locus coeruleus activity in mice impairs cognitive flexibility in an attentional set-shifting task. K. JANITZKY; M. T. LIPPERT*; A. ENGELHORN; J. TEGTMEIER; J. GOLDSCHMIDT; H. HEINZE; F. W. OHL. *LIN Magdeburg, Otto-von-Guericke Univ., Leibniz Inst. for Neurobio., Ctr. for Behavioral Brain Sci., Leibniz Inst. for Neurobio., Otto-von-Guericke Univ.*

8:00 Y39 **530.05** ● The effects of histone deacetylase inhibitors treatment on executive function and prefrontal cortex in adolescent rats. J. A. MCGAUGHY*; G. WELCH; F. M. VASSOLER; E. M. BYRNES. *Univ. New Hampshire, Univ. of New Hampshire, Cummings Sch. of Vet. Med. Tufts Univ.*

9:00 Y40 **530.06** Increased impulsive choice following repeated exposure to methylphenidate during early adolescence but not during adulthood. Z. ABBAS*; A. SWEET; E. AFRAND; G. HERNANDEZ; A. ARVANITOGIANNIS. *Concordia Univ., Univ. de Montréal.*

10:00 Y41 **530.07** Prefrontal cortical Neuregulin-ErbB4 modulation of impulsive behavior in rats. T. PATTIJ*; D. SCHETTERS; M. LOOS; S. SPIJKER; T. J. DE VRIES. *VU Univ. Med. Ctr., Sylics, VU Univ.*

11:00 Y42 **530.08** Cortico-striatal interactions mediating sustained attention performance: Simultaneous high-temporal resolution/multi-analyte microdialysis in prefrontal cortex and striatum. Y. KIM*; O. S. MABROUK; M. SARTER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

8:00 Y43 **530.09** Leptin and lepRb neurons in the medial prefrontal cortex facilitate cognitive flexibility. H. ZHANG*; X. LU. *UTHSCSA.*

9:00 Y44 **530.10** Alpha-2A noradrenergic activation improves behavioral flexibility during feature-based reversal learning. A. HASSANI*; M. OEMISCH; M. BALCARRAS; S. WESTENDORFF; T. WOMELSDORF. *York Univ.*

10:00 Z1 **530.11** Cortical afferents to rat locus coeruleus and pericoeruleus: Implications for optimal behavioral performance. H. BOWREY*; M. H. JAMES; M. D. REIDY; G. ASTON-JONES. *Rutgers Univ.*

11:00 Z2 **530.12** 5HT2A receptor blockade in the orbitofrontal cortex does not attenuate repetitive behaviors in the BTBR mouse. D. A. AMODEO*; E. RIVERA; J. A. SWEENEY; M. RAGOZZINO. *Univ. Illinois, Chicago, Univ. of Illinois at Chicago, Univ. of Texas South Western.*

8:00 Z3 **530.13** ▲ Serotonin 5HT1A receptor blockade potentiates impulsive effects of a cannabinoid CB1 receptor inverse agonist, but not a neutral antagonist in rats: Possible relevance for pharmaceutical safety. J. E. JAGIELO-MILLER; E. S. PLYLER; T. M. PROPER; F. M. MYERS; C. M. LUSKIN; M. C. NORMANN; K. VEMURI; A. MAKRIYANNIS; P. J. MCLAUGHLIN*. *Edinboro Univ. of Pennsylvania, Northeastern Univ.*

9:00 Z4 **530.14** Double dissociation of octopamine and dopamine on choice behavior in *Drosophila.* E. A. GOROSTIZA*; B. BREMBS. *Univ. Regensburg.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

531. Decision Making and Attention: Prefrontal Cortex

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 Z5 **531.01** Revealing prefronto-subcortical circuits in negative emotion regulation using 18F-FDG microPET in marmoset monkeys. Y. SHIBA*; T. FRYER; S. SAWIAK; Y. HONG; R. TAIT; J. SUCKLING; A. SANTANGELO; A. ROBERTS. *Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge.*

9:00 Z6 **531.02** Astrocytes are involved in cognitive flexibility. A. T. BROCKETT*; E. A. LAMARCA; B. A. BRIONES; E. GOULD. *Princeton Univ.*

10:00 Z7 **531.03** Prefrontal cortico-thalamic network connectivity for cognitive control. J. M. PHILLIPS*; N. A. KAMBI; S. R. KECSKEMETI; Y. B. SAALMANN. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

11:00 Z8 **531.04** A bayesian method of categorizing neurons based on functional properties. T. BLANCHARD*; S. T. PIANTADOSI; B. Y. HAYDEN. *Univ. of Rochester.*

8:00 Z9 **531.05** Prefrontal information processing during spatial decision making in rats. T. JAHANS-PRICE*; R. BOGACZ; M. W. JONES. *Univ. of Bristol, Univ. of Oxford.*

9:00 Z10 **531.06** Synchronous beta oscillations in the fronto-striatal loop for behavioral rule switching in non-human primates. F. GERARD-MERCIER*; K. TANAKA. *RIKEN BSI, Cognitive Brain Mapping Lab.*

10:00 Z11 **531.07** Check or Go ? Anxiety based checking behavior in rhesus monkey. M. BOSC*; B. BIOULAC; N. LANGBOUR; T. NGUYEN; M. GOILLANDEAU; B. DEHAY; P. BURBAUD; T. MICHELET. *IMN - CNRS UMR5293, Univ. de Bordeaux, Inst. des Maladies Neurodégénératives, UMR 5293, Ctr. Hospitalier Henri-Laborit, CHU de Bordeaux.*

11:00 Z12 **531.08** The role of prefrontal fast-spiking parvalbumin interneurons in attention. S. K. ÄHRLUND-RICHTER*; H. KIM; M. CARLÉN. *Karolinska Institutet.*

8:00 Z13 **531.09** Methylphenidate reduces noise correlations and improves neural ensemble coding in the primate lateral prefrontal cortex. S. TREMBLAY*; F. PIEPER; A. SACHS; J. MARTINEZ-TRUJILLO. *McGill Univ., Univ. Med. Ctr. Hamburg-Eppendorf, Ottawa Hosp. Res. Inst., Western Univ.*

9:00 Z14 **531.10** Neural mechanisms of shape discrimination under partial occlusion: A circuit model of V4 and prefrontal cortex. H. CHOI*; A. FYALL; E. SHEA-BROWN; A. PASUPATHY. *Univ. of Washington, Univ. of Washington.*

10:00 Z15 **531.11** Theta-phase reset and interareal burst synchronization to gamma activity co-occur in a theta-gamma coupled attention network. B. VOLOH*; T. WOMELSDORF. *York Univ.*

11:00 Z16 **531.12** Opposite development of short- and long-range anterior cingulate pathways in autism. B. ZIKOPOULOS*; Y. J. JOHN; J. TEPE; H. BARBAS. *Boston Univ.*

8:00 Z17 **531.13** The 'Cortical Spectrum': Scores of cortical areas, but only a handful of cortical types in the primate brain. Y. J. JOHN*; B. ZIKOPOULOS; M. GARCIA CABEZAS; H. BARBAS. *Boston Univ.*

9:00 Z18 **531.14** Fine timescale dopaminergic modulation of prefrontal neuronal circuit activity. K. TAO*; S. FUJISAWA. *RIKEN Brain Sci. Inst.*

10:00 Z19 **531.15** Inter-areal spiketrain correlations of anterior cingulate and prefrontal cortex during attention shifts: Cell-type, anatomical, and temporal specificity. M. OEMISCH*; S. WESTENDORFF; S. EVERLING; T. WOMELSDORF. *York Univ., Western Univ.*

11:00 Z20 **531.16** The representation of abstract information that guides decision making in PFC of rats. S. TERADA*; Y. SAKURAI; H. NAKAHARA; S. FUJISAWA. *Kyto Univ., RIKEN BSI.*

8:00 Z21 **531.17** Markers of plasticity suggest higher vulnerability in prefrontal limbic cortices in primates. M. GARCIA-CABEZAS*; H. BARBAS. *Sargent College, Boston Univ.*

9:00 Z22 **531.18** Effects of focal prefrontal ischemic lesions on delay discounting and ultrasonic vocalizations in the rat. R. A. DÉZIEL*; R. A. TASKER. *Univ. of Prince Edward Island.*

10:00 Z23 **531.19** Downregulation of mediodorsal thalamic activity reduces GABAergic neurotransmission in the medial prefrontal cortex, disrupting the E/I balance, and impairing cognitive function. B. R. FERGUSON*; W. GAO. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

11:00 Z24 **531.20** Representational transition from behavioral tactics into action by neurons in primate posterior medial prefrontal cortex. Y. MATSUZAKA*; A. SASAGAWA; H. MUSHIAKE. *Tohoku Univ.*

8:00 Z25 **531.21** Effect of amygdala lesions on local field potentials in the primate prefrontal cortex during a reward-guided task. C. P. MOSHER*; S. TAMANG; E. A. MURRAY; P. H. RUDEBECK. *Ichan Sch. of Med. at Mount Sinai, Natl. Inst. of Mental Hlth.*

9:00 Z26 **531.22** Contributions of the orbitofrontal cortex (OFC) to cognitive flexibility and associative learning during an attentional set-shifting task. M. D. CASTAGNO*; B. J. SLEEZER; B. Y. HAYDEN. *Univ. of Rochester.*

10:00 Z27 **531.23** Demand for control reduces coding sparseness in dorsal anterior cingulate cortex. H. AZAB*; B. HAYDEN. *Univ. of Rochester.*

11:00 Z28 **531.24** Large-scale sensory integration in the mouse cortex during a tactile detection task. P. F. LE MERRE*; P. SALIN; C. C. H. PETERSEN; S. CROCHET. *Ecole Polytechnique Federale De Lausanne (EPFL), CRNL, CRNL.*

8:00 Z29 **531.25** Differential contribution of ventral and dorsal striatum to early and late phases of cognitive set reconfiguration. B. J. SLEEZER*; B. Y. HAYDEN. *Univ. of Rochester.*

9:00 Z30 **531.26** Selective inactivation of the nucleus accumbens and the prefrontal cortex during value based decision making in mice. H. NAKAYAMA*; N. HEINTZ. *The Rockefeller Univ., Howard Hughes Med. Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 Z31 **531.27** Ensemble coding of goal-directed actions in the mouse premotor cortex. M. J. SINISCALCHI*; V. PHOUMTHIPPHAVONG; M. LOZANO; A. C. KWAN. *Yale Univ., Yale Univ. Sch. of Med.*

11:00 Z32 **531.28** Neurons in the primate dorsolateral prefrontal cortex encode summed quantities and choices during an arithmetic task. B. MASSI*; H. SOHN; H. SEO; D. LEE. *Yale Univ.*

8:00 Z33 **531.29** ● Strain specific patterns of the mouse brain functional and structural connectivity. L. HARSAN*; M. REISERT; A. MECHLING; N. HUEBNER; T. BIENERT; H. LEE; J. HENNIG; D. ELVERFELDT. *Univ. Hosp. Freiburg, Med. Physics.*

POSTER

532. Decision Making: Rodents

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 Z34 **532.01** Manipulating projection-specific neuronal populations using a dual viral approach to examine the neural bases of Pavlovian-instrumental transfer. B. K. LEUNG*; L. S. ZWEIFEL; B. W. BALLEINE. *The Univ. of Sydney, Brain and Mind Res. Inst., The Univ. of Washinton.*

9:00 Z35 **532.02** Examining the role of the LC in foraging and exploration. G. KANE*; E. M. VAZEY; R. C. WILSON; A. SHENHAV; G. ASTON-JONES; J. D. COHEN. *Princeton Univ., Rutgers Univ., Univ. of Arizona.*

10:00 Z36 **532.03** Effects of adolescent cannabinoid exposure on risk based decision-making in rats. E. JACOBS-BRICHFORD*; L. R. AMODEO; M. S. MCMURRAY; J. D. ROITMAN. *Univ. of Illinois At Chicago.*

11:00 Z37 **532.04** Comparison of neural representations between rat anterior insular and orbitofrontal cortex in risky decision making. H. ISHII*; Y. KAIZU; S. TAKAHASHI; S. OHARA; P. N. TOBLER; K. TSUTSUI; T. IIJIMA. *Div. of Sys. Neurosci., Tohoku Univ., Univ. of Zurich.*

8:00 Z38 **532.05** Action-dependent state prediction in mouse posterior parietal cortex during an auditory virtual navigation task. A. FUNAMIZU*; B. KUHN; K. DOYA. *Okinawa Inst. of Sci. and Technol.*

9:00 Z39 **532.06** Fasudil, a Rho-kinase inhibitor, transiently remodels prelimbic prefrontal cortical dendritic spines and enhances goal-directed decision-making. A. M. SWANSON*; S. L. GOURLEY. *Emory Univ., Yerkes Natl. Primate Res. Ctr.*

10:00 Z40 **532.07** The role of orbitofrontal cortex in model-based planning in the rat. K. J. MILLER*; A. AKRAMI; M. BOTVINICK; C. BRODY. *Princeton Univ., Princeton Univ., Howard Hughes Med. Inst.*

11:00 Z41 **532.08** ▲ Nucleus accumbens core lesions decrease reward magnitude sensitivity in steady state impulsive choice. S. EDMISTEN*; J. R. PETERSON; M. CAMPA; K. KIRKPATRICK. *Kansas State Univ., Kansas State Univ.*

8:00 Z42 **532.09** Short- and long-term effects of dietary manipulations on impulsive choice behavior and motivation in rats. C. C. HILL*; K. KIRKPATRICK. *Kansas State Univ.*

9:00 Z43 **532.10** Females in the forefront: The effects of a temporal intervention on impulsive choice in Sprague Dawley rats. A. T. MARSHALL*; S. L. STUEBING; A. TRIPLETT; K. KIRKPATRICK. *Kansas State Univ.*

10:00 Z44 **532.11** ▲ Social dominance increases risky choice but not impulsive choice. J. R. LOTT*; C. DAVIS; J. R. PETERSON; K. KIRKPATRICK. *Kansas State Univ.*

11:00 AA1 **532.12** Flexible use of predictive cues beyond the orbitofrontal cortex: Role of the submedius thalamic nucleus. M. WOLFF*, Dr; F. ALCAZAR; A. R. MARCHAND; E. VIDAL; A. FAUGÈRE; E. COUTUREAU. *INCIA, CNRS UMR5287, Univ. of Bordeaux.*

8:00 AA2 **532.13** Thalamocortical control of goal-directed behaviors in rats. F. ALCARAZ*; A. R. MARCHAND; E. J. KREMER; E. COUTUREAU; M. WOLFF. *CNRS UMR5287, Univ. of Bordeaux, CNRS UMR 5535, Univ. of Montpellier.*

9:00 AA3 **532.14** ● Double dissociation in the role of the basolateral amygdala and the insular cortex in the acquisition and performance of goal-directed actions. S. L. PARKES*; G. FERREIRA; E. COUTUREAU. *INRA, UMR 1286, CNRS, UMR 5287, Univ. de Bordeaux.*

10:00 AA4 **532.15** Prefrontal dopamine D1 and D2 receptors regulate dissociable aspects of risk/reward decision-making via distinct ventral striatal and amygdalar circuits. N. L. JENNI*; J. D. LARKIN; S. B. FLORESCO. *Univ. of British Columbia, Univ. of British Columbia.*

11:00 AA5 **532.16** Dissociable effects of nucleus accumbens and medial orbitofrontal cortex inactivation and dopaminergic manipulations on risk/reward decision making assessed with a novel "Blackjack" task. D. R. MONTES*; M. T. L. TSE; S. B. FLORESCO. *Universtity of British Columbia, Universtity of British Columbia.*

8:00 AA6 **532.17** Neural responses observed only in a gambling task in the rat anterior insular cortex. Y. KAIZU*; H. ISHII; S. TAKAHASHI; S. OHARA; P. N. TOBLER; K. TSUTSUI; T. IIJIMA. *Tohoku Univ., Univ. of Zurich.*

9:00 AA7 **532.18** Acute and chronic effects of d-amphetamine on decision-making and loss sensitivity. S. WONG*; C. A. BADENHORST; A. BRIGGS; J. A. SAWADA; A. J. GRUBER. *Univ. of Lethbridge, Univ. of Lethbridge.*

10:00 AA8 **532.19** Neurochemical analysis of biogenic amine neurotransmitters and amino acids associated with countermanding task performance in rats. J. BEUK*; G. B. BAKER; R. J. BENINGER; M. PARÉ. *Queen's Univ., Univ. of Alberta, Queen's Univ., Queen's Univ.*

11:00 AA9 **532.20** Ventral striatum is necessary for temporal specificity of expectations in dopaminergic reward prediction error signals. A. LANGDON*; Y. TAKAHASHI; G. SCHOENBAUM; Y. NIV. *Princeton Univ., NIDA/NIH.*

8:00 AA10 **532.21** ▲ The role of Akt1 in the regulation of behavioral and electrophysiological responses in reward-based decision making in mice. C. CHEN*; Y. LIU; W. LAI. *Lab. of Integrated Neurosci. and Ethology, Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

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* Indicates abstract's submitting author

POSTER

533. Executive Function: Neurophysiology

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 AA11 **533.01** Activity encoding spatial working memory in macaque frontal cortex is highly structured, yet incompatible with current attractor network models. C. D. HOLMES*; C. PAPADIMITRIOU; L. H. SNYDER. *Washington Univ. In St Louis.*

9:00 AA12 **533.02** Involvement of medial prefrontal neurons during the decision process in an audiovisual working memory task. B. PLAKKE*; L. M. ROMANSKI. *Univ. of Rochester Sch. of Med.*

10:00 AA13 **533.03** Transient synchronizations and cross-frequency interactions between prefrontal cortex and striatum underlie category learning. R. LOONIS*; E. G. ANTZOULATOS; S. L. BRINCAT; E. K. MILLER. *MIT, Boston Univ., Univ. of California.*

11:00 AA14 **533.04** Oscillatory synchrony and working memory updating in the monkey cortex. C. DEVIA*; J. ROSE; E. K. MILLER. *MIT, MIT, MIT.*

8:00 AA15 **533.05** Temporal fine-structure of activity in PFC of macaque during in multi-item working memory. M. LUNDQVIST*; J. ROSE; P. HERMAN; S. L. BRINCAT; T. J. BUSCHMAN; E. K. MILLER. *MIT, KTH.*

9:00 AA16 **533.06** Prefrontal coding shifts from perception to memory recall during learning. S. L. BRINCAT*; E. K. MILLER. *MIT.*

10:00 AA17 **533.07** Hippocampal neural activity during a delay-based decision-making task. A. MASUDA*; S. FUJISAWA; S. ITOHARA. *RIKEN Brain Sci. Inst. - Wako.*

11:00 AA18 **533.08** Computation of reward prediction error by projections from medial striatum to midbrain dopaminergic neurons in domestic chicks. C. WEN*; T. MATSUSHIMA. *Hokkaido Univ., Hokkaido Univ.*

8:00 AA19 **533.09** Monkeys (Macaca mulatta) represent magnitude with flexible spatial mappings. R. F. L. DIAMOND*; R. P. GAZES; R. R. HAMPTON. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Bucknell Univ.*

9:00 AA20 **533.10** Two types of representations for numerosity 'zero' in the Parietal Cortex of the Monkey. S. OKUYAMA*; H. MUSHIAKE. *Southern Tohoku Gen. Hosp., Tohoku Univ. Sch. of Med.*

10:00 AA21 **533.11** Medial prefrontal cortex supports reversal learning by facfacilitating shifting amongst competing attractor states in the hippocampus. K. G. GUISE*; M. L. SHAPIRO. *Mount Sinai Sch. of Med., Ichan Sch. of Med. at Mount Sinai.*

11:00 AA22 **533.12** Neural activity of monkey prefrontal and posterior parietal cortex during foraging for multiple targe. M. KADOHISA*; K. WATANABE; M. KUSUNOKI; M. J. BUCKLEY; J. DUNCAN. *Univ. of Oxford, MRC, Japan Society for the Promotion of Sci.*

8:00 AA23 **533.13** Cytoarchitectonic information of rat medial prefrontal "delay" neurons revealed by single-neuron electroporation. K. OYAMA*; Y. TATEYAMA; C. LO; S. OHARA; F. KARUBE; F. FUJIYAMA; T. IIJIMA; K. TSUTSUI. *Grad. Schl. of Life Sci., Tohoku Univ., Lab. of Neural Circuitry, Doshisha Univ. Grad. Schl. of Brain Sci.*

9:00 AA24 **533.14** New insight on neural substrate at single unit level of behavioral task learning from emerging neural activity patterns. J. SI*; W. MA. *Arizona State Univ.*

10:00 AA25 **533.15** CPEB2 regulates hippocampus-related long-term synaptic plasticity and memory. W. LU; C. CHIEN*; Y. HUANG. *Inst. of Biomed. Science, Academia Sinica, Inst. of Biochem. and Mol. Biology, Natl. Yang-Ming Univ., Taiwan Intl. Grad. Program in Mol. Medicine, Natl. Yang-Ming Univ. and Academia Sinica, Academia Sinica, Inst. of Mol. Biol.*

POSTER

534. Learning and Memory: Hippocampal Circuits

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 AA26 **534.01** An interneuron-dependent decrease in sharp-wave ripple frequency in a mouse model of Dravet Syndrome. C. S. CHEAH*; W. A. CATTERALL; J. C. OAKLEY. *Univ. of Washington, Univ. of Washington.*

9:00 AA27 **534.02** Decreased ripple frequency from low sodium conductances in an interneuron network. B. N. LUNDSTROM*; J. OAKLEY. *Univ. of Washington, Mayo Clin.*

10:00 AA28 **534.03** Creatine transporter deficient mice show changes in hippocampal morphology. K. MILES*; M. SKELTON. *Univ. of Cincinnati.*

11:00 AA29 **534.04** ● ▲ Spatial reference memory acquisition in a water maze under light and dark conditions. S. PATEL*; K. KING; A. DHURI; S. LEE; E. J. MARKUS. *Univ. of Connecticut, Univ. of Connecticut.*

8:00 AA30 **534.05** Inactivation of dorsal and ventral hippocampus during a temporal sequence task in a radial arm water maze. S. LEE*; A. RATHEY; D. LEW; K. KATUGAM; E. J. MARKUS. *Univ. of Connecticut.*

9:00 AA31 **534.06** Comparing dorsal and ventral hippocampus oscillations and oscillatory interaction between hippocampus and prefrontal cortex during place and response learning in rats. J. YOON; X. LI; D. KATZ; S. VU; V. WICKENHEISSER; A. RATHEY; E. J. MARKUS*. *Univ. Connecticut, Univ. Connecticut.*

10:00 AA32 **534.07** A distinct entorhinal cortex to dorsal hippocampal ca1 direct circuit for olfactory associative learning. Y. LI*; J. XU; N. LIU; Y. LIU; M. J. RASCH; S. ZENG; C. LI; L. LIN; X. ZHANG. *Inst. of Neuroscience, CAS, State Key Laboraroty of Cognitive Neurosci. and learning & IDG/McGovern Inst. for Brain Research, Beijing Normal Universtiy, Key Lab. of Brain Function Genomics, Inst. of Brain Functional Genomics, East China Normal Univ., Britton Chance Ctr. for Biomed. Photonics, Wuhan Natl. Lab. for Optoelectronics, Huazhong Univ. of Sci. and Technolgy.*

11:00 AA33 **534.08** Hippocampal-thalamo-cortical network connectivity for episodic memory and spatial processing. N. A. KAMBI*; J. M. PHILLIPS; Y. B. SAALMANN. *Univ. of Wisconsin-Madison.*

● Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 AA34 **534.09** Synchronization between Hippocampus and Entorhinal Cortex in behaving rats. X. S. GONZALO COGNO*; E. KROPFF CAUSA; M. MONTEMURRO; I. SAMENGO. *Inst. Balseiro, Ctr. Atomico Bariloche, CONICET, Leloir Inst. - IIBBA, Fac. of Life Sciences, Univ. of Manchester.*

9:00 AA35 **534.10** The influence of spatial and temporal context on oscillatory interactions between dentate gyrus, CA3, CA1, and subiculum in rats during performance of object recognition memory tasks. J. B. TRIMPER*; C. R. GALLOWAY; K. MANDI; A. C. JONES; J. R. MANNS. *Emory Univ., Emory Univ.*

10:00 AA36 **534.11** Medial septal glutamatergic neurons mediate hippocampal theta oscillations and velocity correlated firing of hippocampal neurons during locomotion. F. FUHRMANN*; D. JUSTUS; H. KANEKO; L. SOSULINA; D. FRIEDRICHS; T. BEUTEL; S. SCHOCH; M. SCHWARZ; M. FUHRMANN; S. REMY. *German Ctr. For Neurodegenerative Dis., Univ. of Bonn Med. Ctr., German Ctr. For Neurodegenerative Dis.*

11:00 AA37 **534.12** Design and use of a head-mount fluorescent miniature microscope to visualize neuronal activity during memory formation. C. YAN*; Y. SOUDAGAR; V. MERCALDO; A. J. RASHID; P. W. FRANKLAND; S. A. JOSSELYN. *The Hosp. For Sick Children, Univ. of Toronto, Univ. of Toronto.*

8:00 AA38 **534.13** Linking of fear memories by temporally limited changes in both excitatory and inhibitory neuron activity in the lateral amygdala. A. J. RASHID*; C. YAN; H. HSIANG; A. DECRISTOFARO; S. PARK; C. RAMAKRISHNAN; K. DEISSEROTH; P. W. FRANKLAND; S. A. JOSSELYN. *The Hosp. For Sick Children, Stanford Univ.*

9:00 AA39 **534.14** Destructive circuit remodeling mediates neurogenesis-induced forgetting. A. GUSKJOLEN*; J. R. EPP; L. RESTIVO; S. A. JOSSELYN; P. W. FRANKLAND. *Sick Kids Hosp.*

10:00 AA40 **534.15** Enhanced morphological development of adult generated neurons by optogenetic stimulation. J. R. EPP*; G. VETERE; A. GUSKJOLEN; Y. NIIBORI; S. A. JOSSELYN; P. W. FRANKLAND. *Hosp. For Sick Children, Univ. of Toronto.*

11:00 AA41 **534.16** Hippocampal neurogenesis leads to the erasure of a cocaine conditioned place preference. L. A. VAN KAMPEN*; P. W. FRANKLAND. *The Hosp. For Sick Children, Univ. of Toronto, Univ. of Toronto, Univ. of Toronto.*

8:00 AA42 **534.17** *In vivo* and in silico interrogation of a fear memory network. G. VETERE*; J. W. KENNEY; L. TRAN; A. WHEELER; S. JOSSELYN; P. FRANKLAND. *Hosp. For Sick Children, Inst. of Med. Sci., Toronto, Univ. of Toronto, Univ. of Toronto, Inst. of Med. Sci.*

9:00 AA43 **534.18** Medial prefrontal cortex parvalbumin-positive interneurons modulate spindle-ripple coupling and fear memory consolidation. F. XIA*; B. A. RICHARDS; S. A. JOSSELYN; K. TAKEHARA-NISHIUCHI; P. W. FRANKLAND. *Hosp. For Sick Children, Univ. of Toronto, Univ. of Toronto, Univ. of Toronto.*

10:00 AA44 **534.19** Restoring ability to form new, and recover old “lost”, memories in mice that model Alzheimer’s disease. V. MERCALDO*; A. P. YIU; D. SARGIN; A. J. RASHID; J. CERÓN GONZÁLEZ; P. W. FRANKLAND; S. A. JOSSELYN. *The Hosp. For Sick Children, Univ. of Toronto, Univ. of Toronto.*

11:00 AA45 **534.20** Modeling the effects of brain region inactivation using a functional connectome. J. W. KENNEY*; G. VETERE; L. TRAN; Y. SOUDAGAR; S. A. JOSSELYN; P. W. FRANKLAND. *The Hosp. for Sick Children.*

8:00 AA46 **534.21** Medial prefrontal cortex inactivation biases hippocampal network representations. J. W. RUECKEMANN*; R. J. ROBINSON, II; S. M. FOROUSHANI; R. L. LEIB; S. BOVINO; H. EICHENBAUM. *Boston Univ.*

9:00 AA47 **534.22** Stimulation of the lateral entorhinal cortex reveals optimal frequencies for rhythmic entrainment of downstream hippocampal neurons. L. M. RANGEL*; K. R. KEEFE; P. D. RIVIÈRE; H. EICHENBAUM. *Boston Univ.*

10:00 AA48 **534.23** Stability and remapping of large cell assemblies in the hippocampus. N. R. KINSKY*; D. W. SULLIVAN; W. MAU; H. EICHENBAUM. *Boston Univ.*

11:00 BB1 **534.24** Distinct, complementary organization of information in perirhinal cortex within a medial temporal lobe network supporting episodic memory. C. S. KEENE*; J. H. BLADON; J. R. O’KEEFE; C. D. LIU; H. EICHENBAUM. *Boston Univ.*

8:00 BB2 **534.25** Learning paradigm influences the organization of memory in the hippocampus. D. J. SHEEHAN*; J. W. RUECKEMANN; S. MEHROTRA; H. EICHENBAUM. *Boston Univ. Ctr. For Memory and Brain.*

9:00 BB3 **534.26** Gamma oscillations and hippocampal information flow during a context dependent learning task. A. JOHNSON*; S. MCKENZIE; A. FRANK; H. EICHENBAUM. *Bethel Univ., New York Univ. Med. Ctr., Boston Univ.*

10:00 BB4 **534.27** CA3 time cells. D. M. SALZ*; S. KHASNABISH; A. KOHLEY; B. J. KRAUS; R. J. ROBINSON, II; J. W. RUECKEMANN; H. EICHENBAUM. *Boston Univ., Boston Univ., Boston Univ.*

11:00 BB5 **534.28** Membrane potential dynamics of mouse hippocampal neurons *in vivo.* N. MATSUMOTO*; Y. IKEGAYA. *Univ. Tokyo.*

POSTER

535. Learning and Memory: Modulation and Pharmacology

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 BB6 **535.01** Ameliorating effect of erucic acid on scopolamine-induced memory impairment in mice. E. KIM*; S. LEE; S. JEON; H. LEE; H. KIM; E. WOO; J. RYU. *Colleage of Pharm. Kyung Hee Univ., Kyung Hee Univ., Chosun Univerisity.*

9:00 BB7 **535.02** Effects of Acanthopanax koreanum on scopolamine-induced cognitive impairment in mice. S. LEE*; E. KIM; H. LEE; S. JEON; H. KIM; J. RYU. *Col. of Pharm. Kyung Hee Univ., Kyung Hee Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

10:00 BB8 **535.03** The transgenerational effects of high fat diet on bdnf expression: Epigenetics of cognition. S. FUSCO*; A. MASTRODONATO; M. SPINELLI; S. COCCO; C. RIPOLI; S. BARBATI; R. PIACENTINI; C. GRASSI. *Univ. Cattolica Med. Sch., IRCCS San Raffaele Pisana.*

11:00 BB9 **535.04** Involvement of muscarinic acetylcholine receptors in conditional discrimination task in eyeblink conditioning in mice. A. RAHMAN*; N. TANAKA; K. USUI; S. KAWAHARA. *Univ. of Toyama, Grad. Sch. of Sci. and Eng., Univ. of Toyama.*

8:00 BB10 **535.05** AMPAkine treatment modulates hippocampal theta power in the juvenile rat during Y-maze exploration. D. G. MCHAIL*; S. HUSSAIN; J. ASHRAFI; M. GREER; A. M. R. LOGHMANI; T. C. DUMAS. *George Mason Univ.*

9:00 BB11 **535.06** Xiap regulates ltd dependent learning in mice. J. GIBON*; N. UNSAIN; K. GAMACHE; R. THOMAS; A. DE LEON; A. JOHNSTONE; P. SEGUELA; K. NADER; P. A. BARKER. *McGill Univ., 2Laboratorio de Neurobiología, Inst. de Investigación Médica Mercedes y Martín Ferreyra, INIMEC-CONICET, Dept. of Psychology, McGill Univ.*

10:00 BB12 **535.07** PGC-1α regulates transcriptional programs in a cell- and region-specific way for distinct impacts on circuit function and behavior. L. J. MCMEEKIN*; A. S. BOHANNON; E. W. ADLAF; E. K. LUCAS; L. S. OVERSTREET-WADICHE; L. E. DOBRUNZ; J. J. HABLITZ; R. M. COWELL. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, Icahn Sch. of Med. at Mount Sinai.*

11:00 BB13 **535.08** Catecholaminergic neurons in mouse locus coeruleus are more strongly activated by novelty than catecholaminergic neurons in the ventral tegmental area. A. J. DUSZKIEWICZ; T. TAKEUCHI; P. SPOONER; K. DEISSEROTH; G. FERNÁNDEZ; R. G. MORRIS*. *The Univ. of Edinburgh, Stanford Univ., Radboud Univ. Nijmegen.*

8:00 BB14 **535.09** Catecholaminergic enhancement of initial memory consolidation in mice. T. TAKEUCHI*; A. J. DUSZKIEWICZ; M. YAMASAKI; D. TSE; P. SPOONER; M. WATANABE; K. DEISSEROTH; G. FERNÁNDEZ; R. G. M. MORRIS. *Univ. of Edinburgh, Hokkaido Univ., Stanford Univ., Radboud Univ. Nijmegen.*

9:00 BB15 **535.10** Differential consolidation induced by novelty and sleep associated with contrasting behavioural expression of hippocampal and cortical memory traces. L. GENZEL*; J. ROSSATO; J. JACOBSE; R. G. M. MORRIS. *Univ. of Edinburgh.*

10:00 BB16 **535.11** Adipocyte-specific over-expression of ecto-nucleotide pyrophosphate phosphodiesterase-1 leads to memory impairment in mice on a high-fat diet. A. MILTON*; J. KASPER; H. SALLAM; B. TUMURBAATAR; W. ZHANG; D. TUVDENDORJ; F. LAEZZA; G. TAGLIALATELA; N. ABATE; J. HOMMEL. *Univ. of Texas Med. Br.*

11:00 BB17 **535.12** Mice consuming a diet containing pectin fiber but not EGCG display cognitive benefits on the Morris water maze. T. BHATTACHARYA*; P. PARK; C. RENDEIRO; B. D. PENCE; Y. SUN; A. J. COBERT; K. S. SWANSON; G. C. FAHEY; R. W. JOHNSON; K. W. KELLEY; R. H. MCCUSKER; J. A. WOODS; J. S. RHODES. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

8:00 BB18 **535.13** Combination strategies of environmental enrichment, physical exercise and nutritional supplementation enhance the spatial cognition and hippocampal neurogenesis in ventral subicular lesioned rats. B. M. KUTTY*; V. KAPGAL; N. PREM; P. HEGDE; L. T. RAO. *Natl. Instit Ment Hlt &Neurosci, Natl. Instit Ment Hlt &Neurosci.*

9:00 BB19 **535.14** 17 β-estradiol regulates gamma-band oscillations in the hippocampus and related cognitive functions. A. SCHROEDER*. *The Florey Inst. of Neurosci. and Mental He.*

10:00 BB20 **535.15** CB2 receptor agonist GP1a restores neuronal excitability and LTP alteration in epileptic rats. A. BELMEGUENAI*; M. OGIER; J. BODENNEC; B. GEORGES; L. BEZIN. *Lyon Neurosciences Ctr. - CRNL, Inst. for Epilepsy - IDEE.*

11:00 BB21 **535.17** 5-HT mediated plasticity in hippocampal learning and memory. C. M. TEIXEIRA*; Z. ROSEN; M. HERSH; S. SIEGELBAUM; M. ANSORGE. *NYSPI-Columbia Univ.*

8:00 BB22 **535.18** Disappearance of the left-right asymmetry of allocation of NR2B in CA1 affects non-spatial memory inβ2-microglobrin KO mice. A. SHIMBO*; I. ITO; S. WATANABE. *Keio Univ., Riken, Kyusyu Univ., Keio Univ.*

9:00 BB23 **535.19** Modulation of medial entorhinal cortex layer II principal cell circuitry by glucocorticoids. J. HARTNER*; L. SCHRADER. *Tulane Univ., Tulane Univ.*

10:00 BB24 **535.20** Neonatal (+)-methamphetamine exposure in rats: Impairments in egocentric, allocentric, working, and contextual fear memory. S. A. JABLONSKI*; A. GUTIERREZ; T. M. TEE; K. L. SUTTLING; M. T. WILLIAMS; C. V. VORHEES. *Cincinnati Children's Hosp. Med. Ctr., Cincinnati Children's Res. Fndn., Univ. of Cincinnati, Col. of Med.*

11:00 BB25 **535.21** Post-trauma administration of the pifithrin-α oxygen analogue prevents hippocampal neuronal loss and improves cognitive deficits after experimental traumatic brain injury. L. YANG*; J. WANG; N. GREIG; J. WANG. *Taipei Med. Univ., Taipei Med. Univ., Natl. Inst. on Aging, Natl. Inst. of Hlth.*

8:00 BB26 **535.22** ▲ The effects of caffeine on performance of rats in the Traveling Salesman Problem. M. STOJANOVIC*; B. CHACON; D. MUHAMMAD-MENZIES; R. BLASER. *Univ. of San Diego.*

9:00 BB27 **535.23** Reduced preference for novel social stimuli after knockout of the oxytocin receptor from the hippocampal CA2 area. J. FASTMAN; M. VINCENT; A. SMITH; S. WILLIAMS AVRAM; A. CYMERBLIT-SABBA; J. SONG; H. LEE; S. YOUNG*. *NIMH, NIH, DHHS, Kyungpook Natl. Univ.*

10:00 BB28 **535.24** Multifractal complexity of hippocampal neurons after delta-9-Tetrahydrocannabinol administration during working memory and rest. D. FETTERHOFF*; R. A. KRAFT; R. A. SANDLER; I. OPRIS; C. A. SEXTON; V. Z. MARMARELIS; S. A. DEADWYLER; R. E. HAMPSON. *Wake Forest Univ., Wake Forest Univ. Hlth. Sci., Wake Forest Univ. Hlth. Sci., USC.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 BB29 **535.25** The NMDA antagonist, MK-801, prevents C57BL6/J mice to orient and acquire a cognitive map in a 3D maze. A. ENNACEUR*; R. M. ABUHAMDAH; D. M. HUSSAIN; P. L. CHAZOT. *Univ. of Sunderland, Univ. of Durham, Univ. of Sunderland.*

8:00 BB30 **535.26** Midline thalamic lesions lead to impairments on hippocampal-dependent working memory and hippocampal ACh efflux. J. M. HALL*; L. M. SAVAGE. *Binghamton Univ.*

9:00 BB31 **535.27** Orexin deficiency impairs hippocampus dependent learning and memory. V. MAVANJI; C. M. DUFFY; J. P. NIXON; T. A. BUTTERICK*; C. J. BILLINGTON; C. M. KOTZ. *VAHCS, Univ. Minneaota, Univ. Minnesota, Univ. Minnesota, Univ. Minnesota, Univ. Minnesota, VAHCS.*

10:00 BB32 **535.28** Activation of serotonin 5-HT2A receptor delays the retrieval of spatial memory by male C57BL/6J mice in a Morris water maze task. G. ZHANG*; D. CINALLI; R. W. STACKMAN, Jr. *Anhui Med. Univ., Florida Atlantic Univ.*

11:00 BB33 **535.29** Dopamine, social learning and sex differences: The effects of blocking dorsal hippocampal dopamine D2-type receptors on social learning of food preferences in male and female mice. R. MATTA*; E. A. UNDERWOOD; Z. K. LEACH; A. C. VERTES; E. CHOLERIS. *Univ. of Guelph.*

8:00 BB34 **535.30** Dopamine dependence of hippocampal space coding and spatial learning. A. RETAILLEAU*; S. SINGH; G. MORRIS. *Univ. of Haifa.*

POSTER

536. Learning and Memory: Genes, Signaling, and Neurogenesis I

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 BB35 **536.01** The chromatin organizer special AT-rich binding protein 2 is required for synaptic plasticity and long-term memory formation. C. REDDY; N. WHITTLE; M. KORTE; N. SINGEWALD; F. FERRAGUTI; G. DECHANT; G. APOSTOLOVA*. *Innsbruck Med. Univ., Univ. of Innsbruck, Zoological Inst., Innsbruck Med. Univ.*

9:00 BB36 **536.02** Dissociable roles of GADD45a and GADD45b in the rat perirhinal cortex and hippocampus for object memory: Different forms of DNA methylation? K. A. MITCHNICK*; S. D. CREIGHTON; B. E. KALISCH; B. D. WINTERS. *Univ. of Guelph, Univ. of Guelph.*

10:00 BB37 **536.03** Dissociable roles for maintenance and de novo DNA methyltransferases in object and spatial memory in the rat perirhinal cortex and hippocampus. S. D. CREIGHTON*; K. A. MITCHNICK; A. ALIZZI; B. E. KALISCH; B. D. WINTERS. *Univ. of Guelph, Univ. of Guelph, Univ. of Guelph.*

11:00 BB38 **536.04** The role of histone deacetylases in object recognition memory. A. SMITH*; G. R. I. BARKER; J. B. UNEY; E. C. WARBURTON. *Univ. of Bristol, Univ. of Bristol.*

8:00 BB39 **536.05** A histone deacetylase inhibitor, trichostatin-A, induces odor preference memory extension and maintains enhanced AMPA receptor expression in the rat pup model. S. BHATTACHARYA*; C. W. HARLEY; J. H. MCLEAN. *Mem. Univ. Of Newfoundland, Mem. Univ. of Newfoundland.*

9:00 BB40 **536.06** Glucose-induced memory enhancement is mediated by epigenetic modulation of BDNF and FGF-1 genes expression. Y. OOMURA; T. KATAFUCHI*; S. M. HOSSAIN. *Dept Integr Physiol, Grad Sch. Med. Sci, Kyushu Univ.*

10:00 BB41 **536.07** Lentiviral knock down of inhibitor-2 in the dorsal hippocampus enhances spatial memory and contextual fear conditioning. A. PAHNG*; H. YANG; H. XIA; P. COLOMBO. *Tulane Univ., LSU Hlth. Sci. Ctr.*

11:00 BB42 **536.08** VGF and its C-terminal peptide TLQP-62 regulate memory formation in the hippocampus via a BDNF-TrkB-dependent mechanism. W. LIN*; C. JIANG; M. SADAHIRO; O. BOZDAGI; L. VULCHANOVA; C. M. ALBERINI; S. R. SALTON. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Univ. of Minnesota, New York Univ., Friedman Brain Inst.*

8:00 BB43 **536.09** The special phospholipids, plasmalogens, enhance memory via increasing BDNF and other memory related gene expression in murine hippocampus. M. HOSSAIN*; T. KATAFUCHI; K. MIAKE. *Kyushu University, Dept of Integrative Physiol., Ctr. Res. Institute, Marudai Food Co. Limited.*

9:00 BB44 **536.10** Cognitive dysfunction in a novel knockout mouse model of ZC3H14. J. FIDLER*; J. RHA; S. K. JONES; A. H. CORBETT; P. S. GARCIA. *Emory Univ. / Atlanta VAMC, Emory Univ., Emory Univ., Emory Univ.*

10:00 BB45 **536.11** Proteomic studies of plasma membrane-mitochondrial proteins involved in recognition memory of visual imprinting in chicks. R. O. SOLOMONIA*; M. MEPARISHVILI; G. MARGVELANI; M. NOZADZE; E. MIKAUTADZE; T. KIGURADZE; B. J. MCCABE. *Inst. of Chem. Biology, Ilia Tbilisi State Univ., I.Beritashvili Inst. of Exptl. Biomedicine, Cambridge University, Dept. of Zoology.*

11:00 BB46 **536.12** The involvement of MSK1 in experience-dependent remodelling of hippocampal synaptic plasticity. L. PRIVITERA*; L. MORE'; J. S. ARTHUR; B. G. FRENGUELLI. *Univ. of Warwick, Univ. of Dundee.*

8:00 BB47 **536.13** MSK1 is a major contributor to the cognition-enhancing effects of environmental enrichment. L. MORE*; L. PRIVITERA; J. S. ARTHUR; B. G. FRENGUELLI. *Univ. of Warwick, Univ. of Dundee.*

9:00 BB48 **536.14** ▲ A putative role for neurotensin receptor-2 in hippocampus. M. A. THIBAULT*; L. MCQUADE; H. WOODWORTH; E. POTTER; G. LEINNINGER; A. ROBISON. *Michigan State Univ., Michigan State Univ.*

10:00 BB49 **536.15** Nogo ligands, receptors, co-receptors and modulators in the developing and adult mouse brain. G. SMEDFORS*; K. WELLFELT; T. HJORTENHAMMAR; E. NORDLING; A. JOSEPHSON; L. OLSON; T. KARLSSON. *Karolinska Institutet, Karolinska Institutet.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 BB50 **536.16** Parameters for abolishing conditioned place preference for cocaine from running and environmental enrichment in male C57BL/6J mice. M. L. MUSTROPH*; H. PINARDO; J. R. MERRITT; J. S. RHODES. *Univ. of Illinois Urbana-Champaign.*

8:00 BB51 **536.17** Neuronal PTEN haploinsufficiency causes memory deficit and potentially alters metabolism. J. CABRAL COSTA*; D. Z. ANDREOTTI; M. P. MATTSON; S. CAMANDOLA; C. SCAVONE; E. M. KAWAMOTO. *Univ. of São Paulo, Natl. Inst. on Aging.*

9:00 BB52 **536.18** Fear generalization in NLGN3R451C model of autism is associated with aberrant feedback inhibition in the lateral amygdala. B. UNAL; C. T. UNAL; M. BOLTON*. *Max Planck Florida Inst.*

10:00 BB53 **536.19** The adenosine A2A agonist, CGS21680 reduces behavioral inflexibility and repetitive grooming in the BTBR Mouse. M. E. RAGOZZINO*; D. A. AMODEO; L. CUEVAS; J. A. SWEENEY. *Univ. Illinois Chicago, Univ. Illinois Chicago, Univ. of Texas Southwestern.*

POSTER

537. Prefrontal and Striatal Systems: Molecular Mechanisms and Connectivity

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 BB54 **537.01** Effects of methylphenidate on state-action switching in rhesus monkey prefrontal cortex. A. RAJALA*; L. POPULIN; R. JENISON. *Univ. of Wisconsin, Madison.*

9:00 BB55 **537.02** Stress-induced anxiety and c-fos immunoreactivity in adulthood following chronic juvenile methylphenidate exposure. M. MCWATERS*; E. ANDERSON; L. MATUSZEWICH. *Northern Illinois Univ.*

10:00 BB56 **537.03** Cocaine self-administration enhances response-outcome encoding in dorsal striatum. A. C. BURTON*; G. B. BISSONETTE; A. C. ZHAO; P. K. PATEL; M. R. ROESCH. *Univ. of Maryland, Col. Park.*

11:00 BB57 **537.04** H3 receptor inactivation normalized disrupted histamine transmission during sexual motivation. M. E. RIVEROS*; F. TORREALBA. *Pontificia Univ. Catolica, Clinica Alemana Univ. del Desarrollo.*

8:00 BB58 **537.05** Role of deltaFosB in aggressive behavior in male mice. H. ALEYASIN*; S. A. GOLDEN; M. E. FLANIGAN; M. L. PFAU; C. MENARD; A. R. NECTOW; G. E. HODES; M. HSHMATI; E. HELLER; J. MULTER; L. K. BICKS; R. L. NEVE; E. J. NESTLER; S. J. RUSSO. *Mount Sinai Sch. of Med., NIH, Rockefeller Univ., MIT.*

9:00 BB59 **537.06** Setdb1 histone H3K9 methyltransferase knockout elicits anxiety phenotype. B. JAVIDFAR*; Y. JIANG; S. AKBARIAN. *Icahn Sch. of Med. At Mount Sinai.*

10:00 BB60 **537.07** ● A unique dual cortico-striatal action of a beta-arrestin biased dopamine D2 receptor ligand. N. URS*; S. M. GEE; T. F. PACK; J. D. MCCORVY; T. EVRON; B. L. ROTH; P. O'DONNELL; M. G. CARON. *Duke Univ., Pfizer Inc., Univ. of North Carolina, Chapel Hill, Duke Univ., Duke Univ.*

11:00 BB61 **537.08** Phosphodiesterase 2A inhibition and impulsivity. P. R. A. HECKMAN*; A. BLOKLAND; J. RAMAEKERS; J. PRICKAERTS. *Maastricht Univ., Maastricht Univ.*

8:00 BB62 **537.09** ● Cholinergic modulation of nicotine-evoked glutamate release within the dorsal striatum. D. YOUNG*; R. KOZAK; W. HOWE. *Pfizer Inc.*

9:00 BB63 **537.10** Catechol-O-methyltransferase affects striatal dopamine transmission and modulates the influence of cue salience on associative learning. A. HUBER*; L. OIKONOMIDIS; J. GAUNT; E. M. TUNBRIDGE; M. E. WALTON. *Univ. of Oxford, Univ. of Oxford.*

10:00 BB64 **537.11** Contributions of COMT and DAT to regulation of phasic dopamine release and reward-guided behavior. C. KORN*; C. VAGNONI; M. WALTON; E. TUNBRIDGE. *Oxford Univ.*

11:00 BB65 **537.12** The mammalian target of rapamycin complex 1 (mTORC1) in the orbitofrontal cortex contributes to habitual responding for alcohol. N. MORISOT*; J. T. BECKLEY; K. PHUAMLONG; D. RON. *Univ. of California San Francisco.*

8:00 BB66 **537.13** GCN5 enzymatic activity is required for normal corticostriatal development and function. J. WILDE*; L. NISWANDER. *UC Denver.*

9:00 BB67 **537.14** Corticotropin-releasing factor (CRF) impairs prefrontal cortex-dependent cognitive processes. S. HUPALO*; R. C. SPENCER; C. W. BERRIDGE. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

10:00 BB68 **537.15** Genetic and pharmacologically mediated changes in neural synchrony across the mesocorticolimbic dopamine system during alcohol consumption. A. M. MCCANE*; S. AHN; L. RUBCHINSKY; S. S. JANETSIAN; D. N. LINSENBARDT; C. L. CZACHOWSKI; C. C. LAPISH. *Indiana University-Purdue Univ. Indianapolis, Arizona State Univ., Indiana University-Purdue Univsersity Indianapolis.*

11:00 BB69 **537.16** Which anatomical substrate is reflected by MRI-based connectomics? lessons from the Allen mouse brain connectome atlas. V. ZERBI*; J. GRANDJEAN; Z. PRÖHLE; M. RUDIN; N. WENDEROTH. *Neural Control of Movement Lab, ETH Zurich, Inst. for Biomed. Engineering, ETH and Univ. Zurich, Dept. of Physics, ETH Zurich, Inst. of Pharmacol. and Toxicology, Univ. Zurich.*

8:00 BB70 **537.17** Functional and structural changes associated with recovery of function following lesions to principal sulcus in macaques. M. AINSWORTH*; H. BROWNCROSS; D. J. MITCHELL; A. S. MITCHELL; J. SALLET; M. J. BUCKLEY; J. DUNCAN; A. H. BELL. *Oxford Univ., MRC Cognition and Brain Sci. Unit, Oxford Univ.*

9:00 BB71 **537.18** Characterizing circuits for positive and negative social interactions in mPFC. L. CHUNG*; K. SAKURAI; S. ZHAO; F. WANG. *Duke Univ.*

10:00 BB72 **537.19** Projections from the prefrontal cortex and medial and inferior temporal cortices converge in a critical node in the striatum. E. CHOI*; S. DING; G. W. VAN HOESEN; S. N. HABER. *Univ. of Rochester Med. Ctr., Allen Inst. for Brain Sci., Univ. of Iowa Carver Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 BB73 **537.20** Projection pattern of the ventrocaudal part of the intralaminar thalamic nucleus to the caudate putamen in the rat brain. H. IWAI*; E. KURAMOTO; A. YAMANAKA; T. GOTO. *Kagoshima Univ.*

8:00 BB74 **537.21** A morphological analysis of thalamocortical projections arising from the rat mediodorsal nucleus: A single neuron-tracing study using viral vectors. E. KURAMOTO*; S. PAN; T. FURUTA; H. HIOKI; H. IWAI; A. YAMANAKA; S. OHNO; T. GOTO; T. KANEKO. *Kagoshima Univ., Grad. Sch. of Medicine, Kyoto Univ.*

POSTER

538. Motivation and Emotion: Reward I

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 BB75 **538.01** Cell-type-specific control of innate behaviors by the dorsal raphe nucleus. A. R. NECTOW*; B. FIELD; J. M. FRIEDMAN. *Rockefeller Univ., Rockefeller University/HHMI.*

9:00 BB76 **538.02** The role of median raphe GABA and glutamate neurons in reward. A. TAN*; S. IKEMOTO. *Natl. Inst. On Drug Abuse.*

10:00 BB77 **538.03** Coding of dorsal raphe reward signals by the orbitofrontal cortex. J. ZHOU*; C. JIA; Q. FENG; J. BAO; M. LUO. *Natl. Inst. of Biol. Sciences, Beijing, Peking Univ., Tsinghua Univ.*

11:00 BB78 **538.04** ▲ Differential involvement of dopamine and opioid signaling in food preference and effort-related decision-making in rats. I. MORALES; P. J. CURRIE; T. D. HACKENBERG; R. PASTOR*. *Reed Col., Univ. Jaume I.*

8:00 BB79 **538.05** Low frequency rTMS to monkey STS moderates neuronal sensitivity to social reward. A. UTEVSKY*; M. L. PLATT. *Duke Univ., Duke Univ.*

9:00 BB80 **538.06** Low-frequency deep brain stimulation of the ventral striatum facilitates the extinction of morphine place preference. F. J. MARTINEZ*; J. RODRIGUEZ-ROMAGUERA; M. E. LLORET-TORRES; J. M. MIRANDA-FAJARDO; F. H. DO MONTE; G. J. QUIRK; J. L. BARRETO-ESTRADA. *Univ. of Puerto Rico, Med. Sci. Campus, Univ. of Puerto Rico, Med. Sci. Campus.*

10:00 BB81 **538.07** Intact anterior insular response to punishment magnitude, despite dACC related error-learning deficits in heroin dependent participants. D. J. UPTON*; D. A. O'CONNOR; J. MOORE; K. P. CHARLES-WALSH; S. ROSSITER; R. HESTER. *The Univ. of Melbourne.*

11:00 BB82 **538.08** A new model to study reward discounting in mice living in groups. *L. SZUMIEC, J. RODRIGUEZ PARKITNA. *Inst. of Pharmacol. PAS.*

8:00 BB83 **538.09** Ventral tegmental area and substantia nigra pars compacta exhibit similar neural responses to reward-related cues and events. M. A. WEGENER*; B. MOGHADDAM. *Ctr. For Neurosci. Univ. of Pittsburgh, Univ. of Pittsburgh.*

9:00 BB84 **538.10** Physical activity deficits in obese animals are linked to dysfunction of striatal D2-receptors. D. M. FRIEND*; K. DEVARAKONDA; V. ALVAREZ; K. HALL; A. KRAVITZ. *NIH, Natl. Inst. of Diabetes and Digestive and Kidney Dis., NIH, Natl. Inst. on Alcohol Abuse and Alcoholism.*

10:00 BB85 **538.11** Food intake better predicts weight gain than physical activity and D2 receptor availability. K. DEVARAKONDA*; D. M. FRIEND; J. GUO; K. D. HALL; A. V. KRAVITZ. *NIDDK.*

11:00 BB86 **538.12** Modulation of reward seeking by changes in energy balance: A 3D perspective. S. NOLAN-POUPART*; K. CONOVER; P. SHIZGAL. *Concordia Univ., Concordia Univ.*

8:00 BB87 **538.13** Brain areas involved in detecting valuable objects: A functional MRI study in macaques. A. GHAZIZADEH*; W. GRIGGS; D. A. LEOPOLD; O. HIKOSAKA. *LSR NIH, NIMH.*

9:00 BB88 **538.14** Pupillary correlates of vicarious reward in rhesus macaques. J. A. JOINER*; N. A. FAGAN; M. L. PLATT; S. W. C. CHANG. *Yale Univ., Duke Univ., Yale Univ. Sch. of Med.*

10:00 BB89 **538.15** Seeing eye-to-eye: Live gaze interactions in pairs of rhesus macaques robustly capture dominance behavior. O. DAL MONTE*; M. PIVA; J. A. JOINER; W. PACK; A. C. NAIR; S. W. C. CHANG. *Yale Univ., Yale Univ. Sch. of Med.*

11:00 BB90 **538.16** Counterbalancing prosocial decisions across egocentric and allocentric reward contexts in rhesus macaques. W. D. PACK*; J. A. JOINER; S. W. C. CHANG. *Yale Univ., Yale Univ. Sch. of Med.*

8:00 BB91 **538.17** Impulsivity and accubofrontal white matter integrity. T. IKUTA*; K. H. KARLSGODT. *Univ. of Mississippi, Zucker Hillside Hosp., Feinstein Inst. for Med. Res., Hofstra North Shore-LIJ Sch. of Med.*

9:00 BB92 **538.18** Parcellating the effects of medial orbitofrontal cortex lesions on value-based decision-making. J. PETERS*; M. D'ESPOSITO. *Dept. of Systems Neuroscience, Univ. Medical-Center Hamburg-Eppendorf, Helen Wills Neurosci. Institute, Univ. of California.*

10:00 BB93 **538.19** The neuronal population in monkey ventral striatum encodes both reward size and delay to obtain it. R. FALCONE*; D. WEINTRAUB; G. CHEN; B. RICHMOND. *NIMH.*

POSTER

539. Songbird Communication: Genetic, Neuroendocrine, and Environmental Influences

Theme F: Cognition and Behavior

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 CC1 **539.01** Neurotensin mRNA expression in the medial preoptic nucleus and Area X positively correlates with sexually-motivated song in male European starlings. D. P. MERULLO*; M. A. CORDES; M. S. DEVRIES; S. A. STEVENSON; L. V. RITERS. *Univ. of Wisconsin-Madison.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 CC2 **539.02** Independent contributions of testosterone and a nesting site to sexually-motivated behaviors and gene transcription in male European starlings. J. A. SPOOL*; S. A. STEVENSON; C. S. ANGYAL; L. V. RITERS. *Univ. of Wisconsin Madison.*

10:00 CC3 **539.03** Endocannabinoid CB1 receptor expression in social and vocal control brain regions correlates with status-appropriate agonistic- and sexually-motivated behavior in male European starlings. L. V. RITERS*; M. S. DEVRIES; M. A. CORDES; J. D. RODRIGUEZ; S. A. STEVENSON. *Univ. of Wisconsin.*

11:00 CC4 **539.04** Neuroestrogen modulation of auditory processing across development. D. M. VAHABA*; L. REMAGE-HEALEY. *Univ. of Massachusetts, Univ. of Massachusetts.*

8:00 CC5 **539.05** Neural representation of a shared behavior in two individuals. M. J. COLEMAN*; A. ROESER; F. DUQUE; E. S. FORTUNE. *The Claremont Colleges, New Jersey Inst. of Technol., Univ. San Francisco de Quito.*

9:00 CC6 **539.06** Neural substrates of courtship song perception in female zebra finches: A role for the avian 'prefrontal cortex'. L. VAN RUIJSSEVELT*; Y. CHEN; G. DE GROOF; S. C. WOOLLEY; A. VAN DER LINDEN. *Bio-Imaging Lab. / Univ. of Antwerp, Mc Gill Univ.*

10:00 CC7 **539.07** Pair bond quality influences song preferences and EGR1 expression in a female songbird. H. E. SCHUBLOOM; S. C. WOOLLEY*. *McGill Univ., McGill Univ.*

11:00 CC8 **539.08** ▲ Male lays eggs: Chromosomal and mate preference abnormalities in a chimeric zebra finch lineage. M. JONES*; R. A. CUMMINS; E. JENKINS; R. J. PEREZ; M. BARKER-KAMPS; H. WITTCHEN; C. GANN-VACULCIK; A. L. HRIBAR; L. B. DAY. *Univ. of Mississippi, Univ. of Mississippi.*

8:00 CC9 **539.09** Anatomical specificity of testosterone in the regulation of song and the associated neuroplasticity in canaries. B. A. ALWARD*; S. E. PARKER; J. BALTHAZART; G. F. BALL. *The Johns Hopkins Univ., Univ. of Liege, Univ. of Maryland, Col. Park.*

9:00 CC10 **539.10** Acceleration of maturation by estradiol during adolescence in prepubescent male zebra finches. W. E. GRISHAM*; N. ASKARINAM; M. NELSON; I. T. DAHILIG; A. A. CARLSON; D. SAXON. *UCLA, UCLA, Trinity Col., Claremont McKenna Col.*

10:00 CC11 **539.11** Coping with stress: Does having a single parent affect offspring of typically biparental zebra finches (Taeniopygia guttata)? L. S. PHILLMORE*; J. FISK; S. D. AITKEN; T. M. E. YOUSEF; T. S. PERROT. *Dalhousie Univ.*

11:00 CC12 **539.12** Predicting plasticity: Context-dependent changes to vocal performance predict age-dependent changes to adult birdsong. L. S. JAMES; J. T. SAKATA*. *McGill Univ., McGill Univ.*

8:00 CC13 **539.13** Differential and developmental expression of genes with potential involvement in the specificity, maintenance, and modulation of long-distance projections in the oscine song system. C. V. MELLO*; C. R. OLSON; M. WIRTHLIN; P. V. LOVELL. *Oregon Hlth. Sci. Univ.*

9:00 CC14 **539.14** ZEBrA Redux: An improved digital atlas for exploring brain gene expression in the adult male Zebra Finch (www.zebrafinchatlas.org). P. V. LOVELL*; M. WIRTHLIN; C. V. MELLO. *Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

10:00 CC15 **539.15** Promoter motif analyses reveal unique transcriptional regulatory networks in distinct cell types within the oscine song system. M. WIRTHLIN*; P. V. LOVELL; C. R. OLSON; J. CARLETON; C. V. MELLO. *Oregon Hlth. & Sci. Univ.*

11:00 CC16 **539.16** The NAP snippet of activity-dependent neuroprotective protein (ADNP) is highly conserved in migrating and monogamous non-song birds. I. GOZES*; G. HACOHEN KLEIMAN; A. YEHESKEL; A. BARNEA. *Sackler Sch. Med/Tel Aviv Univ., Open Univ., Life Sciences/Tel Aviv Univ.*

POSTER

540. Electrodes Arrays II

Theme G: Novel Methods and Technology Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 CC17 **540.01** Autonomously tunable interfaces for intracellular recordings. S. SAMPATH KUMAR*; J. MUTHUSWAMY. *Arizona State Univ., Arizona State Univ.*

9:00 CC18 **540.02** ● Using multi-electrode array technology to evaluate *in vitro* neuronal firing parameters and network complexity. R. KESILMAN (KORN)*; S. PARMENTIER-BATTEUR; J. J. RENGER; M. J. MARINO. *Merck & Co., Inc.*

10:00 CC19 **540.03** Silicon carbide-based electrocorticography arrays for chronic implantation. C. DIAZ-BOTIA*; L. E. LUNA; M. CHAMANZAR; C. CARRARO; R. MABOUDIAN; P. N. SABES; M. M. MAHARBIZ. *Univ. of California, San Francisco, Univ. of California Berkeley, Univ. of California Berkeley, Univ. of California Berkeley, Univ. of California San Francisco.*

11:00 CC20 **540.04** Dorsal root ganglia neural recordings with a novel non-penetrating thin-film microelectrode array. Z. J. SPERRY*; J. P. SEYMOUR; F. WU; S. E. ROSS; K. KIM; J. T. BENTLEY; E. YOON; T. M. BRUNS. *Univ. of Michigan.*

8:00 CC21 **540.05** Data-driven model comparing the effect of the glial scar and electrochemical interface on chronic neural recordings in non-human primates. K. A. MALAGA*; K. E. SCHROEDER; P. R. PATEL; Z. T. IRWIN; D. E. THOMPSON; J. N. BENTLEY; C. A. CHESTEK; P. G. PATIL. *Univ. of Michigan, Univ. of Michigan Hlth. Syst.*

9:00 CC22 **540.06** ● An increased throughput platform for acute slice electrophysiology with *in vitro* microelectrode arrays. M. S. TRUJILLO*; S. YASUOKA. *Alpha MED Scientific, Alpha MED Scientific.*

10:00 CC23 **540.07** A 3D neural probe with 1024 electrodes II: Dynamics and functional organization of reward circuitry. J. L. SHOBE*; L. D. CLAAR; K. I. BAKHURIN; S. PARHAMI; S. C. MASMANIDIS. *UCLA, UC Los Angeles.*

11:00 CC24 **540.08** Tracking the activity of multiple individual neurons over one month in organotypic hippocampal slices grown on high-density multi-electrode arrays. W. GONG*; J. SENČAR; D. JÄCKEL; D. BAKKUM; A. HIERLEMANN. *ETH Zurich, Univ. of Ljubljana.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 CC25 **540.09** ● Implantable, yet adaptive computer-controlled multi-electrode positioning system for intracortical recordings in primates. E. FERREA*; L. SURIYA-ARUNROJ; D. HOEHL; U. THOMAS; A. GAIL. *German Primate Ctr., Thomas RECORDING GmbH, Bernstein Ctr. for Computat. Neurosci., Georg-August Univ.*

9:00 CC26 **540.10** ● Electrophysiological monitoring of neural stem cell differentiation. J. COLLINS*; H. C. WONG; J. KOHANA; M. G. BANUELOS; P. H. SCHWARTZ. *Biopico Systems Inc, Univ. of California Irvine, Children's Hosp. of Orange County.*

10:00 CC27 **540.11** Microchannel electrode arrays for regenerative peripheral nerve interface. A. N. ZORZOS*; B. MAIMON; R. RISO; M. CARTY; S. TALBOT; T. R. CLITES; H. M. HERR. *MIT, Harvard Med. Sch., MIT.*

11:00 CC28 **540.12** Intracranial measurement of intracranial electric fields in monkeys and humans reveal spatiotemporal structure of transcranial electric stimulation. A. OPITZ*; C. YAN; A. FALCHIER; E. YEAGLE; P. MEGEVAND; G. LINN; D. ROSS; C. CRADDOCK; S. COLCOMBE; A. THIELSCHER; M. MILHAM; A. MEHTA; C. SCHROEDER. *Nathan Kline Inst., Hofstra North Shore LIJ Sch. of Med. and Feinstein Inst. for Med. Res., Danish Res. Ctr. for Magnetic Resonance, Copenhagen Univ. Hosp. Hvidovre.*

8:00 CC29 **540.13** A test platform to evaluate the long-term safety and performance of peripheral nerve electrodes for brain-computer interface application. S. VASUDEVAN*; C. WELLE. *Food and Drug Administration, CDRH/OSEL/ Div. of Biomed. Physics.*

9:00 CC30 **540.14** *In vivo* validation of a cylindrical 64-channel depth probe with a diameter of 800 µm. F. POTHOF*; L. BONINI; M. LANZILOTTO; A. LIVI; L. FOGASSI; G. A. ORBAN; O. PAUL; P. RUTHER. *Univ. of Freiburg, Inst. Italiano di Tecnologia (IIT), Univ. degli studi di Parma.*

10:00 CC31 **540.15** Carbon nanotube multi-electrode arrays for high sensitive extracellular measurements in cultured human iPSC derived neurons. I. SUZUKI*; N. MATSUDA; A. ODAWARA; M. FUKUDA; H. JIKO. *Tohoku Inst. of Technol., Alpha MED Scientific Inc.*

11:00 CC32 **540.16** The Encephalophone: A novel brain-computer music interface and cognitive rehabilitation device using conscious control of electroencephalogram (EEG). T. A. DEUEL*; J. PAMPIN; J. SUNDSTROM; F. DARVAS. *Swedish Neurosci. Inst., Univ. of Washington, Unive, Univ. of Washington, Univ. of Washington.*

8:00 CC33 **540.17** ● Chronic *in vivo* electrophysiology and histology stability assessment of carbon fiber microelectrode arrays. P. R. PATEL*; H. ZHANG; M. T. ROBBINS; J. B. NOFAR; S. P. MARSHALL; M. J. KOBYLAREK; T. D. Y. KOZAI; N. A. KOTOV; D. R. KIPKE; C. A. CHESTEK. *Univ. of Michigan, Univ. of Michigan, Univ. of Pittsburgh, NeuroNexus Technologies.*

9:00 CC34 **540.18** Carbon fiber based microelectrode array for intracortical neural recording. Y. LEE*; Y. LIM; S. HWANG; H. YOO; S. JUN. *Ewha Womans Univ., Ctr. for Robotics Research, Robotics and Media Institute, Korea Inst. of Sci. and Technol., Dept. of Brain and Cognitive Science, Ewha Womans Univ.*

10:00 CC35 **540.19** ▲ Differential impact of anesthetics on real-time electrochemical recordings of glutamate neurotransmission in the rodent brain. T. COLBURN*. *Univ. of Arizona.*

11:00 CC36 **540.20** Deep brain stimulation in mice using magnetic resonance imaging-compatible carbon electrodes. D. R. GALLINO*; V. KONG; G. DEVENYI; A. MATHIEU; M. CHAKRAVARTY. *Douglas Mental Hlth. Univ. Inst.*

8:00 CC37 **540.21** Standardized regions of interest for population analyses using electrocorticography (ECoG). J. B. COCJIN*; S. R. DAMERA; Z. S. SAAD; S. K. INATI; K. A. ZAGHLOUL. *NINDS, Georgetown Univ., NIMH, NINDS.*

9:00 CC38 **540.22** A 3D neural probe with 1,024 electrodes I: Probe design and development. L. D. CLAAR*; J. L. SHOBE; S. PARHAMI; K. I. BAKHURIN; S. C. MASMANIDIS. *UCLA, UCLA, UCLA, UCLA, UCLA.*

10:00 CC39 **540.23** Induction and characterization of synaptic transmission induced synchronized population bursts of the induced pluripotent stem cell-derived neurons. N. MIYAMOTO*; K. SAWADA. *EISAI Co., Ltd.*

11:00 CC40 **540.24** Automated spike sorting across electrodes in large-scale recordings from the mammalian retina. M. SORBARO SINDACI*; G. HILGEN; S. PIRMORADIAN; I. KEPIRO; S. ULLO; O. MUTHMANN; L. BERDONDINI; D. SONA; E. SERNAGOR; M. H. HENNIG. *Univ. of Edinburgh, Univ. of Newcastle, Inst. Italiano di Tecnologia, Natl. Ctr. for Biol. Sci.*

8:00 CC41 **540.25** ▲ Construction of two-site multi-channel optrode system in freely moving mouse. Y. TANG*. *Shenzhen Inst. of Advanced Technol. (SIAT).*

POSTER

541. Novel Assays

Theme G: Novel Methods and Technology Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 CC42 **541.01** Development of a wirelessly controlled multichannel neurochemical sensor and neurostimulator: WINCS Harmoni. K. H. LEE*; E. K. ROSS; J. K. TREVATHAN; M. P. MARSH; R. A. PHILPOTT; J. S. HUMBLE; C. L. FELTON; B. K. GILBERT; C. J. KIMBLE; M. B. MCINTOSH; K. R. KRESSIN; J. B. BOESCHE; D. R. EAKER; J. L. LUJAN; A. J. BIEBER; S. CHANG; K. E. BENNET. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*

9:00 CC43 **541.02** Real-time functional ultrasound imaging of brain activity on freely moving rats during active tasks. A. URBAN*; D. CLARA; M. GUILLAUME; B. CLÉMENT; M. EMILIE; M. GABRIEL. *Ctr. De Psychiatrie Et Neurosciences - INSERM U894, UMRS 894 INSERM Ctr. de Psychiatrie et Neurosciences, Faculté de Médecine, Univ. Paris Descartes, Sorbonne Paris Cité., Neural Circuit Laboratories, Friedrich Miescher Inst. for Biomed. Res.*

10:00 CC44 **541.03** Single-synapse analysis of long-term potentiation by flow cytometry. G. A. PRIETO*; B. H. TRIEU; G. LYNCH; C. W. COTMAN. *Inst. for Memory Impairments and Neurolog. Disorders.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 CC45 **541.04** ● OpBox: Open-source development of customized and cost-effective hardware and software for behavioral neurophysiology. B. F. COUGHLIN*; B. E. SHANAHAN; G. PIANTONI; S. S. CASH; E. Y. KIMCHI. *Massachusetts Gen. Hosp., Harvard Med. Sch.*

8:00 CC46 **541.05** ● Optical interrogation of ultrasonic neuromodulation in transgenic mice. T. SATO*; D. TSAO. *Caltech.*

9:00 CC47 **541.06** Improved sensitivity and measurement stability of fast scan cyclic voltammetry measurements using the 'elastic net'. H. LONG; K. T. KISHIDA; J. P. WHITE; R. J. MORAN*; T. LOHRENZ; P. PHILLIPS; P. DAYAN; P. R. MONTAGUE. *Virginia Tech., Virginia Tech., Univ. of Washington, Univ. Col. London.*

10:00 CC48 **541.07** ● *In vitro* assessment of biased signaling: A duplex assay approach to detect functional selectivity of 5-HT_{2C} agonists. V. LAKICS*; B. RAUPRICH; M. H. BAKKER; A. RELO; H. MACK; A. HAUPT; W. BRAJE; G. C. TERSTAPPEN; K. DRESCHER. *Abbvie Deutschland Gmbh and Co. KG.*

11:00 CC49 **541.08** ● Nanomechanical characterization of synapses in live hippocampal neurons via torsional harmonic atomic force microscopy. J. YANG*; N. MANDRIOTA; J. JONES; D. KIM; R. LEFORT; R. YUSTE; O. SAHIN. *Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ.*

8:00 CC50 **541.09** Conductive polymer based silk electrode for cell activity measurement. K. TORIMITSU*; H. TAKAHASHI; Y. TAKIZAWA; S. WATANABE. *Tohoku Univ.*

9:00 CC51 **541.10** ▲ Micro-cautery based on photodeposition of zinc nanoparticle onto an optical fiber to prevent internal hematoma in abdominal and pelvic regions in adult rats. C. F. PASTELIN*; P. ZACA-MORÁN; G. F. PÉREZ-SÁNCHEZ; F. CHÁVEZ; C. MORÁN. *Univ. Autonoma de Puebla.*

10:00 CC52 **541.11** Engineering a system to monitor home cage feeding behavior in rodents. A. V. KRAVITZ*; K. P. NGUYEN. *NIDDK, Natl. Inst. of Hlth.*

11:00 CC53 **541.12** ● Extending the viability of acute brain slices. P. B. BREEN; J. W. MORLEY; J. TAPSON; A. VAN SCHAIK; Y. BUSKILA*. *Univ. of Western Sydney, Univ. of Western Sydney, Univ. of Western Sydney, Univ. of Western Sydney, Univ. of Western Sydney.*

8:00 CC54 **541.13** Magnetic resonance imaging/diffusion tensor imaging of defunct baroreflex that underpins mortality in a rat model of hepatic encephalopathy. C. TSAI*; S. H. H. CHAN. *Kaohsiung Chang Gung Mem. Hosp.*

9:00 CC55 **541.14** Design of a neurovascular unit device using tissue engineering techniques for the study of cerebral microvascular permeability in stroke. D. M. SANCHEZ-PALENCIA*; M. SAINT-GENIEZ; J. ARBOLEDA-VELASQUEZ. *Schepens Eye Res. Inst.*

10:00 CC56 **541.15** Evaluation of the N-Methyl-D-Aspartate gated ion channel by an automated electrophysiology instrument designed for fast fluidic exchange. J. WEBBER; J. TANG; M. KASSINOS; B. ZOU; P. MIU*. *Mol. Devices, LLC.*

11:00 CC57 **541.16** Novel microfluidic blood-brain barrier neurovascular culture device. J. A. BROWN*; D. MARKOV; V. PENSABENE; V. ALLWARDT; D. NEELY; M. SHI; Q. YANG; O. HOILETT; P. SAMSON; L. J. MCCAWLE; D. WEBB; J. P. WIKSWO. *Vanderbilt Univ., Vanderbilt Univ. Med. Ctr.*

8:00 CC58 **541.17** Muscle stimulation for haptic feedback in immersive environments. D. Y. BUCKLEY*; Y. CHAI; A. SERENA; C. PIANCASTELLI; Y. CHOU; C. BIANCHINI; M. MARCHWICKI; A. VENDITTI; L. FENES; J. GRAUBINS; G. BOISSELET; P. S. BLOOMFIELD. *UNIT9 Ltd., Imperial Col. London.*

9:00 CC59 **541.18** Information content of video tracking and pressure-sensor derived signals for the discrimination of mouse behaviour in health versus disease. M. CARRENO MUNOZ; K. LÓPEZ DE IPIÑA; S. PIETROPAOLO; A. MOUJAHID; A. FRICK; X. LEINEKUGEL*. *Neurocentre Magendie, INSERM U862, Univ. del País Vasco, CNRS, UMR 5287.*

POSTER

542. Data Analysis

Theme G: Novel Methods and Technology Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 CC60 **542.01** How to visit 0.5% of 15,000 possible posters? Automated poster visit scheduler for SfN. D. ACUNA*; T. ACHAKULVISUT; K. KORDING. *Rehabil. Inst. of Chicago, Northwestern Univ., Northwestern Univ.*

9:00 CC61 **542.02** Multidimensional imaging of brain slices or cell cultures: Acquisition and analysis. N. N. KARPUK*; T. KIELIAN. *Univ. Nebraska Med.*

10:00 CC62 **542.03** Test-retest reliability of cortical parcellations in 165 healthy adults for multi-site analyses in the ENIGMA consortium. J. FASKOWITZ*; D. P. HIBAR; P. M. THOMPSON; N. JAHANSHAD. *Imaging Genet. Ctr.*

11:00 CC63 **542.04** A MATLAB toolbox to tame the torrent: Efficient video processing routines for wide-field Ca^{2+} fluorescence imaging in awake behaving animals. M. BUCKLIN*; H. TSENG; A. I. A. MOHAMMED; X. HAN. *Boston Univ., Boston Univ.*

8:00 CC64 **542.05** Automated control of associative learning and spatial decision making in freely swimming zebrafish, danio rerio. B. SINGH*; L. ZU; J. SUMMERS; J. GIORDANO; E. GLASGOW; J. S. KANWAL. *Georgetown Univ. Med. Ctr., Univ. degli Studi di Roma 'La Sapienza', Georgetown Univ. Med. Ctr.*

9:00 CC65 **542.06** Optimization of *ex vivo* high-resolution mouse diffusion tractography at the gray/white matter border. P. KABARIA; G. DAI*; E. TAKAHASHI. *Boston Children's Hosp., Northeastern Univ., Martinos Center/Mgh, Boston Children's Hosp.*

10:00 CC66 **542.07** Spyking circus: A new software for fast, scalable spike sorting of large-scale extracellular recordings. P. YGER*; O. MARRE. *Inst. De La Vision, Inst. de la Vision.*

11:00 CC67 **542.08** Spatial features of reliably constructed structural brain networks. M. Y. MAHAN; A. P. GEORGOPOULOS*. *Univ. Minnesota, Univ. Minnesota.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 CC68 **542.09** A probabilistic latent factor approach for multi-subject fMRI data modeling. P. CHEN*; P. J. RAMADGE. *Princeton Univ.*

9:00 CC69 **542.10** Multi-echo fMRI enhances reliability of brain-wide BOLD responses to a naturalistic movie. D. C. JANGRAW; D. A. HANDWERKER; J. GONZALEZ-CASTILLO; B. GUTIERREZ; V. ROOPCHANSINGH; P. BANDETTINI*. *NIMH-NIH, NIMH-NIH, NIMH-NIH.*

10:00 CC70 **542.11** Probabilistic maps identify spatially variable features of large-scale resting-state functional connectivity brain systems. E. M. GORDON*; T. O. LAUMANN; B. ADEYEMO; S. E. PETERSEN. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

11:00 CC71 **542.12** Biomarkers of Neurodevelopmental disorders in Early Childhood: Pilot study using functional near infrared spectroscopy. A. A. ANDERSON*; E. SMITH; V. CHERNOMORDIK; N. KARAMZADEH; F. CHOWDHRY; A. THURM; A. GANDJBAKHCHE. *NIH, NIH.*

8:00 CC72 **542.13** Structure and function of the sources of thalami-cortical dysrhythmia in human, revealed by magnetic encephalography. R. R. LLINAS*; M. N. USTININ; S. RYKUNOV; A. I. BOYKO; K. D. WALTON; G. RABELLO. *New York Univ. Sch. Med., Inst. of Mathematical Problems of Biol., Inst. of Mathematical Problems of Biol.*

9:00 CC73 **542.14** Using multi-echo fMRI to increase task-based contrast-to-noise and response stability. B. GUTIERREZ*; D. HANDWERKER; J. GONZALEZ-CASTILLO; V. ROOPCHANSINGH; L. BUCHANAN; P. BANDETTINI. *NIH/NIMH, NIH/NIMH, NIH/NIMH.*

10:00 CC74 **542.15** ● A probabilistic approach for exploring functional brain networks. K. L. STACHENFELD*; J. R. MANNING; R. RANGANATH; T. WILLKE; X. ZHU; D. M. BLEI; K. A. NORMAN. *Princeton Neurosci. Inst., Princeton Univ., Princeton Univ., Intel Labs, Columbia Univ.*

11:00 CC75 **542.16** In search of functional biomarkers in human prefrontal cortex for individuals with traumatic brain injury using functional near-infrared spectroscopy. N. SHAHNI KARAMZADEH; Y. ARDESHIRPOUR; A. ANDERSON; F. CHOWDHRY; M. KELLMAN; D. CHORLIAN; E. WEGMAN; A. GANDJBAKHCHE*. *NIH, George Mason Univ., SUNY Downstate Med. Ctr.*

8:00 CC76 **542.17** ParceNIP: Parcellating neural images using PICo, a graded approach. C. J. BAJADA*; M. A. LAMBON RALPH; G. J. M. PARKER; H. A. HAROON; H. AZADBAKHT; L. L. CLOUTMAN. *The Univ. of Manchester.*

9:00 CC77 **542.18** Investigating default-mode subnetworks in autism with innovation-driven co-activation patterns. F. KARAHANOGLU*; B. BARAN; T. NGUYEN; S. SANTANGELO; D. VAN DE VILLE; D. S. MANOACH. *MGH/HST Martinos Ctr. For Biomed. Imaging, Harvard Med. Sch., Harvard Med. Sch., Ecole Polytechnique Fédérale de Lausanne, Univ. of Geneva.*

10:00 CC78 **542.19** Detecting activation patterns from functional MRI datasets with undetermined event onsets using support vector machines. E. BAGARINAO*; S. MAESAWA; H. WATANABE; H. ISODA. *Brain and Mind Res. Center, Nagoya Univ.*

11:00 DD1 **542.20** Time series analysis of pupillometric data. A. ZENON*. *Inst. of Neurosci.*

8:00 DD2 **542.21** Cognitive function-based whole-brain parcellation using functional connectivity from voxels to regions labeled with cognitive terminology. H. KURASHIGE*; Y. YAMASHITA; R. OSU; Y. OTAKA; T. HANAKAWA; M. HONDA; T. HISATSUNE; H. KAWABATA. *The Univ. of Tokyo, Tokyo Bay Rehabil. Hosp., Natl. Ctr. of Neurol. and Psychiatry, Advanced Telecommunications Res. Inst. Intl., Keio Univ.*

9:00 DD3 **542.22** Migration of thalamic neurons and development of thalamocortical pathways in humans revealed by diffusion tractography. M. WILKINSON; R. WANG; E. TAKAHASHI*. *Dept. of Behavioral Neuroscience, Northeastern Univ., Boston Children's Hosp., Boston Children's Hospital, Harvard Med. Sch., Guizhou Provincial People's Hosp., Boston Childrens Hospital, Harvard Med. Sch.*

10:00 DD4 **542.23** Electroencephalograph (eeg) study of brain bistable illusion. Q. MENG*; E. HONG; F. CHOA. *UMBC, Univ. of Maryland, Baltimroe.*

11:00 DD5 **542.24** Thetaburst TMS to the right posterior superior temporal sulcus disrupts resting state connectivity across the face-processing network as measured with multi-echo fMRI. D. A. HANDWERKER*; G. IANNI; B. GUTIERREZ; V. ROOPCHANSINGH; J. GONZALEZ-CASTILLO; L. G. UNGERLEIDER; P. A. BANDETTINI; D. PITCHER. *NIMH, NIH, NIMH, NIMH, NIH, NIMH.*

8:00 DD6 **542.25** Using multi-echo cardiac gated fMRI to better denoise brainstem data. J. GONZALEZ CASTILLO*; L. C. BUCHANAN; D. A. HANDWERKER; V. ROOPCHANSINGH; J. A. DERBYSHIRE; B. E. GUTIERREZ; P. A. BANDETTINI. *SFIM/LBC/NIMH/NIH, Natl. Inst. of Mental Hlth., NIH.*

POSTER

543. Data Analysis: Neuronal Networks

Theme G: Novel Methods and Technology Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 DD7 **543.01** Spike rate homeostasis tunes networks to sub-criticality. V. PRIESEMANN*; J. WILTING. *Max Planck Inst. For Dynamics.*

9:00 DD8 **543.02** Chronic administration of THC and SR141716-precipitated cannabinoid withdrawal in the rat brain: A complex network analysis. G. SENTHINATHAN*; G. WILLEMS; S. SKRZYPCZAK; C. LECKIE; P. E. MALLET; B. E. MCKAY. *Wilfrid Laurier Univ.*

10:00 DD9 **543.03** The default mode network is spatially but not temporarily consistent. E. SHOKRI-KOJORI*; D. TOMASI; N. D. VOLKOW. *NIH, NIH.*

11:00 DD10 **543.04** Quantifying small-worldness in weighted brain networks: Small-world propensity. S. E. F. MULDOON; E. W. BRIDGEFORD; D. S. BASSETT*. *Univ. of Pennsylvania, John Hopkins Univ., Univ. of Pennsylvania.*

8:00 DD11 **543.05** Analysis of motifs' spontaneous and evoked dynamics in patterned cortical neuronal networks. M. BISIO*; Y. PIASETZKY; M. OLIVEMBOIM; S. KANNER; M. CHIAPPALONE; P. BONIFAZI. *Inst. Italiano Di Tecnologia, Tel-Aviv Univ., Tel-Aviv Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 DD12 **543.06** On the use of electrophysiological signatures in translational research. R. G. PORT*; S. J. SIEGEL; G. C. CARLSON; T. P. L. ROBERTS. *Univ. Of Pennsylvania, Perelman Sch. of Med. at the Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

10:00 DD13 **543.07** Global delayed propagation of electrical signals in primate cortex. S. TAJIMA*; M. SHIMONO. *Univ. of Geneva, Indiana Univ., Harvard/MGH.*

11:00 DD14 **543.08** ▲ An examination of delta-9-tetrahydrocannabinol-induced alterations of neural activity using a novel "complex network analysis" approach. E. L. COLDIN; S. A. RANA; J. SCANTLEBURY; M. SCHAUS; B. E. MCKAY; P. E. MALLET*. *Wilfrid Laurier Univ.*

8:00 DD15 **543.09** Unsupervised hierarchical clustering of resting state functional connectivity data to identify patients with mild tinnitus. S. A. SCHMIDT; M. SCHUBEL; A. N. HIRANI; Y. BARYSHNIKOV; F. T. HUSAIN*. *Univ. of Ilinois at Urbana-Champaign, Univ. Illinois.*

9:00 DD16 **543.10** Assembling the multimodal, multidimensional brain network. M. Y. MAHAN*; A. P. GEORGOPOULOS. *Univ. of Minnesota, Univ. of Minnesota.*

10:00 DD17 **543.11** Comparing MDPV's and cocaine's induced modulation of resting state networks. L. M. COLON-PEREZ*; M. FEBO. *Univ. of Florida, Univ. of Florida.*

11:00 DD18 **543.12** Interfacing in silico and *in vitro* neuronal assemblies: Relevance of electrical stimulation temporal distribution on neural network responses. M. CHIAPPALONE*; V. PASQUALE; P. NOWAK; P. MASSOBRIO; A. BRUZZONE; F. SCARSI; J. TESSADORI. *ISTITUTO ITALIANO DI TECNOLOGIAA, ISTITUTO ITALIANO DI TECNOLOGIA, Univ. degli Studi di Genova.*

8:00 DD19 **543.13** Extracting non-linear spatiotemporal dynamics in active dendrite: Data-driven statistical approach. T. OMORI*; K. HUKUSHIMA. *Kobe Univ., Univ. of Tokyo.*

9:00 DD20 **543.14** A comparison of single and multi-shell diffusion-weighted MRI imaging in the anesthetized macaque for thalamocortical tractography. K. BROWN*; R. A. SHEWCRAFT; P. VELASCO; B. PESARAN. *New York Univ., New York Univ.*

10:00 DD21 **543.15** Testing the statistical significance of dynamical structure in neural population responses. G. F. ELSAYED*; M. T. KAUFMAN; S. I. RYU; K. V. SHENOY; M. M. CHURCHLAND; J. P. CUNNINGHAM. *Columbia Univ. In the City of New York, Cold Spring Harbor Lab., Stanford Univ., Columbia Univ. In the City of New York.*

11:00 DD22 **543.16** One man's prediction is another man's error - quantifying predictive coding at the retino-geniculate synapse independent of the observer's assumptions. M. WIBRAL*; D. RATHBUN; W. M. USREY; A. BASTOS; P. WOLLSTADT. *MEG Unit, Brain Imaging Ctr. Frankfurt, Eberhard Karls Univ., Univ. of California Davis, MIT, Goethe Univ.*

8:00 DD23 **543.17** ▲ Clustering Analysis of Crayfish Agonistic behavior. J. MIRANDA-VELAZCO; K. MENDOZA-ANGELES; G. R. ROLDAN*; J. HERNÁNDEZ-FALCÓN. *Univ. Nacional Autónoma de México, Natl. Univ. Mexico.*

9:00 DD24 **543.18** Nonuniform weights and connectivity patterns on macaque cortical connectome. M. SHIMONO*. *Masanori Shimono, Indiana Univ.*

10:00 DD25 **543.19** ● Definition of sensory-evoked functional area in optical intrinsic signal imaging using a segmentation method. C. YEON*; D. KIM; H. CHOI; K. KIM; E. CHUNG. *GIST.*

11:00 DD26 **543.20** Weighted wavelet z-transform on the uneven event timing of neuronal spikes. W. WU*; J. HUANG; Y. LIN; P. SHAO; C. YEN; M. TSAI; H. TSAO; R. CHEN; C. YEN. *Natl. Taiwan Univ., Grad. Inst. of Electronics Engin., Grad. Inst. of Communication Engin. Col. of Electrical Engin. and Computer Sci., Dept. of Mathematics, Natl. Central Univ., Dept. of Biomechatronic Engineering, National. Ilan Univ., Dept. of Life Science, Tunghai Univ., Dept. of Mathematics, Fu-Jen Catholic Univ.*

8:00 DD27 **543.21** Modeling brain hierarchical structure using graph-based manifold learning. W. LIM*; J. LEE; Y. LIM; K. JUNG; D. KIM. *Korea Advanced Inst. of Sci. and Technol., Seoul Natl. Univ.*

9:00 DD28 **543.22** Bayesian model inversion of coupled mean-field integrate-and-fire populations: Application to voltage-clamp currents and firing rates of CA1 neurons during gamma oscillations. M. F. LEITE*; P. FIGUEIREDO; K. FRISTON; D. KULLMANN; L. LEMIEUX. *Inst. of Neurol., Inst. Superior Técnico, Univ. de Lisboa, UCL Inst. of Neurol., UCL Inst. of Neurol.*

10:00 DD29 **543.23** Correlations and signatures of criticality in neural population models. M. NONNENMACHER; C. BEHRENS; P. BERENS; M. BETHGE; J. H. MACKE*. *Max Planck Inst. for Biol. Cybernetics, Bernstein Ctr. for Computat. Neurosci., Ctr. for Integrative Neurosci., Inst. of Theoretical Physics, Univ. of Tuebingen, Inst. of Opthalmic Res., Baylor Col. of Med., research centre caesar.*

11:00 DD30 **543.24** Network analysis of prefrontal cortical microcircuit dynamics after chronic stress hormone exposure and ketamine treatment. R. N. MODA*; J. WITZTUM; C. LISTON. *Weill Cornell Med. Col., Weill Cornell Med. Col., Weill Cornell Med. Col.*

8:00 DD31 **543.25** Path-analytic Structural Equation Modeling to evaluate connections between primary sensorimotor cortical regions in chronic stroke. K. JUNG*; M. R. BORICH. *Univ. of Texas Hlth. Sci. Ctr. at Houston, Emory Univ. Sch. of Med.*

9:00 DD32 **543.26** Statistics of brain functional networks: Classification and Testing. D. FRAIMAN*; N. FRAIMAN; R. FRAIMAN. *Univ. San Andrés, CONICET, Univ. of Pennsylvania, Univ. de la República.*

10:00 DD33 **543.27** Noise assisted empirical mode decomposition and phasor analysis for the characterization and detection of oscillations in the local field potential. J. M. MIKKILA*. *York Univ.*

11:00 DD34 **543.28** ● Functional graphical models of mouse visual cortex. E. TARALOVA*; R. YUSTE. *Columbia Univ.*

8:00 DD35 **543.29** ● Statistical estimates of neocortex semantical allocation breakdown. L. SEYMOUR*. *Persinvitro, LLC.*

9:00 DD36 **543.30** Understanding the structure and origin of transcranial magnetic stimulation artifacts in electroencephalographic signals. D. FRECHE; N. LEVIT-BINNUN; J. NAIM-FEIL; M. RUBINSON; E. MOSES*. *Interdisciplinary Ctr. (IDC), Weizmann Inst. of Sci.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

544. Data Analysis: Networks and Software Tools, other

Theme G: Novel Methods and Technology Development

Tue. 8:00 AM – *McCormick Place*, Hall A

8:00 DD37 **544.01** Bringing knowledge to data: Visualizing coverage of the neuroscience data space in the Neuroscience Information Framework. T. GILLESPIE*; A. E. BANDROWSKI; J. S. GRETHE; M. E. MARTONE. *UCSD, UCSD.*

9:00 DD38 **544.02** High performance computing web service for the analysis of local field potentials. S. MACKESEY*; M. PRABHAT; G. BUZSÁKI; A. KHOSROWSHAHI; F. SOMMER. *Univ. of California, Berkeley, Lawrence Berkeley Natl. Lab., New York Univ., Nervana.*

10:00 DD39 **544.03** Exploring data-driven techniques for visual representation of neuronal micro-connectomes. L. MARENCO*; R. WANG; R. A. MCDOUGAL; T. M. MORSE; N. T. CARNEVALE; P. MILLER; G. M. SHEPHERD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

11:00 DD40 **544.04** Representation of depth electrodes using parcellated cortical surface maps. M. ROLLO*; C. M. KADIPASAOGLU; N. TANDON. *Univ. of Texas Hlth. Sci. Ctr. At Houst, Mem. Hermann -TMC.*

8:00 DD41 **544.05** ● Atomizing data to ensure that experimental, analytical and/or administrative data points, are: Tangible, useable, fixed and federatable (TUFF-data). P. S. PENNEFATHER*; W. SUHANIC. *Univ. Toronto, gDial Inc.*

9:00 DD42 **544.06** ● A new paradigm in accessing and analyzing big brain data. J. KORICH*; N. J. O'CONNOR; P. J. ANGSTMAN; B. S. EASTWOOD; M. J. FAY; J. O. BLAISDELL; S. J. TAPPAN; K. E. DAY; H. J. KARTEN; C. R. GERFEN; J. R. GLASER. *MBF Biosci., UCSD, NIMH.*

10:00 DD43 **544.07** Unified real-time searching of keywords and attributes in ModelDB. T. M. MORSE*; R. A. MCDOUGAL. *Yale Univ. Sch. Med.*

11:00 DD44 **544.08** Independent Component Analysis (ICA) for ocular artifact correction in EEG data is far from perfect: Limitations and trade-offs. J. DREO*; B. PIKŠ; A. EMERŠIČ; Z. PIRTOŠEK. *Lab. For Cognitive Neurosci.*

8:00 DD45 **544.09** Suppressing false neural signals: Using object-tracking for motion compensation while imaging in the mouse cortex. W. LOSERT; D. E. WINKOWSKI*; E. MARSHALL; M. J. HARRINGTON; P. O. KANOLD. *Univ. of Maryland, Univ. Maryland, Univ. Maryland.*

9:00 DD46 **544.10** A comparison of motion correction techniques applied to functional near-infrared spectroscopy data from children. X. HU*; M. M. ARREDONDO; N. CONFER; A. DASILVA; M. SHALINSKY; I. KOVELMAN. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

10:00 DD47 **544.11** Informatics tools for mapping brain connectivity at meso- and micro-scale. L. FENG*; H. JEON; H. LEE; O. KWON; J. KIM. *Korea Inst. of Sci. and Technol., Korea Inst. of Sci. and Technol.*

11:00 DD48 **544.12** M-sorter2015: Enhanced automatic spike sorting. S. WANG*; W. MA; J. SI. *Arizona State Univ.*

8:00 DD49 **544.13** Quantification of spatial gradients in cells and tissues. M. N. PAVELIEV*; N. LIPACHEV; N. ARNST; N. KULESSKAYA; M. SAARMA; H. RAUVALA. *Univ. of Helsinki, Kazan Federal Univ., Univ. of Helsinki, Univ. of Helsinki.*

9:00 DD50 **544.14** Live-cell high-content analysis of synapse loss and recovery during HIV-1 neurotoxicity. R. SPINDLER*; K. A. KROGH; S. A. THAYER. *Univ. of Minnesota.*

10:00 DD51 **544.15** A voxel-based morphometry pipeline in a computer cluster environment. R. J. ANDERSON; J. J. COOK; J. C. NOULS; M. FOSTER; G. JOHNSON; A. BADEA*. *Duke Univ. Med. Ctr.*

11:00 DD52 **544.16** Web visualization of massive neuroscience datasets using the open connectome project. A. D. BADEN*; K. A. LILLANEY; W. GRAY RONCAL; J. T. VOGELSTEIN; R. BURNS. *Johns Hopkins Univ., Applied Physics Lab. of Johns Hopkins Univ., Johns Hopkins Univ.*

8:00 DD53 **544.17** Automatic and accurate spike clustering based on robust variational Bayesian method. W. MA*; J. SI. *Arizona State Univ.*

9:00 DD54 **544.18** ilastik - a software framework for interactive volume neuro-image analysis and for automatic calcium imaging analysis. S. PETER*; A. KRESHUK; S. BERG; M. SCHIEGG; T. BEIER; C. HAUBOLD; B. EROCAL; J. KIRKHAM; C. ZHANG; U. KOETHE; F. DIEGO; F. A. HAMPRECHT. *Univ. of Heidelberg, HHMI Janelia Farm.*

10:00 DD55 **544.19** An open source toolbox for intracranial grid and depth electrodes localization. A. O. BLENKMANN*; J. P. PRINCICH; H. N. PHILLIPS; C. H. MURAVCHIK; S. KOCHEN. *CONICET, Buenos Aires Univ. - CONICET, Ramos Mejía Hosp., El Cruce "Nestor Kirchner" Hosp., CONICET, Cambridge Univ., Natl. Univ. of La Plata, CONICET – UNAJ – HEC.*

11:00 DD56 **544.20** Current source density method for single neurons. D. CSERPAN*; Z. SOMOGYVARI; D. WOJCIK; H. GLABSKA. *Wigner RCP, Natl. Inst. of Clin. Neurosciences, Nencki Inst. of Exptl. Biol.*

8:00 DD57 **544.21** Critical problems applying Granger causality analysis in neuroscience. P. A. STOKES; P. L. PURDON*. *Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

SPECIAL LECTURE *McCormick Place*

545. Inhibition and Excitation in the Cerebellar Nuclei — CME

Tue. 1:00 PM - 2:10 PM — Hall B1

Speaker: I. M. RAMAN*, Northwestern Univ.*

Neurons in the cerebellar nuclei integrate high-frequency inhibition from convergent Purkinje cells with excitation from diverse mossy fibers to generate cerebellar outputs that lead to regulation of precise motor behaviors. This lecture will include a discussion of the synaptic and cellular specializations of Purkinje neurons, mossy fibers, and neurons of the cerebellar nuclei that contribute to information coding by the cerebellum in mice.

