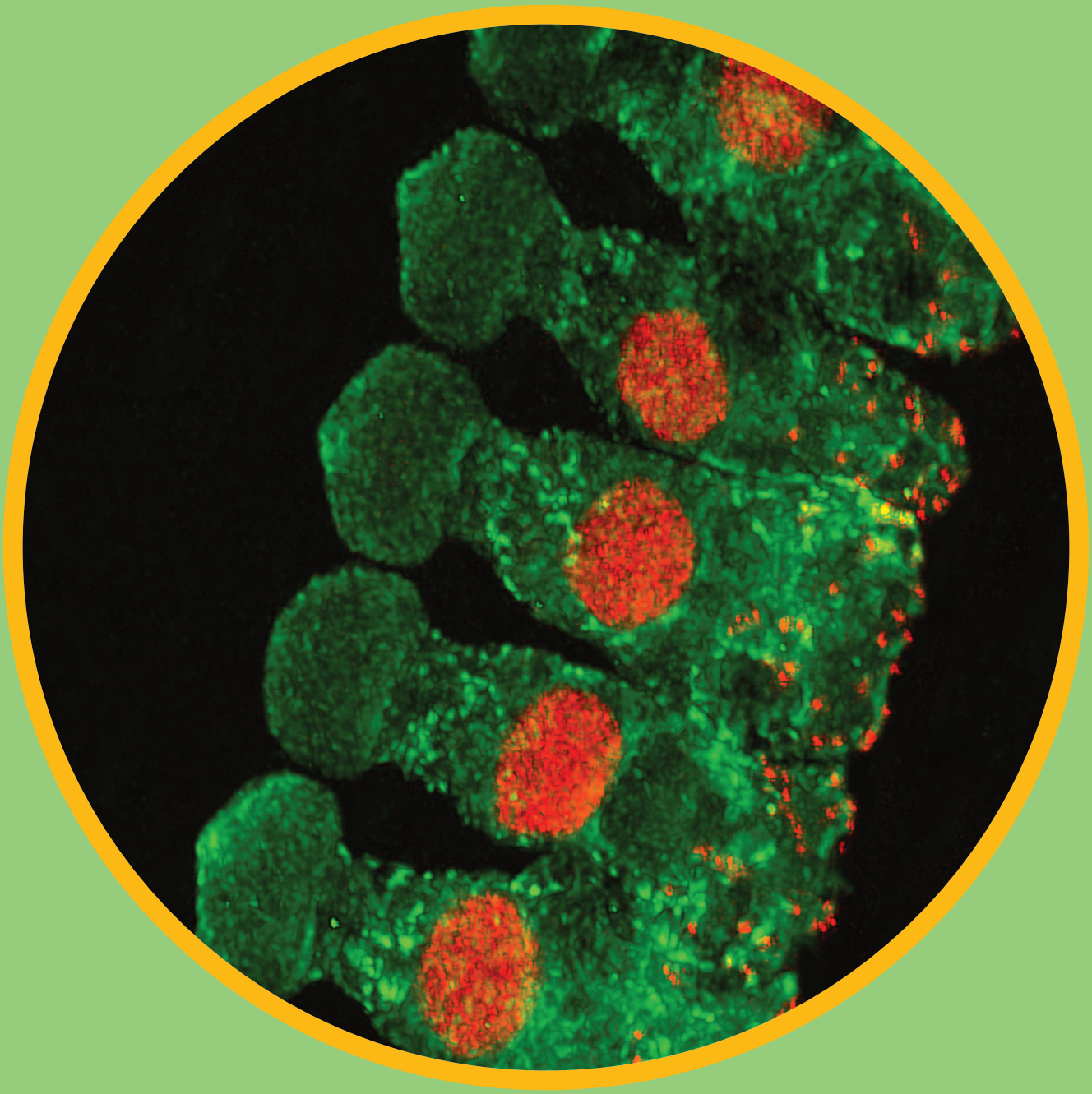
Wednesday

SAN DIEGO | NOVEMBER 3–7
SESSION LISTING 614–796

NEUROSCIENCE 2018



SfN Society for Neuroscience

Information at a Glance

Session information listed here is current as of September 19, 2018.
See SfN.org for the most up-to-date annual meeting information.