SYMPOSIUM *McCormick Place*

546. Time in Cortical Circuits — CME

Tue. 1:30 PM - 4:00 PM — S100A

Chair: G. T. FINNERTY
Co-Chair: D. V. BUONOMANO

Time is central to cognition. The relationship is complex. Cortical circuits function in the time domain. Yet, neural activity in cortical circuits is fundamental to our perception of time. This symposium will address how cortical circuits generate time-dependent cognition. Speakers will consider novel ways that cortical circuits use timing to enhance function and to tell time and will highlight progress in the understanding of how time perception expands the ability to anticipate stimuli and make decisions.

1:30 **546.01** Introduction.

1:35 **546.02** Time and rewiring of cortical microcircuits. G. T. FINNERTY. *King's Col. London.*

2:10 **546.03** Telling time with the neural dynamics of microcircuits. D. V. BUONOMANO. *UCLA.*

2:45 **546.04** Time, decision making and cognition. M. N. SHADLEN. *HHMI & Columbia Univ.*

3:20 **546.05** Temporal expectations in perception. A. NOBRE. *Oxford Univ.*

3:55 **546.06** Closing Remarks.

SYMPOSIUM *McCormick Place*

547. Novel Ideas and Tools to Enhance the Neurobiological Study of Drug Addiction with an Eye Toward Intervention Development and Biomarker Identification — CME

Tue. 1:30 PM - 4:00 PM — S100B

Chair: R. GOLDSTEIN

This translational symposium presents exciting new scientific directions in the study of human drug addiction. Topics will include the use of integrated positron emission tomography (PET) scans and magnetic resonance imaging (MRI) to study abnormalities in blood perfusion of the brain in humans and test novel molecular targets, *in vivo*, as well as the development of cross-species analyses to guide systems-level explorations, and the potential use of brain-computer interfaces to enhance self-control in addiction.

1:30 **547.01** Introduction.

1:35 **547.02** Cardiovascular-brain imaging in human cocaine addiction: Use of PET/MR. N. ALIA-KLEIN. *Icahn Sch. of Med. at Mount Sinai.*

2:10 **547.03** Technology advances using MR-PET imaging that enable new ways to explore brain function in addiction. J. HOOKER. *Martinos Ctr. for Biomed. Imaging.*

2:45 **547.04** Using non-human primate histology and imaging to interpret white matter pathway pathophysiology in the human brain: Relevance to cocaine addiction. S. HABER. *Univ. Rochester.*

3:20 **547.05** Brain-computer interfaces for inducing beneficial plasticity: From simple motor skills to addictive behaviors. J. R. WOLPAW. *Wadsworth Ctr, NYS Dept of Hlth. & SUNY.*

3:55 **547.06** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

548. Clearing and Labeling Methods for High Resolution Imaging of Intact Biological Specimens — CME

Tue. 1:30 PM - 4:00 PM — S406A

Chair: A. ERTURK
Co-Chair: V. GRADINARU

Recent advances in tissue clearing methods paved the way for scientists to image the tissue of interest as a whole, without sectioning. These approaches are particularly powerful for tracing long neuronal connections in the healthy and diseased central nervous system. During this SfN minisymposium, experts in the field will discuss recent advances in tissue clearing methods and their applications.

1:30 **548.01** Introduction.

1:35 **548.02** Whole-body and whole-brain imaging with single-cell resolution by CUBIC. H. R. UEDA. *RIKEN / Univ. of Tokyo.*

1:55 **548.03** LUMOS: High-resolution imaging of the entire mouse brain. O. EFIMOVA. *NRC Kurchatov Inst.*

2:15 **548.04** Adaptive tools for automatic tracing and mapping of whole cleared brains. C. FOWLKES. *UC Irvine.*

2:35 **548.05** Structural and functional characterization of organs by 3DISCO transparency. A. ERTURK. *Ludwig Maximilians Univ. of Munich.*

2:55 **548.06** Passive and whole-body CLARITY for high resolution phenotyping of intact central and peripheral nervous systems circuits. V. GRADINARU. *Caltech.*

3:15 **548.07** Rapid immunolabeling, clearing and volume imaging of adult and developing brain. M. TESSIER-LAVIGNE. *The Rockefeller Univ.*

3:35 **548.08** Closing Remarks.

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

MINISYMPOSIUM *McCormick Place*

549. ● Peripheral Optogenetic Neuromodulation: Progress and Challenges — CME

Tue. 1:30 PM - 4:00 PM — S105

Chair: S. L. DELP

At the border between the external and internal worlds, the peripheral nervous system is fundamental to understanding the behavior of any living being. Optogenetic control of the peripheral nervous system is a powerful tool for exploration and understanding; however, it brings with it a unique set of challenges. This minisymposium will highlight innovations in peripheral optogenetic neuromodulation and illustrate recent discoveries in pain, sensation, motor systems, and stem cell biology.

1:30 **549.01** Introduction.

1:35 **549.02** Optogenetic control of pain and motor circuitry. S. M. IYER. *Stanford Univ.*

1:55 **549.03** Optical control of stem cell derived motor neurons restores function to paralysed muscles. L. GREENSMITH. *UCL Inst. of Neurol.*

2:15 **549.04** New paradigms in wireless light delivery. A. S. Y. POON. *Stanford Univ.*

2:35 **549.05** ● An optogenetic demonstration of motor primitives in the mouse spinal cord. E. BIZZI. *MIT.*

2:55 **549.06** Optogenetic control of aversive sensory circuitry. S. E. ROSS. *Univ. of Pittsburgh.*

3:15 **549.07** Optogenetic dissection of visceral pain. R. W. GEREAU. *Washington Univ. in St. Louis.*

3:35 **549.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

550. Selection and Consolidation of Neuronal Circuits: Lessons from Learning and Development — CME

Tue. 1:30 PM - 4:00 PM — S103

Chair: K. HONG WANG

From perception to action, mental functions are mediated by the activities of neuronal circuits. A fundamental challenge in neuroscience is to understand the processes by which neuronal circuits are selected and consolidated for specific information processing tasks. Speakers will present recent studies of these processes in learning and development that afford integrative understanding across multiple levels including population activity and synaptic connection, neuromodulation, and molecular dynamics.

1:30 **550.01** Introduction.

1:35 **550.02** Imaging Neural Ensembles in Mice During Learning. T. KOMIYAMA. *UCSD.*

1:55 **550.03** Orbitalfrontal cortex bouton turnover is enhanced by rule training and scales with prediction error. L. WILBRECHT. *Univ. of California Berkeley.*

2:15 **550.04** Changes in cortical circuits during development and learning. S. HOFER. *Univ. of Basel.*

2:35 **550.05** Visualization of learning-related memory trace and its erasure by “Synaptic optogenetics”. A. HAYASHI-TAKAGI. *The Univ. of Tokyo.*

2:55 **550.06** Experience-regulated spatial-temporal dynamics of dendritic spines in the living brain. Y. ZUO. *Univ. of California Santa Cruz.*

3:15 **550.07** Molecular logic underlying motor learning-induced consolidation of neuronal ensembles. K. H. WANG. *Natl. Inst. of Mental Hlth.*

3:35 **550.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

551. Redox Signaling in Neurological Dysfunction — CME

Tue. 1:30 PM - 4:00 PM — S406B

Chair: R. FRANCO
Co-Chair: L. MASSIEU

Oxidative stress, the imbalance between reactive oxygen species formation and detoxification, participates in the etiology of neurological disorders. Recent findings demonstrate that reductive/oxidative (redox) signaling regulates gene expression, enzyme activity, neuronal fate, and metabolism. This session will examine recent findings regarding the role of oxidative damage, redox signaling, antioxidant response, metabolism, and mitochondrial dysfunction in neurodegeneration, epilepsy, and brain hypoglycemia.

1:30 **551.01** Introduction.

1:35 **551.02** Energy Metabolism and Redox Signaling in Dopaminergic Cell Death Induced by Gene-Environment Interactions. R. FRANCO. *Univ. of Nebraska-Lincoln.*

1:55 **551.03** Aberrant protein S-nitrosylation in neurodegenerative disorders. T. NAKAMURA. *The Scintillon Inst.*

2:15 **551.04** Beyond the redox imbalance: Oxidative stress contributes to an impaired metabolism in Huntington’s disease. M. A. CASTRO GALLASTEGUI. *Univ. Austral de Chile.*

2:35 **551.05** Mitochondrial Antioxidant Defenses in Models of Amyotrophic Lateral Sclerosis. M. R. VARGAS. *Med. Univ. of South Carolina.*

2:55 **551.06** Oxidative Stress and Cell Death During Ischemia/Hypoglycemia. L. MASSIEU. *Inst. de Fisiología Celular.*

3:15 **551.07** Oxidative Stress, Mitochondrial Dysfunction and Epilepsy. M. N. PATEL. *Univ. of Colorado Anschutz Med. Campus.*

3:35 **551.08** Closing Remarks.

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FRED KAVLI HISTORY OF NEUROSCIENCE LECTURE
McCormick Place

552. 100 Years of Stress and the Hypothalamic, Pituitary, Adrenal Axis

Tues. 2:30 PM - 3:40 PM — Hall B1

Speaker: M. F. DALLMAN, *Univ. of California.*

Support contributed by: The Kavli Foundation

In 1915, Walter B. Cannon described responses to a variety of stressors and concluded that stress causes changes in the brain and body that are preparatory for behaviors such as fight or flight. From subcellular to psychological levels, enormous conceptual and methodological advances have occurred in understanding stress and responses of the brain-HPA and sympathetic nervous system axes in the last century. These advances tend to be isolated within, but not across, disciplines. Our current knowledge provides far greater detail of understanding and it does not change the conclusions drawn by Cannon.

SPECIAL PRESENTATION *McCormick Place*

553. Embracing an Era of Unprecedented Advances in Neuroscience

Tue. 4:00 PM - 5:00 PM — Hall B1

Speaker: F. COLLINS. *NIH.*

Despite many challenges, the last decade has seen tremendous progress in neuroscience. To support continued progress, the National Institutes of Health (NIH) has taken a lead role in implementing the President's Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative. The NIH Director will discuss how his agency, working with the neuroscience community, is catalyzing development of technologies to provide dynamic pictures of the brain, both in disease and in health. He will also examine challenges that cut across biomedical disciplines, and reflect upon opportunities for neuroscientists to face such challenges and generate tomorrow's advances.

PRESIDENTIAL SPECIAL LECTURE *McCormick Place*

554. Grid Cells and Cortical Maps for Space — CME

Tue. 5:15 PM - 6:25 PM — Hall B1

Speaker: M. MOSER*, Kavli Inst. for Systems Neurosci. and Ctr. for Neural Computation, Norwegian Univ. of Sci. and Technol.*

Support contributed by: Takeda Pharmaceuticals International, LLC

The medial entorhinal cortex (MEC) is part of the brain's circuit for dynamic representation of self-location. The metric of this representation is provided by grid cells - cells with spatial firing fields that tile environments in a periodic hexagonal pattern. This lecture will discuss the morphological identity of cells that express this pattern, how they are organized, how they interact with the environment, and how grid cells and place cells contribute to a wider circuit for goal-directed navigation.

NANOSYMPOSIUM

555. Sigma Receptors: Emerging Roles in Health and Disease

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

Tue. 1:00 PM – *McCormick Place*, S405

1:00 **555.01** ● Selective antagonists of the sigma-2/PGRMC1 receptor displace Abeta oligomer receptor binding in Alzheimer's disease. N. J. IZZO*, JR; T. M. SPIRES-JONES; R. YURKO; C. HENSTRIDGE; C. SILKY; C. REHAK; K. MOZZONI; G. LOOK; G. RISHTON; H. SAFFERSTEIN; S. M. CATALANO. *Cognition Therapeut., Univ. of Edinburgh, Cognition Therapeut. Inc.*

1:15 **555.02** ● Sigma-2/PGRMC1 antagonist CT1812 displaces Abeta oligomer binding and improves cognitive performance in aged Alzheimer's transgenic mice. C. SILKY*; N. J. IZZO; C. REHAK; R. YURKO; K. MOZZONI; G. RISHTON; G. LOOK; H. SAFFERSTEIN; S. M. CATALANO. *Cognition Therapeut. Inc.*

1:30 **555.03** Sigma-2 receptor 18 kDa and PGRMC1 are distinct gene products. A. E. RUOHO*; T. A. MAVLYUTOV; U. B. CHU; M. CHU; L. ZHAO; H. YANG; C. R. MCCURDY; L. GUO. *Univ. of Wisconsin, Univ. of Wisconsin, Madison, Univ. of Mississippi.*

1:45 **555.04** Factors that affect sensitivity to sigma-2 receptor-mediated cell death in human SK-N-SH neuroblastoma. Z. LIU*; H. E. NICHOLSON; E. SAVOCA; W. D. BOWEN. *Brown Univ.*

2:00 **555.05** Development of novel therapeutics targeting Sig2R/PGRMC1 for Alzheimer's disease. J. J. SAHN; L. L. SCOTT*; G. ZUNIGA; P. SATARASINGHE; T. WONG; P. M. ARDESTANI; J. PIERCE-SHIMOMURA; M. SHAMLOO; S. F. MARTIN. *The Univ. of Texas at Austin, The Univ. of Texas at Austin, Stanford Univ., The Univ. of Texas at Austin, Stanford Univ.*

2:15 **555.06** ● Quantitative autoradiography analysis of Sigma-1 and Sigma-2 receptor densities in striatal and extra-striatal regions of the aged human brain. J. XU*; J. SUN; N. CAIRNS; J. PELMUTTER; N. NIZZO; S. CATALANO; R. MACH. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Cognition Therapeut. Inc., Univ. of Pennsylvania.*

2:30 **555.07** A potential neuroprotective function for the sigma-2 receptor. H. E. NICHOLSON*; C. MESANGEAU; C. R. MCCURDY; W. D. BOWEN. *Brown Univ., Univ. of Mississippi.*

2:45 **555.08** The controversial identity of the sigma-2 receptor with PGRMC1: Is the PGRMC1/sigma-2 protein, that binds Abeta oligomer, made of two independent molecular entities? C. ABATE; M. NISO; M. L. PATI; N. A. COLABUFO*; F. BERARDI. *Dept. di Farmacia-Scienze del Farmaco, Univ. degli Studi di Bari, Biofordrug S.r.L.*

3:00 **555.09** ● PGRMC1 expression correlates with the sigma-2 fluorescent probe (SW120) staining in rat hippocampus cells. R. H. MACH*; C. ZENG; N. GARG; B. LIEBERMAN. *Univ. of Pennsylvania.*

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NANOSYMPOSIUM

556. Huntington's Disease Mechanisms II

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, N426A

1:00 **556.01** Proteolysis of huntingtin releases non-polyQ fragments that cause death through dynamin 1 dysregulation. F. SAUDOU*; M. ELDAHER; E. HANGEN; J. BRUYERE; I. AL-RAMAHI; G. POIZAT; C. MAYET; N. BOURG; S. LEVEQUE-FORT; J. BOTAS; S. HUMBERT. *Grenoble Inst. of Neuroscience, GIN, Baylor Col. of Med., Univ. Paris Sud.*

1:15 **556.02** Mutant Huntingtin interacts with AAA-ATPase VCP to trigger mitochondrial dysfunction *in vitro* and *in vivo.* X. GUO*; X. QI. *Case Western Reserve Univ.*

1:30 **556.03** Caspase cleavage of huntingtin releases a hidden autophagy inducing domain dependent on myristoylation that is associated with increased mutant huntingtin clearance. D. D. O. MARTIN*; D. E. EHRNHOEFER; M. SCHMIDT; S. S. SANDERS; B. NGUYEN; N. LAZIC; R. J. HEIT; M. C. YAP; L. G. BERTHIAUME; M. R. HAYDEN. *Univ. of British Columbia, Univ. of British Columbia, Univ. of Alberta.*

1:45 **556.04** The Hippo/YAP pathway: A novel pathogenic mechanism in Huntington's disease. G. SADRI-VAKILI*; K. A. MUELLER; K. E. GLAJCH; M. N. HUIZENGA; M. LAQUAGLIA; K. VAKILI. *Massachusetts Gen Hosp, Boston Children's Hosp.*

2:00 **556.05** Mn-handling deficit in a prodromal HD mouse model underlies metabolic alterations. A. B. BOWMAN*; T. J. V. BICHELL; M. WEGRZYNOWICZ; E. M. BRADLEY; K. G. TIPPS; N. FISHER; K. D. DUDEK; A. M. TIDBALL; M. A. UHOUSE; M. R. BRYAN; G. F. KWAKYE. *Vanderbilt Univ., Vanderbilt Univ.*

2:15 **556.06** p75NTR/TrkB imbalance in Huntington´s disease:Implications for future therapeutic approaches. S. GINES; V. BRITO; A. GIRALT; L. ENRIQUEZ-BARRETO; M. PUIGDELLIVOL; N. SUELVES; E. MARTIN; M. MORALES; E. PEREZ-NAVARRO*; J. ALBERCH. *Dept. Cell Biology, Immunol. and Neurosciences, Univ. of Barcelona, Ctr. de Investigación Biomédica de la Rioja, Inst. for Res. in Neurolog. Disabilities (IDINE).*

2:30 **556.07** Fingolimod (FTY720) enhances hippocampal synaptic plasticity and memory in Huntington's disease by preventing astrocyte-mediated inflammation and p75NTR up-regulation. A. MIGUEZ; G. GARCÍA-DÍAZ BARRIGA; V. BRITO; M. STRACCIA; A. GIRALT; S. GINÉS; J. M. CANALS; J. ALBERCH*. *Fac Medicina, Univ. Barcelona, IDIBAPS.*

2:45 **556.08** BDNF and homeostatic plasticity in cortical neurons from the YAC128 mouse model of Huntington's disease. A. I. SMITH-DIJAK*; L. A. RAYMOND. *Univ. of British Columbia.*

3:00 **556.09** Characterization of the striatal kinase Dclk3 and its neuroprotective effects against mutant huntingtin. E. P. BROUILLET*; L. FRANCELLE; L. GALVAN; M. GAILLARD; M. CARRILLO-DE SAUVAGE; G. LIOT; L. DE LONGPREZ; M. DE CHALDÉE; M. GUILLERMIER; D. HOUITTE; C. JOSÉPHINE; F. PETIT; C. JAN; N. DUFOUR; A. PRIGENT; K. H. EL HACHIMI; S. HUMBERT; P. HANTRAYE; F. SAUDOU; K. MERIENNE; A. L. PERRIER; N. DÉGLON; A. BEMELMANS. *CEA, MIRCen, UMR 9199, CEA, CNRS, Univ. Paris-Sud,, Inst. Curie, CNRS UMR 3306, INSERM U1005, Inst. for Integrative Biol. of the Cell (I2BC), UMR 9198 CEA-CNRS-Univ. Paris Sud, Lab. de Neurogénétique EPHE, ICM UPMC, Inserm UMR_S1127/CNRS UMR 7225, Hôpital Pitié-Salpêtrière, Grenoble Inst. of Neuroscience, Inserm U836 – Univ. Joseph Fourier, Lab. de Neurosciences Cognitives et Adaptatives (LNCA) UMR 7364, Univ. de Strasbourg- CNRS, I-Stem, INSERM U861, Lausanne Univ. Med. Sch. (CHUV), Dept. of Clin. Neurosciences (DNC), Lab. of Cell. and Mol. Neurotherapies (LNCM), Lausanne Univ. Med. Sch. (CHUV), Neurosci. Res. Ctr. (CRN), Lab. of Cell. and Mol. Neurotherapies (LNCM).*

3:15 **556.10** Overexpression of Alzheimer's disease risk gene TREM2 to improve the immune response to neurodegeneration. A. DAGGETT*; C. Y. D. LEE; K. MURILLO; X. W. YANG. *UC Los Angeles.*

3:30 **556.11** Huntingtin regulates cortical development: Consequences for Huntington's disease. S. HUMBERT*; M. BARNAT; E. APARICIO; C. BENSTAALI. *Gin-Inserm U836-University Joseph Fourier.*

3:45 **556.12** ● Toward developing a personalized allele-specific gene silencing therapy for Huntington's disease. N. S. CARON*; A. L. SOUTHWELL; C. KAY; M. YE; M. R. HAYDEN. *Ctr. for Mol. Med. and Therapeut.*

4:00 **556.13** Striatal shape differs before and after symptom onset in Huntington's disease and relates to clinical severity: The IMAGE-HD study. Z. ABARYAN*; F. WILKES; C. R. K. CHING; B. A. GUTMAN; S. MADSEN; M. WALTERFANG; J. STOUT; A. CHURCHYARD; P. CHUA; D. VELAKOULIS; G. EGAN; J. LOOI; P. M. THOMPSON; N. GEORGIOU-KARISTIANIS. *USC, Australian Natl. Univ. Med. School, Canberra Hosp., UCLA Sch. of Med., Univ. of Melbourne & Northwestern Mental Health, Melbourne Neuropsychiatry Ctr., Monash Univ., Monash Univ., Monash University, Monash Med. Ctr., USC.*

NANOSYMPOSIUM

557. Motor Neuron Disease

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, N230

1:00 **557.01** Ion channel gene expression and excitability of human and mouse ALS motor neurons at a single cell level. S. LEE*; K. ROET; O. WISKOW; S. GHOSH; K. J. LIVAK; B. P. BEAN; K. EGGAN; C. J. WOOLF. *Boston Children's Hosp., Harvard Univ., Fluidigm Corp., Harvard Med. Sch.*

1:15 **557.02** Interrogating iPSC derived ALS motor neuron excitability changes with high throughput thallium flux and single cell GCAMP6 analysis. K. C. D. ROET*; J. KLIM; Y. ZHANG; J. SHAO; A. GRANTHAM; D. BAKER; L. BARRETT; K. EGGAN; C. J. WOOLF. *FM Kirby Neurobio. Center, Boston Children's Hosp. and Dept. of Neurobiology, Harvard Med. Sch., The Howard Hughes Med. Institute, USA; Harvard Stem Cell Institute, Dept. of Stem Cell and Regenerative Biology, Harvard Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
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* Indicates abstract's submitting author

1:30 **557.03** Human neural precursors derived from induced pluripotent stem cells slow down ALS progression and preserve perineuronal nets. S. FOROSTYAK*; J. KWOK; P. JENDELOVA; A. HOMOLA; M. SENEKLOVA; J. FAWCETT; E. SYKOVA. *Inst. of Exptl. Med. ASCR, 2nd Fac. of Medicine, Charles Univ., John van Geest Ctr. for Brain Repair.*

1:45 **557.04** *In vitro* disease modeling of als using neuronally enriched populations derived from human induced pluripotent cells. A. M. MAROOF*; K. EGGAN. *Harvard Univ.*

2:00 **557.05** Investigating the effects of caprylic triglyceride on mitochondrial function in cell models of amyotrophic lateral sclerosis. S. TIANO*; J. WANG; L. DUBNER; D. J. LANGE; G. M. PASINETTI. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, James J. Peters Veterans Affairs Med. Ctr., Weill Med. Col. of Cornell Univ., Hosp. for Special Surgery.*

2:15 **557.06** Mutant PFN1-dependent cytoskeletal disruption affects mRNA post-transcriptional regulation in ALS. C. FALLINI*; M. JEON; J. E. LANDERS. *UMASS Med. Sch.*

2:30 **557.07** Amyotrophic Lateral Sclerosis-associated profilin I mutations impact dendritic morphology of central nervous system neurons. T. FATH*; M. BRETTLE; A. SUCHOWERSKA; S. W. CHUA; L. M. ITTNER. *Univ. of New South Wales.*

2:45 **557.08** Haploinsufficiency of c9orf72 implicates endosomal trafficking in ALS and FTD. J. ICHIDA*. *USC.*

3:00 **557.09** Molecular mechanisms and therapeutic strategies in amyotrophic lateral sclerosis caused by mutations in the C9orf72 gene. R. BALENDRA*; A. DEVOY; P. FRATTA; S. GROENKE; S. MIZIELINSKA; T. MOENS; T. NICCOLI; C. RIDLER; R. SIMONE; G. PARKINSON; S. NEIDLE; N. WOODLING; R. PATANI; L. PARTRIDGE; A. ISAACS. *Dept. of Neurodegenerative Dis., Inst. of Healthy Ageing, Univ. Col. London, Max Planck Inst. for Biol. of Ageing, Inst. of Healthy Ageing, Univ. Col. London, UCL Sch. of Pharm., Dept. of Mol. Neuroscience, UCL Inst. of Neurol.*

3:15 **557.10** ● Tyrosine kinase inhibition ameliorates nucleocytoplasmic TDP-43 shuttling and reverses cell death and muscle denervation. C. E. MOUSSA*; L. HEYBURN; M. HEBRON; I. LONSKAYA; Y. FENG. *Georgetown Univ., Georgetown Univ.*

3:30 **557.11** Inhibition of BACE1 in the SOD1G93A mouse model of ALS enhances neuromuscular junction remodeling. C. TALLON*; M. H. FARAH. *Johns Hopkins Univ. SOM, Johns Hopkins Univ. SOM.*

3:45 **557.12** Novel small molecules that increase SMN protein and extend survival of SMA mice. A. RIETZ*; E. Y. OSMAN; H. LI; C. L. LORSON; J. J. CHERRY; S. K. CUSTER; G. D. CUNY; M. A. GLICKSMAN; K. J. HODGETTS; E. J. ANDROPHY. *Indiana Univ., Univ. of Missouri, Univ. of Missouri, Brigham and Women's Hosp. and Harvard Med. Sch.*

NANOSYMPOSIUM

558. Major Mental Disorders: Novel Approaches for Patient Evaluation

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, S102

1:00 **558.01** 7T proton magnetic resonance spectroscopy of GABA, glutamate, and glutamine in schizophrenia reveals altered metabolite concentrations in patients and unaffected relatives. K. N. THAKKAR*; L. RÖSLER; J. P. WIJNEN; V. O. BOER; D. W. J. KLOMP; W. CAHN; R. S. KAHN; S. F. W. NEGGERS. *Univ. Med. Ctr. Utrecht, Michigan State Univ., Univ. Med. Ctr. Utrecht.*

1:15 **558.02** A neurocognitive model of ambivalence in schizophrenia. F. TREMEAU*; D. ANTONIUS; J. CACIOPPO; D. JAVITT. *Nathan Kline Inst., Univ. of Buffalo, Univ. of Chicago, Univ. of Columbia.*

1:30 **558.03** Bringing order to the neurophysiological chaos underlying sensory processing dysfunction in schizophrenia. C. LAINSCSEK; A. SAMPSON; T. COGS INVESTIGATORS; G. LIGHT; T. J. SEJNOWSKI*. *Salk Inst. CNL-S, UCSD, UCSD.*

1:45 **558.04** ● Ampet: A brain initiative planning project to design a wearable, microdose pet imager. J. A. BREFCZYNSKI-LEWIS*; S. MAJEWSKI; R. MANJESHWAR; A. STOLIN; P. KINAHAN; J. QI; S. DOLINSKY; R. HARRISON; M. RISHEL; B. ELSTON; K. GONG; K. VAIGNEUR. *West Virginia Univ., UVA, GE Global Res., UW, UC Davis, Agile Technologies.*

2:00 **558.05** Characterization of cellular autofluorescence as a mechanism-guided high throughput biomarker for schizophrenia. N. J. ELKINS; A. RAMOS; T. TSUJIMURA; C. LIN; H. JAARO-PELED; J. GALLEGO; D. ROBINSON; T. SAITOH; T. W. SEDLAK; A. K. MALHOTRA; K. ISHIZUKA; A. SAWA*. *Johns Hopkins Univ., Zucker Hillside Hosp., Aomori Univ.*

2:15 **558.06** Amygdalo-frontal dysconnectivity. Y. I. SHELINE*; T. D. SATTERTHWAITE; P. A. COOK; S. E. BRUCE; C. CONWAY; E. MIKKELSEN; E. SATCHELL; S. N. VANDEKAR; T. DURBIN; R. T. SHINOHARA. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Missouri - St. Louis, Washington Univ., Univ. of Pennsylvania.*

2:30 **558.07** Sex-specific transcriptional signatures in the brains of males and females with major depressive disorders (MDD). B. LABONTÉ*; I. PURUSHOTHAMAN; O. ENGMANN; Z. LORSCH; J. SCARPA; O. ISSLER; G. HODES; D. WALKER; M. PFAU; E. CALIPARI; E. LOH; M. DOYLE; C. TAMMINGA; G. TURECKI; B. ZHANG; L. SHEN; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, UT Southwestern, McGill Univ.*

2:45 **558.08** Impacts of cognitive training on cortical oscillations and implicit learning in patients with schizophrenia. L. B. HINKLEY*; B. BIAGIANTI; D. MIZUIRI; S. VINOGRADOV; S. NAGARAJAN. *UC San Francisco, UCSF.*

3:00 **558.09** Neural activity in the human subthalamic nucleus and globus pallidus internus during approach-avoidance decision making. T. HERRINGTON*; S. PATEL; E. ESKANDAR. *Harvard / Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:15 **558.10** Physiological correlates of an emotional conflict resolution task obtained from intracranial recordings in humans. N. NOSSENSON*; D. I. VALLEJO LOPEZ; K. K. ELLARD; A. C. PAULK; E. N. ESKANDAR; T. DECKERSBACH; A. S. WIDGE; D. D. DOUGHERTY; S. S. CASH. *Massachusetts Gen. Hospital, Harvard Med. Sc, Massachusetts Gen. Hospital, Harvard Med. Sch., Massachusetts Gen. Hospital, Harvard Med. Sch.*

NANOSYMPOSIUM

559. Mood Disorders: Preclinical Models and Therapeutic Approaches

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, S403

1:00 **559.01** ● The synthetic neurosteroid, 3β-methoxypregnenolone (MAP4343) exerts an antidepressant-like efficacy in animal models and promotes neuron morphogenesis and plasticity in primary cultures. N. FROGER*; V. FOURNET; J. COTTIN; J. LEANDRI; N. LADURELLE; L. AMAZIT; L. PARESYS; E. FUCHS; I. VILLEY; E. E. BAULIEU. *Mapreg SAS, INSERM UMR 1195, Univ. Paris Sud, German Primate center.*

1:15 **559.02** A social defeat model of post-traumatic stress disorder: Evidences for the participation of astrocytes and tachykininergic system. E. C. SANTOS*; M. ASSUNÇÃO BICCA; R. C. NUNES MARCHETTE; M. DUZZIONI; T. C. MONTEIRO DE LIMA. *Federal Univ. of Santa Catarina, Federal Univ. of Alagoas.*

1:30 **559.03** Exercise has positive effects on the white matter and the myelinated fibers in the white matter of depression model of rats. Y. TANG*; F. F. WANG; C. X. TAN; L. M. CHEN; Y. GAO; C. X. HUANG; C. N. ZHOU; L. JIANG; Y. ZHANG; F. L. CHAO; L. ZHANG. *Chongqing Med. Univ.*

1:45 **559.04** Speed blues: Methamphetamine induces anhedonia and disrupts frontal cortical energetics in mice. F. C. PEREIRA*; R. FONSECA; R. A. CARVALHO; C. LEMOS; A. C. SEQUEIRA; C. D. SILVA; I. R. PITA; F. CARVALHO; R. D. PREDIGER; I. JARAK; R. A. CUNHA; C. A. FONTES RIBEIRO; A. KÖFALVI. *IBILI/Faculty of Medicine, Univ. of Coimbra, CNC.IBILI, Univ. of Coimbra, CNC, Univ. of Coimbra, Dept. of Life Sciences, Fac. of Sci. and Technology, Univ. of Coimbra, Dept. de Farmacologia, Ctr. de Ciências Biológicas, Univ. Federal de Santa Catarina, UFSC, Inst. for Interdisciplinary Research, Univ. of Coimbra.*

2:00 **559.05** Repeated Streptococcus pyogenes infections induce an autoimmune Th17 cell phenotype in the brain and impair blood-brain barrier integrity: A mouse model for PANS/PANDAS. T. CUTFORTH*; D. KNOWLAND; E. D. SMITH; T. DILEEPAN; M. HSU; M. PLATT; P. CLEARY; D. AGALLIU. *Columbia Univ. Med. Ctr., UC Irvine, Univ. of Minnesota, Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr.*

2:15 **559.06** Pre-pregnancy stress potentiates long-lasting postpartum depression and abnormal Disc1 signaling. G. CHEN*; B. XIA; H. ZHANG. *Nanjing Univ. of Chinese Med.*

2:30 **559.07** Connecting microbiota to behaviour and brain structure. J. A. FOSTER*; J. K. Y. LAI; K. C. RILETT; J. ELLEGOOD; J. LERCH. *McMaster Univ., St. Joseph's Healthcare, The Hosp. for Sick Children.*

2:45 **559.08** A novel approach to PTSD modeling in rats - alternating patterns of limbic activity in different types of stress reaction. G. RICHTER-LEVIN*; G. RITOV. *Univ. Haifa, Univ. of Haifa.*

3:00 **559.09** Identifying the effect of putative OCD risk gene BTBD3 on behavior in mice. S. L. THOMPSON*; E. V. HO; M. E. KLINGER; J. A. KNOWLES; S. C. DULAWA. *Univ. of Chicago, Univ. of Chicago, USC.*

3:15 **559.10** Understanding the dynamics of decision making through the multi-source interference task. D. I. VALLEJO*; N. NOSSESON; A. C. PAULK; K. K. ELLARD; S. SOROWITZ; T. DECKERSBACH; E. ESKANDAR; A. WIDGE; D. DOUGHERTY; S. CASH. *Massachusetts Gen. Hospital, Harvard Med. Sc, Massachusetts Gen. Hospital, Harvard Med. Sch., Massachusetts Gen. Hospital, Athinoula A. Martinos Ctr., Massachusetts Gen. Hospital, Harvard Med. Sch.*

3:30 **559.11** Witnessing stress induced susceptibility in individuals with intimate relationship. W. ZHU*; R. ZHANG; Y. ZHANG; Z. DING; J. SHI; L. LU. *Natl. Inst. On Drug Dependence, Inst. of Mental Health/Peking Univ. Sixth Hosp. and Key Lab. of Mental Health, Ministry of Hlth.*

3:45 **559.12** ● Epigenetic changes of miR-30a in the prenatal stress model: Implications for psychiatric disorders. M. A. RIVA*; A. LUONI; R. MASSART; F. CIRULLI; M. SZYF. *Univ. of Milan, McGill Univ., Inst. Superiore di Sanità.*

4:00 **559.13** Are eEF2 kinase and BDNF expression necessary for lithium's effects? E. S. GIDEONS*; E. T. KAVALALI; L. M. MONTEGGIA. *UT-Southwestern Med. Ctr.*

4:15 **559.14** Optimization and validation of a standard clinical algorithm to accurately measure sleep in non-human primates from actigraphy data. J. L. CAMERON*; T. GAUGHAN; M. RAGOZA; M. PONGIBOVE; D. KAY; B. KREIDER; T. LIU; D. PYRDEK; N. ROCKCASTLE; D. BUYSSE; N. RYAN. *Univ. Pittsburgh Sch. Med., Univ. of Pittsburgh, Univ. of Pittsburgh.*

NANOSYMPOSIUM

560. Stroke Recovery

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, S404

1:00 **560.01** Recombinant pyruvate kinase M2 improves angiogenesis and functional recovery after ischemic stroke in mice. D. CHEN; X. GU; L. WEI; S. YU*. *Emory Univ., Emory Univ.*

1:15 **560.02** B-cell mediated recovery of motor function and hippocampal neurogenesis in a murine model of stroke. S. E. LATCHNEY*; I. Z. NOORBHAI; S. B. ORTEGA; U. M. SELVARAJ; N. L. MONSON; E. J. PLAUTZ; M. P. GOLDBERG; A. J. EISCH; A. M. STOWE. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

1:30 **560.03** ● Increasing self-directed training in neurorehabilitation patients by motivational enhancement. B. STUDER*; S. KNECHT. *St Mauritius Therapieklinik, Univ. of Düsseldorf, Univ. of Düsseldorf.*

1:45 **560.04** The effect of startling acoustic stimulus (SAS) on voluntary elbow flexion in stroke survivors. M. BHADANE; F. GAO; P. ZHOU; S. LI*. *UTHealth, UT Southwest, Univ. of Texas Hlth. Sci. Ctr. - Houston.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 **560.05** ● Bilateral vs. unilateral therapy for chronic stroke patients with varying degrees of motor impairment: A crossover repeated-measures design of neurophysiologic response. D. A. CUNNINGHAM*; J. KNUTSON; K. POTTER-BAKER; V. SANKARASUBRAMANIAN; N. VARNERIN; C. BONNETT; T. ASARE; A. MACHADO; E. PLOW. *Cleveland Clin., Kent State Univ., Case Western Reserve Sch. of Med., Cleveland Clin.*

2:15 **560.06** ● Re-thinking brain stimulation in stroke rehabilitation: Why higher-motor areas might be better alternatives for patients with greater disability. E. B. PLOW*; N. VARNERIN; V. SANKARASUBRAMANIAN; D. CUNNINGHAM; K. POTTER-BAKER; K. SAKAIE; G. H. YUE; A. CONFORTO; A. MACHADO. *Cleveland Clin., Kessler Fndn., Neurol. Clin. Division, Hosp. das Clinicas,, Cleveland Clin.*

2:30 **560.07** Unilateral brain lesions modulate human tonotopic mappings. S. DA COSTA*; S. CROTTAZ-HERBETTE; W. VAN DER ZWAAG; R. MEULI; P. RAPIN; S. CLARKE. *Lausanne Univ. Hosp., Vanderbilt Med. Ctr., Lausanne Univ. Hosp., Ecole Polytechnique Feferale de Lausanne, Lausanne Univ. Hosp., Inst. de Lavigny.*

2:45 **560.08** Vagus nerve stimulation paired with rehabilitative training improves recovery in multiple models of brain injury. S. A. HAYS*. *Univ. of Texas At Dallas.*

NANOSYMPOSIUM

561. Olfactory Processing

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, N226

1:00 **561.01** Feedback from network states affects perception of odor in *C. elegans.* A. GORDUS*; C. BARGMANN. *The Rockefeller Univ.*

1:15 **561.02** Genetic dissection and characterization of the malaria mosquito Anopheles gambiae olfactory system. O. RIABININA*; E. MARR; C. LIN; M. JACOBS-LORENA; D. A. O'BROCHTA; C. J. POTTER. *Johns Hopkins Univ., Johns Hopkins Bloomberg Sch. of Publ. Hlth., Inst. for Biosci. and Biotech. Res., Univ. of Maryland.*

1:30 **561.03** Odor coding with random maps. S. SRINIVASAN*; C. F. STEVENS. *Univ. California, Salk Inst., Univ. California.*

1:45 **561.04** Electron microscopy reconstruction of *Drosophila* melanogaster mushroom body synaptic architectures reveals repeating network motifs in the γ1 lobe. J. S. LAURITZEN*; Z. ZHENG; C. B. FISHER; J. M. RATLIFF; B. M. HARRISON; A. E. ADESINA; C. G. ROBINSON; J. PRICE; D. MILKIE; O. TORRENS; B. KARSH; E. T. TRAUTMAN; K. KHAIRY; E. PERLMAN; M. KAZHDAN; A. CARDONA; S. SAALFELD; D. BOCK. *Janelia Res. Campus, Northeastern Univ., Hudson Price Designs, LLC, Coleman Technologies, Inc., Johns Hopkins Univ.*

2:00 **561.05** The role of trace amine-associated receptors in olfaction. A. K. DEWAN*; A. CICHY; J. ZHANG; D. RINBERG; T. BOZZA. *Northwestern Univ., NYU Neurosci. Inst.*

2:15 **561.06** Mitral cell responses are strongly dependent on trial-to-trial anticipatory variability in the basal firing rate. D. RESTREPO*; E. M. GUTHMAN; A. LI. *Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

2:30 **561.07** Lateral inhibition differences between mitral and tufted cells: Causes and consequences. M. A. GERAMITA*; S. D. BURTON; N. N. URBAN. *Univ. of Pittsburgh, Carnegie Mellon Univ.*

2:45 **561.08** Circuit models identify mechanisms of respiration driven lateral inhibition underlying mitral activity. S. M. SHORT*; T. S. MCTAVISH; T. M. MORSE; G. M. SHEPHERD; J. V. VERHAGEN. *Yale Univ., John B. Pierce Lab.*

3:00 **561.09** Neuronal pattern separation in the olfactory bulb improves odor discrimination learning. A. CARLETON*; O. GSCHWEND; N. ABRAHAM; S. LAGIER; F. BEGNAUD; I. RODRIGUEZ. *Univ. of Geneva, Firmenich.*

3:15 **561.10** Figure background separation in the mouse olfactory bulb. A. VINOGRAD*; Y. LIVNEH; A. MIZRAHI. *The Hebrew Univ. of Jerusalem, The hebrew university.*

3:30 **561.11** Origin and identity of feedback projecting neurons to the main olfactory bulb revealed through retrograde viral tracing. K. PADMANABHAN*; F. OSAKADA; E. CALLAWAY; F. GAGE; T. J. SEJNOWSKI. *Salk Inst. CNL-S, Nagoya Univ., Salk Inst.*

3:45 **561.12** Neural circuits in the cortical amygdala mediate innate, odor-driven behavior. C. M. ROOT*; A. ZARDINA; Y. WANG; K. LAWLOR; R. AXEL. *Columbia Univ.*

NANOSYMPOSIUM

562. Cortical Planning and Execution: Neurophysiology

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, S402

1:00 **562.01** Movement intention modulates neural responses in visual cortex. J. P. GALLIVAN*; C. S. CHAPMAN; D. A. MCLEAN; J. R. FLANAGAN; J. C. CULHAM. *Queen's Univ., Univ. of Alberta, Univ. of Western Ontario.*

1:15 **562.02** Decoding the cortical dynamics of continuous manual tracking from fMRI. D. A. BARANY*; S. VISWANATHAN; M. CIESLAK; E. CADDIGAN; S. T. GRAFTON. *UC Santa Barbara, Univ. Hosp. of Cologne.*

1:30 **562.03** Grasping with and without motor preparation. J. A. MICHAELS*; B. DANN; R. W. INTVELD; R. EPPINGER; H. SCHERBERGER. *German Primate Ctr., Univ. of Göttingen.*

1:45 **562.04** Effect of visual feedback on grasping activity in monkey dorsomedial visual stream. R. BREVEGLIERI*; A. BOSCO; C. GALLETTI; P. FATTORI. *Univ. Di Bologna.*

2:00 **562.05** Shared representations for delayed and non-delayed movement plans. G. ARIANI*; A. LINGNAU. *CIMeC - Ctr. for Mind/Brain Sci.*

2:15 **562.06** Evidence that the globus pallidus provides an urgency signal for decision-making. D. THURA*; P. CISEK. *Univ. Montreal.*

2:30 **562.07** Neural coding of action planning with and without visual feedback. S. MONACO*; E. PELLENCIN; G. MALFATTI; L. TURELLA. *Ctr. for Mind/Brain Sci.*

2:45 **562.08** Numerical representations in electrophysiology recordings from human posterior parietal cortex. S. KELLIS*; C. KLAES; T. AFLALO; B. LEE; K. PEJSA; K. SHANFIELD; S. HAYES-JACKSON; B. PHILLIPS; M. AISEN; C. HECK; C. LIU; R. ANDERSEN. *Caltech, Keck Hosp. of USC, Rancho Los Amigos Natl. Rehabil. Ctr., Keck Hosp. of USC, Rancho Los Amigos Natl. Rehabil. Ctr., Caltech.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 **562.09** Functional interaction between monkey premotor and posterior parietal cortex for goal-directed behavior: Spatial working memory retrieval or motor-goal selection? P. MARTINEZ-VAZQUEZ*; A. GAIL. *Deutsches Primatenzentrum (DPZ), Bernstein Ctr. for Computat. Neurosci., Georg-August-Universität Göttingen.*

3:15 **562.10** Neurocomputational correlates of swiping movements. S. FABBRI*; L. SELEN; I. TONI; P. MEDENDORP. *Radboud Univ.*

3:30 **562.11** Hierarchical action coding within the human brain. L. TURELLA*; R. RUMIATI; A. LINGNAU. *Ctr. For Mind/ Brain Sci. (CIMeC), Univ. of Trento, 2. Scuola Internazionale Superiore di Studi Avanzati (SISSA), 3. Department of Psychology and Cognitive Science, Univ. of Trento.*

3:45 **562.12** When is freewill? T. AFLALO*; B. REVECHKIS; C. ZHANG; E. ROSARIO; S. KELLIS; C. KLAES; D. OUELLETTE; C. LIU; K. PEJSA; N. POURATIAN; R. A. ANDERSEN. *Caltech, Casa Colina Hosp. and Centers for Healthcare, USC, UCLA.*

NANOSYMPOSIUM

563. Comparative Anatomy and Evolution

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, S401

1:00 **563.01** Energy dissipation model of natural selection for the evolution of brain and behavior. L. N. IRWIN*; C. BECK. *Univ. Texas at El Paso, Univ. of Alberta.*

1:15 **563.02** The convergence of cortical structure and network topography. D. S. MARGULIES*; S. S. GHOSH; G. LANGS; M. PETRIDES. *Max Planck Inst. For Human Cognitive and Brain Sci., MIT, Med. Univ. of Vienna, McGill Univ.*

1:30 **563.03** Cortical folding universality and local measures of gyrification. B. MOTA*; Y. WANG. *Univ. Federal Do Rio De Janeiro, Sch. of Computing Science, Newcastle Univ.*

1:45 **563.04** Bridging the smallest and the biggest of the human brain: Interplay between cytoarchitectonics and macroscale connectomics in human cortex. M. P. VAN DEN HEUVEL*; L. SCHOLTENS; M. DE REUS. *Rudolf Magnus Inst. of Neuroscience, Univ. Med. Ctr. Utrecht.*

2:00 **563.05** Biodiversity of mammalian claustrums. J. I. JOHNSON*; M. A. SUPANICH; E. J. SUCHER; J. M. TIERNEY; M. HANNA; C. R. DASBACH; A. S. JASWA; B. A. FENSKE; H. T. YORK; R. C. SWITZER, III; J. A. MORRIS. *Michigan State Univ., NeuroScience Associates, SNBL.*

2:15 **563.06** Claustrum connections with hubs of the default mode, salience, and frontoparietal networks in the common marmoset. D. H. RESER*; P. MAJKA; J. M. H. CHAN; X. PHAM; K. J. WATKINS; S. SNELL; K. RICHARDSON; M. G. P. ROSA. *Monash Univ., Nencki Inst. of Exptl. Biol. PAS, ARC Ctr. of Excellence in Integrative Brain Function.*

2:30 **563.07** Anatomy and function of serotonin 2A receptor neurons in claustro-cortical circuits. E. Y. DEMIREVA*; C. E. MCOMISH; K. K. DEONARAINE; J. A. GINGRICH. *New York State Psychiatric Institute, Columbia Uni, Florey Inst. of Neurosci. and Mental Health, Univ. of Melbourne, Barnard Col., Sackler Inst. for Developmental Psychobiology.*

2:45 **563.08** Exploring fruit bat cortical and subcortical neurophysiology: Optimizing planes of section. R. ORMAN*. *SUNY Downstate Med. Ctr.*

NANOSYMPOSIUM

564. Emotional Processing and Regulation

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, N228

1:00 **564.01** Priming emotions to dissociate affective contributions to decision making in the ultimatum game. S. EL DAMATY*; L. WAHEDI; J. VAN METER. *Georgetown Univ.*

1:15 **564.02** Engagement in a relationship tunes romantic jealousy: Behavioral and neural correlates. Y. SUN; H. YU; J. CHEN; J. LIANG; L. LU; X. ZHOU; J. SHI*. *Natl. Inst. On Drug Dependence of Peking Univ., Ctr. for Brain and Cognitive Sci. and Dept. of Psychology, Peking Univ., Inst. of Mental Health/Peking Univ. Sixth Hosp. and Key Lab. of Mental Health, Peking Univ., Peking-Tsinghua Ctr. for Life Sci. and PKU-IDG/McGovern Inst. for Brain Research, Peking Univ., Key Lab. of Machine Perception (Ministry of Education), Peking Univ.*

1:30 **564.03** Dynamic emotion perception and prior expectancy: A novel fMRI paradigm and multivariate analysis. I. DZAFIC*; A. K. MARTIN; J. HOCKING; B. MOWRY; H. BURIANOVÁ. *The Univ. of Queensland, Queensland Univ. of Technol., Queensland Ctr. for Mental Hlth. Res., The Univ. of Queensland, Macquarie Univ.*

1:45 **564.04** An fMRI study of impulsivity in 'risky' and 'safe' male drivers. G. O'CALLAGHAN*; C. KELLY; M. GORMLEY. *Trinity Col. Dublin.*

2:00 **564.05** Behavioral and neurobiological correlates of a positive mindset in children. L. CHEN*; S. BAE; C. BATTISTA; T. M. EVANS; V. MENON. *Stanford Univ.*

2:15 **564.06** A rewarding nature of conversation: An fMRI study on the contingency between own actions and positive outcome. M. SUMIYA*; T. KOIKE; S. OKAZAKI; N. SADATO. *Natl. Inst. For Physiological Sci., SOKENDAI (THE GRADUATE UNIVERSITY FOR ADVANCED STUDIES).*

2:30 **564.07** Emotional regulation strategy use relates to multivariate patterns in cortical thickness in young and older adults. C. R. MADAN*; D. LINSLEY; C. M. LECLERC; E. A. KENSINGER. *Boston Col., State Univ. of New York at Oswego.*

2:45 **564.08** Emotional modulation of loss and risk aversion in clinical anxiety. C. J. CHARPENTIER*; O. J. ROBINSON; T. SHAROT; J. P. ROISER. *Univ. Col. London.*

3:00 **564.09** The dynamics of continuous self control. P. SOKOL-HESSNER*; N. D. DAW. *New York Univ., New York Univ.*

3:15 **564.10** The integrative process of reading emotional expressions from a crowd of faces. H. IM*; D. ALBOHN; R. B. ADAMS, Jr; K. KVERAGA. *Harvard Med. Sch. / Massachusetts Gen. Hos, The Pennsylvania State Univ., Harvard Med. Sch. / Massachusetts Gen. Hos.*

3:30 **564.11** Detecting emotional component from EEG waveforms using ICA decomposition. N. KANAYAMA*; K. MAKITA; R. KOZUMA; M. MACHIZAWA; T. SASAOKA; G. OKADA; S. YAMAWAKI. *Hiroshima Univ.*

3:45 **564.12** Neural correlates of guilt-induced self-punishment. H. YU*; B. SHEN; Y. CAO; X. ZHOU. *Peking Univ.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

565. Electrode Arrays III

Theme G: Novel Methods and Technology Development

Tue. 1:00 PM – *McCormick Place*, N227

1:00 **565.01** Impact of soft interfaces on neural recordings. A. SRIDHARAN*; J. MUTHUSWAMY. *Arizona State Univ.*

1:15 **565.02** A method for integration of ECoG data from mutliple individuals: Validation in the language network. R. A. VAN DER SPEK*; N. F. RAMSEY; Z. V. FREUDENBURG. *Univ. Med. Ctr. Utrecht.*

1:30 **565.03** Development of fully transparent micro-optoelectrode array for simultaneous optical, electrical interface to the brain and its applications. J. LEE*; I. OZDEN; Y. SONG; A. NURMIKKO. *Brown Univ., Seoul Natl. Univ.*

1:45 **565.04** Nanostructured diamond microelectrode arrays for neural interfacing. G. PIRET; C. HÉBERT; J. MAZELLIER; L. ROUSSEAU; E. SCORSONE; M. COTTANCE; G. LISSORGUES; M. O. HEUSCHKEL; S. PICAUD; P. BERGONZO; B. YVERT*. *INSERM, CEA-LIST, Thalès Res. and Technol., ESIEE-Paris, Qwane Biosci., INSERM/UPMC.*

2:00 **565.05** Protruding nanocrystalline diamond microelectrode arrays for 'in-cell' recording and stimulation. M. MCDONALD*; F. VAHIDPOUR; M. SPIRA; M. NESLADEK. *Hasselt Univ., The Hebrew Univ. of Jerusalem.*

2:15 **565.06** A novel elastomeric conducting microwire for improved chronic tissue integration of neural electrodes. Z. DU*; C. L. KOLARCIK; S. SAPP; S. LUEBBEN; T. D. Y. KOZAI; N. R. SNYDER; C. F. LAGENAUR; X. T. CUI. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, TDA Research, Inc., Univ. of Pittsburgh.*

2:30 **565.07** ● Parylene C-aluminum oxide bilayer encapsulation and minimal iridium oxide tip metal coverage promote neural electrode impedance stability during accelerated aging tests. R. B. CALDWELL*; H. MANDAL; R. SHARMA; L. RIETH; F. SOLZBACHER; P. TATHIREDDY. *Univ. of Utah, Blackrock Microsystems, Univ. of Utah.*

2:45 **565.08** ● *In vivo* characterizations of platinum-iridium electroplated dbs electrodes. A. PETROSSIANS*; J. J. WHALEN, III; F. MANSFELD; J. D. WEILAND. *USC, USC, USC.*

3:00 **565.09** Fiberless multicolor optoelectrodes for neural circuit analysis. K. KAMPASI*; J. SEYMOUR; K. NA; K. D. WISE; E. YOON. *Univ. of Michigan, Ann Arbor.*

3:15 **565.10** A wireless platform for closed-loop optogenetics. S. LEE*; Q. YUAN; P. P. IRAZOQUI. *Purdue Univ.*

3:30 **565.11** A low-cost digital headstage for high channel count µECoG. M. TRUMPIS*; M. INSANALLY; J. ZOU; A. ELSHARIF; A. GHOMASHCHI; N. S. ARTAN; R. C. FROEMKE; J. VIVENTI. *Duke Univ., NYU Sch. of Med., NYU Sch. of Engin., NYIT Sch. of Engin. and Computer Sci., NYU Sch. of Med.*

3:45 **565.12** ● Enhancing the recording and stimulation performance and stability of Utah electrode arrays through metallization improvements. B. BAKER; R. CALDWELL; H. MANDAL; R. SHARMA; M. GRUENHAGEN; P. TATHIREDDY; L. RIETH*. *Univ. of Utah, Univ. of Utah, Blackrock Microsystems, Applied Biosensors.*

4:00 **565.13** Nanostructured electrodes for cell recording. N. MELOSH*; K. CHANG; T. BOZORG-GRAYELI. *Stanford Univ., Stanford Univ.*

DYNAMIC POSTERS

DP07. Dynamic Posters–Tuesday Afternoon

Tue. 1:00 PM – *McCormick Place*, Hall A

All dynamic poster presentations will take place during the full four-hour session time. The theme of the dynamic poster being presented is indicated by the letter in the leftmost column.

A DP01 **DP07.01** NMNAT2 loss of function impairs neuronal migration during brain development. *Y. O. ALI; D. CONNOLLY; J. GILLEY; M. P. COLEMAN; H.-C. LU. *Psychology and Brain Sci., Indiana Univ., Rice Univ., Babraham Inst.*

A DP02 **DP07.02** Neural bases of working memory and relationship to academic performance in adolescents with and without adhd. P. MUKHERJEE; T. HARTANTO; C. CALUB; L. A. CAVALLO; E. CALFEE; A. RAMAKRISHNAN; F. J. DIXON; S. HINSHAW; W. VAN DEN BOS; S. M. MCCLURE; C. FASSBENDER; *J. B. SCHWEITZER. *Dept Psychiatry & Behav Scienc, Unive Calif Davis SOM, Univ. of California, Berkeley, Max Planck, Stanford Univ.*

B DP03 **DP07.03** Calcium measurement in hippocampal cultures with the genetically-encoded indicator GCaMP6s. *A. H. MAHNKE; W. H. GRIFFITH; J. WANG; U. H. WINZER-SERHAN. *Neurosci. and Exptl. Therapeut., Women's Hlth. in Neurosci. Program, Texas A&M Hlth. Sci. Ctr.*

B DP04 **DP07.04** Is multiplexing a general strategy for encoding multiple items in the brain? Evidence from a visual cortical face area and a subcortical auditory area. *V. C. CARUSO; A. F. EBIHARA; A. MILEWSKI; S. TOKDAR; W. A. FREIWALD; J. M. GROH. *Ctr. For Cognitive Neurosci., Statistical Sci., Ctr. For Cognitive Neurosci., Neurobiology, Psychology and Neurosci., Duke Univ., Lab. of Neural Systems, Lab. of Sensory Neurosci., The Rockefeller Univ.*

C DP05 **DP07.05** Intracellular Ca2+ imaging revealed enhanced spiking activity in Mecp2 knockout neurons. A. BELLOT-SAEZ; *L. POZZO-MILLER. *Neurobio., Univ. Alabama-Birmingham.*

D DP06 **DP07.06** Functional microarchitecture of excitatory versus inhibitory neurons in layer 2/3 of mouse auditory cortex. *I. MAOR; A. MIZRAHI. *The Edmond and Lily Safra Ctr. For Brain Sci., The Hebrew Univ.*

E DP07 **DP07.07** The neural basis of resting state functional connectivity mapping resolved using simultaneous hemodynamic and wide-field GCaMP imaging. *Y. MA; S. H. KIM; M. A. SHAIK; E. M. C. HILLMAN. *Biomed. Engin., Columbia Univ.*

F DP08 **DP07.08** Categorical representations of decision variables within orbitofrontal cortex. *A. VAUGHAN; J. HIROKAWA; A. KEPECS. *Cold Spring Harbor Lab.*

F DP09 **DP07.09** Hippocampal representation of spatial decisions in uncertain environments. A. B. SALEEM; K. D. HARRIS; *M. CARANDINI. *Univ. Col. London.*

G DP10 **DP07.10** High-resolution, three-dimensional serial two-photon tomography of whole mouse brains allows mapping of neuronal circuit alterations following brain injury. *D. M. RAMIREZ; L. MA; M. P. GOLDBERG; J. P. MEEKS. *Dept. of Neurol. and Neurotherapeutics, Dept. of Neurosci., Univ. of Texas Southwestern Med. Ctr.*

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* Indicates abstract's submitting author

POSTER

566. Cytoskeletal Functions in Neurodevelopment

Theme A: Development

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 A1 **566.01** Neuronal polarization and morphogenesis are disrupted by mutation of Kinesin-6 family member Kif20b. N. DWYER*; T. D. CUPP; T. L. ARNELL; A. SHRESTHA; K. M. JANISCH. *Univ. Virginia.*

2:00 A2 **566.02** Spectrin cytoskeleton orchestrates peripheral nervous system node of Ranvier assembly and axon integrity. Y. HUANG*; C. ZHANG; D. ZOLLINGER; M. RASBAND. *Baylor Col. of Med.*

3:00 A3 **566.03** DTPPP, a novel microtubule polymerizing protein, is essential for proper *Drosophila* embryonic CNS organization. R. E. MINO*; A. L. RISINGER; S. BANERJEE; S. L. ROGERS; C. ROHENA; M. A. BHAT. *UTHSCSA, UTHSCSA, UNC-Chapel Hill.*

4:00 A4 **566.04** N-terminal and central domains of APC differentially and cooperatively sculpt optic axon growth cones, arbors and targets *in vivo.* T. M. ELUL*; G. PENG; J. PINZIOTTO; A. SOHAL. *Touro Univ.*

1:00 A5 **566.05** Collapsin response mediator protein 1 (CRMP1) and CRMP2 mediate Semaphorin3A signaling, but through distinct pathway to regulate dendritic spine maturation and patterning. Y. GOSHIMA*; H. MAKIHARA; S. NAKAI; N. YAMASHITA; H. NAKAMURA; F. TANAKA; F. NAKAMURA. *Yokohama City Univ. Sch. Med., Yokohama City Univ. Grad. Sch. of Med., Yokohama City Univ. Grad. school of Med., Yokohama City Univ. Grad. school of Med., Johns Hopkins Univ., Yokohama City Univ. Grad. school of Med.*

2:00 A6 **566.06** RACK1 is necessary for the formation of point contacts and axon growth. L. J. KERSHNER*; K. WELSHHANS. *Kent State Univ., Kent State Univ.*

3:00 A7 **566.07** FMRP is involved in the NGF-induced axon elongation by locally regulating Map1b and Calm1 translation. L. BAO*; B. WANG; L. PAN; M. WEI. *Inst. of Biochem. and Cell Biology, Chinese Acad. of Sci.*

4:00 A8 **566.08** Formin-2 in neuronal development. K. V. GHATE*; A. SAHASRABUDHE; A. JACOB; A. GHOSE. *Indian Inst. of Sci. and Research, Pune.*

1:00 A9 **566.09** Ran-dependent control of axon elongation. D. M. WATT*; V. CAVALLI. *Washington Univ. In St. Louis.*

2:00 A10 **566.10** Microtubule plus-end-binding protein, TACC3, promotes axon outgrowth and guidance *in vivo.* L. A. LOWERY*; B. ERDOGAN; G. CAMMARATA; M. EVANS. *Boston Col.*

3:00 A11 **566.11** The role of tau phosphorylation and its 3R and 4R isoforms in regulating microtubule dynamics in living cortical growth cones. S. BISWAS*; L. GORAL; Q. GAN; K. KALIL. *Univ. of Wisconsin.*

4:00 A12 **566.12** Dissociation of netrin-1 receptor UNC5C with TUBB3 is involved in netrin-1-mediated axonal repulsion. Q. SHAO*; G. LIU. *Univ. of Toledo.*

1:00 A13 **566.13** Subcortical cytoskeleton periodicity in the nervous system. E. D'ESTE; D. KAMIN*; F. GÖTTFERT; S. W. HELL. *Max Planck Inst. for Biophysical Chem.*

2:00 A14 **566.14** Calsyntenin-1, a kinesin adaptor, regulates microtubule polarity and dynamics during sensory axon arbor development. T. J. LEE*; K. ELICEIRI; M. HALLORAN. *Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Wisconsin.*

3:00 A15 **566.15** The development of the corpus callosum is dependent on fibroblast growth factor 8 signaling. C. E. STEWART*; W. C. J. CHUNG. *Kent State Univ.*

4:00 A16 **566.16** The role of Transient Receptor Potential Melastatin 7 (TRPM7) channels in neuronal development under normal and hypoxia-induced stress conditions. E. TURLOVA*; C. BAE; M. DEURLOO; W. CHEN; A. BARSZCZYK; D. HORGEN; A. FLEIG; Z. FENG; H. SUN. *Univ. of Toronto, Hawaii Pacific Univ., Queen's Med. Ctr.*

1:00 A17 **566.17** Activity-dependent regulation of the cisternal organelle in the axon initial segment during murine visual system development. A. SCHLUETER*; S. ROSSBERGER; C. SCHULTZ; M. ENGELHARDT. *Heidelberg University, Med. Fac. Mannheim, Kirchhoff-Institute for Physics, Med. Fac. Mannheim.*

2:00 A18 **566.18** ● Period of axonal exuberance of corpus callosum in rat extends into the first two postnatal weeks. M. CULJAT*; J. M. JURASKA. *Hawaii Residency Programs, Univ. of Illinois, Champaign, Univ. of Zagreb.*

3:00 A19 **566.19** Gtf2i regulates neuronal maturation and cognition. M. DEURLOO-STMICHAEL*; W. CHEN; M. YANG; Y. LIN; E. TAM; M. WU; F. LEWIS; G. FOLEY; J. CRAWLEY; H. SUN; L. OSBORNE; Z. FENG. *Univ. of Toronto, MIND institute.*

4:00 A20 **566.20** Structural changes of the axon initial segment in neurons derived from spectrin mutant qv3J. M. DANNEMEYER*; E. LAZAROV; F. WOLF; J. ENDERLEIN; A. NEEF. *Georg August Univ. Goettingen, Hebrew Univ. Jerusalem, Israel, MPI for Dynamics and Self-Organization.*

1:00 A21 **566.21** Map7 regulates the development of sensory axon collateral branches via its microtubule bundling activity. S. TYMANSKYJ; L. MA*. *Thomas Jefferson Univ., Dept. of Neurosci.*

2:00 A22 **566.22** Identifying signaling cascades involved in growth and cell clustering of functional, non-prenylatable RhoA and Rac1. N. G. RAUT*; J. M. REDDY; K. RODEN; D. L. HYNDS. *Texas Women's Univ.*

3:00 A23 **566.23** Correlation analysis of ATP levels and morphological change during neurite extension. R. SUZUKI*; F. NAGASE; K. HOTTA; K. OKA. *Keio Univ.*

4:00 A24 **566.24** Regulation of retrograde mitochondrial transport in axons. K. DRERUP*; S. LUSK; A. NECHIPORUK. *Oregon Hlth. & Sci. Univ.*

1:00 A25 **566.25** The roles of CPE and its interactor, $p150^{Glued}$, in regulation of neuronal cytoskeleton and migration. C. LIANG*; D. CARREL; H. KIM; B. L. FIRESTEIN. *Rutgers Univ., Rutgers Univ.*

Tues. PM

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POSTER

567. Development of Neuronal and Circuit Excitability

Theme A: Development

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 A26 **567.01** Regulation of hindbrain spontaneous activity by K2P channels. K. DUONG*; H. WATARI; A. TOSE; J. GILE; M. BOSMA. *Univ. of Washington, George Washington Univ.*

2:00 A27 **567.02** An auditory hair cell-specific inducible gene expression system to suppress spontaneous activity in hair cells. Y. ASAI*; G. G. S. GÉLÉOC; J. R. HOLT. *Boston Childrens Hosp., Harvard Med. Sch.*

3:00 A28 **567.03** Optical analysis of developmental changes in oscillatory activity in the embryonic chick olfactory bulb. K. SATO*; Y. MOMOSE-SATO. *Komazawa Women's Univ, Fac. of Human Hlth., Kanto-Gakuin Univ, Col. of Nutr.*

4:00 A29 **567.04** Leptin guides chloride homeostasis in the developing rodent hippocampus. C. DUMON*; D. DIABIRA; C. PORCHER; G. A. WAYMAN; I. MEDYNA; J. GAIARSA. *Inst. De Neurobiologie De La Méditerranée(Inmed, Washington State Univ.*

1:00 A30 **567.05** Development of functional synaptic networks in the mouse vagal pathway revealed by voltage-sensitive dye imaging. Y. MOMOSE-SATO*; K. SATO. *Kanto Gakuin University, Col. of Nutr., Komazawa Women's Univ, Fac. of Human Hlth.*

2:00 A31 **567.06** Spontaneous emergence of neuronal groups and attractor dynamics in a spiking model of developing primary sensory cortex. T. MICONI*; J. MCKINSTRY; G. M. EDELMAN. *Neurosciences Inst.*

3:00 A32 **567.07** Functional serotonin signaling in the hippocampus prior to dorsal raphe maturation in neonatal mice. R. A. MORTON*; Y. YANAGAWA; C. VALENZUELA. *Univ. of New Mexico, Gunma Univ. Grad. Sch. of Med.*

4:00 A33 **567.08** Functional dynamics of developing newborn neurons. J. BOULANGER-WEILL*; G. SUMBRE. *IBENS INSERM U1024.*

1:00 A34 **567.09** Spontaneous neuronal activity is required for dendrite pruning of olfactory mitral cells in early postnatal development. S. FUJIMOTO*; Y. MUROYAMA; T. SAITO; T. IMAI. *RIKEN CDB, Chiba Univ.*

2:00 A35 **567.10** Developmental changes in spontaneous activity in the neonatal mouse olfactory bulb *in vivo*. M. N. LEIWE*; T. IMAI. *Lab. For Sensory Circuit Formation.*

3:00 A36 **567.11** *In vivo* expression of Pro-Brain-Derived Neurotrophic Factor (proBDNF) alters Glutamate/GABA balance and increases seizure susceptibilty. B. RIFFAULT*; C. DUMON; N. KOURDOUGLI; N. FERRAND; J. GAIARSA; C. PORCHER. *INMED.*

4:00 A37 **567.12** Calcium binding to Synaptotagmin III regulates patterned spontaneous activity during visual circuit development. W. SHU*; Y. HUANG; S. KAO; Y. HSIAO; C. WANG. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

1:00 A38 **567.13** Phosphorylation of cysteine string protein-alpha regulates retinal waves during development. C. CHEN; Y. HSIAO; T. WO; C. WANG*. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

2:00 A39 **567.14** Evaluation of Cx36 and Cx45 expression during postnatal development of rats hippocampus. G. S. VILAR HIGA*; E. R. KINJO; A. H. KIHARA; B. A. DOS SANTOS; F. ALVEZ. *Univ. Do ABC, Inst. de Ciências Biomédicas- Univ. de São Paulo, Núcleo de cognição e sistemas complexos- UFABC.*

3:00 A40 **567.15** Odor activation domains of inhibitory neurons expand with neuronal maturation. K. B. QUAST*; I. GARCIA; B. R. ARENKIEL. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

4:00 A41 **567.16** GABAergic hub neurons in the developing entorhinal cortex. L. MODOL VIDAL*; V. SOUSA; A. MALVACHE; P. GUIGUE; T. TRESSARD; A. BAUDE; R. COSSART. *INMED, INSERM U901, INMED, INSERM U901.*

1:00 A42 **567.17** Depolarizing $GABA_A$ transmission restrains excitatory synapse formation in the developing hippocampus. C. K. SALMON*; H. PRIBIAG; S. CAMERON; V. MAHADEVAN; D. STELLWAGEN; M. WOODIN; K. MURAI. *Ctr. For Res. In Neurosci., McGill, UC Davis, Univ. of Toronto.*

2:00 A43 **567.18** NMDA receptor-based template networks of the developing neocortex. M. C. ASHBY*; S. R. HULME; J. L. ROZAS. *Univ. of Bristol.*

POSTER

568. Central Nervous System Regeneration

Theme A: Development

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 A44 **568.01** Neurogenin brings about photoreceptor-like cells in chick Müller glial cell culture. R. YAN; L. HE; S. WANG*. *Univ. Alabama, Birmingham.*

2:00 A45 **568.02** Presynaptic zinc regulates optic nerve regeneration: Role of ZnT-3 and nNOS. Y. LI*; K. YUKI; L. ANDEREGGEN; M. ASDOURIAN; M. HERSHFINKEL; S. J. LIPPARD; P. A. ROSENBERG; L. I. BENOWITZ. *Boston Children's Hosp. and Harvard Med. Sch., State Key Lab. of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen Univ., Ben-Gurion Univ. of the Negev, MIT.*

3:00 A46 **568.03** Cadherin expression in normal and regenerating adult zebrafish retinas. S. BHATTARAI; A. SOCHACKA-MARLOWE; N. WANG; K. FORKAPA; R. LONDRAVILLE; Q. LIU*. *Univ. Akron, Univ. Akron.*

4:00 A47 **568.04** After spinal cord injury extracellular cues affect the dynamics of local protein synthesis machinery in regenerating central nervous system axons. R. SACHDEVA*; M. MCMULLEN; J. L. TWISS; J. D. HOULÉ. *Drexel Univ. Col. of Med., Univ. of South Carolina.*

1:00 A48 **568.05** ● ▲ E6020 as a modulator of immune-mediated gliogenesis. L. M. MILICH*; J. S. CHURCH; P. POPOVICH; D. M. MCTIGUE. *The Ohio State Univ. Wexner Med. Ctr., The Ohio State Univ. Wexner Med. Ctr.*

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2:00 A49 **568.06** Structural regeneration and functional restoration of the adult dentate gyrus after catastrophic granule cells death. T. LICHT*; T. KREISEL; B. WOLF; G. ROTHE; E. KESHET. *The Hebrew Univ. of Jerusalem, The Hebrew Univ.*

3:00 A50 **568.07** Genetic lineage tracing of Müller glia-derived progenitors in the mouse retina *in vivo.* C. BOUDREAU-PINSONNEAULT*; M. CAYOUETTE. *Inst. De Recherche Clinique De Montréal, McGill Univ., Inst. De Recherche Clinique De Montréal.*

4:00 A51 **568.08** A challenge to induce retinal regeneration in mouse retina. Y. BABA*; S. WATANABE. *Univ. of Tokyo.*

1:00 A52 **568.09** Hedgehog signaling regulates tissue regeneration in Xenopus laevis tadpoles. A. M. HAMILTON*; L. N. BORODINSKY. *Shriners Hosp. For Children, Northern Californi, Univ. of California Davis Sch. of Med.*

2:00 A53 **568.10** CNS regeneration: Investigating the transcriptional combinatorial logic underlying successful regeneration in zebrafish. A. J. UDVADIA*; I. VENKATESH. *Univ. of Wisconsin Milwaukee, Marquette Univ.*

3:00 A54 **568.11** GDNF-secreting Schwann cells in multichannel OPF+ hydrogel scaffolds promote ascending axonal regeneration, remyelination, and partial locomotor recovery following complete spinal cord transection in rats. B. K. CHEN*; N. N. MADIGAN; J. S. HAKIM; A. M. SCHMEICHEL; A. M. KNIGHT; S. ZHANG; J. J. NESBITT; M. DADSETAN; M. DADSETAN; T. CHIANG; M. J. YASZEMSKI; A. J. WINDEBANK. *Mayo Clin. Rochester.*

4:00 A55 **568.12** ▲ The tumor suppressor HHEX restricts axon growth in central nervous system neurons. M. SIMPSON*; I. VENKATESH; B. CALLIF; L. THIEL; D. COLEY; K. WINSOR; Z. WANG; J. LERCH; M. G. BLACKMORE. *Marquette Univ., The Ohio State Univ.*

1:00 A56 **568.13** Strategies to generate migratory precursors for cortical projection neuron replacement. M. GRONSKA*; H. BELALCAZAR; N. MCKEEHAN; J. HEBERT. *Albert Einstein Col. of Med.*

2:00 A57 **568.14** Combinatorial expression of transcription factors to promote axon regeneration. C. L. ATTWELL*; N. FAGOE; R. E. VAN KESTEREN; A. B. SMIT; J. VERHAAGEN; M. R. J. MASON. *Netherlands Inst. For Neurosci., Ctr. for Neurogenomics and Cognitive Res.*

3:00 A58 **568.15** Reestablishment of axonal subdomains in regenerating axons of the optic nerve. M. A. MARIN*; S. DE LIMA; H. GILBERT; A. MARTINEZ; L. BENOWITZ; M. RASBAND. *Baylor Col. of Med., Univ. Federal do Rio de Janeiro, Boston Children's Hosp. and Harvard Med. Sch.*

4:00 A59 **568.16** Dephosphorylation of CRMP2 enhances recovery after spinal cord injury. J. NAGAI*; Y. KITAMURA; K. OWADA; Y. GOSHIMA; T. OHSHIMA. *Waseda Univ., Yokohama City Univ.*

1:00 A60 **568.17** A role of autophagy in microtubule assembly and axon regeneration. M. HE*; Y. DING; Z. LUO. *Inst. of Neurosci.*

2:00 A61 **568.18** Epigenetic profiling reveals a developmental decrease in promoter accessibility of regeneration associated genes in CNS neurons. I. VENKATESH*; M. SIMPSON; B. CALLIF; M. BLACKMORE. *Marquette Univ.*

3:00 A62 **568.19** Human ES cell- and iPS cell-derived astrocytic subtypes for transplantation after spinal cord injury. I. K. SIMEONOVA*; B. SANDNER; M. MOTSCH; T. SCHACKEL; I. GOGANAU; S. LIU; B. WINNER; A. BLESCH. *Spinal Cord Injury Ctr., Heidelberg Univ. Hosp., Erlangen Univ. Hosp.*

4:00 A63 **568.20** Peripheral electrical stimulation to enhance the regenerative capacity of sensory axons after spinal cord injury. I. GOGANAU*; B. SANDNER; K. FOUAD; A. BLESCH. *Universitats Klinikum Heidelberg, Heidelberg Univ. Hosp., Univ. of Alberta.*

1:00 A64 **568.21** The role of mitochondrial dynamics in CNS axon regeneration. A. KREYMERMAN*; M. B. STEKETEE; J. L. GOLDBERG. *Shiley Eye Center, UCSD, Univ. of Pittsburgh, Univ. of California San Diego.*

2:00 A65 **568.22** Whole transcriptome response to spinal injury in the regenerating spinal cord of the opossum, Monodelphis domestica. B. J. WHEATON*; P. UMALE; A. SUNDARARAJAN; S. GUIDA; J. SENA; F. SCHILKEY; K. M. DZIEGIELEWSKA; N. R. SAUNDERS; R. D. MILLER. *Univ. of New Mexico, Natl. Ctr. for Genome Resources, Univ. of Melbourne.*

3:00 A66 **568.23** LPA pathway modulates intrinsic axon growth of intact CNS neurons after spinal cord injury. K. FINK*; S. STRITTMATTER; W. CAFFERTY. *Yale Univ.*

4:00 A67 **568.24** ▲ Biomimetic injectable 3D hydrogels with aligned topography for neural tissue engineering. C. P. HOFSTETTER; L. J. KOBELT; L. N. CATES; Z. Z. KHAING*. *Univ. of Washington, Univ. of Washington.*

1:00 A68 **568.25** A single cell approach to defining the molecular recipe for successful regeneration of CNS neurons after spinal cord injury. S. R. ALLEN*; S. M. FOGERSON; S. A. BRYANT; O. E. BLOOM; J. J. SMITH; J. R. MORGAN. *Marine Biol. Lab., Duke Univ., Univ. of Kentucky, The Feinstein Inst. for Med. Res.*

2:00 A69 **568.26** ● PTEN deletion and alpha9 integrin expression enhance adult corticospinal tract regeneration. M. R. ANDREWS*; K. ZUKOR; S. MORRIS; Z. HE; J. W. FAWCETT. *Univ. of St Andrews, Harvard Med. Sch., Univ. of Cambridge.*

3:00 A70 **568.27** Demethylation of c-Myc gene triggers transcription of a group of regeneration-associated genes in DRG sensory neurons following conditioning peripheral nerve injury. H. SHIN*; K. KIM; M. KWON; B. KIM. *Ajou University, Med. Sch., Dept. of Biomed. Sciences, Ajou Univ. Grad. Sch. of Med., Dept. of Med. Informatics, Ajou Univ. Sch. of Med., Dept. of Neurology, Ajou Univ. Sch. of Med.*

4:00 A71 **568.28** DNA methylation as a possible epigenetic barrier preventing Müller glia damage-induced dedifferentiation in mammals. L. I. REYES-AGUIRRE*; M. LAMAS. *CINVESTAV, CINVESTAV.*

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POSTER

569. Adolescent Development: Animal Models

Theme A: Development

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 A72 **569.01** Novel mouse models for elucidating the impact of alpha-tocopherol stereoisomers on neonatal brain development. J. G. MUN*; K. DU; C. RENDEIRO; D. S. MILLER; M. BARKER; P. KOZAK; T. BHATTACHARYA; S. RUBAKHIN; C. LAI; K. MATTHEW; J. S. RHODES. *Univ. of Illinois, Abbott Nutr.*

2:00 A73 **569.02** Witnessing social defeat stress mediates a depression-like phenotype in female c57BL/6 mice. F. J. FLORES-RAMIREZ; L. M. RIGGS; J. B. ALIPIO; M. A. HERNANDEZ; B. CRUZ; S. H. BRAREN; P. A. SERRANO; S. D. INIGUEZ*. *California State Univ., Hunter Col., Univ. of Texas At El Paso.*

3:00 A74 **569.03** GABAergic disruption in the juvenile prefrontal cortex of Npas4 deficient mice. L. COUTELLIER*. *Ohio State Univ.*

4:00 A75 **569.04** Environmental enrichment during adolescence alters anxiety, cognitive functioning, and dendritic spine density in male and female rats. R. E. BOWMAN*; J. WAGENBLATT; K. BARATELI; V. LUINE; M. FRANKFURT. *Sacred Heart Univ., CUNY - Hunter Col., Hofstra North Shore - LIJ Sch. of Med.*

1:00 A76 **569.05** ● Voluntary binge-level consumption of ethanol in adolescent rats and the consequences on adult social behavior. D. HOSOVÁ*; E. I. VARLINSKAYA; L. P. SPEAR. *Binghamton Univ.*

2:00 A77 **569.06** Impact of gonadectomy within the Four Core Genotype mouse model: Evidence that sex steroids shape brain structures via activation as well as organization and that influences of sex chromosomes are independent of hormonal milieu. C. CORRE*; D. A. VOUSDEN; S. SPRING; E. COX; A. METCALF; L. R. QIU; M. R. PALMERT; J. P. LERCH. *The Hosp. For Sick Children, The Hosp. for Sick Children.*

3:00 A78 **569.07** Unpredictable chronic mild stress during adolescence shifts preference for nicotine and alters gene expression in the ventral tegmental area. L. F. ALCANTARA*; E. M. PARISE; O. K. SIAL; M. A. GREENWOOD; T. GNECCO; N. J. HARDIMAN; A. I. GONZALEZ; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ.*

4:00 A79 **569.08** Repeated ketamine exposure during adolescence produces long-lasting changes in reward sensitivity to drugs of abuse and gene expression in the Nucleus accumbens in adulthood. O. K. SIAL*; E. M. PARISE; A. M. GANCARZ; L. F. ALCANTARA; A. I. GONZALEZ; T. GNECCO; D. M. DIETZ; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ., State Univ. of New York.*

1:00 A80 **569.09** Repeated Ketamine treatment produces a stress-resistant phenotype in adolescent mice. E. M. PARISE*; L. F. ALCANTARA; O. K. SIAL; A. I. GONZALEZ; N. J. HARDIMAN; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ.*

2:00 A81 **569.10** Oxycodone exposure during adolescence and adulthood dysregulates striatal gene expression and facilitates hydrocodone-seeking in rats. M. A. GREENWOOD*; L. F. ALCANTARA; E. M. PARISE; C. PIEKARSKI; O. K. SIAL; J. BEVERLEY; H. STEINER; C. A. BOLAÑOS-GUZMÁN. *Florida State Univ., Rosalind Franklin Univ. of Med. and Sci.*

3:00 A82 **569.11** Pubertal timing depends on TRPC2 signaling in mice. D. R. PFAU*; S. M. BREEDLOVE; C. L. JORDAN. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

4:00 A83 **569.12** Development of dopaminergic fibers in the medial prefrontal cortex of male and female rats during adolescence. J. WILLING; J. M. BRODSKY; L. R. CORTES; T. KIM; J. M. JURASKA*. *Univ. of Illinois, Univ. of Illinois.*

1:00 A84 **569.13** ▲ Environmental enrichment promotes adaptation to environment rearrangement in younger but not older adolescent rats. D. E. COBB*; K. L. PATTERSON; R. GUCWA; A. J. ROSSI; E. A. ARTZ; A. P. BRUNSON; M. C. ZRULL. *Appalachian State Univ.*

2:00 A85 **569.14** Ketamine exposure during adolescence increases sensitivity to reward-related stimuli in adulthood. L. M. RIGGS*; J. B. ALIPIO; M. A. HERNANDEZ; K. L. SHAWHAN; B. CRUZ; D. SANCHEZ; A. R. ZAVALA; S. D. IÑIGUEZ. *Univ. of Texas at El Paso, California State Univ., California State Univ.*

3:00 A86 **569.15** Effects of single bout of treadmill exercise on epigenetic parameters in hippocampus from adolescent female and male Wistar rats. I. R. SIQUEIRA*; L. C. F. MEIRELES; K. BERTOLDI; C. G. BASSO; L. R. CECHINEL; V. R. ELSNER. *Univ. Federal Do Rio Grande Do Sul.*

4:00 A87 **569.16** Environmental enrichment reverses down-regulation of hippocampal brain-derived neurotrophic factor (BDNF) in male rats following early-life inflammatory challenge. A. KHOURY; M. MACRAE; A. C. KENTNER*. *MCPHS Univ., MCPHS Univ.*

1:00 A88 **569.17** The effects of voluntary exercise on oligodendrocyte development and myelin in juvenile mice and in cuprizone treated adult mice. L. G. TOMLINSON*; P. HUANG; H. COLOGNATO. *Stony Brook Univ.*

2:00 A89 **569.18** ▲ Grooming as a de-arousal behavior underlying novelty habituation: An effect potentiated by environmental enrichment. M. ROJAS*; J. C. BRENES; J. FORNAGUERA; A. MORA-GALLEGOS. *Univ. of Costa Rica, Univ. of Costa Rica.*

3:00 A90 **569.19** Juvenile amphetamine exposure does not induces long-term alterations in exploratory behavior and neural morphology of limbic regions in the rat. H. TENDILLA*, SR; L. ARROYO-GARCÍA; I. CAMACHO-ÁBREGO; G. FLORES. *Inst. De Fisiología, Benemérita Univ. Autónoma De Puebla.*

4:00 A91 **569.20** Learning, socioemotional behavior, and striatal dopamine D1 receptor expression after adolescent drug exposure. A. IZQUIERDO*; H. POZOS; A. DE LA TORRE; A. STOLYAROVA; S. DESHIELDS; J. CEVALLOS; J. RODRIGUEZ. *UCLA.*

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* Indicates abstract's submitting author

1:00 A92 **569.21** Repeated social defeat stress during adolescence impairs the maturation of GABAergic function in the adult prefrontal cortex. E. FLORES-BARRERA*; D. R. THOMASES; A. CABALLERO; J. S. CARTER; K. E. GRANT; J. A. ROSENKRANZ; K. Y. TSENG. *Rosalind Franklin Univ., DePaul Univ.*

2:00 A93 **569.22** ▲ Enduring effects of fluoxetine on spatial memory performance in adolescent and adult male c57bl/6 mice. J. B. ALIPIO*; L. M. RIGGS; L. F. ALCANTARA; S. D. INIGUEZ. *Univ. of Texas at El Paso, California State Univ., Florida State Univ.*

3:00 A94 **569.23** ▲ Enrichment of young adolescent rats promotes balanced exploration of a simple environment. E. A. ARTZ*; H. L. JOHNSON; S. J. SNOUSE; T. J. ARNOLD; Z. H. RICHARDSON-BULL; S. A. BLAKE; M. C. ZRULL. *Appalachian State Univ.*

4:00 A95 **569.24** Changes in the number of synapses in the medial prefrontal cortex across adolescence. C. DRZEWIECKI*; J. WILLING; J. M. JURASKA. *Univ. of Illinois.*

1:00 A96 **569.25** ▲ Perinatal SSRI exposure and social behaviors in juvenile offspring. M. HAZLETT*; M. GEMMEL; E. CSÁSZÁR; S. DE LACALLE; J. PAWLUSKI. *Ohio Univ., Inst. of Exptl. Pharmacol. and Toxicology, Ohio Univ., Univ. of Rennes 1.*

2:00 A97 **569.26** Perinatal ssri exposure and social behaviors in adult offspring. M. GEMMEL*; E. CSASZAR; C. VESEL; S. DE LACALLE; J. PAWLUSKI. *Ohio Univ., Inst. of Exptl. Pharmacol. and Toxicology, Slovak Acad. of Sci., Ohio Univ., Univ. of Rennes.*

3:00 A98 **569.27** Magnetic resonance imaging and histology reveal adolescent binge ethanol-induced alterations in the developmental trajectory of the young adult rodent cerebral cortex. F. T. CREWS*; R. YAXLEY; B. PANIAGUA; A. G. JOHNSON; R. P. VETRENO. *Skipper Bowles Ctr. Alcohol, Skipper Bowles Ctr. Alcohol, Duke Univ. Med. Ctr.*

4:00 A99 **569.28** Effect of sensory enrichment on perineuronal nets recovery following prolonged sensory deprivation. P. CHU*; S. FARAH; S. ALI; A. WAHID; J. C. BRUMBERG. *Queens College, City Univ. of New York, The Grad. Center, CUNY, Queens College, CUNY, The Grad. Center, CUNY, Queens College, CUNY.*

1:00 A100 **569.29** Sex differences in pubertally born cells persist in adult sexually dimorphic regions. J. L. KIM*; M. A. MOHR; L. L. DONCARLOS; S. BREEDLOVE; C. L. JORDAN; C. L. SISK. *Michigan State Univ., Michigan State Univ., Loyola Univ. Chicago.*

2:00 A101 **569.30** Effects of testosterone on hypothalamic-pituitary-adrenal function before, during, and after puberty in male rats. M. GREEN*; M. MCLAREN; T. E. HODGES; C. M. MCCORMICK. *Brock Univ.*

POSTER

570. Adolescent Development: Human Imaging

Theme A: Development

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 A102 **570.01** Dietary DHA and the neural bases of risk taking: Implications for substance abuse. V. L. DARCEY*; B. W. STEVENS; M. F. AVALOS; M. JAWDAT; E. J. ROSE; D. H. FISHBEIN; J. W. VANMETER. *Georgetown Univ., Georgetown Univ. Med. Ctr., Univ. of Maryland Sch. of Med.*

2:00 A103 **570.02** Prenatal stress exposure is associated with altered parietal gray matter volume in healthy adolescents. M. AVALOS*; V. L. DARCEY; B. W. STEVENS; E. J. ROSE; J. VANMETER; D. H. FISHBEIN. *Georgetown Univ. Med. Ctr., Univ. of Maryland Sch. of Med.*

3:00 A104 **570.03** Associations between exposure to alcohol advertising and limbic-frontal activations during an Emotional Counting Stroop task in female adolescents at risk for alcohol misuse. K. R. VIACAVA*; B. W. STEVENS; I. M. PACHECO-COLON; T. N. CLARKE; D. MAYS; L. BIZARRO; D. H. FISHBEIN; J. W. VANMETER. *UFRGS and Georgetown Univ., Georgetown Univ., UFRGS, Univ. of Maryland.*

4:00 A105 **570.04** Cortical and subcortical structural variability in drug naïve adolescents predicts subsequent alcohol use. E. J. ROSE*; V. DARCEY; T. CLARKE; D. ESTEFAN; J. VANMETER; D. FISHBEIN. *Univ. of Maryland Sch. of Med., Georgetown Univ.*

1:00 A106 **570.05** Reductions in prefrontal cortex grey matter predict later initiation of alcohol use during adolescence. B. W. STEVENS*; V. L. DARCEY; T. N. CLARKE; D. L. ESTEFAN; E. J. ROSE; J. W. VANMETER; D. H. FISHBEIN. *Georgetown Univ. Med. Ctr., Univ. of Maryland Sch. of Med.*

2:00 A107 **570.06** Weaker baseline fronto-amygdalar resting state functional connectivity in healthy adolescents who escalate in depression symptoms over time. H. E. STEIN*; G. ALARCÓN; D. V. DEMETER; E. EARL; D. FAIR; B. NAGEL. *Oregon Hlth. and Sci. Univ., Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

3:00 A108 **570.07** EEG correlation in institutionalized adolescents: Long term impact of adverse rearing. J. C. HEVIA*; A. SANZ-MARTÍN; M. GUEVARA; M. HERNÁNDEZ-GONZÁLEZ. *Univ. De Guadalajara, Inst. de Neurociencias, Inst. de Neurociencias, Inst. de Neurociencias.*

4:00 B1 **570.08** Assessment of impulsivity, inhibitory control and alcohol use in preadolescents and adolescents: Students from five schools in Porto Alegre, Brazil. A. R. WILLHELM*; J. C. C. CABRAL; L. M. UGARTE; R. M. M. DE ALMEIDA. *Univ. Federal Do Rio Grande Do Sul.*

1:00 B2 **570.10** Longitudinal sex differences in brain activity during spatial working memory in adolescents. S. A. JONES*; B. J. NAGEL. *Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ.*

2:00 B3 **570.11** *In vivo* mapping of cortical glutamate in early youth. D. R. ROALF*; M. QUARMLEY; R. REDDY NANGA; P. RUPERT; H. HARIHARAN; K. RUPAREL; J. BLAKE; M. A. ELIIOTT; R. REDDY; B. I. TURETSKY. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 B4 **570.12** Neural control of social emotional actions in adolescence. A. TYBOROWSKA*; I. VOLMAN; S. SMEEKENS; I. TONI; K. ROELOFS. *Radboud Univ. Nijmegen, Radboud Univ. Nijmegen, Univ. Col. London.*

4:00 B5 **570.13** Associations between white matter microstructure and gonadal hormone levels are altered in youth with fetal alcohol spectrum disorders (FASD). K. A. UBAN*; M. M. HERTING; J. R. WOZNIAK; E. R. SOWELL. *Children's Hosp. Los Angeles, Univ. of Minnesota, USC.*

1:00 B6 **570.14** During the puberty morphological differences in autism are due to increased gyrification. R. SIUGZDAITE*; H. AERTS; D. MARINAZZO. *Ghent Univ.*

2:00 B7 **570.15** ● Similar maturational trajectories of functional modules in human adolescent brain networks. F. VÁŠA*; P. E. VÉRTES; K. J. WHITAKER; R. ROMERO-GARCIA; A. ALEXANDER-BLOCH; P. KUNDU; A. X. PATEL; R. TAIT; C. OOI; J. SUCKLING; B. INKSTER; P. FONAGY; R. DOLAN; P. B. JONES; I. GOODYER; E. BULLMORE. *Univ. of Cambridge, Natl. Inst. of Mental Hlth., UCLA, The Mount Sinai Hosp., Univ. Col. London, Univ. Col. London, Glaxo-Smith Kline, Cambridgeshire and Peterborough NHS Fndn. Trust.*

3:00 B8 **570.16** Birth weight predicts aberrant striatal intrinsic functional connectivity in preterm born adults. J. G. BÄUML*; M. AVRAM; C. MENG; M. DAAMEN; P. BARTMANN; D. WOLKE; A. WOHLSCHLÄGER; C. SORG. *Technische Univ. München, Univ. of Bonn, Univ. of Warwick.*

4:00 B9 **570.17** The age-effects on topological lateralization of hemispheric brain network from adolescence to adulthood. S. ZHONG*; Y. HE; G. GONG. *Beijing Normal Univ.*

1:00 B10 **570.18** Pubertal status-dependent differential recruitment of ventral striatum and prefrontal cortex during reward processing. S. K. MURRAY*; S. WEI; T. A. NASH; K. M. REDING; T. NGUYEN; P. E. MARTINEZ; D. E. BOYLE; J. M. REUTER; H. A. RAAB; S. M. BRADY; L. K. NIEMAN; S. J. SOLDIN; C. F. ZINK; J. S. KIPPENHAN; P. D. KOHN; J. A. YANOVSKI; P. J. SCHMIDT; K. F. BERMAN. *Section On Integrative Neuroimaging, Clin. & Tr, McGill Univ., Behavioral Endrocrinol. Branch, NIMH, Warren Grant Magnuson Clin. Center, NIH, Program in Developmental Endrocrinol. and Genetics, NICHD, Lieber Inst. for Brain Develop.*

2:00 B11 **570.19** ▲ White matter abnormalities in HIV+ children and associations with processing speed. A. SAREMI*; W. PRASITSUEBSAI; N. JAHANSHAD; T. M. NIR; K. CLIFFORD; L. AURPIBUL; P. M. THOMPSON; K. PRUKSAKAEW; S. LERDLUM; P. VISRUTARATNA; S. J. KERR; T. PUTHANAKIT; R. PAUL; J. ANANWORANICH; V. G. VALCOUR. *USC Stevens Neuroimaging and Informatics Inst., The Thai Red Cross AIDS Res. Ctr., UCSF, Chiang Mai Univ., USC, Chulalongkorn Univ. Hosp., Chiang Mai Univ., Univ. of Missouri, Military HIV Res. Program and Henry M. Jackson Fndn. for the Advancement of Military Med., SEARCH-Thailand.*

3:00 B12 **570.20** Layer-specific comparison of high resolution MRI cortical thickness with the von Economo legacy. L. H. SCHOLTENS*; M. A. DE REUS; M. P. VAN DEN HEUVEL. *Brain Ctr. Rudolf Magnus, UMC Utrecht.*

4:00 B13 **570.21** Adolescent development of structural anterior cingulate cortex connectivity: Meta-analysis of diffusion imaging studies. S. D. LICHENSTEIN*; E. E. FORBES; T. VERSTYNEN. *Univ. of Pittsburgh, Univ. of Pittsburgh Sch. of Med., Carnegie Mellon Univ.*

1:00 B14 **570.22** Age of sign-speech bilingual language exposure and syntactic processing in deaf individuals with cochlear implants using functional near infrared spectroscopy (fnirs). L. PETITTO*; A. STONE; D. ANDRIOLA; C. LANGDON. *Galladet Univ., GALLAUDET UNIVERSITY.*

2:00 B15 **570.23** Exploring the anatomy and genetics of cortical asymmetries in surface area and thickness. B. N. CIPOLLINI*; H. BARTSCH; G. W. COTTRELL. *UC San Diego, UC San Diego.*

3:00 B16 **570.24** Parcellating common neuroanatomical phenotypes across ASD, ADHD, and schizophrenia. M. M. PARK*; A. RAZNAHAN; P. SHAW; N. GOGTAY; J. P. LERCH; M. M. CHAKRAVARTY. *Western Univ., Douglas Mental Hlth. Univ. Inst., Natl. Inst. of Mental Hlth., Natl. Human Genome Res. Inst., Hosp. for Sick Children, McGill Univ.*

4:00 B17 **570.25** Individual structure-function relations within the default-mode network as a result of normal aging. M. AVRAM*; L. PASQUINI; J. BÄUML; V. RIEDL; C. SORG. *Technische Univ. München, Technische Univ. München, Technische Univ. München, Technische Univ. München.*

1:00 B18 **570.26** Neurodevelopmental sex differences in response to emotional faces. J. C. SCOTT; K. RUPAREL; D. H. WOLF; T. SATTERTHWAITE; R. HOPSON; M. QUARMLEY; P. VILLA; R. E. GUR; R. C. GUR*. *Univ. Pennsylvania, Univ. of Pennsylvania, Univ. Pennsylvania.*

2:00 B19 **570.27** The influence of higher order regions on developing visual category specialization in children. J. F. O'RAWE*; A. HUANG; D. KLEIN; H. LEUNG. *Stony Brook Univ.*

3:00 B20 **570.28** Reliability in engagement of maintenance and retrieval brain activation states underlies longitudinal improvements in working memory. D. F. MONTEZ*; D. SIMMONDS; B. LUNA. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 B21 **570.29** Network modularity increases as the "social brain" matures: A gray matter covariance approach. K. FETTICH*; A. O. COHEN; K. S. BREINER; D. DELLARCO; A. GALVAN; B. J. CASEY; L. STEINBERG; J. M. CHEIN. *Temple Univ., Weill Med. Col. of Cornell Univ., UCLA.*

1:00 B22 **570.30** Effects of aging on T1, T2*, and QSM values in the subcortex using 7T MRI. M. C. KEUKEN*; A. SCHAFER; K. BACKHOUSE; S. BEEKHUIZEN; L. HIMMER; A. KANDOLA; J. LAFEBER; L. PROCHAZKOVA; A. TRUTTI; R. TURNER; B. FORSTMANN; P. BAZIN. *UvA, Max Planck Inst. for Human Cognitive and Brain Sci.*

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* Indicates abstract's submitting author

POSTER

571. Amino Acids

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 B23 **571.01** How the inhibitory modulator GABA alters development, behavior and neuronal circuit function in *Drosophila.* D. D MAHMOOD*; N. DABBAIN; J. GRAFF; Z. MAJEED; R. L. COOPER. *Univ. of Kentucky, Univ. of Sulaimani, Emory Univ., Univ. of Salahaddin.*

2:00 B24 **571.02** Quantitative brain-wide mapping of GABAergic neuronal subtypes in mice. Y. KIM*; K. UMADEVI VENKATARAJU; K. PRADHAN; G. FITZGERALD; M. HE; J. LEVINE; Z. HUANG; P. OSTEN. *Cold Spring Harbor Lab., Fudan university.*

3:00 B25 **571.03** SLC1A4 and SLC1A5 mediate transport of D-serine in brain. J. C. FARNSWORTH; G. E. LIND; B. R. LYDA; N. R. NATALE; M. P. KAVANAUGH*. *Univ. of Montana, Univ. of Montana, Univ. of Montana.*

4:00 B26 **571.04** Role of ventral tegmental area glutamate neurons in behavioral reinforcement. J. YOO*; V. ZELL; J. WU; A. JOHNSON; R. RESSLER; M. A. SHENASA; C. A. PUNTA; K. H. FIFE; N. A. GUTIERREZ-REED; T. S. HNASKO. *UCSD.*

1:00 B27 **571.05** Enzymatic biosensor measurements of dynamic, light-evoked release of the NMDA receptor coagonist D-serine in the retina. E. C. GUSTAFSON*; S. MARINESCO; R. F. MILLER. *Univ. Minnesota, Univ. Lyon 1.*

2:00 B28 **571.06** Afferent inputs of transmitter-defined neuronal populations of the ventral tegmental area. L. FAGET*; J. DUAN; R. RESSLER; F. OSAKADA; E. M. CALLAWAY; T. S. HNASKO. *UCSD, Salk Inst. for Biol. Studies.*

3:00 B29 **571.07** A neurotensin-producing cell population of the subiculum forms glutamatergic synapses with both principal neurons of the entorhinal cortex and dentate gyrus. N. I. CILZ*; S. LEI. *Univ. of North Dakota.*

4:00 B30 **571.08** The enzyme glutamate dehydrogenase is important for glutamate entrance in the tricarboxylic acid cycle in isolated nerve terminals. M. C. HOHNHOLT*; H. S. WAAGEPETERSEN. *Univ. of Copenhagen.*

1:00 B31 **571.09** ● Actions of 3-hydroxykynurenine (3-HK), a tryptophan metabolite, on synaptic transmission in the mouse hippocampus and thalamus. R. T. NGOMBA*; S. A. NEALE; S. L. S. DUNN; R. SCHWARCZ; T. E. SALT. *IRCCS Neuromed, UCL Inst. of Ophthalmology, Neurexpert Ltd, Dept. of Psychiatry, Univ. Maryland Sch. Med.*

2:00 B32 **571.10** ● High-throughput detection of Glycine in biological samples based on a novel enzymatic assay. G. E. CHAVARRIA; K. C. SCHMITT*; N. TIBREWAL; S. SADDAR; P. SAINI; G. TCHAGA; G. YAN. *Biovision.*

3:00 B33 **571.11** Molecular mechanisms of neuroprotection against hypoxia in a hyperglutamatergic state and the role of mitochondrial K+ channels and HIF1a. E. K. MICHAELIS*; D. HUI; R. PAL; M. L. MICHAELIS; X. WANG. *Univ. Kansas.*

POSTER

572. Neurotrophins

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 B34 **572.01** Functions of novel RET isoforms in the nervous system. N. A. GABRESKI*; S. S. NOVAKOVA; J. VAGHASIA; B. A. PIERCHALA. *The Univ. of Michigan, The Univ. of Michigan.*

2:00 B35 **572.02** Withdrawn.

3:00 B36 **572.03** Identification of nascent proteins synthesized locally in the axons of cultured rat cortical neurons. C. WU*. *Natl. Tsing Hua Univ.*

4:00 B37 **572.04** BDNF and TrkB are regulated by both pre- and postsynaptic activity and enhance presynaptic cPKC-betaI to modulate neuromuscular synaptic function. M. A. LANUZA*; E. HURTADO; L. NADAL; T. OBIS; A. SIMON; V. CILLEROS; N. GARCIA; M. M. SANTAFÉ; M. TOMÀS; J. TOMÀS. *Univ. Rovira i Virgili.*

1:00 B38 **572.05** Dopamine function in ErbB4 mutant mice. M. SKIRZEWSKI*; I. KARAVANOVA; A. BUONANNO. *NIH/NICHD.*

2:00 B39 **572.06** Phenotypic assessment of mice with a loss of TrkB in serotonergic neurons. A. STEINZEIG / SHTEINTCAIG*; M. PRIYADARSHINI SAHU; E. CASTRÉN. *Neurosci. Center, Univ. of Helsinki.*

3:00 B40 **572.07** A p75/Ret complex mediates programmed cell death in sympathetic neurons. C. R. DONNELLY*; N. A. GABRESKI; O. R. STEPHENS; M. A. CHOWDHURY; B. A. PIERCHALA. *Univ. of Michigan.*

4:00 B41 **572.08** A time course of inflammation-driven changes in synaptic plasticity: The combined effects of aging and an immune challenge lead to long-lasting deficits in L-LTP in hippocampal area CA1. N. TANAKA*; G. P. CORTESE; R. M. BARRIENTOS; S. F. MAIER; S. L. PATTERSON. *Temple Univ., Columbia Univ., Unversity of Colorado.*

1:00 B42 **572.09** Stimulus-specific combinatorial functionality of neuronal c-fos enhancers. J. JOO*; T. KIM. *Univ. of Texas Southwestern Med. Ctr.*

2:00 B43 **572.10** Inhibition of GABAregic synapses removes exercise-induced expression of nerotrophins in the motor cortex. H. MAEJIMA*; N. KANEMURA. *Hokkaido Univ., Saitama Prefectural Univ.*

3:00 B44 **572.11** Physical exercise-induced improvements of behavior and neuroplasticity are impaired in the BDNF Val66Met knock-in mice. A. IERACI; A. I. MADAIO; A. MALLEI*; F. S. LEE; M. POPOLI. *Univ. degli Studi di Milano, Cornell Univ.*

4:00 B45 **572.12** Probing the novel relationship between a transcriptional regulator of the cell cycle, Late Simian Virus 40 Factor, neurogenesis and epilepsy. K. HOKENSON*; U. HANSEN; A. R. BROOKS-KAYAL; S. J. RUSSEK. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Boston Univ., Univ. of Colorado Denver - Anschutz Med. Campus.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 B46 **572.13** Physiological role of TGF-β1 in hippocampal synaptic plasticity and memory. D. PUZZO*; W. GULISANO; C. A. GUIDA; A. A. R. IMPELLIZZERI; F. DRAGO; A. PALMERI; F. CARACI. *Univ. of Catania.*

2:00 B47 **572.14** Generation and characterization of a brain derived neurotrophic factor (BDNF rs6265) knockin rat. C. E. SORTWELL*; C. J. KEMP; J. W. LIPTON; A. COLE-STRAUSS; F. P. MANFREDSSON; N. M. KANAAN; M. F. DUFFY; N. MARCKINI; T. J. COLLIER. *Michigan State Univ.*

3:00 B48 **572.15** Loss of brain-derived neurotrophic factor (BDNF) signalling in cortico-limbic interneurons contributes to synaptic imbalance and abnormal social behaviour in mice. S. TAN*; Y. XIAO; Y. YEN; H. YIN; T. W. SOONG; H. S. JE. *Duke-NUS Grad. Med. Sch., NUS Grad. Sch. for Integrative Sci. and Engin., Yong Loo Lin Sch. of Medicine, Natl. Univ. of Singapore, Duke Inst. for Brain Sci.*

4:00 B49 **572.16** BDNF levels mediate constitutive activity of ERα and ERβ, but not GPER in neuro-2A cells. B. O. OGUNLADE*; M. R. DESHOTELS; E. SPINU; A. G. ROBINSON; K. MANAYE; C. M. FILIPEANU. *Howard Univeersity, Louisiana state Univ., Howard Univ., Howard Univ., Howard Univ.*

1:00 B50 **572.17** Endocannabinoid-BDNF interactions at cortical excitatory synapses. M. L. YEH*; R. SELVAM; E. S. LEVINE. *Univ. of Connecticut Hlth. Ctr.*

2:00 B51 **572.18** SNAREs mediate BDNF secretion essential for the development of callosal axons. M. SHIMOJO*; J. COURCHET; S. PIERAUT; N. TORABI-RANDER; M. HIGUCHI; F. POLLEUX; A. MAXIMOV. *Natl. Inst. of Radiological Sci., The Scripps Res. Inst., Zuckerman Mind Brain Behavior Inst. and Kavli Inst. for Brain Sci.*

3:00 B52 **572.19** Effects of BDNF, proBDNF and fluvoxamine on NO release from activated rodent microglial cells. Y. MIZOGUCHI*; Y. HARAGUCHI; H. NABETA; Y. IMAMURA; A. MONJI. *Dept. Psychiatry, Fac. Medicine, Saga Univ.*

4:00 B53 **572.20** Mesocortical BDNF-mediated disinhibition of mPFC GABA neurons contributes to neuropathic pain. F. FENG*; W. SHI; X. HONG; Y. LI; J. YANG; H. WANG; L. WANG; X. WANG; H. DING; H. ZHANG; J. CAO. *Xuzhou Med. Col.*

1:00 B54 **572.21** Novel pharmacological modulators of Arc/Arg3.1 protein stability. J. LALONDE*; S. A. REIS; S. J. HAGGARTY. *Mass. Gen. Hosp. – Harvard Med. Sch.*

2:00 B55 **572.22** Expression of TRPV1 regulated by STAT5 in hippocampus. L. HUANG*; J. LIU; Y. WANG; H. YIN; C. ZHANG; S. YU; Y. TANG. *Chengdu Univ. of Traditional Chinese Med.*

POSTER

573. Long-Term Potentiation Signaling Mechanisms I

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 B56 **573.01** Compensation for PKMζ function in spatial long-term memory in mutant mice. C. HSIEH*; P. TSOKAS; T. C. SACKTOR. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

2:00 B57 **573.02** miR-204 regulates surface expression of NMDA receptor through repressing EphB2 in mouse hippocampal neurons. K. KIM*; H. NAM; C. DANKA; K. KIM. *DGIST.*

3:00 B58 **573.03** An NMDA receptor S1166A KI mouse exhibits impaired synaptic plasticity at CA1 synapses. M. W. PORCH*; J. HWANG; R. S. ZUKIN; A. E. CHÁVEZ. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

4:00 B59 **573.04** Methylphenidate enhance long-term potentiation in CA3-CA1 hippocampal synapse involving insertion of functional AMPA receptors. G. UGARTE; C. CARVALLO; C. ROZAS; D. CONTRERAS; R. FARÍAS; R. DELGADO; M. ZEISE; B. E. MORALES*. *Univ. of Santiago.*

1:00 B60 **573.05** Regulation of NMDA receptor 2B expression in layer IV barrel cortex by CaMKII. S. KO*; S. CHUNG. *Yonsei Univ.*

2:00 B61 **573.06** Stimulus parameters determine the role of PKA, protein synthesis and CP-AMPARs in LTP at hippocampal CA1 synapses. P. PARK*; B. KAANG; G. L. COLLINGRIDGE. *Univ. of Bristol, Seoul Natl. Univ., Univ. of Toronto.*

3:00 B62 **573.07** Modeling the signaling mode of calcium influx through L-type calcium channels to the nucleus. X. LI*; W. HOLMES. *Ohio Univ., Ohio.*

4:00 B63 **573.08** Exploring Arc protein complexes in SH-SY5Y neuroblastoma cells. O. NIKOLAIENKO; C. R. BRAMHAM*. *Univ. of Bergen.*

1:00 B64 **573.09** Dopaminergic signalling regulates synaptic cooperation and competition of associative plasticity through differential activation of extracellular signal-regulated kinases (ERK1/2). M. S. SHETTY*; S. GOPINADHAN; S. SAJIKUMAR. *Natl. Univ. of Singapore, Life Sci. Inst. (LSI).*

2:00 B65 **573.10** CaMKII is required for long-term memory of conditioned taste aversion and its modulation of neocortical LTP. Y. JUAREZ MUÑOZ*; M. L. ESCOBAR. *Facultad De Psicologia, UNAM.*

3:00 B66 **573.11** The role of autophosphorylation at Thr286 of CaMKII in single dendritic spines during long-term potentiation. J. CHANG*; P. PARRA-BUENO; R. YASUDA. *Max Planck Florida Inst., Duke Univ.*

4:00 B67 **573.12** Hebbian long-term potentiation in feed-forward hippocampal interneurons. M. MERCIER*; D. KULLMANN. *Univ. Col. London.*

1:00 B68 **573.13** CaMK2G, an intellectual disability candidate gene, is critical for spatial learning by controlling activity-dependent BDNF synthesis in the hippocampus. H. MA*; S. SANCHEZ; I. KATS; B. SUUTARI; R. TSIEN. *New York Univ.*

2:00 B69 **573.14** Role and regulation of CRTC1 phosphorylation during activity-dependent synaptic plasticity. M. DESALVO*; T. CH'NG; A. VASHISHT; J. WOHLSCHLEGEL; K. MARTIN. *UCLA, Nanyang Technological Univ., Nanyang Technological Univ., UCLA Brain Res. Inst.*

3:00 B70 **573.15** Compensation for PKMζ function in late-LTP in mutant mice. P. TSOKAS*; T. C. SACKTOR. *SUNY Downstate Med. Center, Brooklyn, NY, SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
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* Indicates abstract's submitting author

4:00 B71 **573.16** Proteasome inhibition lowers the threshold for CREB phosphorylation and L-LTP induction. S. V. BACH*; A. VASHISHT; J. W. MORGAN; T. K. SMITH; A. N. HEGDE. *Wake Forest Univ.*

1:00 B72 **573.17** Abnormal mTOR signaling contributes to Ube3A deficiency-induced impairment in hippocampal synaptic plasticity and hippocampus-dependent memory. J. SUN*; Y. LIU; J. TRAN; P. O'NEAL; X. HAO; M. BAUDRY; X. BI. *Western Univ. of Hlth. Sci.*

2:00 B73 **573.18** An Arc-regulating chromatin modifying complex controls neuronal activity-dependent gene expression. N. E. OEY*; H. LEUNG; H. M. A. VANDONGEN; A. M. J. VANDONGEN. *Duke-Nus Grad. Med. Sch.*

POSTER

574. Homeostatic Plasticity II

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 B74 **574.01** ▲ Kappa opioid receptor signaling in hippocampal gain control and temporal lobe epilepsy. R. L. DUNN*; B. N. QUEENAN; P. A. FORCELLI; D. T. S. PAK. *Georgetown Univ., Johns Hopkins Sch. of Med.*

2:00 B75 **574.02** Dynamic gap junction networks regulate ipRGC intra-retinal signaling in the developing retina. D. ARROYO*; M. B. FELLER. *Univ. of California Berkeley, Univ. of California Berkeley.*

3:00 B76 **574.03** Theoretical model of TMS-cortical plasticity. P. K. FUNG*; P. A. ROBINSON. *SUNY Downstate Med. Ctr., Univ. of Sydney, Univ. of Sydney, Ctr. for Integrated Res. and Understanding of Sleep.*

4:00 B77 **574.04** Modulating hippocampal plasticity with *in vivo* brain stimulation. R. JANKORD*; J. ROHAN. *Air Force Res. Lab., NAMRU-D.*

1:00 B78 **574.05** Neurons that innervate a single target adopt a different strategy for maintaining synaptic strength than those neurons that innervate multiple targets. Z. LU*; J. BORYCZ; A. CHOUHAN; Z. LU; I. MEINERTZHAGEN; G. MACLEOD. *Florida Atlantic Univ., Dalhousie Univ., Baylor Col. of Med., Florida Atlantic Univ.*

2:00 B79 **574.06** Continuously recorded neurons reveal sleep/wake dynamics of firing rate homeostasis in freely behaving animals. K. B. HENGEN*; J. N. MCGREGOR; S. D. VAN HOOSER; D. B. KATZ; G. G. TURRIGIANO. *Brandeis Univ., Brandeis Univ.*

3:00 B80 **574.07** Sleep disruption alters hippocampal filtering dynamics. E. WALLACE*; R. K. MAGANTI; M. V. JONES. *Univ. of Wisconsin - Madison, Univ. of Wisconsin, Univ. of Wisconsin.*

4:00 B81 **574.08** Mechanisms underlying the reversibility of synaptic homeostasis. C. J. NEFF*; C. FRANK. *Univ. of Iowa, Univ. of Iowa.*

1:00 B82 **574.09** Nicotinic receptor modulation triggers bidirectional synaptic scaling in embryonic motoneurons *in vivo.* C. E. GONZALEZ-ISLAS*; M. GARCIA-BEREGUIAIN; P. A. WENNER. *Emory Univ. Sch. Med.*

2:00 B83 **574.10** Glutamatergic signaling regulates potentiation of specific GABAergic synapse. C. Q. CHIU*; M. J. HIGLEY. *Yale Univ. Sch. of Med.*

3:00 B84 **574.11** Quantitative ultrastructural dissection of cryo-fixed synapses using high-resolution electron tomography. C. TAO*; Y. LIU; R. SUN; B. ZHANG; J. ZHANG; P. LAU; Z. ZHOU; G. BI. *Univ. of Sci. and Technol. of China, UCLA.*

4:00 B85 **574.12** Excitability modulation of CA1 neuron by TRPV1 channels activation. C. A. ROZAS*; C. MAUREIRA; R. DELGADO; B. MORALES. *Univ. of Santiago de Chile, Univ. de Chile.*

1:00 B86 **574.13** Homeostatic regulation of presynaptic neurotransmitter release in the vertebrate neuromuscular synapse. A. E. HOMAN*; G. E. RIBBLE; S. D. MERINEY. *Univ. of Pittsburgh.*

2:00 B87 **574.14** Evidence that mctp is presynaptic calcium sensor necessary for robust homeostatic plasticity. O. GENC; D. K. DICKMAN; W. MA; A. TONG; G. W. DAVIS*. *Univ. California-SF, USC.*

POSTER

575. The Dynamic Synapse

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 B88 **575.01** Cocaine occludes bidirectional synaptic plasticity between medium-sized spiny neurons of the nucleus accumbens and ventral pallidum projection neurons. M. CREED*; C. LÜSCHER. *Univ. of Geneva.*

2:00 B89 **575.02** Regulation of local calcium dynamics at a reciprocal synapse. C. JUAN*; M. HENDRICKS. *Dept. of Biology, IPN, McGill Univ.*

3:00 B90 **575.03** A possible role for REM sleep in synaptic plasticity: Opposed changes in the CA3-CA1 and hippocampus-to-Nucleus Accumbens connections during sleep states. J. CARPONCY*; N. FRAIZE; P. LIBOUREL; G. MALLERET; P. SALIN; R. PARMENTIER. *CRNL - UMR 5292, Equipe SLEEP, CRNL.*

4:00 B91 **575.04** Differential effects on somatic and dendritic inhibition in PFC layer V pyramidal cells by emotional trauma. L. LIU; W. ITO; A. Y. MOROZOV*. *Virginia Tech. Carilion Res. Inst.*

1:00 B92 **575.05** Regulation of synaptic plasticity by the dark/light cycle. K. HE*; S. HATTAR; A. KIRKWOOD. *The Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 B93 **575.06** Hippocampal theta rhythm provides different modulation of long-term potentiation and spike excitability at the basal and apical dendrites of hippocampal CA1 pyramidal cells. C. S. H. LAW; L. LEUNG*. *Univ. Western Ontario, Univ. Western Ontario.*

3:00 B94 **575.07** The effect of tissue on current shunting during anodal tDCS. M. P. JACKSON*; W. TUCKER; R. JANKORD. *Wright Patterson AFB.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 B95 **575.08** Anodal transcranial direct current stimulation improves hippocampal-dependent learning and memory by boosting synaptic plasticity through epigenetic modulation of Bdnf gene. M. V. PODDA*; S. COCCO; A. MASTRODONATO; S. FUSCO; L. LEONE; S. A. BARBATI; C. COLUSSI; M. MAINARDI; C. RIPOLI; C. GRASSI. *Inst. of Human Physiology, Univ. Cattolica, Natl. Res. Council.*

1:00 B96 **575.09** The effects of transcranial magnetic stimulation on single neurons: Evidence for induced changes in synaptic function and excitability. N. MATHESON*; J. B. H. SHEMMELL; P. W. BROWNJOHN; J. N. J. REYNOLDS. *Univ. of Otago, Univ. of Otago.*

2:00 B97 **575.10** Coordinated plasticity at inhibitory and excitatory synapses. T. RAVASENGA; A. BARBERIS*. *ISTITUTO ITALIANO DI TECNOLOGIA.*

3:00 B98 **575.11** Morphine induces synaptic impairment in cultured hippocampal neurons: Reversal with platelet-derived growth factor. Y. CAI*; H. LIU; H. XIONG; J. ARIKKATH; S. BUCH. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

4:00 B99 **575.12** Anxiety elicits synaptic potentiation through activation of AMPA-receptor subunit GluA3. M. RENNER*; E. H. H. ALBERS; N. GUTIERREZ-CASTELLANOS; N. R. REINDERS; T. R. LODDER; C. I. DE ZEEUW; H. W. KESSELS. *Netherlands Inst. For Neurosci.*

1:00 B100 **575.13** Electrical theta-burst stimulation modulates interhemispheric inhibition after photothrombotic stroke. L. J. BODDINGTON*; J. P. GRAY; J. N. J. REYNOLDS. *Univ. of Otago.*

2:00 B101 **575.14** Functional characterization of SNPs in the CPG2 region of human SYNE1 with potential relevance to Bipolar Disorder. M. A. RATHJE*; S. LOEBRICH; E. NEDIVI. *MIT.*

3:00 B102 **575.15** ● Subchronic vortioxetine increases levels of Arc protein and phosphorylation of S845-GluR1 in the mouse frontal cortex - a putative mechanism underlying its pro-cognitive properties. P. KUGATHASAN; M. GULINELLO; C. SÁNCHEZ; Y. LI*. *Lundbeck Res. USA, Albert Einstein Col. of Med.*

POSTER

576. Oscillations and Synchrony: Unit Studies

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 B103 **576.01** Functional cannabinoid-induced isolation of CA1 from CA3 in rodent hippocampus. R. SANDLER*; D. FETTERHOFF; T. BERGER; D. SONG; R. HAMPSON; V. MARMARELIS. *USC, Wake Forest Univ.*

2:00 B104 **576.02** Online modulation of hippocampal oscillatory activity *in vivo.* D. A. KUZMIN*; E. C. NICHOLSON; M. WESTON; D. M. KULLMANN. *Univ. Col. London.*

3:00 B105 **576.03** GABAergic interneuron subtypes differentially regulate beta and gamma band oscillatory activity of primary visual cortex in awake mice. G. CHEN*; M. J. RASCH; Q. YE; X. H. ZHANG. *Inst. of Neuroscience,Chinese Acad. Of Scien, State Key Lab. of Cognitive Neuroscience&Learning.*

4:00 B106 **576.04** Membrane potential dynamics of spontaneous and visually evoked gamma rhythmicity in V1 of awake mice. Q. PERRENOUD*; C. M. A. PENNARTZ; L. J. GENTET. *Yale Univ. Sch. of Medecine, Univ. of Amsterdam, Univ. Lyon 1.*

1:00 B107 **576.05** Phase-locked inhibition, but not excitation, underlies hippocampal ripple oscillations in awake mice *in vivo.* J. GAN; S. WENG; A. J. PERNÍA-ANDRADE; J. CSICSVARI; P. JONAS*. *IST Austria.*

2:00 B108 **576.06** Martinotti cells defined by Chrna2 coordinate layer V pyramidal cell activity. M. M. HILSCHER*; R. N. LEÃO; K. E. LEÃO; K. KULLANDER. *Uppsala Univ., Federal Univ. of Rio Grande do Norte.*

3:00 B109 **576.07** Criticality is non-stationary in cortical neuronal networks. G. HAHN*; A. PONCE-ALVAREZ; C. MONIER; G. BENVENUTI; A. KUMAR; F. CHAVANE; G. DECO; Y. FRÉGNAC. *Univ. Pompeu Fabra, UNIC/CNRS, INT, KTH.*

4:00 B110 **576.08** Dissecting parvalbumin-cell receptor mechanisms underlying ketamine action. N. PICARD; H. H. LEE*; A. E. TAKESIAN; M. FAGIOLINI; T. K. HENSCH. *Boston Children's Hosp., Boston Children's Hosp., Boston Children's Hosp.*

1:00 B111 **576.09** Cell-type specific microcircuitry in the CA3 region of the hippocampus. D. L. HUNT*; N. SPRUSTON. *Howard Hughes Med. Inst.*

2:00 B112 **576.10** Electrical connectivity overrides individual neuron dynamics dictating homogenous network behavior. A. S. STAGKOURAKIS*; C. THÖRN PEREZ; A. HELLYSAZ; R. AMMARI; C. BROBERGER. *Karolinska Institutet.*

3:00 C1 **576.11** Dynamical constraints on improving coding fidelity through the `sign rule'. B. KRIENER*; I. FIETE. *Univ. of Texas at Austin.*

POSTER

577. Modulation of Neuronal Firing Properties I

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 C2 **577.01** NMDA receptor and protein kinase A signaling modulates firing properties of cerebellar stellate cells. R. ALEXANDER*; D. BOWIE. *McGill Univ., McGill Univ., McGill Univ.*

2:00 C3 **577.02** Excitatory and inhibitory innervation of *in vivo* recorded and labeled individual dopaminergic neurons of the ventral tegmental area. T. MONTERO*; C. GONZALEZ-CABRERA; P. HENNY. *Pontificia Univ. Catolica De Chile.*

3:00 C4 **577.03** Physiology and ion channel expression of axons of amygdala projection neurons. J. GRUNDEMANN*; S. KRABBE; E. VOGEL; K. BYLUND; C. MÜLLER; V. SENN; A. LUTHI. *Friedrich Miescher Inst., Ernst Struengmann Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 C5 **577.04** Investigating action potential initiation and propagation with dynamic clamp: Sensitivity to parameters. M. A. NAVARRO*; S. L. DEBS; B. R. BERIGAN; T. G. CARRON; A. M. WOOD; L. S. MILESCU. *Univ. of Missouri, Whitman Col., Washington State Univ.*

1:00 C6 **577.05** Neurons in rat retrosplenial cortex display heterogeneity of firing type. A. N. NYE*; C. SONG; J. R. MOYER, Jr. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee.*

2:00 C7 **577.06** Reconciling neuromodulation and homeostasis. T. O'LEARY*; G. DRION; A. FRANCI; E. MARDER. *Volen Ctr. For Complex Systems, Brandeis Univ., Univ. Nacional Autónoma de México.*

3:00 C8 **577.07** Dopamine modulation of motor cortical microcircuit. M. LE BON-JEGO*; A. MOHANRAJ; A. TAUPIGNON; J. BAUFRETON. *Univ. De Bordeaux.*

4:00 C9 **577.08** Linking the electrophysiological diversity of mammalian neurons to gene expression. S. TRIPATHY*; L. TOKER; D. TEBAYKIN; O. MARCARCI; P. PAVLIDIS. *Univ. of British Columbia.*

1:00 C10 **577.09** Paradoxical effects of A-type potassium currents on neuron FI curves. G. DRION*; T. O'LEARY; E. MARDER. *Brandeis Univ.*

2:00 C11 **577.10** The depolarized after-potential following the spike in unmyelinated axons in the CNS reduces conduction failures occurring at fever-like temperatures. D. PEKALA; H. SZKUDLAREK; M. RAASTAD*. *Emory Univ. Sch. of Med., Jagiellonian Univ.*

3:00 C12 **577.11** Size and dendritic localization of the axon initial segment correlates with *in vivo* spontaneous firing of individual substantia nigra dopaminergic neurons. P. HENNY*; R. C. MEZA. *Pontificia Univ. Catolica de Chile.*

4:00 C13 **577.12** Metabolic constraints on neuronal signaling. M. L. GERTZ*; Z. GREGURIC FERENCEK; Z. OBAIDA; J. R. CRESSMAN, Jr. *George Mason Univ.*

1:00 C14 **577.13** The roles of Kv2 channels in regular and burst firing of action potentials in layer 5a and 5b neocortical pyramidal neurons. G. S. NEWKIRK*; D. PATHAK; N. C. DEMBROW; R. C. FOEHRING; W. J. SPAIN. *Univ. of Washington, Univ. of Tennessee, VA Epilepsy Ctr. of Excellence.*

2:00 C15 **577.14** Genetic deletion of the sodium channel beta four subunit attenuates the Purkinje neuron resurgent sodium current and evoked firing frequency. J. L. RANSDELL*; P. M. ALLEN; J. M. NERBONNE. *Washington Univ.*

3:00 C16 **577.15** Chronic intermittent hypoxic preconditioning in juvenile rats increases the intrinsic excitability of RVLM presympathetic neurons in response to acute hypoxia. M. KARLEN-AMARANTE; D. ACCORSI-MENDONCA*; C. E. L. ALMADO; D. J. A. MORAES; B. H. MACHADO. *Univ. of Sao Paulo, Univ. São Paulo.*

4:00 C17 **577.16** Adaptation of the excitability of CA1 neurons to chronic inactivity. D. KARMELIC*; V. PALMA; M. SANHUEZA. *Univ. De Chile.*

1:00 C18 **577.17** Postnatal role of sox6 on maturation and function of cortical parvalbumin-expressing interneurons. H. MUNGUBA*; J. N. CARRIÇO; S. NILSSON; P. OBERST; A. B. MUNOZ-MANCHADO; R. BATISTA-BRITO; G. J. FISHELL; G. DI CRISTO; J. HJERLING-LEFFLER. *Karolinska Institutet, Univ. de Montréal, Yale Univ., New York Univ.*

POSTER

578. Glia, *In Vivo* Approaches

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 C19 **578.01** Alteration to cerebral hemodynamics modifies astrocytes Ca^{2+} activity in awake, behaving mice. C. T. TRAN*; G. GORDON. *Univ. of Calgary.*

2:00 C20 **578.02** Glial involvement in transcranial direct current stimulation (tDCS)-induced plasticity. H. MONAI*; M. OHKURA; M. TANAKA; K. MIKOSHIBA; S. ITOHARA; J. NAKAI; Y. IWAI; H. HIRASE. *RIKEN BSI, Saitama Univ.*

3:00 C21 **578.03** The influence of astrocytic vesicular release on cognitive function. J. F. OLIVEIRA*; V. M. SARDINHA; S. GUERRA-GOMES; G. TAVARES; J. CORREIA; M. MARTINS; N. SOUSA. *ICVS/3B's Associate Lab, Minho Univ., Life and Hlth. Sci. Res. Inst. (ICVS).*

4:00 C22 **578.04** Role of P2X7 receptor/HIF-1α signal pathway in astrocyte-mediated ischemic tolerance. Y. HIRAYAMA*; Y. IKEDA-MATSUO; S. KOIZUMI. *Dept. Liaison Academy, Sch. Med., Univ. Yamanashi, Dept. Neuropharmacol., Interdisciplinary Grad. Sch. Med., Univ. Yamanashi, Univ. Kitasato.*

1:00 C23 **578.05** 7.0 Tesla MRI reveals electrostatic environment of the glia limitans. K. SUZUKI; K. YAMADA; Y. SUZUKI; I. L. KWEE; T. NAKADA*. *Brain Res. Inst, Univ. of Niigata, Univ. of California, Davis.*

2:00 C24 **578.06** Increased expression of astrocytic connexins in AQP4 knockout mice. S. KATOOZI*; L. M. A. CAMASSA; S. RAHMANI; H. B. BOLDT; O. P. OTTERSEN; M. AMIRY-MOGHADDAM. *Univ. of Oslo/ Inst. of Basic Med. Sci.*

3:00 C25 **578.07** 3D modeling, tissue reconstruction, and quantification of astrocyte distribution in the adult mouse CNS at molecular resolution with intact thick tissue matter. R. G. SATTLER*; S. J. MILLER; J. D. ROTHSTEIN. *Johns Hopkins Univ.*

4:00 C26 **578.08** Establishing a novel two-photon imaging approach to access spinal motoneurons *in vivo.* L. P. CARTAROZZI*; A. SCHELLER; F. KIRCHHOFF; A. L. R. OLIVEIRA. *UNICAMP, Universitätsklinikum des Saarlandes, UNICAMP.*

1:00 C27 **578.09** Vessel-associated glioma cells co-opt vascular regulation. I. KIMBROUGH*; A. HONASOGE; L. CHAUNSALI; H. SONTHEIMER. *Univ. of Alabama At Birmingham.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 C28 **578.10** ● The time course of the glial reactivity to deep brain stimulation. A longitudinal study of DBS in the Goettingen Minipig brain. D. ORLOWSKI*; A. MICHALIS; A. N. GLUD; A. R. KORSHØJ; L. M. FITTING; T. W. MIKKELSEN; A. MERCANZINI; A. JORDAN; A. DRANSARD; J. C. H. SØRENSEN. *Dept. of Clin. Medicine, Aarhus Univ., Aleva Neurotherapeutics SA.*

3:00 C29 **578.11** Subcellular organization of the orientation map in visual cortical astrocytes. M. LÓPEZ-HIDALGO; J. SCHUMMERS*. *Max Planck Florida Inst.*

4:00 C30 **578.12** Behavioral characterization of astrocyte Gs conditional knockout mice. A. MADAYAG*; K. M. BOYT; K. D. MCCARTHY. *UNC Chapel Hill.*

POSTER

579. Tau in Cellular and Biochemical Models

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 C31 **579.01** Longitudinal *in vivo* imaging of tau pathology, microglial activation and neuronal loss in a mouse model of tauopathy. N. SAHARA*; A. ISHIKAWA; M. TOKUNAGA; T. MINAMIHISAMATSU; J. MAEDA; M. SHIMOJO; M. ONO; S. UCHIDA; I. MATSUMOTO; H. TAKUWA; M. ZHANG; T. SUHARA; M. HIGUCHI. *Natl. Inst. of Radiological Sci.*

2:00 C32 **579.02** A cellular model of tau-mediated NMDA receptor dysfunction. E. E. PEREZ SOLIS*; J. SEGOVIA-VILA; U. GARCÍA. *CINVESTAV.*

3:00 C33 **579.03** Numb regulates Tau levels and axonal homeostasis in mouse retinal ganglion cells. M. LACOMME*, ESQ; J. CAI; M. CAYOUETTE. *Inst. De Recherche Clinique De Montréal, Dept. of Medicine, Univ. de Montréal, Anat. and Cell Biol. department, McGill Univ.*

4:00 C34 **579.04** Brain aggregates; an effective *in vitro* cell culture system for drug screening targeting neurodegenerative diseases. M. AHN*; F. KALUME; A. OEHLER; R. PITSTICK; G. CARLSON; S. DEARMOND. *UCSF, Universtiy of Washington, McLaughlin Res. Inst.*

1:00 C35 **579.05** Extracellular tau oligomers induce mislocalization of endogenous neuronal tau and axonal transport deficits. E. M. SWANSON*; L. MCMAHON; L. BRECKENRIDGE; S. SOM; G. S. BLOOM. *Univ. of Virginia.*

2:00 C36 **579.06** Selective involvement of the septo-hippocampal fiber tract and upregulation of acetylcholinesterase in tauopathy model mice. Y. MOTOI*; Y. HARA; K. HIKISHIMA; H. MIZUMA; H. ONOE; S. MATSUMOTO; H. OKANO; S. AOKI; N. HATTORI. *Juntendo Univ. Sch. Med., Keio Univ. Sch. of Med., RIKEN Ctr. for Life Sci. Technologies.*

3:00 C37 **579.07** Tauopathy: Discovery of small molecule modulators of tau phenotypes in human iPSC-derived neuronal models of Frontotemporal Degeneration. M. SILVA*; C. CHENG; S. REIS; C. TAU; D. LUCENTE; B. DICKERSON; S. J. HAGGARTY. *Massachusetts Gen. Hosp., Tau Consortium, Massachusetts Gen. Hosp.*

4:00 C38 **579.08** ● Synaptic contacts enhance cell-to-cell tau pathology propagation. S. C. CALAFATE*; B. DE STROOPER; J. DE WIT; P. VESTREKEN; D. MOECHARS. *Janssen Pharmaceutica, VIB Ctr. for the Biol. of Dis.*

1:00 C39 **579.09** Tau45-230 forms neurotoxic aggregates in Alzheimer's disease and related disorders. A. B. FERREIRA*; A. E. LANG. *Northwestern Univ.*

2:00 C40 **579.10** ● Modifiers of tau oligomer internalization in human neurons derived from iPSCs. M. USENOVIC*; S. NIROOMAND; J. J. RENGER; S. PARMENTIER-BATTEUR. *Merck & Co.*

3:00 C41 **579.11** Exploring the molecular overlap in the brain and plasma of repetitive mTBI and AD mouse models using proteomic technology. J. O. OJO*. *The Roskamp Inst.*

4:00 C42 **579.12** Overexpression of Tau protein induces a dispersion of the Golgi apparatus in neuroblastoma cells. F. GARCIA-SIERRA*; F. RODRÍGUEZ-CRUZ; F. M. TORRES-CRUZ; J. ESCOBAR-HERRERA; G. BASURTO-ISLAS. *Dept. of Cell Biology, CINVESTAV- IPN, CINVESTAV- IPN, Univ. Autonoma Metropolitana.*

1:00 C43 **579.13** ● Tau antibody-mediated prevention of seeding of tau pathology and associated toxicity. E. E. CONGDON*; D. SHAMIR; H. R. B. SAIT; S. RASOOL; E. M. SIGURDSSON. *New York Univ. Sch. of Med., New York Univ. Sch. of Med., New York Univ. Sch. of Med.*

2:00 C44 **579.14** ● Antibodies targeting truncated tau protein reduce tau pathology in primary neuronal and mixed cortical cultures. S. R. MODAK; M. SOLESIO; S. KRISHNASWAMY; E. E. CONGDON; E. M. SIGURDSSON*. *New York Univ. Sch. of Med., New York Univ. Sch. of Med.*

3:00 C45 **579.15** ● Tau antibodies reduce tau levels in differentiated but not in non-differentiated human SH-SY5Y cells. D. B. SHAMIR*; E. M. SIGURDSSON. *New York Univ. Sch. of Med., New York Univ. Sch. of Med.*

4:00 C46 **579.16** Alzheimer's disease cellular model: 2,2'-dithiodipyridine-induced Tau oligomerization in primary rat cortical neurons. C. QIAN; K. L. KRAUS; R. A. COLVIN*. *Ohio Univ., Ohio Univ.*

1:00 C47 **579.17** The role of selective autophagy in neurofibrillary tangle pathology. Y. XU*; H. ZHENG. *Baylor Col. of Med.*

2:00 C48 **579.18** Pathological forms of tau affects mitochondrial dynamics in Alzheimer's disease. R. A. QUINTANILLA*; K. VERGARA; F. A. CABEZAS-OPAZO. *Lab. of Neurodegenerative Dis.*

3:00 C49 **579.19** Regulating proteostasis to control both normal and pathological tau biology. S. N. FONTAINE*; M. D. MARTIN; C. A. DICKEY. *Univ. of South Florida.*

4:00 C50 **579.20** ● Pentobarbital-induced hypothermia modulates total and phosphorylated tau: Implication of alpha7 nicotinic receptors. A. GOBERT*; F. IOP; V. PASTEAU; K. ALBINET; L. DANOBER; C. LOUIS; P. LESTAGE. *Inst. De Recherches Servier.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 C51 **579.21** The effects of manipulating the de-ubiquitinating enzymes USP14 and UCH-L1 on the levels of TAU and polyubiquitinated proteins: Relevance to Alzheimer's disease. M. J. KIPROWSKA*; A. STEPANOVA; A. GALKIN; M. FIGUEIREDO-PEREIRA. *Hunter College, CUNY, The Grad. Center, CUNY, Queen's Univ. Belfast, Russian Acad. of Sci.*

2:00 C52 **579.22** Tau phosphorylation plays a role in mRNA 3' end processing. F. E. KLEIMAN; J. E. BAQUERO; M. ORDONEZ; A. ALONSO*. *Hunter Col., Col. of Staten Island, CUNY.*

3:00 C53 **579.23** Phosphorylated tau has increased binding affinity to dynactin. S. D. CRISH*; W. J. GELDENHUYS; C. M. DENGLER-CRISH; G. N. WILSON. *NEOMED, Kent State Univ.*

4:00 C54 **579.24** Tau phosphorylation correlates with cellular tau uptake. S. TAKEDA*; S. L. DEVOS; S. WEGMANN; C. COMMINS; C. K. NOBUHARA; A. D. ROE; I. COSTANTINO; R. PITSTICK; G. A. CARLSON; M. P. FROSCH; B. T. HYMAN. *Massachusetts Gen. Hosp., McLaughlin Res. Inst.*

1:00 C55 **579.25** ● Functional analysis of AD-derived paired-helical filaments in cellular and *in vivo* Tau aggregation models. A. MARREIRO; K. VAN KOLEN; M. BORGERS; D. VAN DAM; M. MAHIEU; G. DANEELS; M. VANDERMEEREN; R. WILLEMS; K. DE WAEPENAERT; I. VAN DE WEYER; P. P. DE DEYN; L. TEMMERMAN; G. DEPUYDT; L. VER DONCK; A. EBNETH; L. SCHOOFS; J. KEMP; M. H. MERCKEN*. *KU Leuven, Janssen Res. & Develop., Univ. of Antwerp.*

2:00 C56 **579.26** ● The specific targeting of tau oligomers therapeutically in Alzheimer's disease. R. KAYED*; D. L. CASTILLO-CARRANZA; J. E. GERSON; M. GUERRERO-MUNOZ; U. SENGUPTA; B. HAWKINS; A. BARRETT. *Univ. Texas Med. Br., UTMB, UTMB, UTMB, UTMB.*

3:00 C57 **579.27** ● Fluorescent assays for the detection of beta-Amyloid and Tau modification enzymes: Pin1 and Glutaminyl cyclase. O. GURINOVICH; C. KO*; X. WANG; R. ZHANG; V. RAKHMANOVA. *AnaSpec, Inc. EGT Group.*

4:00 C58 **579.28** Differential recognition of pathological forms of tau protein with N-terminal antibodies in tauopathies and *in vitro* assays. B. COMBS*; K. K. COX; C. HAMEL; N. M. KANAAN. *Michigan State Univ.*

1:00 C59 **579.29** Regulation of RNA protein granule formation and tau mRNA expression by G3BP1. R. BRANDT*; F. SÜNDERMANN; M. IGAEV; B. NIEWIDOK; A. PEREIRA DA GRACA; L. BAKOTA. *Univ. of Osnabrueck.*

POSTER

580. Amyloid Precursor Protein: Apolipoprotein E and Cholesterol

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 C60 **580.01** Investigating the role of copper deficiency and zinc in a mouse model of late onset Alzheimer's disease. S. N. HOWELL*; K. N. BOGGS; J. M. FLINN. *George Mason Univ.*

2:00 C61 **580.02** APP/APOE4 mice show impaired nest building and circadian rhythm activity at 6 months. J. M. FLINN*; K. N. BOGGS; J. L. MINGOS; P. KAKALEC; S. N. HOWELL. *George Mason Univ.*

3:00 C62 **580.03** Impact of human APP overexpression on cerebral cholesterol metabolism in ApoBxAPP and APPSL mice. C. SCHWEINZER*; T. LOEFFLER; E. STEYRER; B. HUTTER-PAIER; M. WINDISCH. *QPS Austria Gmbh, Inst. of Mol. Biol. and Biochemistry, Med. Univ. Graz, NeuroScios GmbH.*

4:00 C63 **580.04** "Fatty Brain" resulting from altered ApoE expression following pubertal binge ethanol consumption in rats. A. ASIMES*; M. M. PRZYBYCIEN-SZYMANSKA; T. R. PAK. *Loyola Univ. Chicago, Loyola Univ. Chicago.*

1:00 C64 **580.05** ApoE4 impairs brain insulin signaling and glucose metabolism. N. ZHAO*. *Mayo Clin. Jacksonville.*

2:00 C65 **580.06** Withdrawn.

3:00 C66 **580.07** Female and male sex hormones differentially regulate apolipoprotein J (ApoJ) in primary neurons. S. K. WOODY*; A. CHHIBBER; L. ZHAO. *Univ. of Kansas Sch. of Pharm.*

4:00 C67 **580.08** Effects of ApoE isoforms on learning and memory in knock-in mice expressing the Danish dementia BRI2 mutant. K. ISHIWARI*; F. BIUNDO. *Albert Einstein Col. of Med.*

1:00 C68 **580.09** ApoE dependent interactions of the α-secretase ADAM10 in Alzheimer's disease. B. SHACKLETON*; C. BACHMEIER; F. CRAWFORD. *Roskamp Inst., The Open Univ.*

2:00 C69 **580.10** Unraveling the role of apolipoprotein E in age- and Abeta-related neuronal dysfunction. J. A. KLICKSTEIN*; K. KUCHIBHOTLA; L. WROBLESKI; S. WEGGMAN; M. ARBEL-ORNATH; E. HUDRY; B. T. HYMAN. *Massgeneral Inst. For Neurodegenerative Diseas, New York Univ. Sch. of Med.*

3:00 C70 **580.11** APOE2 protects against age-related memory decline: A clinical and pre-clinical evaluation. M. SHINOHARA*; T. KANEKIYO; J. FRYER; G. BU. *Mayo Clin. Florida.*

4:00 C71 **580.12** Impaired interaction between apolipoprotein E and Alzheimer's disease-associated mutation in TREM2. Y. ATAGI*; X. CHEN; C. LIU; H. ZHENG; X. LI; C. VERBEECK; N. SAKAE; P. DAS; S. YOUNKIN; J. FRYER; G. BU. *Mayo Clin. Florida, Xiamen Univ.*

1:00 C72 **580.13** Effects of cholesterol and GM1 on the membrane actions of Amyloid beta in hippocampal neurons. E. FERNANDEZ*; F. J. SEPULVEDA; C. OPAZO; L. G. AGUAYO. *Univ. De Concepcion, The Univ. of Melbourne.*

2:00 C73 **580.14** Hippocampal volume and dentate gyrus new-born neuron density in a mouse model of apolipoprotein eε4 domain interaction. S. O. ADEOSUN*; X. HOU; A. PALMER; B. ZHENG; R. L. RAFFAI; K. H. WEISGRABER; J. WANG. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of California and VA Med. Ctr., Gladstone Inst. of Neurolog. Disease, Univ. of California, Univ. of Mississippi Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 C74 **580.15** ● Omega-3 fatty acids augment the actions of nuclear receptor agonists in a mouse model of Alzheimer's disease. B. CASALI*; A. W. CORONA; M. M. MARIANI; C. KARLO; K. GHOSAL; G. LANDRETH. *Case Western Reserve Univ., Case Western Reserve Univ., ReXceptor, Case Western Reserve Univ.*

4:00 C75 **580.16** High fat diet aggravates memory deficits in APP mice and causes epigenetic changes. A. Y. CARTER*; V. L. REEVES; N. F. FITZ; J. SCHUG; I. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh, Univ. of Pennsylvania, Inst. for Diabetes, Obesity and Metabolism.*

1:00 C76 **580.17** Bexarotene treatment induced up-regulation of Trem2 and Aβ phagocytosis by microglia in APP/PS1 mice. A. MOUNIER*; K. NAM; J. SCHUG; N. F. FITZ; I. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh, Univ. of Pittsburgh, Functional Genomics Core, Dept. of Genetics, Univ. of Pennsylvania, Univ. of Pittsburgh.*

2:00 C77 **580.18** Withdrawn.

3:00 C78 **580.19** Astrocytic LRP1 mediates brain abeta clearance. C. LIU*; J. HU; N. ZHAO; J. CIRRITO; D. M. HOLTZMAN; G. BU. *Mayo Clin., Washington Univ.*

4:00 C79 **580.20** ● Investigation of ABCA7 function and potential links to mechanisms underlying Alzheimer's disease. P. DENIS; B. HALL; Y. WANG; M. CUEVA; J. GRAY; J. DANAO; S. WILTZIUS; M. HUANG; J. BRADLEY; L. FENG; J. PRETORIUS; P. ROSE; A. LIM; D. SMITH; D. FLESHER; H. CARLISLE; S. SAMBASHIVAN; E. MARCORA; S. WOOD; S. WANG; S. KOIRALA*. *Amgen, Amgen, Amgen, Amgen.*

1:00 C80 **580.21** ABCA1 is necessary for bexarotene-mediated clearance of soluble amyloid beta from the hippocampus of APP/PS1 mice. A. W. CORONA*; N. KODOMA; B. CASALI; G. E. LANDRETH. *Case Western Reserve Univ.*

POSTER

581. Human Imaging Studies in Parkinson's Disease

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 C81 **581.01** Longitudinal changes in basal ganglia and cortex using task-based fMRI in early Parkinson's disease. R. G. BURCIU*; J. W. CHUNG; P. SHUKLA; E. OFORI; N. R. MCFARLAND; M. S. OKUN; D. E. VAILLANCOURT. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

2:00 C82 **581.02** Quantification of striatal dopaminergic uptake in Parkinson's disease: A new multimodal method combining SPECT DaT and MPRAGE. K. SMART*; R. DURSO; E. MODESTINO. *Boston Univ. Sch. of Med.*

3:00 C83 **581.03** Functional neuroimaging of prefrontal cortex in Parkinson's disease using fNIRS: Effects of cognitive task during seated and standing postures. G. KERR*; M. MUTHALIB; R. PEGORARO; L. ROEDER; I. STEWART; S. SMITH. *Queensland Univ. Technol.*

4:00 C84 **581.04** ● Detecting an olfactory-based biomarker for early stage Parkinson's disease using diffusion tensor imaging. N. JOSHI; T. ROLHEISER; J. D. FISK; K. P. GOOD; N. KHAN; G. E. PHILLIPS; J. R. MCKELVEY; H. A. ROBERTSON*. *Dalhousie Univ. Fac Med., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ.*

1:00 C85 **581.05** β-Amyloid PET predicts longitudinal cognitive performance in Parkinson's disease. M. C. CAMPBELL*; E. R. FOSTER; J. S. PERLMUTTER. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

2:00 C86 **581.06** Parkinson's disease targets intrinsic brain networks. Y. ZEIGHAMI*; M. ULLA; Y. ITURRIA-MEDINA; M. DADAR; K. LARCHER; V. FONOV; A. C. EVANS; D. L. COLLINS; A. DAGHER. *McGIll Univ., CHU Clermont-Ferrand.*

3:00 C87 **581.07** C-terminal-truncated alpha-synuclein smart molecule: A novel blood-brain barrier permeable diagnostic and therapeutic molecule for Parkinson's disease. A. CARTIER*; R. BHATT. *ICB International, Inc.*

4:00 C88 **581.08** Neuroimaging biomarkers for cognitive dysfunction in Parkinson's disease. J. S. PERLMUTTER*; C. BUDDHALA; P. T. KOTZBAUER; N. J. CAIRNS; M. C. CAMPBELL. *Washington Univ. Sch. Med., Washington Univ. in St. Louis, Washington Univ. in St. Louis.*

1:00 C89 **581.09** ● Differences in brainstem volumes on MRI in Parkinson's disease patients vs. persons whose DAT scans did not show evidence of dopaminergic deficit (SWEDD). C. D. SCHROEDER*; G. T. STEBBINS; J. G. GOLDMAN. *Rush Univ. Med. Ctr.*

2:00 C90 **581.10** Alterations in the default mode network in de novo, untreated Parkinson's disease patients with mild cognitive impairment. S. L. KLETZEL*; B. C. HARTON; A. KOPICKI; A. A. HERROLD; T. L. PAPE. *Edward Hines Jr. VA Hosp., Adler Univ., Northwestern Univ., Marionjoy Rehabil. Hosp.*

3:00 C91 **581.11** Striatal and thalamic shape alterations in Parkinson's disease. A. RAGOTHAMAN*; C. R. K. CHING; A. MEZHER; Z. ABARYAN; P. M. THOMPSON; B. A. GUTMAN. *USC, USC, UCLA Sch. of Med., USC.*

4:00 C92 **581.12** Mild depressive symptoms are related to *in vivo* myelin load in Parkinson's disease. J. SOJKOVA*; D. DEAN, III; S. HURLEY; S. JOHNSON; B. B. BENDLIN; A. L. ALEXANDER; C. GALLAGHER. *Univ. of Wisconsin, Oxford Ctr. for Functional Magnetic Resonance Imaging of the Brain.*

1:00 C93 **581.13** Attention task-related changes to intrinsic functional connectivity in Parkinson's disease. T. MADHYASTHA*; A. LEE; M. K. ASKREN; J. B. LEVERENZ; T. MONTINE; T. GRABOWSKI. *Univ. of Washington, Univ. of Washington, Cleveland Lou Ruvo Ctr. for Brain Hlth. at Cleveland Clin.*

2:00 C94 **581.14** ● Striatal - motor cortex functional connectivity in moderate pd and psp. A. S. KURANI*; R. G. BURCIU; R. SEIDLER; M. S. OKUN; N. R. MCFARLAND; D. E. VAILLANCOURT. *Northwestern Univ. Feinberg Sch. of Med., Univ. of Florida, Univ. of Michigan, Univ. of Florida.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 C95 **581.15** ▲ Neuroanatomical changes predictive of motor decline in mild Parkinson's disease. L. BAEHR*; M. GROSSMAN; D. WOLK; C. MCMILLAN. *Univ. of Pennsylvania.*

4:00 C96 **581.16** Abnormal recruitment of left prefrontal cortex underlies impaired working memory in Parkinson's disease. T. HATTORI*; S. HOROVITZ; P. KUNDU; R. REYNOLDS; C. LUNGU; E. WASSERMANN; M. HALLETT. *Sapporo Med. Univ., NIH, Tokyo Med. and Dent. Univ., Mount Sinai Hosp., NIH.*

1:00 D1 **581.17** Micro-structural differences in white matter between Atypical Parkinsonism and Parkinson's disease. K. JUNG; Y. CHANG; M. LEE*; H. S. KIM; C. G. CHOI; S. C. JUNG; C. S. LEE; S. J. KIM; N. KIM. *Asan Inst. For Life Sci., Asan Med. Ctr., Asan Inst. For Life Sci.*

2:00 D2 **581.18** ▲ MAPT gene polymorphism is associated with abnormal uncinate fasciculus integrity in normal population. A. BAYANI ERSHADI*; A. ABDOLALIZADEH; N. ABBASI; B. MOHAJER; M. AARABI. *Tehran Univ. of Med. Sciences, Student's S, Zanjan Univ. of Med. Sci., Tehran Univ. of Med. Sci.*

3:00 D3 **581.19** Intraoperative fmri as a potential biomarker of dbs-evoked adverse effect. W. GIBSON*; P. TESTINI; C. EDWARDS; J. FELMLEE; K. GORNY; K. WELKER; B. KLASSEN; H. MIN; K. LEE. *Mayo Grad. Sch., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*

4:00 D4 **581.20** Diffusion MRI and connectivity of the STN in Parkinson's patients undergoing DBS treatment. M. PETERSEN*; T. E. LUND; D. G. ZEIDLER; R. SANGIL; J. FRANDSEN; N. SUNDE; F. ROSENDAL; K. ØSTERGAARD. *Aarhus Univ. Hosp., Aarhus Univ., Aarhus Univ. Hosp., Aarhus Univ. Hosp.*

1:00 D5 **581.21** ● Striatal density of adenosine A1 receptors in early Parkinson's disease measured with [C-11]MPDX PET. M. MISHINA*; M. SUZUKI; K. ISHII; Y. KIMURA; K. ISHIBASHI; M. SAKATA; K. ODA; J. TOYOHARA; S. KOBAYASHI; H. NAGAYAMA; S. KITAMURA; K. KIMURA; K. ISHIWATA. *Nippon Med. Sch., Tokyo Metropolitan Inst. of Gerontology, Katsushika Med. Center, The Jikei Univ. Sch. of Med., Kinki Univ., Hokkaido Univ. of Sci., Nippon Med. Sch. Chiba Hokusoh Hosp., Nippon Med. Sch., Nippon Med. Sch. Musashi Kosugi Hosp.*

2:00 D6 **581.22** ● Overlapping neural correlates of impulsivity and hypomania in Parkinson's disease. F. SCHWARTZ*; M. TAHMASIAN; K. WILLIAMSON; L. ROCHHAUSEN; F. MAIER; L. TIMMERMANN; A. DRZEZGA; T. VAN EIMEREN; C. EGGERS. *Univ. Hosp. of Cologne, Univsersity Hosp. of Cologne.*

3:00 D7 **581.23** Impulsivity is associated with increased metabolism of the fronto-insular network in Parkinson's disease. M. TAHMASIAN*; L. ROCHHAUSEN; F. MAIER; K. L. WILLIAMSON; A. DRZEZGA; L. TIMMERMANN; T. VAN EIMEREN; C. EGGERS. *Univ. Hosp. of Cologne, Univ. Hosp. of Cologne.*

4:00 D8 **581.24** ● Studies towards the development of a PET tracer for aggregated α-synuclein. G. MCALLISTER; D. HARDICK; D. MITCHELL; K. NASH; J. EBERLING; R. MACH; P. KOTZBAUER; Z. TU; E. BORRONI; M. HONER; L. GOBBI; S. MASON; W. KLUNK; C. A. MATHIS*. *BioFocus, a Charles River Co., Michael J. Fox Fndn., Univ. of Pennsylvania, Washington Univ., Roche, Univ. of Pittsburgh, B-938 PUH.*

1:00 D9 **581.25** *In vitro* characterization of a C-11 or H-3 labeled PDE10A radioligand and its potential implementation for progression of Parkinson's disease. H. LIU; H. JIN; X. YUE; X. ZHANG; J. LI; H. FLORES; Y. SU; J. S. PERLMUTTER; Z. TU*. *Washington Univ.*

2:00 D10 **581.26** Early onset Parkinson's disease (EOPD) progression as monitored by hyperechogenicity of the substantia nigra (SN). S. RAVI*; K. VENKITESWARAN; V. SHIVKUMAR; N. HARID; T. GILMOUR; C. LIEU; R. SAADI; D. DANG; J. WANG; Q. YANG; T. SUBRAMANIAN. *Pennsylvania State Univ. Col. of Med., Pennsylvania State Univ. Col. of Med.*

3:00 D11 **581.27** DNMT3B polymorphisms is associated with Parkinson's disease. J. PEZZI*; C. M. B. ENS; M. FIEGENBAUM; A. F. SCHUMACHER-SCHUH; M. L. F. CHAVES; A. L. CAMOZZATO. *UFCSPA, UFRGS.*

4:00 D12 **581.28** Cholinergic system and mobility: A TMS study to unveil the effect of motor-cognitive combined rehabilitation in Parkinson's disease. L. AVANZINO*; E. PELOSIN; C. OGLIASTRO; G. LAGRAVINESE; A. RAVASCHIO; A. MIRELMAN; J. M. HAUSDORFF; G. ABBRUZZESE. *Univ. of Genoa, Tel-Aviv Med. Ctr.*

POSTER

582. Therapeutics of Parkinson's Disease: Clinical Studies

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 D13 **582.01** Dexmedetoidine modulates neuronal activity in subthalamic nucleus during surgery for Parkinson's disease. A. RAZ; C. A. AMLONG; M. I. BANKS*; D. A. RUSY; K. A. SILLAY. *Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Tennessee Hlth. Sci. Ctr.*

2:00 D14 **582.02** ▲ Deep brain stimulation battery decay of Activa PC neurostimulators; initial clinical data. R. P. PATEL*; R. J. DIPAOLA; S. F. DANISH; S. WONG; E. L. HARGREAVES. *Robert Wood Johnson Med. School, Rutgers Univ., Robert Wood Johnson Med. School, Rutgers Univ.*

3:00 D15 **582.03** Effects of gm1 ganglioside administration on cognitive, motor, and sensorimotor functions in Parkinson's disease patients. J. S. SCHNEIDER*; C. YANG. *Thomas Jefferson Univ., Pennsylvania State Univ.*

4:00 D16 **582.04** ● Computational modeling of stimulation-evoked dopamine release recorded with fast scan cyclic voltammetry. J. TREVATHAN*; J. L. LUJAN; K. H. LEE. *Mayo Clin., Mayo Clin.*

1:00 D17 **582.05** Towards the implementation of a novel DBS electrode for targeted neural activation. D. V. NESTEROVICH*; A. WILLSIE; C. BUTSON; A. DORVAL. *Univ. of Utah.*

2:00 D18 **582.06** ● Identification of Deep Brain Stimulation targets from a cohort of Parkinson's disease patients. G. DUFFLEY*; D. CHEN; K. FOOTE; M. OKUN; C. R. BUTSON. *Univ. of Utah, Scientific Computing and Imaging (SCI) Inst., Univ. of Florida, Univ. of Florida, Ctr. for Movement Disorders and Neurorestoration, Univ. of Florida.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 D19 **582.07** Activity based interventions for individuals with Parkinson's disease: An occupationally focused systematic review. K. A. PICKETT*; R. N. MASSART; K. J. LATHROP; A. MALSCH; S. E. GOLOFF. *Univ. of Wisconsin - Madison.*

4:00 D20 **582.08** Anti-neuroinflammation effect of Zonisamide in early Parkinson's disease. T. TERADA*; M. YOKOKURA; E. YOSHIKAWA; M. FUTATSUBASHI; S. KONO; T. KONISHI; T. BUNAI; Y. HOSOI; M. SAKAO-SUZUKI; H. MIYAJIMA; Y. OUCHI. *Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med., Shizuoka Inst. of Epilepsy and Neurolog. Disorders, Hamamatsu Univ. Sch. of Med., Hamamatsu Photonics K.K., Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med.*

1:00 D21 **582.09** Can individuals with Parkinson's disease perceive complex auditory cues to correct movement? T. PINKHASOV*; E. VASUDEVAN; M. SCHEDEL; D. WEYMOUTH; J. LOOMIS; L. MURATORI. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

2:00 D22 **582.10** ● Research firmware for deep brain stimulation devices: A randomized, blinded pilot study of novel stimulation patterns and shapes in Parkinson's disease and Essential Tremor. U. AKBAR*; R. S. RAIKE; N. HACK; C. HESS; J. SKINNER; D. MARTINEZ; S. DEJESUS; M. S. OKUN. *Brown Univ., Medtronic PLC, US Naval Hosp., Univ. of Florida, Univ. of Florida.*

3:00 D23 **582.11** Serotonin 5HT2A receptors in patient with Parkinson's disease with visual hallucinations. S. CHO*; A. STRAFELLA; M. CRIAUD; C. LI; M. ZUROWSKI; S. DUFF-CANNING; A. VIJVERMAN; V. BRUNO; C. AQUINO; P. RUSJAN; S. HOULE; S. FOX. *Ctr. For Addiction and Mental Hlth., Toronto Western Res. Inst. and Hosp., Dept. of Psychiatry, Univ. of Toronto.*

4:00 D24 **582.12** The use of WINCS and Diamond electrode to perform wireless neurotransmitter monitoring in a patient with Parkinson's disease. M. A. BABU*; S. PAEK; P. MIN; C. BLAHA; J. TOMSHINE; M. MARSH; D. JANG; S. CHANG; K. BENNET; K. LEE. *Mayo Clin., Mayo Clin., Hanyang Univ.*

1:00 D25 **582.13** Human neural stem cell therapy in experimental Parkinson's disease: Beyond the brain. A. NELKE; S. GARCIA-LOPEZ; A. MARTINEZ-SERRANO; M. P. PEREIRA*. *Ctr. de Biología Mol. Severo Ochoa, Univ. Autonoma de Madrid, Ctr. De Biologia Mol. Severo Ochoa.*

2:00 D26 **582.14** *In vivo* nigrostriatal changes associated with MAO-B inhibitor therapy in Parkinson's disease. R. G. BURCIU; E. OFORI*; P. SHUKLA; O. PASTERNAK; J. W. CHUNG; N. R. MCFARLAND; M. S. OKUN; D. E. VAILLANCOURT. *Univ. of Florida, Univ. of Florida, Harvard Med. Sch., Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

POSTER

583. Dystonia and Parkinson's Disease

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 D27 **583.01** Neurophysiological assessment of synaptic plasticity in dyt11 dystonia. M. MALTESE; G. SCIAMANNA; G. MARTELLA; G. PONTERIO; A. TASSONE; R. E. GOODCHILD; A. PISANI*. *Neurophysiol. and Plasticity Lab., Fondazione Santa Lucia IRCCS, Dept. of Systems Medicine, Univ. of Rome "Tor Vergata", 4Vlaams Inst. voor Biotechnologie (VIB) Ctr. for the Biol. of Disease, Dept. of Human Genetics, Campus Gasthuisberg, 3000, Clinica Neurologica Univ. Tor Vergata, Dept. of Systems Medicine, Univ. of Rome.*

2:00 D28 **583.02** PRRT2 deficiency causes paroxysmal dystonia in mice. M. S. LEDOUX*; J. XIAO; Y. XUE; E. M. MARQUEZ-LONA; S. R. VEMULA. *Univ. of Tennessee Hlth. Sci. Ctr.*

3:00 D29 **583.03** Cholinergic function in mouse models of DYT-TOR1A dystonia. K. L. ESKOW JAUNARAJS*; C. N. THOMPSON; D. G. STANDAERT. *Univ. of Alabama-Birmingham.*

4:00 D30 **583.04** Gene expression profiling in CIZ1-deficient mouse cerebellum. S. R. VEMULA*; J. XIAO; M. S. LEDOUX. *Univ. of Tennessee Hlth. Sci. Ctr.*

1:00 D31 **583.05** Altered resting state functional connectivity MRI in adductor-type laryngeal dystonia. S. A. NORRIS*; M. C. CAMPBELL; J. M. KOLLER; A. Z. SNYDER; J. S. PERLMUTTER. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

2:00 D32 **583.06** ● Multi-sensor based biomechanical characterization of cervical dystonia determines optimal onabotulinumtoxinA treatment parameters. O. SAMOTUS; H. MORADI; F. RAHIMI; M. S. JOG*. *Univ. of Western Ontario.*

3:00 D33 **583.07** Analysis of TAF1 gene splice variants in fibroblasts and iPS cells-derived neural stem cells from patients with X-Linked Dystonia-Parkinsonism. J. DHAKAL; N. ITO*; W. T. HENDRIKS; N. WAKABAYASHI-ITO; C. A. VAINE; C. LIU; D. SHIN; K. SHIN; T. MULTHAUPT-BUELL; N. SHARMA; X. O. BREAKEFIELD; D. C. BRAGG. *Massachusetts Gen. Hosp.*

4:00 D34 **583.08** Voice tremor in spasmodic dysphonia: A multi-modal neuroimaging study. D. KIRKE; G. BATTISTELLA; M. CHOY; V. KUMAR; E. RUBIEN-THOMAS; K. SIMONYAN*. *Mount Sinai Sch. of Med.*

1:00 D35 **583.09** Vibratory feedback and visualizations increase muscle awareness and task performance in subjects with dystonia during a redundant, one-dimensional myocontrol task. S. A. LIYANAGAMAGE*; M. BERTUCCO; T. D. SANGER. *USC, Children's Hosp. Los Angeles.*

2:00 D36 **583.10** Investigating premotor-parietal connectivity in writer's cramp patients. N. THIRUGNANASAMBANDAM; A. S. PILLAI; J. A. SHIELDS; M. HALLETT*. *NINDS/NIH.*

3:00 D37 **583.11** Genetic inducible silencing of cerebellar synapses in mice. J. WHITE*; R. V. SILLITOE. *Baylor Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 D38 **583.12** TorsinA regulates adaptation to chronic stress *in vivo.* G. BEAUVAIS*; N. BODE; J. L. WATSON; H. M. WEN; K. A. GLENN; P. GONZALEZ-ALEGRE. *Children's Hosp. of Philadelphia, Roy J and Lucille Carver Col. of Med. at the Univ. of Iowa, Roy J and Lucille Carver Col. of Med. at the Univ. of Iowa, Perelman Sch. of Med. at the Univ. of Pennsylvania, The Children's Hosp. of Philadelphia.*

1:00 D39 **583.13** Enhanced glutamatergic synaptic transmission in a DYT1 dystonia mouse model, evaluated by membrane-potential imaging. S. IWABUCHI*; N. C. HARATA. *Univ. of Iowa.*

2:00 D40 **583.14** Role of major and brain-specific Sgce isoforms in the pathogenesis of myoclonus-dystonia syndrome. J. XIAO*; Y. XUE; S. R. VEMULA; M. S. LEDOUX. *Univ. of Tennessee Hlth. Sci. Ctr.*

3:00 D41 **583.15** The epidemiological and molecular analysis of Paroxysmal kinesigenic dyskinesia in Japan. H. TANGE; M. OHISHI; N. KUROTAKI; Y. MORIMOTO; S. ONO; Y. KUSUMOTO; S. YAMADA; K. SHIROTANI; N. IWATA; K. YOSHIURA; N. MORI*; H. OZAWA. *Nagasaki Univ. Sch. of Med., Nagasaki Univ. Sch. of Pharmaceut. Sci., Nagasaki Univ. , Atomic Bomb Dis. Inst., Nagasaki Univ. Sch. of Med.*

4:00 D42 **583.16** ε-sarcoglycan interacts with components of the dystrophin-associated glycoprotein complex and other membrane proteins in the brain. F. A. CARLISLE; A. J. WAITE; Y. CHAN; A. R. ISLES*; D. J. BLAKE. *Cardiff Univ., Ultragenyx Pharmaceut. Inc., Carolinas Med. Ctr., Cardiff Univ.*

1:00 D43 **583.17** Abnormal twisting movements and selective loss of maturing striatal cholinergic interneurons in forebrain-conditional Tor1a knockout mice. S. S. PAPPAS*; W. T. DAUER. *Univ. of Michigan.*

2:00 D44 **583.18** Withdrawn.