Important Phone Numbers

Annual Meeting Headquarters Office

Logistics and Programming

San Diego Convention Center:
Sails Pavilion
Logistics: (619) 525-6200
Programming: (619) 525-6205

Volunteer Leadership Lounge

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

Annual Meeting Information Booths

San Diego Convention Center

Lobby A: (619) 525-6224
Lobby D: (619) 525-6225
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Press Office

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Room 15B
(619) 525-6230

Exhibit Management

San Diego Convention Center:
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(619) 525-6240

First Aid and Hospital Numbers

First Aid Room

San Diego Convention Center:
Lobby C
(619) 525-6211

Scripps Mercy Hospital

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

Sharp Rees – Stealy Downtown
San Diego Urgent Care

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

Key to Poster Floor by Themes

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

Theme

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

NOTE: Theme J Posters will be on display in Hall B beginning at 1 p.m. on Saturday, Nov. 3, and will remain posted until 5 p.m., Sunday, Nov. 4. One-hour presentations will occur either Saturday afternoon or Sunday morning.

Code of Conduct at SfN Events

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

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

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

Cover Image: This confocal image shows rat cochlear inner hair cells with their synaptic ribbons in an organ of Corti wholemount preparation. Hair cells were immunostained with antibodies that recognize the hair cell marker Myosin VIIa (green) and CtBP2 (red), which marks the presynaptic ribbon complex.
Courtesy with permission: *Journal of Neuroscience* 20 July 2016, 36 (29): 7740–7749.

Complete Session Listing

Wednesday AM

LECTURE *San Diego Convention Center*

614. Biochemical Computation in Postsynaptic Compartments: Implications for Synaptic Plasticity, Learning, and Memory — CME

Wed. 8:30 AM - 9:40 AM — SDCC Ballroom 20

Speaker: R. YASUDA, *Max Planck Florida Inst. for Neurosci.*

Dendritic spines are postsynaptic compartments that contain biochemical signaling cascades important for synaptic plasticity, learning and memory. Signaling events in dendritic spines are mediated by molecular networks composed of hundreds of signaling proteins. This lecture will discuss how the spatiotemporal dynamics of these networks play roles in transforming rapid Ca2+ pulses into long-lasting protein activity, which is coordinated throughout different subcellular compartments, necessary for the induction of synaptic plasticity.

SYMPOSIUM *San Diego Convention Center*

615. Multiple Axes of Dopamine Systems for Behavioral Controls: From Fly Via Rodent to Monkey — CME

Wed. 8:30 AM - 11:00 AM — SDCC 6A

Chair: M. WATABE-UCHIDA, *Harvard University*
Co-Chair: O. HIKOSAKA, *National Eye Institute*

Across the animal kingdom, dopamine plays a central role in regulating diverse flexible and habitual behaviors. This symposium brings together researchers using different models, from invertebrates to primates, to discuss how multiple dopamine systems work in concert to generate appropriate behavioral control. This comparative framework will highlight conserved and divergent organizational principles across dopamine systems and how they confer flexibility to neural circuits and behavior.

8:30 **615.01** Introduction.

8:35 **615.02** Dopaminergic modulation at multiple time-scales in *Drosophila.* V. RUTA. *The Rockefeller Univ.*

9:10 **615.03** Source-target topography and functional diversity of dopamine substantia nigra neurons in mice. J. ROEPER. *Goethe Univ. Frankfurt.*

9:45 **615.04** Separate dopamine systems reinforce behavioral choice along value and threat axes in mice. M. WATABE-UCHIDA. *Harvard Univ.*

10:20 **615.05** Two groups of monkey dopamine neurons for flexible and stable decisions. O. HIKOSAKA. *Natl. Eye Inst.*

10:55 **615.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

616. Mental Structures and Sequences: Evolutionary Solutions From Birds to Primates — CME

Wed. 8:30 AM - 11:00 AM — SDCC 6B

Chair: C. I. PETKOV, *Newcastle University*
Co-Chair: A. FRIEDERICI, *Max Planck Institute*

The human brain appears to be specialized for certain operations. To what extent aspects of our neurobiology can find realistic animal models constitutes a pressing issue for neuroscience. This is most salient in the domain of language, a uniquely human neurocognitive capacity. This symposium will review the revolution taking place in understanding the neurobiology of language as it includes how the brain creates mental structures and which aspects engage evolutionarily conserved or convergent neural mechanisms.