3:00 D45 **583.19** Functional imaging of head movements in healthy volunteers and in cervical dystonia. C. N. PRUDENTE*; R. STILLA; C. BUETEFISCH; T. KIMBERLEY; X. HU; K. SATHIAN; E. HESS; H. JINNAH. *EMORY UNIVERSITY, Univ. of Minnesota, Emory Univ.*

4:00 D46 **583.20** Distinct and shared patterns of resting-state functional connectivity alterations in task-specific and non task-specific primary focal dystonia. G. BATTISTELLA*; P. TERMSARASAB; R. RAMDHANI; K. SIMONYAN. *Dept. of Neurology, Icahn Sch. of Med., Dept. of Neurol. and Otolaryngology, Icahn Sch. of Med.*

1:00 D47 **583.21** Altered dopamine receptor 1-positive medium spiny neuron activity and impaired motor-skill transfer in Dyt1 ΔGAG heterozygous knock-in mice. F. YOKOI*; H. CHEN; M. T. DANG; J. LIU; J. R. GANDRE; K. KWON; R. YUEN; S. N. ROPER; Y. LI. *Univ. of Florida, Children's Hosp. of Philadelphia, Univ. of Alabama at Birmingham, St. Louis Univ., Univ. of Florida.*

2:00 D48 **583.22** Role of the Na+ leak current channel in involuntary movement disorders in *C. elegans.* M. KASAP*; E. AAMODT; D. DWYER. *LSU Hlth. Sci. Ctr. Shreveport, LSU Hlth. Sci. Ctr. Shreveport, LSU Hlth. Sci. Ctr. Shreveport.*

3:00 E1 **583.23** BDNF and NMDA receptor expression in X-linked dystonia Parkinsonism neural stem cells. L. ZHANG*; D. M. MCCARTHY; T. J. MORGAN, Jr; K. SHIN; W. T. HENDRIKS; D. C. BRAGG; P. G. BHIDE. *Florida State Univ., Florida State University,College of Med., Massachusetts Gen. Hosp.*

4:00 E2 **583.24** Overriding upstream reading frames associated with L-dopa responsive dystonia and other human diseases. L. JONES*; E. DAVILA; L. K. GOODE; P. G. BHIDE; I. ARMATA. *Florida State Univ.*

1:00 E3 **583.25** Cytoskeletal and mitochondrial-related protein changes within the DBA/2J visual projection. G. N. WILSON*; D. M. INMAN; S. D. CRISH. *Kent State Univ., Northeast Ohio Med. Univ.*

POSTER

584. Autism: Synaptic and Cellular Mechanisms I

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 E4 **584.01** Alterations in complex ii of the electron transport chain are associated with elevated mitochondrial respiration in btbr mouse model of autism spectrum disorder. Y. AHN*; R. MYCHASIUK; N. CHENG; N. C. YEE; R. TOBIAS; J. M. RHO. *Alberta Children's Hosp. Res. Inst.*

2:00 E5 **584.02** Modeling Shankopathies in genetically edited human induced neurons. F. YI*; T. DANKO; T. SUDHOF. *Stanford Univ.*

3:00 E6 **584.03** Characterization of ASD-associated Shank proteins in early development of rat hippocampal neurons. S. C. HALBEDL*; M. SCHOEN; T. BOECKERS; M. SCHMEISSER. *Ulm Univ.*

4:00 E7 **584.04** Novel signaling and neurodevelopmental mechanisms in a mouse model of psychiatric pathogenesis. R. E. STANLEY*; P. M. MARTIN; A. E. FREITAS; A. P. ROSS; B. N. R. CHEYETTE. *UCSF.*

1:00 E8 **584.05** Effects of maternal immunoactivation on neurotransmission in mpfc-amygdala circuits. Y. LI; B. C. FINGER; S. M. LANDINO; C. J. MCDOUGLE; W. A. CARLEZON, Jr.; V. Y. BOLSHAKOV*. *McLean Hosp-Harvard Med. Sch., Lurie Ctr. for Autism, Massachusetts Gen. Hosp.*

2:00 E9 **584.06** Impaired synaptic development in a maternal immune activation mouse model of neurodevelopmental disorders. P. COIRO; P. RAGUNATHAN; A. SURESH; E. SPARTZ; G. PENDYALA; S. CHOU; Y. JUNG; B. MEAYS; S. ROY; M. LI; A. DUNAEVSKY*. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska – Lincoln.*

3:00 E10 **584.07** Dysfunction of microglia-mediated reorganization of dentate gyrus-CA3 circuits in a mouse autism model. K. SHIBATA*; R. KOYAMA; K. MORISHITA; Y. IKEGAYA. *Lab. Chem. Pharmacol., Grad. Sch. Pharmaceut. Sci., Univ. Tokyo.*

4:00 E11 **584.08** Identifying translating mRNAs involved in pathological synaptic plasticity. S. R. THOMSON*; M. F. BEAR; E. K. OSTERWEIL. *Univ. of Edinburgh, MIT.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 E12 **584.09** Tsc2-deficiency induced mTOR hyperactivity impairs spatiotemporal dynamics of mitophagy in neurons. D. EBRAHIMI-FAKHARI*; A. SAFFARI; L. WAHLSTER; A. DINARDO; M. HAN; M. SAHIN. *Boston Children's Hospital, Harvard Med. Sch., Heidelberg Univ. Hospital, Ruprecht-Karls Univ. Heidelberg, Boston Children's Hospital, Harvard Med. Sch.*

2:00 E13 **584.10** Examining the role of dixdc1 in neural connectivity and autism spectrum disorder. V. KWAN*; C. HUNG; N. HOLZAPFEL; K. HABING; N. MURTAZA; S. WALKER; S. SCHERER; K. HOPE; R. TRUANT; K. SINGH. *McMaster Univ., The Hosp. for Sick Children.*

3:00 E14 **584.11** Synaptic alterations in the striatum and the cortex of a new mouse model of autism spectrum disorders: JAKMIP1 knock-out mouse. L. GALVAN*; J. BERG; J. Y. CHEN; C. CEPEDA; D. GESCHWIND; M. S. LEVINE. *UCLA, UCLA.*

4:00 E15 **584.12** Neuronal overexpression of AT-1 causes an autistic-like phenotype in the mouse. R. HULLINGER*; L. MI; J. WANG; E. BOMBA; J. DOWELL; C. BURGER; E. CHAPMAN; J. DENU; L. LI; L. PUGLIELLI. *Univ. of Wisconsin- Madison, Univ. of Wisconsin.*

1:00 E16 **584.13** Excessive Ras-MAPK-dependent synaptic clustering drives enhanced motor learning in the MECP2-duplication mouse model of syndromic autism. R. T. ASH*; S. A. BUFFINGTON; P. G. FAHEY; J. PARK; H. LU; M. COSTA-MATTIOLI; H. Y. ZOGHBI; S. M. SMIRNAKIS. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

2:00 E17 **584.14** Physiological effects of an ASD-associated mutation in CaMKIIα. J. R. STEPHENSON*; X. WANG; B. C. SHONESY; J. S. SUTCLIFFE; R. J. COLBRAN. *Vanderbilt Univ.*

3:00 E18 **584.15** Neuregulin-1 promotes redox-dependent neuronal cobalamin metabolism by stimulating cysteine-dependent glutathione synthesis. R. C. DETH*; N. HODGSON; M. TRIVEDI; M. SCHRIER; Y. ZHANG. *Nova Southeastern Univ., Harvard Med. Sch., Northeastern Univ.*

4:00 E19 **584.16** Neuronal adaptor protein Mint2/APBA2 associated in the pathogenesis of Autism Spectrum Disorders (ASDs). Y. LIN*; K. CONNOR; A. E. DUPRE; G. M. DILLON; U. BEFFERT; A. HO. *Boston Univ. Sch. of Med., Boston Univ.*

1:00 E20 **584.17** The ependymal protein alpha-T-catenin contributes to autism through its age-dependent effect on ventricle size and neurogenesis. S. S. FOLMSBEE*; D. R. WILCOX; C. J. GOTTARDI. *Northwestern Univ.*

2:00 E21 **584.18** Circuit-level E/I-ratio disruption in ASD mouse models: A common model of sensory hyperexcitability? M. W. ANTOINE*; P. SCHNEPEL; D. E. FELDMAN. *Univ. Of California, Berkeley, Univ. of California Berkeley.*

3:00 E22 **584.19** Convergent excitability defects in the prefrontal corticothalamic circuit unite diverse mouse models of autism. A. C. BRUMBACK*; V. S. SOHAL. *Univ. of California, San Francisco, Univ. of California, San Francisco.*

4:00 E23 **584.20** Identification of rare causal variants in autism spectrum disorder. N. HUSAIN*; I. CUTCUTACHE; Q. YUAN; Y. XIAO; C. ARCINAS; W. YU; J. KO; A. CHEN; C. KIM; S. ROZEN; H. JE. *Duke-Nus Grad. Med. Sch., Duke-NUS Grad. Med. Sch., Natl. Univ. of Singapore, Natl. Univ. of Singapore, Res. Dept., Yonsei Univ., Nanyang Technological Univ., Yonsei Univ.*

1:00 E24 **584.21** Developmental *in vivo* cellular localization of Shank1 and Shank2 scaffold proteins. S. M. COLLINS*; R. GALVEZ; S. REED. *Univ. of Illinois.*

POSTER

585. Autism: Environment and Pathology

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 E25 **585.01** Involvement of p53 in neurodevelopmental toxicity of mercury and ethanol. E. M. SAJDEL-SULKOWSKA*. *Harvard Med. Sch/BWH.*

2:00 E26 **585.02** Macroautophagy pathway analysis in autism spectrum disorders. A. HAM*; H. LI; S. KUO; D. SULZER; G. TANG. *Columbia Univ., Columbia Univ.*

3:00 E27 **585.03** Prenatal environmental factors alone can induce autism and epilepsy in a rat model. F. M. BERCUM*; K. M. RODGERS; A. M. BENISON; Z. Z. SMITH; J. TAYLOR; E. KORNREICH; D. BARTH. *UNIVERSITY OF COLORADO, Univ. of Colorado at Denver, St. Jude Med., Univ. of Colorado at Boulder.*

4:00 E28 **585.04** Early behavioral abnormalities and perinatal alterations of Pten/Akt pathway in valproic acid autism model mice. S. AHN*; U. MAHMOOD; J. RYU; K. LEE; H. KIM. *Seoul Nat'L Univ. Coll. of Med., Seoul Nat'L Univ. Coll. of Natural Sci., Seoul Nat'L Univ. Bundang Hosp.*

1:00 E29 **585.05** Blood biomarkers for autism: Peptoids. U. YAZDANI*; S. ZAMAN; B. GADAD; W. LI; N. ROATCH; C. SCHUTTE; L. HEWITSON; D. GERMAN. *Univ. TX-Southwestern Med. Ctr., Johnson Ctr. for Child Hlth. and Develop.*

2:00 E30 **585.06** Blood biomarkers for autism: Proteins. D. C. GERMAN*; S. SINGH; U. YAZDANI; B. GADAD; S. ZAMAN; N. ROATCH; C. SCHUTTE; L. HEWITSON. *U Texas Southwestern Med. Cntr., The Johnson Ctr. for Child Hlth. and Develop.*

3:00 E31 **585.07** Left lateralized sexual dimorphism in cortical thickness in autism. A. BEDFORD*; M. M. PARK; G. A. DEVENYI; R. PATEL; M. CHAKRAVARTY. *Douglas Mental Healthy Univ. Inst., Douglas Mental Healthy Univ. Inst., Western Univ., McGill Univ.*

4:00 E32 **585.08** Dysregulation in metal homeostasis in autistic children compared to controls in jordan. L. ALZGHOUL*; N. ABU TARBOUSH; M. ELDAHABI; S. ALBDOUR; O. ABU HANTASH; B. ABU-IRMAILEH. *The Univ. of Jordan, The Univ. of Jordan, Hamdi Mango Ctr. for Scientific Res.*

1:00 E33 **585.09** Optimization of Golgi impregnation methods for analyses of dendritic complexity in human brain disorders. R. K. WEIR*; M. D. BAUMAN; C. M. SCHUMANN. *Univ. of California, Davis, UC Davis MIND Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 E34 **585.10** Meta-analysis of region-specific transcriptome changes in the brain of autism patients. D. VELMESHEV*; M. MAGISTRI; N. KHOURY; M. FAGHIHI. *Univ. of Miami, Univ. of Miami.*

3:00 E35 **585.11** Role of prefrontal cortical interneurons in the pathogenesis of autism. E. HASHEMI*; J. ARIZA; V. MARTINEZ-CERDENO. *Inst. For Pediatric Regenerative Med., Univ. of California Davis, MIND Inst.*

4:00 E36 **585.12** Electron microscopic examination of axon density and myelin thickness in temporal lobe white matter in autism. T. A. AVINO*; X. LIU; C. M. SCHUMANN. *Univ. of California, Davis MIND Inst., Univ. of California, Davis.*

1:00 E37 **585.13** Increased binding of MeCP2 and DNMT1 to RELN and GAD1 regulatory regions is associated with down-regulation of RELN and GAD1 mRNAs in postmortem prefrontal cortex of autism spectrum disorder (ASD) brain. A. ZHUBI*; Y. CHEN; E. DONG; E. H. COOK; A. GUIDOTTI; D. GRAYSON. *Univ. Ill at Chicago, OSF St. Elizabeth Med. Ctr., Univ. of Illinois at Chicago.*

2:00 E38 **585.14** Examination of cell count and size within the superficial layers in autism. A. T. KARST*; J. J. HUTSLER. *Univ. of Wisconsin, Oshkosh, Univ. of Nevada, Reno.*

3:00 E39 **585.15** Neuronal streaming in the temporal cortex of control and autism children and adults. E. C. AZMITIA*; Z. T. SACCOMANO. *NYU/ NYUMS, NYU.*

4:00 E40 **585.16** ● The effect of bumetanide treatment in rodent models of autism. D. C. FERRARI*; R. NARDOU; M. CHIESA; N. LOZOVAYA; S. EFTEKHARI; R. TYZIO; M. BILLON-GRAND; N. BURNASHEV; Y. BEN-ARI. *Neurochlore, INMED, INSERM U901, Aix-Marseille Univ.*

POSTER

586. Rett Syndrome

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 E41 **586.01** Human and Mouse Models of Rett Syndrome exhibit altered prenatal cortical development due to alterations in neurogenesis. P. IP*; N. MELLIOS; D. FELDMAN; S. D. SHERIDAN; S. KWOK; B. ROSEN; B. CRAWFORD; Y. LI; R. JAENISCH; S. J. HAGGARTY; M. SUR. *MIT, Ctr. for Human Genet. Res., Whitehead Inst. for Biomed. Res.*

2:00 E42 **586.02** Role of BDNF signaling in synapse formation and maintenance in MeCP2Null/y excitatory neurons. C. SAMPATHKUMAR*; Y. WU; T. TRIMBUCH; C. ROSENMUND. *Charité - Universitätsmedizin Berlin.*

3:00 E43 **586.03** ● The TrkB ligand LM22A-4 rescues hippocampal LTP and Rett-like behavioral phenotypes in Mecp2 knockout mice. W. LI*; T. YANG; F. LONGO; L. POZZO-MILLER. *The Univ. of Alabama At Birmingham, Stanford Univ.*

4:00 E44 **586.04** Partial rescue of Rett syndrome phenotypes via modulation of NF-κB signaling and vitamin D supplementation in Mecp2-null mice. J. L. MACDONALD*; N. KISHI; J. D. MACKLIS. *Harvard Univ., Syracuse Univ., RIKEN Brain Sci. Inst.*

1:00 E45 **586.05** Chronic *in vivo* treatment of Rett mice with the free radical scavenger Trolox. O. A. JANC; M. A. HUESER; K. CAN; B. KEMPKES; M. MUELLER*. *Univ. Goettingen.*

2:00 E46 **586.06** CAGE analysis of genes involved in the onset of Rett Syndrome. A. PATRIZI*; C. LI; A. FORREST; E. ARNER; P. CARNINCI; A. SAXENA; M. FAGIOLINI. *Boston Children's Hosp. Harvard Med. Sch., Omics Sci. Center, RIKEN Yokohama Inst., RIKEN Ctr. for Life Sci. Technologies, Biomed. Res. Ctr. at Guy's and St Thomas' Trust, Genomics Core Facility, Guy's Hosp.*

3:00 E47 **586.07** Visual evoked potentials detect cortical processing deficits in Rett syndrome patients. J. J. LEBLANC; G. DEGREGORIO; V. K. VOGEL-FARLEY; K. BARNES; W. E. KAUFMANN; M. FAGIOLINI*; C. A. NELSON. *Boston Children's Hosp., Harvard Med. Sch., Children's Hosp. Boston Harvard, Harvard Grad. Sch. of Educ.*

4:00 E48 **586.08** Ketamine ameliorates visual evoked potential impairments in Mecp2 Heterozygous female mice. E. CENTOFANTE*; A. PATRIZI; N. PICARD; M. FAGIOLINI. *Boston Children's Hosp.*

1:00 F1 **586.09** Post-critical period Mecp2 de-silencing rescues aberrant visual circuits in a Rett syndrome mouse model. A. J. SIMON*; N. PICARD; M. TAYLOR; M. STANLEY; C. CHEN; M. FAGIOLINI. *Harvard Univ., Boston Children's Hosp.*

2:00 F2 **586.10** Loss of MeCP2 causes urological dysfunction and contributes to death by kidney failure in mouse models of Rett Syndrome. C. S. WARD*; T. HUANG; J. HERRERA; R. C. SAMACO; M. PITCHER; J. L. NEUL. *Univ. of California San Diego, Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

3:00 F3 **586.11** Neuronal hyperexcitability versus breathing abnormality in Mecp2-null mice. W. ZHONG; N. CUI; C. JOHNSON; M. F. OGINSKY; S. ZHANG; Y. WU; C. JIANG*. *Georgia State Univ.*

4:00 F4 **586.12** Alterations in MeCP2 dosage within dopaminergic neurons regulate startle and prepulse inhibition in mice. S. SORIANO*; D. R. CONNOLLY; C. S. WARD; C. M. MCGRAW; N. M. TRUONG; A. CHAHROUR; A. J. LIANG; H. Y. ZOGHBI; J. L. NEUL; R. C. SAMACO. *Baylor Col. of Med., Baylor Col. of Medicine/Jan and Dan Duncan Neurolog. Res. Inst., UCSD, Univ. of California, San Francisco.*

1:00 F5 **586.13** Increased GFAP levels accompany neuronal loss in a mouse model of MeCP2 duplication syndrome. J. M. FRANKLIN*; L. WANG; S. R. D'MELLO. *Southern Methodist Univ.*

2:00 F6 **586.14** IGF1 treatment in RTT patients improve social and cognitive abilities in an open label study. D. TROPEA*; F. SCUSA; N. MORTIMER; A. BENINCASA; G. PINI. *Trinity Col. Dublin, Tuscany Ctr. for Rett Syndrome.*

3:00 F7 **586.15** Neuron-microglia interaction contributes to Rett syndrome pathology. M. HORIUCHI*; L. J. SMITH; I. MAEZAWA; L. JIN. *Univ. of California, Davis.*

4:00 F8 **586.16** Misregulation of alternative splicing in a mouse model of Rett syndrome. R. LI; Q. DONG; C. CHIAO; H. LI; Q. CHANG*. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. Wisconsin-Madison.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 F9 **586.17** Transcriptional profiling of Mecp2 A140V mouse model for Rett syndrome/X-linked mental retardation reveals subtle changes in long gene expression. S. RANGASAMY*; B. GERALD; S. SVEJDA; A. HILBERT; S. OLFERS; G. JENTARRA; W. LIANG; V. NARAYANAN. *Translational Genomics Res. Inst., Translational Genomics Res. Inst., Barrow Neurolog. Institute, St.Joseph's Hosp. and Med. Ctr., Midwestern Univ.*

2:00 F10 **586.18** Alterations in the novel object recognition circuit following MeCP2 deletion from cholinergic neurons. E. BALLINGER*; C. SCHAAF; D. TALMAGE; H. Y. ZOGHBI; L. W. ROLE. *SUNY At Stony Brook, Baylor Col. of Med.*

3:00 F11 **586.19** Chronic forniceal deep brain stimulation recuses the impairment of contextual fear memory and hippocampal LTP in Rett syndrome mice. S. HAO*; Z. WU; B. TANG; Y. SUN; H. ZOGHBI; J. TANG. *Dept. of Pediatrics, Baylor Col. of Medici, Texas Children's Hosp., Baylor Col. of Med., Baylor Col. of Med., Howard Hughes Med. Inst.*

4:00 F12 **586.20** Bidirectional homeostatic synaptic plasticity is impaired in cultured hippocampal neurons from Mecp2 knockout mice. X. XU*; L. POZZO-MILLER. *Univ. of Alabama At Birmingham.*

1:00 F13 **586.21** CDKL5 is required for spine maintenance during synaptic plasticity. D. LI*; C. YANG; Z. XIONG. *Inst. of Neurosci.*

2:00 F14 **586.22** Consequences of hippocampal hyperactivity in the medial prefrontal cortex of Mecp2 knockout mice, a model of the autism Rett syndrome. M. PHILLIPS*; W. LI; L. POZZO-MILLER. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

3:00 F15 **586.23** The balance between excitation and inhibition of cortical GABAergic interneurons is altered in both Mecp2 and Cdkl5 knockout mice. N. MORELLO; R. SCHINA; R. PIZZO; E. CALCAGNO; M. PHILLIPS; M. SASSOÈ-POGNETTO; L. POZZO-MILLER; M. GIUSTETTO*. *Univ. of Torino - Dept. of Neurosci., Dept. of Neurobio. - Civitan Intl. Res. Ctr. - The Univ. of Alabama at Birmingham.*

POSTER

587. Mechanisms of Epilepsy Poster Session

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 F16 **587.01** Functional ultrasound imaging of spontaneous absence seizure in awake rat. L. SIEU; A. BERGEL; E. TIRAN; T. DEFFIEUX; M. PERNOT; J. GENNISSON; A. BONNOT; M. TANTER; I. COHEN*. *INSERM U1130 / CNRS UMR8246 / UPMC, Inst. de recherche translationnelle en Neurosciences ICM-A-IHU, Ecole Doctorale Frontières du Vivant (FdV), Programme Bettencourt, Inst. Langevin, ESPCI ParisTech, PSL Res. university.*

2:00 F17 **587.02** Archetypal early and late excitability changes during epileptogenesis revealed by sensory evoked and spontaneous field potentials in hippocampus. Z. SMITH*; A. M. BENISON; K. M. RODGERS; F. M. BERCUM; F. E. DUDEK; D. S. BARTH. *Univ. of Colorado Boulder, Univ. of Utah.*

3:00 F18 **587.03** Comparison of F-18-fluorethyltyrosine and F-18-fluordesoxyglucose positron emission tomography in chronically epileptic rats. J. P. BANKSTAHL*; P. BASCUNANA; I. LEITER; F. M. BENGEL; M. BANKSTAHL. *Hannover Med. Sch., Hannover Med. Sch., Univ. of Vet. Med.*

4:00 F19 **587.04** Retrograde tracing reveals changes in monosynaptic inputs onto neonatal- vs. adult-born dentate granule cells in a rodent model of temporal lobe epilepsy. X. DU*; H. ZHANG; E. WOLF; J. PARENT. *Univ. of Michigan, Univ. of Michigan.*

1:00 F20 **587.05** Identifying propagation and source of epileptiform activity in the hippocampus in transgenic mice with voltage-sensitive fluorescent proteins. C. CHIANG*; L. E. GONZALEZ-REYES; R. SHIVACHARAN; D. M. DURAND. *Case Western Reserve Univ., Case Western Reserve Univ.*

2:00 F21 **587.06** Increased CA1 hippocampal excitability in Na, K-ATPase α3 subunit mutant (D801N) knock-in mice. A. S. HUNANYAN*; A. HELSETH; S. ADIL; M. LINABARGER; E. AREHART; L. CHUNG; M. MIKATI. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

3:00 F22 **587.07** ● Increased sensitivity to chemoconvulsant in Akt3 transgenic mice is improved by RAD001 treatment. S. M. MCTIGHE*; S. J. NEAL; A. J. GRAY; K. CAPRE; S. L. LEGARE; D. S. BURDETTE; J. DODART. *Novartis Inst. For Biomed. Res., Novartis Inst. For Biomed. Res.*

4:00 F23 **587.08** Electrophysiological and molecular characterization of a neonatal pilocarpine model. C. WORMUTH*; C. HENSELER; K. BROICH; M. WEIERGRÄBER; A. PAPAZOGLOU. *Federal Inst. For Drugs and Med. Devices.*

1:00 F24 **587.09** Cholinergic status epilepticus induces widespread brain damage in postnatal day 7 rat pups. D. TOROLIRA; L. SUCHOMELOVA; J. NIQUET*; C. WASTERLAIN. *VA Greater Los Angeles Healthcare Syst., UCLA.*

2:00 F25 **587.10** Pharmacological and genetic inhibition of protein kinase Cδ alleviates hippocampal neurodegeneration induced by trimethyltin. T. T. TU; Y. NAM; H. TRAN; J. JEONG; E. SHIN*; H. KIM. *Col. of Pharmacy, Kangwon Natl. Univ., Col. of Medicine, Chung-Ang Univ.*

3:00 F26 **587.11** Evoked lateral amygdala neuron activity in rats with acquired sound-induced seizures. H. K. ANDERSEN; D. M. GIANGRASSO; A. J. ROSSI; K. L. PATTERSON; D. E. COBB; M. C. ZRULL*. *Appalachian State Univ.*

4:00 F27 **587.12** Failure of synaptic transmission may contribute to seizure propagation. A. BHANSALI*; W. VAN DRONGELEN; A. K. TRYBA. *Univ. of Chicago.*

1:00 F28 **587.13** Online measurement of glutamate levels during pentylenetetrazole-induced epileptiform activity using a high temporal resolution technique and simultaneous EEG recording. K. PARDO*; A. MORALES-VILLAGRÁN; L. MEDINA-CEJA. *Univ. de Guadalajara.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 F29 **587.14** Interleukin-1β augments neuronal cell death induced by status epilepticus in the developing dentate gyrus by a mechanism independent of IL-1RI activation. L. LOPEZ-MERAZ*; J. MEDEL-MATUS; C. RINCÓN-LÓPEZ; A. TLAPA-PALE; L. BELTRÁN-PARRAZAL; C. PÉREZ-ESTUDILLO; C. MORGADO-VALLE. *CICE, UNIVERSIDAD VERACRUZANA, UCLA, UV.*

3:00 F30 **587.15** RNAseq based microRNA and transcriptome profiles of the rat hippocampus subfields. A. MATOS*; A. S. VIEIRA; A. M. CANTO; K. BRUMATTI; C. C. ROCHA; B. CARVALHO; V. PASCOAL; R. GLIOLI; I. LOPES-CENDES. *Univ. of Campinas, Fluminense Federal Univ.*

4:00 F31 **587.16** Role of adult neurogenesis in the generation of ectopic neurons in the dentate gyrus and their role in epileptogenesis. A. BELMADANI*; D. REN; R. J. MILLER. *Northwestern Univ., Northwestern Univ. Chicago, Northwestern Univ. Chicago.*

1:00 F32 **587.17** Serial preclinical C-11-PK11195-PET imaging reveals the time course of microglia activation during insult-induced epileptogenesis. M. BRACKHAN*; P. BASCUÑANA; F. TWELE; F. M. BENGEL; M. BANKSTAHL; J. P. BANKSTAHL. *Hannover Med. Sch., Univ. of Vet. Med.*

2:00 F33 **587.18** Evoked population spike of *in vitro* rat hippocampal brain slice assay for assessment of proconvulsant liability of mGluRs ligands. J. ZHAI*; A. LAGRUTTA; H. ZENG; Y. ZHOU; F. SANNAJUST. *Merck & Co.*

3:00 F34 **587.19** Neocortical organotypic slices show spontaneous epileptiform activity and a developmental decrease in neuronal Cl^- concentration. J. C. GLYKYS*; K. STALEY. *Massachusetts Gen. Hosp.*

4:00 F35 **587.20** Alterations of neurovascular coupling in rats with focal epilepsy. Y. SONG*; S. GARCIA; Y. FROMETA; R. A. TORRES; J. BAE; A. DESHMUKH; W. LIN; Y. ZHENG; J. J. RIERA. *Florida Intl. Univ., Univ. of Reading.*

POSTER

588. Animal Models of Epilepsy: Comorbidities

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 F36 **588.01** Dentate gyrus-CA1 hippocampal interneuron desynchronization in chronically epileptic mice running on a virtual linear track. T. SHUMAN*; M. JAVAHERIAN; C. C. KABA; D. J. CAI; K. CHENG; R. MANAVI; N. RAO; J. DANESHRAD; A. A. FARIBORZI; J. LOU; S. E. FLORES; C. YANG; S. GHIAEE; M. STRAHMAN; K. I. BAKHURIN; S. C. MASMANIDIS; P. GOLSHANI. *UCLA, Salk Res. Inst.*

2:00 F37 **588.02** Early life seizures in rodents can disrupt the preference for social novelty unrelated to increased emotionality. R. M. CYSNEIROS*; I. S. LEITE; A. S. S. CASTELHANO. *Univ. Presbiteriana Mackenzie.*

3:00 F38 **588.03** Epilepsy induced depression and memory deficit: Intricacies of Serotonergic System. A. MISHRA*; R. K. GOEL. *Natl. Inst. of Pharmaceut. Educ. & R, Punjabi Univ.*

4:00 F39 **588.04** The effects of an acute flurothyl seizure on associative learning and memory. A. J. HOLLEY*; J. N. LUGO, Jr. *Baylor Univ., Baylor Univ.*

1:00 F40 **588.05** Cardiorespiratory dysfunction due to hippocampal seizure propagation into the brainstem. T. SALAM; W. NUWISAIT; G. MONTANDON; R. GENOV; J. PEREZ VELAZQUEZ; M. DEL CAMPO; P. L. CARLEN*. *Toronto Western Hosp, Univ. of Toronto, Univ. of Toronto, Hosp. for Sick Children.*

2:00 F41 **588.06** ▲ Characterization of neonatal ultrasonic vocalization behavior and neurodevelopmental signaling after kainate-induced seizures in mice. C. REYNOLDS*; G. SMITH; T. JEFFERSON; J. LUGO. *Baylor Univ., Baylor Univ.*

3:00 F42 **588.07** Effect of age and sex on seizure responses in mice. T. N. FERRARO*; G. G. SMITH; R. J. BUONO. *Cooper Med. Sch. of Rowan Univ., VAMC, Cooper Med. Sch. of Rowan Univ.*

4:00 F43 **588.08** Effects of adolescent cannabinoid exposure on adult seizure susceptibility and lethality. H. H. LOPEZ*; M. SPRING; K. SCHOOLCRAFT. *Skidmore Col., Skidmore Col.*

1:00 F44 **588.09** The effect of elevated temperature on seizures and anxiety in GABRG2+/Q390X knockin epilepsy mouse model. T. A. WARNER*; J. KANG. *Vanderbilt Univ. Med. Ctr.*

2:00 G1 **588.10** Impaired gabaergic neurotransmission in amygdala and anxiety phenotype in GABRG2+/ Q390X knockin epilepsy mouse model. C. ZHANG*; B. MCMAHON; T. WARNER; R. MACDONALD; J. KANG. *Vanderbilt Univ. Med. Ctr., Third Military Med. Univ., Vanderbilt Brain Inst.*

3:00 G2 **588.11** Competition between the brain and testes for selenium utilization: Insights into gender differences in selenium metabolism and risk of neurodevelopmental disease. M. W. PITTS*; P. M. KREMER; A. C. HASHIMOTO; D. TORRES; C. N. BYRNS; C. S. WILLIAMS; M. J. BERRY. *Univ. Hawaii, Vanderbilt Univ. Sch. of Med.*

4:00 G3 **588.12** Increased susceptibility to 6-Hz-induced acute seizures and corneal kindling in a triple-transgenic mouse model of Alzheimer's disease. M. BANKSTAHL*; J. P. BANKSTAHL; W. HÄRTIG. *Univ. of Vet. Med. Hannover, Hannover Med. Sch., Univ. of Leipzig.*

1:00 G4 **588.13** A novel behavioral approach to examining spatial learning and social interaction in a mouse model of temporal lobe epilepsy. L. D. ORMISTON; S. ANGELIDES; A. BARTH; I. MODY*. *Univ. of California at Los Angeles, UCLA Sch. Med.*

2:00 G5 **588.14** A head-fixation protocol allowing electrophysiological, hemodynamic and behavioral measurements in a polygenic rodent model of absence epilepsy. C. P. MCCAFFERTY*; A. KUNDISHORA; J. SAMPOGNARO; E. JOHNSON; N. SMITH; Y. SI; P. ANTWI; A. MORAWU; H. BLUMENFELD. *Yale Univ., Yale Univ.*

3:00 G6 **588.15** Sleep state and circadian time dependent respiratory consequences of seizures and seizure-induced death. G. F. BUCHANAN*; K. I. CLAYCOMB; M. A. HAJEK. *Univ. of Iowa, Yale Sch. of Med.*

4:00 G7 **588.16** Characterization of Cacna1a knock-in mice as a model for sudden unexpected death in epilepsy. E. A. TOLNER*; I. C. M. LOONEN; M. B. HOUBEN; M. SCHENKE; R. D. THIJS; R. A. VOSKUYL; M. D. FERRARI; A. M. VAN DEN MAAGDENBERG. *Leiden Univ. Med. Ctr., Leiden Univ. Med. Ctr., Leiden Univ. Med. Ctr., Leiden Univ. Med. Ctr.*

Tues. PM

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 G8 **588.17** Increased anxiety and cognitive impairments in a rat model of absence epilepsy: Effects of the T-type calcium channel blocker Z944. W. N. MARKS*; M. E. CAVANAGH; Q. GREBA; L. AN; S. M. CAIN; T. P. SNUTCH; J. G. HOWLAND. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of British Columbia.*

2:00 G9 **588.18** Role of RBFOX3/NeuN in epilepsy and cognitive impairment. H. HUANG*; H. WANG; P. HSIEH; D. HUANG; P. CHIN. *GIBMS, Col. of Medicine, NTU.*

3:00 G10 **588.19** A historical and critical overview of the contributions of the wistar audiogenic rat (war) strain to neuroscience. Challenging complexity and transdisciplinarity. N. GARCIA-CAIRASCO*; E. H. L. UMEOKA. *Ribeirao Preto Sch. Med., Ribeirão Preto Sch. of Med. - Univ. of São Paulo.*

POSTER

589. Traumatic Brain Injury: Animal Models I

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 G11 **589.01** The effects of early life immune programming on outcomes in a rodent mild traumatic brain injury model. S. A. CANDY*; R. MYCHASIUK; H. HEHAR; I. MA; Q. PITTMAN; M. J. ESSER. *Univ. of Calgary, Alberta Children's Hosp.*

2:00 G12 **589.02** Expression pattern of interleukin (IL)-6, 7 and 10 in the CNS of mice. P. SZOT*; A. FRANKLIN; D. F. LATTEMANN; M. RASKIND; E. PESKIND. *Puget Sound Hlth. Care Syst., Univ. of Washington, Puget Sound Hlth. Care Syst.*

3:00 G13 **589.03** Exposure of rats to a mild blast traumatic brain injury: The galanin system. L. KAWA*; S. BARDE; U. ARBORELIUS; E. THEODORSSON; D. AGOSTON; M. RISLING; T. HÖKFELT. *Karolinska Institutet, Linköpings universitet, Uniformed Services Univ.*

4:00 G14 **589.04** Temporal profile of chronic motor and cognitive deficits in a rodent model of penetrating ballistic-like brain injury (PBBI). K. L. CAUDLE*; R. C. PEDERSEN; J. A. SUN; S. A. BUSGANG; Y. DENG-BRYANT; A. M. BOUTTÉ; L. LEUNG; F. C. TORTELLA; D. A. SHEAR. *Walter Reed Army Inst. of Res.*

1:00 G15 **589.05** Granule cells born during post-traumatic neurogenesis functionally integrate into the hippocampus. E. SCHNELL*; L. E. VILLASANA; K. N. KIM; G. L. WESTBROOK. *Portland VA Med. Ctr., OHSU, Vollum Inst.*

2:00 G16 **589.06** Experimental Traumatic Brain Injury in rats results in a marked increase of translocator protein 18 kDa (TSPO) binding in the vicinity of the brain contusion. C. K. DONAT*; K. GABER; J. MEIXENSBERGER; P. BRUST; L. H. PINBORG; J. D. MIKKELSEN. *Copenhagen Univ. Hospital, Rigshospitalet, Leipzig Univ. Hosp., Helmholtz-Zentrum Dresden-Rossendorf.*

3:00 G17 **589.07** Two-dimensional unfolded maps for the study of the location, distribution and extent of the cortical lesion following lateral fluid-percussion injury. X. E. NDODE-EKANE*; I. KHARATISHVILI; A. SIERRA LOPEZ; R. J. IMMONEN; O. H. J. GRÖHN; A. PITKÄNEN. *A.I.V. Institute, Univ. of Eastern Finland.*

4:00 G18 **589.08** Concomitant increase in cognitive behavioral deficits and white matter injury markers over time in a gyrencephalic animal model of traumatic brain injury. S. C. SCHWERIN*; E. HUTCHINSON; K. RADOMSKI; C. PIERPAOLI; S. L. JULIANO. *Uniformed Services Univ., NIH.*

1:00 G19 **589.09** Mild traumatic brain injury enhances acquisition and impairs retention of fear learning. C. LIN*; C. WEISS; J. E. PITT; C. CHAN; J. F. DISTERHOFT. *Northwestern Univ.*

2:00 G20 **589.10** ▲ An investigation into the role of the nucleus accumbens in mild traumatic brain injury and impulsivity. H. HEHAR*; B. KOLB; K. YEATES; M. J. ESSER; R. MYCHASIUK. *Univ. of Calgary, Univ. of Lethbridge, Univ. of Calgary.*

3:00 G21 **589.11** Variation in the return-to-exercise time interval following pediatric concussion: Effects on behavioural and molecular outcomes. R. M. MYCHASIUK*; H. HEHAR; I. MA; M. J. ESSER. *Univ. of Calgary, Univ. of Calgary.*

4:00 G22 **589.12** ● ▲ Does acutely placed embryonic neural stem cell therapy induce restoration of function following cortical contusion impact in adult rats reared in an enriched environment? K. MEERSCHAERT*; I. HIATT; M. SEARLES; J. SMITH. *Saginaw Valley State Univ.*

1:00 G23 **589.13** Abnormalities in coherence of local field potential oscillations in medial prefrontal cortex are linked to lasting perseverative depression and fear following mild traumatic brain injury in a mouse model. D. H. HECK*; Y. LIU; M. G. HONIG; S. HELDT; N. DEL MAR; N. H. GULEY; W. BU; B. M. MOORE; A. J. REINER. *Univ. of Tennessee, Univ. of Tennessee.*

2:00 G24 **589.14** What can the next generation of diffusion MRI methods offer TBI research? E. B. HUTCHINSON*; A. AVRAM; S. SCHWERIN; S. JULIANO; C. PIERPAOLI. *NICHD, Natl. Inst. of Hlth., NICHD/NIH, Uniformed Services Univ.*

3:00 G25 **589.15** Validation of mouse traumatic brain injury model with behavioral and MRI end-points. E. LATONUMMI*; L. TOLPPANEN; P. PIRINEN; K. K. LEHTIMÄKI; T. AHTONIEMI; A. NURMI. *Charles River Discovery Services Finland.*

4:00 G26 **589.16** Long-term cognitive deficits induced by traumatic brain injury in rats are exaggerated by pre-exposure to life-threatening stress. M. O. OGIER*; A. BELMEGUENAI; S. BOUVARD; T. LIEUTAUD; L. BEZIN. *French Armed Forces Biomed. Res. Inst., Lyon Neurosci. Ctr. - CRNL, Inst. For Epilepsy - IDEE.*

1:00 G27 **589.17** The crustacean central nervous system in focus: Nitric oxide induces a specific innate immune response. P. CHAVES DA SILVA*; D. B. PINHEIRO-SOUSA; C. CORRÊA; S. L. CARVALHO; S. ALLODI. *Univ. Federal Do Rio De Janeiro, Univ. Federal do Maranhão.*

2:00 G28 **589.18** *Drosophila* melanogaster as a model for blast-induced traumatic brain injury. K. R. BARBER*; A. M. BUCKLEY; B. E. HAWKINS; D. S. DEWITT; Y. P. WAIRKAR. *The Univ. of Texas Med. Br., The Univ. of Texas Med. Br.*

3:00 G29 **589.19** Electron microscopy of delayed axonopathy following traumatic brain injury. C. A. WILEY*; G. MURDOCH; M. SUN; J. FRANKS; D. B. STOLZ; C. E. DIXON; G. A. WANG; S. J. BISSEL; P. M. KOCHANEK. *Univ. Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 G30 **589.20** Effects of mild whole-body blast wave trauma to the vestibular receptor organs, nuclei, and VOR in mice. S. LIEN*; S. AJLUNI; Z. MRIDHA; H. ARNSON; N. LEFELDT; D. DICKMAN. *Baylor Col. of Med., Rice Univ.*

1:00 G31 **589.21** Efficacy of motor cortical stimulation following experimental TBI is frequency dependent. E. R. CLAYTON*; D. A. KOZLOWSKI; T. A. JONES; D. L. ADKINS. *Med. Univ. of South Carolina, DePaul Univ., Univ. of Texas, Austin.*

2:00 G32 **589.22** Differential abundance of amyloid beta peptides in brain tissue and biofluids after delayed recovery from a subacute penetrating ballistic-like brain injury. A. M. BOUTTE*; B. N. ABBATIELLO; S. F. GRANT; J. S. GILSDORF; D. W. JOHNSON; C. M. CARTAGENA; F. C. TORTELLA; D. A. SHEAR. *Walter Reed Army Inst. For Res.*

3:00 G33 **589.23** Traumatic brain injury in mice induces chronic hyperesthesia. J. WU; Z. ZHAO; X. ZHU; N. WARD; S. ZHAO; A. I. FADEN*. *Univ. of Maryland Sch. of Med., Univ. of Maryland Med. Ctr.*

4:00 G34 **589.24** Development and validation of an organotypic brain slice model for studying chronic traumatic encephalopathy. C. A. BERG; S. GHAISAS; N. KONDRU; H. JIN; V. ANANTHARAM; A. KANTHASAMY; A. G. KANTHASAMY*. *Iowa State Univ.*

1:00 G35 **589.25** Fear conditioning alters excitatory/ inihbitory tone in fear learning circuit of mice with mild traumatic brain injury. B. SCHNEIDER*; F. GHODDOUSSI; J. CHARLTON; R. KOHLER; M. P. GALLOWAY; S. A. PERRINE; A. C. CONTI. *John D. Dingell VA Med. Ctr., Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med.*

2:00 G36 **589.26** From biomechanics to behavior: An end-to-end investigation of blast-induced traumatic brain injury causes and consequences. N. RACE*; B. ZIAIE; W. TRUITT; E. BARTLETT; Z. LIU; R. SHI. *Purdue Univ., Indiana Univ. Sch. of Med.*

3:00 G37 **589.27** Studies of repetitive mild TBI: Animal model of sports-related head impact. D. BRIGGS*; M. ANGOA-PÉREZ; D. KUHN. *Wayne State Univ., John D. Dingell VA Med. Ctr.*

POSTER

590. Spinal Cord Injury: Therapeutic Strategies

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 G38 **590.01** Tamoxifen improves locomotor recovery after spinal cord injury: Establishing a therapeutic window for this condition. J. M. COLON*; A. I. TORRADO; J. M. SANTIAGO; I. K. SALGADO; A. CAJIGAS; Y. ARROYO; J. D. MIRANDA. *Univ. of Puerto Rico Sch. of Med., Univ. of Puerto Rico Carolina, Univ. of Puerto Rico Rio Piedras.*

2:00 G39 **590.02** Combined lithium and noggin treatment regulates differentiation of endogenous neural progenitors and promotes functional recovery after spinal cord injury through down-regulation of p300. H. K. YIP*; Y. DAI; M. P. L. CHEUNG. *Univ. Hong Kong Fac Med., Univ. Hong Kong Fac Med.*

3:00 G40 **590.03** Use of transplants of mesenchymal stem cells that are genetically altered to overexpress SDF-1 for treating motor deficits in a rat model of spinal cord injury. A. N. STEWART*; J. MATYAS; R. WELCHKO; A. GOLDSMITH; E. PETERSON; S. ZEILER; M. LU; Z. NAN; J. ROSSIGNOL; G. DUNBAR. *Field Neurosciences Inst. At Central Michigan, Program in Neurosci., Field Neurosciences Inst. at Central Michigan Univ., Dept. of Psychology, Col. of Med., Field Neurosciences Inst.*

4:00 G41 **590.04** Enbrel treatment promotes transplanted donor human mesenchymal precursor cell survival following spinal cord injury. S. LOVETT*; A. R. HARVEY; G. W. PLANT; S. I. HODGETTS. *Univ. of Western Australia, Stanford Univ.*

1:00 G42 **590.05** Inhibiting cortical PKA activity in spinal cord injured rats enhances corticospinal tract plasticity and rehabilitative training efficacy via EPAC. K. FOUAD*; D. WEI; C. HURD; D. GALLEGUILLOS; J. SINGH; K. K. FENRICH; C. WEBBER; S. SIPIONE. *Univ. of Alberta.*

2:00 G43 **590.06** Optimization of trophic support for neural stem cell grafts in sites of spinal cord injury. J. ROBINSON; L. GRAHAM; D. WU; Y. WANG; M. TUSZYNSKI; P. P. LU*. *UCSD, VA-San Diego Healthcare Syst.*

3:00 G44 **590.07** A potent time-dependent suppression of muscle spasticity by spinal-intrathecal delivery of glycine transporter 1 inhibitor (sarcosine) in rat complete thoracic 9 transection model. T. YOSHIZUMI*; K. KAMIZATO; A. PLATOSHYN; J. STRNADEL; J. A. CORLETO; A. M. ALAMRI; M. R. NAVARRO; J. GIESSINGGER; S. MARSALA; M. MARSALA. *UNIVERSITY OF CALIFORNIA SAN DIEGO MARASALA LAB.*

4:00 H1 **590.08** NSAID treatment for whole body vibration-induced pain: Effects on behavioral symptoms & spinal activity. M. ZEEMAN; S. KARTHA*; B. WINKELSTEIN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 H2 **590.09** ● Exogenous factors contributing to neuropathic pain after SCI. B. MURATORI*; G. ACOSTA; S. M. VEGA ALVAREZ; J. PAGE; R. SHI. *Weldon Sch. of Biomed. Engin., Purdue Univ., Purdue Univ.*

2:00 H3 **590.10** Two-week administration of neuropathic pain medications fails to prevent the development of cutaneously evoked autonomic dysreflexia after high thoracic spinal cord transection in rats. K. E. TANSEY*; J. CHUNG; H. J. LEE. *Emory Univ/Atlanta VA.*

3:00 H4 **590.11** Cell cycle activation contributes to development and maintenance of neuropathic pain following spinal cord injury. J. WU*; Z. ZHAO; C. L. RENN; S. G. DORSEY; A. I. FADEN. *Univ. of Maryland, Sch. of Med., Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Nursing.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 H5 **590.12** Anti-inflammatory compound curcumin and mesenchymal stem cells improved recovery from spinal cord injury by altering immune responses in rats. J. RUŽICKA*; L. MACHOVÁ URDZÍKOVÁ; A. KLOUDOVÁ; C. SHANNON; K. KÁROVÁ; J. DUBISOVA; Š. KUBINOVÁ; R. MURALI; E. SYKOVÁ; M. JHANWAR-UNIYAL; P. JENDELOVÁ. *Inst. of Exptl. Medicine, ASCR, Inst. of Exptl. Medicine, ASCR, New York Med. Col., Inst. of Exptl. Medicine, ASCR.*

1:00 H6 **590.13** Curcumin decreases secondary damage and improves function following spinal cord injury. S. ABU HUSSEIN; H. ATTIA; A. A. ABDELLATIF*. *American Univ. in Cairo, Alazhar Univ. Fac. of Med., American Univ. in Cairo.*

2:00 H7 **590.14** The effect of bone marrow stromal cells on blood spinal cord barrier stabilization after spinal cord injury. G. J. RITFELD*; G. VOLPEDA; M. OUDEGA. *Univ. of Miami Miller Sch. of Med., Univ. of Pittsburgh.*

3:00 H8 **590.15** Combination of adipose stem cells and olfactory ensheathing cells as a treatment for spinal cord injury. E. GOMES; S. MENDES; R. SILVA; F. TEIXEIRA; J. GIMBLE; N. SOUSA; N. SILVA; A. J. SALGADO*. *Univ. of Minho, Tulane Univ., Univ. of Minho.*

4:00 H9 **590.16** ● Sox9 knockdown promotes reactive sprouting and locomotor recovery in spinal cord injured mice by reducing CSPG levels. T. HRYCIW*; W. M. MCKILLOP; N. M. GEREMIA; E. M. YORK; L. RUBINGER; T. LIU; K. XU; A. BROWN. *Robarts Res. Institute, Western Univ., Brain Res. Inst. and Intl. Collaboration on Repair Discoveries (iCORD), Univ. of British Columbia, Robarts Res. Inst. and Dept. of Anat. and Cell Biology, Western Univ.*

1:00 H10 **590.17** A pericyte origin of stromal scar tissue following multiple different types of lesions to the central nervous system. Y. KELAHMETOGLU*; D. DIAS; J. TATARISHVILI; C. PEREZ ESTRADA; A. ERNST; L. BRUNDIN; Z. KOKAIA; O. LINDVALL; J. FRISÉN; C. GÖRITZ. *Karolinska Inst., Lund Univ., Karolinska Inst.*

2:00 H11 **590.18** Effects of reduction of suppressors of cytokine signaling-3 (socs3) expression on dendritic outgrowth and demyelination after spinal cord injury. K. PARK; C. LIN; K. LI; Y. LEE*. *Cleveland Clin.*

3:00 H12 **590.19** Differential activation and effects of the PERK, ATF6, and IRE1 arms of the ER stress response after spinal cord injury. S. R. WHITTEMORE*; S. MULLINS; K. R. ANDRES; A. S. RIEGLER; M. HETMAN; S. SARASWAT OHRI. *Univ. of Louisville.*

4:00 H13 **590.20** Role of autophagy in oligodendrocyte survival and functional recovery after thoracic SCI. S. O. SARASWAT*; A. BANKSTON; A. MULLINS; A. METZ; M. HETMAN; S. WHITTEMORE. *Univ. Louisville.*

1:00 H14 **590.21** Crosstalk between endoplasmic reticulum stress response and autophagy pathways in CNS endothelial cell survival. S. A. MYERS*; A. E. RIEGLER; K. R. ANDRES; S. SARASWAT-OHRI; T. HAGG; S. R. WHITTEMORE. *Univ. Louisville, Univ. of Louisville, East Tennessee State Univ.*

2:00 H15 **590.22** Inhibition of RNA-polymerase-1 protects oligodendrocytes against endoplasmic reticulum stress. E. KILANCZYK*. *Univ. of Louisville.*

3:00 H16 **590.23** Autophagy regulates the final stages of CNS myelination. A. N. BANKSTON*; A. E. METZ; R. M. HOWARD; S. R. WHITTEMORE. *Univ. of Louisville.*

4:00 H17 **590.24** Two PTP receptors for CSPG inhibitors use convergent and divergent signaling pathways in neurons. Y. OHTAKE*; D. WONG; P. M. ABDUL-MUNEER; M. E. SELZER; S. LI. *SHPRC, Temple Univ. Sch. of Med., SHPRC, Temple Univ. Sch. of Med.*

1:00 H18 **590.25** The effects of a nt-3 persistent delivery gelatin sponge scaffold on mscs growth *in vitro* and spinal cord tissue regeneration in rats and canines. G. LI*; Y. ZENG. *Sun Yat-Sen Univ., Sun Yat-Sen Univ.*

2:00 H19 **590.26** microRNA mediated augmentation of therapeutic effects of synthetic bororetinoid in mono-culture and co-culture models of spinal cord injury. S. K. RAY*; M. CHAKRABARTI; B. C. DAS. *Univ. SC Sch. Med., Kansas Univ. Med. Ctr.*

3:00 H20 **590.27** Differential intensity-dependent effects of magnetic stimulation on the longest neurites and shorter dendrites in neuroscreen-1 cells. C. LIN*; K. LIN; V. LIN; Y. LEE. *Cleveland Clin., Cleveland Clin.*

4:00 H21 **590.28** Safety assessment of NSCs induced from human PBMC-derived iPS cells. K. SUGAI*; T. SHOFUDA; R. FUKUZAWA; H. FUKUSUMI; M. ISODA; S. OHTA; J. KOHYAMA; A. IWANAMI; M. MATSUMOTO; Y. KANEMURA; M. NAKAMURA; H. OKANO. *Keio University, Sch. of Med., Keio University, Sch. of Med., Inst. for Clin. Research, Osaka Natl. Hospital, Natl. Hosp. Organization, Tokyo Metropolitan Children's Med. Ctr., Inst. for Clin. Research, Osaka Natl. Hospital, Natl. Hosp. Organization.*

1:00 H22 **590.29** Pharmacological inhibition of clathrin mediated endocytosis and the effect of magnetic nanoparticles in the morphology of primary neurons. R. AMMASSAM VEETTIL*; T. MCALLISTER; S. GHOSH; S. SEBASTIAN; D. HYNDS. *Texas Woman's Univ., Southeast Missouri State Univ.*

2:00 H23 **590.30** Transdifferentiation of human keratinocytes into oligodendrocyte progenitors. P. MOHAMMAD GHARIBANI*; C. KERR; S. CHUA; A. ALL. *Johns Hopkins Sch. of Med., Univ. of Maryland Sch. of Med., Natl. Univ. of Singapore.*

POSTER

591. Cell Death Mechanisms: Apoptosis and Mitochondria

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 H24 **591.01** ▲ Eugenol exhibits anxiolytic activity in diabetic encephalopathic rats. J. KHAN*; D. GARABADU; S. KRISHNAMURTHY. *Indian Inst. of Technol. (BHU).*

2:00 H25 **591.02** Metformin exhibits anxiolytic activity in experimental type-2 diabetic rats. D. GARABADU*; S. KRISHNAMURTHY. *Indian Inst. of Technol. (Banaras Hindu University).*

3:00 H26 **591.03** Valosin-containing protein (VCP)/ p97 is a key mediator between autophagic cell death and apoptosis in adult hippocampal neural stem cells following insulin withdrawal. B. YEO*; C. HONG; S. JUNG; H. WOO; S. YU. *DGIST.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 H27 **591.04** ● Dual Leucine-Zipper Kinase (DLK) dependent regulation of the Integrated Stress Response contributes to neurodegenerative and neuroregenerative responses. M. LARHAMMAR*; S. HUNTWORK-RODRIGUEZ; A. SENGUPTA GHOSH; Z. JIANG; H. SOLANOY; J. EASTHAM-ANDERSON; J. S. KAMINKER; J. W. LEWCOCK; T. A. WATKINS. *Genentech Inc, Genentech Inc, Genentech Inc.*

1:00 H28 **591.05** TCP and CPFO, the metabolites of CPF induce neurotoxicity in SH-SY5Y cells. H. DAI*; L. ZHAO; Y. DENG; J. ZHANG. *Third Xiangya Hosp. of Central South Univ., Dept. of neurology, the Second Xiangya Hosp. of Central South Univ.*

2:00 H29 **591.06** Regulation of neuronal death and survival by interaction of pro and anti-death versions of Bcl-xL with the mitochondrial permeability transition pore. H. PARK*; P. LICZNERSKI; P. MIRANDA; Y. NIU; S. SACCHETTI; K. N. ALAVIAN; E. A. JONAS. *Yale Sch. of Med., Imperial Col. London.*

3:00 H30 **591.07** Induced Mitophagy alters localization of TDP-43. S. ITAMAN; K. GAN; S. A. DAVIS; M. A. GITCHO*. *Delaware State Univ., Delaware Ctr. for Neurosci. Res.*

4:00 H31 **591.08** Pro-survival role of thioredoxin reductase under metabolic stress condition: Interplay between autophagy and apoptosis. N. PANDIAN*; M. IQBAL; E. EFTEKHARPOUR. *Dept. of Physiology, Univ. of Manitoba, Dept. of Physiol. and Pathophysiology, Univ. of Manitoba, Univ. of Manitoba.*

1:00 H32 **591.09** The pro-survival role of cytosolic p53 in adult hippocampal neural stem cells. S. J. JUNG*; K. CHUNG; H. RYU; C. J. HONG; H. PARK; H. WOO; B. YEO; S. YU. *DGIST.*

2:00 H33 **591.10** Amp-activated protein kinase contributes to zinc neurotoxicity in mouse cortical cultures via activation by lkb1 and induction of bim. J. EOM; Y. KIM*. *Sejong university, Sejong Univ.*

3:00 H34 **591.11** Modulation of mitochondrial dynamics by high-extracellular glucose in nerve growth factor (NGF)-differentiated PC12 cells. A. E. SOSA ESCALANTE*; R. DIAZ-ESCARCEGA; J. MANZO-DENES; C. MORGADO-VALLE; L. BELTRAN-PARRAZAL. *Univ. Veracruzana, Univ. Veracruzana.*

4:00 H35 **591.12** The effect of dichloroacetate on mitochondrial metabolism and brain injury after hypoxia ischemia in neonatal mice. T. LI*; Y. SUN; C. XIE; Y. ZHANG; K. ZHOU; K. BLOMGREN; C. ZHU. *Gothenburg Univ., Third Affiliated Hosp. of Zhengzhou Univ., Zhengzhou Children's Hosp., Inst. of Neurosci. and Physiology, Univ. of Gothenburg, Karolinska Univ. Hosp.*

POSTER

592. Neuro-Oncology I

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 H36 **592.01** Gene expression profile in glioblastoma multiforme. N. CARKACI-SALLI*; J. M. SHEEHAN; J. W. BACCON; T. ABRAHAM; K. E. VRANA; R. E. HARBAUGH; M. GLANTZ. *Penn State Col. of Med., Penn State Col. of Med., Penn State Col. of Med., Penn State Col. of Med.*

2:00 H37 **592.02** Cortical thickness in the contralesional hemisphere is related to survival length and tumor diffusivity in long-term survivors of glioblastoma multiforme. C. DE LOS ANGELES*; K. I. ALPERT; J. JACOBS; A. W. RADEMAKER; J. J. RAIZER; K. R. SWANSON; L. WANG. *Northwestern U Feinberg Sch. of Med.*

3:00 H38 **592.03** RNA-seq expression profiling of ion channels in glioblastoma stem cells. J. POLLAK*; P. J. PADDISON; R. C. ROSTOMILY; J. RAMIREZ. *Seattle Children's Res. Inst., Fred Hutchinson Cancer Res. Ctr., Univ. of Washington, Sch. of Med., Univ. of Washington, Sch. of Med.*

4:00 H39 **592.04** Cisplatin (CDDP) modifies the protein expression of IP3R and RYR as well as interacts with Ca^{2+} -ATP-ase dependent calcium management of SH-SY5Y neuroblastoma cells. D. BUSSELBERG*; A. SAYED; E. VARGHESE; A. FLOREA. *Weill Cornell Med. Col. In Qatar, WCMC-Q, Neuropathology, Univ. Dusseldorf.*

1:00 H40 **592.05** Alterations in functional connectivity due to brain tumor growth in a mouse model of glioma. I. ORUKARI*; A. Q. BAUER; E. A. SLAT; J. B. RUBIN; J. P. CULVER. *Washington Univ. In St Louis, Washington Univ. in St Louis, Washington Univ. in St Louis.*

2:00 H41 **592.06** ▲ Treating glioblastoma multiforme with bone marrow-derived mesenchymal stem cells. L. D. HUFFMAN*; K. R. IDYLE; A. CRANE; A. K. ANTCLIFF; D. J. DUES; K. D. FINK; J. ROSSIGNOL; G. L. DUNBAR. *Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst.*

3:00 H42 **592.07** Activation of a putative membrane androgen receptor increases the efficacy of the chemotherapeutic agent, temozolomide, in a human glioblastoma cell line. C. A. BROCK; A. BADEAUX MCGILVRAY; M. SINGH*. *Univ. North Texas Hlth. Sci. Ctr-Ft. Worth.*

4:00 H43 **592.08** Selective inhibition of survival of malignant astrocytoma by conjugated linoleic acid. Implication in anti-glioma therapy. A. S. SILVA-RAMIREZ; H. M. GONZALEZ-SANCHEZ; C. G. CASTILLO; A. ROCHA-URIBE; M. M. GONZALEZ-CHAVEZ; S. F. ALI; E. RANGEL-LOPEZ; A. SANTAMARIA; C. GONZALEZ*, V. *Univ. Autonoma De San Luis Potosi, Facultad de Medicina, Universiad Autonoma de San Luis Potosi, Div. of Neurotoxicology, NCTR, Lab. de Aminoacids Excitadores, INNN.*

1:00 H44 **592.09** ● Effects of irinotecan nanoparticles on viability rates of glioblastoma multiforme and neurons. H. AHMET*; A. TAGHİZADEHGHALEHJOUG; U. OKKAY; N. TASPINAR; K. NALCI; M. TASPINAR; M. CETIN; A. UYANIK; S. BUTUNER. *Ataturk Univ., Ataturk Univ., Yuzuncu Yil Univ., Ataturk Univ., Ataturk Univ.*

2:00 H45 **592.10** Expression patterns of multiple antigens evaluated by immunochemistry in individual glioblastoma patient samples. M. E. BARISH*; L. WENG; Y. ZHAI; M. D'APUZZO; B. BADIE; S. J. FORMAN; C. E. BROWN. *Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope, City of Hope Med. Ctr., City of Hope Med. Ctr., City of Hope Med. Ctr.*

3:00 H46 **592.11** Enhancement of human neuroblastoma cell apoptosis by combined treatment with valproic acid and interferon-β. S. DEDONI*; M. C. OLIANAS; P. ONALI. *Univ. of Cagliari, Dept Biomed. Sci.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 H47 **592.12** MMPs facilitate perivascular glioma cell invasion. E. G. THOMPSON*; H. W. SONTHEIMER. *The Univ. of Alabama at Birmingham.*

1:00 H48 **592.13** Modeling high-grade glioma via directed genome instability. C. V. CAMACHO*; T. SHAW; C. QU; G. WU; Y. FAN; Y. LI; S. M. DOWNING; H. R. RUSSELL; S. CHANG; J. ZHANG; S. J. BAKER; D. W. ELLISON; P. J. MCKINNON. *St Jude Children's Res. Hosp., St Jude Children's Res. Hosp., Yale Univ., St Jude Children's Res. Hosp., St Jude Children's Res. Hosp.*

2:00 I1 **592.14** The effect of pharmacological modulation of calcium signaling on the viability of human neuroblastoma cells. A. M. FLOREA*; G. REIFENBERGER; D. BÜSSELBERG. *Heinrich Heine Univ. Düsseldorf, Uniklinikum, Weill Cornell Med. Col. in Qatar.*

3:00 I2 **592.15** Insights into HuR multimerization in glioma. N. FILIPPOVA*; X. YANG; A. SOROCHINSKY; Z. GENTRY; L. B. NABORS. *Univ. of Alabama At Birmingham (UAB), VHHS, Vanderbilt Univ.*

4:00 I3 **592.16** ▲ Morphological effects of curcumin on A172 cell line of human astrocytoma. M. B. GARRIDO ARMAS*; M. SALAZAR-GARCIA; S. OROZCO-SUAREZ; F. ARENAS-HUERTERO. *HOSPITAL INFANTIL DE MEXICO FEDERICO GOMEZ, UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO, Hosp. Infantil de Mexico, Federico Gomez., HOSPITAL DE ESPECIALIDADES CENTRO MEDICO NACIONAL SIGLO XXI. INSTITUTO MEXICANO DEL SEGURO SOCIAL, Hosp. Infantil de Mexico, Federico Gomez.*

1:00 I4 **592.17** ▲ Soluble adenylyl cyclase(sAC) modulates cell proliferation and survival in glioblastoma. L. MICCI*; C. CARDENAS; R. G. CORREDOR. *Florida Intl. Univ., Florida Intl. Univ., Florida Intl. Univ.*

2:00 I5 **592.18** Additive effects of the combined expression of tGAS1 and PTEN-LONG reducing the viability of glioma cells. L. SANCHEZ*; J. HERNANDEZ-SOTO; P. VERGARA; R. O. GONZALEZ; J. SEGOVIA-VILA. *CENTRO DE INVESTIGACION Y DE ESTUDIOS AVANZADOS, UNIVERSIDAD AUTONOMA METROPOLITANA.*

3:00 I6 **592.19** Intratumoral modulation therapy for glioblastoma. M. COOPER; H. XU; C. DE OLIVEIRA; S. WHITEHEAD; S. SCHMID; M. O. HEBB*. *Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario.*

4:00 I7 **592.20** Plexin-B2 signaling promotes tumorigenicity of glioblastoma stem-like cells through activation of STAT3. Y. HUANG*; R. TEJERO-VILLALBA; R. H. FRIEDEL; H. ZOU. *Neuroscience, Icahn Sch. of Med. at Mount Sinai, Neurosurgery, Icahn Sch. of Med. at Mount Sinai.*

1:00 I8 **592.21** ● Targeted delivery of histone deacetylase inhibitor for anti-glioma therapy. L. ZOU; J. D. RODRIGUEZ; T. THOMAS; H. DOU*. *Texas Tech. Univ. Hlth. Sci. Ctr. (TTUHSC).*

2:00 I9 **592.22** ● Mechanism of transport and intracellular target of GlioStem: Novel technology for near-immediate detection of glioblastoma-derived stem cell-like cells. A. GRACIAS; B. MIGLIORI; N. GIOTOPOULOU; E. KAVANAGH; M. BÄCK; P. NILSSON; B. JOSEPH; O. HERMANSON*. *Dept. of Neuroscience, Karolinska Institutet, Karolinska Institutet, Linköping Univ.*

3:00 I10 **592.23** Pharmacological inhibition of CLIC1 chloride channel impairs glioblastoma stem cell proliferation. R. WURTH; F. BARBIERI; M. TONELLI; G. GAUDENZI; M. PERETTI; G. VITALE; M. MAZZANTI; T. FLORIO*. *Univ. of Genova, Univ. of Milano.*

4:00 I11 **592.24** Bioenergetic adaptation of invasive glioma: A complication to therapeutic targeting? B. AHN*; Y. AHN; N. DANG; A. WELJIE; J. RHO; D. SENGER. *Dept. of Oncology, Univ. of Calgary, Southern Alberta Cancer Res. Inst., Univ. of Calgary, Univ. of Pennsylvania.*

1:00 I12 **592.25** Differential tumor graft acceptance of 261 Glioblastoma Multitforme (GBM) cell lines between wild type C5Bl6, CD74 deficient, and Gamma Delta TCR deficient mice. S. MUKHERJEE*; L. DAO; R. TOBIN; G. DUSIO; E. FONKEM; M. NEWELL ROGERS. *Texas A & M, Scott and White Healthcare, scott and White Healthcare, Scott and White Healthcare.*

2:00 I13 **592.26** ● Glycolytic inhibition induces er stress and apoptotic cell death in patient derived glioblastoma stem-like cells. S. S. SHAH*; G. A. RODRIGUEZ; A. SANCHEZ; M. SCHECHTER; W. WALTERS; R. J. KOMOTAR; J. S. PRINCE; R. M. GRAHAM. *Univ. of Miami Miller Sch. of Med., UM Electron Microscopy Lab.*

3:00 I14 **592.27** The CXCL12/CXCR4 signaling axis in the pathogenesis and progression of neural stem cell derived glioblastomas. A. CALINESCU*; E. CARBALLO; D. B. ZAMLER; R. DOHERTY; D. TRAN; P. R. LOWENSTEIN; M. G. CASTRO. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

4:00 I15 **592.28** Carnosol: A natural approach to control cancer stem cell in human neuroblastoma and glioblastoma. C. GIACOMELLI; M. L. TRINCAVELLI; S. DANIELE; A. BERTOLI; G. FLAMINI; A. BRACA; C. MARTINI*. *Univ. of Pisa, Univ. of Pisa.*

1:00 I16 **592.29** The role of neuropilin 1 in glioma associated microglia and macrophages. J. MIYAUCHI*; J. NISSEN; D. SELWOOD; S. TSIRKA. *Stony Brook Univ., Univ. Col. London.*

POSTER

593. Schizophrenia: Circuitry Models

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 I17 **593.01** Reduced functional connectivity and synchrony between spiking neurons in a primate model of schizophrenia. J. L. ZICK*; R. K. BLACKMAN; M. V. CHAFEE; T. I. NETOFF. *Univ. of Minnesota, Univ. of Minnesota, Brain Sci. Center, VA Med. Ctr., Univ. of Minnesota.*

2:00 I18 **593.02** Ketamine induced chronic alterations of neural oscillatory amplitudes and cross-frequency couplings in the rat hippocampus: A translational model of schizophrenia. T. I. MICHAELS*; L. L. LONG; J. J. CHROBAK; C. A. CHEN; C. A. CHEN. *Univ. of Connecticut.*

3:00 I19 **593.03** Gut vagal afferents modulate schizophrenia-relevant behavioral functions. M. KLARER*; M. ARNOLD; J. KRIEGER; W. LANGHANS; U. MEYER. *ETH Zurich, Univ. of Zurich-Vetsuisse.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 I20 **593.04** Sub-anesthetic ketamine-induced changes in resting state functional connectivity in conscious nonhuman primates. E. MALTBIE*; K. GOPINATH; N. URUSHINO; L. HOWELL. *Emory Univ., Emory Univ.*

1:00 I21 **593.05** Knockout of NR1 receptors in the reticular nucleus of the thalamus impairs reversal learning and decreases sleep spindles. T. E. BJORNESS*; S. BIRNBAUM; J. LISMAN; R. W. GREENE. *Univ. of Texas, Southwestern Med. Ctr., Univ. of Texas Southwestern, Brandeis Univ.*

2:00 I22 **593.06** The short- and long-term behavioural effects of chronic risperidone differ in adolescents and adults. A. MOE*; S. ALEXANDER; N. D. KURNIAWAN; X. CUI; T. H. J. BURNE; D. W. EYLES. *The Queensland Brain Inst., Ctr. for Advanced Imaging, Queensland Ctr. for Mental Hlth. Res.*

3:00 I23 **593.07** Nucleus reuniens regulation of ventral tegmental area dopamine neuron activity. E. C. ZIMMERMAN*; N. JAKOBOWSKI; A. A. GRACE. *Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh.*

4:00 I24 **593.08** Identification of EEG biomarkers in mouse models of psychiatric disorders induced by NMDA antagonists. V. DUVEAU*; C. TOULLER; B. POUYATOS; C. DUMONT; C. BOUYSSIÈRES; Y. ROCHE; C. ROUCARD. *SynapCell.*

1:00 I25 **593.09** Chronic ketamine administration differentially alters parvalbumin expression as a function of age and time of sacrifice: Evidence for dynamic protein expression. J. A. CORRIVEAU*; K. M. KEARY, III; V. M. KANIA; M. M. CHALUPARAMBIL; J. J. CHROBAK. *Univ. of Connecticut.*

2:00 I26 **593.10** ▲ Subcortical coherence changes induced by high-frequency stimulation in the thalamic reticular nucleus on a neonatal model of schizophrenia. G. CONTRERAS-MURILLO*; V. M. MAGDALENO-MADRIGAL; A. VALDÉS-CRUZ; R. FERNÁNDEZ-MAS; S. ALMAZÁN-ALVARADO; D. MARTÍNEZ-VARGAS; I. CAMACHO-ABREGO; J. V. NEGRETE-DÍAZ; G. FLORES. *Inst. Nacional De Psiquiatría Ramón De La Fuen, Benemérita Univ. Autónoma de Puebla.*

3:00 I27 **593.11** Possible role for thalamic GAD67 in vacuous chewing movements. S. E. BACHUS*. *George Mason Univ.*

4:00 I28 **593.12** Longitudinal observations of neuro-metabolites in social isolation rearing model: 1H-MRS study at 9.4 T. H. HEO*; H. H. LEE; H. KIM. *Seoul Nat'L Univ. Col. of Med.*

1:00 I29 **593.13** Network-level dysfunction induced by perinatal phencyclidine is rescued by D-serine treatment. S. SESHADRI*; D. PLENZ. *NIMH, Natl. Inst. of Mental Hlth.*

POSTER

594. Alcohol: Effects of Prenatal Exposure

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 I30 **594.01** Developmental ethanol exposure disrupts attention performance and prefrontal neuron function in male mice. E. L. LOUTH*; W. BIGNELL; C. L. TAYLOR; C. D. BAILEY. *Univ. of Guelph.*

2:00 I31 **594.02** The impact of prenatal ethanol exposure on fear memory recall and behavioral development in adulthood. O. O. KOZANIAN*; E. KORZUS; K. J. HUFFMAN. *UC Riverside.*

3:00 I32 **594.03** Delayed orbital frontal cortex recruitment allows for dorsal striatum to drive behavioral inflexibility in prenatal alcohol exposed mice. K. L. MARQUARDT*; J. CAVANAGH; K. CALDWELL; J. BRIGMAN. *Univ. of New Mexico, Univ. of New Mexico.*

4:00 I33 **594.04** Consequences of prenatal drinking in the dark (DID) and neonatal ethanol intubation on spatial learning and memory in mice. A. HAWKEY; W. XU; H. LI; L. FIELDS; M. CARTER; J. LUO; G. CHEN; S. BARRON*. *Univ. Kentucky, Univ. Kentucky.*

1:00 I34 **594.05** ▲ Moderate *in utero* alcohol exposure results in sex-dependent inflammation in the developing rat brain. L. S. TERASAKI*; J. M. SCHWARZ. *Univ. of Delaware.*

2:00 I35 **594.06** Neuroimmune consequences of postnatal ethanol exposure and the potential anti-inflammatory and pro-cognitive benefits of ibuprofen treatment. M. J. GOODFELLOW*; Y. SHIN; D. LINDQUIST. *The Ohio State Univ., The Ohio State Univ.*

3:00 I36 **594.07** Transgenerational effects of perinatal ethanol exposure: Alcohol and sucrose consumption in two generations. R. LAWRENCE*; F. HOUK; V. STETTER. *Viterbo Univ., Viterbo Univ.*

4:00 I37 **594.08** Paternal alcohol imparts stress hyporesponsivity to male offspring. G. R. ROMPALA; A. FINEGERSH; G. E. HOMANICS*. *Univ. Pittsburgh, Univ. Pittsburgh.*

1:00 I38 **594.09** ● The effect of early alcohol exposure on the brain and behavior in a third trimester equivalent animal model of fetal alcohol spectrum disorders. P. C. SWART*. *Univ. of Cape Town.*

2:00 I39 **594.10** Magnetoencephalography study on multisensory integration in adolescents with fetal alcohol spectrum disorder. A. D. BOLANOS*; B. A. COFFMAN; J. F. L. PINNER; P. KODITUWAKKU; J. M. STEPHEN. *Univ. of New Mexico, The Mind Res. Network, Univ. of Pittsburgh Sch. of Med., Univ. of New Mexico, Univ. of New Mexico.*

3:00 I40 **594.11** Female rats exposed to moderate levels of ethanol during gestation display modified spatial navigation behavior. C. M. MAGCALAS*; D. BARTO; C. W. BIRD; S. DAVIES; D. D. SAVAGE; D. A. HAMILTON. *Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 I41 **594.12** Impact of postnatal 5-7-9 alcohol exposure and voluntary exercise on prefrontal plasticity and behavior. G. F. HAMILTON*; I. J. HERNANDEZ; C. P. KREBS; J. S. RHODES. *Univ. of Ilinois Urbana-Champaign.*

1:00 I42 **594.13** Reduced agonistic behavior in male rats exposed to ethanol prenatally following blockade of GluN2B containing NMDA receptors in agranular insular cortex. C. W. BIRD*; D. BARTO; C. MAGCALAS; C. I. RODRIGUEZ; T. DONALDSON; S. DAVIES; D. D. SAVAGE; D. A. HAMILTON. *Univ. New Mexico, Univ. New Mexico HSC.*

2:00 I43 **594.14** *In utero* ethanol exposure disrupts migration of glutamatergic neurons into the cortical plate. L. C. DELATOUR*; H. H. YEH. *Geisel Sch. of Med. At Dartmouth.*

3:00 I44 **594.15** Impaired production of oligodendrocyte lineage cells in a third trimester-equivalent mouse model of fetal alcohol spectrum disorder (FASD). J. NEWVILLE; C. F. VALENZUELA; L. LI; L. JANTZIE; L. A. CUNNINGHAM*. *Univ. New Mexico Sch. Med., Univ. New Mexico Sch. Med.*

4:00 I45 **594.16** ● Developmental alcohol exposure impairs activity-dependent S-Nitrosylation of NDEL1 for neuronal maturation. A. SAITO*; Y. TANIGUCHI; S. KIM; B. SELVAKUMAR; M. D. BALLINGER; J. SABRA; M. JALLOW; P. YAN; K. ITO; S. HIROTSUNE; A. WYNSHAW-BORIS; S. H. SNYDER; A. SAWA; A. KAMIYA. *Johns Hopkins Univ. Sch. of Med., Dokkyo Med. Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Osaka City Univ. Grad. Sch. of Med., Case Western Reserve Univ. Sch. of Med.*

1:00 I46 **594.17** Bumetanide treatment mitigates ethanol-induced deficits in PFC-dependent behavior associated with interneuronopathy in a mouse model of FASD. H. H. YEH*; A. G. J. SKORPUT; V. P. GUPTA; P. W. L. YEH; J. T. WEISS; N. M. SIMINERI. *Geisel Sch. of Med. at Dartmouth.*

2:00 I47 **594.18** Embryonic alcohol exposure increases apoptosis in the zebrafish brain; a strain comparison. S. MAHABIR*; D. CHATTERJEE; R. GERLAI. *Univ. of Toronto Mississauga, Univ. of Toronto Mississauga.*

3:00 I48 **594.19** ▲ Third trimester-equivalent ethanol exposure causes micro-bleeds in the rat cerebral cortex. J. WELCH; J. MAYFIELD; C. F. VALENZUELA*. *Univ. New Mexico HSC.*

4:00 J1 **594.20** *Ex vivo* model of prenatal alcohol exposure: Development and confirmation of validity. E. TUNC-OZCAN*; A. B. FERREIRA; E. E. REDEI. *Northwestern Univ., Northwestern Univ.*

1:00 J2 **594.21** DNA methylation, neural stem cells and Fetal Alcohol Spectrum Disorders; implicating the role of MeCP2 regulatory network. M. RASTEGAR*; V. R. B. LIYANAGE; R. M. ZACHARIAH. *Univ. of Manitoba.*

2:00 J3 **594.22** Gene expression profiling and genome-wide sequencing of methylated DNA identified dynamic changes in the methylome during early development. C. MANDAL; K. JUNG; S. KIM; K. PARK; J. CHAI; Y. LEE; Y. CHAI*. *Hanyang university, Hanyang Univ., Hanyang Univ.*

POSTER

595. Drug Delivery

Theme C: Disorders of the Nervous System

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 J4 **595.01** The importance of the 6- and 7-positions of tetrahydroisoquinolines as selective antagonists for the orexin 1 receptor. Y. ZHANG*; D. A. PERREY; A. M. DECKER; J. LI; B. P. GILMOUR; B. F. THOMAS; D. L. HARRIS; S. P. RUNYON. *Res. Triangle Inst., Univ. at Buffalo.*

2:00 J5 **595.02** Feasibility of targeted intracerebral administration in the cynomolgus monkey. J. DOUVILLE*; F. EMOND; C. FOUCAULT; J. LAFOND; R. ST-JACQUES; C. COPEMAN. *Charles River Labs. Preclinical Services, Montreal.*

3:00 J6 **595.03** ● Application of polymeric nanoparticles for CNS targeted zinc delivery *in vivo.* R. CHHABRA*; B. RUOZI; A. VILELLA; S. PFAENDER; T. BOECKERS; M. ZOLI; G. TOSI; A. GRABRUCKER. *Johns Hopkins Med. Inst., Intl. Grad. Sch. in Mol. Med., WG Mol. Analysis of Synaptopathies, Ulm Univ., Pharmaceut. Technol., Univ. of Modena and Reggio Emilia, Inst. of Anat. and Cell Biol.*

4:00 J7 **595.04** Targeted nanoproteinparticle conjugates for direct therapeutic shuttling to the brain. S. GILMORE; M. W. MCNERNEY*; N. FISCHER; N. BE; C. BLANCHETTE. *Lawrence Livermore Natl. Lab.*

1:00 J8 **595.05** ● Guanidinoglycoside conjugation; a novel technology for intranasal delivery of therapeutic proteins to the CNS. C. GLASS*; B. E. THACKER; W. TONG; K. M. HAMILL; C. A. DWYER; J. J. PHILLIPS; Y. TOR; T. SCOTT; J. D. ESKO. *TEGA Therapeut. Inc, UCSD, UCSD, Univ. of California, San Francisco, Pharmatek Laboratories, Inc.*

2:00 J9 **595.06** Visualizing normal and enhanced distribution of antibodies and antibody fragments in brain extracellular space using *in vivo* integrative optical imaging. D. J. WOLAK*; E. BRUNETTE; D. B. STANIMIROVIC; R. G. THORNE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Natl. Res. Council of Canada, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

3:00 J10 **595.07** ● Lipid DNA-nanoparticles as drug carrier for the treatment of eye diseases. S. O. SCHNICHELS*; J. HURST; A. GRUSZKA; K. BARTZ-SCHMIDT; A. HERRMANN; M. S. SPITZER; J. DE VRIES. *Ctr. for Ophthalmology Tübingen, Zernike Inst. for Advanced Materials.*

4:00 J11 **595.08** Guidance of magnetic nanocontainers for treating Alzheimer's disease using an electromagnetic, targeted drug-delivery actuator. G. YOON; F. UL AMIN; J. YOON; M. KIM*. *Dept. of Biol., Gyeongsang national Unverisity.*

1:00 J12 **595.09** Self-assembling MMP-2 cleavable hydrogel drug delivery systems; neural tissue biocompatibility and response. K. M. KOSS*; M. A. CHURCHWARD; K. G. TODD; L. D. UNSWORTH. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 J13 **595.10** Effect of intranasal administration of encapsulated gdnf in an animal model of parkinson´s disease. O. GARTZIANDIA; E. HERRÁN; J. A. RUIZ-ORTEGA*; C. MIGUELEZ; M. IGARTUA; J. V. LAFUENTE; J. L. PEDRÁZ; L. UGEDO; R. M. HERNÁNDEZ. *NanoBioCel Group.Laboratory of Pharmaceutics. Pharmacy School.University of The Basque Country (UPV/EHU), Biomaterials and Nanomedicine (CIBER-BBN). Biomed. ResearchNetworking Ctr. in Bioengineering, Dpt. Pharmacology.University Basque Country.UPV/EHU, Dept. Pharmacology. Fac. of Med. and Denstistry. Univ. of the Basque Country (UPV/EHU), LaNCE. Dept.Neurosciences. Fac. of Med. and Denstistry. Univ. of the Basque Country (UPV/EHU).*

POSTER

596. Auditory Processing: Cortex and Cortical Circuits

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 J14 **596.01** ▲ Changes in birdsong production and electrophysiological activities in HVC after the whole lesion of Nucleus Uvaeformis in adult Bengalese Finches. R. WANG*; F. WU; X. ZHANG; X. ZHANG; S. ZENG. *Beijing Key Lab. of Gene Resource and Molecu, Col. of Life Sci.*

2:00 J15 **596.02** Intrinsically phasic and tonic excitatory neurons in the avian auditory mesopallium. A. N. CHEN*; C. D. MELIZA. *Neurosci. Grad. Program, Univ. of Virgi, Univ. of Virginia.*

3:00 J16 **596.03** Multifaceted modulation of auditory signal detection and encoding by norepinephrine: Evidence for differential adrenergic receptor mediation. M. IKEDA*; M. LIMA; L. REMAGE-HEALEY. *Univ. of Massachusetts, Amherst, Univ. of Massachusetts, Amherst.*

4:00 J17 **596.04** Thalamocortical connections of sensory areas in the nine-banded armadillo (Dasypus novemcinctus). H. A. LAWRENCE*; A. BUCK; J. J. PADBERG. *Univ. of Central Arkansas.*

1:00 J18 **596.05** Anatomical and functional convergence of motor and neuromodulatory synapses in mouse auditory cortex. A. NELSON*; R. MOONEY. *Duke Univ.*

2:00 J19 **596.06** Thalamocortical innervation pattern in mouse auditory and visual cortex: Laminar and cell-type specificity. L. MESIK*; X. JI; B. ZINGG; Z. XIAO; L. ZHANG; H. W. TAO. *Unifersity of Southern California, Southern Med. Univ., USC.*

3:00 J20 **596.07** Pathway specific effects of isoflurane on synaptic responses in supra- and infra-granular auditory cortex neurons. A. RAZ*; B. M. KRAUSE; S. M. GRADY; M. I. BANKS. *Univ. of Wisconsin, Univ. of Wisconsin - Madison.*

4:00 J21 **596.08** Modulating auditory cortical plasticity through passive exposure to amplitude-modulated noise. M. THOMAS*; M. CISNEROS-FRANCO; L. OUELLET; E. DE VILLERS-SIDANI. *McGill University, Montreal Neurolog. Inst.*

1:00 J22 **596.09** Spatial distribution patterns of short term potentiation induced by microelectrode stimulation in the mouse auditory cortex *in vitro.* T. TATENO*; A. SANO. *Hokaido Univ.*

2:00 J23 **596.10** Callosal projections influence neuronal-specific sound-evoked responses in the mouse auditory cortex. C. ROCK*; A. APICELLA. *Univ. of Texas San Antonio.*

3:00 J24 **596.11** Gaba(b) receptors regulate experience-dependent maturation of temporal processing in the primary auditory cortex. X. LONG; R. HAN; D. CAI; M. LIU; Y. ZHENG; Y. LIU; L. ZHAO; J. YAO; K. YUAN*. *Tsinghua Univ., WeiFang Med. Univ., Affiliated Hosp. of WeiFang Med. Univ.*

4:00 J25 **596.12** Layer 5 and 6 auditory corticocollicular neurons are differentially distributed with respect to their subcortical targets in the mouse. G. YUDINTSEV*; D. A. LLANO. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

1:00 J26 **596.13** Layer 6 corticothalamic neurons modulate the gain and selectivity of columnar sound processing. W. GUO*; A. R. CLAUSE; A. N. BARTH-MARON; B. G. SHINN-CUNNINGHAM; D. B. POLLEY. *Massachusetts Eye and Ear Infirmary, Boston Univ., Harvard Med. Sch., Harvard Med. Sch.*

2:00 J27 **596.14** ▲ Computational studies of a thalamocortical network containing the thalamic reticular nucleus, using a novel mutual information estimator to measure network performance. E. GRIBKOVA*; D. A. LLANO. *Univ. of Illinois At Urbana-Champaign.*

3:00 J28 **596.15** Auditory cortex controls sound driven innate defense behavior through corticofugal projections to inferior colliculus. X. R. XIONG; F. LIANG*; B. ZINGG; X. JI; L. A. IBRAHIM; H. W. TAO; L. I. ZHANG. *USC, USC, Southern Med. Univ., USC, USC.*

4:00 J29 **596.16** Divergent intrinsic electric properties of L5 pyramidal neurons in the primary auditory cortex and auditory belt of rat. O. PROFANT*; K. PYSANENKO; M. KRALIKOVA; J. SYKA; L. VALIHRACH; M. ANDEROVA; R. TURECEK. *Inst. of Exptl. Medicine, Acad. of Sci., 1st Fac. of Medicine, Charles Univ. in Prague, Univ. Hosp. in Motol, Inst. of Biotechnology, Acad. of Sci., Inst. of Exptl. Medicine, Acad. of Sci.*

1:00 J30 **596.17** Congenital deafness leads to increased cortical thickness in auditory association cortex and Broca's area. M. PTITO*; J. LIND; S. ESKIDLSEN; D. COLLINS; V. FONOV; T. DYRBY; P. CAYÉ-THOMASEN; R. KUPERS. *Univ. Montreal, Rigshospitalet, Univ. of Copenhagen, Aarhus Univ., Montreal Neurolog. Inst., Montreal Neurolog. Inst., Hvidovre Hosp., Rigshospitalet.*

POSTER

597. Interactions between Auditory and Non-Auditory Modalities

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 J31 **597.01** Differential effects of auditory and visual alpha power in relation to concomitant haemodynamic response. G. Y. BEZGIN*; T. BROWN; Z. FATIMA; A. R. MCINTOSH. *McConnell Brain Imaging Ctr., Baycrest Ctr.*

2:00 J32 **597.02** McGurk illusion recalibrates neural representation and perception of subsequent auditory input. C. S. LÜTTKE*; M. EKMAN; M. A. J. VAN GERVEN; F. P. DE LANGE. *Donders Inst. Brain, Cognition and Behaviour.*

Tues. PM

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 J33 **597.03** Is the sound-induced double-flash illusion generated in primary visual cortex? Insights into multisensory integration from intracranial EEG recording in humans. E. M. YEAGLE*; P. MEGEVAND; M. MERCIER; M. T. KAUFMAN; L. CHARTARIFSKY; A. K. CHURCHLAND; A. D. MEHTA. *North Shore Univ. Hosp., Feinstein Inst. for Med. Res., Univ. Hosp. of Geneva, Montefiore Med. Ctr., Albert Einstein Col. of Med., Cold Spring Harbor Lab.*

4:00 J34 **597.04** Multisensory learning through passive audio-visual stimulation in six month old infants. S. ROHLF*; B. HABETS; B. ROEDER. *Univ. of Hamburg, Univ. of Hamburg.*

1:00 J35 **597.05** Cross-modal processing in the auditory and visual cortex: FNIRS study with a double-flash illusion. S. SHIGARAKI; K. HACHISUKA; E. OKUNO; T. HIROYASU*. *Doshisha Univ., Denso Corp., Doshisha Univ.*

2:00 J36 **597.06** Audio-visual integration for motion perception. T. OMI; W. TERAMOTO; S. HIGUCHI; S. HIDAKA; Y. SUGITA*. *Waseda Univ., Kumamoto Univ., Iwate Med. Univerisity, Rikkyo Univ.*

3:00 J37 **597.07** Audiovisual speech perception and presence of the McGurk effect in left-hemisphere stroke patients and matched control participants. L. C. ERICKSON*; M. E. FAMA; K. A. SPIEGEL; E. H. LACEY; L. M. SKIPPER-KALLAL; S. XING; J. P. RAUSCHECKER; P. E. TURKELTAUB. *Georgetown Univ. Med. Ctr., MedStar Natl. Rehabil. Hosp.*

4:00 J38 **597.08** The auditory cortex tracks the temporal dynamics of visual speech during silent lip-reading. P. MEGEVAND*; M. R. MERCIER; D. M. GROPPE; C. E. SCHROEDER; N. MESGARANI; A. D. MEHTA. *Feinstein Inst. For Med. Res., Geneva Univ. Hosp., Montefiore Med. Ctr., Albert Einstein Col. of Med., Nathan S. Kline Inst., Columbia Univ., Columbia Univ.*

1:00 J39 **597.09** Eye can hear clearly now: Visual speech increases the sensitivity of auditory cortex to peri-threshold speech-in-noise. E. C. LALOR*; M. J. CROSSE. *Trinity Col. Dublin.*

2:00 J40 **597.10** A computational model of content-specific and content-free cross-modal predictions in audiovisual speech. I. OLASAGASTI*; S. HOVSEPYAN ; S. BOUTON; A. GIRAUD. *Univ. of Geneva.*

3:00 J41 **597.11** Auditory and tactile processing and links to autism spectrum disorder symptoms. L. K. BRYANT*; M. T. WALLACE; C. J. CASCIO. *Vanderbilt Univ., Vanderbilt Univ.*

4:00 J42 **597.12** Does sound localization improve with obstructed somatosensory feedback? N. SAVIJA*; P. DI NOTA; G. R. LEVKOV; G. A. ESCOBAR; K. SMITH; J. F. X. DESOUZA. *York Univ., York Univ., York Univ., York Univ.*

1:00 J43 **597.13** The multisensory integration of naturalistic musical stimuli. M. P. OLSHANSKY*; J. F. X. DESOUZA. *York Univ., Ctr. for Vision Res., York Univ.*

2:00 J44 **597.14** Visual activation of auditory field maps across Heschl's Gyrus and surrounding cortex. B. BARTON*; J. H. VENEZIA; K. SABERI; G. HICKOK; A. A. BREWER. *Univ. of California, Irvine.*

POSTER

598. Identifying Circuits in Striate Cortex

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 J45 **598.01** Organization of interareal connectivity in mouse cortex. J. A. HARRIS*; K. E. HIROKAWA; L. NG; S. MIHALAS; C. GERFEN; P. BOHN; B. OUELLETTE; M. MORTRUD; J. D. WHITESELL; S. SORENSEN; H. ZENG. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci., Natl. Inst. of Mental Hlth.*

2:00 J46 **598.02** Connectivity of Vasoactive Intestinal Peptide expressing inhibitory interneuron in mouse visual cortex. E. M. KYUBWA*; J. Z. HUANG; E. M. CALLAWAY. *Salk Inst. for Biol. Studies, UCSD, Cold Spring Harbor Lab.*

3:00 J47 **598.03** Characterization and comparison of cortical and geniculate responses in awake and anesthetized mouse. S. DURAND*; R. IYER; K. MIZUSEKI; S. MIHALAS; C. REID. *Allen Inst. For Brain Sci.*

4:00 J48 **598.04** The influence of long-range feedback inputs on single-cell dendritic signaling. A. SHAI*; C. A. ANASTASSIOU; H. ZENG; M. E. LARKUM; C. KOCH. *Caltech, Allen Inst. for Brain Sci., Humboldt Univ.*

1:00 K1 **598.05** ● Cellular taxonomy of the primary visual cortex in mice by single cell RNA-seq. B. TASIC*; V. MENON; T. N. NGUYEN; T. K. KIM; Z. YAO; K. SMITH; T. DOLBEARE; B. LEVI; T. JARSKY; S. SORENSEN; L. GRAY; D. BERTAGNOLLI; J. GOLDY; N. SHAPOVALOVA; S. PARRY; L. MADISEN; S. SUNKIN; S. MIHALAS; C. DANG; J. PHILLIPS; L. NG; A. BERNARD; C. KOCH; M. HAWRYLYCZ; H. ZENG. *Allen Inst. For Brain Sci.*

2:00 K2 **598.06** The effect of the fine structure in connectivity on the collective dynamics in cortex. C. A. VAN VREESWIJK*; S. RAO; D. HANSEL. *Univ. ParisDescartes, Univ. ParisDescartes.*

3:00 K3 **598.07** Automated creation of generalized leaky integrate-and-fire neuron models at several levels of complexity tuned to *in vitro* electrophysiology data. C. M. TEETER*; R. IYER; N. CAIN; D. FENG; S. SUNKIN; C. KOCH; S. MIHALAS. *Allen Inst. For Brain Sci.*

4:00 K4 **598.08** Data generation pipeline for the allen cell types database. C. KOCH*; J. BERG; A. ARKHIPOV; S. SORENSEN; B. TASIC; C. ANASTASSIOU; S. SUNKIN; N. GOUWENS; S. MIHALAS; T. JARSKY; C. TEETER; T. DESTA; S. CALDEJON; S. DING; N. GAUDREAULT; V. MENON; S. PARRY; K. SMITH; J. TING; W. WAKEMAN; E. LEIN; C. FARRELL; V. MALDONADO; H. PENG; C. DANG; M. HAWRYLYCZ; L. NG; A. BERNARD; H. ZENG; J. PHILLIPS. *Allen Inst. For Brain Sci.*

1:00 K5 **598.09** Genetic labeling strategies for *in vitro* functional analysis of human neocortical cell types and microcircuits. P. CHONG; J. T. TING*; T. L. DAIGLE; R. P. GWINN; C. COBBS; E. LEIN. *Allen Inst. For Brain Sci., Swedish Neurosci. Inst., Swedish Neurosci. Inst.*

2:00 K6 **598.10** Standardizing spike sorting: An *in vitro, in silico* and *in vivo* study to develop quantitative metrics for sorting extracellularly recorded spiking activity. C. MITELUT*; S. L. GRATIY; D. DENMAN; J. H. SIEGLE; S. DURAND; K. GODFREY; C. LEE; R. C. REID; M. HAWRYLYCZ; C. KOCH; N. V. SWINDALE; C. ANASTASSIOU. *Univ. of British Columbia, Allen Inst. for Brain Sci.*

3:00 K7 **598.11** Characterizing the mesoscale organization of mouse visual cortex using ultraviolet light. J. SIEGLE*; J. ZHUANG; D. J. DENMAN; M. T. VALLEY; B. P. DANSKIN; R. C. REID; S. R. OLSEN; J. WATERS; T. J. BLANCHE. *Allen Inst. for Brain Sci., UC Berkeley.*

4:00 K8 **598.12** Active somatic and dendritic single-cell models using data from an *in vitro* slice electrophysiology and morphology platform. C. ANASTASSIOU*; W. VAN GEIT; C. ROSSERT; J. BERG; T. DESTA; D. FENG; L. KANARI; S. SUNKIN; J. SHILLCOCK; S. SORENSEN; H. PENG; A. BERNARD; C. DANG; M. HAWRYLYCZ; S. HILL; J. W. PHILLIPS; H. ZENG; E. MUELLER; H. MARKRAM; C. KOCH. *Allen Inst. for Brain Sci., Ecole Polytechnique Federale de Lausanne.*

1:00 K9 **598.13** ● Chromatic responses in the mouse central visual pathway. D. J. DENMAN*; J. H. SIEGLE; R. C. REID; T. J. BLANCHE. *Allen Inst. For Brain Sci., Univ. of California.*

2:00 K10 **598.14** The mechanism of orientation selectivity in Layer 4 in rodent V1. D. HANSEL*; G. MATO; C. VAN VREESWIJK. *CNRS, Univ. Paris Descartes, Ctr. Atomico.*

3:00 K11 **598.15** Generation and analysis of biophysical models of diverse mouse cortical neuron types. N. W. GOUWENS*; J. BERG; T. DESTA; D. FENG; T. FLISS; K. GODFREY; T. JARSKY; L. NG; S. SORENSEN; S. SUNKIN; Z. ZHOU; A. BERNARD; C. DANG; H. PENG; J. PHILLIPS; H. ZENG; M. HAWRYLYCZ; C. KOCH; A. ARKHIPOV. *Allen Inst. For Brain Sci.*

4:00 K12 **598.16** Characterization of connectivity and synaptic properties of layer 4 neurons in the mouse primary visual cortex. G. J. SOLER-LLAVINA; B. R. LEE*; H. ZENG. *Allen Inst. for Brain Sci.*

1:00 K13 **598.17** A fine ultra-structural analysis of synaptic terminals formed by different cell types in layer 4 of the primary visual cortex of the mouse. A. L. BODOR*; K. GLATTFELDER; S. MIHALAS; M. TAKENO; N. M. D. COSTA. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

2:00 K14 **598.18** The functional organization of presynaptic neural networks providing input to individual cortical neurons. S. TRENHOLM*; A. WERTZ; K. YONEHARA; Z. RAICS; M. LEINWEBER; D. HILLIER; G. SZALAY; G. KELLER; B. ROZSA; K. CONZELMANN; B. ROSKA. *Friedrich Miescher Inst., Inst. of Exptl. Med., Ludwig-Maximilians-Universitat, Univ. of Basel.*

3:00 K15 **598.19** Large scale imaging and 3d visualization of long-range circuits in clarity-treated primate visual cortex. C. CHRISTENSEN; F. FEDERER; A. GOOCH; S. MERLIN; V. PASCUCCI; A. ANGELUCCI*. *Univ. of Utah, Univ. Utah, Pacific Northwest Natl. Lab.*

4:00 K16 **598.20** Morphological classification of genetically-identified neurons in mouse primary visual cortex. S. A. SORENSEN*; T. DESTA; M. FISHER; A. HENRY; D. SANDMAN; N. THATRA; X. LIU; Z. ZHOU; J. BERG; S. CALDEJON; N. GAUDREAULT; T. LEMON; S. PARRY; J. HARRINGTON; W. WAKEMAN; D. FENG; S. SUNKIN; A. BERNARD; L. NG; C. DANG; H. PENG; J. PHILLIPS; C. KOCH; H. ZENG. *Allen Inst.*

1:00 K17 **598.21** Simulating LFP responses in mouse V1 to sensory inputs using a large-scale, biophysically detailed multi-layer circuit model. S. L. GRATIY*; C. MITELUT; S. DURAND; D. DENMAN; J. SIEGLE; J. BERG; S. SORENSEN; A. ARKHIPOV; M. HINES; A. SHAI; J. PHILLIPS; H. ZENG; R. REID; M. HAWRYLYCZ; C. KOCH; C. ANASTASSIOU. *Allen Inst. for Brain Sci., Univ. of British Columbia, Yale Univ., Caltech.*

2:00 K18 **598.22** V1 layer 4B neurons projecting to V2 thick stripes in macaque: V1 intra-laminar projections and their relationship to cytochrome oxidase compartments. J. T. YARCH*; F. FEDERER; A. ANGELUCCI. *Univ. of Utah.*

3:00 K19 **598.23** Characterization of human and mouse neurons using an *in vitro* slice electrophysiology platform. J. BERG*; T. JARSKY; A. OLDRE; K. HADLEY; D. HILL; R. MANN; C. ANASTASSIOU; A. ARKHIPOV; T. CASPER; P. CHONG; N. DEE, D. FENG, K. GODFREY, N. GOUWENS, B. LEE,; L. LI, Y. LI, S. MIHALAS, L. NG, J. NYHUS, J. PERKINS; S. PARRY, D. REID, C. SLAUGHTERBECK, G. SOLER-LLAVINA; S. SULLIVAN, S. SUNKIN, N. TASKIN, C. TEETER, J. TING; C. FARRELL, M. HAWRYLYCZ, E. LEIN, J. W. PHILLIPS; C. KOCH, H. ZENG; A. BERNARD. *Allen Inst. For Brain Sci.*

4:00 K20 **598.24** Dendritic morphology feature analysis for mouse neuron classification. X. LIU*; S. SORENSEN; C. LEE; Z. ZHOU; B. LONG; S. SUNKIN; H. ZENG; M. HAWRYLYCZ; H. PENG. *Allen Inst. For Brain Sci.*

1:00 K21 **598.25** Long range input to layer 1/2 drive distinct excitatory/inhibitory balance in modules within mouse primary visual cortex (V1). P. BISTA*; A. BURKHALTER. *Washington Univ. In St. Louis.*

2:00 K22 **598.26** ● Linking electrophysiology and optophysiology *in vivo.* P. LEDOCHOWITSCH*; M. DUCROS; R. LIU; M. A. BUICE; C. MITELUT; C. ANASTASSIOU; P. SAGGAU; T. J. BLANCHE. *Allen Inst. for Brain Sci., Univ. of British Columbia, Univ. of California.*

3:00 K23 **598.27** Local connectivity of long-range projection neurons in mouse primary visual cortex. M. KIM*; M. IACARUSO; P. ZNAMENSKIY; T. MRSIC-FLOGEL. *Biozentrum, Univ. of Basel.*

4:00 K24 **598.28** Construction of a voxel based mesoscopic mouse connectome. K. D. HARRIS; J. HARRIS; H. ZENG; S. MIHALAS*; E. SHEA-BROWN. *Univ. of Washington, Allen Inst. For Brain Sci.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

599. Striate Cortex Plasticity

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 K25 **599.01** Mechanisms of experience dependent synaptic stabilization in layerII/III excitatory neurons in mouse visual cortex. J. SUBRAMANIAN*; A. BALCIOGLU-DUTTON; E. NEDIVI. *MIT.*

2:00 K26 **599.02** Correlated turnover of inhibitory boutons during ocular dominance plasticity. R. RAJENDRAN*; H. SAIEPOUR; A. J. HEIMEL; C. N. LEVELT. *Netherlands Inst. For Neurosci.*

3:00 K27 **599.03** Optogenetic interference with somatostatin-interneuron activity suppresses enucleation-induced cross-modal plasticity in the adult mouse visual cortex. I. SCHEYLTJENS*; S. VREYSEN; M. LARAMÉE; E. DREESEN; C. VAN DEN HAUTE; V. BAEKELANDT; J. NYS; L. ARCKENS. *KU Leuven, KU Leuven.*

4:00 K28 **599.04** Daily *in vivo* imaging of inhibitory and excitatory synapses during the progression of an ocular dominance shift. K. P. BERRY*; K. VILLA; J. SUBRAMANIAN; J. CHA; P. T. C. SO; Y. KUBOTA; E. NEDIVI. *MIT, Natl. Inst. for Physiological Sci.*

1:00 K29 **599.05** Temporal frequency-dependent potentiation of visually-evoked responses in adult mouse visual cortex. C. L. LANTZ*; E. M. QUINLAN. *Univ. of Maryland.*

2:00 K30 **599.06** Sensory experience modifies the spatial relationship between orientation and ocular dominance maps in visual cortex. S. L. CLOHERTY; N. J. HUGHES; G. J. GOODHILL; M. R. IBBOTSON*. *Natl. Vision Res. Inst., Univ. of Queensland.*

3:00 K31 **599.07** A new effective cell surface proteomics approach for mm3-tissue samples to investigate cross-modal plasticity in mouse visual cortex. L. H. ARCKENS*; N. LOMBAERT; J. NYS; D. VALKENBORG; G. BAGGERMAN; K. SMOLDERS. *KU Leuven, U Antwerp.*

4:00 K32 **599.08** Experience-dependent miR-34a triggers critical period plasticity by repressing GAT1. Y. KOBAYASHI*; M. D. CAIATI; T. K. HENSCH. *Harvard Univ., Boston Children's Hosp.*

1:00 K33 **599.09** Lynx1 limits dendritic spine turnover in adult visual cortex. M. SAJO*; G. C. R. ELLIS-DAVIES; H. MORISHITA. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

2:00 K34 **599.10** Regulation of experience-dependent plasticity in visual cortex following ngr1 deletion within individual cortical layers. M. G. FRANTZ*; A. W. MCGEE. *Michael Frantz, USC, USC.*

3:00 K35 **599.11** Bidirectional regulation of matrix metalloproteinase-9 (mmp-9) activity by visual experience in the adult mouse primary visual cortex. S. MURASE*; Y. GU; E. M. QUINLAN. *Univ. Maryland.*

4:00 K36 **599.12** Environmental enrichment preserves lifelong ocular dominance plasticity in mouse visual cortex. F. GREIFZU*; S. LÖWEL. *Georg-August Univ. Göttingen.*

1:00 K37 **599.13** Effect of synaptic plasticity on orientation selectivity in the primary visual cortex. G. MATO*; S. GONZALO COGNO. *CNEA and CONICET, Inst. Balseiro.*

2:00 K38 **599.14** Inhibitory synapses are repeatedly assembled and removed at persistent sites *in vivo.* K. L. VILLA*; K. P. BERRY; J. SUBRAMANIAN; J. CHA; P. T. C. SO; Y. KUBOTA; E. NEDIVI. *MIT, Natl. Inst. for Physiological Sci.*

3:00 K39 **599.15** Effective compression of predictive information in retinal ganglion cells learned through STDP. A. SEDERBERG*; J. N. MACLEAN; S. E. PALMER. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

4:00 K40 **599.16** Plasticity of binocularity and visual acuity are differentially limited by nogo receptor. C. STEPHANY*; L. L. H. CHAN; H. H. M. DORTON; S. N. PARIVASH; S. QIU; A. W. MCGEE. *Saban Res. Institute, Children's Hosp. Los Angeles, City Univ. of Hong Kong, Univ. of Arizona Col. of Med.*

1:00 K41 **599.17** Understanding the role of fluoxetine in reinstating critical period-like plasticity. S. BESHARA*; J. G. A. PINTO; D. G. JONES; K. M. MURPHY. *McMaster Univ., Pairwise Affinity Inc, McMaster Univ.*

2:00 K42 **599.18** Role of creb on the regulation of ocular dominance plasticity. N. S. PULIMOOD*; A. E. MEDINA. *Univ. of Maryland Baltimore.*

3:00 L1 **599.19** Arc gates the expression of critical period ocular dominance plasticity in the visual cortex. K. R. JENKS*; E. PASTUZYN; J. ICHIDA; H. BITO; M. BEAR; J. SHEPHERD. *Univ. of Utah, Univ. of Utah, Univ. of Tokyo, MASSACHUSETTS INSTITUTE OF TECHNOLOGY.*

4:00 L2 **599.20** Increased visual cortical thickness in sight-recovery individuals. M. J. GUERREIRO*; M. V. ERFORT; J. HENSSLER; L. PUTZAR; B. ROEDER. *Univ. of Hamburg.*

1:00 L3 **599.21** Transient loss of cross-modal influence in primary visual cortex by experience and inhibition. R. HATTORI*; T. K. HENSCH. *Mol. and Cell. Biol., Harvard Univ., Neurol., Boston Children's Hosp.*

2:00 L4 **599.22** Nicotinic modulation of somatostatin interneurons reactivates plasticity in adult visual cortex. M. SADAHIRO*; M. DEMARS; P. BURMAN; H. MORISHITA. *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, Icahn Sch. of Med. At Mount Sinai.*

POSTER

600. Motion Processing

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 L5 **600.01** Enhancement and suppression of motion signals by static stimuli in the human visual system. C. QUAIA*; B. M. SHELIGA; L. M. OPTICAN; B. G. CUMMING. *Natl. Eye Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 L6 **600.02** Optic flow links BOLD suppressed early visual cortex to areas encoding heading direction as predicted by predictive coding. A. SCHINDLER*; A. BARTELS. *Ctr. For Integrative Neuroscience, Univ. of Tuebingen.*

3:00 L7 **600.03** Spike-field coupling of the anterior cingulate cortex and frontal eye field in goal-directed eye movements. S. BABAPOOR-FARROKHRAN*; M. VINCK; T. WOMELSDORF; S. EVERLING. *Western Univ., Yale Univ., York Univ.*

4:00 L8 **600.04** How does the visual system recover object motion during self-motion? O. W. LAYTON*; B. R. FAJEN. *Rensselaer Polytechnic Inst.*

1:00 L9 **600.05** Comparing the specification of facial motion in macaques and humans. H. ZHANG*; A. STACY; S. JAPEE; L. UNGERLEIDER. *NIMH, Natl. Inst. of Mental Hlth.*

2:00 L10 **600.06** A large-scale phenomenological model of activity in primate area mt. O. SADAT REZAI*; B. TRIPP. *Univ. of Waterloo.*

3:00 L11 **600.07** Interactions of local motion signals. E. I. NITZANY*; M. LOE; S. E. PALMER; J. D. VICTOR. *Cornell Univ., Weill Cornell Med. Col., Univ. of Chicago, Univ. of Chicago.*

4:00 L12 **600.08** Speed encoding in human motion regions for objective and retinal motion. D. KORKMAZ HACIALIHAFIZ*; G. DARMANI; A. BARTELS. *Univ. of Tübingen, IMPRS for Cognitive and Systems Neurosci.*

1:00 L13 **600.09** Neural activity in occipito-parietal and frontal regions predicts outcome of bistable motion perception. Q. CHEN*; L. SHEN; B. HAN; J. XIA; L. CHEN. *South China Normal Univ., South China Normal Univ., Univ. de Toulouse, Ctr. de Recherche Cerveau et Cognition, Univ. Paul Sabatier, Ctr. Natl. de la Recherche Scientifique, Unité Mixte de Recherche 5549, Faculté de Médecine de Purpan, Dept. of Psychology, Peking Univ.*

2:00 L14 **600.10** Prediction error signals for visuo-motor mismatch in human visual cortex. J. HEINZLE*; K. STEPHAN; G. B. KELLER. *Univ. of Zuerich and ETH Zuerich, Univ. Col. London, Max Planck Inst. for Metabolism Res., Friedrich Miescher Inst. for Biomed. Res.*

3:00 L15 **600.11** Neural signals of motion integration are modulated by perception. Q. LI*; N. K. LOGOTHETIS; G. A. KELIRIS. *Max Planck Inst. For Biol. Cybernetics, Bernstein Ctr. For Computat. Neurosci., Div. of Imaging Sci. and Biomed. Engin., Bio-Imaging Lab.*

4:00 L16 **600.12** Spatial integration of visual motion signals for smooth pursuit eye movements in humans and non-human primates. C. SIMONCINI*; T. MUKHERJEE; L. C. OSBORNE. *Univ. of Chicago.*

1:00 L17 **600.13** EEG frequency tagging reveals neural integration in the perception of coordinated motion. N. ALP*; N. KOGO; B. ROSSION; J. WAGEMANS. *KU Leuven, Lab. of Exptl. Psychology, KU Leuven, Inst. of Res. in Psychology and Inst. of Neuroscience, Univ. Catholique de Louvain.*

2:00 L18 **600.14** A genome-wide association study of human visual motion perception. N. REN*; B. CHEN; Z. ZHU; Y. RAO; F. FANG. *Dept. of Psychology, Peking Univ., Peking Univ.*

3:00 L19 **600.15** Receptive field transformations between retinal ganglion cells and superficial inhibitory interneurons in zebrafish larvae. F. ABBAS*; M. P. MEYER. *King's Col. London.*

4:00 L20 **600.16** Neural motion detection circuits underlying looming-evoked escape behaviors in *Drosophila.* Y. KYUNG*; H. DIERICK; F. GABBIANI. *Baylor Col. of Med., Baylor Col. of Med., Rice Univ.*

1:00 L21 **600.17** FMRI brain activation in response to motion in school-age children born <33 weeks' gestational age who were supplemented with high-dose DHA - results from a follow-up of a randomized controlled trial. C. S. MOLLOY*; J. CHEN; R. BEARE; D. K. THOMPSON; S. STOKES; M. MAKRIDES; C. T. COLLINS; L. W. DOYLE; M. L. SEAL; P. J. ANDERSON. *Univ. of Nebraska-Lincoln, Murdoch Childrens Res. Inst., Monash Univ., Univ. of Melbourne, Women's and Children's Hlth. Res. Inst., Healthy Mothers, Babies and Children, South Australian Hlth. and Med. Res. Inst., Sch. of Paediatrics and Reproductive Health, The Univ. of Adelaide, FOODplus Res. Centre, The Univ. of Adelaide, Royal Women's Hosp.*

2:00 L22 **600.18** Visual motion processing during continuous naturalistic behaviors. J. KNÖLL*; J. W. PILLOW; A. C. HUK. *The Univ. of Texas At Austin, Princeton Univ., The Univ. of Texas at Austin.*

POSTER

601. Sensorimotor Transformation: Neurophysiology

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 L23 **601.01** Membrane properties of lamprey lateral pallial neurons and their sensory input - dissecting the primordial cortical microcircuit. S. MYSORE SURYANARAYANA*; B. ROBERTSON; P. WALLEN; S. GRILLNER. *Karolinska Institutet.*

2:00 L24 **601.02** Functional cerebral networks of prepulse inhibition: A positron emission tomography (PET) study in freely moving rats. C. ROHLEDER*; B. NEUMAIER; A. DRZEZGA; R. GRAF; F. LEWEKE; H. ENDEPOLS. *Central Inst. of Mental Hlth., Inst. of Radiochemistry and Exptl. Mol. Imaging, Clin. of Nuclear Med., Max Planck Inst. for Metabolism Res.*

3:00 L25 **601.03** Control of midbrain motor output by the basal ganglia. E. A. STUBBLEFIELD*; J. ESSIG; G. J. MURPHY; G. FELSEN; J. T. DUDMAN. *Janelia Res. Campus, Univ. of Colorado Sch. of Med.*

4:00 L26 **601.04** Neural correlates of visually-guided behavior in mouse cingulate cortex. N. A. STEINMETZ*; C. P. BURGESS; C. ROSSANT; S. N. KADIR; M. L. D. HUNTER; D. F. M. GOODMAN; M. CARANDINI; K. D. HARRIS. *Univ. Col. London, Imperial Col. London.*

1:00 L27 **601.05** Fronto-cortical projections to medial and lateral subdivisions of the mouse Superior Colliculus and their potential role in approach and avoidance behaviour. M. A. SAVAGE*; R. MCQUADE; A. THIELE. *Inst. of Neurosci.*

2:00 L28 **601.06** Multi-channel recording in the superior colliculus - insights into network computation and communication. U. K. JAGADISAN*; N. J. GANDHI. *Univ. of Pittsburgh.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 L29 **601.07** The reliance of FEFsem activity on retinal input. L. R. BAKST*; J. FLEURIET; M. J. MUSTARI. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

4:00 L30 **601.08** Robustness of direction discrimination performance during LIP inactivation. L. N. KATZ*; J. L. YATES; A. C. HUK. *The Univ. of Texas At Austin.*

1:00 L31 **601.09** Response of neurons in the medial prefrontal cortex during a time interval integration task. S. W. EGGER*; C. CHANG; M. JAZAYERI. *MIT, MIT, Harvard Med. Sch.*

2:00 L32 **601.10** Neural correlates of multimodal arm position estimation in the posterior parietal cortex. P. VANGILDER*, JR; Y. SHI; G. APKER; C. A. BUNEO. *Arizona State Univ.*

3:00 L33 **601.11** Congruence of spatial selectivity for local field potentials and spiking activity in primate posterior parietal cortex. N. J. HALL*; R. J. GERTH; C. L. COLBY. *Univ. of Pittsburgh, Ctr. for Neural Basis of Cognition, Univ. of Pittsburgh.*

4:00 L34 **601.12** Evoked movement vectors of cortical motor fields in primates. D. J. MILLER*; R. M. FRIEDMAN; I. STEPNIEWSKA; J. H. KAAS. *Vanderbilt Univ.*

1:00 L35 **601.13** An internal model for reaching using sensorimotor transformations. C. USTUN*. *Independent Scholar.*

2:00 L36 **601.14** Visuo-motor processing of objects in pre-supplementary motor area F6 neurons of the macaque. L. BONINI*; A. LIVI; M. LANZILOTTO; M. MARANESI; P. RUTHER; F. BARZ; L. FOGASSI; G. RIZZOLATTI. *Italian Inst. of Technol. - BCSMC, Univ. of Parma, Univ. of Freiburg.*

3:00 L37 **601.15** Mirror neurons respond to the observation of intransitive actions. V. PAPADOURAKIS*; V. RAOS. *Univ. of Crete Med. Sch., Fndn. for Res. and Technol. - Hellas.*

4:00 L38 **601.16** State-dependent impact of transcranial alternating current stimulation of the motor mirror system. M. FEURRA*; M. NAZAROVA; E. BLAGOVESHCHENSKY; M. YUREVICH; A. LEBEDEVA; D. POZDEEVA; V. NIKULIN. *Natl. Res. University, Higher Sch. of Ec, Natl. Res. University, Higher Sch. of Econ., Univ. Med. Berlin, Dept. of Neurol. and Clin. Neurophysiology.*

1:00 L39 **601.17** Visual feedback modulates functional connectivity between anterior intraparietal sulcus and ipsilateral motor cortex. G. JEGATHEESWARAN*; M. VESIA; R. ISAYAMA; R. CHEN. *Toronto Western Res. Institute, UHN, Univ. of Toronto.*

2:00 L40 **601.18** Enhanced human motor cortical plasticity by combined mirror visual feedback therapy and transcranial direct current stimulation (tDCS). Y. UEKI*; M. HORIBA; Y. SHIMIZU; K. SAHASHI; K. ITO; J. MIZUTANI; I. WADA; N. MATSUKAWA; I. NOJIMA. *Nagoya Citiy Univ., Nagoya university.*

3:00 L41 **601.19** A high resolution MEG study of predictive coding in action selection. J. J. BONAIUTO*; S. MEYER; G. BARNES; S. BESTMANN. *Univ. Col. London, Univ. Col. London, Univ. Col. London.*

4:00 L42 **601.20** Comparison of TMS elicited and voluntary synergies of the human hand. M. YAROSSI*; Y. WEI; S. ADAMOVICH; E. TUNIK. *Rutgers Biomed. Hlth. Sci., New Jersey Inst. of Technol., Rutgers Biomed. Hlth. Sci.*

POSTER

602. Peripheral Pain: Transient Receptor Potential (TRP) Receptors

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 L43 **602.01** Lysophosphatidylcholine(LPC)-induced pain is medicated by activation of TRPM2 in mice. P. CHO; J. LIM*; S. LEE; Y. KANG; S. OH; S. JUNG. *Hanyang Univ., Seoul Natl. Univ.*

2:00 L44 **602.02** Modulation of TRPV1 channels by sodium hyaluronate. E. DE LA PEÑA GARCIA*; R. CAIRES; E. LUIS; F. J. TABERNER; G. FERNANDEZ-BALLESTER; A. FERRER-MONTIEL; E. A. BALAZS; A. GOMIS; C. BELMONTE. *Inst. De Neurociencias. UMH-CSIC, Inst. de Biología Mol. y Celular, Matrix Biol. Inst.*

3:00 M1 **602.03** Spontaneous L-glutamate release enhancement and outward current produced by thymol in adult rat spinal substantia gelatinosa neurons. C. WANG; Z. XU; T. FUJITA; C. JIANG; L. ZHU; T. YU; R. HIRAO; E. KUMAMOTO*. *Dept Physiol, Saga Med. Sch.*

4:00 M2 **602.04** Carvone presynaptically enhances glutamatergic spontaneous excitatory transmission by activating TRP channels in the adult rat spinal substantia gelatinosa. Q. KANG; T. FUJITA*; C. JIANG; L. ZHU; C. WANG; T. YU; R. HIRAO; E. KUMAMOTO. *Saga Med. Sch.*

1:00 M3 **602.05** ● Loss of function in trpv3 associated with olmsted syndrome and erythromelalgia. Z. PANG; Z. LI; M. J. CATERINA*. *Johns Hopkins Sch. Med.*

2:00 M4 **602.06** Calcium influx through TRPV1 inhibits mechanosensitive Piezo channels via phosphoinositide depletion. T. ROHACS*; I. BORBIRO; D. BADHEKA. *Rutgers, New Jersey Med. Sch.*

3:00 M5 **602.07** Prostaglandin E2 (through EP1 receptor) decreases the internalization of the transient receptor potential vanilloid type 1 (TRPV1) in dorsal root ganglia (DRG) neurons *in vitro* -a new mechanism in mediating the trafficking of TRPV1. S. M. JAFFAL*. *McGill Univ.*

4:00 M6 **602.08** Acid-sensing ion channels (ASICs) detect moderate acidifications to induce ocular pain. X. GASULL*; G. CALLEJO; A. CASTELLANOS; M. CASTANY; A. GUAL; C. LUNA; M. ACOSTA; J. GALLAR; J. P. GIBLIN. *Univ. De Barcelona, Hosp. Vall d'Hebron, Inst. de Neurociencias, Univ. Miguel Hernandez-CSIC.*

1:00 M7 **602.09** A-kinase anchoring protein 79/150 coordinates signaling from metabotropic glutamate receptor to transient receptor potential a1 in sensory neurons. K. SZTEYN*; R. GOMEZ; J. DU; S. CARLTON; N. A. JESKE. *Univ. of Texas Hlth. Sci. Ctr. San Anto, Univ. of Texas Med. Br.*

2:00 M8 **602.10** ▲ Antinociceptive effects of CGRP8-37 recombinant peptide in a rat spinal cord injury pain model. C. HAN*; P. P. CHEN; S. JERGOVA; F. NASIRINEZHAD; C. COSNER; S. GAJAVELLI; J. SAGEN. *Florida Intl. Univ., Univ. of Miami, Iran Univ. of Med. Sci.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
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* Indicates abstract's submitting author

3:00 M9 **602.11** ▲ RNA-seq based transcriptome profiling of human and mouse dorsal root ganglion yields insight into robustness of mouse models for human pain therapeutic studies. A. TORCK*; J. V. KIM; M. Q. ZHANG; G. DUSSOR; T. J. PRICE; P. RAY. *The Univ. of Texas At Dallas.*

4:00 M10 **602.12** Primary afferents temporally encode the noxious stimulus for pain signaling. K. CHO*; J. CHOI; D. SIN; S. KIM; D. JANG; S. JUNG. *Hanyang Univ., Seoul Natl. Univ., UNIST.*

1:00 M11 **602.13** The role of PLCδ4 in regulation of TRPM8 channels in sensory neurons. Y. YUDIN*; T. ROHACS. *Rutgers New Jersey Med. Sch.*

2:00 M12 **602.14** Functional characterization of cold-sensitive neurons using constellation pharmacology. T. A. MEMON*; R. W. TEICHERT; B. M. OLIVERA. *Dept. of Biology, Univ. of Utah.*

3:00 M13 **602.15** Chemokine signaling mediates mechanical and cold hypersensitivity in sickle cell disease. K. J. ZAPPIA*; C. A. HILLERY; C. L. STUCKY. *Med. Col. of Wisconsin, Med. Col. of Wisconsin, BloodCenter of Wisconsin.*

4:00 M14 **602.16** Distinct pathways underlying peripheral thermal and mechanical hypersensitivity induced by C-type natriuretic peptide. A. J. SHEPHERD*; A. TIWARI; L. LOO; D. P. MOHAPATRA. *Washington University, Sch. of Med., Vanderbilt Univ., Univ. of North Carolina.*

POSTER

603. Thalamic and Cortical Processing

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 M15 **603.01** Impaired cholinergic modulation in the prelimbic cortex of a rat model of neuropathic pain. D. RADZICKI*; M. MARTINA; S. POLLEMA-MAYS. *Northwestern Univ., Northwestern Univ.*

2:00 M16 **603.02** CB2 receptor activation in ventrolateral thalamus produces antinociceptive effects on a rat tail flick model. S. RECILLAS*, JR; I. DOTOR LÓPEZ; R. SÁNCHEZ-ZAVALETA; G. RAMÍREZ-GARCÍA; P. SÁNCHEZ-APARICIO; H. CORTÉS-CALLEJAS; B. FLORÁN. *Univ. Autónoma Del Estado De México., CINVESTAV-IPN, CENIAQ - INR.*

3:00 M17 **603.03** Activation of corticostriatal circuitry relieves acute pain. H. Y. LIN*; R. YANG; T. MANDERS; M. LEE; J. WANG. *NYU Sch. of Med.*

4:00 M18 **603.04** Contribution of 5-HT_{2C}R to abnormal synaptic transmission in amygdala pathways in a neuropathic pain model. W. ZHANG*; T. A. GREEN; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Univ. of Texas Med. Br.*

1:00 M19 **603.05** Effect of spinal manipulation on spontaneous and evoked activity of thalamic submedius neurons. W. R. REED*; J. T. CRANSTON; S. M. ONIFER; R. S. SOZIO. *Palmer Col. of Chiropractic.*

2:00 M20 **603.06** SK channel function in the amygdala in arthritis pain - behavioral evidence. J. THOMPSON*; G. JI; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr.*

3:00 M21 **603.07** Pain increases cortical power and enhances cortico-cortico coupling. B. W. LEBLANC*; P. BOWARY; C. Y. SAAB. *Rhode Island Hosp.*

4:00 M22 **603.08** SK channel function in the amygdala in neuropathic pain - electrophysiological evidence. V. A. YAKHNITSA*; J. THOMPSON; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr.*

1:00 M23 **603.09** Single unit responses to acute pain stimulus in the acc and s1 in awake rats. T. R. MANDERS*; A. S. TONG; Q. ZHANG; Z. CHEN; J. WANG. *New York Univ.*

2:00 M24 **603.10** Neurons in the transitional zone (TZ) in rat sensorimotor cortex play an important role in modulating pain processing in the contralateral TZ. R. S. WATERS*; A. L. DE JONGH CURRY; O. V. FAVOROV. *Univ. Tennessee Hlth. Sci. Ctr., Univ. of Memphis, Univ. of North Carolina, Chapel Hill.*

3:00 M25 **603.11** Role of Cav3.1 T-type Ca^{2+} channel in trigeminal neuropathic pain. E. YU*; S. CHOI; R. R. LLINÁS. *New York Univ. Sch. of Med.*

4:00 M26 **603.12** Contribution of 5-HT_{2C}R to CRF1 receptor activation in amygdala neurons in a neuropathic pain model. G. JI*; T. A. GREEN; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Univ. of Texas Med. Br.*

1:00 M27 **603.13** ● Thalamic interneurons may play a role in altered mechanical thresholds following subthalamic deep brain stimulation in parkinsonian rats. L. GEE*; A. RAMIREZ-ZAMORA; D. SHIN; J. G. PILITSIS. *Albany Med. Col., Albany Med. Ctr., Albany Med. Col., Albany Med. Ctr.*

2:00 M28 **603.14** Role of posterior thalamic nuclei in formalin induced nociception of awake behaving mice. Y. HUH*; J. CHO. *Korea Inst. of Sci. and Technol.*

3:00 M29 **603.15** SK channel function in the amygdala in neuropathic pain - behavioral evidence. V. NEUGEBAUER*; G. JI; J. THOMPSON. *Texas Tech. Univ. Hlth. Sci. Ctr.*

4:00 M30 **603.16** Pathophysiological implication of CaV3.1 T-type Ca^{2+} channel in trigeminal neuropathic pain. S. CHOI*; E. YU; R. R. LLINÁS. *New York Univ. Sch. of Med.*

1:00 M31 **603.17** Evidence of thalamocortical dysrhythmia in patients with fibromyalgia. G. RABELLO*; K. WALTON; J. DELFINO; R. LLINÁS. *New York Univ. Sch. of Med.*

2:00 M32 **603.18** Nociception related gene expression in the lateral thalamic region during the estrous cycle. M. UMORIN*; C. JOHNSON; L. L. BELLINGER; P. R. KRAMER. *Texas A&M Univ. Baylor Col. of Dent.*

3:00 M33 **603.19** mGluR5 and endocannabinoids interact at the amygdala-prefrontal cortical synapse to increase pyramidal cell output in a pain model. T. KIRITOSHI*; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr.*

4:00 M34 **603.20** Thalamic trigeminovascular neurons have preferential sensitivity to different colors of light: Implications for photophobia during migraine. R. NOSEDA*; R. SAAVEDRA-WALKER; R. NIR; A. MELO-CARRILLO; R. BURSTEIN. *Beth Israel Med. Ctr/ Harvard Med. Sch.*

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* Indicates abstract's submitting author

POSTER

604. Pain Physiology

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 M35 **604.01** Upregulation of Ih expressed in IB4-negative Aδ nociceptive DRG neurons contributes to mechanical hypersensitivity associated with cervical radiculopathic pain. D. LIU*. *Duke Med.*

2:00 M36 **604.02** ● Bioinformatic analysis of angiotensin ii receptor type 2 expression in the dorsal root ganglion. A. SHY*; D. C. SESSIONS; J. KIM; T. HOLEMAN; D. V. TILLU; T. J. PRICE. *Univ. of Arizona, New Mexico Inst. of Mining and Technol., Univ. of Texas.*

3:00 M37 **604.03** ▲ IB4 expressing, but not TRPV1 expressing nociceptive fibers mediate movement-evoked breakthrough cancer pain. K. CARLSON; I. PELLETIER; J. HAVELIN; I. IMBERT; F. PORRECA; T. E. KING*. *Univ. of New England, Univ. of Arizona.*

4:00 M38 **604.04** Tamoxifen-inducible nav1.7 KO mouse: Characterization at an RNA, protein and electrophysiological level. L. DENG*; R. M. REESE; S. D. SHIELDS; K. SCEARCE-LEVIE; D. H. HACKOS. *Genentech Inc.*

1:00 M39 **604.05** Purinergic signaling in trigeminal nociceptive system in meninges and trigeminal ganglia. C. GUERRERO-TORO*; G. YEGUTKIN; R. GINIATULLINA; K. KOROLEVA; E. KILINC; R. GINIATULLIN. *Univ. of Eastern Finland, A. I. Virtanen Inst., Univ. of Turku.*

2:00 M40 **604.06** Modulation of pain transmission in the dorsal horn circuit: From ionic channels to information transfer of noxious inputs. P. SACRÉ; Y. GUAN; W. S. ANDERSON; S. V. SARMA*. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

3:00 M41 **604.07** Discogenic low back pain (LBP): Is it possible for intervertebral disc (IVD) itself to generate LBP? E. PARK*; S. MOON; H. SUH; H. HAN. *Col. of Medicine, Korea Univ.*

4:00 M42 **604.08** *In vivo* evaluation of cell activity using manganese-enhanced magnetic resonance imaging (MEMRI) in adult rats after neonatal nociceptive stimulation. J. M. MALHEIROS*; A. TANNÚS; R. GUINSBURG; L. COVOLAN. *Univ. Federal De Sao Paulo, USP, Univ. Federal de São Paulo.*

1:00 M43 **604.09** Does macrophage migration inhibitory factor (MIF) contribute to chronic spontaneous activity in nociceptor somata after spinal cord injury? A. BAVENCOFFE; Q. YANG; O. BLOOM; E. T. WALTERS*. *Univ. Texas Med. Sch. at Houston, Feinstein Institute, Hofstra North Shore LIJ Sch. of Med.*

2:00 M44 **604.10** ▲ Forced exercise alleviates evoked and ongoing pain in a model of advanced, NSAID-resistant osteoarthritis. I. IMBERT*; M. WALKER; J. ALLEN; G. STEVENSON; T. KING. *Univ. of New England.*

3:00 M45 **604.11** ● Effects of the natural substance (-)-alpha-Bisabolol on trigeminal central sensitisation and sensorimotor behaviour induced by acute noxious orofacial stimuli. L. T. MELO*; V. PANCHALINGAM; L. AVIVI-ARBER; P. CHERKAS; A. R. CAMPOS; B. J. SESSLE. *Univ. of Fortaleza, Univ. of Toronto.*

4:00 M46 **604.12** Selective CCR2 chemokine receptor antagonists as potential treatment of bone cancer pain. E. MIDAVAINE*; D. BARRIÈRE; J. LONGPRÉ; P. SARRET. *Univ. De Sherbrooke.*

1:00 M47 **604.13** The contribution of nucleus accumbens brain derived neurotrophic factor to persistent hyperalgesia development. C. H. TAMBELI*; L. CAMARGO-CALILI; E. DIAS-VIEIRA; G. G. SANTOS; C. SARTORI; C. A. PARADA. *UNIVERSITY OF CAMPINAS.*

2:00 M48 **604.14** Sensitization of C-fiber nociceptors in a murine model of Sickle Cell Disease (SCD) is decreased by the inhibition of anandamide hydrolysis through local administration of URB597. M. L. UHELSKI*; K. GUPTA; D. SIMONE. *Univ. of Minnesota Twin Cities.*

3:00 N1 **604.15** Mouse physiology changes over time during isoflurane anesthesia but remains within normal limits. L. BAUER*; L. LOW; C. BUSHNELL. *NIH.*

4:00 N2 **604.16** ● Effects of bacterial virulence factor applied to the rat dental pulp on nociceptive sensorimotor behaviour and medullary dorsal horn (MDH) nociceptive neurons. V. PANCHALINGAM*; V. FENG; L. MELO; L. AVIVI-ARBER; P. GAZERANI; P. CHERKAS; B. SESSLE. *Fac. of Dent., Aalborg Univ.*

1:00 N3 **604.17** ● An *in vivo* electrophysiological assay to assess blood-nerve barrier penetration in the sciatic nerve. K. CHOONG*; T. M. WALL; J. L. KRAJEWSKI; X. CHI; T. E. FITCH; B. FORSTER; B. S. WILENKIN; M. J. KRAMBIS; K. M. GARDINIER; T. J. RAUB; K. RASMUSSEN; J. S. MCDERMOTT; K. K. PALMER; B. T. PRIEST; L. R. KEHN; E. S. NISENBAUM. *Lilly Res. Labs.*

2:00 N4 **604.18** Functional TTX resistant sodium channels of human IPS and ES cell-derived nociceptive neurons resemble an early stage of development. D. R. SCHMIDT*; E. EBERHARDT; S. HAVLICEK; A. S. LINK; C. NEACSU; Z. KOHL; M. HAMPL; A. M. KIST; J. SCHÜTTLER; C. ALZHEIMER; J. WINKLER; B. NAMER; A. LAMPERT; B. WINNER. *Friedrich-Alexander Univ. Erlangen-Nuremberg, Friedrich-Alexander Univ. Erlangen-Nuremberg, Univ. hospital Erlangen, FAU Erlangen-Nuremberg, Friedrich-Alexander Univ. Erlangen-Nuremberg, Friedrich-Alexander Univ. Erlangen-Nuremberg, Univ. Hosp., Univ. Hosp. RWTH Aachen.*

3:00 N5 **604.19** Right side specific potentiation of parabrachial-central amygdala transmission by trigeminal nerve-mediated inflammatory pain. Y. MIYAZAWA; M. SUGIMOTO; Y. TAKAHASHI; A. M. WATABE; F. KATO*. *Dept Neurosci, Jikei Univ. Sch. Med., Dept Neurosci, Jikei Univ.*

4:00 N6 **604.20** Nociceptive sensitization of a defensive strike occurs centrally in Manduca sexta. D. TABUENA*; C. MOFFATT; M. FUSE. *San Francisco State Univ.*

1:00 N7 **604.21** Sex differences in BDNF expression after exposure to early life stress leads to susceptibility to neuropathic pain-induced emotional dysfunction. T. NISHINAKA*; K. NAKAMOTO; S. TOKUYAMA. *Kobe Gakuin Univ.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 N8 **604.22** Multi-molecular and structural profiles of the skin and cutaneous innervation that validate a pig proximal nerve injury models for translational research on human peripheral neuropathic pain. S. B. MEILIN*; M. DOCKUM; D. CASTEL; I. SABBAG; F. L. RICE. *MD Biosci., Integrated Tissue Dynamics LLC, The Neufeld Cardiac Res. Institute, Sheba Med. Centre, Sackler Sch. of Med., Lahav Res. Institute, Kibutz Lahav, Negev.*

3:00 N9 **604.23** Test-retest reliability of 10 Hz conditioning electrical stimulation inducing long-term potentiation-like pain facilitation in humans. W. XIA*; C. D. MØRCH; O. K. ANDERSEN. *Aalborg Univ.*

4:00 N10 **604.24** ● Parental modeling of stoicism and its effect on pain outcomes: Preliminary findings. C. A. STURYCZ*; B. L. KUHN; E. W. LANNON; S. T. PALIT; Y. M. GÜERECA; M. F. PAYNE; K. A. THOMPSON; J. O. SHADLOW; J. L. RHUDY. *Univ. of Tulsa.*

1:00 N11 **604.25** The influence of placebo analgesia on pain and the nociceptive flexion reflex (NFR): Is descending inhibition engaged? Y. M. GUERECA*; B. KUHN; S. PALIT; J. L. RHUDY. *The Univ. of Tulsa.*

2:00 N12 **604.26** Wearing video goggles inhibits spinal nociception. E. W. LANNON*; J. RHUDY. *The Univ. of Tulsa.*

3:00 N13 **604.27** Predictors of placebo analgesia of pain and spinal nociception. S. PALIT*; Y. M. GUERECA; B. L. KUHN; J. L. RHUDY. *Univ. of Tulsa.*

4:00 N14 **604.28** Heart rate variability is not associated with placebo analgesia. B. KUHN*; Y. GUERECA; S. PALIT; J. RHUDY. *The Univ. of Tulsa, The Univ. of Tulsa.*

1:00 N15 **604.29** Role of potassium channel TREK1 in formalin-induced acute and chronic nociception. V. A. MARTÍNEZ-ROJAS*; G. GARCÍA; A. HERNÁNDEZ MENDOZA; A. COVARRUBIAS CAMARILLO; J. MURBARTIÁN. *Cinvestav Sede Sur.*

2:00 N16 **604.30** Gender specific effects of fluoxetie, duloxetine and amitriptyline in pain behavior and spinal BDNF expression in mice. M. ZAMMATARO; M. BARRESI; S. MERLO; L. CUCCI; M. SORTINO; S. CHIECHIO*. *Univ. of Catania, Univ. of Catania, Univ. of Gothenburg, Sweden., Univ. of Catania.*

POSTER

605. Somatosensory Signaling Mechanisms

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 N17 **605.01** The biophysical basis of rapidly adapting mechanoreceptor currents in *C. elegans* touch receptor neurons. A. L. EASTWOOD; A. SANZENI; B. C. PETZOLD; S. PARK; B. L. PRUITT; M. VERGASSOLA; M. B. GOODMAN*. *Stanford Univ., Univ. of California at San Diego, Stanford Univ.*

2:00 N18 **605.02** The role of arachidonic acid containing-membranes in modulating mechanoreceptor currents *in vivo* in *C. elegans.* S. KATTA*; V. VÁSQUEZ; A. L. EASTWOOD; M. B. GOODMAN. *Stanford Univ., Univ. of Tennessee Hlth. Sci. Ctr.*

3:00 N19 **605.03** Segregated population of layer 5 sensorimotor cortex neurons projects to superficial and deeper laminae of the same spinal cord segment. R. OLIVARES-MORENO*; Y. MORENO-LOPEZ; L. CONCHA; M. CORDERO-ERAUSQUIN; G. ROJAS-PILONI. *UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO, Inst. des Neurosciences Cellulaires et Intégratives.*

4:00 N20 **605.04** Corticospinal segregated projections activates distinct segmental interneurons in rat spinal cord. Y. MORENO-LOPEZ; R. OLIVARES-MORENO; M. CORDERO-ERAUSQUIN; G. ROJAS-PILONI*. *Univ. Natl. Autonoma Mexico, Inst. des Neurosciences Cellulaires et Intégratives.*

1:00 N21 **605.05** Peptidomic investigation of rat dorsal root ganglia. E. G. TILLMAAND*; N. YANG; E. V. ROMANOVA; S. S. RUBAKHIN; J. V. SWEEDLER. *Univ. of Illinois At Urbana-Champaign.*

2:00 N22 **605.06** Reflexive voice pitch responses to laryngeal mechanosensory stimulation. M. J. HAMMER*; S. A. PALM; A. BHATTACHARYA. *Univ. of Wisconsin.*

3:00 N23 **605.07** A multiphysics model of the pacinian corpuscle. J. QUINDLEN*; H. K. STOLARSKI; M. FLANDERS; V. H. BAROCAS. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

4:00 N24 **605.08** ▲ Cold temperature stimulates IP3R-mediated calcium release in skin cells. S. E. PIERCE*; N. W. BELLONO; E. OANCEA. *Brown Univ.*

1:00 N25 **605.09** Development of a screening platform for natriuretic peptide receptor 1 antagonists. H. SOLINSKI; S. MISHRA; J. HUANG; M. KRIEGBAUM; M. HOON*. *NIDCR.*

2:00 N26 **605.10** TLR signaling in mast cells contributes to chronic pruritus in a rat model of atopic dermatitis. T. HAN*; H. LEE; J. LEE; S. BACK; H. NA. *Korea Univ. Col. Med., Dept. of Pharmaceutics & Biotechnology, Col. of Med. Engineering, Konyang Univ.*

3:00 N27 **605.11** Transmembrane guanlylyl cyclases and CaMKI mediate thermosensory signaling and thermal acclimation. Y. YU*; A. TAKEISHI; V. HAPIAK; H. BELL; P. SENGUPTA. *Brandeis Univ.*

4:00 N28 **605.12** Mechanisms underlying the scratching behavior induced by the activation of proteinase activated receptor-4 (PAR-4) in mice. R. COSTA*; E. S. PATRICIO; C. P. FIGUEIREDO; M. A. BICCA; G. C. SEGAT; E. S. FERNANDES; T. M. CUNHA; S. BEVAN; J. B. CALIXTO. *Univ. Federal do Rio de Janeiro, Univ. Federal de Santa Catarina, UNICEUMA, USP, King's Col. London.*

1:00 N29 **605.13** Identification of interneurons that mediate nociception in *Drosophila* and are modulated by touch sensing neurons. A. BURGOS*; K. HONJO; C. QIAN; L. VENKATASUBRAMANIAN; L. MACPHERSON; D. GOHL; D. W. TRACEY; M. SILIES; W. GRUEBER. *Columbia Univ., Univ. of Tsukuba, Stanford Univ., Indiana Univ., European Neurosci. Inst.*

2:00 N30 **605.14** Proprioceptive trigeminal neuron activity modulated by locus coeruleus by hyperpolarization-activated current inhibition. J. WON*; M. SAITO; Y. KANG; S. OH. *Seoul Natl. Univ., Osaka Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
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* Indicates abstract's submitting author

3:00 N31 **605.15** Social touch and fast-spiking interneurons of rodent somatosensory cortex. C. LENSCHOW*; A. CLEMENS; M. BRECHT. *Bernstein Ctr. For Computat. Neurosci.*

4:00 N32 **605.16** Combination of physiological function with cellular character in single somatosensory neuron using *in vivo* whole-cell recording and quantitative single cell real-time PCR. C. LI*; K. LI; L. BAO; X. ZHANG. *Inst. of Neurosci., State Key Lab. of Cell Biology, Inst. of Biochem. and Cell Biol.*

1:00 N33 **605.17** A neuronal brake on itch through metabotropic glutamate receptor activation. F. B. FREITAG*; K. ROGOZ; B. ARESH; H. PETTERSON; L. INGWALL; E. MAGNÚSDÓTTIR; H. ANDERSEN; C. NAGARAJA; K. KULLANDER; M. LAGERSTRÖM. *Uppsala Univ.*

2:00 N34 **605.18** A human deafness gene (TMC1) homolog regulates locomotion via multiple dendritic sensory neurons in *Drosophila* larvae. W. ZHANG*; S. MELTZER; D. ZANINI; J. LI; T. CHENG; M. C. GÖPFERT; L. Y. JAN; Y. JAN. *HHMI/UCSF, Dept. of Cell. Neurobiology, Univ. of Göttingen.*

3:00 N35 **605.19** Intimate Touch at a Distance. R. KOPPARAJU*; S. LIN; Y. CHENG; Y. CHIEN; U. HOCHGESCHWENDER; C. CHEN. *Inst. of Biomed. Sci., Taiwan Intl. Grad. Program in Interdisciplinary Neuroscience, Natl. Yang-Ming Univ. and Academia Sinica, Inst. of life Sci. ,National Defence Med. Ctr., Dept. of Life Sci. , Natl. Taiwan Univ., Dept. of Neurobio. , Central Michigan Univ., Taiwan Mouse Clin. ,National Comprehensive Mouse Phenotyping and Drug Testing Ctr. ,Academia Sinica.*

4:00 N36 **605.20** Somatosensory function of the dermal papillae in humpback whale skin. S. A. ELDRIDGE*; F. MORTAZAVI; F. L. RICE; D. R. KETTEN; D. L. ROSENE. *Univ. of Massachusetts Dartmouth, Boston Univ. Sch. of Med., Integrated Tissue Dynamics, Woods Hole Oceanographic Inst., Harvard Med. Sch.*

1:00 N37 **605.21** Stiffened membrane by STOML3 for the sense of touch. Y. QI*; L. ANDOLFI; F. FRATTINI; M. LAZZARINO; J. HU. *Ctr. For Integrative Neurosci., Grad. Sch. of Cell. & Mol. Neurosci., Inst. Officina dei Materiali-CNR.*

2:00 N38 **605.22** Fear conditioning induces expression of cannabinoid 1 receptors (CB1) in barrel cortex of adult mice. E. SIUCINSKA*; W. BRUTKOWSKI; T. BERNAS. *Nencki Inst.*

POSTER

606. Motoneuron Excitability

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 N39 **606.01** Operant conditioning of cutaneous reflexes in freely moving rats: Initial development. Y. CHEN*; L. CHEN; J. R. WOLPAW; X. Y. CHEN. *Wadsworth Ctr, NYS Dept Hlth. & SUNY, Natl. Ctr. for Adaptive Neurotechnologies, Dept of Neurology, Stratton VA Med. Ctr.*

2:00 N40 **606.02** Inferior olive ablation markably changes spinal cord GABAergic circuitry and KCC2 expression on motoneuron. Y. WANG*; Y. CHEN; L. CHEN; J. R. WOLPAW; X. Y. CHEN. *Wadsworth Ctr. NYS Dept Hlth. & SUNY, Natl. Ctr. for Adaptive Neurotechnologies, Dept of Neurology, Stratton VA Med. Ctr.*

3:00 N41 **606.03** H-reflex conditioning after transection of dorsal ascending (DA) tract disturbs key locomotor features in rats. L. CHEN*; Y. CHEN; X. X. YANG; Y. WANG; J. R. WOLPAW; X. Y. CHEN. *Wadsworth Ctr, NYS Dept Hlth. & SUNY, Natl. Ctr. for Adaptive Neurotechnologies, Dept of Neurology, Stratton VA Med. Ctr.*

4:00 N42 **606.04** Magnitude of reciprocal inhibition on plantarflexor H-reflex increases non-linearly with level of dorsiflexor muscle activity in non-neurologically impaired humans. J. LIANG; R. L. SEGAL*. *Med. Univ. of South Carolina.*

1:00 N43 **606.05** Operant conditioning of motor evoked potential (MEP) in free moving rats: Initial study. X. Y. CHEN*; Y. CHEN; L. CHEN; Y. WANG; J. R. WOLPAW. *Wadsworth Ctr, NYS Dept Hlth. & SUNY, Natl. Ctr. for Adaptive Neurotechnologies, Dept of Neurology, Stratton VA Med. Ctr.*

2:00 N44 **606.06** The negotiated equilibrium hypothesis of spinal cord function. J. R. WOLPAW*. *Wadsworth Center, NYS Dept of Hlth., Natl. Ctr. for Adaptive Neurotechnologies, Dept of Neurology, Stratton VA Med. Ctr.*

3:00 N45 **606.07** Recording of reticulospinal neurons to understand their participation in upper limb bilateral exertion. A. M. BURNS*; H. ADELI; J. BUFORD. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

4:00 N46 **606.08** Combined corticospinal and reticulospinal effects on upper limb muscles: Cooperation and competition of motor systems uncovered using stimulus trains. A. ORTIZ-ROSARIO*; H. ADELI; J. A. BUFORD. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

1:00 N47 **606.09** Interactions between corticospinal and reticulospinal outputs determine muscle response in the upper limbs and trunk as revealed with stimulus-triggered averaging. S. HULBERT*; H. ADELI; J. BUFORD. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

2:00 N48 **606.10** Identifying supraspinal influences on lumbosacral motor neuron excitability after spinal cord injury: Effects of galvanic vestibular stimulation and acoustic startle reflex on MMR amplitude in leg muscles. A. MINK; D. SAYENKO; D. ATKINSON; Y. GERASIMENKO; S. HARKEMA; . . .*. *Univ. of Louisville, Neurosci. Collaborative Center, Frazier Rehab Inst., UCLA, Univ. of Louisville, Pavlov Inst. of Physiol., Univ. of Louisville.*

3:00 O1 **606.11** Transcutaneous spinal cord stimulation as a tool to investigate function of vestibulospinal, reticulospinal, and corticospinal descending pathways. D. SAYENKO*; D. ATKINSON; A. MINK; K. GURLEY; Y. GERASIMENKO; S. HARKEMA. *Univ. of California Los Angeles, Frazier Rehab Inst., Univ. of Louisville, Univ. of Louisville, Louisiana State Univ. Hlth. Sci. Ctr. New Orleans, Pavlov Inst. of Physiol., Univ. of Louisville.*

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* Indicates abstract's submitting author

4:00 O2 **606.12** Identifying descending propriospinal influence on lumbosacral motor neuron excitability after spinal cord injury: Effects of ulnar nerve stimulation on MMR amplitude in leg muscles. D. A. ATKINSON*; D. G. SAYENKO; A. MINK; K. GURLEY; V. SMITH; Y. P. GERASIMENKO; S. J. HARKEMA. *Univ. of Louisville, Frazier Rehab Inst., UCLA, Univ. of Louisville, Louisianna State UniversityHealth Sci. Ctr., Univ. of Louisville, Pavlov Inst. of Physiol.*

1:00 O3 **606.13** Modulation of motoneuron excitability by α5GABAA receptors. M. CANTO-BUSTOS*; E. LOEZA-ALCOCER; R. FELIX; R. DELGADO-LEZAMA. *CINVESTAV-IPN, CINVESTAV-IPN, CINVESTAV-IPN.*

2:00 O4 **606.14** Increasing Motoneuron persistent inward current as treatment for Sepsis-Induced Weakness. M. M. RICH*; P. NARDELLI; R. POWERS; T. COPE. *Wright State Univ., Georgia Inst. of Technol., Univ. of Washington.*

3:00 O5 **606.15** Estimates of persistent inward current in human soleus motor units decline during fatigue. K. MENDES; J. M. KALMAR*. *Wilfrid Laurier Univ.*

4:00 O6 **606.16** Is motor neuron excitability modulated by sex hormones across the menstrual cycle ? E. K. CASEY; M. E. REESE; E. OKAFOR; D. CHUN; C. GAGNON; F. F. NIGL; Y. Y. DHAHER*. *Drexel Univ. Col. of Med., The rehabilitation Inst. of Chicago, Northwestern Univ.*

1:00 O7 **606.17** Persistent Inward Currents of adult mouse spinal motoneurons, recorded *in vivo* using single electrode discontinuous voltage clamp (SEDVC). S. HUH*; C. J. HECKMAN; M. MANUEL. *Northwestern Univ., Northwestern Univ., Univ. Rene Descartes Paris.*

2:00 O8 **606.18** Developmental modulation of persistent inward currents in XII MNs. A. L. REVILL*; N. Y. CHU; M. J. LEBLANCQ; C. T. DICKSON; G. D. FUNK. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

3:00 O9 **606.19** Motoneuron excitability regulation changes during C-bouton development in mice. I. PANEK*; A. THANA; R. M. BROWNSTONE. *Dalhousie Univ., Dalhousie Univ., Dalhousie Univ.*

4:00 O10 **606.20** ● Transient receptor potential vanilloid 1 (TRPV1) and transient receptor potential ankyrin-1 (TRPA1) activators reduce muscle cramping. G. SHORT*; B. W. HEGARTY; C. H. WESTPHAL; J. M. CERMAK. *Flex Pharma Inc.*

POSTER

607. Motoneuron Excitability: Afferent Input

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 O11 **607.01** Genetic tools to study sensory motor circuits. A. SHARMA*; H. WU; C. BELLARDITA; Y. XUAN; K. MELETIS; O. KIEHN; F. LALLEMEND. *Karolinska Institutet, Karolinska Institutet.*

2:00 O12 **607.02** ● The effect of joint flexibility and knee pain upon corticospinal and reflex control of quadriceps. C. M. ALEXANDER*; J. KASSAM; M. LONG. *Imperial Col. Healthcare NHS Trust, Imperial Col. Healthcare NHS Trust, Imperial Healthcare NHS Trust.*

3:00 O13 **607.03** An optogenetic approach to understanding fine control of fast locomotion. O. CAPPELLARI*; K. E. WELLS; S. D. WILSHIN; J. CHARLES; J. R. HUTCHINSON; A. J. SPENCE; D. J. WELLS. *Royal Vet. Col., Royal Vet. Col., Temple Univ.*

4:00 O14 **607.04** Presynaptic histaminergic inhibition of synaptic transmission from mesencephalic trigeminal afferents to masseter motoneurons in juvenile rats. K. NAKAYAMA*; C. GEMBA; S. NAKAMURA; A. MOCHIZUKI; M. INOUE; T. INOUE. *Showa Univ. Sch. of Dent., Showa Univ. Sch. of Dent.*

1:00 O15 **607.05** Shared synaptic input to motoneuron pools from different limbs in essential tremor. J. GALLEGO*; J. L. DIDERIKSEN; A. HOLOBAR; J. L. PONS; E. ROCON; D. FARINA. *Northwestern Univ., Aalborg Univ., Univ. of Maribor, Spanish Natl. Res. Council, Spanish Natl. Res. Council, Georg-August Univ.*

2:00 O16 **607.06** Topographical distribution of corticospinal axons in the mouse spinal cord. H. KAMEDA*; N. MURABE; H. MIZUKAMI; K. OZAWA; M. SAKURAI. *Teikyo Univ. Sch. of Med., Jichi Med. Univ.*

3:00 O17 **607.07** Epimuscular myofascial loads affect tendon organ firing behavior. H. A. SMILDE*; J. A. VINCENT; G. C. BAAN; P. NARDELLI; T. C. COPE; H. MAAS. *VU Univ., Wright State Univ.*

4:00 O18 **607.08** Reflex activity of pubococcygeus muscle motoneurons by clitoris stimulation in the rat. O. LARA GARCIA*; D. PÉREZ GARCÍA; M. MARTINEZ GOMEZ; M. LARA GARCIA; P. PACHECO. *Ctr. de Investigaciones Cerebrales, UV, Inst. de Neuroetologia, UV, Inst. de Investigaciones Biomedicas, UNAM, Ctr. Tlaxcala Biologia de la Conducta, UAT.*

1:00 O19 **607.09** Enhanced muscle connectivity changes neural control of synergistic muscles during locomotion. M. BERNABEI*; J. H. VAN DIEËN; H. MAAS. *MOVE Res. Inst. Amsterdam.*

2:00 O20 **607.10** The severity of the central neuroimmune response following peripheral nerve injury correlates with the amount of proprioceptive IA afferent loss from injured motoneurons. T. M. ROTTERMAN*; F. J. ALVAREZ. *Emory Univ.*

3:00 O21 **607.11** The property of Ia excitation and recurrent inhibition of abdominal motoneurons in the cat. M. NIWA*; N. MUTO; S. SASAKI. *Kyorin University, Fac. of Hlth. Sci., Kyorin Univ., Ibaraki Prefectural Univ. of Hlth. Sci.*

4:00 O22 **607.12** Spinal direct current stimulation enhances vertical jump power in healthy adults. H. R. BERRY*; B. A. CONWAY. *Strathclyde Univ., Strathclyde Univ.*

1:00 O23 **607.13** Reorganization of locomotor bursts by proprioceptive feedback. J. BACQUE-CAZENAVE*; B. CHUNG; D. CATTAERT; W. HEITLER; D. H. EDWARDS. *Neurosci. Inst., INCIA, Univ. of St Andrews.*

2:00 O24 **607.14** Electrophysiological responses to joint rotation in acute stroke. N. L. SURESH*; J. EWOLDT; E. LAZZARO; G. JARAMILLO; W. Z. RYMER. *Rehabil. of Chicago, Johns Hopkins Univ.*

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POSTER

608. Cerebellum: Circuits and Function

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 O25 **608.01** Prefrontal cortex modulation of cerebellar motor learning. M. T. DE JEU*; P. J. HOLLAND; C. M. PARISIUS. *Erasmus MC.*

2:00 O26 **608.02** Depression of the cerebellar vermis alters the direction of postural sway to a vestibular perturbation. C. LAM*; C. TOKUNO; L. R. BENT. *Univ. of Guelph, Brock Univ.*

3:00 O27 **608.03** Purkinje cell activity modulated by the transcranial direct current stimulation (tDCS) in rats. N. VUKMER; P. DOMENIG; K. SHIN; H. LU*. *GA Campus, Philadelphia Col. of Osteo. Med., PCOM - Georgia Campus.*

4:00 O28 **608.04** Cerebellar tDCS alters resting-state connectivity in cerebro-cerebellar cognitive networks. A. M. D'MELLO*; D. SHOOK; W. HAYWARD; P. E. TURKELTAUB; C. J. STOODLEY. *American Univ., Georgetown Univ. Med. Ctr., MedStar Natl. Rehabil. Hosp.*

1:00 O29 **608.05** Differential modulation of interneuron circuits in human motor cortex by afferent input and cerebellar direct current stimulation. R. HANNAH*; D. AUSTIN; J. C. ROTHWELL. *UCL Inst. of Neurol.*

2:00 O30 **608.06** Effects of transcranial direct current stimulation of the cerebellum on brain resting state oscillatory and network activity. D. MATTIA; M. PETTI; L. ASTOLFI; M. MASCIULLO; I. PISOTTA; S. CLAUSI; M. LEGGIO; F. CINCOTTI; M. MOLINARI*. *Santa Lucia Foundation, IRCCS, Sapienza Univ. of Rome, Rome, Italy;, Santa Lucia Foundation, IRCCS, Santa Lucia Foundation, IRCCS, Fac. of Med. and Psychology Sapienza Univ. of Rome, Santa Lucia Foundation, IRCCS, Santa Lucia Foundation, IRCCS, Rome, Italy, Santa Lucia Fndn.*

3:00 O31 **608.07** Cerebellar activity during a visually cued finger tapping task in adolescents with Fetal Alcohol Spectrum Disorder (FASD): A Magnetoencephalographic (MEG) study. C. M. GARCIA*; P. W. KODITUWAKKU; C. D. TESCHE. *Univ. of New Mexico, Univ. of New Mexico.*

4:00 O32 **608.08** Updating inverse models for head movement control does not require cerebellar integrity. N. LEHNEN; S. GLASAUER*; M. SAğLAM. *Munich Univ. Hosp., Ludwig-Maximilian-University, Gediz Univ.*

1:00 O33 **608.09** Differential roles of the cerebellar hemisphere and dentate nucleus in temporal processing across sub- and supra-second durations. E. PETTER*; N. A. LUSK; W. H. MECK. *Duke.*

2:00 O34 **608.10** Early postnatal methylazoxymethanol administration leads to cerebellar hypoplasia and supra-second timing deficits in adult rats. N. A. LUSK*; E. A. PETTER; W. H. MECK. *Duke Univ.*

3:00 O35 **608.11** ▲ Fos expression in Purkinje cells by olfactory stimulation in male rats. Z. S. HERNÁNDEZ*; A. TAMARIZ; L. VÁSQUEZ; G. ARANDA-ABREU; R. TOLEDO; G. CORIA-AVILA; J. MANZO; L. I. GARCÍA. *Doctorado Investigaciones Cerebrales Univ. V, Ctr. de Investigaciones Cerebrales, Univ. Veracruzana.*

POSTER

609. Bimanual and Interlimb Control

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 O36 **609.01** Assessing control mechanisms and leader-follower roles in human-human and bimanual interactions during object manipulation. K. MOJTAHEDI*; M. SANTELLO. *Arizona State Univ.*

2:00 O37 **609.02** Somatosensory electrical stimulation added to motor practice modifies neuronal excitability but does not have additive effects on interlimb transfer in humans. M. P. VELDMAN*; I. ZIJDEWIND; N. A. MAFFIULETTI; T. HORTOBÁGYI. *Univ. Med. Ctr. Groningen, Univ. Med. Ctr. Groningen, Schulthess Clin.*

3:00 O38 **609.03** Facilitation of triceps brachii motoneurons by contralateral elbow flexion. I. ZIJDEWIND*; M. A. PEREZ. *UMC Groningen, Neurosci. Inst. Ctr. for the Neural Basis of Cognition, The Miami Project to Cure Paralysis.*

4:00 O39 **609.04** Motor control efficiency in bimanual and collaborative tasks. E. J. AVILA MIRELES; V. SQUERI*; D. DE SANTIS; P. MORASSO; J. ZENZERI. *Inst. Italiano Tecnologia.*

1:00 O40 **609.05** Modulation of corticospinal excitability of wrist muscles depending on the phase of cyclic illusory movement of the contralateral limb. K. NAKAGAWA*; Y. UMESAWA; Q. WEIHUANG; K. NAKAZAWA; M. G. FUJIE; H. FUJIMOTO; K. KANOSUE. *The Univ. of Tokyo, Res. Fellow of JSPS (PD), Waseda Univ., Waseda Univ., Waseda Univ.*

2:00 O41 **609.06** Variances of joint configuration and muscle activity patterns during arm cycling against external resistances. M. MRAVCSIK; L. BOTZHEIM; N. ZENTAI; J. LACZKO*. *Univ. of Pecs, Pazmany Peter Catholic Univ., Wigner Res. Ctr. for Physics.*

3:00 O42 **609.07** Effects of varying visual feedback on learning a bimanual birhythmic (2:1) isometric force coordination pattern. M. LEWIS; M. DUNN; E. SHIREMAN; K. MULLER; D. DEAN, Jr; A. CHAUDHARI; N. PATEL; R. T. EAKIN; W. W. SPIRDUSO; L. D. ABRAHAM*. *Univ. Texas Austin.*

4:00 O43 **609.08** Manual asymmetry during a bilateral reach and hold task. E. J. WOYTOWICZ*; J. WHITALL; K. P. WESTLAKE; R. L. SAINBURG. *Univ. of Maryland, Univ. of Southampton, The Pennsylvania State Univ., Penn State Milton S. Hershey Med. Ctr. and Col. of Med.*

1:00 O44 **609.09** Entrainment of movement kinematics as the default mode of human joint actions: A cooperative grasping study. L. GUO*; M. NIEMEIER. *Univ. of Toronto at Scarborough, Univ. of Toronto at Scarborough, York Univ.*

2:00 O45 **609.10** Effect of handedness on the generation and execution of upper limb planar movements. M. COSCIA*; E. PIRONDINI; N. DUTHILLEUL; S. EL KHOURY; R. L. DE SOUZA; A. BILLARD; S. MICERA. *École Polytechnique Fédérale De Lausanne, École Polytechnique Fédérale De Lausanne, École polytechnique fédérale de Lausanne, Scuola Superiore Sant'anna.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 O46 **609.11** ▲ The effects of bilateral reach tasks on postural control in older adults. M. CAMINITA; H. HIBINO; K. KERN*; M. HUANG; S. BROWN. *Univ. of Michigan, Univ. of Michigan Flint.*

4:00 O47 **609.12** The influence of biomechanical constraints on bimanual coordination. D. CORDOVA BULENS*; F. CREVECOEUR; J. THONNARD; P. LEFÈVRE. *Univ. catholique de Louvain.*

1:00 O48 **609.13** Different levels of intracortical inhibition are involved in bimanual common vs. dual-goal tasks and related to interlimb interaction. W. LIAO*; J. WHITALL; J. BARTON; S. MCCOMBE WALLER. *Univ. of Maryland Baltimore, Fac. of Hlth. Sci., Univ. of Maryland.*

2:00 P1 **609.14** Effects of task constraints bimanual coordination in patients post-stroke. R. L. MCGRATH; S. S. KANTAK*. *Moss Rehabil. Res. Inst.*

3:00 P2 **609.15** Multi-frequency bimanual force production: Symmetric and asymmetric interference. D. M. KENNEDY*; J. RHEE; C. H. SHEA. *Texas A&M Univ., Texas A&M Univ.*

4:00 P3 **609.16** Mirror training augments the cross-education of strength and reduces the contralateral silent period duration in the untrained but not the trained wrist. T. ZULT*; S. GOODALL; K. THOMAS; S. SOLNIK; T. HORTOBÁGYI; G. HOWATSON. *Univ. of Groningen, Northumbria Univ., Pennsylvania State Univ., Univ. Sch. of Physical Educ., North West Univ.*

1:00 P4 **609.17** Crossed reflexes in distal muscles in the upper limb. D. S. SOTEROPOULOS*. *Newcastle Univ.*

2:00 P5 **609.18** Bilateral movement time delays when reaching and grasping one or two objects. Y. LEI*; F. CALABRO; M. PEREZ. *Univ. of Miami, Univ. of Pittsburgh.*

POSTER

610. Stroke: Impairments and Recovery

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 P6 **610.01** Neuronal substrate supporting hand function in chronic stroke patients with incomplete motor recovery. J. J. FREEMAN*; K. P. REVILL; M. W. HAUT; G. M. KOWALSKI; M. WISCHNEWSKI; S. R. BELAGAJE; F. NAHAB; D. J. COBIA; X. HU; G. HOBBS; C. M. BUETEFISCH. *Emory Univ., West Virginia Univ., Northwestern Univ.*

2:00 P7 **610.02** The relationship between muscle synergies and limb dynamics is altered after a stroke. E. V. OLESH*; V. GRITSENKO. *West Virginia Univ., West Virginia Univ.*

3:00 P8 **610.03** Altered spatial muscle activation patterns reveal possible mechanisms of motor impairment in stroke. G. RASOOL*; B. AFSHARIPOUR; N. L. SURESH; X. HU; W. Z. RYMER. *Rehabil. Inst. of Chicago, Northwestern Univ.*

4:00 P9 **610.04** Reconstructing the three-dimensional ultrasound elastography of human biceps muscle. X. HU*; A. LAI; M. DUFF; N. L. SURESH; W. Z. RYMER. *Rehabil. Inst. of Chicago, Rehabil. Inst. of Chicago.*

1:00 P10 **610.05** Effects of wrist tendon vibration on cortical activity during arm stabilization. D. B. SNYDER*; S. A. BEARDSLEY; B. D. SCHMIT. *Marquette Univ.*

2:00 P11 **610.06** Condition-specific deficits in intersegmental coordination after stroke. K. SAMBASIVAN*; K. HAENTJENS; S. KHANAFER; S. K. SUBRAMANIAN; M. C. BANIÑA; A. G. FELDMAN; H. SVEISTRUP; M. F. LEVIN. *McGill Univ., Jewish Rehabil. Hospital, Ctr. for Interdisciplinary Res. in Rehabil. of Greater Montreal (CRIR), McGill Univ., Univ. of Ottawa, Univ. de Montréal, Univ. of Ottawa, Elisabeth Bruyere Hosp.*

3:00 P12 **610.07** Temporal and spatial upper-limb interjoint coordination in chronic stroke subjects versus healthy individuals when reaching. M. R. M. RODRIGUES; M. SLIMOVITCH; A. K. BLANCHETTE; M. F. LEVIN*. *McGill Univ., Ctr. for Interdisciplinary Res. in Rehabil. of the Greater Montreal, Laval Univ.*

4:00 P13 **610.08** Corticospinal resetting of the threshold (referent) position for activation of muscles during motion at the elbow joint. S. K. SUBRAMANIAN*; L. RODRIGUES; L. RYCKEMBUSCH; T. BROHMAN; D. BARTHELEMY; M. F. LEVIN; A. G. FELDMAN. *Neurosciences, Univ. De Montréal, Ctr. for Interdisciplinary Res. in Rehabil. of Greater Montreal (CRIR), Univ. Paris Descartes, Univ. de Montréal, Montreal, Canada, Univ. De Montréal, McGill Univ.*

1:00 P14 **610.09** Residual deficits in arm coordination in an obstacle avoidance reaching task in individuals with good arm recovery after stroke. M. C. BANINA*; M. F. LEVIN. *McGill Univ., Ctr. for Res. in Rehabil. of Greater Montreal (CRIR).*

2:00 P15 **610.10** Motor unit coherence among muscles of the flexion synergy in individuals with chronic hemiparetic stroke. L. C. MILLER*; F. NEGRO; C. HECKMAN; D. FARINA; J. P. A. DEWALD. *Northwestern Univ., Florida Intl. Univ., Univ. Med. Ctr. Gottingen.*

3:00 P16 **610.11** A computational approach to understand a valley of motor recovery. J. IZAWA*; Y. MURATA; T. HIGO; N. SCHWEIGHOFER. *Univ. of Tsukuba, The Natl. Inst. of Advanced Industrial Sci. and Technol., Natl. Inst. of Advanced Industrial Sci. and Technol., Univ. of Southern Calfornia.*

4:00 P17 **610.12** Hemisphere-specific motor adaptation deficits in the ipsilesional arm of stroke patients. V. YADAV*; D. C. GOOD; R. L. SAINBURG. *The Pennsylvania State Univ., Penn State Hershey, The Pennsylvania State Univ. and Penn State Hershey.*

1:00 P18 **610.13** Comparing disruption of bihemispheric motor sites on a reaching task in mild and severe arm impairment after stroke. R. HARRINGTON*; E. CHAN; S. MOHAPATRA; C. J. WUTZKE; A. K. ROUNDS; D. ABRAHAM; M. L. HARRIS-LOVE. *Georgetown Univ., Medstar Hlth. Res. Inst., Medstar Natl. Rehabil. Hosp., George Mason Univ.*

2:00 P19 **610.14** Motor imagery deficits in individuals with post-stroke hemiparesis. G. CURTIS; S. JAX*. *Moss Rehabil. Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 P20 **610.15** Inter-trial variability during forward reaching differs with severity in people post stroke. C. WUTZKE*; R. M. HARRINGTON; E. CHAN; S. MOHAPATRA; M. L. HARRIS-LOVE. *Veterans Affairs Med. Ctr., Georgetown Univ., Natl. Rehabil. Hosp., Univ. of Montana.*

4:00 P21 **610.16** Toward robotic assessment of proprioception in 3d space. J. D. KLEIN*; B. WHITSELL; P. ARTEMIADIS; C. A. BUNEO. *ASU, Interdisciplinary Grad. Program in Neurosci., Alliance for Person-centered Accessible Technologies IGERT Program, Sch. of Engin. of Matter, Transport, and Energy, IRA A. Fulton Sch. of Engin. Arizona State Univ., Sch. of Biol. and Hlth. Systems Engineering, Ira A. Fulton Sch. of Engin. Arizona State Univ.*

1:00 P22 **610.17** Employing a binary decision tree algorithm to identify the abduction load threshold at which loss of independent joint control arrests reaching motion in stroke. M. D. ELLIS*; C. J. LIANG; M. E. RICHARDSON; K. R. SIPPLE; D. O. TAFELSKI; J. P. A. DEWALD. *Northwestern Univ.*

2:00 P23 **610.18** Role of stretch and startle reflexes in falls following stroke: Insights from treadmill induced balance perturbations. D. CELINSKIS*; M. D. GRABINER; C. F. HONEYCUTT. *Arizona State Univ., Univ. of Illinois.*

3:00 P24 **610.19** Effects of post-stroke extension/adduction coupling in the lower extremity during gait initiation: Preliminary results. N. SANCHEZ*; A. C. DRAGUNAS; J. P. A. DEWALD; K. E. GORDON. *Northwestern Univ., Northwestern Univ.*

4:00 P25 **610.20** Reduced pedaling-related brain activation volume post-stroke does not depend on task performance. B. CLELAND*; S. SCHINDLER-IVENS. *Marquette Univ.*

1:00 P26 **610.21** ● Grey and white matter changes associated with periodic leg movement during sleep: A magnetic resonance imaging study. M. D. GAREAU*; A. BARIL; D. GILBERT; N. GOSSELIN; A. DESAUTELS. *Hôpital Du Sacré Coeur De Montréal.*

2:00 P27 **610.22** Neuromuscular control bandwidth at the elbow following stroke. M. C. BENGTSON; T. STOECKMANN; L. A. MROTEK; C. GHEZ; R. A. SCHEIDT*. *Marquette Univ., Marquette Univ., Univ. of Wisconsin, Oshkosh, Columbia Univ. Med. Ctr., Northwestern Univ. Feinberg Sch. of Med.*

3:00 P28 **610.23** A model identifiability analysis for separating the relative neural and muscular contributions to weakness after stroke. P. COOMAN*; F. HUANG; J. L. PATTON. *Rehabil. Inst. of Chicago.*

4:00 P29 **610.24** Relationship between skilled reach performance and corpus callosum integrity in individuals with mild motor impairment after stroke. J. C. STEWART*; M. O'DONNELL; K. HANDLERY; C. J. WINSTEIN. *Univ. of South Carolina, USC.*

1:00 P30 **610.25** Improvement of voluntary control of post-stroke paretic hands using a novel assistive system - Rein Hand: Preliminary findings. J. YAO*; C. CARAMONA; J. SULLIVAN; K. WILKINS; E. LEE; A. MOORE; N. PARMANN; S. WOJTON; Z. GARCIA; J. P. A. DEWALD. *Northwestern Univ., Illinois Mathematics and Sci. Acad.*

2:00 P31 **610.26** ● Feasibility of transcranial Random Noise Stimulation combined with repetitive reaching practice in stroke survivors with chronic and severe paresis: A triple blind pilot RCT. K. S. HAYWARD*; K. L. RUDDY; D. LLOYD; S. G. BRAUER; R. N. BARKER; R. G. CARSON. *Univ. of British Columbia, The Univ. of Queensland, James Cook Univ., Swiss Federal Inst. of Technol., The Univ. of Queensland, Townsville Mackay Medicare Local, Trinity Col., Queens Univ.*

3:00 P32 **610.27** ● Mobility rehabilitation in acute stroke using a wearable ankle robot. D. JIN*; Y. REN; K. CHEN; R. HARVEY; E. ROTH; S. PRABHAKARAN; L. ZHANG. *Rehabil. Inst. of Chicago, Inst. for Publ. Hlth. and Med. (IPHAM),Northwestern Univ. Clin. and Translational Sci. Inst. (NUCATS).*

4:00 P33 **610.28** Designing myoelectric computer interfaces to improve arm function in chronic stroke. M. W. SLUTZKY*; E. M. MUGLER; E. W. LINDBERG. *Northwestern Univ.*

1:00 P34 **610.29** Testing the feasibility of way-finding combined with aerobic activity after stroke. L. WILLIAMS*; A. TRINH; A. MANSFIELD; D. BROOKS; N. ANDERSON; W. E. MCILROY. *Univ. of Waterloo, Sunnybrook Res. Inst., Univ. of Toronto, Toronto Rehabil. Inst., Rotman Res. Inst.*

POSTER

611. Brain Machine Interface: Methods and Technology

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 P35 **611.01** Assessment of tissue using high resolution MRI following intracortical multi-shank microelectrode array implantation. A. J. WOOLLEY*; A. BONGERS; N. H. LOVELL; J. W. MORLEY. *Univ. of New South Wales, Univ. of Western Sydney, Univ. of New South Wales.*

2:00 P36 **611.02** Intrinsic imaging of the wounding response around implanted neural devices. C. R. ESQUIBEL*; S. K. BRODNICK; J. P. NESS; J. R. NOVELLO; A. A. SCHENDEL; H. C. LEE; K. J. OTTO; L. A. KRUGNER-HIGBY; S. O. POORE; K. W. ELICEIRI; J. C. WILLIAMS. *Univ. of Wisconsin - Madison, Purdue Univ., Univ. of Florida, Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

3:00 P37 **611.03** ● Transparent graphene micro-electrocorticography and its electrochemical impedance spectroscopy. D. PARK*; S. K. BRODNICK; D. BAEK; A. SCHENDEL; S. MIKAEL; T. RICHNER; J. NESS; F. ATRY; J. NOVELLO; H. KIM; S. THONGPANG; R. PASHAIE; Z. MA; J. WILLIAMS. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Milwaukee, Mahidol Univ.*

4:00 P38 **611.04** A mesh structure based polyimide microelectrode for long-term epidural-ECoG recording. D. BAEK*; S. K. BRODNICK; D. PARK; H. KIM; S. LEE; J. C. WILLIAMS. *Univ. of Wisconsin-Madison, Korea Univ., Univ. of Wisconsin-Madison.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 P39 **611.05** *In vivo* imaging of spacial and temporal propagation of neural activity after stimulation with a CLEAR microECoG array in GCaMP6f mice. S. K. BRODNICK*; J. P. NESS; C. R. ESQUIBEL; J. R. NOVELLO; D. PARK; S. MIKAEL; D. BAEK; F. ATRY; M. R. HAYAT; T. J. RICHNER; K. W. ELICEIRI; L. KRUGNER-HIGBY; R. PASHAIE; Z. MA; J. C. WILLIAMS. *Univ. of Madison WI, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Milwaukee, Univ. of Washington.*

2:00 P40 **611.06** Chronic functionality and biocompatibility assessment of an intraneural stimulating electrode in the rat sciatic nerve. S. M. WURTH*; M. CAPOGROSSO; S. RASPOPOVIC; J. GANDAR; Q. BARRAUD; A. CUTRONE; J. RIGOSA; N. KINANY; G. TAVERNI; G. COURTINE; S. MICERA. *EPFL, SSSA, EPFL, SSSA.*

3:00 P41 **611.07** A new ECOG-based BCI system based on WIMAGINE® a fully implantable recording device for human applications. F. SAUTER-STARACE*; G. CHARVET; C. MESTAIS; M. FOERSTER; A. LAMBERT; N. TORRES-MARTINEZ; T. COSTECALDE; D. RATEL; T. AKSENOVA; A. BENABID. *French Alternative Energies and Atomic Energy Comm.*

4:00 P42 **611.08** ● Additional information from connectivity may improve classification in ECoG based Brain-Computer Interfaces. E. J. AARNOUTSE*; S. BROLSMA; Z. V. FREUDENBURG; N. F. RAMSEY. *Brain Ctr. Rudolf Magnus.*

1:00 Q1 **611.09** A cost-efficient method for impedance reduction of neural microelectrodes by nanostructured platinum. C. BOEHLER*; M. ASPLUND. *Albert-Ludwigs-University.*

2:00 Q2 **611.10** PEDOT electroplating improves tetrode impedance stability. B. A. GROSS*; D. BAUER; G. R. POE; N. B. LANGHALS. *Univ. of Michigan, Univ. of Michigan.*

3:00 Q3 **611.11** The foreign body response to the Utah Slant Electrode Array in human peripheral nerve. M. B. CHRISTENSEN*; H. A. C. WARK; D. T. HUTCHINSON; P. A. TRESCO. *Univ. of Utah, Univ. of Utah.*

4:00 Q4 **611.12** ECM coatings reduce the FBR to chronically implanted microelectrode arrays. M. POLEI*; R. OAKES; J. SKOUSEN; P. A. TRESCO. *Univ. of Utah.*

1:00 Q5 **611.13** Artifacts reduction with a simple filter for multichannel implantable neural interfaces. O. FUKAYAMA*; K. MABUCHI. *The Univ. of Tokyo.*

2:00 Q6 **611.14** ● Wireless floating microelectrode array (WFMA)for neural stimulation. P. TROYK*; S. COGAN; M. ROMERO-ORTEGA; M. BAK; S. BREDESON. *Illinois Inst. Tech., Sigenics, Inc, Univ. of Texas, MicroProbes for Life Sci.*

3:00 Q7 **611.15** Evaluation of systemic and histological changes using accelerated failure studies in mice implanted with intracortical device. J. GAIRE; K. J. OTTO*. *Univ. of Florida.*

4:00 Q8 **611.16** Does precise pulse timing affect the perception of intracortical microstimulation? T. CALLIER*; H. P. SAAL; E. W. SCHLUTER; F. V. TENORE; S. J. BENSMAIA. *Univ. of Chicago, Johns Hopkins Univ.*

1:00 Q9 **611.17** Effects of stimulation frequency on the excitability of central nervous system during functional electrical stimulation. H. SUZUKI*; T. ONO; E. YAMADA; S. KASUGA; J. USHIBA. *Keio Univ., Saiseikai Kanagawa-ken Hosp., Keio Univ., Keio Univ.*

2:00 Q10 **611.18** ● Large scale group analysis of spectral features in electrocorticography. Z. V. FREUDENBURG*; R. VAN DER SPEK; M. J. VANSTEENSEL; E. J. AARNOUTSE; N. F. RAMSEY. *UMC Utrecht-Rudolf Magnus Inst., Univ. Med. Ctr. Utrecht.*

3:00 Q11 **611.19** ▲ Investigating the effect of current flow on cortical excitability using bipolar tDCS. V. RAWJI*; J. C. ROTHWELL; S. BESTMANN; M. CIOCCA; A. ZACHARIA; M. BIKSON. *Univ. Col. London, Univ. of Milan, Geneva Univ. Hosp. and Fac. of Med., The City Col. of New York.*

4:00 Q12 **611.20** Direct current stimulation modulates bidirectional synaptic plasticity. G. KRONBERG*; M. BRIDI; T. ABEL; L. C. PARRA. *The City Col. of New York, Univ. of Pennsylvania.*

1:00 Q13 **611.21** Different learning processes of multichannel versus small channel configuration for online brain-computer interface. J. MENG*; S. ZHANG; A. BEYKO; T. HANSON; B. HE. *Univ. of Minnesota.*

2:00 Q14 **611.22** Methods for detecting speech articulation events from single channel recordings of the speech cortex. M. MCCURRY; P. KENNEDY; M. CLEMENTS*. *Georgia Inst. of Technol., Neural Signals Inc.*

3:00 Q15 **611.23** ● Characterization of gamma electrophysiological response over sensorimotor cortex. M. P. BRANCO*; Z. V. FREUDENBURG; E. J. AARNOUTSE; M. J. VANSTEENSEL; N. F. RAMSEY. *Univ. Med. Ctr. Utrecht.*

POSTER

612. Brain-Machine Interface Grasping Devices

Theme D: Sensory and Motor Systems

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 Q16 **612.01** Dynamic iterative brain-computer interface for dexterous hand movements. J. WU*; N. R. WILSON; D. SARMA; V. KUMAR; T. M. BLAKELY; F. DARVAS; B. W. BRUNTON; J. G. OJEMANN; R. P. N. RAO. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

2:00 Q17 **612.02** Initial performance is better in altered BMI decoders that preserve muscle synergies. S. N. NAUFEL*; L. E. MILLER. *Northwestern Univ.*

3:00 Q18 **612.03** Distinct motor cortical representations for grasp kinematics and kinetics. R. D. FLINT*, III; E. W. LINDBERG; E. M. MUGLER; J. M. ROSENOW; M. C. TATE; M. W. SLUTZKY. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Rehabil. Inst. of Chicago.*

4:00 Q19 **612.04** Nerve-muscle graph chamber for amputee control of powered prostheses. R. R. RISO*; M. J. CARTY; S. G. TALBOT; H. M. HERR. *MIT Media Lab, Biomechatronics Dept., Neural Interfaces Group, Brigham and Womans Hosp.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 Q20 **612.05** Non-invasive BMI and Neuroprosthesis in spinal cord injury. R. RUPP; G. R. MUELLER-PUTZ*. *Univ. of Heidelberg, Graz Univ. of Technol.*

2:00 R1 **612.06** Wavelet analysis on electroencephalographic time series to identify key patterns corresponding to arm movements. L. GOODMAN*; B. DE CELIS ALONSO; E. MORENO BARBOSA. *Benemérita Univ. Autónoma De Puebla.*

3:00 R2 **612.07** Adaptive decoder training for FES neuroprosthesis. C. ETHIER*; D. ACUNA; S. SOLLA; K. KORDING; L. MILLER. *Northwestern Univ., Rehabil. Inst. of Chicago.*

4:00 R3 **612.08** Severely affected ALS patients have broad and high expectations for brain-machine interfaces. M. HIRATA*; Y. KAGEYAMA; T. SHIMOKAWA; J. SAWADA; T. YANAGISAWA; M. SHAYNE; N. MIZUSHIMA; O. SAKURA; T. YOSHIMINE. *Osaka Univ. Med. Sch., Yamanashi Univ., Osaka Gen. Med. Ctr., Osaka Intractable Dis. Med. Information Ctr., The Univ. of Tokyo.*

1:00 R4 **612.09** Decoding of limbs movement from magnetoencephalography for BCI applications. T. AKSENOVA*; M. SCHAEFFER; V. ROHU; N. TARRIN; E. LABYT; I. VERGARA; B. MORINIERE; A. ELISEYEV; C. MESTAIS; A. BENABID. *CLINATEC, CEA-LETI MINATEC, CLINATEC, CEA-LIST.*

2:00 R5 **612.10** Real-time myoelectric control of a virtual upper limb prosthesis via lower leg gestures: Preliminary results. K. R. LYONS*; S. S. JOSHI. *UC Davis.*

3:00 R6 **612.11** Contralateral and ipsilateral gesture decoding in epilepsy patient using electrocorticographic signals. Y. JIN*; X. WANG; M. LU; S. ZHANG; J. ZHU; X. ZHENG. *Zhejiang Univ., Dept. of Biomed. Engin. and Instrument Science, Zhejiang Univ., The Second Affiliated hospital of Zhejiang Univ. Sch. of Med.*

4:00 R7 **612.12** Real-time decoding of individual and combined finger movements from macaque area AIP, F5, and M1. W. SHENG*; A. AGUDELO-TORO; H. SCHERBERGER. *German Primate Ctr.*

1:00 R8 **612.13** Functional testing of a soft-synergy based artificial prosthetic hand. A. GAILEY*; S. GODFREY; R. BREIGHNER; K. ANDREWS; K. ZHAO; A. BICCHI; M. SANTELLO. *Arizona State Univ., Inst. Italiano di Tecnologia, The Mayo Clin., Univ. of Pisa.*

2:00 R9 **612.14** Peripheral and cortical decoding of individuated finger movement in the rhesus macaque. Z. T. IRWIN*; P. P. VU; A. J. BULLARD; I. C. SANDO; J. N. BENTLEY; M. G. URBANCHEK; P. G. PATIL; P. S. CEDERNA; C. A. CHESTEK. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

3:00 R10 **612.15** Measuring the influence of EMG control on feedforward uncertainty. R. JOHNSON*; K. KORDING; L. HARGROVE; J. SENSINGER. *Rehabil. Inst. of Chicago, Northwestern Univ., Univ. of New Brunswick.*

4:00 R11 **612.16** EEG-controlled functional electrical stimulation of paralyzed hand muscles in subjects with chronic, complete, cervical spinal cord injury for grasp and release. K. GANT*; L. ZIMMERMAN; Z. XIE; J. C. SANCHEZ; A. PRASAD. *The Univ. of Miami.*

1:00 R12 **612.17** Restoration of hand function in daily life using a brain/neural interface controlled hand-exoskeleton. M. WITKOWSKI*; M. CEMPINI; M. CORTESE; N. VITIELLO; N. BIRBAUMER; S. R. SOEKADAR. *Applied Neurotechnology / Univ. Hosp. Tübingen, The BioRobotics Inst., Inst. for Med. Psychology and Behavioural Neurobio., Inst. di Ricovero a Cura a Carattere Scientifico.*

2:00 R13 **612.18** Changes in LFP power during motor learning in brain-machine interface. R. JIE CUI; M. ARMENTA SALAS; S. I. HELMS TILLERY*. *Arizona State Univ.*

3:00 R14 **612.19** ● Radio-transparent enclosures for enabling wireless home-cage recordings of non-human primates. M. POWELL*; D. XING; R. DARIE; A. GREGOIRE; J. B. ZIMMERMANN; W. BRITZ; J. S. HARPER, III; D. A. BORTON. *Brown Univ., Brown Univ., Brown Inst. for Brain Sci., Britz and Co., Brown Univ.*

4:00 R15 **612.20** Myoelectric pattern recognition control of a wearable exoskeleton hand. Z. LU; K. TONG; P. ZHOU*. *Univ. of Texas Hlth. Sci. Ctr. At Houst, The Chinese Univ. of Hong Kong.*

POSTER

613. Hypothalamic Pituitary Gonadal Axis: Neural Control

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 R16 **613.01** Time course of photoperiodic responses in the hypothalamus of a seasonally breeding songbird. S. EDWARDS*; R. A. ALDREDGE; A. M. IANCU; N. P. JAMES; K. W. SOCKMAN; D. L. MANEY. *Emory Univ., Univ. of North Carolina, Univ. of North Carolina.*

2:00 R17 **613.02** Gonadal regression elicited in Pekin duck drakes and hens associated with a drop in light intensity. G. S. FRALEY*. *Hope Col.*

3:00 R18 **613.03** ▲ Increased hypothalamic GnIH-ir and decreased reproductive behaviors in an inbred line of Single Comb White Leghorn egg-layers, GHs6. H. M. POTTER*; E. ALENCIKS; L. PORTER; M. SHANNON; G. S. FRALEY. *Hope Col., Hope Col.*

4:00 R19 **613.04** ▲ Lack of effects on growth and body weight gain after elimination of the leptin receptor from the brain of immature Pekin drakes. L. M. PORTER*; E. ALENCIKS; K. FRAZIER; A. PORTER; G. S. FRALEY. *Hope Col.*

1:00 R20 **613.05** ▲ Immunolesions of melanopsin receptive neurons attenuates the hormonal reproductive axis in the adult but has no effect on growth in immature Peking ducks. E. ALENCIKS*; K. FRAZIER; A. PORTER; G. FRALEY. *Hope Col., Hope Col.*

2:00 S1 **613.06** The neonatal sensorial denervation induced by capsaicin increases the dendritic arborization in the hippocampus of the adult male rat. C. CORDERO; G. HERNANDEZ; E. BIVIANO; G. FLORES; R. REYES; U. QUIROZ; C. MORAN*. *Benemerita Univ. Autonoma de Puebla, Benemerita Univ. Autonoma de Puebla, Benemerita Univ. Autonoma de Puebla, Univ. Autonoma de Puebla.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 S2 **613.07** Interaction of leptin, nitric oxide and neuropeptide Y to control the female reproductive function: Modulation by estrogen and food condition. L. OLIVEIRA*; C. R. FRANCI. *Ribeirão Preto Med. School, Univ. of São P.*

4:00 S3 **613.08** RFRP-3 stimulates the male mouse reproductive axis. C. ANCEL*; J. S. KIM; M. INGLIS; G. M. ANDERSON. *Ctr. For Neuroendocrinology.*

1:00 S4 **613.09** Winter is coming: Linking seasonal cues to reproduction in the mouse. M. J. BEYMER*; C. SÁENZ DE MIERA; D. HAZZLERIG; V. SIMONNEAUX. *Univ. of Strasbourg, Univ. of Tromsø.*

2:00 S5 **613.10** KNDy neurons are activated by estradiol during the preovulatory surges of luteinizing hormone and prolactin in female rats. R. E. SZAWKA*; R. ARAUJO-LOPES; R. G. L. BERNARDES; F. L. M. BELLO; P. C. HENRIQUES; N. S. S. AQUINO; C. R. FRANCI. *Univ. Federal De Minas Gerais (UFMG), Univ. de São Paulo.*

3:00 S6 **613.11** Colocalization of substance P receptor and gonadotropin-releasing hormone (GnRH) in hypothalamic mice neurons. R. DÍAZ ESCÁRCEGA*; A. E. SOSA-ESCALANTE; M. L. LOPEZ-MERAZ; L. BELTRAN-PARRAZAL; C. MORGADO-VALLE. *Univ. Veracruzana, Univ. Veracruzana.*