8:30 **616.01** Introduction.

8:35 **616.02** Language in our brain: The origins of a uniquely human capacity. A. FRIEDERICI. *Max Planck Inst.*

9:10 **616.03** The temporal structure of perception and production: An evolutionary linking hypothesis. D. POEPPEL. *New York Univ.*

9:45 **616.04** Structured sequence learning, language evolution, and primate fronto-temporal neural systems. C. I. PETKOV. *Newcastle Univ.*

10:20 **616.05** Conserved neural coding principles and generative models for songbird communication and natural language. T. GENTNER. *UCSD.*

10:55 **616.06** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

617. Human Stem Cell Models to Validate Rare and Common Variants Contributing to Neurodevelopmental Disorders — CME

Wed. 8:30 AM - 11:00 AM — SDCC 6C

Chair: K. BRENNAND, *Icahn School of Medicine at Mount Sinai*

As genetic studies identify a growing list of variants underlying neuropsychiatric disease and addiction, unraveling how these risk factors interact within and between the diverse cell types of the brain becomes critical. This minisymposium will discuss recent molecular and phenotypic insight uncovered using hiPSC-derived neurons and glia, with a focus on integrating these findings with datasets generated from consortia-led genomic and post-mortem studies of large patient cohorts.

8:30 **617.01** Introduction.

8:35 **617.02** Functional inference and CRISPR editing of noncoding risk variants of schizophrenia in hiPSC model. J. DUAN. *NorthShore Univ. Healthsystem/University of Chicago.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:55 **617.03** Interrogating convergent cell and molecular phenotypes across neuropsychiatric disorders with iPSC technology. A. E. URBAN. *Stanford Univ.*

9:15 **617.04** Using induced human neurons to study addiction related gene variants. Z. PANG. *Rutgers.*

9:35 **617.05** Convergence of independent DISC1 mutations on impaired neurite growth via decreased UNC5D expression. T. L. YOUNG-PEARSE. *Brigham and Women's Hospital, Harvard Med. Sch.*

9:55 **617.06** Evaluating the contribution of rare and common variants to genetic risk for schizophrenia using stem cells. K. BRENNAND. *Icahn Sch. of Med. at Mount Sinai.*

10:15 **617.07** Using human stem cell models to elucidate molecular mechanisms in Autism Spectrum Disorder. L. BARRETT. *Broad Inst.*

10:35 **617.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

618. Novel Molecular Targets for the Treatment of Pain — CME

Wed. 8:30 AM - 11:00 AM — SDCC 6E

Chair: J. M. STREICHER, *University of Arizona*
Co-Chair: T. LARGENT-MILNES, *University of Arizona*

The opioid crisis and the side effects of opioid therapy have illustrated the great medical and scientific need for new pain therapies that do not have the drawbacks of opioids. Covering topics ranging from downstream molecular signaling effectors of opioid receptors to new receptor targets, this minisymposium will highlight recent advances in finding new molecular targets for the treatment of pain and explore how these targets can be manipulated to improve pain and/or opioid therapy.

8:30 **618.01** Introduction.