4:00 S7 **613.12** Neuromedins U and S differentially regulate pulsatile LH and prolactin secretion and are expressed in the supraoptic and paraventricular nuclei in ewes. P. GRACHEV*; M. VALENT; R. L. GOODMAN. *West Virginia University, Sch. of Med.*

1:00 S8 **613.13** Comparative study of the RFRP system in male and female Syrian hamster. J. B. HENNINGSEN*; V. SIMONNEAUX; J. D. MIKKELSEN; V. POIREL; F. GAUER. *Inst. of Cell. and Integrative Neurosci., Inst. of Cell. and Integrative Neurosci., Neurobio. Res. Unit.*

2:00 S9 **613.14** A transcriptomic analysis of the estrous cycle in 4 regions of the mouse brain. L. M. DICARLO*; C. M. VIED; R. S. NOWAKOWSKI. *Florida State Univ. Col. of Med.*

3:00 S10 **613.15** Induction of the rat luteinizing hormone (LH) surge activates pubertally born cells whereas blocking cell proliferation during puberty or adulthood blunts the LH surge. M. A. MOHR*; L. L. DONCARLOS; C. L. SISK. *Michigan State Univ., Loyola Univ. Chicago.*

4:00 S11 **613.16** The trithorax group complex counteracts the repressive effect of the polycomb group at puberty by promoting an active chromatin state at key gene promoters. C. A. TORO*; A. LOMNICZI; H. WRIGHT; A. SHILATIFARD; S. R. OJEDA. *Oregon Hlth. & Sci. Univ. (OHSU), Northwestern Univ.*

1:00 S12 **613.17** Estradiol is the major ovarian steroid involved in the transcriptional e translational regulation of kisspeptin system in the preoptic area of female rats. C. M. LEITE*; B. KALIL; E. T. UCHOA; J. ANTUNES-RODRIGUES; L. L. K. ELIAS; J. A. ANSELMO-FRANCI. *Univ. of Sao Paulo, Sch. of Med. of Ribeirao Preto, Univ. of Sao Paulo, State Univ. of Londrina.*

2:00 S13 **613.18** Rapid progesterone signaling in adult female kisspeptin neurons *in vitro.* M. A. MITTELMAN-SMITH*; A. K. SCOTT; P. E. MICEVYCH. *UCLA.*

3:00 S14 **613.19** Estradiol regulation of A-type potassium currents sculpts the membrane potential response to GABA in arcuate KNDy neurons. R. A. DEFAZIO*; M. A. NAVARRO; L. S. MILESCU; S. M. MOENTER. *Univ. of Michigan, Univ. of Missouri, Univ. of Michigan.*

4:00 S15 **613.20** Bursts-generation mechanisms of AVPV kisspeptin neurons are regulated by the estrous cycle with multiple currents involved. L. WANG*; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

1:00 S16 **613.21** Arcuate kisspeptin-expressing neurons exhibit steroid-sensitive long-term patterns of episodic firing activity in male mice. M. RICU*; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan.*

2:00 S17 **613.22** ▲ Morphometric and myelination changes in ARC kisspeptin neurons underlie activation of HPG-axis during breeding season in the adult male rhesus monkey. H. ZUBAIR; S. SHAMAS; H. ULLAH; T. HUMA; S. KIRAN; R. HUSSAIN*; M. SHAHAB. *Lab. of Reproductive Neuroendocrinology, Lab. of Reproductive Neuroendocrinology.*

3:00 S18 **613.23** Kisspeptin does not affect excitatory postsynaptic currents in supraoptic nucleus neurons from virgin or pregnant rats. A. SEYMOUR*; R. PIET; R. E. CAMPBELL; C. H. BROWN. *Univ. of Otago.*

4:00 S19 **613.24** High frequency - induced peptide release governs the synchronization of the arcuate kisspeptin neurons. J. QIU*; C. C. NESTOR; S. L. PADILLA; R. D. PALMITER; O. K. RØNNEKLEIV; M. J. KELLY. *Dept. of Physiol. and Pharmacology, Oregon Hlth. and Sci. Univ., Howard Hughes Med. Institute, Univ. of Washington,, Oregon Natl. Primate Res. Center, Oregon Hlth. and Sci. Univ.*

POSTER

614. Estrogen Signaling and Cognition

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 S20 **614.01** The rapid effects of estrogens in the medial amydgala on social recognition in female mice. P. A. SHEPPARD*; J. LYMER; T. KUUN; P. PALETTA; E. CHOLERIS. *Univ. of Guelph.*

2:00 T1 **614.02** Evidence of ligand-independent activation of estrogen receptor alpha in rat hippocampus. E. M. GRISSOM; J. M. DANIEL*. *Tulane Univ.*

3:00 T2 **614.03** Estradiol increases extracellular glucose concentration in the hippocampus of young adult female rats. W. WANG*; P. E. GOLD; D. L. KOROL. *Syracuse Univ.*

4:00 T3 **614.04** Adding reference memory to a working memory maze task alters the pattern of age-related impairment in rats: Associations with choline acetyltransferase activity in discrete brain regions. A. V. PRAKAPENKA*; R. HIROI; M. POISSON; Z. KIRSHNER; A. J. CASTANEDA; R. B. GIBBS; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium, Barrow Brain Tumor Res. Ctr., Arizona State Univ., Univ. of Pittsburgh Sch. of Pharm.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 T4 **614.05** The effects of the botanical estrogen isoliquiritigenin on cognition in young adult female rats. P. KUNDU*; T. TUNUR; D. KOROL; S. BANDARA; S. MONAIKUL; W. G. HELFERICH; S. SCHANTZ. *Univ. of Illinois Urbana-Champaign, Syracuse Univ.*

2:00 T5 **614.06** Excreted but not forgotten: Estriol effects on spatial working and reference memory task performance in middle-aged ovariectomized rats. G. A. STONEBARGER*; S. V. KOEBELE; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium.*

3:00 T6 **614.07** Examination of mechanisms through which estrogen receptor-dependent transcription persists in brains of female ERE-Luc mice lacking ovarian estrogens. K. J. POLLARD*; E. GRISSOM; J. DANIEL. *Tulane Univ., Tulane Univ.*

4:00 T7 **614.08** An orderly interaction? Maze order impacts the outcome of estrogen effects on memory. S. V. KOEBELE*; A. M. QUIHUIS; C. N. LAVERY; Z. M. T. PLUMLEY; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium.*

1:00 T8 **614.09** Role of acetylcholine in the rapid estrogenic facilitation of social learning. K. S. ERVIN*; W. QIU; M. SAWULA; E. CHOLERIS. *Univ. of Guelph, Univ. of Guelph.*

2:00 T9 **614.10** A comparison of the effects of hormone therapy estrogens, 17β-estradiol and conjugated equine estrogens, on the midbrain serotonin system: Associations between dorsal raphe nucleus tryptophan hydroxylase-2 mRNA levels and cognitive, anxiety-like, and depressive-like behaviors. R. HIROI*; G. WEYRICH; J. S. TALBOOM; A. JORDAN; S. V. KOEBELE; S. MENNENGA; L. T. HEWITT; P. MENDOZA; C. N. LAVERY; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium, Banner Sun Hlth. Res. Inst.*

3:00 T10 **614.11** The G-protein-coupled estrogen receptor (GPER/GPR30) modulates cell-signaling proteins that regulate actin polymerization in the dorsal hippocampus of female mice. J. KIM*; A. M. FORTRESS; K. M. FRICK. *Univ. of Wisconsin-Milwaukee.*

4:00 T11 **614.12** A G-protein coupled estrogen receptor agonist in the hippocampus rapidly improves object and social recognition in female mice. J. LYMER*; A. ROBINSON; E. CHOLERIS. *Univ. of Guelph.*

1:00 T12 **614.13** A sex difference in levels of myelin basic protein in the orbitofrontal cortex of adult rats is not impacted by gonadectomy. J. DARLING*; J. M. DANIEL. *Tulane Univ., Tulane Univ.*

2:00 T13 **614.14** Estradiol-mediated spine changes in the dorsal hippocampus and medial prefrontal cortex depend on ERK and mTOR activation in the dorsal hippocampus of ovariectomized female mice. J. J. TUSCHER*; V. LUINE; M. FRANKFURT; K. M. FRICK. *UW-Milwaukee, Hunter Col. of the City Univ. of New York, Hofstra North Shore-LIJ Sch. of Med.*

3:00 T14 **614.15** Rapid Effects of gonadal hormones on spatial memory and hippocampal spines in male rats. V. N. LUINE*; L. F. JACOME; F. LEMA; K. BARATELI; D. BUITRAGO; M. FRANKFURT. *Hunter Col., Hunter Col. of CUNY, Hofstra North Shore-LIJ Sch. of Med.*

4:00 T15 **614.16** Rapid and lateralized effects of estrogen manipulation on cognitive auditory processing in a seasonal songbird. G. DE GROOF*; J. BALTHAZART; M. CEULEERS; C. A. CORNIL; A. VAN DER LINDEN. *Univ. of Antwerp, Univ. of Liège.*

1:00 T16 **614.17** Estrogen withdrawal induces depression-like behavior, cognitive dysfunction and temperature dysregulation in a rodent model of perimenopausal symptoms. M. GULINELLO*; C. SANCHEZ; Y. LI. *Albert Einstein Coll of Med., Lundbeck Res. USA.*

2:00 T17 **614.18** Physiological arousal enhances memory for negative material in post-menopausal women not on hormone replacement therapy. S. E. NIELSEN*; M. MATHER. *USC.*

3:00 T18 **614.19** Anastrozole treatment to ovariectomized rats induces compensatory plastic changes in prefrontal third-layer pyramidal neurons concomitant to working memory impairment. D. A. VELÁZQUEZ-ZAMORA*; N. I. MARTÍNEZ-TORRES; M. CERVANTES; I. GONZÁLEZ-BURGOS. *Univ. Politécnica De La Zona Metropolitana D, Inst. Mexicano del seguro Social, Univ. Michoacana de San Nicolás de Hidalgo.*

4:00 T19 **614.20** Sex differences in neonatal hippocampal neurogenesis impact early life forgetting. S. L. STOCKMAN*; J. M. BOWERS; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med.*

1:00 T20 **614.21** ▲ Estradiol and luteinizing hormone affect spatial memory by influencing cell proliferation and expression of brain-derived neurotrophic factor. N. BOHM-LEVINE; A. GOLDBERG; E. VARRONE; J. E. THORNTON*. *Oberlin Col.*

2:00 U1 **614.22** Hippocampal aromatization modulates spatial memory in the zebra finch via the action of estradiol on membrane receptors. D. J. BAILEY*; E. R. PAITEL; J. A. GUNDERSON; Y. V. MAKEYEVA; C. J. SALDANHA. *St. Norbert Col., St. Norbert Col., American Univ.*

3:00 U2 **614.23** Luteinizing hormone receptor activation in the CNS increases neurite outgrowth and spatial memory. J. A. BLAIR*; H. MCGEE; X. WANG; G. CASADESUS SMITH. *Kent State Univ., Kent State Univ., Case Western Reserve Univ.*

4:00 U3 **614.24** Does maternal genistein impair non-spatial, hippocampal-dependent memory in adulthood? C. C. WRENN*; C. T. LANGRECK; S. A. LOTHSPEICH. *Drake Univ.*

1:00 U4 **614.25** Estrogen sensitive G-protein coupled receptor (GPER1) rapidly regulates dendritic spine turnover and PSD-95 dynamics. K. SELLERS*; P. RAVAL; I. A. WATSON; T. Z. DEEB; J. MUKHERJEE; F. ERLI; D. GADD; N. J. BRANDON; D. P. SRIVASTAVA. *Kings Col. London, Tufts Univ. Med. Sch., Univ. of Milano-Bicocca, AstraZeneca Neurosci. IMED.*

2:00 U5 **614.26** Local activation of Ras-like small GTPase Rap1 is required for estrogen-induced spine formation. D. P. SRIVASTAVA*; A. SHUM. *Inst. of Psychiatry, Psychology and Neuroscien, Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

615. Sex and Social Factors in Fear and Anxiety

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 U6 **615.01** The effect of sex and social status on gene expression in Syrian hamster brain. K. E. MCCANN*; D. M. SINKIEWICZ; A. NORVELLE; K. L. HUHMAN. *Georgia State Univ.*

2:00 U7 **615.02** Brain derived neurotrophic factor in the medial prefrontal cortex reduces the acquisition of conditioned defeat. A. M. ROSENHAUER*; B. M. THOMPSON; T. E. LARKIN; K. L. HUHMAN. *Georgia State Univ.*

3:00 U8 **615.03** Brain derived neurotrophic factor impairs consolidation of conditioned defeat learning but does not impair learning of social cues. K. A. PARTRICK*; B. M. THOMPSON; T. E. LARKIN; Z. SONG; K. L. HUHMAN. *Neurosci. Inst.*

4:00 U9 **615.04** ▲ Effects of environmental enrichment and social isolation and the reversion of those conditions on anxiety and fear conditioning. A. MORA-GALLEGOS*; S. SALAS; J. FORNAGUERA. *Univ. of Costa Rica.*

1:00 U10 **615.05** ▲ Effects of differential housing on emotional behaviors and expression of BDNF and CRF in hippocampus and amygdala. S. SALAS*; A. SEQUEIRA; J. FORNAGUERA; A. MORA-GALLEGOS. *Univ. of Costa Rica.*

2:00 U11 **615.06** ▲ Cellular mechanisms by which social status alters behavioral responses to stress. S. SEDDIGHI; A. K. BARNES; C. T. CLINARD; M. A. COOPER*. *Univ. of Tennessee.*

3:00 U12 **615.07** Metabolomics of Resilience to Social Stress. B. N. DULKA*; A. K. BOURDON; C. T. CLINARD; M. B. MUVVALA; S. R. CAMPAGNA; M. A. COOPER. *Univ. of Tennessee, Univ. of Tennessee, Univ. of Tennessee.*

4:00 U13 **615.08** The role of androgen receptor signaling in the maintenance of dominance status and resistance to conditioned defeat. C. T. CLINARD*; S. G. ADLER; M. A. COOPER. *Univ. of Tennessee.*

1:00 U14 **615.09** Sex-specific gene expression changes in CA3 neurons of heterozygous BDNF Val66Met mice mimics some effects of acute stress. J. MARROCCO*; M. B. RÍOS; J. F. KOGAN; J. D. GRAY; E. M. WATERS; E. F. SCHMIDT; N. HEINTZ; B. S. MCEWEN. *The Rockefeller Univ., The Rockefeller Univ.*

2:00 U15 **615.10** Sex-dependent programming of opioid receptor expression within the juvenile nucleus accumbens by early life stress. L. CHANG*; S. L. KIGAR; A. CUARENTA; H. C. GUNDERSON; B. A. BALDO; V. P. BAKSHI; A. P. AUGER. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

3:00 U16 **615.11** ● Adolescent psychosocial stress induces immediate and sustained increases in anxiety-like behavior and deficits in social behavior in male rats. V. GHISAYS*; J. STREICHER; J. CALDWELL; S. BERMAN; A. BIRKENHAUER; C. ESTRADA; M. B. SOLOMON. *Univ. of Cincinnati, Univ. of Cincinnati.*

4:00 U17 **615.12** ● The role of estradiol signaling in the medial amygdala on emotionality, cognition and metabolic function in female rats. C. ESTRADA*; V. GHISAYS; J. CALDWELL; J. STREICHER; S. BERMAN; A. BIRKENHAUER; M. B. SOLOMON. *Univ. of Cincinnati, Univ. of Cincinnati.*

1:00 U18 **615.13** ● Neuroendocrine and behavioral effects of CORT 118335, a novel glucocorticoid and mineralocorticoid receptor antagonist in male rats. E. T. NGUYEN*; S. BERMAN; J. STREICHER; A. C. WULSIN; J. CALDWELL; J. P. HERMAN; M. B. SOLOMON. *Univ. of Cincinnati.*

2:00 U19 **615.14** Learning in the company of individuals with similar phenotypes can facilitate fear extinction in rats selectively bred for their locomotor response to novelty. K. E. PRATER*; E. L. AURBACH; H. LARCINESE; P. BLANDINO, Jr.; S. J. WATSON; S. MAREN; H. AKIL. *Univ. of Michigan, Univ. of Michigan, Texas A&M Univ.*

3:00 U20 **615.15** GPR55 receptor activation in the ventral hippocampus modulates mesolimbic dopaminergic activity and causes schizophrenia-related emotional and social cognition disturbances. S. R. LAVIOLETTE*; M. LOUREIRO; J. RENARD. *Univ. of Western Ontario, Univ. of Western Ontario.*

4:00 U21 **615.16** Corticotropin-releasing factor activates different circuits in male and female rats. K. WIERSIELIS*; S. COHEN; G. VAN BUSKIRK; D. LOSEN; H. KEITA; J. BERGMANN; N. BAKSH; B. WICKS; D. BANGASSER. *Temple Univ.*

1:00 U22 **615.17** Sexual dimorphism in the pattern of c-Fos activation evoked by acute and chronic stress. A. SOOD*; K. CHAUDHARI; N. KACHEWAR; V. VAIDYA. *Tata Inst. of Fundamental Res.*

2:00 U23 **615.18** TIA-1 is a prion-related RNA binding protein that regulates alternative splicing of the glucocorticoid receptor in a sex-specific manner. J. B. RAYMAN*; E. R. KANDEL. *Columbia University/HHMI.*

3:00 U24 **615.19** Sex-specific molecular plasticity in the rodent hippocampus following chronic variable stress. D. R. HOMIACK*; M. STANLEY; B. BARRILEAUX; N. LIM; L. SCHRADER. *Tulane Univ., Tulane Univ.*

4:00 U25 **615.20** Baseline and chronic stress induced sex differences in rat CA3 hippocampal pyramidal cell dendrite morphology and delta opioid receptor trafficking. S. ODELL*; B. HALL; S. MAZID; T. A. VAN KEMPEN; A. D. GONZALEZ; B. S. MCEWEN; E. M. WATERS; T. MILNER. *Weill Cornell Med. Col., The Rockefeller Univ.*

1:00 U26 **615.21** ▲ Social isolation during adolescence alters dendritic branching and spine density of pyramidal neurons in the hippocampal CA1 of adolescent female rats. R. ADEROGBA*; A. AKAD; F. SHAEFFER; W. HUANG; A. RAO; L. KLINGENSMITH; Y. CHEN; T. CHOWDHURY; C. AOKI. *CUNY Hunter Col., New York Univ.*

2:00 U27 **615.22** ▲ Neonatal maternal separation alters, in a gender specific manner, the expression of regulatory elements of the TRH system and the response of the thyroid axis to energy deficiency. E. L. JAIMES*; M. GUTIÉRREZ-MARISCAL; P. JOSEPH-BRAVO. *Inst. De Biotecnología, UNAM.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 U28 **615.23** Behavioral and hormonal role of the individual components of the task elevated T maze (ETM) in female rats. N. L. GARCIA SALDIVAR*; M. R. A. GONZÁLEZ LÓPEZ; S. E. CRUZ MORALES. *UNAM FES-Iztacala.*

4:00 U29 **615.24** Locus coeruleus (LC) neuronal activity and sniffing behavior in female rats during social interaction (SI): Impact of adolescent social isolation. A. L. CURTIS*. *Children's Hosp. Philadelphia.*

1:00 U30 **615.25** ▲ Estrogen as a neuroprotector against negative effects of morphine in fear extinction. F. RODRIGUEZ-ORTIZ*; A. TORRES-REVERÓN; E. SANTINI; D. L. RAMOS-ORTOLAZA. *Pontifical Catholic Univ. of Puerto Rico, Ponce Hlth. Sci. Univ., Palm Beach Atlantic Univ.*

2:00 U31 **615.26** Combined vicarious stress and social buffering in the prairie vole. J. J. WARDWELL*; N. MCNEAL; M. L. SCOTTI; W. COLBURN; A. DOTSON; E. IHM; M. WOODBURY; A. J. GRIPPO. *Northern Illinois Univ., Northern Illinois Univ.*

3:00 U32 **615.27** Effects of extended developmental and adult social isolation on neurochemistry and cortisol levels in response to a social stimulus in zebrafish (Danio rerio). S. SHAMS*; D. CHATTERJEE; R. GERLAI. *Univ. of Toronto Mississauga, Univ. of Toronto Mississauga, Univ. of Toronto Mississauga.*

POSTER

616. Food Intake and Energy Balance: Anatomy and Development

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 U33 **616.01** Reciprocal crosstalk between the sensory and sympathetic innervation of brown and white adipose tissue. V. RYU*; T. J. BARTNESS. *Georgia State Univ., Obesity Reversal Ctr.*

2:00 U34 **616.02** Withdrawn.

3:00 U35 **616.03** Brain activation and inhibition in food intake and meal structures by abdominal surgery in mice. L. WANG; Y. TACHE*. *UCLA, UCLA Dep Med. Div. Digestive Dis.*

4:00 U36 **616.04** The blood-brain barrier regions in diet-induced obesity - dietary fats induce changes only in the medium eminence. A. F. S. RAMALHO; M. FIORAVANTE; J. MORARI; C. SOLON; N. R. V. DRAGANO; A. L. OLIVEIRA*; L. A. VELLOSO; E. P. ARAUJO. *Univ. of Campinas, Univ. of Campinas - Lab. of Nerve Regeneration.*

1:00 U37 **616.05** Developmental exposure to PBDE flame retardants induces hypothyroidism and impacts hedonic tone in adult rats. L. L. DRISCOLL*; J. WATTS; R. KASEMODEL; T. TUMMINO; W. HARRIS; R. LACH. *Colorado Col., Colorado Col.*

2:00 U38 **616.06** ▲ Potential glutamatergic and endocannabinergic interaction regulates food intake. A. SANCHEZ-FUENTES*; A. L. BECERRIL MELÉNDEZ; A. ROMANO LÓPEZ; O. AMANCIO BELMONT; M. MÉNDEZ DÍAZ; A. E. RUIZ CONTRERAS; O. PROSPÉRO GARCÍA. *Univ. Nacional Autónoma de México.*

3:00 U39 **616.07** Neuroanatomical evidence for neurohumoral transmission by melanin-concentrating hormone neurons in the rat. V. R. KONANUR; T. M. HSU; S. E. KANOSKI*; J. D. HAHN. *USC.*

4:00 U40 **616.08** Hypothalamic chemoarchitecture in the adult male rat: Creating canonical atlas maps for co-visualized immunoreactive peptidergic neuronal populations (α-MSH, nNOS, MCH) and their fiber systems in multiple brains. C. E. WELLS*; A. ACOSTA; D. ALDRETE; A. CARRION; L. CASTRO; A. C. ESCAPITA; E. ESPINOZA; K. DE LA FUENTE; A. GARRETT; A. GOMEZ; N. GOMEZ; C. HERNANDEZ-CASNER; M. LUEVANO; A. LOPEZ; D. MARTINEZ; E. MENDOZA; M. ORTEGA; M. PEREZ; E. RANGEL; E. REZA; J. RIVERA; C. ROMAN; A. ROSAS; C. SEADE-GALINDO; J. TERAN; J. UNPINGCO; S. VALDEZ; A. M. KHAN. *The Univ. of Texas at El Paso, The Univ. of Texas at El Paso, The Univ. of Texas at El Paso.*

1:00 U41 **616.09** Distribution and chemical identification of neurons projecting to the ventral tegmental area: A combined retrograde tracing and immunohistochemical study in the adult male rat, with special reference to the lateral hypothalamic area. E. M. WALKER*; B. DE HARO; R. H. THOMPSON; A. M. KHAN. *Univ. of Texas El Paso, Univ. of Texas El Paso, USC.*

2:00 U42 **616.10** Connections of the rostral portion of the hypothalamic arcuate nucleus: A combined anterograde and retrograde study in the adult male rat. A. MARTINEZ*; B. E. PINALES; A. M. KHAN. *Univ. of Texas At El Paso, Univ. of Texas At El Paso.*

3:00 V1 **616.11** Behavior-associated and post-consumption glucose entry into the nucleus accumbens extracellular space during glucose free-drinking in trained rats. K. T. WAKABAYASHI*; E. A. KIYATKIN. *NIH/NIDA.*

4:00 V2 **616.12** Leptin suppresses development of GLP-1 innervation to the paraventricular nucleus of the hypothalamus. J. E. BIDDINGER*; R. B. SIMERLY. *Children's Hosp. Los Angeles, USC, Children's Hosp. Los Angeles.*

1:00 V3 **616.13** ● Central inhibition of c-jun n-terminal kinase suppresses feeding and reduces body weight. P. LOGRASSO*; S. GAO. *Scripps Res. Inst.*

2:00 V4 **616.14** Initial chemoarchitectural and connectional characterization of polymodal association cortical structures with the diencephalon: Immunohistochemical and tract tracing studies. K. NEGISHI*; J. HAMDAN; A. M. KHAN. *UNIVERSITY OF TEXAS AT EL PASO, UNIVERSITY OF TEXAS AT EL PASO.*

3:00 V5 **616.15** Contribution of D1 and D2 type neurons to nucleus accumbens efferent pathways and their influence on feeding. C. W. BOND*; K. E. FURMAN; B. B. LAND; D. OTTENHEIMER; R. J. DILEONE. *Yale Univ., Univ. of Washington.*

4:00 V6 **616.16** Leptin promotes the development of oxytocin projections from the paraventricular hypothalamic nucleus to the dorsal vagal complex. A. ELSON*; R. SIMERLY. *Children's Hosp. Los Angeles, Children's Hosp. Los Angeles.*

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* Indicates abstract's submitting author

1:00 V7 **616.17** Electric remodeling of AgRP and POMC neurons is driven by diet composition and precedes weight gain and leptin insensitivity. J. GAMMONS*; W. WEI; D. SUTHERLAND; A. SMITH; C. KACZOROWSKI; K. O'CONNELL. *Univ. of Tennessee Hlth. Sci. Ctr.*

2:00 V8 **616.18** Neuroanatomical characterization of bombesin receptor subtype 3 (brs-3) neurons using brs3-t2a-cre-er^{t2} mice. S. H. ZAHLER*; C. XIAO; R. A. PINOL; M. L. REITMAN. *DEOB, NIDDK, Natl. Inst. of Hlth.*

3:00 V9 **616.19** Structural changes induced for acute hyperglycemia in median eminence tanycytes and vasculature. F. A. MARTINEZ ACUÑA*; M. CIFUENTES; K. SALAZAR; N. JARA; F. NUALART. *Univ. of Concepcion, Univ. of Malaga.*

4:00 V10 **616.20** Identification and provisional mapping of a novel population of hypothalamic calbindin-immunoreactive neurons that project to the hypothalamic paraventricular nucleus: A combined immunohistochemical and tract tracing study in the adult male rat. B. DE HARO*; A. M. KHAN. *Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

1:00 V11 **616.21** Pharmacological inhibition of ventral hippocampal NMDA receptors accelerates meal onset and increases meal frequency. R. C. HANNAPEL*; M. B. PARENT. *Neurosci. Inst.*

2:00 V12 **616.22** Effects of intranasal insulin on prefrontal-hypothalamic brain circuits in lean, fasted subjects. L. TIEDEMANN*; J. HETTEL; K. GIESEN; S. BRASSEN. *Univ. Med. Ctr. Hamburg-Eppendorf.*

3:00 V13 **616.23** Ventral striatopallidal control of macronutrient intake. D. WIRTSHAFTER*; I. R. COVELO; N. HORODENSKA; J. A. LUVIANO; Z. I. PATEL; T. R. STRATFORD. *Univ. Illinois At Chicago.*

4:00 V14 **616.24** Aromatase levels in amygdala, obesity and self control: PET and personality studies. A. BIEGON*; N. ALIA-KLEIN; T. HILDEBRANDT; D. PARETO; S. KIM; J. LOGAN; J. FOWLER; G. WANG. *Stony Brook Univ., Mount Sinai Sch. of Med., Hosp. Val d'Hebron, NIAAA, NYU Med. Sch., Brookhaven Natl. Lab.*

1:00 V15 **616.25** Subcortical connectivity modulates effects of transcranial direct current stimulation on eating behavior in response to food cues among obese subjects. J. KIM*; J. NOH; H. PHO; J. KIM; K. YUN; H. JEON; T. OH; H. BAEK; H. CHOI. *Seoul Natl. Univ., Korea Basic Sci. Inst., Chungbuk Natl. Univ., Chungbuk Natl. Univ., Caltech, Seoul Natl. Univ.*

POSTER

617. Blood Flow Functional Imaging

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

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 V16 **617.01** Quantitative metabolic changes and G protein-coupled receptor activation using autoradiography. O. ALITALO; J. RYTKÖNEN; T. PARKKARI; T. D. WOLINSKY*; A. NURMI; T. HUHTALA. *Charler River Discovery Services, Charles River.*

2:00 V17 **617.02** Pharmacological blockade of inhibitory neuronal activation reduces the evoked fMRI response to LOT stimulation in the rat olfactory bulb. A. J. POPLAWSKY*; H. FUKUDA; S. KIM. *Univ. of Pittsburgh, Inst. for Basic Sci. (IBS), SKKU.*

3:00 V18 **617.03** Resting state fmri of the ferret: Sensory, default mode, and higher-order networks. Z. C. ZHOU*; A. P. SALZWEDEL; S. RADTKE-SCHULLER; Y. LI; K. K. SELLERS; Y. I. SHIH; F. FRÖHLICH; W. GAO. *Univ. of North Carolina - Chapel Hill, Univ. of North Carolina - Chapel Hill, Univ. of North Carolina - Chapel Hill, Univ. of North Carolina - Chapel Hill, Univ. of North Carolina - Chapel Hill, Univ. of North Carolina - Chapel Hill, Univ. of North Carolina - Chapel Hill.*

4:00 V19 **617.04** Neurovascular coupling in motor cortex: Inversion of the hemodynamic response as a property of baseline cortical state. R. E. SLACK*; P. PATEL; L. BOORMAN; M. JONES; J. BERWICK. *Univ. of Sheffield.*

1:00 V20 **617.05** The effects of endothelial dysfunction on neural activity, hemodynamics and neurovascular coupling. M. A. SHAIK*; S. H. KIM; Y. MA; T. H. ZHAO; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ.*

2:00 V21 **617.06** Blood oxygenation level dependent (BOLD) contrast based pharmacological MRI in naïve rats and mice. K. LEHTIMÄKI*; A. NURMI; O. KONTKANEN; P. J. SWEENEY; L. PARK. *Charles River Discovery Res. Services Finland, CHDI Management/CHDI Fndn.*

3:00 V22 **617.07** Dissociable spatial properties of functional connectivity in gray and white matter. M. J. TOBIA*; D. GALLAGHER; R. DEWAL; P. KARUNANAYAKA; Q. YANG. *Hershey Med. Ctr.*

4:00 V23 **617.08** Novel BOLD model for hemodynamic response with brief stimulation in the human brain. J. KIM*; D. RESS. *Baylor Col. of Med.*

1:00 V24 **617.09** Clinical and prognostic significance of brain SPECT changes in the default mode network areas. D. G. PAVEL*; S. R. BEST. *The Neurosci. Ctr., The Neurosci. Ctr.*

2:00 V25 **617.10** Capturing the dynamics of neuronal activity, brain oxygenation and brain blood flow during acute cortical stroke. H. ZHAO*; D. CHOW; M. G. KOZBERG; M. A. SHAIK; S. H. KIM; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ., Columbia Univ.*

3:00 V26 **617.11** Human MRI tensor-based corroboration of transport indices of gliovascular glymphatic fluidic system of brain for clearing Alzheimer's Amyloid. P. K. ROY*. *Natl. Brain Res. Ctr.*

4:00 V27 **617.12** Ultra-fast MREG detection of glymphatic pulsations. V. KIVINIEMI*; X. WANG; V. KORHONEN; P. LEVAN; S. KEILHOLZ; M. NEDERGAARD. *MIPT, MRC of Oulu Univ. Hosp., Normal Univ. of Beijing, Univ. of Freiburg, Georgia Insititue of Technol. and Emory Univ. Sch. of Med., Univ. of Rochester Med. Ctr.*

1:00 V28 **617.13** Genetic influences on resting-state networks: A twin study. Z. MA*; Y. FU; C. HAMILTON; Z. LIANG; X. HOU; X. MA; X. HU; Q. HE; W. DENG; Y. WANG; L. ZHAO; H. MENG; T. LI; N. ZHANG. *Penn State Univ., The First Affiliated Hosp. of Chongqing Med. Univ., Chongqing Med. and Pharmaceut. Col., The First Affiliated Hosp. of Chongqing Med. Univ., West China Hosp. of Sichuan Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

618. Spatial Memory

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 V29 **618.01** ▲ Cognitive factors associated with spatial navigation. M. FRAHMAND*; L. KORTHAUER; N. T. NOWAK; I. DRISCOLL. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin- Milwaukee.*

2:00 V30 **618.02** Virtual water maze performance in middle-aged adults. N. T. NOWAK*; J. DOSHI; L. KORTHAUER; E. AWE; C. DAVATZIKOS; I. DRISCOLL. *UW - Milwaukee, Univ. of Pennsylvania.*

3:00 V31 **618.03** Associations between pattern separation and structural brain integrity in middle age. L. E. KORTHAUER*; N. T. NOWAK; E. AWE; I. DRISCOLL. *Univ. of Wisconsin-Milwaukee.*

4:00 V32 **618.04** Which way and how far? Tracking of translation and rotation information for human path integration. E. R. CHRASTIL*; K. R. SHERRILL; M. E. HASSELMO; C. E. STERN. *Boston Univ., Athinoula A. Martinos Ctr. for Biomed. Imaging.*

1:00 V33 **618.05** High confidence false memory for spatial context is mediated by the parahippocampal cortex. J. M. KARANIAN*; S. D. SLOTNICK. *Boston Col.*

2:00 V34 **618.06** Visual field position biases in the human medial temporal lobe. K. F. LAROCQUE*; N. WITTHOFT; K. GRILL-SPECTOR; A. D. WAGNER. *Stanford Univ.*

3:00 V35 **618.07** Incongruent visual animations make unrelated narratives more memorable by driving stronger brain responses. S. S. COHEN*; L. C. PARRA. *City Col., The Grad. Ctr. at the City Univ. of New York, City Col.*

4:00 V36 **618.08** The impact of visual interference on representational content in the medial temporal lobe and ventral visual stream regions during a delayed match-to-sample task. E. B. O'NEIL*; A. C. H. LEE. *Univ. of Toronto, Scarborough.*

1:00 V37 **618.09** Neural spatial memory ROCs indicate the hippocampus operates in a threshold manner. B. JEYE*; J. M. KARANIAN; P. P. THAKRAL; S. D. SLOTNICK. *Boston Col., Univ. of Texas.*

2:00 V38 **618.10** Spontaneous use of spatial memory strategies are associated with greater cortical plasticity following a virtual spatial memory intervention program in healthy older adults. V. D. BOHBOT*; D. SODUMS; K. KONISHI; L. DAHMANI; L. BHERER. *Douglas Mental Hlth. Univ. Institute, Dept. of Psychiatry, McGill Uni, CRIUGM, Dept. of Psychology, Univ. of Montreal.*

3:00 V39 **618.11** High total cholesterol and LDL-cholesterol levels are associated with decrease use of hippocampal-dependent spatial strategies. K. KONISHI*; R. JOOBER; K. MACDONALD; J. BREITNER; V. D. BOHBOT. *Douglas Mental Hlth. Univ. Institute, McGill Univ., Douglas Mental Hlth. Res. Inst., Ctr. for Studies on Prevention of Alzheimer's Dis. (StoP-AD), Douglas Mental Hlth. Univ. Inst.*

4:00 V40 **618.12** Common neural correlates of spatial memory and olfaction. L. DAHMANI*; R. PATEL; M. CHAKRAVARTY; V. D. BOHBOT. *McGill Univ., Douglas Mental Hlth. Univ. Inst.*

1:00 V41 **618.13** Dopamine and verbal memory: The effect of an acute phenylalanine/tyrosine depletion on the word frequency mirror effect task. Z. K. CHAUDHARY*; J. THERRIAULT; A. DAGHER; M. LEYTON; V. D. BOHBOT. *McGill Univ., McGill Univ., McGill Univ., McGill Univ.*

2:00 V42 **618.14** Strategy changes across the menstrual cycle and with maternal experience in a human virtual navigation task. D. HUSSAIN*; S. HANAFI; K. KONISHI; W. BRAKE; V. D. BOHBOT. *Concordia Univ., Douglas Mental Hlth. Univ. Inst.*

3:00 V43 **618.15** Does the hippocampus keep track of time? D. J. PALOMBO*; M. M. KEANE; M. VERFAELLIE. *Boston Univ. Sch. of Med., VA Boston Healthcare Syst., Wellesley Col.*

4:00 V44 **618.16** Damage to the medial temporal lobes impairs spatial precision and spatiotemporal binding while sparing allocentric memory. B. KOLARIK*; K. SHAHLAIE; A. HASSAN; A. BORDERS; K. KAUFMAN; G. GURKOFF; A. YONELINAS; A. EKSTROM. *Univ. of California, Davis, Ctr. for Neuroscience, Univ. of California, Davis, Univ. of California Davis.*

1:00 V45 **618.17** High-resolution hippocampal activation patterns predict memory precision. A. A. BORDERS*; J. D. STOKES; C. T. KYLE; A. D. EKSTROM; A. P. YONELINAS. *UC Davis, UC Davis.*

2:00 V46 **618.18** Dynamic spatiotemporal organization of individual episodic memory retrieval networks. A. SCHEDLBAUER*; A. WATROUS; C. KADIPASAOGLU; N. TANDON; A. EKSTROM. *Univ. of California, Davis, Univ. of Bonn, Univ. of Texas Hlth. Sci. Ctr. at Houston.*

3:00 V47 **618.19** Integration of familiar and novel spatial templates in episodic memory. J. STOKES*; C. KYLE; A. EKSTROM. *UC Davis, Univ. of California, Davis, Univ. of California, Davis.*

4:00 V48 **618.20** A tale of two temporal retrieval strategies: Dynamic expression of temporal sequence retrieval. J. S. LIEBERMAN*; C. T. KYLE; J. D. STOKES; A. D. EKSTROM. *Univ. of California Davis.*

1:00 W1 **618.21** Low frequency hippocampal oscillations differentiate between successful retrieval of related versus unrelated spatiotemporal context. M. COPARA*; K. KIM; M. ROLLO; C. KADIPASAOGLU; N. TANDON; A. EKSTROM. *UC Davis, Univ. of Texas, Hlth. Sci. Ctr. at Houston, UC Davis.*

2:00 W2 **618.22** Hippocampal low-frequency oscillations elicited during virtual navigation persist in the absence of visual and self-motion cues. L. K. VASS*; M. S. COPARA; M. SEYAL; K. SHAHLAIE; S. TOMASZEWSKI FARIAS; P. Y. SHEN; A. D. EKSTROM. *UC Davis, UC Davis, UC Davis, UC Davis, UC Davis.*

3:00 W3 **618.23** ▲ Temporal encoding strategies produce comparable boosts in free recall performance to spatial encoding strategies. N. R. BOUFFARD*; J. STOKES; C. KYLE; J. LIEBERMAN; A. EKSTROM. *Univ. of California, Davis.*

4:00 W4 **618.24** Prospective representation of navigational events in the human hippocampus. T. I. BROWN*; K. F. LAROCQUE; S. E. FAVILA; V. A. CARR; A. M. GORDON; B. BOWLES; A. D. WAGNER. *Stanford Univ., New York Univ., Univ. of California, Berkeley.*

1:00 W5 **618.25** Temporal features of narrative construction are different for healthy older adults and patients with hippocampal damage. A. DEDE*; R. O. HOPKINS; L. R. SQUIRE. *Univ. of California San Diego, Veterans Affairs San Diego Healthcare Syst., Brigham Young Univ., Intermountain Med. Ctr., Univ. of California San Diego, Univ. of California San Diego.*

2:00 W6 **618.26** "Global-first" topological properties pattern recognition in rodent. X. LIU*; Z. ZHOU; N. LIU; Y. TANG; L. WANG. *Shenzhen Inst. of Advanced Technology.*

POSTER

619. Language III

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 W7 **619.01** Decomposing the bilingual language control network into preparatory processes and execution. R. SEO*; A. STOCCO; C. S. PRAT. *Univ. of Washington, Inst. of Learning and Brain Sci.*

2:00 W8 **619.02** Analysis of hemispheric differences in gene expression in primates. A. VERENDEEV*; G. MUNTANÉ; T. M. MAYNARD; C. C. SHERWOOD. *George Washington Univ., Inst. de Biologia Evolutiva, Univ. Pompeu Fabra - CSIC, George Washington Univ.*

3:00 W9 **619.03** Developmental changes in the functional and structural connectivity within brain networks involved in phonological processing. B. L. SUSSMAN*; Y. LIU; F. CAO. *Michigan State Univ., Univ. of Michigan.*

4:00 W10 **619.04** Impaired articulation but unimpaired auditory processing in KE family members with mutation of FOXP2. K. SCHULZE; L. HALLIDAY; S. AMITAY; F. VARGHA-KHADEM; M. MISHKIN*. *Univ. Col. London Inst. of Child Hlth., Univ. Col. London, MRC Inst. of Hearing Res., NIMH.*

1:00 W11 **619.05** Deciphering the role of CNTNAP2 in cognitive disorders; from molecule to patient. P. RODENAS CUADRADO*; N. PIETRAFUSA; T. FRANCAVILLA; A. LA NEVE; P. STRIANO; S. C. VERNES. *Max Planck Inst. For Psycholinguistics, Univ. of Bari, "G. Gaslini" Inst.*

2:00 W12 **619.06** Rapid learning and consolidation of novel morphosyntax in human neocortex: Neuromagnetic evidence. A. LEMINEN*; L. KIMPPA; M. LEMINEN; M. LEHTONEN; J. P. MÄKELÄ; Y. SHTYROV. *Aarhus Univ., Univ. of Helsinki, Aarhus Univ., Åbo Akademi Univ., BioMag Lab.*

3:00 W13 **619.07** Automatic processing of morphosyntax by second language learners. L. A. HEDLUND*; A. LEMINEN; S. HUT; L. KIMPPA; M. LEMINEN; Y. SHTYROV. *Cognitive Behavior Res. Unit, Ctr. of Functionally Integrative Neuroscience, Arhus Univ., Ctr. for Cognition and Decision Making, Higher Sch. of Econ.*

4:00 W14 **619.08** What was that word? Selective interference during memory consolidation of novel words in adults. L. KACZER*; E. HOCHMAN; L. BAVASSI; M. PEDREIRA. *IFIBYNE CONICET, IFIBYNE CONICET.*

1:00 W15 **619.09** Impaired sensorimotor integration in auditory feedback control of vocal pitch in Alzheimer's disease. K. RANASINGHE*; N. S. KORT; A. J. BEAGLE; H. KOTHARE; J. S. GILL; D. MIZUIRI; S. M. HONMA; B. L. MILLER; K. A. VOSSEL; J. F. HOUDE; S. S. NAGARAJAN. *Univ. of California San Francisco, Gladstone Inst. of Neurolog. Dis.*

2:00 W16 **619.10** Graphical features of the structural connectome of the human brain in speech skills. K. JUNG*; Y. CHANG; M. LEE; J. LEE; J. LEE; S. J. KIM; N. KIM; M. KWON. *Asan Med. Ctr., Asan Med. Ctr., Asan Med. Ctr.*

3:00 W17 **619.11** Left inferior parietal lobe engagement during rule learning from speech involves temporal orienting of attention. R. DE DIEGO-BALAGUER*; J. L. AMENGUAL; M. RUZZOLI; A. CALLEJAS; A. MARTINEZ-ALVAREZ; S. SOTO-FARACO. *ICREA, Univ. of Barcelona, Bellvitge Res. Biomed. Inst. (IDIBELL), Univ. of Barcelona, Ctr. de Reserche de l'Institut du Cerveau et de la Moelle Epinière, Fundació Bosch i Gimpera, Univ. Pompeu Fabra.*

4:00 W18 **619.12** Superior verbal skills in the congenitally blind. V. OCCELLI*; S. LACEY; C. STEPHENS; K. SATHIAN. *Emory Univ.*

1:00 W19 **619.13** Which language should I use?: Bilingual speakers show distinct patterns of parasympathetic regulation when code-switching in an emotional context. L. E. QUIÑONES-CAMACHO*; S. SAVAGE; C. LAMAR-PRIETO; E. L. DAVIS. *Univ. of California Riverside, Univ. of California Riverside, Univ. of California Riverside.*

2:00 W20 **619.14** Stimulus expectancy and response entropy in adult cochlear implant users. N. M. AMICHETTI*; E. ATAGI; A. WINGFIELD; Y. KONG. *Brandeis Univ., Brandeis Univ., Northeastern Univ.*

3:00 W21 **619.15** The development of parsing routes for complex words in second language learners. S. HUT*; A. LEMINEN; L. HEDLUND; L. KIMPPA; M. LEMINEN; Y. SHTYROV. *Univ. of Helsinki, Aarhus Univ., Higher Sch. of Econ.*

4:00 W22 **619.16** Non-verbal communication during the speaking and listening phases of a dyadic conversation in children with high functioning autism and children with williams syndrome. M. B. KIM*; P. LAI; D. TRAUNER; J. REILLY; U. BELLUGI. *Salk Inst. For Biol. Studies, Salk Inst. for Biol. Studies, UCSD, San Diego State Univ.*

1:00 W23 **619.17** Characterizing multiple channels of social behaviors and expressivity in adults with Williams Syndrome during narratives. T. V. DANG*; P. LAI; J. REILLY; U. BELLUGI. *Salk Inst. For Biol. Studies, Univ. of California San Diego, San Diego State Univ.*

2:00 W24 **619.18** Task-based connectivity between the inferior frontal lobes increases following left hemisphere stroke and is associated with worse naming performance. L. SKIPPER-KALLAL*; E. H. LACEY; S. XING; K. SPIEGEL; M. E. FAMA; P. E. TURKELTAUB. *Georgetown Univ., MedStar Natl. Rehabil. Hosp.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 W25 **619.19** Predicting behavioral preferences in language use from electrophysiological activity. P. M. ALDAY; D. ROEHM; M. SCHLESEWSKY; I. BORNKESSEL-SCHLESEWSKY*. *Univ. of South Australia, Univ. of Salzburg.*

4:00 W26 **619.20** Cognitive demands in speech comprehension task modulates the effective connectivity: An optical tomography study. M. S. HASSANPOUR*; A. T. EGGEBRECHT; J. E. PEELLE; J. P. CULVER. *Washington Univ. In St. Louis, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

1:00 W27 **619.21** Using cochlear implant simulations to examine the effects of signal degradation and linguistic complexity on sentence comprehension and listening effort. E. ATAGI*; N. M. AMICHETTI; W. ALFORD; Y. KONG; A. WINGFIELD. *Brandeis Univ., Northeastern Univ.*

2:00 W28 **619.22** The impact of stress on precise and rough speech processing in early infancy. C. TEICKNER*; A. BECKER; U. SCHILD; C. K. FRIEDRICH. *Eberhard Karls Univ. Tuebingen, Univ. of Hamburg.*

3:00 W29 **619.23** The bilateral inferior parietal lobules in support of Chinese multi-character word recognition. N. LIN*. *Inst. of Psychology of the Chinese Acad. of.*

4:00 W30 **619.24** The effect of degree of automaticity in processing hierarchical structure in arithmetic and language. H. JEON*; A. D. FRIEDERICI. *Max Planck Inst. for Human Cognitive and Brain Sci.*

1:00 W31 **619.25** Phonological verbal fluency task demands more attentional resources than Semantic verbal fluency task in patients with Parkinson's disease. M. E. PIEMONTE*; M. R. PIKEL. *Univ. Sao Paulo.*

2:00 W32 **619.26** A functional anatomical map of human speech production. K. KATLOWITZ*; M. A. LONG; M. SVIRSKY; T. MCALLISTER BYUN; R. C. CLARY; H. OYA; M. A. HOWARD, III; J. D. W. GREENLEE. *New York Univ. Sch. of Med., New York Univ. Sch. of Med., New York Univ. Sch. of Med., New York Univ. Sch. of Med., Univ. of Iowa.*

POSTER

620. Human Decision Making: Perception, Motor, and Attention

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 W33 **620.01** A novel implicit associative learning framework: Validation, role of attention and relation to Bayesian decision making. A. ALAMIA*; A. CLEEREMANS; E. OLIVIER; A. ZENON. *Univ. Catholique De Louvain, Univ. Libre de Bruxelles.*

2:00 W34 **620.02** ● A review of transcranial direct current sensation monitoring. M. P. WEISEND*; M. S. SHERWOOD; M. K. HOWES; K. M. GRUNDY. *Wright State Res. Inst., Antioch Col.*

3:00 W35 **620.03** ▲ Contribution of attentional selection to learning during probabilistic inference. C. GUO*; S. G. HOFFMAN; P. KHORSAND; A. SOLTANI. *Dartmouth Col.*

4:00 W36 **620.04** Disentangling the involvement of primary motor cortex in value-based reinforcement learning and value-based decision making. G. DEROSIERE*; P. VASSILIADIS; S. DEMARET; A. ZENON; J. DUQUE. *Inst. of Neurosci.*

1:00 W37 **620.05** Neural functions of memory retrieval and narrative reconstruction during free-viewing of film Memento. J. E. KAUTTONEN*; Y. HLUSHCHUK; U. HASSON; I. JÄÄSKELÄINEN; P. TIKKA. *Aalto, Princeton Univ.*

2:00 W38 **620.06** The role of the alpha rhythm in regulating neuronal dynamics. S. HAEGENS*; C. B. MIKELL; E. H. SMITH; J. F. RUSSO; T. B. NELP; G. P. BANKS; S. SINHA; S. SHETH. *Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr., Rutgers Univ.*

3:00 W39 **620.07** Visual-spatial category encoding in human parietal cortex. Y. LI*; L. WANG; X. HU; Y. YU. *Inst. of Psychology, Inst. of Psychology, Chinese Acad. of Sci., First Affiliated Hosp. of Anhui Med. Univ.*

4:00 W40 **620.08** Deciding where to attend: Increased frontal theta/delta oscillations and their neuronal substrate. A. RAJAN*; Y. LIU; H. HUANG; J. BENGSON; G. MANGUN; M. DING. *Univ. of Florida, Univ. of California.*

1:00 W41 **620.09** Human premotor cortex is implicated in the evaluation of the correctness of observed non-motor visual stimulus sequences according to a learned conjunction rule: A magnetoencephalography study. L. LUNEAU; J. F. KALASKA*. *Univ. de Montreal, Univ. De Montréal.*

2:00 W42 **620.10** Investigating the plasticity of perceptual decision-making in the human brain. C. DEVINE; D. MCGOVERN; S. KELLY; R. G. O'CONNELL*. *Trinity Col. Dublin, Univ. Col. Dublin.*

3:00 W43 **620.11** Attention-related brain potentials predict willingness to pay. N. GOTO*; M. MORTAZAVI; M. WATABE; A. SCHAEFER. *Monash Univ. Malaysia.*

4:00 W44 **620.12** Arousal decreases conservativeness in a random dot motion decision making task. W. TORGERUD*; D. MUSSACK; T. LEE; G. MAFFEI; G. COTUGNO; P. SCHRATER. *Univ. of Minnesota, Univ. of Minnesota, Univ. of California, Univ. Pompeu Fabra, King's Col. London, Univ. of Minnesota.*

1:00 W45 **620.13** Early target selection signals predict the onset and rate of evidence accumulation during perceptual decision making. G. LOUGHNANE*; D. NEWMAN; M. BELLGROVE; E. LALOR; S. KELLY; R. O'CONNELL. *Trinity Col., Monash Univ., Univ. Col. Dublin.*

2:00 W46 **620.14** Sensory evoked potentials in human anterior cingulate cortex electrophysiological recordings during a cognitive task. A. R. WEISS*; M. J. GILLIES; A. L. GREEN; J. R. WALTERS; T. Z. AZIZ. *NINDS, Univ. of Oxford, Univ. of Oxford.*

3:00 W47 **620.15** Occurrence pattern of EEG at the on-set of a voluntary movement. S. KAWASHIMA*; A. MORI; N. T. MINAKAWA; M. TAKAYOSE. *Nihon Univ., Nihon Univ.*

4:00 W48 **620.16** Functional dissociations between abstract and effector-selective decision signals during delayed perceptual choices. D. M. TWOMEY*; S. P. KELLY; R. G. O'CONNELL. *Trinity Col. Dublin, Univ. Col. Dublin.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 X1 **620.17** Risk-taking decision in motor task can be modulated by transcranial direct current stimulation over dorsolateral prefrontal cortex. K. OTA*; Y. MASUGI; M. SHINYA; K. KUDO. *The Univ. of Tokyo, The Japan Society for the Promotion of Sci.*

2:00 X2 **620.18** Modeling of generation of self-organized response in the analog circuit from dynamic memories coded on the neural network using multi-scale biological oscillations. M. HIRABAYASHI*; H. OHASHI. *Bio-ICT Lab., Advanced ICT Res. Institute, NICT, Univ. of Tokyo.*

3:00 X3 **620.19** Temporal dynamics of activity in human anterior cingulate cortex during an event-related color-word Stroop interference task. K. L. ANDERSON*; V. PIAI; J. J. LIN; R. T. KNIGHT. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Irvine.*

4:00 X4 **620.20** Action selection as a biased competition up to the primary motor cortex. C. BUC CALDERON*; T. VERGUTS; W. GEVERS. *Univ. Libre De Bruxelles, Ghent Univ., Univ. Libre de Bruxelles.*

1:00 X5 **620.21** Dynamics of evidence integration in canonical models of perceptual decision making. G. PRAT ORTEGA*; K. WIMMER; J. DE LA ROCHA; A. ROXIN. *Ctr. De Recerca Matemàtica, IDIBAPS.*

2:00 X6 **620.22** Computational modeling reveals differences in how patients with Parkinson's disease implement bias in perceptual decision-making compared to healthy control subjects. M. A. BASSO*; A. PERUGINI; J. DITTERICH. *UCLA, UC Davis.*

3:00 X7 **620.23** Faulty use of prior information in patients with Parkinson's disease. A. PERUGINI*; J. DITTERICH; M. A. BASSO. *UCLA, UC Davis, UCLA.*

4:00 X8 **620.24** Influence of value-dependent endogenous signals on saccadic choice. E. CHU*; L. M. HARRIS; V. W. LEE; S. FARASHAHI; A. SOLTANI. *Dartmouth Col., Dartmouth Col.*

1:00 X9 **620.25** Reward primes representations in human short-term visual memory. C. M. HICKEY*; M. V. PEELEN. *Univ. of Trento.*

2:00 X10 **620.26** 3D reconstructions and quantitative analyses of immunocytochemical staining patterns in the human subthalamic nucleus (STN). A. ALKEMADE*; M. C. KEUKEN; G. DE HOLLANDER; R. BALESAR; M. WEISS; A. TRUTTI; A. SCHAEFER; B. U. FORSTMANN. *Univ. of Amsterdam, Max Planck Inst. for Human and Cognitive Brain Sci.*

POSTER

621. Memory and Cognition: Influence by Aging

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 X11 **621.01** Neural correlates of working memory for face and location in advanced aging. M. SUZUKI*; T. KAWAGOE; S. NISHIGUCHI; N. ABE; Y. OTSUKA; R. NAKAI; M. YAMADA; S. YOSHIKAWA; K. SEKIYAMA. *Fac. of Letters, Kumamoto Univ., Grad. Sch. of Social and Cultural Sciences, Kumamoto Univ., Grad. Sch. of Medicine, Kyoto Univ., Kokoro Res. Center, Kyoto Univ., Grad. Sch. of Comprehensive Human Sciences, Univ. of Tsukuba.*

2:00 X12 **621.02** The effects of physical exercise with music on prefrontal cortex volume of elderly people: Mihama–kiho scan project. K. TABEI*; M. SATOH; J. OGAWA; T. TOKITA; N. NAKAGUCHI; K. NAKAO; H. KIDA; H. TOMIMOTO. *Mie Univ., YAMAHA Music Fndn., Mihama Town Hall, Kiho Town Hall, Kinan Hosp.*

3:00 X13 **621.03** Neuropsychological and neuroanatomical factors associated with speech-in-noise perception in aging. K. A. ALTONJI*; J. HANSON; M. KASSEL; C. HUMPHRIES; M. SABRI. *Med. Col. of Wisconsin.*

4:00 X14 **621.04** Neural representations of subjective value across the human lifespan. M. A. GRUBB*; S. RASHID; P. W. GLIMCHER; I. LEVY. *New York Univ., Yale Sch. of Med.*

1:00 X15 **621.05** Proactive interference as a source for age related navigational decline. M. MERHAV*; T. WOLBERS. *DZNE, DZNE.*

2:00 X16 **621.06** A modified-Sternberg paradigm measures load and delay components of working memory in cognitive SuperAgers. A. H. COOK*; E. LOYER; M. MESULAM; S. WEINTRAUB; H. BREITER; E. ROGALSKI; J. REILLY. *Northwestern Univ., Northwestern Univ.*

3:00 X17 **621.07** Cognitive performance and gait task difficulty are predictors of stride variability during dual-task walking. L. A. ZUKOWSKI*; P. PLUMMER. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

4:00 X18 **621.08** ● Association between medial temporal lobe microstructure and cognitive function in healthy community-dwelling older adults. E. T. REAS; D. J. HAGLER, Jr.; N. S. WHITE; A. M. DALE; E. BARRETT-CONNOR; L. K. MCEVOY*. *UCSD, UCSD, UCSD.*

1:00 X19 **621.09** Aging contributes to grey matter volume and attentional impulsivity correlates in frontoparietal functional connectivity. J. J. CASTRELLON*; L. C. DANG; S. F. PERKINS; G. R. SAMANEZ-LARKIN; D. H. ZALD. *Vanderbilt Univ., Yale Univ.*

2:00 X20 **621.10** Neural connectivity during episodic memory formation in young and old adults. S. CANSINO*; C. ESTRADA-MANILLA; P. TREJO-MORALES; E. H. PASAYE-ALCARAZ; E. AGUILAR-CASTAÑEDA; P. SALGADO-LUJAMBIO; A. L. SOSA-ORTIZ. *Lab. NeuroCognition, Nat Autonomous Univ. of Mexico, Nat Autonomous Univ. of Mexico, Natl. Inst. of Neurol. and Neurosurg.*

3:00 X21 **621.11** Classification of age-related brain connectivity using resting state fMRI and the support vector machine. T. IIDAKA*; E. BAGARINAO; S. KOYAMA; M. KUNIMI; T. NAKAI. *Nagoya University, Grad. Sch. of Med., Natl. Inst. for Geriatrics and Gerontology.*

4:00 X22 **621.12** Integrity and selectivity of functional activation maps predict behavioral performance and successful aging. C. G. HABECK*; Y. GAZES; H. OH; Y. STERN. *Columbia Univ.*

1:00 X23 **621.13** Visual search performances does not predict age- related performance differences in an everyday memory task. M. KEMPE*; O. L. BOCK; D. MEMMERT. *German Sport Univ. Cologne, German Sport Univ. Cologne, German Sport Univ. Cologne.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 X24 **621.14** Life-time stability of reference ability neural networks. Y. STERN*; C. HABECK; Y. GAZES. *Cognitive Neurosience Division, Columbia Univ.*

3:00 X25 **621.15** Unique white matter tract covariance patterns predict age-declining cognitive abilities. Y. GAZES*; Q. R. RAZLIGHI; D. O'SHEA; Y. STERN; C. G. HABECK. *Columbia Univ.*

4:00 X26 **621.16** Relation of white matter hyperintensity volume to cognitive performance in older adults. L. A. NGUYEN*; P. K. BHARADWAJ; K. A. HAWS; M. C. FITZHUGH; T. P. TROUARD; G. A. HISHAW; G. E. ALEXANDER. *Univ. of Arizona, Evelyn F. McKnight Brain Inst., Arizona Alzheimer's Consortium, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

1:00 X27 **621.17** Association between lifetime physical activity and cognitive functioning in older community dwelling adults. S. J. GILL*; C. M. FRIEDENREICH; T. T. SAJOBI; S. R. LONGMAN; L. L. DROGOS; M. H. DAVENPORT; A. V. TYNDALL; G. A. ESKES; D. B. HOGAN; M. D. HILL; J. S. PARBOOSINGH; B. J. WILSON; M. J. POULIN. *Univ. of Calgary, Univ. of Calgary, Hotchkiss Brain Inst., Univ. of Calgary, Alberta Hlth. Services, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Alberta Hlth. Services, Univ. of Calgary, Dalhousie Univ., Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, 15Libin Cardiovasc. Inst. of Alberta, Univ. of Calgary.*

2:00 X28 **621.18** Contributions of age and Alzheimer's pathology to hippocampal memory network function in healthy elderly. S. M. MARKS*; S. N. LOCKHART; K. L. ARNEMANN; J. W. VOGEL; H. D. SCHWIMMER; W. J. JAGUST. *Helen Wills Neurosci. Inst., Univ. of California, Life Sci. Div., Lawrence Berkeley Natl. Lab.*

3:00 X29 **621.19** Transcranial direct current stimulation over the right prefrontal cortex leads to time-dependent enhancement of sustained attention in ageing. M. BROSNAN*; M. ARVANEH; P. M. DOCKREE; I. ROBERTSON. *Trinity Col. Dublin, Trinity Col. Inst. of Neurosci. and Sch. of Psychology.*

4:00 X30 **621.20** Medial temporal lobe representational pattern similarity during encoding predicts episodic memory performance among healthy older adults. V. A. CARR*; A. M. KHAZENZON; J. D. BERNSTEIN; C. P. LITOVSKY; G. A. KERCHNER; A. D. WAGNER. *Stanford Univ., Stanford Univ.*

1:00 X31 **621.21** Structural and functional hippocampal changes underlying age-related memory retrieval impairment. A. M. KHAZENZON*; V. A. CARR; J. D. BERNSTEIN; C. P. LITOVSKY; G. A. KERCHNER; A. D. WAGNER. *Stanford Univ.*

2:00 X32 **621.22** A deficit-compensation brain activation pattern common to working memory and functional mobility in older adults. T. KAWAGOE*; M. SUZUKI; S. NISHIGUCHI; N. ABE; Y. OTSUKA; R. NAKAI; M. YAMADA; S. YOSHIKAWA; K. SEKIYAMA. *Kumamoto Univ., Kyoto Univ., Kokoro Res. Center, Kyoto Univ., Univ. of Tsukuba.*

3:00 X33 **621.23** *(Unable to attend)* The role of medial temporal lobe regions in incidental and intentional retrieval of relational and item information in aging. W. WANG*; K. S. GIOVANELLO. *Duke Univ., Univ. of North Carolina at Chapel Hill.*

4:00 X34 **621.24** Investigating linear and nonlinear age-related changes in the functional neural correlates of context memory across the adult lifespan. E. ANKUDOWICH*; S. PASVANIS; M. N. RAJAH. *McGill Univ., Cerebral Imaging Center, Douglas Mental Hlth. Univ. Inst.*

1:00 X35 **621.25** ▲ Factors modifying longitudinal change in white matter tract integrity in healthy midlife and older adults. A. BILLIG*; K. M. KENNEDY; P. R. A. W. ROBINSON; K. SCHAIE; S. L. WILLIS. *Integrated Brain Imaging Ctr., The Univ. of Texas at Dallas, Univ. of Washington, Univ. of Washington.*

2:00 X36 **621.26** Neural correlates of loneliness in younger and older adults. A. D'AGOSTINO*; T. CANLI. *Stony Brook Univ.*

3:00 X37 **621.27** Age-related differences in networks of brain activation across two executive functioning domains - updating and task-switching. K. KAWA*; M. B. SCHMIT; J. A. CARDOZA; A. M. STICKEL; E. L. GLISKY; L. RYAN. *Univ. of Arizona, Univ. of Arizona.*

4:00 X38 **621.28** Dietary zinc serum levels: Preventing memory decline and depression in late adulthood. A. A. OLIVEIRA*, JR; T. JACOBSEN; T. FONSECA; M. FIEGENBAUM; F. ANDRADE. *UFCSPA - Univ. Federal De Ciencias Da Saúde, UFCSPA, UFCSPA, Feevale.*

1:00 X39 **621.29** The effects of Omega-3 fatty acid supplementation on cognitive abilities in healthy adults. D. LEHMAN*; G. LECKIE; K. ERICKSON; S. SEREIKA; D. KUAN; S. MANUCK; M. MULDOON. *Univ. of Pittsburgh.*

2:00 X40 **621.30** ● Lutein and zeaxanthin are related to neurobiological efficiency during cognitive performance: An fMRI study. C. A. LINDBERGH*; D. TERRY; C. MEWBORN; M. BELLO; E. BOVIER; L. M. RENZI; B. R. HAMMOND; L. MILLER. *Univ. of Georgia.*

POSTER

622. Changes of Functional Network Activity: Physiology, Normal Ageing and Neurodegenerative Disease

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 X41 **622.01** Attentional regulation training is associated with flexible engagement of frontal control and default brain networks in older adults. A. ADNAN*; G. R. TURNER; A. CHEN; T. NOVAKOVIC-AGOPIAN; M. D'ESPOSITO. *York Univ., York Univ., Veteran's Admin. Med. Ctr., Univ. of California, Berkeley.*

2:00 X42 **622.02** Comparing in-Person and Telephone Approaches to Videoconference - based cognitive assessment - an exploratory study with older individuals. T. C. CASTANHO*; L. AMORIM; P. MOREIRA; J. MARIZ; A. SILVA; J. PALHA; N. SOUSA; N. SANTOS. *Sch. of Hlth. Sci.*

3:00 X43 **622.03** Spatial reconstruction and spatial pattern separation in young and older adults. R. CLARK*; A. TAHAN; P. D. WATSON; N. COHEN; J. SEVERSON; M. VOSS. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa, Univ. of Illinois Urbana-Champaign, Digital Artefacts.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 X44 **622.04** Functional correlates of personality & facial perception in old and young adults. N. PERSSON*; N. C. EBNER; T. LIN; H. FISCHER. *Stockholm Univ., Stockholm Univ., Univ. of Florida, Karolinska Institutet.*

1:00 X45 **622.05** Fatigue and fatigability in young and older adults. S. BURKE*; I. SAMUEL; B. KLUGER; M. DING. *Univ. of Florida, Univ. of Florida, Univ. of Colorado Denver.*

2:00 X46 **622.06** Dynamics of resting state functional connectivity through the human adult lifespan. D. BATTAGLIA*; E. C. A. HANSEN; P. RITTER; V. JIRSA. *INS, Univ. Aix-Marseille, BCCN, FIAS, Charité Univ. Hosp., Bernstein Focus State Dependencies of Learning and BCCN, Minerva Res. Group BrainModes, MPI for Human Cognitive and Brain Sci.*

3:00 X47 **622.07** Contributions of hippocampal and striatal tract integrity to mnemonic discrimination across the lifespan. I. J. BENNETT*; C. E. L. STARK. *Univ. of California, Irvine, Univ. of California, Irvine.*

4:00 X48 **622.08** ● Discovery and characterization of potent biphasic a5GABAA receptor modulators. M. SOH*; R. MCGEARY; J. LYNCH. *Queensland Brain Inst., Sch. of Pharmacy, The Univ. of Queensland.*

1:00 Y1 **622.09** Age differences in regional myelin content and white matter organization in healthy adults: Comparing myelin water fraction and diffusion tensor imaging. M. ARSHAD*; J. A. STANLEY; N. RAZ. *Wayne State Univ., Wayne State Univ. Sch. of Med., Inst. of Gerontology, Wayne State Univ.*

2:00 Y2 **622.10** Physical activity levels and white matter microstructure in community-dwelling older adults. C. SEXTON*; N. FILIPPINI; E. ZSOLDOS; A. MAHMOOD; S. SABIA; A. SINGH-MANOUX; M. KIVIMAKI; H. JOHANSEN-BERG; K. EBMEIER. *Univ. of Oxford, Univ. Col. London.*

3:00 Y3 **622.11** Age-related changes in cerebral correlates of voice processing. J. ZHANG*; F. W. SMITH; B. L. GIORDANO; M. GROSBRAS; G. A. ROUSSELET; P. BELIN. *Univ. of Texas at Dallas, Univ. of Glasgow, Univ. of East Anglia, Univ. of Glasgow.*

4:00 Y4 **622.12** Arterial spin labelling (ASL) may be useful for diagnosing various types of Parkinson's disease with dementia. K. ABE*; T. HAYASHI; M. YAMAMOTO; N. AKIYAMA; M. FUJITA. *Hyogo Col. of Med. Grad. Sch. of Medic, Fujita Shinkeinaika Clin.*

1:00 Y5 **622.13** Anatomical substrate of fatigue in Parkinson's disease. Q. ZHAO*; H. HUANG; J. TANNER; C. PRICE; B. KLUGER; M. DING. *Univ. of Florida, Univ. of Florida, Univ. of Colorado.*

2:00 Y6 **622.14** Validation of olfactory identification deficit as a biomarker of Alzheimer's disease. E. LAZAR*; M. WOODWARD; C. AMRUTKAR; J. HAGEMEIER; H. SHAH; R. BENEDICT; S. RAJAKRISHNAN; R. DOODY; L. YAN; K. SZIGETI. *SUNY At Buffalo, Baylor Col. of Med.*

3:00 Y7 **622.15** ● Identification of initial visit factors predictive of cognitive maintenance or cognitive decline in memory clinic patients. W. D. DUNN, Jr.; R. CHEN; L. ZHANG; E. E. HECHT; A. I. LEVEY; D. A. GUTMAN*. *Emory Univ., Emory Univ. Sch. of Med., Emory Univ., Emory Univ., Emory Univ. Sch. of Med., Emory Univ.*

4:00 Y8 **622.16** ● PDE4 inhibition in young healthy adults improves memory: A translational approach. M. VAN DUINEN*; A. SAMBETH; A. BLOKLAND; J. PRICKAERTS. *Maastricht Univ., Maastricht Univ.*

1:00 Y9 **622.17** The effect of chronic consumption of purple grape juice on memory, bdnf and histone h4 acetylation levels in elderly residents in southern Brazil. V. ELSNER*; P. CAÑETE DA COSTA; G. REINALDO; C. ARAUJO; I. REICHERT VITAL DA SILVA; P. DAL LAGO; C. FUNCHAL; C. DANI. *Ctr. Universitario Metodista Do IPA, Programa de Pos Graduação em Biociências e Reabilitação do Ctr. Universitário Metodista do IPA, Curso de Fisioterapia do Ctr. Universitário Metodista do IPA, Programa de Pós Graduação em Ciências da Saúde da Univ. Federal de Ciências da Saúde de Porto Alegre, Programa de Pos Graduação em Biociências e Reabilitação do Ctr. Universitário Metodista do IPA, Dept. de Fisioterapia, Programa de Pós Graduação em Ciências da Reabilitação da Univ. Federal de Ciências da Saúde de Porto Alegre.*

2:00 Y10 **622.18** Age-related differences in the salience network: Behavioral implications for executive function and affect. A. TOUROUTOGLOU*; J. ANDREANO; L. FELDMAN BARRETT; B. DICKERSON. *Athinoula A. Martinos Center, Massachusetts Gen. Hosp., Harvard Med. Sch., Harvard Med. Sch., Harvard Med. Sch., Northeastern Univ.*

3:00 Y11 **622.19** Neural mechanisms supporting successful speech comprehension in normal aging. Y. -. LEE*; C. ROGERS; N. MIN; A. WINGFIELD; M. GROSSMAN; J. PEELLE. *Univ. of Pennsylvania, Washington Univ. in St. Louis, Brandeis Univ.*

4:00 Y12 **622.20** Age-dependent community dynamics and brain system organization in human functional brain networks. K. J. SCHLESINGER*; B. O. TURNER; B. LOPEZ; M. B. MILLER; J. M. CARLSON. *Univ. of California, Santa Barbara, Univ. of California, Santa Barbara.*

1:00 Y13 **622.21** Gray matter volumes related to body fat predict executive functions differentially in males and females. A. STICKEL*; E. RODRIGUEZ; A. MEYER; L. RYAN. *Univ. of Arizona.*

2:00 Y14 **622.22** ● Characterizing population EEG dynamics throughout adulthood. A. HASHEMI*; L. J. PINO; G. MOFFAT; K. J. MATHEWSON; C. AIMONE; L. A. SCHMIDT; P. J. BENNETT; A. B. SEKULER. *McMaster Univ., InteraXon.*

3:00 Y15 **622.23** Dual-task functional connectivity changes induced by exercise in the elderly. L. T. K. VO*; M. N. N. TO; A. F. KRAMER. *Tan Tao Univ., Univ. of Illinois at Urbana-Champaign.*

4:00 Y16 **622.24** Brain metabolism, amyloid, vascular disease: Anterior cingulate cortex and cognitive aging. J. V. PARDO*; J. T. LEE. *Univ. of Minnesota & VAMC, VAMC.*

1:00 Y17 **622.25** ▲ Healthy children with Apolipoprotein E4 carriers showed a stronger connectivity between nodal regions of default mode networks that linked to weakened functional connections between hippocampus and default mode networks. A. ARINO*; M. ABE; D. MICHIMATA; S. YOKOTA; T. HASHIMOTO; K. FURUKAWA; M. KAMADA; H. ARAI; H. TAKEUCHI; R. KAWASHIMA; Y. TAKI. *Tohoku Univ., Inst. of Aging, Develop. and Cancer, Tohoku Univ., Inst. of Aging, Develop. and Cancer, Tohoku Univ., Inst. of Development, Aging and Cancer.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 Y18 **622.26** Evidence that decreased system segregation observed across the healthy adult lifespan does not result in differences in resting-state defined system topology. M. Y. CHAN*; F. ALHAZMI; N. K. SAVALIA; D. C. PARK; G. S. WIG. *Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr.*

POSTER

623. Cognition and Anxiety: Animal Models

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 Y19 **623.01** Effect of chronic plus acute prolonged stress on expression of platelet derived growth factor in the rat orbitofrontal cortex. K. SMITH*; D. A. CRUZ; B. BINGHAM; R. R. BURSON; D. A. MORILAK; D. E. WILLIAMSON. *UT Hlth. Sci. Ctr. San Antonio, Univ. of Texas Hlth. Sci. Ctr. San Antonio, San Antonio Military Med. Ctr.*

2:00 Y20 **623.02** Effect of time-of-day on mouse behavior measured in a comprehensive behavioral test battery. K. TAKAO*; H. SHOJI; S. HATTORI; T. MIYAKAWA. *Natl. Inst. For Physiological Sci., Fujita Hlth. Univ.*

3:00 Y21 **623.03** ▲ Study of anxiolytic effects of kami kihi to (gui pi tang) in rats. J. V. CIANCAGLINI, Jr; B. B. SILVA*; M. POLLY, Jr; R. S. DE LIMA, jr; F. S. GUIMARÃES, Jr; P. L. LANNI, Jr; L. C. D. NETO, Jr; D. FEDER, Dr; C. D. NASSIS, Dr. *Faculdade De Medicina Do ABC, Faculdade De Medicina Do ABC, Faculdade De Medicina Do ABC.*

4:00 Y22 **623.04** Effects of Lippia alba on animals submitted to the elevated t-maze test. J. E. PANDOSSIO*; N. M. MARTINS; P. M. MARTINS. *Univ. of Brasilia.*

1:00 Y23 **623.05** Hippocampal abnormalities through the activation of glucocorticoid receptor in the hippocampus of an animal model of PTSD. N. NAGASHIMA; M. FUCHIKAMI*; S. NOJIMA; T. KATAOKA; S. OKADA; H. TAKEMOTO; S. MORINOBU; S. YAMAWAKI. *Hiroshima University, Dept. of Psychiatry, Natl. Hosp. Organization, Kamo Mental Hlth. Ctr., Prefectulal Univ. of hiroshima, Dept. of Preservation of health welfare science, Kochi Med. School, Kochi University, Dept. of Neuropsychiatry.*

2:00 Y24 **623.06** ▲ Modulation of the Endocannabinoid System within the Nucleus Accumbens shell elicits anxiolytic effects in rats. T. PARDO-GARCÍA; N. YUSIF; C. S. MALDONADO-VLAAR*. *Univ. Puerto Rico, Univ. Puerto Rico, Univ. Puerto Rico.*

3:00 Y25 **623.07** ● Effect of COMTval158met polymorphism on sensitivity to long-term effects of trauma in the predator stress model of PTSD. J. DESLAURIERS*; M. TOTH; D. HOPPENER; M. A. GEYER; V. B. RISBROUGH. *Univ. of California San Diego, Ctr. of Excellence for Stress and Mental Health, VA, Utrecht Inst. for Pharmaceut. Sci.*

4:00 Y26 **623.08** Altered cognitive and motivational nociceptive processing in an animal model of post-traumatic stress disorder. J. D. VEGA-TORRES*; P. KALYAN-MASIH; T. HEERS; J. D. FIGUEROA. *Loma Linda Univ. Sch. of Med.*

1:00 Y27 **623.09** Effects of familiarity on emotional contagion in rodents. M. C. CARRILLO*; F. MIGLIORATI; R. BRULS; T. VAN LIERDE; Y. HAN; M. HEINEMANS; I. PRUIS; V. GAZZOLA; C. KEYSERS. *Netherlands Inst. For Neurosci., Netherlands Inst. for Neurosci., Univ. Gent, Univ. of amsterdam.*

2:00 Y28 **623.10** Sex differences in kappa opioid receptor-mediated negative affective states in rats. M. MAVRIKAKI*; J. MAYS; D. PUTTICK; E. CHARTOFF. *Harvard Med. School, McLean Hosp.*

3:00 Y29 **623.11** Establishment of a behavioral-pharmacological evaluation on social interaction behavior using a 3-chamber system for rats. T. YAMAGUCHI; R. FUKUMORI; M. YOSHIOKA*; T. YAMAMOTO. *Nagasaki Intl. Univ., Hokkaido Univ. Sch. Med.*

4:00 Y30 **623.12** Anxiolytic effect of Diferuloylmethane on rats exposed to ozone. L. HERNANDEZ*; J. J. RAMIREZ-VAZQUEZ; S. NERY-FLORES; G. CAMARGO; A. HERNANDEZ-CHAVEZ; M. MALDONADO-RUBIO; S. RAMOS CALZADA; M. L. MENDOZA-MAGAÑA; M. A. RAMIREZ HERRERA. *Univ. de Guadalajara.*

1:00 Y31 **623.13** Sex matters: Anxiolytic effects of diazepam and BDNF and parvalbumin protein levels. B. MASON; R. RAVENELLE; A. K. BERMAN; S. DONALDSON*. *Univ. of Massachusetts Boston, City Univ. of New York, Western Michigan Univ., Univ. Massachusetts, Boston.*

2:00 Y32 **623.14** Sex-dependent increase in myocardial sensitivity to ischemic injury in an animal model of post-traumatic stress disorder. P. R. ZOLADZ*; A. KRIVENKO; M. E. FRY; J. D. LAWSON; L. E. STONER; E. D. EISENMANN; B. L. JOHNSON; M. L. HEMBREE; R. M. ROSE; C. J. LOMBARDI; M. R. HUNTLEY; S. SEELEY; A. D. BUI; B. R. RORABAUGH. *Ohio Northern Univ., Ohio Northern Univ.*

3:00 Y33 **623.15** Modeling the effects of paternal lifestyle on the mental health of offspring. A. K. SHORT*; T. Y. PANG; A. J. HANNAN. *Florey Inst. of Neurosci. and Mental Hlth., Univ. of Melbourne.*

4:00 Y34 **623.16** The effect of bimodal value representation on goal directed behavior and reflective choice in behaving macaque. M. YASUDA*; S. NAKAMURA; K. OKADA; Y. KOBAYASHI; K. TSUTSUI; K. NAKAMURA. *Kansai Med. Univ., Grad. Sch. of Life Sciences, Tohoku Univ., Osaka Univ. Grad. Sch. of Frontier Biosci.*

1:00 Y35 **623.17** Midbrain dopamine stimulation enhances perceptual sensitivity. A. LAK*; S. SCHRÖDER; E. JACOBS; S. SOARES; C. P. BURGESS; J. J. PATON; K. D. HARRIS; M. CARANDINI. *Univ. Col. London, Champalimaud Ctr. for the Unknown.*

2:00 Y36 **623.18** Amelioration of working memory deficits induced by prefrontal cortical GABA hypofunction by D1 receptor stimulation. M. AUGER*; N. S. CHAN; S. B. FLORESCO. *Univ. of British Columbia, Univ. of British Columbia.*

3:00 Y37 **623.19** The influence of acute stress on individual differences in probabilistic reversal learning. C. A. BRYCE*; S. B. FLORESCO. *Univ. of British Columbia, Univ. of British Columbia.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

624. Decision Making: Rodents II

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 Y38 **624.01** Non-aggressive resolution of conflict between two male mice by resource split behavior. I. CHOE*; K. KIM; S. PARK; I. KIM; H. SHIN. *Inst. For Basic Sci.*

2:00 Y39 **624.02** Sex differences measured using a novel paradigm to assess approach and avoidance behaviors. T. G. CHOWDHURY*; N. W. SIMON; R. DUTTA; J. T. WOOD; B. MOGHADDAM. *Univ. of Pittsburgh, Scripps Col.*

3:00 Y40 **624.03** Effect of social peers on risky decision making in male sprague dawley rats. V. WEISS*; M. T. BARDO. *Univ. of Kentucky, Univ. of Kentucky.*

4:00 Y41 **624.04** ● Bayesian approach can help analyze and design cognitive flexibility tasks. J. WANG; D. S. TAIT*; E. M. BOWMAN; V. J. BROWN. *Univ. of St Andrews.*

1:00 Y42 **624.05** Context cues disambiguate the meaning of an extinguished stimulus to guide choice between actions. V. LAURENT*; B. C. CHIENG; B. W. BALLEINE. *Brain & Mind Res. Inst.*

2:00 Y43 **624.06** Multi-site optogenetic inactivation of the rat frontal orienting fields and posterior parietal cortex during evidence accumulation. C. D. KOPEC*; J. U. KASDIN; C. D. BRODY. *Princeton Univ., HHMI / Princeton Univ.*

3:00 Y44 **624.07** Temporal integration in a vibrotactile delayed comparison task: From sensory coding to decision in humans and rats. A. FASSIHI; A. AKRAMI; V. H. SCHÖNFELDER; M. E. DIAMOND*. *SISSA, Intl. Sch. for Advanced Studies, Princeton Univ., Howard Hughes Med. Inst.*

4:00 Z1 **624.08** Causal contribution and neural encoding of the rat superior colliculus in an accumulation of evidence decision-making task. T. D. HANKS*; M. M. YARTSEV; C. D. BRODY. *Princeton Univ., Princeton University, HHMI.*

1:00 Z2 **624.09** Time dependent involvement of Posterior Parietal and Prefrontal cortex in a rat auditory parametric working memory task. A. AKRAMI*; A. EL HADY; C. D. KOPEC; C. BRODY. *Princeton Neurosci. Inst. (PNI), Howard Hughes Med. Inst., Princeton Univ.*

2:00 Z3 **624.10** Transient, localized disruption of neural activity in posterior parietal cortex reduces accuracy of visual decisions. A. M. LICATA; D. N. RAPOSO; A. K. CHURCHLAND*. *Cold Spring Harbor Lab.*

3:00 Z4 **624.11** A behavioral task for quantitative assessment of impulsivity in mice. H. PI*; T. SIKKENS; A. KEPECS. *Cold Spring Harbor Lab., Univ. of Amsterdam, Cold Spring Harbor Lab.*

4:00 Z5 **624.12** Integration of visual and tactile signals in behaving rats. N. NIKBAKHT*; R. QUIAN QUIROGA; D. ZOCCOLAN; M. E. DIAMOND. *SISSA, Univ. of Leicester.*

POSTER

625. Executive Function: Models of Disorders

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 Z6 **625.01** ▲ Anxiolytic-like effects of n-sustituted melatonin analogues on mice. A. ALMARAZ*; E. B. NARANJO-RODRIGUEZ; A. S. LIRA-ROCHA; A. M. VÁZQUEZ. *Univ. Nacional Autonoma De Mexico.*

2:00 Z7 **625.02** Rapid and refined screening of behavioral flexibility, impulsivity and attention in mice using different types of automated home-cage tasks. E. REMMELINK*; M. VERHAGE; A. B. SMIT; M. LOOS. *Sylics, VU Univ., VU Univ.*

3:00 Z8 **625.03** Eco-HAB - fully automated and ecologically relevant assay for individualized measurement of social impairments in mouse models of autism. A. PUSCIAN*; S. ŁęSKI; M. WINIARSKI; P. BOGUSZEWSKI; G. KASPROWICZ; E. KNAPSKA. *Nencki Inst. of Exptl. Biology, PAS, Ctr. for Theoretical Physics, Polish Acad. of Sci., Warsaw Univ. of Technol.*

4:00 Z9 **625.04** Low level lead exposure differentially impairs cognitive flexibility in an attentional set shifting task dependent upon sex and developmental period of exposure. L. S. NEUWIRTH*; D. W. ANDERSON; J. S. SCHNEIDER. *Thomas Jefferson Univ.*

1:00 Z10 **625.05** Moderate prenatal alcohol exposure alters hippocampal functional network connectivity and social behavior in adult long evans rats. C. I. RODRIGUEZ*; S. DAVIES; V. CALHOUN; D. SAVAGE; D. HAMILTON. *The Univ. of New Mexico, The Univ. of New Mexico, The Univ. of New Mexico, The Mind Res. Network.*

2:00 Z11 **625.06** Elevated brain cytokine levels associated with cognitive vulnerability of CHT+/- mice following repeated mild traumatic brain injury. A. KOSHY CHERIAN*; N. C. TRONSON; V. PARIKH; R. D. BLAKELY; M. SARTER. *Univ. of Michigan, Temple Univ., Vanderbilt Univ. Sch. of Med.*

3:00 Z12 **625.07** Persistent alterations in cortical structure and function following maternal deprivation in the rat. S. S. JANETSIAN*; M. M. TIMM; A. M. MCCANE; A. J. BAUCUM, II; B. F. O'DONNELL; C. C. LAPISH. *Dept. of Psychology; Indiana University-Purdue Univ. Indianapolis, Dept. of Biology; Indiana University-Purdue Univ. Indianapolis, Indiana Univ. Sch. of Med. Stark Neurosci. Res. Inst., Indiana Univ., Indiana University-Purdue Univ. Indianapolis.*

4:00 Z13 **625.08** Sensitivity to delay of reinforcement, but not sensitivity to amount, correlates with impulsivity in Spontaneously Hypertensive Rats. V. ORDUÑA*; O. ZAMORA. *UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO.*

1:00 Z14 **625.09** The significance of highly basic C-terminal region of Reelin for behavior. K. SAKAI; H. SHOJI; T. KOHNO; T. MIYAKAWA; M. HATTORI*. *Nagoya City Univ., Fujita Hlth. Univ., Natl. Inst. Physiol. Sci.*

2:00 Z15 **625.10** Situational and age-dependent decision making during life threatening distress in myotis macrodactylus. X. HUANG; T. JIANG; Z. LONG; B. LUO; X. YUE; Y. GU; J. FENG; J. S. KANWAL*. *Northeast Normal Univ., Georgetown Univ. Med. Ctr.*

Tues. PM

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 Z16 **625.11** EP4 receptor-associated protein (EPRAP) deficient mice exhibited behavioral abnormalities. R. FUJIKAWA*; M. MINAMI; S. HIGUCHI; M. YASUI; T. IKEDO; M. NAGATA; M. YOKODE. *Kyoto Univ.*

4:00 Z17 **625.12** Behavioral and biochemical consequences of simulated vehicle exhaust exposure. A. A. SALVI*; G. PATKI; H. LIU; S. SALIM. *Univ. of Houston, Univ. of Houston.*

1:00 Z18 **625.13** Touchscreen tasks for cognitive phenotyping of rats exposed to a chronic mild stress model of depression. L. MARTIS*; S. KROG; C. BRISION; A. MØLLER; O. WIBORG. *Aarhus Univ., Ctr. of Functionally Integrative Neurosci.*

2:00 Z19 **625.14** Bone marrow-derived mesenchymal stem cells improve diabetes-induced cognitive impairment by secreting exosomes and repair neurons and astrocytes. M. NAKANO*; K. NAGAISHI; N. KONARI; T. CHIKENJI; Y. MIZUE; M. FUJIMIYA. *Sapporo Med. Univ.*

3:00 Z20 **625.15** Cerebellar neuropathology influences cerebellar-nucleus accumbens, striatum, and prefrontal cortex pathways in modulating dopamine release in the Fmr1 strain: Relevance to Autism Spectrum-related behavioral disorders. E. MCKIMM*; D. M. COOMES; Z. R. HOLLOWAY; M. CALTON; D. GOLDOWITZ; G. MITTLEMAN; C. D. BLAHA. *The Univ. of Memphis, Univ. of British Columbia.*

4:00 Z21 **625.16** ● Effect of sub-anesthetic ketamine on behavior in Cynomolgus Macaques. G. J. DEMARCO*; X. CHEN; B. DEREK; C. CHRISTOFFERSEN. *Pfizer Inc., Pfizer Inc.*

1:00 Z22 **625.17** ▲ Biting the hand that feeds you: Heart rate variability as a correlate of aggression. L. A. CRAIG*; E. P. WIERTELAK; J. E. MEYERS-MANOR. *Macalester Col.*

2:00 Z23 **625.18** Methamphetamine withdrawal inflates reward valuation by enhancing corticostriatal plasticity. A. B. THOMPSON*; A. STOLYAROVA; Y. ZHUANG; F. GOMEZ-PINILLA; A. IZQUIERDO. *UCLA, UCLA, UCLA.*

3:00 Z24 **625.19** Investigating the role of catecholamines in cognitive dysfunction associated with Parkinson's disease. S. L. SIMMS*; L. KEIBEL; V. VELLA; J. S. SHUMSKY; B. D. WATERHOUSE; S. KORTAGERE. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

4:00 Z25 **625.20** Chronic pramipexole treatment influences motor and impulse control in a rat model of Parkinson's disease. S. TEDFORD*; N. A. HOLTZ; S. A. GRASSO; A. L. PERSONS; T. C. NAPIER. *Rush Univ., Rush Univ.*

1:00 Z26 **625.21** Rodent models of delirium and encephalopathy: Behavioral and neurophysiological studies in aging. E. Y. KIMCHI*; B. F. COUGHLIN; S. S. CASH. *Massachusetts Gen. Hosp., Harvard Med. Sch., Massachusetts Gen. Hosp.*

2:00 Z27 **625.22** Voluntary physical exercise improves the subsequent motor and cognitive impairments in Parkinson's disease model of rats. S. HSUEH*; T. HSIEH; J. LAI; K. CHEN; Y. YU; Y. CHAN; C. LI; Y. CHIANG. *Program For Neural Regenerative Medicine, TMU, Grad. Inst. of Neural Regenerative Medicine, Col. of Med. Sci. and Technology, Taipei Med. University, Taipei, Taiwan, Dept. of Physical Therapy and Grad. Inst. of Rehabil. Science, Col. of Medicine, Chang Gung University, Taoyuan, Taiwan, Dept. of Neurosurgery, Taipei Med. Univ. Hospital, Taipei, Taiwan.*

3:00 Z28 **625.23** High midbrain D3 receptor availability is related to inflexible decision-making processes in rats. S. M. GROMAN*; N. J. SMITH; J. R. PETRULLI; L. CHEN; B. MASSI; D. LEE; E. D. MORRIS; J. R. TAYLOR. *Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

4:00 Z29 **625.24** Response of medial prefrontal cortex to cues for behavioral restraint. K. MANSON*; J. D. ROITMAN. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago.*

1:00 Z30 **625.25** Effects of methylphenidate on prefrontal cortex and decision-making throughout development. J. D. ROITMAN*; E. JACOBS-BRICHFORD; M. MCMURRAY; C. SHORT; L. AMODEO. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

2:00 Z31 **625.26** Neural markers of cognitive control, and their evolution during a pre-symptomatic monkey model of Parkinson's disease. C. R. WILSON*; F. STOLL; M. C. M. FARAUT; J. VEZOLI; V. LEVIEL; E. PROCYK. *Inserm U846, Stem Cell & Brain Res. Inst., Univ. de Lyon, UCBL, Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society.*

3:00 Z32 **625.27** ▲ Pupillometric readouts of decision making in mice. P. J. STEFFAN*; M. MCGINLEY; D. LEE; D. MCCORMICK. *Yale Univ., Yale Univ., Yale Univ.*

4:00 Z33 **625.28** Cocaine self-administration and incubation of craving exacerbates poor decision-making on a rat gambling task, exposing individual vulnerability to addiction. J. N. FERLAND*; C. A. WINSTANLEY. *Univ. of British Columbia, Univ. of British Columbia.*