8:35 **618.02** Spinal cord heat shock protein 90 as a novel target to enhance opioid analgesia and reduce side effects. J. M. STREICHER. *Univ. of Arizona.*

8:55 **618.03** Sex differences in targeting ion anti-porters for pain. T. LARGENT-MILNES. *Univ. of Arizona.*

9:15 **618.04** Opioid and neurokinin receptor signaling platforms for pain and analgesia. M. CANALS. *Monash Univ.*

9:35 **618.05** ● Anti-nociceptive potential for novel allosteric modulators of the type 1 cannabinoid receptor. R. LAPRAIRIE. *Univ. of Saskatchewan.*

9:55 **618.06** Molecular targets downstream of A_3AR agonism in chronic pain states. T. DOYLE. *St. Louis Univ.*

10:15 **618.07** ● Resolving inflammatory pain by macrophages and specialized pro-resolving mediators. R. JI. *Duke Univ.*

10:35 **618.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

619. The Endolysosomal System and Proteostasis: From Development to Degeneration — CME

Wed. 8:30 AM - 11:00 AM — SDCC 28A

Chair: H. ZHANG, *Rutgers Robert Wood Johnson Medical School*
Co-Chair: B. R. WINCKLER, *University of Virginia*

Intracellular membrane trafficking represents a very unique challenge for neurons because of their highly elaborate cellular architecture. Genes regulating endocytosis and subsequent endosomal routing, in particular, are frequently linked to neurological diseases. This minisymposium will discuss novel insight into the mechanisms of endosomal trafficking in neurons, the effects on proteostasis, and the functional impact on neuronal development and degeneration.

8:30 **619.01** Introduction.

8:35 **619.02** Proteostasis in dendrites: Regulating endosomal flux for lysosomal degradation. B. R. WINCKLER. *Univ. of Virginia.*

8:55 **619.03** Systems analysis of neurodevelopmental and neurodegenerative mechanisms in Menkes disease. V. FAUNDEZ. *Emory Univ.*

9:15 **619.04** Neuronal autophagy and intercellular regulation of homeostasis in the brain. S. MADAY. *Univ. of Pennsylvania.*

9:35 **619.05** Axonal transport and autophagy-lysosomal regulation in Alzheimer's disease. Q. CAI. *Rutgers, The State Univ. of New Jersey.*

9:55 **619.06** Endosomal trafficking defects and Alzheimer's disease. C. ALMEIDA. *Nova Univ. of Lisbon.*

10:15 **619.07** Par polarity proteins in endolysosomal trafficking and Alzheimer's disease. H. ZHANG. *Robert Wood Johnson Med. School, Rutgers Univ.*

10:35 **619.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

620. Neural Proteomics in Synapse Development and Function — CME

Wed. 8:30 AM - 11:00 AM — SDCC 29D

Chair: B. GRILL, *Scripps Research Institute*
Co-Chair: K. A. MARTEMYANOV, *Scripps Research Institute*

An explosion of proteomic approaches is increasingly playing a greater role in understanding synapse biology, via identification of novel protein interactions and signaling networks that regulate synapses. This minisymposium will explore synapse biology across model systems, with insight stemming from proteomics. Cutting-edge experimental strategies for quantitative profiling and interactome mapping reveal biology underlying synapse formation, function, and its role in physiology and disease.

8:30 **620.01** Introduction.

8:35 **620.02** Toward single-synapse proteome analysis. S. G. GRANT. *The Univ. of Edinburgh.*

8:55 **620.03** Mapping trans-synaptic interactions involved in function and wiring of the first visual synapse. K. A. MARTEMYANOV. *Scripps Florida.*

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9:15 **620.04** Chemogenetic and optogenetic tools for characterizing neuronal proteomes and transcriptomes. A. TING. *Stanford Univ.*

9:35 **620.05** Measuring neuron specific striatal synaptic proteomes. J. SAVAS. *Northwestern Univ.*

9:55 **620.06** Cell-type specific neuronal proteomes. E. M. SCHUMAN. *Max Planck Inst. for Brain Res.*

10:15 **620.07** Deciphering the molecular mechanisms of synapse formation and axon termination using *C. elegans.* B. GRILL. *The Scripps Res. Inst.*

10:35 **620.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

621. Cortical Control of Locomotion and Posture — CME

Wed. 8:30 AM - 11:00 AM — SDCC 31C

Chair: I. N. BELOOZEROVA, *Barrow Neurological Inst*

Understanding mechanisms of complex natural movements is the ultimate goal of motor systems neuroscience. This minisymposium will discuss recent advances in locomotion and posture research gained in the freely behaving cat. Focusing on parietal, pre-motor, and motor cortical mechanisms of full body movements, it will include a new analytical description of corticospinal processing that allows steering, and a description of powered limb prosthesis integrated with nerves and muscles.

8:30 **621.01** Introduction.

8:35 **621.02** The inverse model of the central pattern generator reveals motor systems dynamics of rhythmic and reaching movements. S. YAKOVENKO. *West Virginia Univ.*

8:55 **621.03** Gaze behavior during walking. T. J. RIVERS. *Univ. of Kansas.*

9:15 **621.04** Contribution of cat premotor areas to visually-guided locomotion. T. NAKAJIMA. *Asahikawa Med. Univ.*

9:35 **621.05** Parietal cortex contributions to working memory-guided obstacle avoidance. C. WONG. *Univ. of Western Ontario.*

9:55 **621.06** Motor cortex for step accuracy and stability. B. FARRELL. *Georgia State Univ.*

10:15 **621.07** Cat locomotion with a powered prosthesis integrated with residual bone, skin, sensory nerves, and muscles. H. PARK. *Texas A&M Univ.*

10:35 **621.08** Closing Remarks.

LECTURE *San Diego Convention Center*

622. A Genetic Roadmap to Understanding Auditory Perception Mechanisms — CME

Wed. 10:00 AM - 11:10 AM — SDCC Ballroom 20

Speaker: C. PETIT*, Inst. Pasteur, Collège de France.*

The molecular mechanisms underlying auditory system development and function remained unknown until they were unlocked by genetic dissection. This lecture will show how the hundreds of causal genes for deafness have revealed the molecular basis of sound detection and processing in the cochlea. Recent results extend genetic dissection to the identity and functional connectivity of auditory cortex neuronal populations. How pleiotropic functions of deafness genes are likely to affect future treatments and shed light on the evolution of this sensory system will be discussed.

LECTURE *San Diego Convention Center*

623. Reward Processing by the Dorsal Raphe — CME

Wed. 11:30 AM - 12:40 PM — SDCC Ballroom 20

Speaker: M. LUO*, Natl. Inst. of Biol. Sciences, Beijing.*

Rewards fundamentally influence animal survival and well-being. The dorsal raphe nucleus (DRN) in the midbrain is a major center for serotonin neurons. The questions of whether and how the DRN and the serotonin system process reward signals have remained controversial. This lecture will present recent evidence to argue that DRN serotonin neurons likely encode “beneficialness,” or how much potential benefit the current state might bring to an individual. This simple theory may explain the diverse roles of serotonin in modulating behaviors and intervening in psychiatric disorders.

NANOSYMPOSIUM

624. Stem Cells and Disease Modeling: Neurodevelopment

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 30E

8:00 **624.01** Identifying the role of TAOK2 in brain development and the 16p11.2 CNV microdeletion. N. MURTAZA; S. WHITE; E. DENAULT; K. BRENNAND; J. ELLIS; S. SCHERER; K. K. SINGH*. *McMaster Univ., Hosp. for Sick Children, Icahn Sch. of Med. at Mount Sinai.*

8:15 **624.02** Cerebral organoid and animal models targeting the pathway dysregulated by 16p11.2 autism CNV. L. M. IAKOUCHEVA*; J. URRESTI; M. AMAR; P. MORAN LOSADA; P. ZHANG; P. NEGRAES; N. YU; C. TRUJILLO; J. YATES III; A. R. MUOTRI. *Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego, Scripps Res. Inst.*

8:30 **624.03** Modeling neurodevelopmental etiology of psychiatric disorders in human forebrain organoids. X. QIAN*; K. M. CHRISTIAN; G. MING; H. SONG. *Perelman Sch. of Medicine, Univ. of Pennsyl, Johns Hopkins Univ. Sch. of Med., Perelman Sch. of Medicine, Univ. of Pennsylvania.*

8:45 **624.04** High throughput screening of hiPSC derived brain organoids to probe for phenotypes in idiopathic autism. A. W. PHILLIPS; J. NESTOR; M. DURENS*; M. W. NESTOR. *The Hussman Inst. for Autism, Hussman Inst. For Autism, Hussman Inst. for Autism, The Hussman Inst. For Autism.*