1:00 Z34 **625.29** Pupillary dynamics reflect behavioral states in head-fixed rats performing whisker direction discrimination tasks. B. SCHRIVER*; S. BAGDASAROV; Q. WANG. *Columbia Univ.*

2:00 Z35 **625.30** Assessing cognitive flexibility in the social home-cage. T. J. BURTON*; A. SAWATARI. *The Univ. of Sydney, The Univ. of Sydney.*

POSTER

626. Learning and Memory: Hippocampal Circuits

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 Z36 **626.01** ΔFosB regulation of hippocampal physiology and learning. A. L. EAGLE*; P. A. GAJEWSKI; M. YANG; P. J. KENNEDY; H. WANG; A. J. ROBISON. *Michigan State Univ., Michigan State Univ., UCLA.*

2:00 Z37 **626.02** Epigenetic regulation of the FosB gene in hippocampus. P. A. GAJEWSKI*; A. L. EAGLE; E. A. HELLER; I. MAZE; A. J. ROBISON. *Michigan State Univ., Michigan State Univ., Mount Sinai Sch. of Med., Mount Sinai Sch. of Med.*

3:00 Z38 **626.03** Hippocampal Arc protein expression in male C57BL/6J mice is exploration dependent in the novel object recognition task. D. A. CINALLI*, JR; S. J. COHEN; R. W. STACKMAN, Jr. *Florida Atlantic Univ., Florida Atlantic Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 Z39 **626.04** Involvement of hippocampal diaschisis in mediating stroke-induced hippocampal hypofunction and memory deficits. G. RABILLER*; Y. NISHIJIMA; J. HE; X. LEINEKUGEL; V. ANDJELKOVIC; A. HAMBUCKEN; B. BONTEMPI; J. LIU. *The Inst. of Neurodegenerative Dis., Neurolog. Surgery, UC San Francisco and SFVAMC.*

1:00 Z40 **626.05** The design and application of a flexible parylene-based multi-electrode array for *in vivo* recording from the rat hippocampus. H. XU*; M. HSIAO; D. SONG; T. W. BERGER. *USC.*

2:00 Z41 **626.06** Consequences of altered dendritic arborization in hippocampal networks -linking molecular signaling and neuronal morphology. J. MAURER; D. MAUCERI; H. BADING; A. DRAGUHN; M. BOTH*. *Heidelberg Univ., Heidelberg Univ.*

3:00 Z42 **626.07** ● Disruption of the hippocampal gabaergic system in the fgf14–/– mouse model. T. K. ALSHAMMARI*; M. A. ALSHAMMARI; E. HOXHA; M. N. NENOV; M. CAMBIAGHI; A. MARCINNO; T. F. JAMES; J. LI; B. SACCHETTI; H. Y. MELTZER; F. TEMPIA; F. LAEZZA. *Univ. of Texas Med. Br., King Saud Univ., Univ. of Torino, Univ. of Texas Med. Br., Northwestern Univ. Feinberg Sch. of Med.*

4:00 Z43 **626.08** Hippocampal and perirhinal cortex BOLD responses to familiar and novel odors in awake rats: Just a start.. C. CHWIESKO*; B. BOULAT; D. WIEDERMANN; M. HOEHN; M. SAUVAGE. *Ruhr-Universität Bochum, Max-Planck- Inst. for neurological research.*

1:00 Z44 **626.09** Spatiotemporal synaptic input pattern sensitivity of persistent firing in hippocampal CA1 neuron model. K. TAKADA*; K. TATENO. *Kyushu Inst. of Technol., Kyushu Inst. of Technol.*

2:00 AA1 **626.10** The dendrites of granule cell layer neurons are the primary injury sites in the “Brain Diabetes” rat. A. S. SHINGO*; R. F. MERVIS; T. KANABAYASHI; S. KITO; T. KOABAYASHI; T. MURASE. *Okinaka Mem. Inst. For Med. Res., Univ. of South Florida Col. of Med., Biopathology Inst., ShonanFujisawa Tokushu-kai Hosp.*

3:00 AA2 **626.11** Tau-dependent loss of cell cycle repressors in a mouse model of Alzheimer’s disease. S. IPPATI*. *UNSW.*

4:00 AA3 **626.12** Neuroprotective effects of placenta-derived mesenchymal stem cell for rat model of dementia. J. LEE*; D. JEONG; W. CHANG; J. CHANG. *Dept. of Neurosurg, Brain Korea 21 Plus Project Me, Dept. of Neurosurgery, Yonsei Univ. Col. of Med.*

1:00 AA4 **626.13** Neuronal responses to conspecifics and social facial touch in the ventral hippocampus. R. P. RAO*; M. BRECHT. *Humboldt Univ. of Berlin.*

2:00 AA5 **626.14** Neurodevelopmental insult by neonatal ventral hippocampal lesion alters periodic activity of dorsal hippocampal neurons in adult rats. H. KAO*; A. A. FENTON. *New York Univ.*

3:00 AA6 **626.15** Cognition-sensitive discoordination of local field potentials and place cell spike-field coupling in Fmr1 knockout mice. A. A. FENTON*; F. SPARKS; Z. TALBOT; B. RADWAN; D. DVORAK. *New York Univ., SUNY, Downstate Med. Ctr., New York Univ., SUNY Downstate Med. Ctr.*

4:00 AA7 **626.16** Coordinated slow and fast gamma oscillations predict recollection success and failures in wild-type and Fragile X Syndrome model mice. D. DVORAK*; B. RADWAN; A. A. FENTON. *New York Univ.*

1:00 AA8 **626.17** Do cortical head-direction cells preserve both directional tuning and temporally-coordinated neural discharge during cognitive control of information in two spatial frames? E. PARK*; S. KEELEY; A. A. FENTON. *New York Univ.*

2:00 AA9 **626.18** Hyperactivity, short- and long-term memory impairments during otherwise intact cognitive control in the gestational day 17 methylazoxymethanol acetate (MAM) rat model of neurodevelopmental insult. K. C. O’REILLY*; A. A. FENTON. *New York Univ.*

3:00 AA10 **626.19** Neural discoordination within the hippocampus place cell network during cognitive control in the Fragile X mouse model of Autism Spectrum Disorder. F. T. SPARKS*; Z. N. TALBOT; D. DVORAK; A. A. FENTON. *New York Univ., New York Univ. Sch. of Med., SUNY Downstate Med. Ctr.*

4:00 AA11 **626.20** Characterization of the postnatal loss of mef2c selectively in the brain. M. MAHGOUB*; M. ADACHI; P. LIN; L. M. MONTEGGIA. *UTSW Med. Ctr. At Dallas, Astellas.*

1:00 AA12 **626.21** Spatial representation of place cells of APPswe/PSEN1dE9 Alzheimer mouse model. M. PARK*; H. RHIM; J. CHO. *Korea Inst. of Sci. and Technol., Korea Univ. of Sci. and Technol.*

2:00 AA13 **626.22** Learning and memory induced CA1 activity *in vivo* and its deficiency in a mouse model of Alzheimer’s disease. S. POLL*; L. C. SCHMID; J. STEFFEN; D. EHNINGER; M. FUHRMANN. *German Ctr. for Neurodegenerative Dis. (DZNE).*

3:00 AA14 **626.23** Hippocampal inactivation impairs object-in-place associations and delay-dependent recognition in rhesus monkeys. A. R. WEISS*; J. BACHEVALIER; M. C. ALVARADO. *Emory University/YNPRC.*

4:00 AA15 **626.24** ▲ Morphological analysis of CA1-CA3 neurons of dorsal hippocampus and evaluating the learning and spatial memory process in adult Taiep rats. F. MEDINA; A. B. SILVA*. *Benemérita Univ. Autónoma de Puebla, Benemérita Univ. Autónoma de Puebla.*

1:00 AA16 **626.25** A computational model of the ‘what’ and ‘where’ of episodic memory. A. BICANSKI*; N. BURGESS. *Inst. of Cognitive Neurosci.*

2:00 AA17 **626.26** Learning-related single-neuron activity changes in the nidopallium caudolaterale and hippocampus. S. STAROSTA*; O. GUNTURKUN; M. C. STÜTTGEN. *Ruhr Univ., Inst. of Pathophysiology & Focus Program Translational Neurosci.*

3:00 AA18 **626.27** Mesopontine median raphe regulates hippocampal ripple oscillation and memory consolidation. D. V. WANG*; S. IKEMOTO. *NIH.*

4:00 AA19 **626.28** Upregulation of estrogen receptor alpha restores spatial memory and NMDA receptor synaptic function. L. A. BEAN*; A. KUMAR; A. RANI; M. GUIDI; P. CRUZ; T. C. FOSTER. *Univ. of Florida, Univ. of Florida, Noldus Information Technol.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

1:00 AA20 **626.29** Genetic activation of stathmin impairs adult hippocampal neurogenesis, spinogenesis, and NMDA receptor-dependent memory. S. UCHIDA*; I. CHÉVERE-TORRES; C. HEVI; Y. WATANABE; G. P. SHUMYATSKY. *Yamaguchi Univ., Rutgers Univ., CREST-JST.*

POSTER

627. Learning and Memory: Gamma and Theta Activity

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 AA21 **627.01** Enhancing prefrontal neuron excitability enables the associative learning over an extended temporal delay. X. YU*; J. VOLLE; H. SUN; S. E. TANNINEN; N. INSEL; K. TAKEHARA-NISHIUCHI. *Univ. of Toronto, Univ. of Toronto.*

2:00 AA22 **627.02** Parvalbumin cells in prefrontal cortex support working memory by modulating theta and gamma power. M. U. WOLOSZYNOWSKA-FRASER*; B. CROUCH; B. PLATT; P. WULFF; G. RIEDEL. *Univ. of Aberdeen, Christian Albrechts Univ.*

3:00 AA23 **627.03** A respiration-coupled rhythm in the rat hippocampus independent of theta and cortical slow oscillations. A. B. TORT*; A. L. V. LOCKMANN; R. N. LEÃO; D. A. LAPLAGNE. *Brain Institute, UFRN.*

4:00 AA24 **627.04** Respiration-related rhythm and theta oscillations are both present in the olfactory bulb of awake mice. V. NGUYEN CHI*; C. MÜLLER; T. WOLFENSTETTER; W. ZHONG; Y. YANOVSKY; A. DRAGUHN; A. B. L. TORT; J. BRANKACK. *Univ. of Heidelberg, Med. Fac., Heidelberg Univ., Brain Inst.*

1:00 AA25 **627.05** Early learning comparison of CA1 and CA3 single-unit response profiles during theta-contingent eyeblink conditioning. J. J. CICCHESE*; S. D. BERRY. *Miami Univ.*

2:00 AA26 **627.06** Local field potential activity in the monkey hippocampus during virtual navigation and contextual learning. R. A. GULLI*; G. DOUCET; B. CORRIGAN; S. WILLIAMS; J. MARTINEZ-TRUJILLO. *Western Univ., McGill Univ., Robarts Res. Institute, Western Univ., McGill Univ., McGill Univ.*

3:00 AA27 **627.07** Reward expectancy modulates CA1 oscillatory dynamics and hippocampal-ventral striatal coupling. C. S. LANSINK*; G. T. MEIJER; J. V. LANKELMA; M. VINCK; J. C. JACKSON; C. M. A. PENNARTZ. *Univ. of Amsterdam, Univ. of Amsterdam, Yale Univ. Sch. of Med.*

4:00 AA28 **627.08** The crosstalk within theta rhythms between secondary auditory cortex and basolateral amygdala is essential during remote fear memory recall. M. CAMBIAGHI*; A. GROSSO; E. LIKTHTIK; R. MAZZIOTTI; G. CONCINA; A. RENNA; T. SACCO; J. A. GORDON; B. SACCHETTI. *Univ. degli Studi di Torino, Columbia Univ., CNR - Inst. of Neurosci., Univ. degli Studi di Torino.*

1:00 AA29 **627.09** ● Effects of α7 nicotinic acetylcholine receptor activation on neurophysiological markers of cognition. M. HAJOS*; C. KELLEY; D. NAGY; L. LEVENTHAL; M. STOILJKOVIC. *Yale Univ. Sch. of Med., FORUM Pharmaceuticals.*

2:00 AA30 **627.10** Hippocampal theta phase -contingent memory retrieval across trace eyeblink conditioning in rabbits. T. WASELIUS*; M. PENTTONEN; J. WIKGREN; M. S. NOKIA. *Univ. of Jyvaskyla, Finland.*

3:00 AA31 **627.11** Functional ultrasound imaging of a spatial navigation task in mobile rat. A. BERGEL; L. SIEU; E. TIRAN; T. DEFFIEUX; M. PERNOT; J. GENNISSON; A. C. BONNOT*; M. TANTER; I. COHEN. *INSERM U1130, CNRS 8246, UPMC, Ecole Doctorale Frontières du Vivant (FdV), Programme Bettencourt, Inst. de recherche translationnelle en Neurosciences ICM-A-IHU, Inst. Langevin, ESPCI ParisTech, PSL Res. university, CNRS UMR7587, INSERM U979, UPMC, Paris VI.*

4:00 AA32 **627.12** Laminar, sub-regional, areal and behavioral contributions to variability in the hippocampal speed-theta relationship. L. L. LONG*; J. J. CHROBAK. *Univ. of Connecticut.*

1:00 AA33 **627.13** Effects of adenosine A2A receptor activation on chronic intermittent hypoxia-induced changes in sleep architecture and synaptic plasticity in rat. L. DU*; L. XU; Y. KE; W. YUNG. *The Chinese Univ. of Hong Kong.*

2:00 AA34 **627.14** Theta-rhythmic drive between medial septum and hippocampus during theta and non-theta states: A Granger causality analysis. D. KANG*; M. DING; I. TOPCHIY; L. SHIFFLETT; B. KOCSIS. *J. Crayton Pruitt Family Dept. of Biomed. Engineering, Univ. of Florida, BIDMC, Harvard Med. Sch.*

3:00 AA35 **627.15** Activity of supramammillary nucleus neurons during theta and slow oscillations in anaesthetized rats. A. SLEZIA*; A. F. VICENTE; A. KASZAS; A. GHESTEM; P. P. QUILICHINI; C. BERNARD. *Aix-Marseille Univ., Inserm.*

POSTER

628. Learning and Memory: Aging III

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 AA36 **628.01** Altered synaptic and molecular mechanisms of memory formation in ageing. W. AZIZ*; I. KRAEV; K. MIZUNO; F. A. VIGIL; K. KASBI; S. ROTHE; A. AHMAD; M. STEWART; K. P. GIESE. *Kings Col. London, The Open Univ.*

2:00 AA37 **628.02** Region specific expression of aging and cognitive genes. L. IANOV*; A. RANI; A. KUMAR; B. S. BEAS; J. L. BIZON; T. C. FOSTER. *McKnight Brain Institute, Univ. of Florida.*

3:00 AA38 **628.03** The role of mTORC2 in age-associated memory loss. J. L. JOHNSON*; W. HUANG; G. ROMAN; M. COSTA-MATTIOLI. *Baylor Col. of Med., Baylor Col. of Med., Univ. of Houston.*

4:00 AA39 **628.04** Dorsal but not ventral hippocampal volume predicts cognitive performance in age. J. M. REICHEL*; B. T. BEDENK; M. CZISCH; C. T. WOTJAK. *Albert Einstein Col. of Med., Max Planck Inst. of Psychiatry.*

1:00 AA40 **628.05** Morphological changes in synapses during memory formation in ageing. I. V. KRAEV*; A. KIRBY; W. AZIZ; K. MIZUNO; H. A. DAVIES; P. GIESE; M. G. STEWART. *The Open Univ., King's Col. London.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 AA41 **628.06** Epigenetic modification of PKMζ rescues aging-related cognitive impairment. C. CHEN; S. MENG; Y. XUE; C. SUN; J. DENG; N. CHEN; Y. BAO; L. CAO; W. ZHU; Y. LUO*; J. SHI; W. SONG; L. LU. *Inst. of Mental Health, Peking Univ. Sixth Hospital, and Key Lab. of Mental Hlth., Natl. Inst. on Drug Dependence and Beijing Key laboratory of Drug dependence Research, Peking Univ., Dept. of Biochem. and Mol. Biology, Peking Univ. Hlth. Sci. Ctr., Med. Sch. of Hunan Normal Univ., Brain Res. Centre, Departments of Med. and Psychiatry, Univ. of British Columbia, Peking-Tsinghua Ctr. for Life Sci. and PKU-IDG/ McGovern Inst. for Brain Research, Peking Univ.*

3:00 AA42 **628.07** Gross anatomical correlates of age-related spatial-cognitive decline in homing pigeons (Columba livia). V. J. COPPOLA*; A. J. SCHREIBER; N. KANYOK; V. P. BINGMAN. *Bowling Green State Univ.*

4:00 AA43 **628.08** Behavioral deficits in a mouse model of Alzheimer's disease are mediated by alterations in immediate early gene expression. J. PERUSINI*; S. CAJIGAS; S. C. LIM; C. A. DENNY. *Columbia University-NYSPI.*

1:00 AA44 **628.09** ▲ Aged-dependent effect of histone deacetylase inhibition on synaptic plasticity and memory. G. RAMIREZ MEJIA*; P. MORENO-CASTILLA; L. RODRIGUEZ-DURAN; M. ESCOBAR; F. BERMUDEZ RATTONI. *IFC - UNAM, Univ. Autónoma Metropolitana, Facultad de Psicologia - UNAM.*

2:00 AA45 **628.10** A biophysical, minimal model to explore age-related changes in ion channel gene expression and excitability in CA1 pyramidal cells. E. MCKIERNAN*; M. A. HERRERA-VALDEZ; D. F. MARRONE. *Wilfrid Laurier Univ., Natl. Autonomous Univ. of Mexico.*

3:00 AA46 **628.11** Dissociation of memory and long-term potentiation performance in aged mice. W. YANG*; X. ZHOU; T. MA. *Dept. Gerontology, Wake Forest Baptist Med. Ctr., Dept. of physiology and pharmacology, Wake Forest Baptist Med. Ctr., Dept. of Neurobio. and Anat. , Wake Forest Baptist Med. Ctr.*

4:00 AA47 **628.12** Phosphorylated tyrosine 1472 NR2B levels are elevated in select synaptic compartments in the hippocampus of young and aging rats but only partially reduced by the presence of estrogen in aging rats. T. A. MILNER*; S. MAZID; M. DODOS; R. PURI; W. G. M. JANSSEN; J. H. MORRISON; B. S. MCEWEN; E. M. WATERS. *Weill Cornell Med. Col., The Rockefeller Univ., Mount Sinai Sch. of Med.*

1:00 AA48 **628.13** The glutamate modulator riluzole alters hippocampal gene expression patterns associated with age-related cognitive decline. J. KOGAN*; J. D. GRAY; R. L. DAVIDSON; B. S. MCEWEN; A. C. PEREIRA. *The Rockefeller Univ.*

2:00 BB1 **628.14** Conserved memory and hippocampal glutamate in a growth hormone receptor knockout model of extended life span. K. N. HASCUP*; P. J. FITZGERALD; S. O. BRODERICK; S. RANDALL; J. J. KOPCHICK; A. BARTKE; E. R. HASCUP. *Southern Illinois Univ. Sch. of Med., Ohio Univ., Southern Illinois Univ. Sch. of Med., Southern Illinois Univ. Sch. of Med.*

3:00 BB2 **628.15** Hippocampal glutamate and cognition is altered in normal aging C57BL/6J mice. S. O. BRODERICK*; K. N. HASCUP; E. R. HASCUP. *SIU Sch. of Med., SIU Sch. of Med., SIU Sch. of Med.*

4:00 BB3 **628.16** A docosahexaenoic acid diet prevented cognitive decline in mice knock-in for human apolipoprotein e epsilon 4 allele. M. PLOURDE*; R. CHOUINARD-WATKINS; M. VANDAL; F. CALON. *Res. Ctr. On Aging, Univ. de Sherbrooke, Univ. Laval.*

1:00 BB4 **628.17** ● Dietary supplementation with quercetin rejuvenates cognitive performance independent of adult hippocampal neurogenesis. K. DU*; S. D. PEREZ; P. T. KOZAK; A. A. SHERIFF; J. H. BAXTER; R. VAZHAPPILLY; J. S. RHODES. *Univ. of Illinois At Urbana Champaign, Univ. of Illinois at Urbana Champaign, Abbott Nutr.*

2:00 BB5 **628.18** Dietary supplements with quercetin and micronutrients enhanced performance in active avoidance task in aged mice but no synergistic effect was found with voluntary wheel running. P. PARK*; T. K. BHATTACHARYA; C. RENDEIRO; B. D. PENCE; A. J. COBERT; J. L. RYTYCH; Y. SUN; K. W. KELLEY; R. W. JOHNSON; R. H. MCCUSKER; J. H. BAXTER; J. A. WOODS; J. S. RHODES. *Univ. of Illinois At Urbana-Champaign, Abbott Nutr.*

3:00 BB6 **628.19** Cognition and behaviour impairment: Is oxidative stress the earlier change commanding senescence? Lessons from senescence accelerated P8 mice. M. PALLÀS*; M. PUIGDORIOL-ILLAMOLA; V. PALOMERA-AVALOS; A. CAMINS; C. GRIÑÁN-FERRÉ. *Univ. De Barcelona, Univ. de Barcelona.*

4:00 BB7 **628.20** Epigenetic changes mediated by miRNAs as a cause of rapidly aging and cognitive impairments in female SAMP8 mouse model. C. G. FERRE*, JR; V. PALOMERA-AVALOS, Jr.; D. PUIGDORIOL-ILLAMOLA, Jr.; D. ORTUÑO-SAHAGÚN, Sr.; A. CAMINS, Sr.; M. PALLÀS, Sr. *Univ. of Barcelona, Univ. de Guadalajara.*

1:00 BB8 **628.21** Reframing role of resveratrol in neurodegeneration: Oxidative stress, mitochondrial function and Wnt-pathway modulation in the brain of metabolically stressed SAMP8 mice. V. PALOMERA*; C. GRIÑÁN-FERRÉ, Jr; A. CAMINS; N. AMARO-UMBERT; M. PUIGDORIOL-ILLAMOLA; C. SANFELIU; A. M. CANUDAS; M. PALLÀS. *Univ. Guadalajara, Univ. de Barcelona, Idibabs-CSIC.*

2:00 BB9 **628.22** The ability of concord grape juice to reverse a latent learning impairment during aging in rats depends on the duration of the supplement. E. M. STOUFFER*; P. N. MICHENER; L. C. WILSON. *Bloomsburg Univ. of PA.*

3:00 BB10 **628.23** Centella asiatica alters mitochondrial and antioxidant response pathways and improves neuronal health and cognitive function. N. E. GRAY*; C. J. HARRIS; J. A. ZWEIG; M. HUNTER; J. F. QUINN; A. SOUMYANATH. *Oregon Hlth. and Sci. Univ., VA Portland Hlth. Care Syst.*

4:00 BB11 **628.24** Dietary curcumin and caloric restriction improve functional outcomes in late middle age and early senescent C57BL/6 male and female mice. M. SARKER*; S. F. FRANKS; N. SUMIEN; M. J. FORSTER. *UNT Hlth. Sci. Ctr., Univ. of North Texas Hlth. Sci. Ctr., Univ. of North Texas Hlth. Sci. Ctr.*

Tues. PM

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

629. Invertebrate Learning and Memory I

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 BB12 **629.01** Electrophysiological changes underlying lapses in memory consolidation. M. CROSSLEY; F. LORENZETTI; P. R. BENJAMIN*; M. O'SHEA; I. KEMENES. *Univ. Sussex.*

2:00 BB13 **629.02** The role of microRNAs in memory consolidation in Lymnaea. G. KEMENES*; D. VAVOULIS; S. KORNEEV. *Sussex Neuroscience, Sch. of Life Sciences, Univ. of Sussex, Univ. of Bristol.*

3:00 BB14 **629.03** Activity of serotonergic neurons underlies choice between retrieval-induced extinction or reconsolidation of memory. P. M. BALABAN*; M. ROSHCHIN; A. ZUZINA; A. TIMOSHENKO; A. Y. MALYSHEV. *Inst. Higher Nervous Activity & Neurophysiol. RAS.*

4:00 BB15 **629.04** Endovanilloid-mediated synaptic potentiation contributes to behavioral sensitization. Y. WANG*; B. D. BURRELL. *Univ. of South Dakota.*

1:00 BB16 **629.05** ▲ Effect of sleep deprivation on crayfish olfactory thresholds. J. SALAZAR-VÁSQUEZ; K. MENDOZA-ANGELES; G. ROLDAN; J. HERNANDEZ-FALCON*. *Univ. Nacional Autónoma de México, Univ. Natl. Autonoma Mexico.*

2:00 BB17 **629.06** Serotonin may convey positive and octopamine negative reinforcement signals to the learning network of Octopus vulgaris. T. SHOMRAT; B. HOCHNER*. *Dept of Neurobiology, Hebrew Univ., The Ruppin Academic Center, Sch. of Marine Sci.*

3:00 BB18 **629.07** Short- and long-term plasticity in homologous learning and memory networks of octopus and cuttlefish are highly variable in their molecular but not computational properties or connectivity. A. TURCHETTI-MAIA*; N. STERN-MENTCH; N. NESHER; B. HOCHNER; T. SHOMRAT. *Dept. Neurobiology, Silberman Inst. of Life Sciences, The Hebrew Univ., The Ruppin Academic Center, Sch. of Marine Sci.*

4:00 BB19 **629.08** Inferring functional connectivity of neural circuits using information theoretic causality measures. Z. CAI*; B. AAZHANG; J. H. BYRNE. *Rice Univ., The Univ. of Texas Med. Sch. at Houston.*

1:00 BB20 **629.09** Voltage-sensitive dye (VSD) recordings reveal the network dynamics that underlie fictive behaviors. C. NEVEU*; D. A. BAXTER; J. H. BYRNE. *The Univ. of Texas Med. Sch. At Houston.*

2:00 BB21 **629.10** Role of p38 MAPK and ERK activation in doxorubicin mediated attenuation of 5-HT-induced long-term synaptic facilitation. H. LAKSHMINARASIMHAN*; Y. ZHANG; L. J. CLEARY; J. H. BYRNE. *The Univ. of Texas Med. Sch. At Houston.*

3:00 BB22 **629.11** The role of growth factor signaling in post-transcriptional RNA regulation during long-term memory formation in *Aplysia.* A. M. KOPEC*; A. A. MIRISIS; T. J. CAREW. *New York Univ.*

4:00 BB23 **629.12** Synaptic generation of a retrograde intracellular signal requires tyrosine kinase and mitogen-activated protein kinase activity in *Aplysia.* S. STOUGH*; A. KOPEC; T. CAREW. *Augustana Col., New York Univ.*

1:00 BB24 **629.13** Non-nuclear ERK/MAPK signaling is temporally correlated with the opening of training windows for long-term memory formation in *Aplysia.* A. CHEN*; T. J. CAREW; G. T. PHILIPS. *New York Univ.*

2:00 BB25 **629.14** Molecular and cellular mechanisms of endogenous neurotrophic factor signaling during long-term synaptic plasticity in *Aplysia californica.* A. ALEXANDRESCU*; T. J. CAREW. *New York Univ., New York Univ.*

3:00 BB26 **629.15** *Aplysia* neurotrophin acts as a presynaptic autocrine, anterograde, and retrograde signal during the transition from short-term facilitation to intermediate-term facilitation produced by 5HT at *Aplysia* sensory-motor neuron synapses. I. JIN*; H. UDO; E. R. KANDEL; R. D. HAWKINS. *Columbia Univ., Kyushu Univ.*

4:00 BB27 **629.16** Role of the nitric oxide signaling cascade in the induction of the behavioral changes produced by aversive stimuli in *Aplysia.* J. FARRUGGELLA; J. A. ACEBO; M. L. WAINWRIGHT*; R. MOZZACHIODI. *Texas A&M Univ. - Corpus Christi.*

1:00 BB28 **629.17** ▲ Persistent transcriptional correlates of long-term sensitization training in Aplyisa californica. J. PATEL; C. CONTE; S. HERDEGEN; S. KAMAL; I. E. CALIN-JAGEMAN; R. CALIN-JAGEMAN*. *Dominican Univ., Dominican Univ.*

2:00 BB29 **629.18** Classical conditioning in the *Aplysia* siphon-withdrawal preparation involves RNA synthesis and DNA methylation. R. D. HAWKINS*; I. ANTONOV; A. NAGARAJ; Q. YANG. *Columbia Univ., New York State Psychiatric Inst.*

3:00 BB30 **629.19** Impact of chronic sleep deprivation on short-term and long-term associative memory in *Aplysia californica.* H. KRISHNAN*; E. NOAKES; L. C. LYONS. *Florida State Univ.*

4:00 BB31 **629.20** The role of stimulus novelty in attention in the invertebrate *Aplysia.* K. PEARCE; M. E. KIMBROUGH; X. ZHAO; T. S. DEHGHANI; E. J. MOC; D. ENAYATI; S. S. BENTLEY; V. KONG; T. W. ABRAMS*. *Univ. of Maryland Med. Sch.*

1:00 BB32 **629.21** Prolonged food deprivation alters the co-expression of sensitization and food suppression induced by aversive stimuli in *Aplysia.* K. A. MAC LEOD; M. L. WAINWRIGHT; R. MOZZACHIODI*. *Texas A&M Univ. - Corpus Christi.*

POSTER

630. Invertebrate Learning and Memory II

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 BB33 **630.01** Identifying neuronal dynamics of short-term associative memory in *C. elegans.* A. SYLVAIN*; M. RAHIMI; G. STEIN; C. T. MURPHY. *Princeton Univ., Princeton Univ., Princeton Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 BB34 **630.02** UNC-43T, a putative ortholog of CaMKII$_\gamma$, appears necessary for associative conditioning in *C. elegans.* J. K. ROSE*; L. K. ALFILER; M. R. PRIBIC. *Western Washington Univ.*

3:00 BB35 **630.03** Irn-2/scd-2 mutations dissociate sensory integration and associative learning in *C. elegans.* G. S. WOLFE*; V. TONG; D. VAN DER KOOY. *Univ. of Toronto, Univ. of Toronto.*

4:00 BB36 **630.04** ▲ Flexibility of the learned antenna projection response to natural contexts in Periplaneta americana. M. POMAVILLE*; D. D. LENT; A. LAWLESS. *California State University, Fresno, California State University, Fresno.*

1:00 BB37 **630.05** Crucial evidence of the prediction error theory in a behavioral pharmacological study. K. TERAO*; Y. MATSUMOTO; M. MIZUNAMI. *Hokkaido Univ., Japan Society for the Promotion of Sci., Tokyo Med. and Dent. Univ., Hokkaido Univ.*

2:00 BB38 **630.06** Are the neural circuits controlling the temporal structure of spontaneous actions involved in operant self-learning? C. ROHRSEN; B. BREMBS*. *Univ. Regensburg.*

3:00 BB39 **630.07** Forgetting is mediated by a dopamine→Scribble→Rac signaling pathway. I. CERVANTES-SANDOVAL*; M. CHAKRABORTY; R. L. DAVIS. *The Scripps Res. Inst.*

4:00 BB40 **630.08** Investigating the histone deacetylase 4 (hdac4) memory pathway: Interaction with ankyrin2? S. SCHWARTZ*; H. L. FITZSIMONS. *Massey Univ.*

1:00 BB41 **630.09** Electric-Shock Sensory in *Drosophila* central brain. W. HU*; Y. PENG; F. ZHANG; L. WANG; Y. ZHONG. *Tsinghua Univ.*

2:00 BB42 **630.10** A glycine receptor subunit homologue, AVR-14, alters short-term memory in an interstimulus interval-dependant manner. C. H. RANKIN*; T. MCDIARMID. *Univ. British Columbia.*

3:00 BB43 **630.11** Dopamine receptor activities regulate learning-dependent odor preference changes in *Drosophila.* S. NAGANOS*; M. SAITOE. *Tokyo Metropolitan Inst. of Med. Sci.*

4:00 BB44 **630.12** Octopamine in Sexual Behavior. A. I. FERNANDEZ*; J. LIM; J. JAMES; P. EVANS; K. HAN. *Univ. of Texas At El Paso, The Babraham Inst.*

1:00 BB45 **630.13** The roles of dopamine in sexual behavior. J. LIM*; J. JAMES; J. JOHNSON; K. HAN. *Univ. of Texas At El Paso.*

2:00 BB46 **630.14** Hormonal convergence in regulation of *Drosophila* courtship memory. S. LEE*; N. KARAPETIANS; C. RIVERA-PEREZ; T. WIJESEKERA; F. G. NORIEGA; B. DAUWALDER; M. E. ADAMS. *Univ. of California, Riverside, Florida Intl. Univ., Univ. of Houston, Univ. of California, Riverside.*

3:00 BB47 **630.15** ▲ The role of beta adrenergic-like octopamine receptor Octβ1R in learning and memory. J. B. SABANDAL*; P. EVANS; K. HAN. *The Univ. of Texas At El Paso, The Babraham Inst.*

4:00 BB48 **630.16** Serotonergic modulation of goal-directed habituation during exploration in *Drosophila.* G. W. ROMAN*; S. ZHANG; M. DE LA FLOR; L. CHEN; G. GUNARATNE; H. DIERICK. *Univ. Houston, Baylor Col. of Med.*

POSTER

631. Cortical and Hippocampal Circuits: Spatial Navigation

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 BB49 **631.01** Mechanisms contributing to experience-dependent changes in the structure of hippocampal replay sequences. T. FENG*; D. SILVA; D. FOSTER. *Johns Hopkins Univ. SOM.*

2:00 BB50 **631.02** Auto-associative dynamics in the generation of sequences of hippocampal place cells. B. E. PFEIFFER*; D. J. FOSTER. *Univ. of Texas Southwestern Med. Ctr., Johns Hopkins Univ. Sch. of Med.*

3:00 BB51 **631.03** Hippocampal area CA3 is necessary for the induction of sharp-wave ripples in area CA1. H. DAVOUDI*; D. J. FOSTER. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

4:00 BB52 **631.04** Rate of reverse, but not forward hippocampal replay increases with a relative increase in reward. E. AMBROSE*; B. E. AMBROSE; D. J. FOSTER. *Johns Hopkins Univ., Univ. of Texas Southwestern Med. Ctr.*

1:00 BB53 **631.05** Seeing the woods for the geometries: The hippocampus is necessary for configural but not elemental cue use in spatial orientation. I. N. JOHNSTON*. *Sch. of Psychology.*

2:00 BB54 **631.06** Assessing movement similarity in the morris water task. D. BARTO*; D. HAMILTON. *UNM.*

3:00 BB55 **631.07** The roles of the medial and lateral divisions of the entorhinal cortex in visual scene memory. S. YOO*; I. LEE. *Seoul Natl. Univ.*

4:00 BB56 **631.08** The perirhinal cortex, but not the postrhinal cortex, is required for visual, but not tactile, object recognition memory. J. AHN*; I. LEE. *Seoul Natl. Univ.*

1:00 BB57 **631.09** Synchronization between hippocampus and prefrontal cortex during social behavior. Y. ZHAN*; Y. TANG. *Shenzhen Inst. of Advanced Technol.*

2:00 BB58 **631.10** Dorsal hippocampus is unnecessary for the expression of either a place or response spatial strategy in the rodent submerged T-maze. J. S. ASEM*; P. C. HOLLAND. *Johns Hopkins Univ.*

3:00 BB59 **631.11** Role of visual cues in idiothetic and allocentric strategies for spatial position coding in hippocampus. J. KOENIG*; M. NOUGUIER; G. MARTI; F. MICHON; J. EPSZTEIN. *INMED/INSERM, U901.*

4:00 BB60 **631.12** Ventral hippocampus inactivation impairs goal-directed spatial navigation in obstacle-laden environments. M. CONTRERAS; T. PELC; M. LLOFRIU; A. WEITZENFELD; J. FELLOUS*. *Univ. of Arizona, Univ. of South Florida.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 BB61 **631.13** Prefrontal-hippocampal theta coherence, sharp wave ripples, and bursts of cortical unit activity underlie choices and encoding in the radial arm maze. M. V. MYROSHNYCHENKO*; C. LAPISH. *Indiana Univ., Indiana Univ. Purdue Univ. Indianapolis.*

2:00 BB62 **631.14** Egocentric learning deficits in rats produced by developmental manganese overexposure or adulthood 6-hydroxydopamine toxicity are exacerbated in combination. R. A. BAILEY*; A. GUTIERREZ; R. M. AMOS-KROOHS; C. V. VORHEES; M. T. WILLIAMS. *Cincinnati Children's Hosp. Med. Ctr.*

3:00 BB63 **631.15** Contextually mediated zenk expression in the hippocampal formation of the male brown-headed cowbird (Molothrus ater). S. L. GRELLA*; M. F. GUIGUENO; D. J. WHITE; D. F. SHERRY; D. F. MARRONE. *Wilfrid Laurier Univ., Univ. of Western Ontario, Univ. of Western Ontario, McKnight Brain Institute, Univ. of Arizona.*

4:00 BB64 **631.16** Neural representations of others' place-related information. T. DANJO*; S. FUJISAWA. *Riken Brain Sci. Inst.*

1:00 BB65 **631.17** Functional reorganization of the medial temporal lobe memory system following neonatal hippocampal damage in monkeys. P. LAVENEX*; L. CHAREYRON; L. STICKLEY; P. BANTA LAVENEX; D. G. AMARAL. *Univ. of Lausanne, Univ. of Fribourg, Univ. of California at Davis.*

2:00 BB66 **631.18** Validation of the clockmaze as a robust task for hippocampus-related spatial cognition in mice. P. T. HUERTA*; R. SANKOWSKI; E. GIBSON; C. REY; K. J. CLUNE; T. S. HUERTA; S. ROBBIATI. *The Feinstein Inst. For Med. Res.*

3:00 BB67 **631.19** The vestibular contribution to self-motion perception in the behaving mouse. E. BRACEY*; B. PICHLER; C. V. ROUSSEAU; T. MARGRIE. *Neurophysiol., Sainsbury Wellcome Ctr., Natl. Inst. for Med. Res.*

4:00 BB68 **631.20** Expanded firing patterns of grid cells in rats climbing on a wall. G. CASALI*; K. J. JEFFERY. *Inst. of Behavioural Neuroscience, UCL.*

1:00 BB69 **631.21** Selective silencing of medial prefrontal parvalbumin interneurons induces cognitive schizophrenia-like symptoms in mice. G. RIEDEL*; M. WOLOSZYNOWSKA-FRASER; B. PLATT; B. CROUCH. *Univ. Aberdeen, Univ. of Aberdeen.*

2:00 BB70 **631.22** Flexible spatial learning in rats requires intact hippocampal-prefrontal circuits. P. AVIGAN*; K. SEIP-CAMMACK; M. L. SHAPIRO. *Mount Sinai Sch. of Med.*

3:00 BB71 **631.23** Neural representation of space and objects in rat anterior claustrum. M. M. JANKOWSKI*; S. M. O'MARA. *Trinity Col. Inst. of Neuroscience, Trinity Col. Dublin.*

4:00 BB72 **631.24** ▲ Effects of environmental enrichment on anxiety, sensory gating, sociability, and spatial learning in mice. T. R. HENDERSHOTT; S. LANGELLA; P. S. MCGUINNESS; A. C. BASU*. *Col. of the Holy Cross.*

1:00 BB73 **631.25** Effects of different levels of environmental enrichment on reversing cholinergic deficits in rats. E. P. WIERTELAK*; D. PALMER; J. MEYERS-MANOR. *Macalester Col., Macalester Col.*

2:00 BB74 **631.26** Neural correlates within nucleus prepositus and paragigantocellularis during active and passive movement. J. R. DUMONT*; S. S. WINTER; K. B. FARNES; J. S. TAUBE. *Dartmouth Col.*

POSTER

632. Cortical and Hippocampal Circuits: Spatial Navigation

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 BB75 **632.01** Synchronicity without rhythmicity in the hippocampal formation of behaving bats. T. ELIAV*; M. GEVA-SAGIV; A. FINKELSTEIN; M. YARTSEV; A. RUBIN; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci., Hebrew Univ. of Jerusalem.*

2:00 BB76 **632.02** 3D grid cells and border cells in flying bats. G. GINOSAR*; A. FINKELSTEIN; A. RUBIN; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci.*

3:00 BB77 **632.03** Vectorial representation of goals in the hippocampus of bats. A. SAREL*; A. FINKELSTEIN; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sceince.*

4:00 BB78 **632.04** Positional firing properties of the dorsal subiculum in the navigating rat. J. M. OLSON*; J. K. LI; E. L. TAO; K. TONGPRASEARTH; D. A. NITZ. *UCSD.*

1:00 BB79 **632.05** Route versus environment centered properties in the spatial firing patterns of retrosplenial cortex neurons. A. S. ALEXANDER*; D. A. NITZ. *UCSD.*

2:00 BB80 **632.06** A subset of CA1 and subiculum neurons selectively encode rewarded locations. J. L. GAUTHIER*; D. W. TANK. *Princeton Univ.*

3:00 BB81 **632.07** Landmark-control over place cells varies within the CA1 pyramidal layer. T. GEILLER*; J. CHOI; S. ROYER. *KIST, Korea Univ.*

4:00 BB82 **632.08** Impact of cues on optogenetically identified Mossy cells of the dentate gyrus. S. KIM*; D. JUNG; S. ROYER. *Korea Inst. of Sci. and Technol., Korea Advanced Inst. of Sci. and Technol.*

1:00 BB83 **632.09** How generalizable is rodent hippocampal function across other species? Preliminary hippocampal recordings in the ferret (Mustela putorius). S. L. S. DUNN; J. BIZLEY; D. A. BENDOR*. *Univ. Col. London, Univ. Col. London.*

2:00 BB84 **632.10** Inter-spike intervals reveal functionally distinct cell populations in the medial entorhinal cortex. P. LATUSKE*; O. TOADER; K. ALLEN. *Dept. of Clin. Neurobio. At the Med. Facu, Dept. of Clin. Neurobiology, Med. Fac. of Heidelberg Univ. and German Cancer Res. Ctr. (DKFZ).*

3:00 BB85 **632.11** Transgenic activation of MEC LII results in similar changes in the firing properties of CA1 place cells across distinct environments. C. LYKKEN*; N. ESTRADA; B. KANTER; C. KENTROS. *Univ. of Oregon, Norwegian Univ. of Sci. and Technol.*

4:00 BB86 **632.12** Transgenic activation of medial entorhinal cortex similarly alters spatial firing properties of CA3 and CA1 place cells. B. R. KANTER*; T. P. NGUYEN; C. G. KENTROS. *Univ. of Oregon, Norwegian Univ. of Sci. and Technol.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 BB87 **632.13** ● Long-term refinement of CA1 ensemble representations of associations between reward and spatial location. E. OTTO HAMEL*; M. C. LARKIN; L. J. KITCH; M. J. SCHNITZER. *Stanford Univ.*

2:00 BB88 **632.14** Presence of significant directional modulation in rodent hippocampus, in real and virtual environments. Z. M. AGHAJAN*; L. ACHARYA; J. MOORE; C. VUONG; M. R. MEHTA. *UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA.*

3:00 BB89 **632.15** Causal role of visual cues in determining hippocampal directional responses at single neuron and ensemble level. L. ACHARYA*; Z. M. AGHAJAN; C. VUONG; J. J. MOORE; M. MEHTA. *UCLA, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*

4:00 BB90 **632.16** Hippocampal neural dynamics in a virtual Morris water maze navigation task. J. J. MOORE*; L. ACHARYA; J. D. CUSHMAN; C. VUONG; Z. M. AGHAJAN; B. POPENEY; M. R. MEHTA. *W. M. Keck Ctr. For Neurophysics, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA.*

1:00 BB91 **632.17** Motivation and validation of an EEG-based estimate of hippocampal replay content. C. M. ALTIMUS*; R. E. AMBROSE; B. E. PFEIFFER; J. B. HARROLD; D. J. FOSTER. *Johns Hopkins Sch. of Med., Johns Hopkins Univ., Univ. of Texas Southwestern Med. Ctr.*

2:00 BB92 **632.18** Local and distant input controlling excitation in layer II of the medial entorhinal cortex. R. PINNA*; E. C. FUCHS; A. NEITZ; S. MELZER; O. TOADER; A. CAPUTI; H. MONYER. *Deutsches Krebsforschung Zentrum (DKFZ), Dept. of Clin. Neurobio. of the Med. Fac. of Heidelberg Univ. and German Cancer Res. Ctr. (DKFZ), Howard Hughes Med. Institute, Harvard Med. Sch.*

3:00 BB93 **632.19** Intact allocentric spatial memory during virtual navigation in rhesus monkeys with bilateral hippocampal lesions. B. M. STEEMERS*; R. SAUNDERS; M. MISHKIN; C. DOELLER; S. GUDERIAN. *Natl. Inst. of Hlth., Donders Institute, Radboud Univ.*

4:00 CC1 **632.20** Quantifying and exploring the emergence of the late members of the active set of hippocampal place cells in novel environments. S. E. FOX*; J. BARRY; K. BOLDING. *Downstate Med. Ctr., Univ. of Vermont Col. of Med., Duke Univ. Sch. of Med.*

1:00 CC2 **632.21** Visual cue-related activity of MEC cells during navigation in virtual reality. A. A. KINKHABWALA*; D. ARONOV; D. W. TANK. *Princeton Univ., Princeton Neurosci. Inst.*

2:00 CC3 **632.22** Direct input from MECIII to hippocampal CA1 is crucial for long-range "active" replay during wake but not during sleep. J. YAMAMOTO*; J. SUH; S. TONEGAWA. *MIT.*

3:00 CC4 **632.23** Contribution of cerebellar Parallel Fiber-Purkinje Cell LTP to hippocampal spatial map stability. J. M. LEFORT*; F. JARLIER; C. I. DE ZEEUW; L. RONDI-REIG; C. ROCHEFORT. *CNRS-ESPCI, Sorbonne Universités, UPMC Univ. Paris 06, UMR-S 8246, INSERM, UMR-S 1130, CNRS, UMR 8246, Eramus MC, Netherlands Inst. for Neuroscience, Royal Acad. of Sci. (KNAW).*

POSTER

633. Functions of Prefrontal, Striatal, and Thalamic Circuits

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 CC5 **633.01** ● Assessing reward learning in macaques using a probabilistic selection task. C. GLAVIS-BLOOM*; D. ALBERATI; T. BALLARD; M. CROXALL; K. TAYLOR; D. UMBRICHT; T. L. WALLACE. *SRI Intl., F. Hoffmann-La Roche Ltd, Lafayette Instrument Co.*

2:00 CC6 **633.02** Sign-tracking to a lever-CS in autoshaping is due to instrumental learning. M. NAEEM*; N. WHITE. *McGill Univ., McGill Univ.*

3:00 CC7 **633.03** Behavioral flexibility in reversal learning of "what" vs "where": A Bayesian approach. R. BARTOLO*; L. KENNERLY; V. D. COSTA; B. B. AVERBECK. *NIMH/NIH.*

4:00 CC8 **633.04** Measuring and manipulating corticostriatal functional neural circuitry in the socially monogamous prairie vole. E. A. AMADEI*; Z. V. JOHNSON; J. KWON; A. C. SHPINER; V. SARAVANAN; W. D. MAYS; L. J. YOUNG; R. C. LIU. *Georgia Tech. and Emory Univ., Emory Univ., Emory Univ., Emory Univ., Emory Univ., Emory Univ.*

1:00 CC9 **633.05** Post-extinction inactivation of the dorsolateral striatum blocks extinction of egocentric response learning, but not place learning, in the plus-maze. J. GOODMAN*; M. G. PACKARD. *Texas A&M Univ.*

2:00 CC10 **633.06** The contribution of dorsomedial and dorsolateral striatum during different phases of Morris water maze training. T. POOTERS*; I. GANTOIS; B. VERMAERCKE; R. D'HOOGE. *Lab. of Biol. Psychology, Sonenberg Lab.*

3:00 CC11 **633.07** Context-dependent action selection mediated by specific temporal coordination between prefrontal cortex and striatum. S. ARDID*; J. SHERFEY; M. M. MCCARTHY; N. KOPELL. *Boston Univ.*

4:00 CC12 **633.08** Modeling neuronal diversity and fast network oscillations in rat anterior cingulate cortex (ACC). J. S. SHERFEY*; N. E. ADAMS; F. E. N. LEBEAU; N. KOPELL. *Boston University, Sch. of Med., Boston Univ., Newcastle University, Med. Sch.*

1:00 CC13 **633.09** Balancing consistency with flexibility in anterior cingulate cortex (ACC) action representations. J. K. SEAMANS*; L. MA; D. DURSTEWITZ; J. HYMAN. *UBC, Western Univ., Central Inst. of Mental Health, Heidelberg Univ., Univ. of Nevada Las Vegas.*

2:00 CC14 **633.10** Coding of emotional valence in the rodent Anterior Cingulate Cortex (ACC). B. CARACHEO*; J. GREWAL; J. SEAMANS. *UBC Brain Res. Ctr., Univ. of British Columbia, Univ. of British Columbia.*

3:00 CC15 **633.11** Unilateral naris occlusion effectively abolishes gamma oscillations in the rat ventral striatum. J. E. CARMICHAEL*; J. M. GMAZ; M. A. A. VAN DER MEER. *Dartmouth Col., Univ. of Waterloo.*

4:00 CC16 **633.12** Environmental enrichment and striatal perineuronal net dissolution exert opposing behavioural effects in the puzzle-box task. A. M. O'CONNOR*; C. A. LEAMEY; A. SAWATARI. *Bosch Inst.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 CC17 **633.13** Withdrawn.

2:00 CC18 **633.14** Role of the dorsolateral and dorsomedial striatum in reward learning. A. LIPKIN*; H. BERGSTROM; C. PICKENS; C. PINARD; A. HOLMES. *Natl. Inst. On Alcohol Abuse and Alcoholism.*

3:00 CC19 **633.15** Optogenetic stimulation of striatum during an active visual change detection task in mice. L. WANG*; K. RANGARAJAN; R. J. KRAUZLIS. *Natl. Eye Inst.*

4:00 CC20 **633.16** Representation of learned action sequences in the dorsolateral corticostriatal circuit. N. MARTIROS*; A. M. GRAYBIEL. *MIT, MIT.*

1:00 CC21 **633.17** Devascularization of sensorimotor cortex produces persistent deficits in a string pulling task. A. BLACKWELL*; W. L. WIDDICK; J. L. CHEATWOOD; D. G. WALLACE. *Northern Illinois Univ., Southern Illinois Univ.*

2:00 CC22 **633.18** Neglecting to protect: Unilateral DCS lesions disrupt food protection behavior organization. P. A. BLANKENSHIP*; C. N. WOLF; J. L. CHEATWOOD; D. G. WALLACE. *Northern Illinois Univ., Southern Illinois Univ.*

3:00 CC23 **633.19** Frontal cortical circuits for the control of consummatory behavior. L. M. AMARANTE*; M. S. CAETANO; M. M. CLASEN; K. SWANSON; B. WETZELL; M. LAUBACH. *American Univ., UFABC.*

4:00 CC24 **633.20** Modulation of cellular activity by effort and reward in Anterior Cingulate Cortex. S. HASHEMNIAYETORSHIZI*; K. D. SESSFORD; A. J. GRUBER; D. R. EUSTON. *Univ. of Lethbridge, Univ. of Calgary.*

1:00 CC25 **633.21** Neuronal signals related to self-agency in forontopolar cortex. K. TODA*; B. N. AFRICK; G. K. ADAMS; J. GARIEPY; M. L. PLATT. *Duke Univ., Duke Univ., Yerkes Primate Res. Center, Emory Univ.*

2:00 CC26 **633.22** Neural dynamics between the basal forebrain and the dorsolateral prefrontal cortex during wakefulness, sleep and anesthesia. Y. ISHIZAWA*; C. MARTINEZ-RUBIO; A. PAULK; J. EICHENLAUB; S. S. CASH; E. ESKANDAR. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

3:00 CC27 **633.23** Alteration of NREM Sleep in mice with increased low-threshold burst firing in thalamocortical neurons. J. HONG*; J. LEE; G. HA; H. SHIN; E. CHEONG. *Yonsei Univ., Inst. for Basic Sci.*

4:00 CC28 **633.24** Two interneuron subtypes in laterodorsal tegmentum antagonistically control innate fear. Y. HONGBIN*; J. YANG; S. HAO; W. XI; X. HE; L. ZHU; H. LOU; Y. YU; F. XU; S. DUAN; H. WANG. *Zhejiang Univ., Inst. of Physics and Mathematics.*

1:00 CC29 **633.25** Voluntary movement gates vestibular sensory coding in the ventral posterior lateral thalamus. A. DALE*; K. E. CULLEN. *McGill Univ.*

POSTER

634. Optogenetic and Chemogenetic Manipulation of Motivation and Emotion

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 CC30 **634.01** Loss of prefrontal control of a brainstem defensive behavior circuit following social defeat. L. MARRONE*; T. FRANKLIN; B. SILVA; C. GROSS. *EMBL.*

2:00 CC31 **634.02** Glutamatergic lateral hypothalamic inputs to VTA produce avoidance and suppress dopamine release in the nucleus accumbens. E. NIEH*; C. M. VANDER WEELE; K. N. PRESBREY; K. M. TYE. *Picower Inst. For Learning and Memory, MIT.*

3:00 CC32 **634.03** Observing and controlling projection-defined medial prefrontal cortex subpopulations in reward and aversion. C. M. VANDER WEELE*; R. WICHMANN; I. C. ESPINEL; E. H. S. SCHUT; E. IZADMEHR; C. E. WILDES; K. M. TYE. *MIT, Radboud Univ.*

4:00 CC33 **634.04** Retrieval of positive and negative associations produces opposite responses in BLA neurons projecting to NAc and CeM. A. BEYELER*; P. NAMBURI; C. SIMONNET; G. F. GLOBER; G. F. CONYERS; R. LUCK; C. P. WILDES; K. M. TYE. *Picower Insitute for Learning and Memory, MIT.*

1:00 CC34 **634.05** Amygdala-prefrontal interactions during the competition of fear- and reward-related memories. A. BURGOS-ROBLES*; M. ANAHTAR; K. M. TYE. *MIT.*

2:00 CC35 **634.06** Subregions of the thalamic paraventricular nucleus make distinct contributions to emotional behavior. J. R. BARSON*; S. F. LEIBOWITZ. *Drexel Univ. Col. of Med., The Rockefeller Univ.*

3:00 CC36 **634.07** Differential activity in afferents to the paraventricular nucleus of the thalamus in response to incentive and predictive stimuli. J. L. HAIGHT*; S. B. FLAGEL. *Univ. of Michigan, Univ. of Michigan, Mol. and Behavioral Neurosci. Inst.*

4:00 CC37 **634.08** Chemogenetic manipulations of prelimbic inputs to the paraventricular nucleus of the thalamus alter sign- and goal-tracking behavior. I. RIVERO-COVELO*; J. L. HAIGHT; K. M. FRASER; B. N. KUHN; S. M. FERGUSON; S. B. FLAGEL. *Univ. of Michigan, Seattle Children's Res. Inst.*

1:00 CC38 **634.09** A population of parvalbumin-expressing (pv+) neurons in the lateral habenula promotes anxiety. L. POZZI*; I. PALLUCCHI; I. LAZARIDIS; I. POLLAK DOROCIC; K. MELETIS. *Karolinska Institutet.*

2:00 CC39 **634.10** Ventral striatal projections to the lateral habenula modulate aggression reward. S. A. GOLDEN*; M. HESHMATI; D. J. CHRISTOFFEL; K. GUISE; M. L. PFAU; H. ALEYASIN; G. E. HODES; M. FLANIGAN; D. BREGMAN; L. KHIBNIK; J. TAI; N. REBUSI; N. REBUSI; B. KRAWITZ; D. CHAUDHURY; J. J. WALSH; Y. SHAHAM; M. HAN; M. L. SHAPIRO; S. J. RUSSO. *Natl. Inst. On Drug Ause, Icahn Sch. of Med. at Mount Sinai, Univ. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 CC40 **634.11** ▲ Pyramidal cells-OLMα2 interneurons network underlies theta activity and anxiety related behavior in the ventral hippocampus. S. MIKULOVIC; C. RESTREPO*; S. PUPE; A. TORT; K. KULLANDER; R. LEÃO. *Uppsala Univ., Uppsala university, 2. Brain Institute, Federal Univ. of Rio Grande do Norte, Uppsala university.*

4:00 CC41 **634.12** ● Dissection of social neurocircuitry using chemogenetics and pharmaco-MRI. M. BENEKAREDDY*; M. SAXE; M. VON KIENLIN; B. KUENNECKE; A. GHOSH. *F. Hoffmann-La Roche.*

1:00 CC42 **634.13** Characterizing behavior-suppressing circuits: Optogenetic stimulation of basal amygdala terminals in nucleus accumbens shell suppresses cue-evoked seeking and drinking. Z. MILLAN*; P. H. JANAK. *Johns Hopkins Univ.*

2:00 CC43 **634.14** Are the auditory pathways converging in the Lateral Amygdala required for the expression of Pavlovian defense reactions? L. DIAZ-MATAIX*; N. BENABDALLAH; S. A. SERKA; V. DOYERE; J. E. LEDOUX. *New York Univ., Paris-Saclay Inst. of Neurosci. (Neuro-PSI), Nathan Kline Inst.*

3:00 CC44 **634.15** An extended amygdala to ventral tegmental area circuit underlies ethanol-seeking behavior in mice. M. M. PINA*; C. L. CUNNINGHAM. *OHSU, OHSU.*

4:00 CC45 **634.16** Mesointerpeduncular circuitry and dopaminergic control of affective state. S. R. DEGROOT*; R. ZHAO-SHEA; P. GARDNER; A. TAPPER. *UMASS Med. Sch.*

1:00 CC46 **634.17** Structure and function of circuits that provide input to dopaminergic and serotonergic neurons. I. POLLAK DOROCIC*; D. FÜRTH; Y. XUAN; K. MELETIS. *Karolinska Institutet.*

2:00 CC47 **634.18** Different outputs of lateral hypothalamus GABAergic neurons control appetitive and consummatory behaviors. C. ZHU; S. SONG*; Y. XIONG; W. SHI. *Tsinghua Univ.*

3:00 CC48 **634.19** Activation of D2-expressing neurons in the nucleus accumbens enhances motivation. C. SOARES-CUNHA*; B. COIMBRA; A. DAVID-PEREIRA; S. BORGES; L. PINTO; A. J. RODRIGUES; N. SOUSA. *Life and Hlth. Sci. Res. Inst. (ICVS), ICVS/3B's - PT Government Associate Lab.*

4:00 CC49 **634.20** A mesoaccumbal glutamatergic population that induces aversion when stimulated optogenetically. S. PUPE*; J. PEDERSEN; T. VIERECKEL; C. J. A. SMITH-ANTILLA; M. LAGERSTRÖM; Å. WALLÉN-MACKENZIE. *Uppsala Univ.*

1:00 CC50 **634.21** Selective activation of glutamatergic inputs from the pedunculopontine tegmental nucleus to the ventral tegmental area is reinforcing. H. WANG*; A. CHAKRABORTI; S. ZHANG; J. QI; S. STEIDL; M. MORALES. *IRP/NIDA/NIH, Loyola Univ. Chicago.*

2:00 CC51 **634.22** Monosynatic inputs to ventral tegmental area glutamate neurons. C. MEJIAS-APONTE*; B. B. GARCIA IGLESIAS; D. J. BARKER; S. ZHANG; M. MORALES. *NIDA-IRP, NIH, Natl. Inst. on Drug Abuse.*

3:00 CC52 **634.23** Brain mapping of neurons with a dual glutamatergic-GABAergic phenotype. D. H. ROOT*; H. WANG; M. MORALES. *Natl. Inst. on Drug Abuse.*

4:00 CC53 **634.24** The lateral habenula receives an unexpected glutamatergic input from the lateral preoptic area. D. J. BARKER*; D. H. ROOT; H. WANG; S. ZHANG; M. MORALES. *Natl. Inst. On Drug Abuse- Intramural Resea, Natl. Inst. on Drug Abuse, Intramural Res. Program.*

1:00 CC54 **634.25** Feeding behavior and reward are differentially induced by optogenetically activating GABAergic lateral hypothalamic projections to VTA at different stimulation frequencies. M. F. BARBANO*; H. WANG; R. WISE; M. MORALES. *Johns Hopkins Univ., NIDA/NIH.*

2:00 CC55 **634.26** Glutamatergic neurons from the ventral tegmental area establish multiple synapses on single parvalbumin-GABAergic interneurons in the nucleus accumbens. S. ZHANG*; J. QI; M. MORALES. *Natl. Inst. of Health, Natl. Inst. on Drug Abuse, IRP.*

3:00 CC56 **634.27** Glutamatergic inputs from the ventral tegmental area to nucleus accumbens drive aversion by acting on GABAergic interneurons. J. QI*; H. WANG; S. ZHANG; D. J. BARKER; M. MORALES. *Natl. Inst. On Drug Abuse.*

4:00 CC57 **634.28** Connectivity of neural microcircuitry in frontal cortex revealed by large-scale network imaging. J. T. TRACHTENBERG*; P. GARCIA-JUNCO CLEMENTE; D. RINGACH; E. TRING. *UCLA.*

POSTER

635. Fear and Anxiety: Molecular and Cellular Mechanisms

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 CC58 **635.01** Epigenetics of social anxiety disorder: Oxytocin receptor gene (OXTR) hypomethylation as a risk marker? C. ZIEGLER*; I. LAEGER; S. STEVENS; K. LESCH; V. AROLT; A. GERLACH; J. DECKERT; P. ZWANZGER; K. DOMSCHKE. *Universityclinic Würzburg, Dept. of Psychiatry and Psychosomatics, Dept. of Clin. Psychology and Psychotherapy, Div. of Mol. Psychiatry, Lab. of Translational Neurosci.*

2:00 CC59 **635.02** Effect of a single episode of footshock on anxiety and neuropeptide precursors in the striatum and extended amygdala. H. WANG*; S. LI; G. J. KIROUAC. *Univ. of Manitoba, Univ. of Manitoba.*

3:00 CC60 **635.03** Effect of progesterone withdrawal on experimental anxiety and hypothalamus - pituitary-adrenal axis in Wistar and Wistar Kyoto in intact female rats. D. M. ISLAS*; P. DE GORTARI; N. VEGA-RIVERA; C. LÓPEZ-RUBALCAVA; G. UGALDE-FUENTES; E. ESTRADA-CAMARENA. *Inst. Nacional De Psiquiatria, Ctr. de Investigación y Estudios Avanzados del IPN.*

4:00 CC61 **635.04** ▲ Role of arginine vasopressin on the amygdaloid modulation of fear and anxiety in the rat. O. R. HERNANDEZ PEREZ*; E. PALOMARES; M. CRESPO RAMIREZ; M. PÉREZ DE LA MORA; K. FUXE. *Univ. Nacionalautonoma De México, Inst. de Fisiología Celular, Karolinska Institutet.*

1:00 CC62 **635.05** Cannabinoid receptor 2 activation and anxiety after repeated social defeat stress. H. J. STRATTON*; D. ALLEN; J. WU. *Barrow Neurolog. Inst., Arizona State Univ., Barrow Neurolog. Inst.*

Tues. PM

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 CC63 **635.06** Sex difference in anxiety-like effects of the THC agonist CP55,940. H. T. FRENCH*; A. KLAMBATSEN; S. JENAB; V. QUINONES-JENAB. *Hunter Col., Hunter Col.*

3:00 CC64 **635.07** Loss of forebrain 5-HT1A receptors results in a depression but not anxiety-like phenotype. A. GARCIA*; S. CANETTA; B. P. GUIARD; A. GARDIER; C. KELLENDONK; A. DRANOVSKY; E. D. LEONARDO. *Columbia University, New York Psychiatry Inst., Faculté Pharmacie, Univ. Paris Sud, Chatenay-Malabry, F-92296, France.*

4:00 CC65 **635.08** ▲ L. reuteri decreases baseline anxiety, alters fear-related memory, and buffers stress-induced anxiety in C57/BL6 mice. R. J. PENDRY*; R. P. MADIGAN; M. D. ERIKSSON; J. D. WHITE; M. J. EIMERBRINK; M. J. CHUMLEY; G. W. BOEHM. *Texas Christian Univ., Texas Christian Univ., Texas Christian Univ.*

1:00 CC66 **635.09** Dissociated linkage between serotonin related gene polymorphisms, fearful voice and face processing, amygdala activity and trait anxiety: A combined fmri and erp study. Y. CHEN*; C. CHEN; C. HU; Y. CHENG. *Natl. Yang-Ming Univ., Natl. Yang-Ming Univ.*

2:00 CC67 **635.10** Conditional knockout of ASIC1a in ASIC4-positive neurons reverses innate fear and anxiety phenotypes in ASIC4 KO. Y. CHIEN*; S. LIN; C. CHEN. *Academia Sinica/Institute of Biomed. Sci., Program in Mol. Medicine, Natl. Yang-Ming Univ. and Academia Sinica, Taiwan Mouse Clin.*

3:00 CC68 **635.11** Corticotropin-releasing factor modulates ultrasonic calling behavior and anxiety in rats. J. O. TAYLOR*; V. GJINI; A. LEMKE; B. G. COOPER. *TCU.*

4:00 CC69 **635.12** Effects of acute pharmacogenetic activation of excitatory cortical neurons on anxiety and depressive-like behavior. S. PATI*; V. SINGH; V. VAIDYA. *Tata Inst. of Fundamental Res.*

1:00 CC70 **635.13** Tau pathology induced anxiety symptoms through impairing vGAT-GABA system in mice hippocampus CA3. X. LI*; J. WANG. *Key Lab. of Ministry of Educ. of Neurolo, Key Lab. of Ministry of Educ. of Neurolog. Dis.*

2:00 CC71 **635.14** ● Chronic administration of exogenous ketone supplementation reduces anxiety in Sprague-Dawley rats. C. ARI*; A. POFF; S. KESL; C. GOLDHAGEN; C. MURDUN; D. D`AGOSTINO. *Hyperbaric Biomed. Res. Laboratory, Univ. of South Florida.*

3:00 CC72 **635.15** Local administration of serotonin in the thalamic reticular nucleus induces anxiety in rat via 5HT1A receptor. M. GARCIA-RAMIREZ*; G. AVILA; B. DEL RIO. *ENCB-IPN.*

4:00 CC73 **635.16** Nucleus accumbens shell, but not core, regulates the expression of discriminative conditioned. P. T. PIANTADOSI*; D. C. M. YEATES; S. B. FLORESCO. *Univ. of British Columbia.*

1:00 CC74 **635.17** Blocking of orexin receptors in the paraventricular thalamus has no effect on conditioned fear but has anxiolytic effects. X. DONG; S. LI; Y. LI; G. J. KIROUAC*. *Col. of Dent., Inst. of Psychology.*

2:00 CC75 **635.18** A neuropeptidergic trace of acute stress in a central fear circuit switches active to passive coping strategies. P. PLIOTA*; F. GRÖSSL; V. BÖHM; J. GRIESSNER; W. HAUBENSAK. *Res. Inst. of Mol. Pathology (IMP), Med. Univ. of Vienna.*

3:00 CC76 **635.19** Effects of CB1 receptor agonism and antagonism on fear and stress responses in adult intact, ovariectomized, and estradiol-treated female rats. J. J. SIMONE*; B. L. MALIVOIRE; C. M. MCCORMICK. *Brock Univ., Brock Univ., Brock Univ.*

4:00 CC77 **635.20** Endocannabinoid receptor CB_2 gene expression in hippocampus reflects modulation of anxious behavior. J. ROBERTSON*; J. K. ACHUA; J. P. SMITH; M. A. PRINCE; T. R. SUMMERS; P. J. RONAN; C. H. SUMMERS. *Univ. of South Dakota, Sanford Sch. of Med., Veterans Affairs Res. Service, Inst. of Possibility, Sanford Hlth., Veterans Affairs Res. Service, Avera Res. Ctr., Sanford Sch. of Med.*

1:00 CC78 **635.21** Understanding the role of serotonin receptor subtypes 7 and 2C (5-HT7/2C) in comorbid pain and depression using novel compounds derived from marine cyanobacteria. N. C. LAX*; C. M. IGNATZ; E. J. HILTON; T. AHMED; K. J. TIDGEWELL; B. J. KOLBER. *Duquesne Univ.*

2:00 DD1 **635.22** Differential contribution of amygdala GABAA receptors in benzodiazepine-induced anxiolysis. Y. GAO*; S. HELDT. *Univ. of Tennessee Hlth. Sci. Ctr.*

3:00 DD2 **635.23** Induction of compulsive checking with quinpirole and 8-OH-DPAT as a perturbation of security motivation: Dose-response profiles. H. SZECHTMAN*; A. DVORKIN-GHEVA; A. H. ALKHATIB; M. C. TUCCI. *McMaster Univ.*

4:00 DD3 **635.24** Blunted HPA-axis response is not sufficient to predict a complex PTSD-like behavioral phenotype. A. I. VAZDARJANOVA*; D. CRETHERS; K. BUNTING; R. NALLOOR; A. OHRI; T. PATTON. *Charlie Norwood VA Med. Ctr., Georgia Regents Univ., Augusta Biomed. Res. Corp., Georgia Regents Univ.*

1:00 DD4 **635.25** Proteomic profile changes in SAPAP3-deficient mice. N. S. CHEREPANOVA*; E. VÁZQUEZ-ROSA; L. N. MCDANIEL; A. A. PIEPER. *Univ. of Iowa, Univ. of Iowa.*

2:00 DD5 **635.26** Epigenetic control of post-natal neuroplasticity in the healthy and stressed brain: Exploring methylation and hydroxymethylation marks. A. MATEUS PINHEIRO*; M. SANTIAGO; P. PATRICIO; J. MARINHO; M. BRANCO; N. ALVES; A. MACHADO SANTOS; M. MORAIS; J. CORREIA; C. ANTUNES; J. BESSA; W. REIK; N. SOUSA; J. MARQUES; 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, Epigenetics Programme, Babraham Institute, Babraham Res. Campus and Ctr. for Trophoblast Research, Univ. of Cambridge.*

3:00 DD6 **635.27** Increased amygdalar glutamate efflux in response to predator stress is modulated by mu opioid receptors. A. C. SHARKO*; J. PARILLA-CARRERO; K. F. KAIGLER; D. LEE; G. HARTSHORN; J. R. FADEL; M. A. WILSON. *Univ. of South Carolina-School of Med.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

636. Motivation and Emotion: Reward II

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 DD7 **636.01** Mid-insula activity to food vs non-food images is positively correlated with hunger susceptibility. J. E. INGEHOLM*; K. BURROWS; A. MARTIN; K. D. HALL; W. K. SIMMONS. *NIH / NIMH, Laureate Inst. for Brain Res., NIH / NIMH, NIMH / NIDDK, The Univ. of Tulsa.*

2:00 DD8 **636.02** ● Effects of increasing adult hippocampal neurogenesis in mice during exposure to chronic stress. L. CULIG; S. LEGENDRE; F. MINIER; G. GRIEBEL*; A. SAHAY; R. HEN; C. BELZUNG. *Univ. François Rabelais, Inserm U930, Sanofi, Ctr. for Regenerative Med., Harvard Stem Cell Inst., Columbia Univ.*

3:00 DD9 **636.03** Role of inhibitory signaling in the nucleus accumbens during reward-seeking behavior. S. E. MORRISON*; V. B. MCGINTY; J. DU HOFFMANN; S. M. NICOLA. *Albert Einstein Col. of Med., Stanford Univ., Icahn Sch. of Med. at Mount Sinai.*

4:00 DD10 **636.04** Dopamine and Pavlovian conditioning: Studies using a new behavioral procedure to investigate conditioned responding elicited by discrete appetitive cues. M. D. VALYEAR*; F. LACROIX; M. COSSETTE; I. TRUJILLO-PISANTY; J. MADDUX; P. SHIZGAL; N. CHAUDHRI. *Concordia Univ., Concordia Univ.*

1:00 DD11 **636.05** Social reward valuation in primate midbrain dopamine cells. A. NORITAKE*; M. ISODA. *Kansai Med. Univ., Kansai Med. Univ.*

2:00 DD12 **636.06** Reward amplifies Simon effect by increasing the automatic activation of spatial code. L. WANG*; K. JIANG; S. LI; X. ZHOU. *Peking Univ.*

3:00 DD13 **636.07** Neural correlates of touch reward. C. TRISCOLI*; G. HÄGGBLAD; H. OLAUSSON; I. CROY; U. SAILER. *Univ. of Gothenburg, Univ. of Gothenburg, Univ. of Linköping, Tech. Univ. of Dresden, Univ. of Gothenburg.*

4:00 DD14 **636.08** Inhibition of adult hippocampal neurogenesis impairs motivation to obtain sucrose, but not food, reward using a progressive ratio responding paradigm. R. KARLSSON; H. A. CAMERON*. *NIH.*

1:00 DD15 **636.09** ▲ Persistence of the effects of binge eating induction with corn oil in rats. W. ZEPEDA-RUIZ*; C. Y. RAMOS-LAZZARI; D. N. VELAZQUEZ-MARTINEZ. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autónoma de México.*

2:00 DD16 **636.10** Motivational state but not reward value or Pavlovian cues affect forelimb motor skill learning in rats. A. C. MOSBERGER*; L. DE CLAUSER; H. KASPER; M. WIECKHORST; M. E. SCHWAB. *Brain Res. Institute, Univ. of Zurich, D-HEST ETH Zurich.*

3:00 DD17 **636.11** Resting-state functional connectivity between interoceptive cortex and reward circuitry modulates ratings of inferred food pleasantness. K. BURROWS*; J. A. AVERY; K. L. KERR; C. MULLINS; J. BODURKA; W. K. SIMMONS. *Laureate Inst. For Brain Res., The Univ. of Tulsa, The Univ. of Oklahoma, The Univ. of Tulsa.*

4:00 DD18 **636.12** Examination of the addictive properities of the anandamide transport inhibitor SBFI26. P. K. THANOS*; B. CLAVIN; J. HAMILTON; J. O'ROURKE; T. MAHER; C. KOUMAS; E. MIAO; A. ELHAGE; G. TENG; M. KACZOCHA; D. DEUTCH. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

1:00 DD19 **636.13** Representation of social hierarchy and fluid value in the primate amygdala. J. MUNUERA*; D. C. SALZMAN. *Columbia Univ., Columbia Univ., New York State Psychiatric Inst.*

2:00 DD20 **636.14** Linking neural patterns and behavioral models of outcome anticipation through representational similarity analysis. D. B. EHRLICH; Z. ZHANG; I. LEVY*. *Yale Sch. of Med., Yale Univ., Yale Univ.*

3:00 DD21 **636.15** Propranolol interferes with the reconsolidation of a sign-tracking, but not a goal-tracking conditioned response. E. S. COGAN*; N. C. TRONSON; T. E. ROBINSON. *Univ. of Michigan.*

4:00 DD22 **636.16** Oxytocin and playfulness in juvenile Fischer 344 and Lewis rats. S. M. SIVIY*; C. C. GARLISS; L. S. MCDOWELL; S. R. ECK; J. A. SOROKA. *Gettysburg Col.*

1:00 DD23 **636.17** Behavioral responding in the discriminative stimulus task is habitual. J. MEFFRE*; H. FIELDS; F. AMBROGGI. *Lab. De Neurosciences Cognitives, Univ. of California, San Francisco.*

2:00 DD24 **636.18** The neural correlates of dynamic goal pursuit. K. M. ANDERSON*; L. M. PATRICK; J. REINEN; A. J. HOLMES. *Yale Univ.*

3:00 DD25 **636.19** Glutamate released into the basolateral amygdala tracks the encoding of reward value and the use of this information to guide reward seeking. M. MALVAEZ*; S. STOLL; A. M. YORITA; L. FENG; H. G. MONBOUQUETTE; K. M. WASSUM. *UCLA, UCLA.*

4:00 DD26 **636.20** Cell-type specific responses to reward and punishment in the dorsal raphe of freely behaving mice. Y. LI*; W. ZHONG; D. WANG; J. ZHOU; F. HU; Z. LIU; Q. FENG; C. JIA; J. ZENG; Q. GUO; M. LUO. *Natl. Inst. of Biol. Sciences, Beijing, Grad. Sch. of Peking Union Med. Col., Sch. of Life Sciences, Tsinghua Univ., PTN Grad. Program, Sch. of Life Sciences, Peking Univ., Britton Chance Ctr. for Biomed. Photonics, Wuhan Natl. Lab. for Optoelectronics-Huazhong Univ. of Sci. and Technol.*

1:00 DD27 **636.21** Pupil dynamics represent human task performance prior to the execution. N. WATANABE*; H. OHIRA. *Nagoya university, Japan Society for Promotion of Sci., Natl. Inst. of Information and Communications Technol., Rutgers Univ.*

• Indicated a real or perceived conflict of interest, see page 160 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

637. Sensory and Motor Systems in Invertebrates

Theme F: Cognition and Behavior

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 DD28 **637.01** The magnetotactic response of *C. elegans* wild-type isolates displays adaptations across different geographical regions. A. G. VIDAL-GADEA*; C. BAINBRIDGE; C. C. BERON; K. WARD; N. GHORASHIAN; S. GOKCE; J. RUSSELL; N. TRUONG; A. PARIKH; O. PAPOULAS; D. BOUTZ; O. E. GADEA; E. MARCOTTE; A. BEN-YAKAR; J. T. PIERCE-SHIMOMURA. *Illinois State Univ., The Univ. of Texas at Austin, The Univ. of Texas at Austin, The Univ. of Texas at Austin.*

2:00 DD29 **637.02** Investigating the neural basis of color-based mate choice preferences in Heliconius butterflies. N. P. BUERKLE*; E. WESTERMAN; M. R. KRONFORST; S. E. PALMER. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

3:00 DD30 **637.03** Local structure of subcellular input retinotopy in an identified visual interneuron. Y. ZHU*; F. GABBIANI. *Baylor Col. of Med.*

4:00 DD31 **637.04** Direction-specific adaptation in neuronal and behavioral responses of cercal sensory system in the cricket. H. OGAWA*; R. MITANI; K. OKA. *Hokkaido Univ., Hokkaido Univ., Keio Univ.*

1:00 DD32 **637.05** Preceding auditory inputs modulate responsiveness and orientation in wind-elicited walking behavior in the cricket. M. FUKUTOMI*; H. OGAWA. *Hokkaido Univ., Hokkaido Univ.*

2:00 DD33 **637.06** ▲ The effect of calling songs with multiple frequencies in the phonotactic response of female cricket Acheta domesticus. J. MENDONCA*; B. NAVIA; J. STOUT. *Andrews Univ.*

3:00 DD34 **637.07** Crickets employ different escape strategies for different aversive stimuli. C. L. CLELAND*; A. M. CHILDS; K. L. REIMAN; R. L. GAITA; A. A. SIEBELS; A. M. SILVA; S. C. HEITSCH; C. R. EBEL; G. P. HOPKINS; J. C. SORIAGALVARRO. *James Madison Univ.*

4:00 DD35 **637.08** ● ▲ The roboscorpion-a method for inducing defensive behavior in giant desert hairy scorpions (hadrurus arizonensis). D. W. MILLER*; G. GAGE. *Michigan State Univ.*

1:00 DD36 **637.09** Neural correlates of spatial attention in the central complex of the praying mantis (Tenodera sinensis). J. P. MARTIN*; A. WOSNITZA; D. BERTSCH; J. W. BOSSE; A. J. POLLACK; R. E. RITZMANN. *Case Western Reserve Univ., Case Western Reserve Univ.*

2:00 DD37 **637.10** Robotic model used to investigate descending commands during hunting of the mantis tenodera sinensis. N. S. SZCZECINSKI*; D. J. BERTSCH; J. P. MARTIN; R. D. QUINN; R. E. RITZMANN. *Case Western Reserve Univ.*

3:00 DD38 **637.11** Change in hunting strategy is mediated by insulin in the praying mantis (Tenodera sinensis). D. J. BERTSCH*; J. P. MARTIN; A. C. CARDWELL; R. E. RITZMANN. *Case Western Reserve Univ., Case Western Reserve Univ.*

4:00 DD39 **637.12** Feeding network excitation drives a progressive reconfiguration of the turn motor network in a predatory sea-slug. J. W. BROWN*; R. GILLETTE. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

1:00 DD40 **637.13** ▲ Correlating kinetics and kinematics of earthworm peristaltic locomotion. E. N. KANU*; K. A. DALTORIO; R. D. QUINN; H. J. CHIEL. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

2:00 DD41 **637.14** Design and actuation of compliant modular worm-like robot. A. KANDHARI*; A. D. HORCHLER; K. A. DALTORIO; K. C. MOSES; R. J. BACHMAN; H. J. CHIEL; R. D. QUINN. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

3:00 DD42 **637.15** Controller design for a soft-bodied peristaltic locomotion robot. K. A. DALTORIO*; A. D. HORCHLER; A. KANDHARI; H. J. CHIEL; R. D. QUINN. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

4:00 DD43 **637.16** Brain-wide attractor dynamics represent the motor command sequence in *C. elegans.* S. KATO*; H. KAPLAN; T. SCHRODEL; M. ZIMMER. *IMP - Res. Inst. of Mol. Pathology.*

1:00 DD44 **637.17** Octopuses hold their head in a fixed horizontal orientation relative to the world likely to simplify the control of locomotion with flexible arms. G. LEVY*; B. HOCHNER. *The Hebrew Univ. of Jerusalem.*

2:00 DD45 **637.18** A surprisingly rich behavioral repertoire for an animal without a brain - the sea anemone Stomphia coccinea. W. N. FROST*; R. T. PORTER; Y. ISMAIL. *The Chicago Med. Sch., Lake Forest Col.*

3:00 DD46 **637.19** ▲ Impacts of elevated environmental manganese on crayfish behavior and neurophysiology. A. C. LEFEVRE; A. PARSONS-WHITE; B. L. ANTONSEN*. *Marshall Univ.*

POSTER

638. Whole-Brain Imaging and Atlasing I

Theme G: Novel Methods and Technology Development

Tue. 1:00 PM – *McCormick Place*, Hall A

1:00 DD47 **638.01** Advances in high-resolution, high-throughput whole mouse brain volume electron microscopy. S. MIKULA*; S. K. MIKULA; M. MUELLER; N. NEEF; J. TISLER; J. TRITTHARDT; W. DENK. *Max-Planck Inst. For Neurobio., Max-Planck Inst. For Med. Res.*

2:00 DD48 **638.02** Human brain anatomy post mortem with a whole-brain 9.4T RF-coil: Towards mesoscale resolution with MRI. A. ROEBROECK*; S. SENGUPTA; M. BASTIANI; S. SCHILLAK; B. TRAMM; M. WAKS; A. LATASTER; A. HERRLER; D. TSE; B. POSER. *Maastricht Univ., Life Services, LLC, Maastricht Univ., Maastricht Univ., Maastricht Univ. Med. Ctr.*

3:00 DD49 **638.03** ▲ Whole brain mapping of the direct inputs and axonal projections of pomc and agrp neurons. D. WANG*. *Natl. Inst. of Biol. Sci.*

4:00 DD50 **638.04** ● The open synaptome project: Toward a microscopy-based platform for single-synapse analysis of diverse populations of cns synapses. S. J. SMITH*; R. BURNS; M. CHEVILLET; E. LEIN; G. SAPIRO; W. SEELEY; J. TRIMMER; J. T. VOGELSTEIN; R. WEINBERG. *Allen Inst. For Brain Sci., Johns Hopkins Univ., Johns Hopkins Univ., Duke Univ., Univ. of California, Univ. of California, Johns Hopkins Univ., Univ. of North Carolina.*

1:00 DD51 **638.05** Computational statistics for whole brain CLARITY analysis using the Open Connectome Project. A. K. SIMHAL*; W. GRAY RONCAL; K. A. LILLANEY; K. KUTTEN; M. I. MILLER; J. T. VOGELSTEIN; R. BURNS; L. YE; R. TOMER; K. DEISSEROTH; G. SAPIRO. *Duke Univ., Applied Physics Lab. of Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Stanford Univ., Duke Univ., Duke Univ.*

2:00 DD52 **638.06** ● Open connectome project: Lowering the barrier to entry big data neuroscience. J. T. VOGELSTEIN*; S. J. SMITH; W. GRAY RONCAL; R. VOGELSTEIN; R. BURNS; K. A. LILLANEY; A. D. BADEN; G. KIAR; P. MANAVALAN. *Johns Hopkins Univ., Allen Inst. for Brain Sci., Johns Hopkins Applied Physics Lab., IARPA.*

3:00 DD53 **638.07** Light sheet microscopy of whole mouse brains with improved clearing and optics. H. DODT*; C. HAHN; K. BECKER; S. SAGHAFI; N. JÄHRLING; M. PENDE; I. SABDYUSHEVA LITSCHAUER; M. WANIS. *Tech. Univ. Vienna, Med. Univ. Vienna.*

4:00 DD54 **638.08** ● HeadLight: A tool chain to analyze & visualize whole mouse brain data. K. UMADEVI VENKATARAJU*; A. NARASIMHAN; P. OSTEN; Y. KIM; J. TARANDA; L. KADIRI. *Cold Spring Harbor Lab., Certerra Inc.*

1:00 DD55 **638.09** A whole-brain atlas of inputs to inhibitory and excitatory neurons in prefrontal cortex. Y. XUAN*; S. ÄHRLUND-RICHTER; D. FÜRTH; K. MELETIS; M. CARLÉN. *Karolinska Institutet.*

2:00 DD56 **638.10** Whole mouse brain fluorescence imaging at synaptic resolution. X. HANQING*; S. ZENG. *Huazhong Univ. of Sicience & Technol.*

3:00 DD57 **638.11** High-speed volumetric imaging of neuronal network activity in awake behaving mice. L. KONG*; M. CUI. *HHMI/Janelia Res. Campus, Howard Hughes Med. Inst.*

4:00 DD58 **638.12** Microglia 3D reconstruction with planar fluorescence microscopy and CLARITY histology. G. M. ARISI*; F. ZANINI. *Univ. Federal De Sao Paulo - UNIFESP.*

1:00 DD59 **638.13** See-through cortex: Flattening technique improves clearing speed and imaging. J. L. BALSOR*; J. M. MATTINA; S. MOLOT-TOKER; K. M. MURPHY. *McMaster Univ., McMaster Univ.*

2:00 DD60 **638.14** This is a brain-wide precision imaging method. H. GONG*; X. LI; A. LI; J. YUAN; Q. LUO. *Wuhan Natl. Lab. For Optoelectronics.*

3:00 DD61 **638.15** Imaging the mouse spinal cord cyto- and chemoarchitecture with CLARITY. G. SENGUL*; H. LIANG; G. PAXINOS. *Ege Univ. Sch. Med., Neurosci. Res. Australia.*

4:00 DD62 **638.16** A platform for brain-wide imaging and reconstruction of individual neurons. M. N. ECONOMO*; N. G. CLACK; L. D. LAVIS; C. R. GERFEN; K. SVOBODA; E. W. MYERS; J. CHANDRASHEKAR. *HHMI/Janelia Res. Campus, Natl. Inst. of Mental Hlth., Max Planck Inst. of Mol. Cell Biol. and Genet.*

• Indicated a real or perceived conflict of interest, see page 160 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
DP06.02	**J. Lujan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Boston Scientific.
452	**B. Sabatini:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); cofounder of Optogenix LLC.
455.02	**C. Lagier-Tourenne:** A. Employment/Salary (full or part-time); Illumina Inc (Husband). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Illumina Inc (Husband). F. Consulting Fees (e.g., advisory boards); Neurimmune.
459	**S.B. Floresco:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Contract and consulting work for Pfizer Inc. Other; Pfizer.
461.02	**D.M. Holtzman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; AstraZeneca, Eli Lilly, C2N Diagnostics. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cure Alzheimer's Fund, JPB Foundation, Tau Consortium. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); C2N Diagnostics, LLC. F. Consulting Fees (e.g., advisory boards); C2N Diagnostics, LLC, AstraZeneca, Genentech, Eli Lilly, Neurophage.
461.10	**S. Estus:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Abbvie.
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463.07	**R. Kayed:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Has patent applications on the compositions and methods related to tau oligomers and antibodies.
463.09	**A. Rachalski:** A. Employment/Salary (full or part-time); AstraZeneca. **A. Bogstedt:** A. Employment/Salary (full or part-time); AstraZeneca. **S. Tai:** A. Employment/Salary (full or part-time); AstraZeneca. **E. Åberg:** A. Employment/Salary (full or part-time); AstraZeneca.
464.07	**S.K. Halder:** A. Employment/Salary (full or part-time); POSTDOCTORAL FELLOW, DEPARTMENT OF PHARMACOLOGY AND THERAPEUTIC INNOVATION, NAGASAKI UNIVERSITY GRADUATE SCHOOL OF BIOMEDICAL SCIENCES, 1-14 BUNKYO-MACHI, NAGASAKI 852-8521, JAPAN. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; This work was supported by Platform for Drug Discovery, Informatics, and Structural Life Science and in part by Grants-in-Aid for Scientific Research (to H.U., B: 13470490 and B: 15390028) on Priority. **H. Ueda:** A. Employment/Salary (full or part-time); PROFESSOR, DEPARTMENT OF PHARMACOLOGY AND THERAPEUTIC INNOVATION, NAGASAKI UNIVERSITY GRADUATE SCHOOL OF BIOMEDICAL SCIENCES, 1-14 BUNKYO-MACHI, NAGASAKI 852-8521, JAPAN. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; This work was supported by Platform for Drug Discovery, Informatics, and Structural Life Science and in part by Grants-in-Aid for Scientific Research (to H.U., B: 13470490 and B: 15390028) on Priority.
465.02	**C. Keysers:** A. Employment/Salary (full or part-time); Faculty of Social and Behavioral Sciences, University of Amsterdam.
465.05	**N.C. Derecki:** A. Employment/Salary (full or part-time); Janssen Research and Development.
468.06	**J.R. Korenberg:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Site PI for Roche Pharma drug study.
471.04	**G. Church:** Other; Please see: http://arep.med.harvard.edu/gmc/tech.html.
474.29	**S. Takatori:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Smoking Research Foundation. **H. Kawasaki:** B. Contracted Research/Research Grant (principal investigator for a drug study,

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477.10	**S.J. Moss:** F. Consulting Fees (e.g., advisory boards); Sage Therapeutics.
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477.23	**S. Bertrand:** A. Employment/Salary (full or part-time); HiQScreen Sàrl. **E. Neveu:** A. Employment/Salary (full or part-time); HiQScreen Sàrl. **D. Bertrand:** A. Employment/Salary (full or part-time); HiQScreen Sàrl.
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482.04	**H. Kim:** A. Employment/Salary (full or part-time); Medifron DBT, Inc.
482.13	**K. Tokuraku:** A. Employment/Salary (full or part-time); full. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; JSPS KAKENHI 25350974, JST A-STEP 14540422.
482.20	**M. Gallagher:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Agenebio.
482.21	**L. Kirby:** F. Consulting Fees (e.g., advisory boards); Amarantus Diagnostics. **P. Jorgensen:** F. Consulting Fees (e.g., advisory boards); Amarantus Diagnostics. **D.A. Lowe:** F. Consulting Fees (e.g., advisory boards); Amarantus Bioscience Holdings, Inc. Other; Industry Funded Trial (Amarantus Bioscience Holdings, Inc.). **C. Bier:** F. Consulting Fees (e.g., advisory boards); Amarantus Diagnostics. **M. Sabbagh:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Banner Sun Health Research Institute.
483.06	**D.M. Holtzman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; AstraZeneca, Eli Lilly, C2N Diagnostics. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cure Alzheimer's fund, JPB Foundation, Tau Consortium. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); C2N Diagnostics LLC. F. Consulting Fees (e.g., advisory boards); AstraZeneca, Genentec, Eli Lilly, Neurophage, C2N Diagnostics.
483.14	**M.L. Poole:** A. Employment/Salary (full or part-time); National Health and Medical Research Council.
483.19	**T.A. Day:** A. Employment/Salary (full or part-time); Eli Lilly & Co. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly & Co. **Z. Yang:** A. Employment/Salary (full or part-time); Eli Lilly & Co. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly & Co. **D.L. Czilli:** A. Employment/Salary (full or part-time); Eli Lilly & Co. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly & Co. **J.M. Wolak:** A. Employment/Salary (full or part-time); Eli Lilly & Co. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly & Co. **Z. Ahmed:** A. Employment/Salary (full or part-time); Eli Lilly & Co. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly & Co. **S. Bose:** A. Employment/Salary (full or part-time); Eli Lilly & Co. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly & Co. **M.J. O'Neill:** A. Employment/Salary (full or part-time); Eli Lilly & Co. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly & Co. **P.C. May:** A. Employment/Salary (full or part-time); Eli Lilly & Co. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Eli Lilly & Co.
484.01	**L.T. Haas:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if