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9:00 **624.05** Idiopathic and 16p11.2 deletion autism neural precursor cells (npcs) exhibit common defects in neurite outgrowth, cell migration, and mTOR signaling. S. PREM*; C. C. PENG; B. DEV; X. ZHOU; R. J. CONNACHER; M. WILLIAMS; P. MATTESON; M. MEHTA; J. H. MILLONIG; E. M. DICICCO-BLOOM. *Rutgers Robert Wood Johnson Med. Sch., Rutgers Univ., Rutgers Robert Wood Johnson Med. Sch., Rutgers Robert Wood Johnson Med. Sch., Rutgers Univ., Rutgers Univ., Rutgers Robert Wood Johnson Med. Sch.*

9:15 **624.06** Development and characterization of an innovative model of preterm hypoxic injury using cerebral organoids. N. DAVIAUD*; R. H. FRIEDEL; H. ZOU. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

9:30 **624.07** Studying prenatal exposure to drugs of abuse using cerebral organoid models of early neural development. D. ZHANG*; F. JACOB; S. WONG; Y. WENG; J. DANI; M. DE BIASI; K. CHRISTIAN; H. SONG; G. MING. *Perelman Sch. of Med. at the Univ. of P.*

9:45 **624.08** Modeling Rett syndrome using human brain organoids. I. PARK*; Y. XIANG; Y. TANAKA; B. CAKIR; B. PATTERSON. *Yale Univ., Dept. of Genetics, Yale Sch. of Med., Yale Univ.*

10:00 **624.09** Network and molecular changes during neuronal differentiation in iPSC derived from idiopathic autism patients. Y. KIM*; D. N. AMATYA; S. B. LINKER; C. MARCHETTO; F. H. GAGE. *Natl. Ctr. for Mental Hlth., Salk Inst., Salk Inst. For Biol. Studies, Salk Inst., Salk Inst.*

10:15 **624.10** Altered network connectivity in Rett syndrome stem cell-derived cortical neuron networks. R. S. MOK*; L. DUONG; M. MUFTEEV; D. C. RODRIGUES; L. DEJONG; W. WEI; A. PIEKNA; P. PASCERI; J. C. MARTINEZ-TRUJILLO; J. ELLIS. *Hosp. for Sick Children, Robarts Res. Inst., Univ. of Western Ontario, The Hosp. for Sick Children.*

10:30 **624.11** Mutations in ACTL6B cause autism and epilepsy and lead to loss of dendrites in human neurons. S. C. BELL*; J. ROUSSEAU; H. PENG; M. JEFRI; H. WU; J. THEROUX; Z. AOUABED; S. EHRESMANN; C. ERNST; P. CAMPEAU. *McGill Univ., Univ. of Montreal.*

10:45 **624.12** Using single-cell rna sequencing to characterize the developing human neuroepithelia. A. BHADURI*; M. G. ANDREWS; T. NOWAKOWSKI; A. R. KRIEGSTEIN. *Univ. of California San Francisco, UCSF, Univ. of California San Francisco, Univ. of California San Francisco.*

11:00 **624.13** Primary cilia dysfunction in the mouse model of fragile X syndrome (FXS): A novel role of FMRP on primary ciliogenesis. B. LEE*; S. PANDA; H. LEE. *UTHSCSA.*

11:15 **624.14** ● Cellular metabolic switches as checkpoints for tracking cellular transitions during sensory neuronal differentiation from iPSCs and neural precursors. K. SINGH; Y. KAM; S. MOHAMMAD; S. H. WHITE; K. K. SINGH; E. SZABO*. *McMaster Univ., Agilent Technologies, McMaster Univ., McMaster Univ.*

NANOSYMPOSIUM

625. Epilepsy: Human Studies

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 32

8:00 **625.01** Comparison of brain MRI morphometry features in epilepsy. C. SAIOTE*; T. R. HENRY; M. C. PARK. *Univ. of Minnesota.*