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	those funds come to an institution.; Axerion Therapeutics. **S.V. Salazar:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Axerion Therapeutics. **S.M. Strittmatter:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Axerion Therapeutics.
484.02	**S.V. Salazar:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Axerion Therapeutics. **L.T. Haas:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Axerion Therapeutics. **S.M. Strittmatter:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Axerion Therapeutics.
484.05	**W. Klein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acumen Pharmaceuticals.
484.09	**D.M. Holtzman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; AstraZeneca, Eli Lilly, C2N Diagnostics. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cure Alzheimer's Fund, JPB Foundation, Tau Consortium. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-founder, C2N Diagnostics LLC and ownership interests. F. Consulting Fees (e.g., advisory boards); AstraZeneca, Genentech, Eli Lilly, Neurophage, C2N Diagnostics.
484.17	**G.J. Pagandiaz:** A. Employment/Salary (full or part-time); University of Illinois at Urbana-Champaign, College of Engineering, Department of Bioengineering. **M. Wang:** A. Employment/Salary (full or part-time); University of Illinois at Urbana-Champaign, Department of Animal Sciences. **P. Sengupta:** A. Employment/Salary (full or part-time); University of Illinois at Urbana-Champaign, Beckman Institute for Advanced Science and Technology, Department of Bioengineering.
486.09	**L. Ver Donck:** A. Employment/Salary (full or part-time); Janssen Research and Development, a Division of Janssen Pharmaceutica NV. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Johnson & Johnson. **M. Mahieu:** A. Employment/Salary (full or part-time); Janssen Research and Development, a Division of Janssen Pharmaceutica NV. **K. Van Kolen:** A. Employment/Salary (full or part-time); Janssen Research and Development, a Division of Janssen Pharmaceutica NV. **R. Willems:** A. Employment/Salary (full or part-time); Janssen Research and Development, a Division of Janssen Pharmaceutica NV.
486.17	**E. Schenker:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **G. Rollin-Jego:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **R. Billiras:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **V. Pasteau:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **J.C. Richardson:** A. Employment/Salary (full or part-time); GlaxoSimthKline R&D. **S. Dix:** A. Employment/Salary (full or part-time); Eli Lilly. **C. Czech:** A. Employment/Salary (full or part-time); Roche Pharma and Early Development. **L. Ozmen:** A. Employment/Salary (full or part-time); Roche Pharma Research and Early Development. **A. Gobert:** A. Employment/Salary (full or part-time); Institut de recherches Servier.
486.18	**T.K. Murray:** A. Employment/Salary (full or part-time); Eli Lilly. **M.A. Ward:** A. Employment/Salary (full or part-time); Eli Lilly. **K.G. Phillips:** A. Employment/Salary (full or part-time); Eli Lilly.
487.18	**G. Kim:** A. Employment/Salary (full or part-time); Northwestern University. **S. Vahedi:** A. Employment/Salary (full or part-time); Rosalind Franklin University of Medicine and Science. **S. Weintraub:** A. Employment/Salary (full or part-time); Northwestern University. **E. Bigio:** A. Employment/Salary (full or part-time); Northwestern University. **M. Mesulam:** A. Employment/Salary (full or part-time); Northwestern University. **C. Geula:** A. Employment/Salary (full or part-time); Northwestern University.
488.01	**T. Foltynie:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; "Exenatide as a treatment for Parkinsons disease"- Michael J fox Foundation. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc., St Jude Medical. F. Consulting Fees (e.g., advisory boards); Abbvie Pharmaceuticals. **P. Limousin:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc., St Jude Medical. F. Consulting Fees (e.g., advisory boards); Abbvie Pharmaceuticals. **L. Zrinzo:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc., St Jude Medical. **M.I. Hariz:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc., St Jude Medical. **P. Brown:** F. Consulting Fees (e.g., advisory boards); Medtronic Inc.
488.03	**T. Foltynie:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Michael J Fox Foundation. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc., St Jude Medical. F. Consulting Fees (e.g., advisory boards); Abbvie Pharmaceuticals. **P. Limousin:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc., St Jude Medical. **L. Zrinzo:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc., St Jude Medical. **M.I. Hariz:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc., St Jude Medical. **P. Brown:** F. Consulting Fees (e.g., advisory boards); Medtronic Inc.
488.19	**C.G. van Horne:** Other; Medtronic. **J.E. Quintero:** Other; Medtronic. **G.A. Gerhardt:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Medtronic.
488.20	**J.E. Quintero:** Other; Medtronic. **C.G. van Horne:** Other; Medtronic.
488.22	**J.M. Henderson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intelect Medical, Nevro Corp. F. Consulting Fees (e.g., advisory boards); Intelect Medical, Nevro Corp.
488.23	**J.M. Henderson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent

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	holder, excluding diversified mutual funds); Intelect Medical, Nevro Corp. F. Consulting Fees (e.g., advisory boards); Intelect Medical, Nevro Corp.
489.06	**F. Fang:** Other; National Natural Science Foundation of China (No. 81371417).
489.16	**X.L. Yin:** A. Employment/Salary (full or part-time); The Reddy Laboratory, Garrison Institute on Aging. **M. Manczak:** A. Employment/Salary (full or part-time); The Reddy Laboratory, Garrison Institute on Aging. **Y. Suneetha:** A. Employment/Salary (full or part-time); The Reddy Laboratory, Garrison Institute on Aging1. **R. Kandimalla:** A. Employment/Salary (full or part-time); The Reddy Laboratory, Garrison Institute on Aging. **A. Pandey:** A. Employment/Salary (full or part-time); The Reddy Laboratory, Garrison Institute on Aging. **C. Kuruva:** A. Employment/Salary (full or part-time); The Reddy Laboratory, Garrison Institute on Aging. **P. Reddy:** A. Employment/Salary (full or part-time); The Reddy Laboratory, Garrison Institute on Aging, Departments of Cell Biology & Biochemistry, Neurology, Neuroscience & Pharmacology.
489.18	**A. Louis Sam Titus:** A. Employment/Salary (full or part-time); University of Texas at Dallas. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 R01 NS040408. **S. D'Mello:** A. Employment/Salary (full or part-time); Southern Methodist University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH grant R01 NS040408.
490.05	**D. Brunner:** A. Employment/Salary (full or part-time); PsychoGenics, Inc. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; IRSF. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PsychoGenics, Inc. **P.A. Kabitzke:** A. Employment/Salary (full or part-time); PsychoGenics, Inc. **M. Osborne:** A. Employment/Salary (full or part-time); PsychoGenics, Inc. **A. Barboza:** A. Employment/Salary (full or part-time); PsychoGenics, Inc. **L. Thiede:** A. Employment/Salary (full or part-time); PsychoGenics, Inc. **N. Roberts:** A. Employment/Salary (full or part-time); PsychoGenics, Inc. **T. Hanania:** A. Employment/Salary (full or part-time); PsychoGenics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PsychoGenics, Inc.
490.10	**W.E. DeCoteau:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cerion. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cerion NRX. **A.Y. Estevez:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cerion. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cerion NRX.
491.08	**T.L. Schaefer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Fraxa Research Foundation Grant. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Astra Zeneca.
491.19	**Q. He:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine.
491.24	**G.R. Sterne:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application number: PCT/US2014/072083. **J. Kim:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application number: PCT/US2014/072083. **B. Ye:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application number: PCT/US2014/072083.
493.03	**S. Arcot Desai:** A. Employment/Salary (full or part-time); NeuroPace, Inc. **F.T. Sun:** A. Employment/Salary (full or part-time); NeuroPace, Inc. **T.K. Tcheng:** A. Employment/Salary (full or part-time); NeuroPace, Inc. **M.J. Morrell:** A. Employment/Salary (full or part-time); NeuroPace, Inc.
493.10	**M. Aghagolzadeh:** A. Employment/Salary (full or part-time); Brown University. **F. Gerhard:** A. Employment/Salary (full or part-time); Brown University. **W. Truccolo:** A. Employment/Salary (full or part-time); Brown University.
494.11	**A.D. Sebben:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).
494.12	**P.X. Royero:** A. Employment/Salary (full or part-time); afs.
495.03	**T.K. Berdyyeva:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **L. Aluisio:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **S. Otte:** A. Employment/Salary (full or part-time); Inscopix. **R.M. Wyatt:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **C. Dugovic:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **J. Shelton:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **K. Ghosh:** A. Employment/Salary (full or part-time); Inscopix. **M.J. Schnitzer:** A. Employment/Salary (full or part-time); Inscopix. **T. Lovenberg:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **P. Bonaventure:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC.
495.21	**T. Shih:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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.
496.09	**O. Devinsky:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); GW Pharmaceuticals.
497.04	**C. Ehnert:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **A. Gramowki-Voss:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroProof GmbH. **B.M. Bader:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **O.H. Schroeder:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroProof GmbH.
497.15	**R.S. Hammond:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **G.M. Belfort:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **A.J. Robichaud:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **J.J. Doherty:** A. Employment/Salary (full or part-time); SAGE Therapeutics.
497.24	**J.A. Araujo:** A. Employment/Salary (full or part-time); InterVivo. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ketogen. **J. Caskenette:** A. Employment/Salary (full or part-time); Vivocore. **A. Patrick:** A. Employment/Salary (full or part-time); Vivocore. **W. Lau:** A. Employment/Salary (full or part-time); InterVivo. **L. Balenci:** A. Employment/Salary (full or part-time); Ketogen. **J.S. Andrews:** A. Employment/Salary (full or part-time); Ketogen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds);

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	Ketogen. **S. Annedi:** A. Employment/Salary (full or part-time); Vibrant Pharma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Ketogen. **G.A. Higgins:** A. Employment/Salary (full or part-time); InterVivo. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ketogen.
498.07	**L. Granados:** A. Employment/Salary (full or part-time); Instituto Nacional de Pediatría. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CONACYT.
498.11	**J. Villeda:** Other; Young Research. **J. De jesus-carpanta:** Other; Youn research. **F. Fernandez-Valverde:** Other; Research in neuromuscular diseases. **M. Alonso-vanegas:** Other; Neurosurgeon and Research.
498.13	**C.J. Marcuccilli:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U.S. Provisional Patent ARCD.P0586US.P1 to C.J.M. and A.K.T. **A.K. Tryba:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US Provisional Patent ARCD.P0586US.P1 to C.J.M. and A.K.T.
499.01	**H. Plamondon:** A. Employment/Salary (full or part-time); University of Ottawa. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Natural Sciences and Engineering Research Council of Canada (NSERC).
499.23	**I. Ay:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; electroCore LLC. **B. Simon:** A. Employment/Salary (full or part-time); electroCore LLC.
500.01	**N. Schiff:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Schiff is an inventor of several patents related to neuromodulation therapy. F. Consulting Fees (e.g., advisory boards); Dr. Schiff has served as a consultant for Intelect Medical. **K. Purpura:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Purpura is an inventor of several patents related to neuromodulation therapy. **C.R. Butson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Butson is an inventor of several patents related to neuromodulation therapy. F. Consulting Fees (e.g., advisory boards); Dr. Butson has served as a consultant for Intelect Medical, NeuroPace, Advanced Bionics, St. Jude Medical, Boston Scientific and Functional Neuromodulation.
500.02	**C.R. Butson:** F. Consulting Fees (e.g., advisory boards); St Jude Medical, Boston Scientific, Functional Neuromodulation.
500.09	**E. Simon O'Brien:** A. Employment/Salary (full or part-time); Biocodex. **D. Gauthier:** A. Employment/Salary (full or part-time); Biocodex. **V. Riban:** A. Employment/Salary (full or part-time); Biocodex. **M. Verleye:** A. Employment/Salary (full or part-time); Biocodex.
501.12	**L. Ma:** A. Employment/Salary (full or part-time); Merck & Co. Inc. **Y. Hu:** A. Employment/Salary (full or part-time); Merck & Co. Inc. **C.A. Gretzula:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **S. Niroomand:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **J.J. Renger:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **S.M. Smith:** A. Employment/Salary (full or part-time); Merck &Co., Inc.
502.01	**M.P. Kelly:** F. Consulting Fees (e.g., advisory boards); Deallus, Asubio.
502.07	**L. Scott:** A. Employment/Salary (full or part-time); Pfizer INC. **C. Buzby:** A. Employment/Salary (full or part-time); Pfizer INC. **Z. Hughes:** A. Employment/Salary (full or part-time); Pfizer INC.
502.09	**E. Basurto:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; # 129381.
502.10	**J.C. Ockuly:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis, Inc. **J.D. Beck:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis Inc. **S.A. Hanson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis Inc. **M.L. Hendrickson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis Inc.
503.10	**L. Demetriou:** A. Employment/Salary (full or part-time); Imanova Ltd. **M.B. Wall:** A. Employment/Salary (full or part-time); Imanova Ltd. **J. Howard:** A. Employment/Salary (full or part-time); Imanova Ltd. **E.A. Rabiner:** A. Employment/ Salary (full or part-time); Imanova Ltd.
505.14	**J. Burgdorf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex Inc. F. Consulting Fees (e.g., advisory boards); Naurex Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Naurex Inc. **R.S. Duman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Naurex Inc. F. Consulting Fees (e.g., advisory boards); Naurex Inc.
506.11	**M.D. Berquist:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); National Institute on Drug Abuse Drug Supply Program. **L.E. Baker:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); National Institute on Drug Abuse Drug Supply Program.
508.01	**E.W. Large:** A. Employment/Salary (full or part-time); Circular Logic, LLC.
508.15	**T. Lunner:** A. Employment/Salary (full or part-time); Oticon A/S, Denmark. **C. Graversen:** A. Employment/Salary (full or part-time); Oticon A/S, Denmark.
509.01	**L. Chen:** A. Employment/Salary (full or part-time); Department of Psychology, Peking University.
509.03	**R.H. Gifford:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Advanced Bionics, Cochlear Americas. F. Consulting Fees (e.g., advisory boards); Advanced Bionics, Cochlear Americas, MED-EL.
513.11	**A.A. Alsousi:** A. Employment/Salary (full or part-time); University of Missouri Kansas City. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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-NIDCR #DE021888 (OJI).
514.11	**D. Kyle:** A. Employment/Salary (full or part-time); Purdue Pharma.
514.18	**M. Roux:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Integrated DNA technologies. **M. Lemire:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Integrated DNA technologies. **J. Lainé:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Integrated DNA technologies. **J. Longpré:** C. Other Research Support (receipt of drugs,

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	supplies, equipment or other in-kind support); Integrated DNA technologies. **A.M. Jacobi:** A. Employment/Salary (full or part-time); Integrated DNA technologies. **S.D. Rose:** A. Employment/Salary (full or part-time); Integrated DNA technologies. **M.A. Behlke:** A. Employment/Salary (full or part-time); Integrated DNA technologies. **P. Sarret:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Integrated DNA technologies.
515.24	**P. Chu:** A. Employment/Salary (full or part-time); Queens College, CUNY. **J.C. Brumberg:** A. Employment/Salary (full or part-time); Queens College, CUNY.
516.08	**J. Confais:** A. Employment/Salary (full or part-time); NCNP. **S. Tomatsu:** A. Employment/Salary (full or part-time); NCNP. **K. Seki:** A. Employment/Salary (full or part-time); NCNP.
519.17	**D.A. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); HDT Global. F. Consulting Fees (e.g., advisory boards); HDT Global.
520.23	**C. Hurt:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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. **D. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); HDT Robotics.
522.24	**D. McDonnall:** A. Employment/Salary (full or part-time); Ripple LLC. **C. Smith:** A. Employment/Salary (full or part-time); Ripple LLC. **D. Merrill:** A. Employment/Salary (full or part-time); Ripple LLC. **S. Guillory:** A. Employment/Salary (full or part-time); Ripple LLC. **S. Hiatt:** A. Employment/Salary (full or part-time); Ripple LLC.
523.16	**D.A. Morilak:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 A/S. F. Consulting Fees (e.g., advisory boards); Lundbeck A/S.
523.25	**S. Tilden:** A. Employment/Salary (full or part-time); University of Colorado at Boulder. **J. Amat:** A. Employment/Salary (full or part-time); University of Colorado at Boulder. **S.F. Maier:** A. Employment/Salary (full or part-time); University of Colorado at Boulder. **L. Watkins:** A. Employment/Salary (full or part-time); University of Colorado at Boulder.
524.16	**J. Hirsh:** A. Employment/Salary (full or part-time); University of Virginia. **C. Deppmann:** A. Employment/Salary (full or part-time); University of Virginia.
524.17	**M. Rito:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); PAEP. Other; Posgrado Ciencias Biológicas UNAM.
525.10	**M. Yassa:** A. Employment/Salary (full or part-time); Univ. of California-Irvine. **H. Soya:** A. Employment/Salary (full or part-time); Univ. of Tsukuba.
525.15	**S. Qin:** A. Employment/Salary (full or part-time); Stanford Unversity, NIH, BNU.
530.05	**J.A. McGaughy:** A. Employment/Salary (full or part-time); University of New Hampshire.
531.29	**L. Harsan:** A. Employment/Salary (full or part-time); University of Strasbourg, Faculty of Medecine, ICube.
532.14	**S.L. Parkes:** A. Employment/Salary (full or part-time); AgreenSkills fellowship programme co-funded from the EU's Seventh Framework Programme under grant agreement N° FP7-267196.
534.04	**S. Patel:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); UCRF and PCLB Foundation. **K. King:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); UCRF and PCLB Foundation. **A. Dhuri:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); UCRF and PCLB Foundation. **S. Lee:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); UCRF and PCLB Foundation. **E.J. Markus:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); UCRF and PCLB Foundation.
537.07	**P. O'Donnell:** A. Employment/Salary (full or part-time); Pfizer Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock. **M.G. Caron:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acadia Stock. F. Consulting Fees (e.g., advisory boards); Lundbeck Advisory board, Consultant Omeros Corp.
537.09	**D. Young:** A. Employment/Salary (full or part-time); Pfizer Inc. **R. Kozak:** A. Employment/Salary (full or part-time); Pfizer Inc. **W. Howe:** A. Employment/Salary (full or part-time); Pfizer Inc.
540.02	**R. Kesilman (korn):** A. Employment/Salary (full or part-time); Merck & Co., Inc. **S. Parmentier-Batteur:** A. Employment/Salary (full or part-time); Merck& Co., Inc. **J. J. Renger:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **M.J. Marino:** A. Employment/Salary (full or part-time); Merck & Co., Inc.
540.06	**M.S. Trujillo:** A. Employment/Salary (full or part-time); Alpha MED Scientific. **S. Yasuoka:** A. Employment/Salary (full or part-time); Alpha MED Scientific.
540.09	**D. Hoehl:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Thomas RECORDING GmbH, Giessen, Germany. **U. Thomas:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Thomas RECORDING GmbH, Giessen, Germany.
540.10	**J. Collins:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PI for a NIH Grant 5R43MH104170. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest with Biopico Systems Inc. **H.C. Wong:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CoInvestigator for NIH Grant 5R43MH104170. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest with Biopico Systems Inc. **J. Kohana:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Personnel in NIH Grant 5R43MH104170. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest with Biopico Systems Inc. **M.G. Banuelos:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 5R43MH104170. **P.H. Schwartz:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PI of subaward in NIH Grant 5R43MH104170.
540.17	**D.R. Kipke:** A. Employment/Salary (full or part-time); NeuroNexus Technologies.
541.04	**B.F. Coughlin:** A. Employment/Salary (full or part-time); Massachusetts General Hospital. **B.E. Shanahan:** A.

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	Employment/Salary (full or part-time); Massachusetts General Hospital. **G. Piantoni:** A. Employment/Salary (full or part-time); Massachusetts General Hospital. **S.S. Cash:** A. Employment/Salary (full or part-time); Massachusetts General Hospital. **E.Y. Kimchi:** A. Employment/Salary (full or part-time); Massachusetts General Hospital.
541.05	**T. Sato:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Thync Inc. F. Consulting Fees (e.g., advisory boards); Thync Inc.
541.07	**V. Lakics:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG. **B. Rauprich:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG. **M.H. Bakker:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG. **A. Relo:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG. **H. Mack:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG. **A. Haupt:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG. **W. Braje:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG. **G.C. Terstappen:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG. **K. Drescher:** A. Employment/Salary (full or part-time); AbbVie Deutschland GmbH & Co KG.
541.08	**O. Sahin:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bruker.
541.12	**P.B. Breen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); The Braincubator. **Y. Buskila:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); The Braincubator.
542.15	**K.L. Stachenfeld:** A. Employment/Salary (full or part-time); Princeton University. **J.R. Manning:** A. Employment/Salary (full or part-time); Princeton University. **R. Ranganath:** A. Employment/Salary (full or part-time); Princeton University, Columbia University. **T. Willke:** A. Employment/Salary (full or part-time); Intel. **X. Zhu:** A. Employment/Salary (full or part-time); Intel. **D.M. Blei:** A. Employment/Salary (full or part-time); Columbia University. **K.A. Norman:** A. Employment/Salary (full or part-time); Princeton University.
543.19	**C. Yeon:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 of Medical System Engineering (iMSE) grant in GIST, The GIST-Galtech Research Collaboration Project through a grant provided by GIST in 2015.
543.28	**E. Taralova:** A. Employment/Salary (full or part-time); Columbia University. **R. Yuste:** A. Employment/Salary (full or part-time); Columbia University.
543.29	**L. Seymour:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PersInVitro, LLC. F. Consulting Fees (e.g., advisory boards); Experian.
544.05	**P.S. Pennefather:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Authors are sole owners of gDial Inc that is commercializing software based on these ideas. **W. Suhanic:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Authors are sole owners of gDial Inc that is commercializing software based on these ideas.
544.06	**J. Korich:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **N.J. O'Connor:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **P.J. Angstman:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **B.S. Eastwood:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **M.J. Fay:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **J.O. Blaisdell:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **S.J. Tappan:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **K.E. Day:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **J.R. Glaser:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MBF Bioscience.
549	**S.L. Delp:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Circuit Therapeutics. F. Consulting Fees (e.g., advisory boards); Circuit Therapeutics.
549.05	**E. Bizzi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stocks listed in FYSE. F. Consulting Fees (e.g., advisory boards); Italian Institute of Technology.
555.01	**N.J. Izzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics. **T.M. Spires-Jones:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cognition Therapeutics. **R. Yurko:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **C. Henstridge:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cognition Therapeutics. **C. Silky:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **C. Rehak:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **K. Mozzoni:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **G. Look:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **G. Rishton:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **H. Safferstein:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **S.M. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc.
555.02	**C. Silky:** A. Employment/Salary (full or part-time); Cognition therapeutics. **N.J. Izzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **C. Rehak:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **R. Yurko:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **K. Mozzoni:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **G. Rishton:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **G. Look:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **H. Safferstein:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **S.M. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc.
555.06	**N. Nizzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **S. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc.
555.09	**R.H. Mach:** F. Consulting Fees (e.g., advisory boards); Cognition Therapeutics.
556.12	**M.R. Hayden:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries.
557.10	**C.E. Moussa:** Other; I have an IP to Use TKIs in neurodegenerative diseases.
558.04	**R. Manjeshwar:** A. Employment/Salary (full or part-time); GE Global Research. **J. Qi:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Toshiba. **S. Dolinsky:** A. Employment/Salary (full or part-time); GE Global Research. **M. Rishel:** A. Employment/Salary (full or part-time); GE Global Research. **K. Vaigneur:** A. Employment/Salary (full or part-time); Agile Technologies.
559.01	**N. Froger:** A. Employment/Salary (full or part-time); Mapreg SAS. **V. Fournet:** A. Employment/Salary (full or part-time); Mapreg SAS. **J. Cottin:** A. Employment/Salary (full or part-time); Mareg SAS. **J. Leandri:** A. Employment/Salary (full or part-time); Mapreg SAS. **L. Paresys:** A. Employment/Salary (full or part-time); Mapreg SAS. **I. Villey:** A. Employment/Salary (full or part-time); Mapreg SAS.

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	E.E. Baulieu: A. Employment/Salary (full or part-time); Mapreg SAS. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patents on MAP4343: #WO2004067010 in Europe; #8,034,798 B2 and #12,232,993 in USA.
559.12	**M.A. Riva:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Sunovion. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Eli Lilly; Lundbeck; Otzuka; Sumitomo Dainippon Pharma; Sunovion. F. Consulting Fees (e.g., advisory boards); Eli Lilly; Lundbeck.
560.03	**S. Knecht:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NAVIGATE ESUS.
560.05	**A. Machado:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATI, Enspire and Cardionomics. F. Consulting Fees (e.g., advisory boards); Spinal Modulation and Functional Neurostimulation.
560.06	**A. Machado:** Other; AM has the following conflicts of interest to disclose: ATI, Enspire and Cardionomics (distribution rights from intellectual property), Spinal Modulation and Functional Neurostimulation (consultant).
565.07	**H. Mandal:** A. Employment/Salary (full or part-time); Blackrock Microsystems. **L. Rieth:** A. Employment/Salary (full or part-time); Blackrock Microsystems. **F. Solzbacher:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Blackrock Microsystems. **P. Tathireddy:** A. Employment/Salary (full or part-time); Blackrock Microsystems.
565.08	**A. Petrossians:** A. Employment/Salary (full or part-time); Platinum Group Coatings, LLC (part-time). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Platinum Group Coatings, LLC (co-founder). **J.J. Whalen:** A. Employment/Salary (full or part-time); Platinum Group Coatings, LLC (part-time). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Platinum Group Coatings, LLC (co-founder). **J.D. Weiland:** A. Employment/Salary (full or part-time); University of Southern California. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Platinum Group Coatings, LLC (co-founder).
565.12	**H. Mandal:** A. Employment/Salary (full or part-time); Blackrock Microsystems. **M. Gruenhagen:** A. Employment/Salary (full or part-time); Blackrock Microsystems. **P. Tathireddy:** A. Employment/Salary (full or part-time); Blackrock Microsystems, Applied Biosensors. **L. Rieth:** A. Employment/Salary (full or part-time); Blackrock Microsystems.
566.18	**M. Culjat:** A. Employment/Salary (full or part-time); Hawaii Residency Programs. **J.M. Juraska:** A. Employment/Salary (full or part-time); University of Illinois, Champaign.
568.05	**L.M. Milich:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Eisai.
568.26	**J.W. Fawcett:** F. Consulting Fees (e.g., advisory boards); Acorda Therapeutics and Novartis.
569.05	**D. Hosová:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Developmental Exposure Alcohol Research Center (DEARC), Department of Psychology, Binghamton University, Binghamton, NY 13902-6000. NIH grant U01 AA019972 – NADIA Project. **E.I. Varlinskaya:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Developmental Exposure Alcohol Research Center (DEARC), Department of Psychology, Binghamton University, Binghamton, NY 13902-6000. NIH grant U01 AA019972 – NADIA Project. **L.P. Spear:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Developmental Exposure Alcohol Research Center (DEARC), Department of Psychology, Binghamton University, Binghamton, NY 13902-6000. NIH grant U01 AA019972 – NADIA Project.
570.15	**E. Bullmore:** A. Employment/Salary (full or part-time); Glaxo-Smith Kline. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Glaxo-Smith Kline.
571.09	**T.E. Salt:** Other; Director of Neurexpert Ltd.
571.10	**G.E. Chavarria:** A. Employment/Salary (full or part-time); Full Time. **K.C. Schmitt:** A. Employment/Salary (full or part-time); Full Time. **N. Tibrewal:** A. Employment/Salary (full or part-time); Full Time. **S. Saddar:** A. Employment/Salary (full or part-time); Full Time. **P. Saini:** A. Employment/Salary (full or part-time); Full Time. **G. Tchaga:** A. Employment/Salary (full or part-time); Full Time. **G. Yan:** Other; Owner.
575.15	**M. Gulinello:** F. Consulting Fees (e.g., advisory boards); Lundbeck Research USA. **C. Sánchez:** A. Employment/Salary (full or part-time); Lundbeck Research USA. **Y. Li:** A. Employment/Salary (full or part-time); Lundbeck Research USA.
578.10	**A. Michalis:** A. Employment/Salary (full or part-time); Aleva Neurotherapeutics SA, Lausanne, Switzerland. **A. Mercanzini:** A. Employment/Salary (full or part-time); Aleva Neurotherapeutics SA, Lausanne, Switzerland. **A. Jordan:** A. Employment/Salary (full or part-time); Aleva Neurotherapeutics SA, Lausanne, Switzerland. **A. Dransard:** A. Employment/Salary (full or part-time); Aleva Neurotherapeutics SA, Lausanne, Switzerland. **J.C.H. Sørensen:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Aleva Neurotherapeutics SA, Lausanne, Switzerland.
579.08	**S.C. Calafate:** Other; work is done under a research grant from the IWT, in collaboration with Janssen.
579.10	**M. Usenovic:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **S. Niroomand:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **J.J. Renger:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **S. Parmentier-Batteur:** A. Employment/Salary (full or part-time); Merck & Co., Inc.
579.13	**E.M. Sigurdsson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; H. Lundbeck A/S. F. Consulting Fees (e.g., advisory boards); H. Lundbeck A/S.
579.14	**E.M. Sigurdsson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; H. Lundbeck A/S. F. Consulting Fees (e.g., advisory boards); H. Lundbeck A/S.
579.15	**E.M. Sigurdsson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a

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	PI for a drug study, report that research relationship even if those funds come to an institution.; H. Lundbeck A/S. F. Consulting Fees (e.g., advisory boards); H. Lundbeck A/S.
579.20	**A. Gobert:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **F. Iop:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **V. Pasteau:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **K. Albinet:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **L. Danober:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **C. Louis:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **P. Lestage:** A. Employment/Salary (full or part-time); Institut de Recherches Servier.
579.25	**A. Marreiro:** Other; Doctoral grant partially funded by J&J. **K. Van Kolen:** A. Employment/Salary (full or part-time); J&J. **M. Borgers:** A. Employment/Salary (full or part-time); J&J. **M. Mahieu:** A. Employment/Salary (full or part-time); J&J. **G. Daneels:** A. Employment/Salary (full or part-time); J&J. **M. Vandermeeren:** A. Employment/Salary (full or part-time); J&J. **R. Willems:** A. Employment/Salary (full or part-time); J&J. **K. De Waepenaert:** A. Employment/Salary (full or part-time); J&J. **I. Van De Weyer:** A. Employment/Salary (full or part-time); J&J. **L. Ver Donck:** A. Employment/Salary (full or part-time); J&J. **A. Ebneth:** A. Employment/Salary (full or part-time); J&J. **J. Kemp:** A. Employment/Salary (full or part-time); J&J. **M.H. Mercken:** A. Employment/Salary (full or part-time); J&J. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); J&J.
579.26	**R. Kayed:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Has patent applications on the compositions and methods related to tau oligomers and antibodies.
579.27	**O. Gurinovich:** A. Employment/Salary (full or part-time); AnaSpec, Inc. EGT Group. **C. Ko:** A. Employment/Salary (full or part-time); AnaSpec, Inc. EGT Group. **X. Wang:** A. Employment/Salary (full or part-time); AnaSpec, Inc. EGT Group. **R. Zhang:** A. Employment/Salary (full or part-time); AnaSpec, Inc. EGT Group. **V. Rakhmanova:** A. Employment/Salary (full or part-time); AnaSpec, Inc. EGT Group.
580.15	**B. Casali:** A. Employment/Salary (full or part-time); Case Western Reserve University. **A.W. Corona:** A. Employment/Salary (full or part-time); Case Western Reserve University. **M.M. Mariani:** A. Employment/Salary (full or part-time); Case Western Reserve University. **C. Karlo:** A. Employment/Salary (full or part-time); Case Western Reserve University. **K. Ghosal:** A. Employment/Salary (full or part-time); ReXceptor. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institute for Health. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ReXceptor. Other; ReXceptor. **G. Landreth:** A. Employment/Salary (full or part-time); Case Western Reserve 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.; National Institute for Health. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ReXceptor. Other; ReXceptor.
580.20	**P. Denis:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **B. Hall:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **Y. Wang:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **M. Cueva:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **J. gray:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **J. Danao:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **S. Wiltzius:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **M. Huang:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **J. Bradley:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **L. Feng:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **J. Pretorius:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **P. Rose:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **A. Lim:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **D. Smith:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **D. Flesher:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **H. Carlisle:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **S. sambashivan:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **E. Marcora:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **S. Wood:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **S. Wang:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation. **S. Koirala:** A. Employment/Salary (full or part-time); Amgen Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Corporation.

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581.04	**H.A. Robertson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurodyn Inc. F. Consulting Fees (e.g., advisory boards); Neurodyn Inc.
581.09	**C.D. Schroeder:** A. Employment/Salary (full or part-time); Rush University Medical Center, Governors State University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH T32AG000269-15. **G.T. Stebbins:** A. Employment/Salary (full or part-time); Rush University Medical Center. B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institutes of Health, Michael J. Fox Foundation for Parkinson's Research, Dystonia Coalition, CHDI Management, Inc. F. Consulting Fees (e.g., advisory boards); Adamas Pharmaceuticals, Inc., Ceregene, Inc., CHDI Management, Inc., Ingenix Pharmaceutical Services (i3 Research), Neurocrine Biosciences, Inc. Other; Other: Editorial Board, Journal of Clinical and Experimental Neuropsychology. **J.G. Goldman:** A. Employment/ Salary (full or part-time); Rush University Medical Center. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH K23NS060949, Michael J. Fox Foundation, Parkinson's Disease Foundation, Rush University, Teva (Moderato study, site-PI). F. Consulting Fees (e.g., advisory boards); Acadia, Pfizer, Teva.
581.14	**R. Seidler:** F. Consulting Fees (e.g., advisory boards); University of Florida. **M.S. Okun:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Parkinson Foundation, NIH, NPF, the Michael J. Fox Foundation, the Parkinson Alliance, Smallwood Foundation, the Bachmann-Strauss Foundation, and the UF Foundation. **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. F. Consulting Fees (e.g., advisory boards); UT Southwestern Medical Center, University of Illinois at Chicago, and Great Lakes NeuroTechnologies.
581.21	**M. Mishina:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; apan Society for the Promotion of Science. **K. Ishii:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Japan Society for the Promotion of Science. **Y. Kimura:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Japan Society for the Promotion of Science. **K. Ishiwata:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Japan Society for the Promotion of Science.
581.22	**F. Schwartz:** A. Employment/Salary (full or part-time); German Research Foundation (KFO 219, TP 10).
581.24	**G. McAllister:** A. Employment/Salary (full or part-time); BioFocus. **D. Hardick:** A. Employment/Salary (full or part-time); BioFocus. **D. Mitchell:** A. Employment/Salary (full or part-time); BioFocus. **K. Nash:** A. Employment/Salary (full or part-time); BioFocus.
582.04	**J.L. Lujan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Boston Scientific.
582.06	**K. Foote:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Device Donations from Medtronic and NeuroPace. **M. Okun:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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, NPF, the Michael J. Fox Foundation, the Parkinson Alliance, Smallwood Foundation, the Bachmann- Strauss Foundation, the Tourette Syndrome Association, and the UF Foundation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); royalties for publications with Demos, Manson, Amazon, Smashwords, Books$Patients, and Cambridge (movement disorders books. F. Consulting Fees (e.g., advisory boards); National Parkinson's Foundation. **C.R. Butson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); is an inventor of several patents related to neuromodulation therapy. F. Consulting Fees (e.g., advisory boards); . Butson has served as a consultant for Intelect Medical, NeuroPace, Advanced Bionics, St. Jude Medical, Boston Scientific and Functional Neuromodulation.
582.10	**R.S. Raike:** A. Employment/Salary (full or part-time); Employed by Medtronic. **M.S. Okun:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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, NPF, the Michael J. Fox Foundation, the Parkinson Alliance, Smallwood Foundation, the Bachmann-Strauss Foundation, the Tourette Syndrome Association, and the UF Foundation. F. Consulting Fees (e.g., advisory boards); National Parkinson Foundation. Other; royalties for publications with Demos, Manson, Amazon, Smashwords, Books4Patients, and Cambridge.
583.06	**H. Moradi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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. **M.S. Jog:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Allergan.
585.16	**D.C. Ferrari:** A. Employment/Salary (full or part-time); Neurochlore. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurochlore. **R. Nardou:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurochlore. **M. Chiesa:** A. Employment/Salary (full or part-time); Neurochlore. **N. Lozovaya:** A. Employment/Salary (full or part-time); Neurochlore. **M. Billon-Grand:** A. Employment/ Salary (full or part-time); Neurochlore. **Y. Ben-Ari:** A. Employment/Salary (full or part-time); Neurochlore. E.

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	Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurochlore.
586.03	**W. Li:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Frank Longo, PharmatrophiX. **F. Longo:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); PharmatrophiX.
587.07	**S.M. McTighe:** A. Employment/Salary (full or part-time); Novartis Institutes for Biomedical Research. **S.J. Neal:** A. Employment/Salary (full or part-time); Novartis Institutes for Biomedical Research. **A.J. Gray:** A. Employment/Salary (full or part-time); Novartis Institutes for Biomedical Research. **K. Capre:** A. Employment/Salary (full or part-time); Novartis Institutes for Biomedical Research. **S.L. Legare:** A. Employment/Salary (full or part-time); Novartis Institutes for Biomedical Research. **D.S. Burdette:** A. Employment/Salary (full or part-time); Novartis Institutes for Biomedical Research. **J. Dodart:** A. Employment/Salary (full or part-time); Novartis Institutes for Biomedical Research.
589.12	**J. Smith:** A. Employment/Salary (full or part-time); Saginaw Valley State University.
590.09	**B. Muratori:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 5R01NS073636-04 R01, The State of Indiana. **R. Shi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 5R01NS073636-04 R01, State of Indiana.
590.16	**T. Hryciw:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Named as inventor on patents and patent applications related to SOX9 inhibition. **A. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Named as inventor on patents and patent applications related to SOX9 inhibition.
591.04	**M. Larhammar:** A. Employment/Salary (full or part-time); Genentech Inc. **S. Huntwork-Rodriguez:** A. Employment/Salary (full or part-time); Genentech Inc. **A. Sengupta Ghosh:** A. Employment/Salary (full or part-time); Genentech Inc. **Z. Jiang:** A. Employment/Salary (full or part-time); Genentech Inc. **H. Solanoy:** A. Employment/Salary (full or part-time); Genentech Inc. **J. Eastham-Anderson:** A. Employment/Salary (full or part-time); Genentech Inc. **J.S. Kaminker:** A. Employment/Salary (full or part-time); Genentech Inc. **J.W. Lewcock:** A. Employment/Salary (full or part-time); Genentech Inc. **T.A. Watkins:** A. Employment/Salary (full or part-time); Genentech Inc.
592.09	**H. Ahmet:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Tubitak 113S083, Ataturk University BAP 2011270. **A. Taghİzadehghalehjoug:** A. Employment/Salary (full or part-time); Tubitak 113S083. **U. Okkay:** A. Employment/Salary (full or part-time); Tubitak 113S083. **N. Taspinar:** A. Employment/Salary (full or part-time); Tubitak 113S083. **K. Nalci:** A. Employment/Salary (full or part-time); 113S083. **S. Butuner:** A. Employment/Salary (full or part-time); 113S083.
592.21	**L. Zou:** A. Employment/Salary (full or part-time); Texas tech University Health Sciences Center at El Paso. **T. Thomas:** A. Employment/Salary (full or part-time); Texas tech University Health Sciences Center at El Paso. **H. Dou:** A. Employment/Salary (full or part-time); Texas tech University Health Sciences Center at El Paso. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Texas tech University Health Sciences Center. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Texas tech University Health Sciences Center.
592.22	**O. Hermanson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Celluminova.
592.26	**W. Walters:** A. Employment/Salary (full or part-time); University of Miami Brain Tumor Initiative. **R.J. Komotar:** F. Consulting Fees (e.g., advisory boards); Osteomed, LLC, Codman/Johnson&Johnson, Inc., Medtronic, Inc., Synaptive, Inc. **J.S. Prince:** A. Employment/Salary (full or part-time); University of Miami. **R.M. Graham:** A. Employment/Salary (full or part-time); University of Miami Brain Tumor Initiative.
594.09	**P.C. Swart:** A. Employment/Salary (full or part-time); University of Cape Town.
594.16	**A. Kamiya:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Hitachi Med Co. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Hitachi Med Co. F. Consulting Fees (e.g., advisory boards); Taisho Pharm Co.
595.03	**R. Chhabra:** A. Employment/Salary (full or part-time); International Graduate School in Molecular Medicine, Ulm University, Germany.
595.05	**C. Glass:** A. Employment/Salary (full or part-time); TEGA Therapeutics, Inc. **B.E. Thacker:** A. Employment/Salary (full or part-time); TEGA Therapeutics, Inc. **J.J. Phillips:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; TEGA Therapeutics, Inc. **Y. Tor:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TEGA Therapeutics, Inc. **T. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TEGA Therapeutics, Inc. **J.D. Esko:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TEGA Therapeutics, Inc.
595.07	**S.O. Schnichels:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor (IP is with the University). Other; Research prizes from Novartis and Alcon. **A. Herrmann:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor (IP is with the University). **M.S. Spitzer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor (IP is with the University). Other; Research prizes from Novartis and Alcon. **J. de Vries:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor (IP is with the University).
598.05	**B. Tasic:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **V. Menon:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **T.N. Nguyen:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **T.K. Kim:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **Z. Yao:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **K. Smith:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **T. Dolbeare:** A. Employment/Salary (full or part-time); Allen Institute

PRESENTATION NUMBER	STATEMENT
	for Brain Science. **B. Levi:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **T. Jarsky:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **S. Sorensen:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **L. Gray:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **D. Bertagnolli:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **J. Goldy:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **N. Shapovalova:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **S. Parry:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **L. Madisen:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **S. Sunkin:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **S. Mihalas:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **C. Dang:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **J. Phillips:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **L. Ng:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **A. Bernard:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **C. Koch:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **M. Hawrylycz:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **H. Zeng:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science.
598.13	**T.J. Blanche:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); White Matter LLC.
598.26	**T.J. Blanche:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); White Matter, LLC.
602.05	**M.J. Caterina:** F. Consulting Fees (e.g., advisory boards); Hydra Biosciences SAB Member.
603.13	**A. Ramirez-Zamora:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boston Scientific. F. Consulting Fees (e.g., advisory boards); TEVA neuroscience. **J.G. Pilitsis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 1R01CA166379. F. Consulting Fees (e.g., advisory boards); Medtronic, Boston Scientific, St. Jude.
604.02	**D.C. Sessions:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Copyright to bioinformatics open sourceware not yet published.
604.11	**L. Avivi-Arber:** A. Employment/Salary (full or part-time); University of Toronto. **P. Cherkas:** A. Employment/Salary (full or part-time); University of Toronto. **A.R. Campos:** A. Employment/Salary (full or part-time); University of Fortaleza. **B.J. Sessle:** A. Employment/Salary (full or part-time); University of Toronto.
604.16	**V. Panchalingam:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CIHR. **V. Feng:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CIHR. **L. Melo:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CIHR. **L. Avivi-Arber:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CIHR. **P. Cherkas:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CIHR. **B. Sessle:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CIHR.
604.17	**K. Choong:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **T.M. Wall:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **J.L. Krajewski:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **X. Chi:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **T.E. Fitch:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **B. Forster:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **B.S. Wilenkin:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **M.J. Krambis:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **K.M. Gardinier:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **T.J. Raub:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **K. Rasmussen:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **J.S. McDermott:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **K.K. Palmer:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **B.T. Priest:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **L.R. Kehn:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time). **E.S. Nisenbaum:** A. Employment/Salary (full or part-time); Eli Lilly & Company INC.(full time).
604.24	**C.A. Sturycz:** A. Employment/Salary (full or part-time); University of Tulsa. **B.L. Kuhn:** A. Employment/Salary (full or part-time); University of Tulsa. **E.W. Lannon:** A. Employment/Salary (full or part-time); University of Tulsa. **S.T. Palit:** A. Employment/Salary (full or part-time); University of Tulsa. **Y.M. Güereca:** A. Employment/Salary (full or part-time); University of Tulsa. **M.F. Payne:** A. Employment/Salary (full or part-time); University of Tulsa. **J.O. Shadlow:** A. Employment/Salary (full or part-time); University of Tulsa. **J.L. Rhudy:** A. Employment/Salary (full or part-time); University of Tulsa.
606.20	**G. Short:** A. Employment/Salary (full or part-time); Flex Pharma Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma Inc. **B.W. Hegarty:** A. Employment/Salary (full or part-time); Flex Pharma Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma Inc. **C.H. Westphal:** A. Employment/Salary (full or part-time); Flex Pharma Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma Inc. **J.M. Cermak:** A. Employment/Salary (full or part-time); Flex Pharma Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma Inc.
607.02	**C.M. Alexander:** A. Employment/Salary (full or part-time); National Institute of Health Research. **M. Long:** A. Employment/Salary (full or part-time); Imperial College London. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Imperial College Healthcare Charity.
610.21	**A. Desautels:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Novartis, GlaxoSmithKline, Jazz.
610.26	**K.S. Hayward:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SMART Arm Pty Ltd. **D. Lloyd:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SMART Arm Pty Ltd. **S.G. Brauer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SMART Arm Pty Ltd. **R.N. Barker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SMART Arm Pty Ltd. **R.G. Carson:** E. Ownership Interest (stock, stock

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	options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SMART Arm Pty Ltd.
610.27	**Y. Ren:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rehabtek LLC. **L. Zhang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rehabtek LLC.
611.03	**D. Park:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Wisconsin Alumni Research Foundation. **S.K. Brodnick:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **D. Baek:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **A. Schendel:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **S. Mikael:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **T. Richner:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **J. Ness:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **F. Atry:** A. Employment/Salary (full or part-time); University of Wisconsin-Milwaukee. **J. Novello:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **H. Kim:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **S. Thongpang:** A. Employment/Salary (full or part-time); Mahidol University. **R. Pashaie:** A. Employment/Salary (full or part-time); University of Wisconsin-Milwaukee. **Z. Ma:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison. **J. Williams:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison.
611.08	**E.J. Aarnoutse:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research is funded by the Dutch Technology Foundation STW, in project nr 12803 with co-funding from Medtronic Europe. **N.F. Ramsey:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research is funded by the Dutch Technology Foundation STW, in project nr 12803 with co-funding from Medtronic Europe.
611.14	**P. Troyk:** A. Employment/Salary (full or part-time); Sigenics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sigenics, Inc. **M. Bak:** A. Employment/Salary (full or part-time); MicroProbes for Life Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MicroProbes for Life Sciences.
611.18	**E.J. Aarnoutse:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe as affiliation.
611.23	**E.J. Aarnoutse:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe.
612.19	**W. Britz:** A. Employment/Salary (full or part-time); Britz and Company. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Britz and Company.
615.11	**J. Caldwell:** A. Employment/Salary (full or part-time); University of Cincinnati.
615.12	**J. Caldwell:** A. Employment/Salary (full or part-time); University of Cincinnati. **M.B. Solomon:** A. Employment/Salary (full or part-time); University of Cincinnati.
615.13	**E.T. Nguyen:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Corcept Therapeutics Incorporated. **M.B. Solomon:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Corcept Therapeutics Incorporated. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Corcept Therapeutics Incorporated.
616.13	**P. LoGrasso:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); OPKO Health. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); OPKO Health. F. Consulting Fees (e.g., advisory boards); OPKO Health.
620.02	**M.P. Weisend:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rio Grande Neurosciences. F. Consulting Fees (e.g., advisory boards); Rio Grande Neurosciences.
621.08	**A.M. Dale:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CorTechs Labs. **L.K. McEvoy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CorTechs Labs.
621.30	**L.M. Renzi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 Nutritional Products. **B.R. Hammond:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 Nutritional Products. **L. Miller:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 Nutritional Products, University of Georgia Bio-Imaging Research Center (Administrative Support).
622.08	**M. Soh:** A. Employment/Salary (full or part-time); Queensland Brain Institute.
622.15	**D.A. Gutman:** F. Consulting Fees (e.g., advisory boards); Memorial Sloan Kettering Dermatology Division--Consultant.
622.16	**M. Van Duinen:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; ZonMw95110091, Takeda Development Centre Europe Ltd. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Takeda Development Center Americas, Inc. F. Consulting Fees (e.g., advisory boards); Takeda Development Center Americas, Inc. **A. Sambeth:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Takeda Development Center Americas, Inc. **A. Blokland:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Takeda Development Center Americas, Inc. **J. Prickaerts:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a

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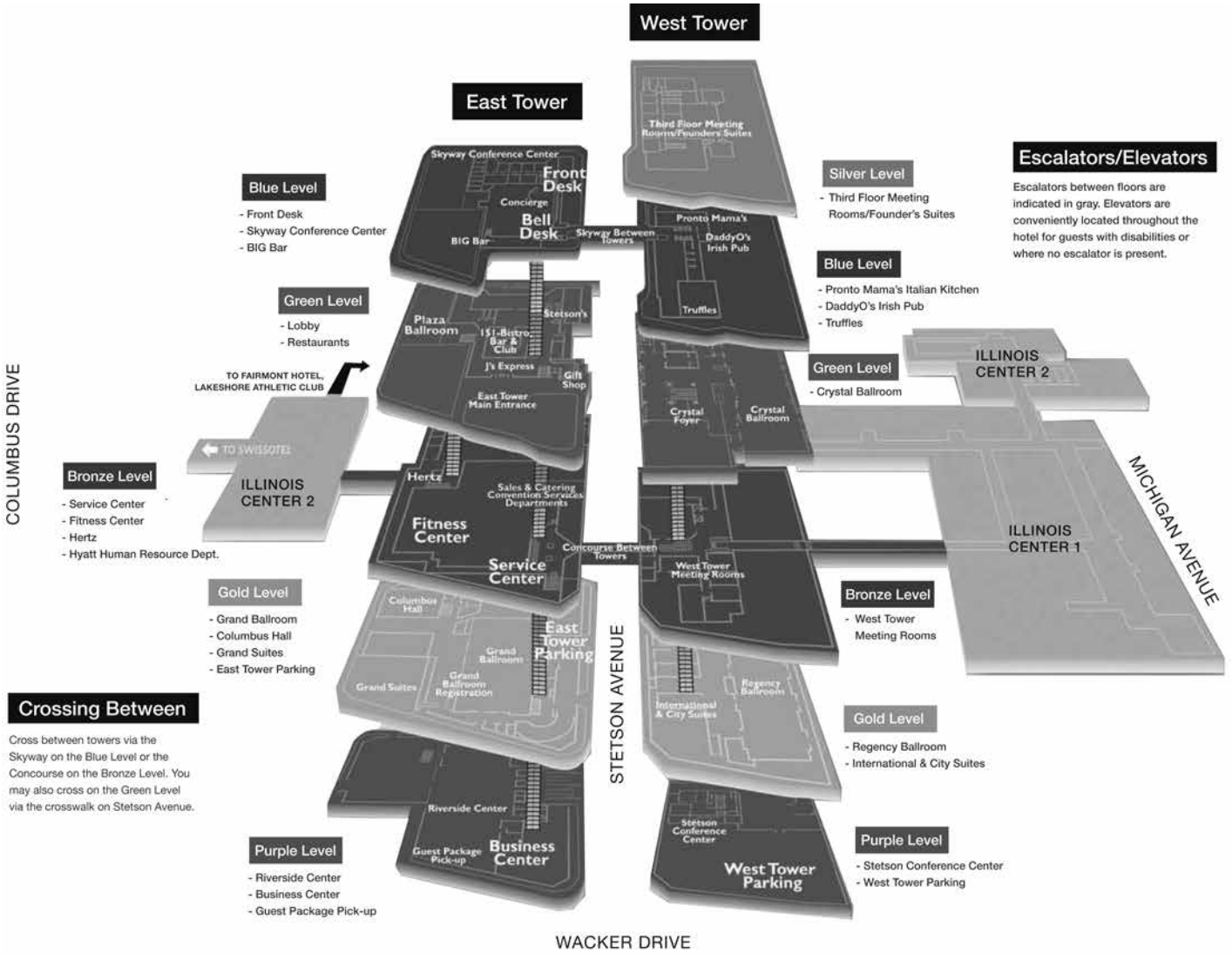
	drug study, report that research relationship even if those funds come to an institution.; Takeda Development Center Americas, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Takeda Development Center Americas, Inc. F. Consulting Fees (e.g., advisory boards); Takeda Development Center Americas, Inc.
622.22	**L.J. Pino:** A. Employment/Salary (full or part-time); InteraXon. **G. Moffat:** A. Employment/Salary (full or part-time); Interaxon. **C. Aimone:** A. Employment/Salary (full or part-time); InteraXon.
623.07	**V.B. Risbrough:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Johnson and Johnson.
624.04	**E.M. Bowman:** A. Employment/Salary (full or part-time); University of St Andrews. **V.J. Brown:** A. Employment/Salary (full or part-time); University of St Andrews.
625.16	**G.J. DeMarco:** A. Employment/Salary (full or part-time); Pfizer Inc. **X. Chen:** A. Employment/Salary (full or part-time); Pfizer Inc. **B. Derek:** A. Employment/Salary (full or part-time); Pfizer Inc. **C. Christoffersen:** A. Employment/Salary (full or part-time); Pfizer Inc.
626.07	**H.Y. Meltzer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Activas, the American Foundation for Suicide Prevention, Auspex, Forum, Janssen, Mag T Therapeutics, Naurex, Reviva, Sumitomo Dainippon, Sunovion. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acadia Pharmaceuticals, GlaxoSmithKline, SureGene. F. Consulting Fees (e.g., advisory boards); Forum, Lundbeck, Reviva, Sunovion.
627.09	**M. Hajos:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; FORUM Pharmaceuticals. **L. Leventhal:** A. Employment/Salary (full or part-time); FORUM Pharmaceuticals.
628.17	**J.H. Baxter:** A. Employment/Salary (full or part-time); Abbott Nutrition. **R. Vazhappilly:** A. Employment/Salary (full or part-time); Abbott Nutrition.
632.13	**M.J. Schnitzer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inscopix, Inc. F. Consulting Fees (e.g., advisory boards); Inscopix, Inc.
633.01	**C. Glavis-Bloom:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; F. Hoffmann-La Roche Ltd. **D. Alberati:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd. **T. Ballard:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd. **M. Croxall:** A. Employment/Salary (full or part-time); 3Lafayette Instrument Company. **K. Taylor:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd. **D. Umbricht:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd. **T.L. Wallace:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; F. Hoffmann-La Roche Ltd.
634.12	**M. Benekareddy:** A. Employment/Salary (full or part-time); F. Hoffman La Roche. **M. Saxe:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche. **M. von Kienlin:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche. **B. Kuennecke:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche. **A. Ghosh:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche.
635.14	**A. Poff:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); University of South Florida. **S. Kesl:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); University of South Florida. **D. D`Agostino:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); University of South Florida.
636.02	**G. Griebel:** A. Employment/Salary (full or part-time); employee of Sanofi.
637.08	**D.W. Miller:** A. Employment/Salary (full or part-time); Backyard Brains. **G. Gage:** A. Employment/Salary (full or part-time); Backyard Brains.
638.04	**S.J. Smith:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Founder's equity in Aratome, LLC, a Menlo Park CA company that provides array tomography products and services.
638.06	**S.J. Smith:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aratome.
638.08	**K. Umadevi Venkataraju:** A. Employment/Salary (full or part-time); Part-time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Certerra Inc.

Hotel Floor Plans

HYATT REGENCY CHICAGO DOWNTOWN

(not connected to McCormick Place)

151 E. Wacker Drive
Chicago, IL 60601



HYATT REGENCY CHICAGO DOWNTOWN

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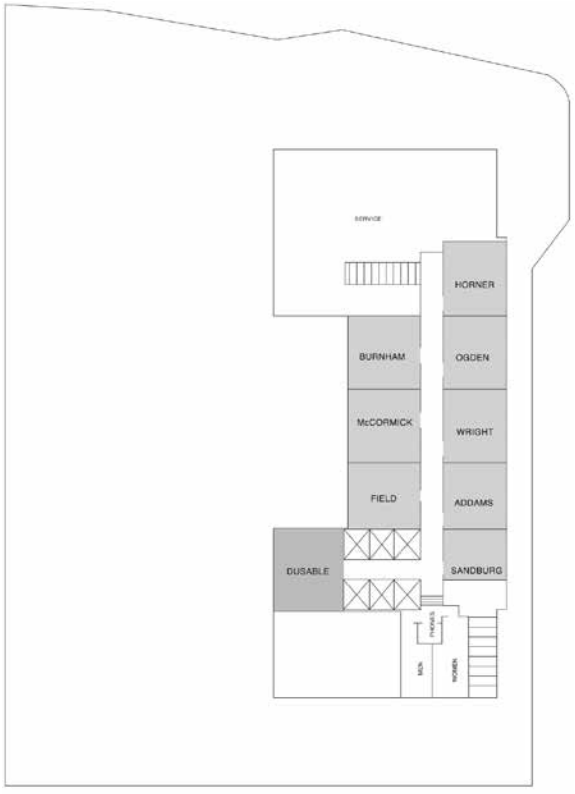
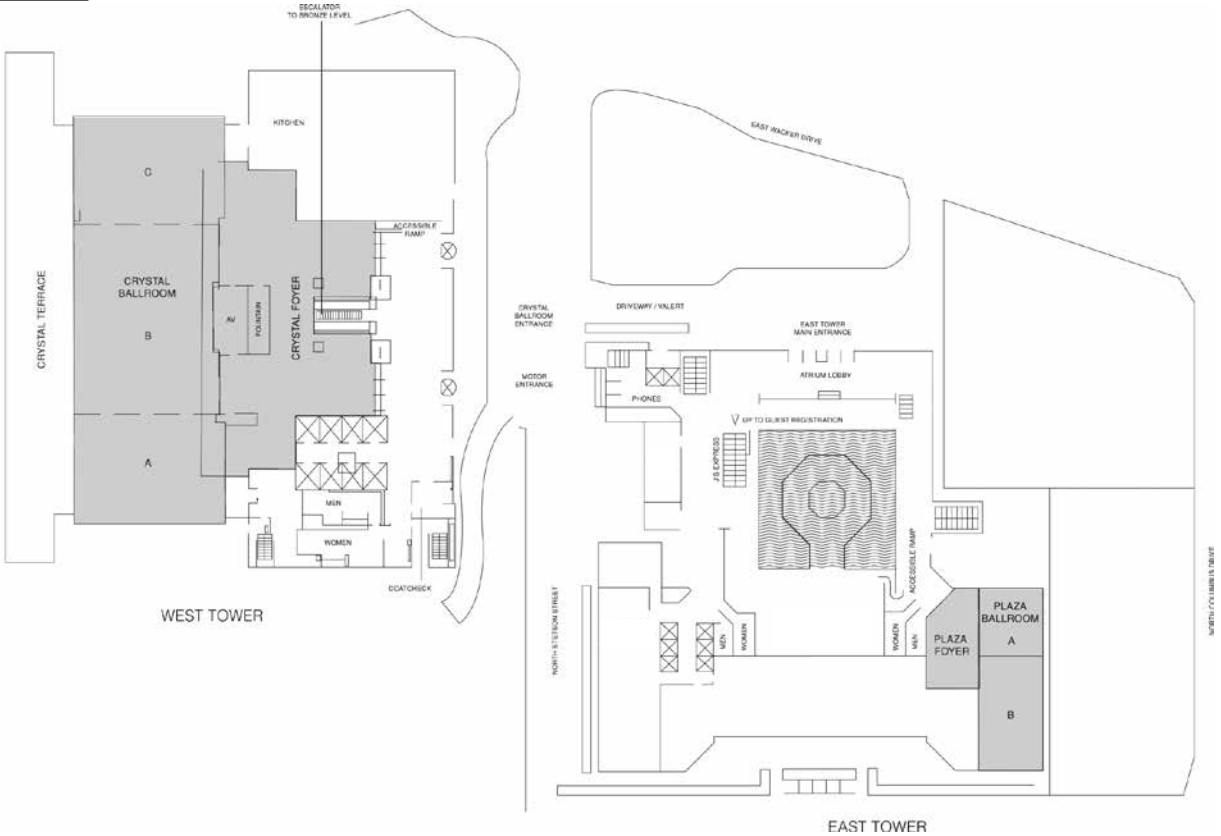
SILVER LEVEL



WEST TOWER

GREEN LEVEL

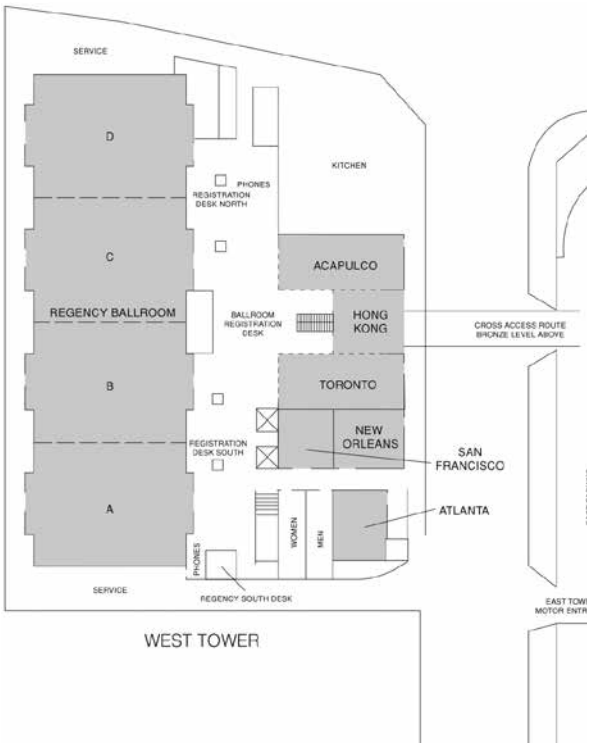


HYATT REGENCY CHICAGO DOWNTOWN

(continued)

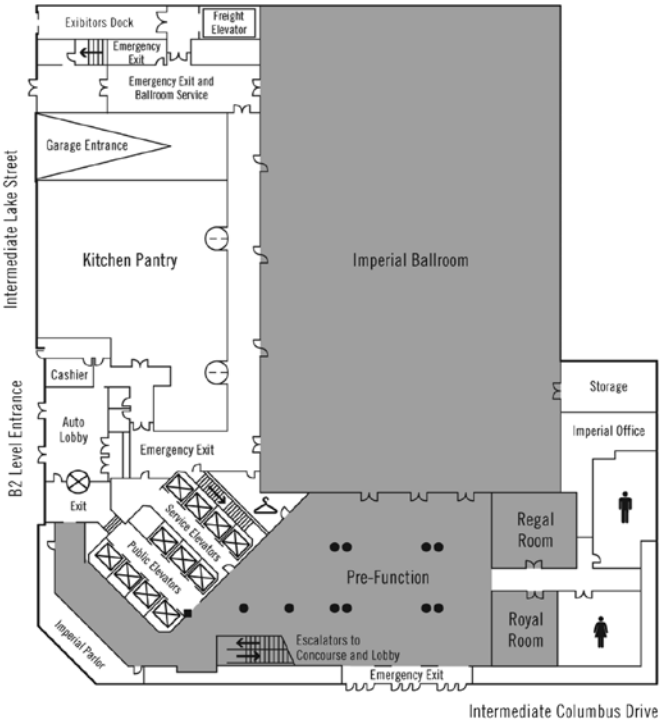
BRONZE LEVEL

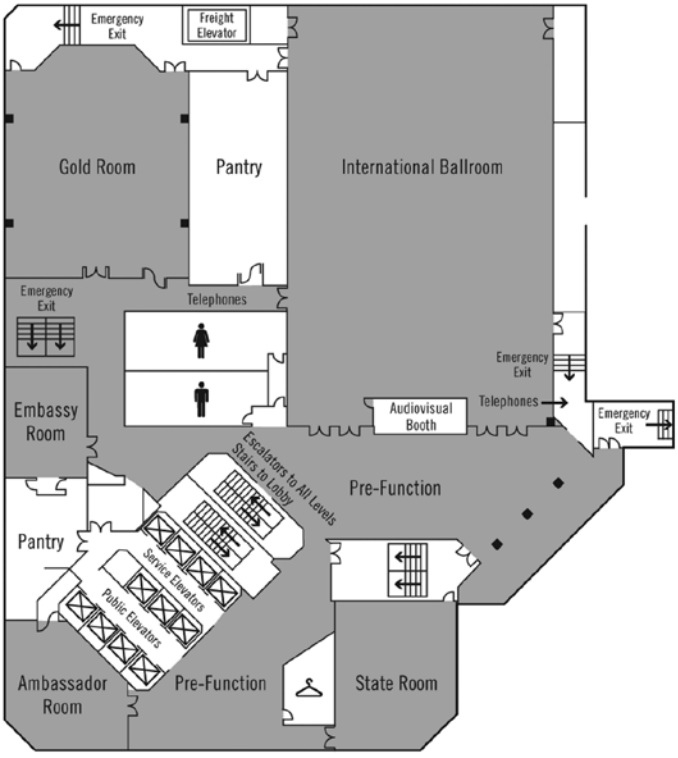
GOLD LEVEL

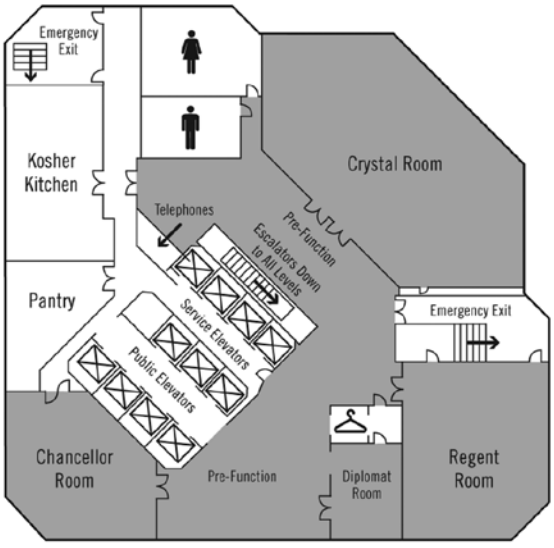


FAIRMONT CHICAGO, MILLENNIUM PARK

200 N. Columbus Drive
Chicago, IL 60601



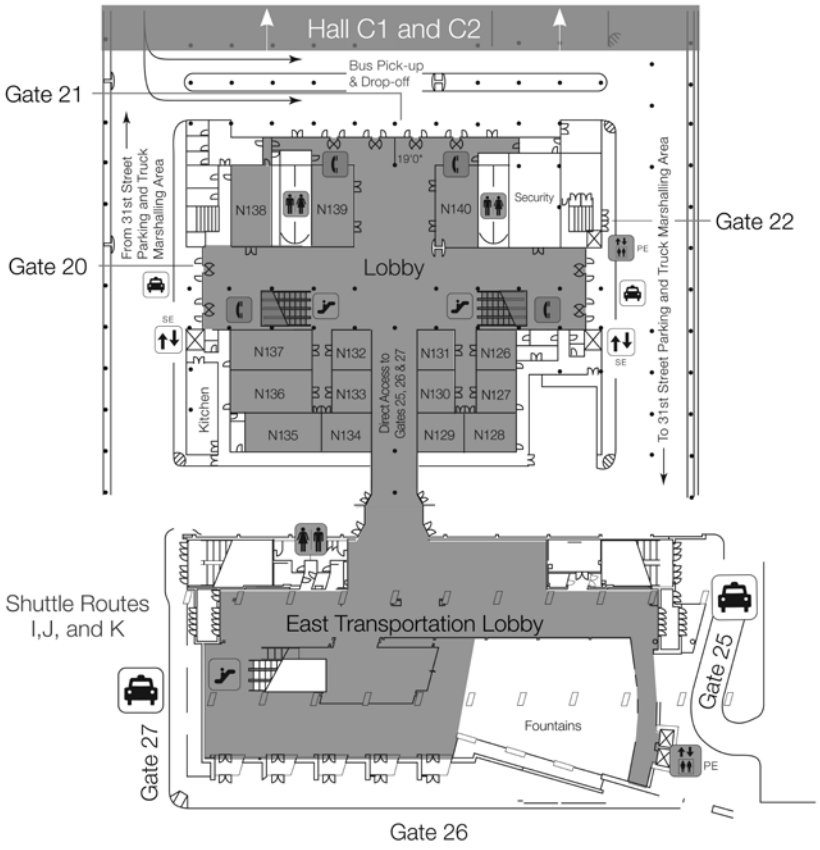




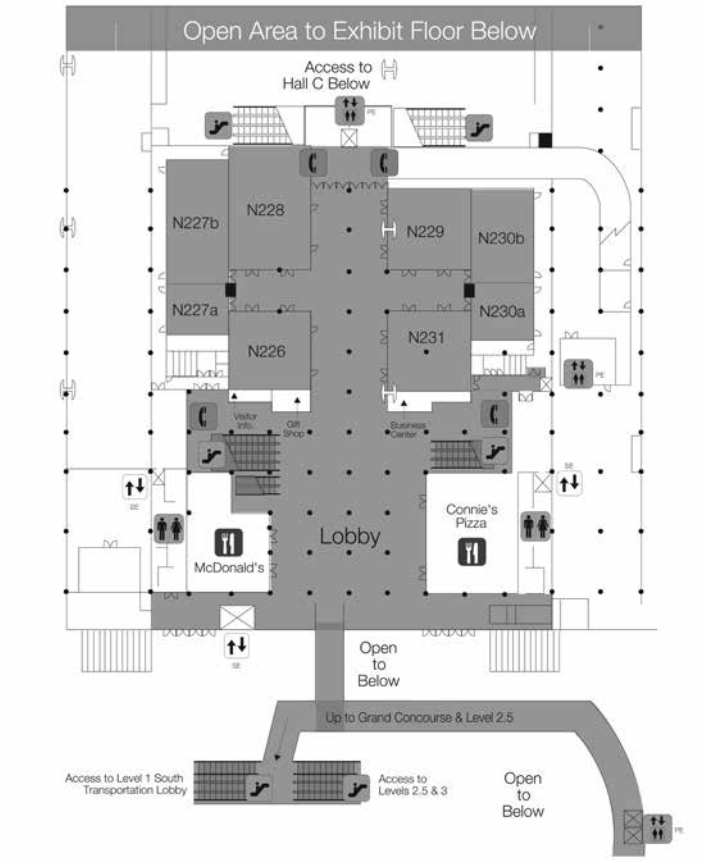
McCORMICK PLACE

2301 S. Martin Luther King Drive
Chicago, IL 60616

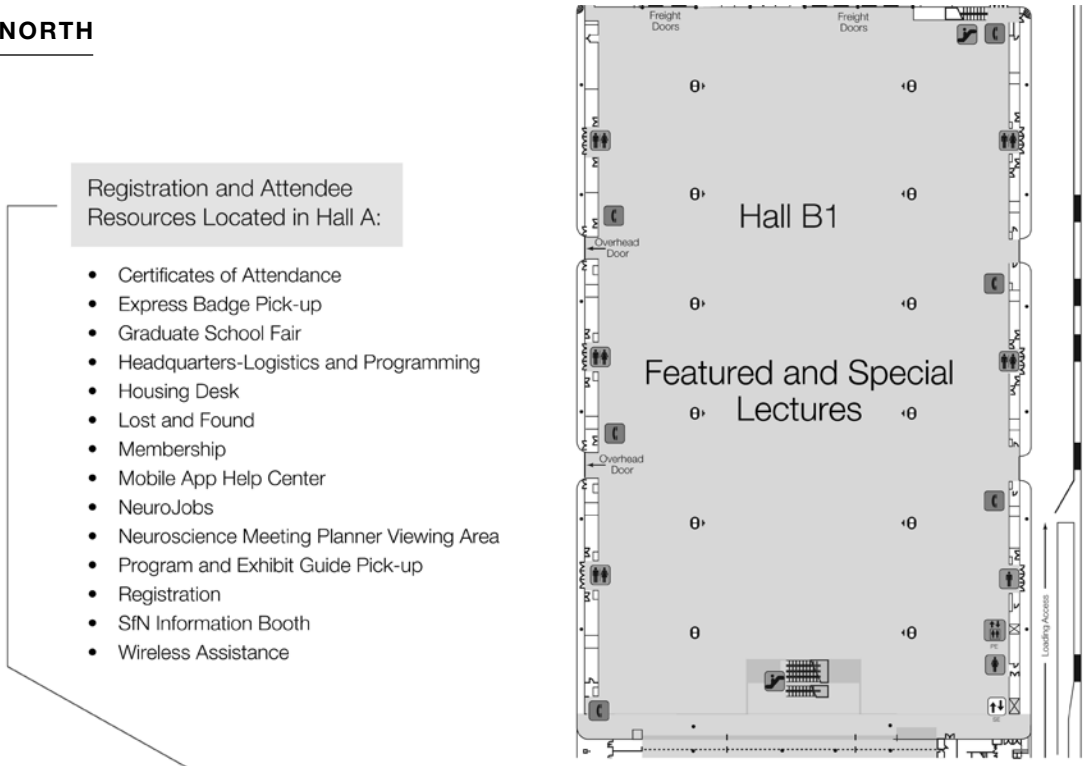
LEVEL 1 NORTH



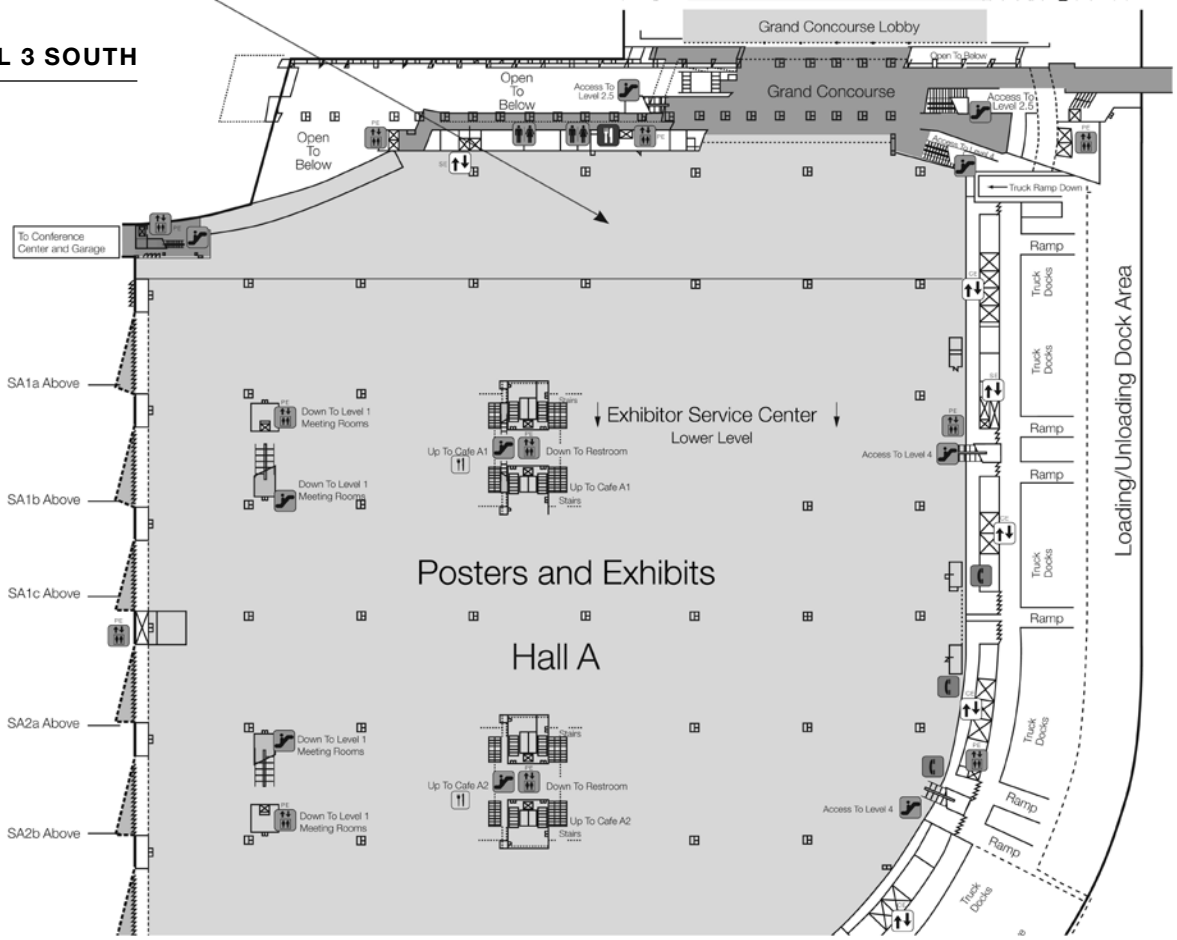
LEVEL 2 NORTH



LEVEL 3 NORTH



LEVEL 3 SOUTH



McCORMICK PLACE

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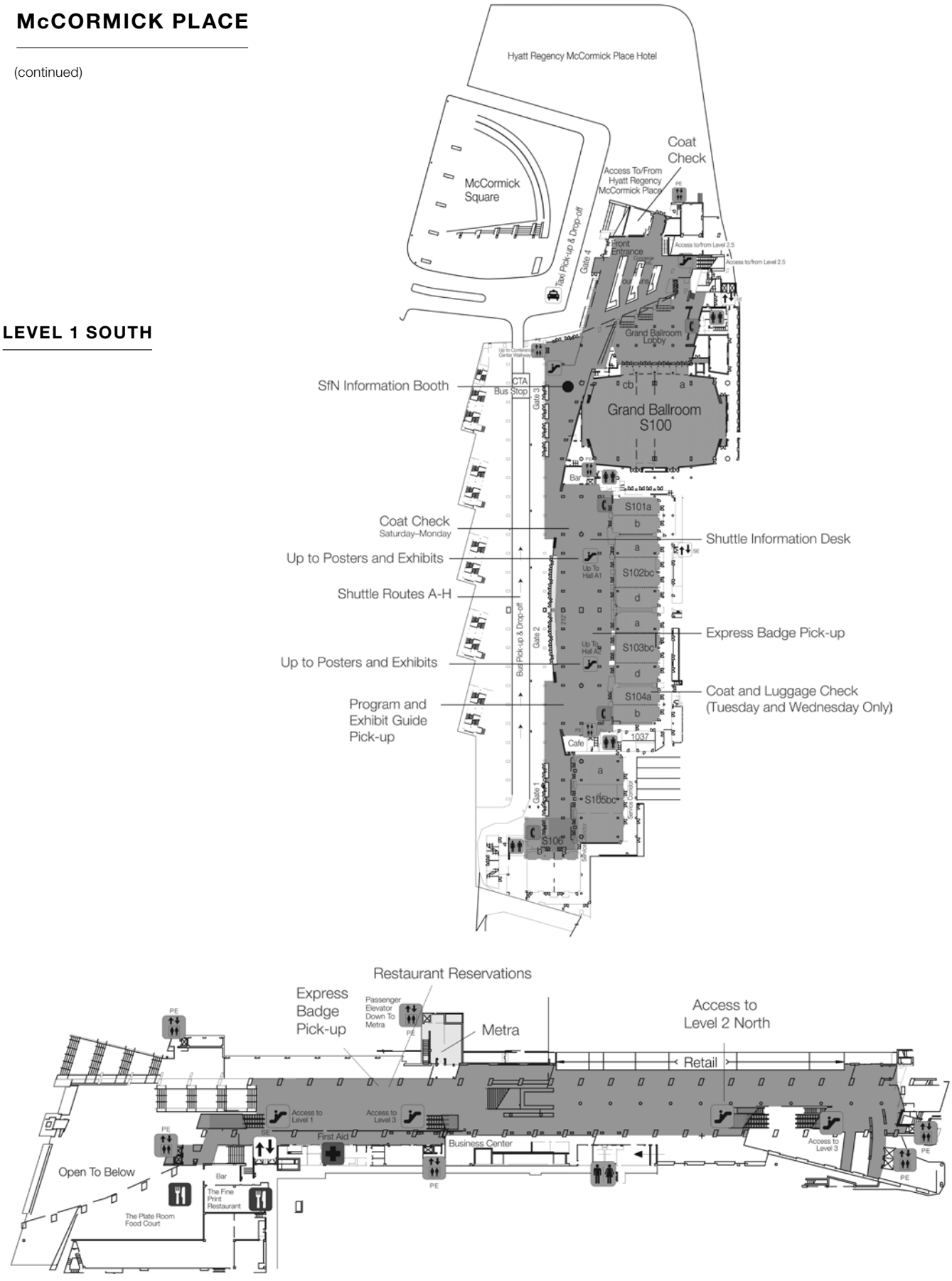
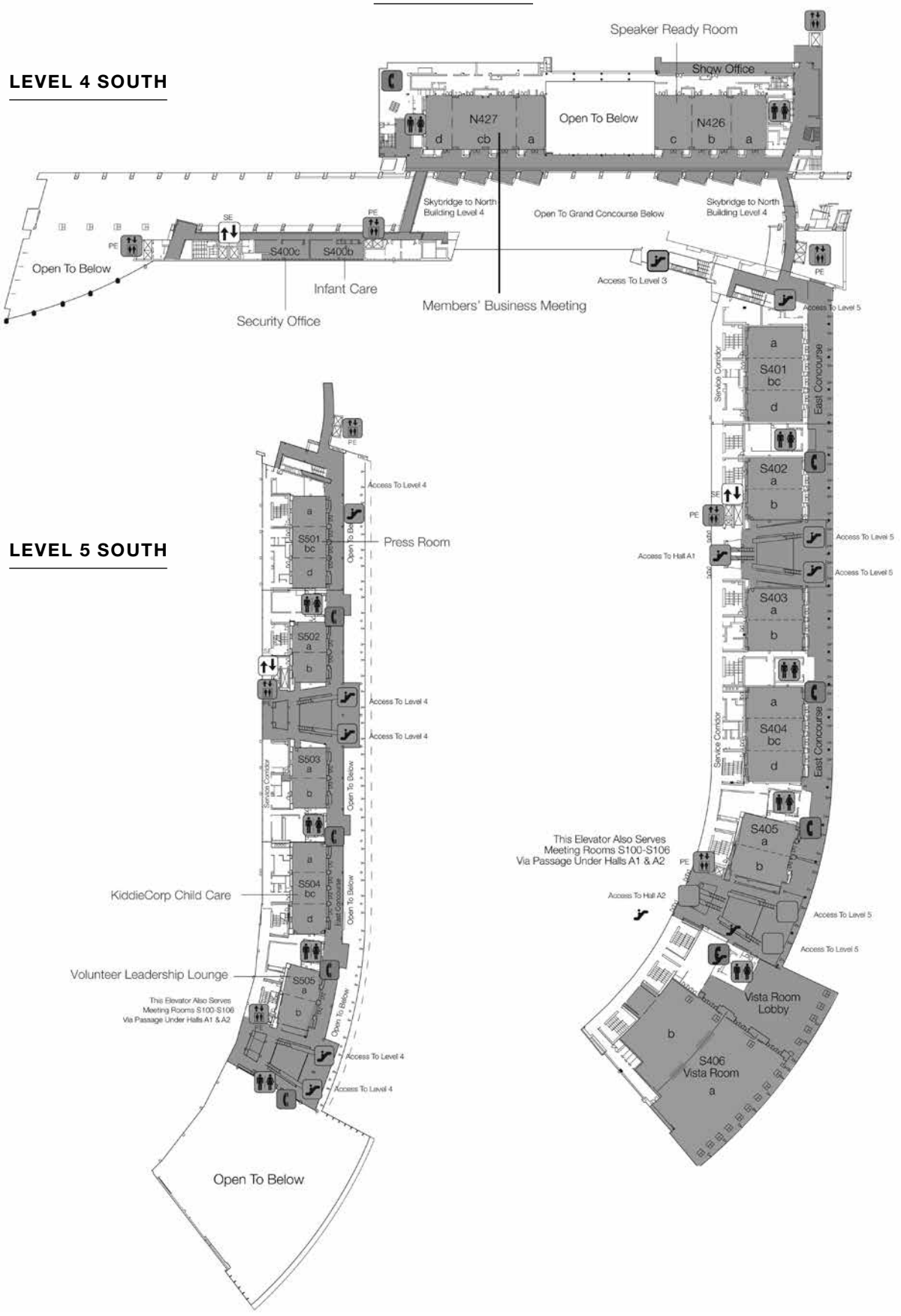
LEVEL 1 SOUTH



LEVEL 4 NORTH

LEVEL 4 SOUTH

LEVEL 5 SOUTH



Neuroscience 2015

Exhibits and Poster Sessions

McCormick Place, South Building

Meeting Dates: Oct. 17–21

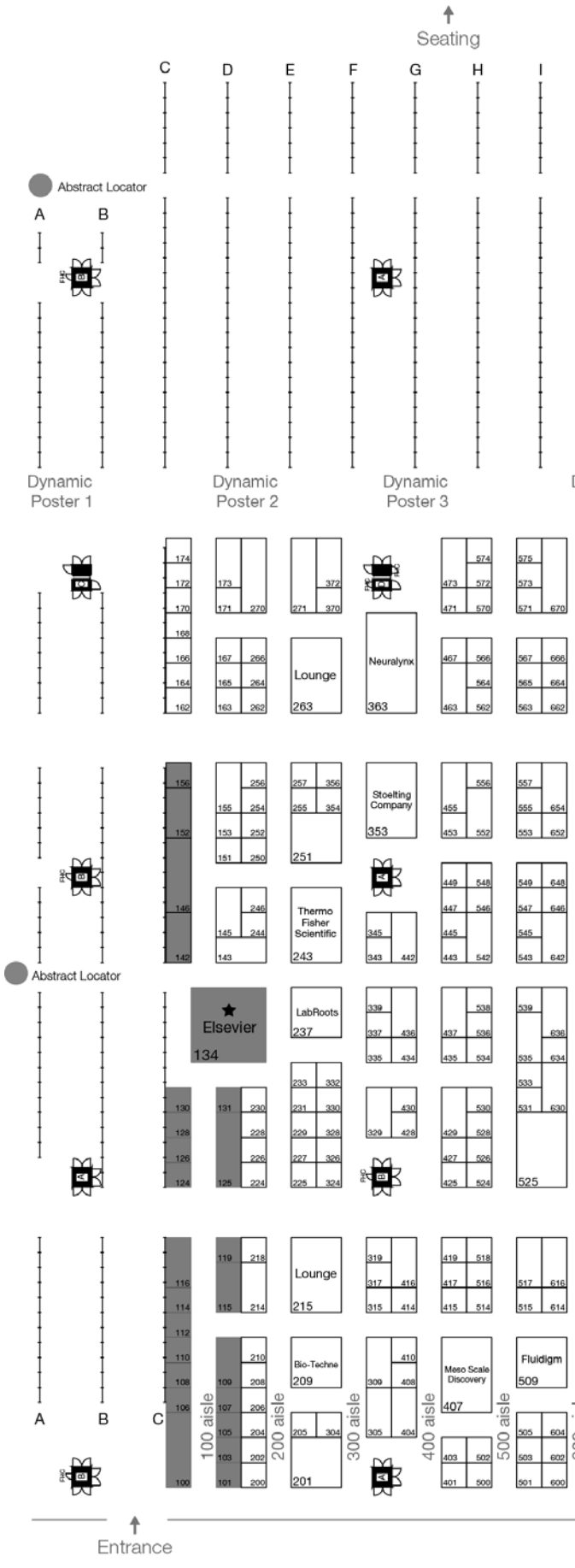
Exhibit Dates: Oct. 18–21

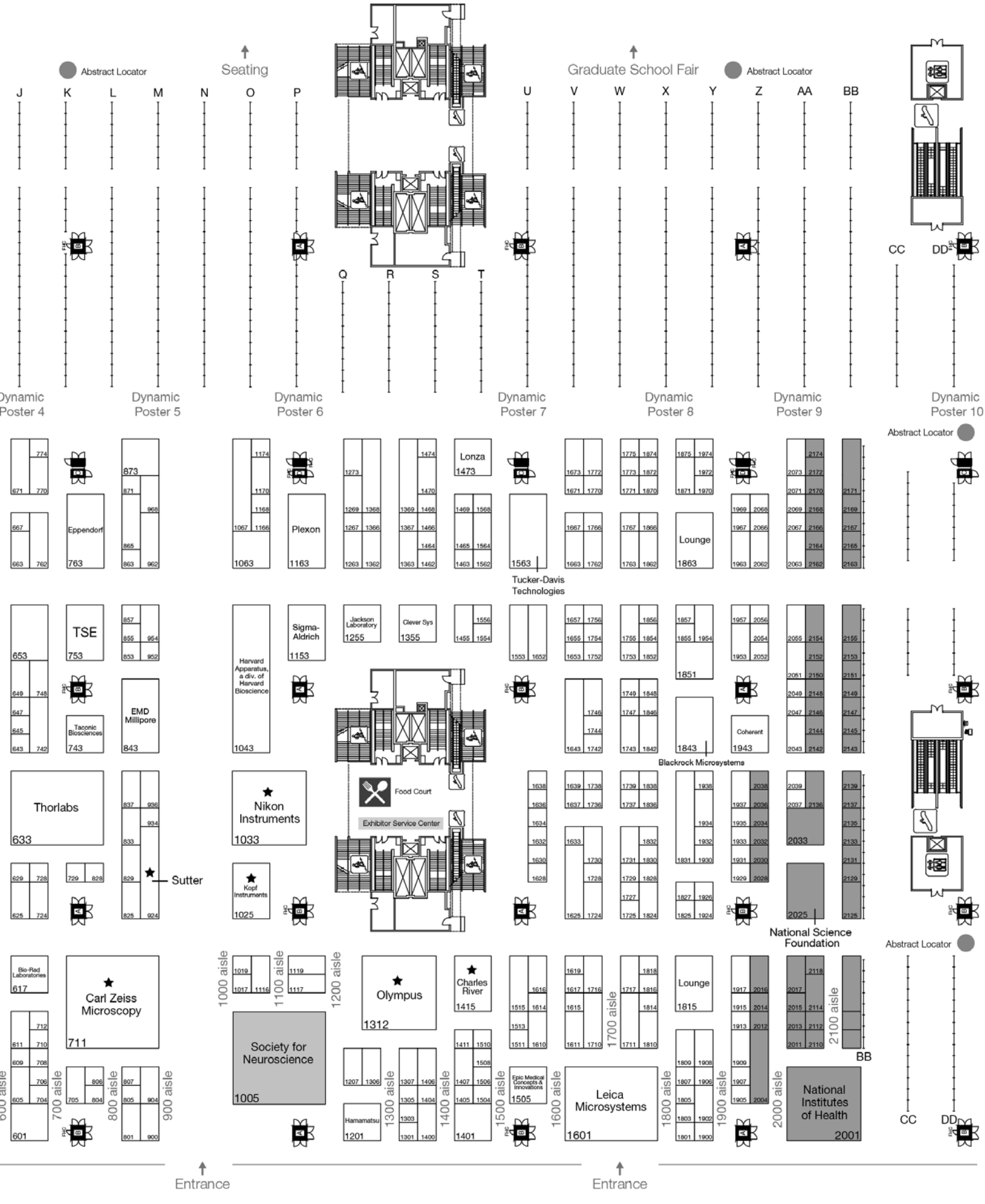
Note: Entrances will open at noon on Saturday and at 7 a.m. Sunday through Wednesday for poster presenter setup only. Poster sessions are open for all attendees at 1 p.m. on Saturday and 8 a.m. Sunday through Wednesday.

Floor plans subject to change.

For current floor plan, visit SfN.org/exhibits.

- Publisher's Row
- Nonprofit / Institutes
- SfN
- Exhibitor Service Center
- ★ Sustaining Associate Members
- Food Court
- Abstract Locator
- Column / Fire Hydrant (FHC)

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CC DD
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Sigma-Aldrich 1153
Jackson Laboratory 1255
Clever Sys 1355
Harvard Apparatus, a div. of Harvard Bioscience 1043
Taconic Biosciences 743
EMD Millipore 843
1851
Coherent 1943
Blackrock Microsystems
Thorlabs 633
Nikon Instruments 1033
Food Court
Exhibitor Service Center
Sutter
Kopf Instruments 1025
2033
2025
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1100 aisle
1200 aisle
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Epic Medical Concepts & Innovations 1505
Leica Microsystems 1601
National Institutes of Health 2001
600 aisle
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800 aisle
900 aisle
1300 aisle
1400 aisle
1500 aisle
1600 aisle
1800 aisle
1900 aisle
2000 aisle
Hamamatsu 1201
601
1401
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Entrance
Entrance

Neuroscience 2016

See You in San Diego

NOVEMBER 12–16

Society *for* Neuroscience