8:15 **625.02** Properties of interictal background EEG are potential biomarkers of seizure onset zone. B. HUNT*; C. G. FINK; Z. T. IRWIN; C. A. CHESTEK; W. C. STACEY; S. V. GLISKE. *Univ. of Michigan, Ohio Wesleyan Univ., Univ. of Michigan, Univ. of Michigan.*

8:30 **625.03** ● Ripples (80-200 Hz) in the human mesial temporal lobe exhibit different profiles of phase-amplitude coupling in relation to slow waves. S. A. WEISS*; I. SONG; S. VANGALA; Z. J. WALDMAN; I. FRIED; M. R. SPERLING; A. BRAGIN; J. ENGEL, Jr.; Y. NIR; R. STABA. *Thomas Jefferson Univ., Thomas Jefferson Univ., UCLA, UCLA Sch. Med., David Geffen Sch. Med. UCLA, UCLA, Tel Aviv Univ.*

8:45 **625.04** ● The intracranial EEG spike rate is inversely proportional to extracellular glutamate in patients with intractable epilepsy. M. S. SANDHU*; N. GANESH; I. I. GONCHAROVA; E. C. DAMISAH; C. ONG; E. L. PEREZ; O. PETROFF; L. STAIB; L. HIRSCH; D. D. SPENCER; T. EID; H. P. ZAVERI. *Yale Univ., Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

9:00 **625.05** Altered modularity and local connectivity in sudden unexpected death in epilepsy. L. A. ALLEN; R. M. HARPER; M. GUYE; R. KUMAR; J. OGREN; S. B. VOS; L. LEMIEUX; S. D. LHATOO; R. K. HARPER*; C. L. WILSON; B. DIEHL. *Univ. Col. London, Univ. of California Los Angeles, Aix Marseille Univ., Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. Hosp. Case Med. Ctr., Univ. of California Los Angeles Dept. of Neurobio., Univ. of California Los Angeles.*

9:15 **625.06** An altered perisomatic innervation of principal cells contributes to the higher synchrony of population events in the epileptic human neocortical slice preparations. E. Z. TÓTH*; L. ERőSS; L. ENTZ; A. BAGÓ; D. FABÓ; I. ULBERT; L. WITTNER; K. TÓTH. *Res. Ctr. For Natural Sciences, HAS, Semmelweis Univ., Natl. Inst. of Clin. Neurosci., Pázmány Péter Catholic Univ.*

9:30 **625.07** Inflammation and long-term epilepsy associated tumours (LEATs). R. R. HAMMOND*; D. COSMA; E. M. CHAPMAN; M. J. MEYER; D. R. GORASSINI; A. PARRENT. *Western Univ., Western Univ., Univ. of Alberta, King's Univ. Col.*

9:45 **625.08** ▲ PADI4 protein expression in human brain from temporal lobe epilepsy patients. S. N. WEISS*; T. N. FERRARO; R. J. BUONO. *Cooper Med. Sch. of Rowan Univ.*

10:00 **625.09** Plasma tiRNA fragments are elevated in advance of seizures in human epilepsy. J. H. M. PREHN; M. C. HOGG; R. RAOOF; N. MONSEFI; H. EL NAGGAR; N. DELANTY; S. BAUER; F. ROSENOW; D. C. HENSHALL*. *Royal Col. Surgeons Ireland, Beaumont Hosp., Epilepsy Ctr. Hessen, Epilepsy Ctr. Frankfurt Rhine-Main.*

NANOSYMPOSIUM

626. Alzheimer's Disease and Other Dementias: APP and Metabolites: Cleavage and Processing

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 33

8:00 **626.01** Age-dependent elevation of APP is associated with reduced BACE1-mediated processing of CHL1 in both APP transgenic and knock-in mouse models of AD. W. KIM*; S. WU; T. SAITO; T. C. SAIDO; G. TESCO. *Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med., Brain Sci. Inst, RIKEN, RIKEN Brain Sci. Inst.*

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* Indicates abstract's submitting author

8:15 **626.02** GGA3 gene knock out and a novel AD-linked GGA3 gene mutation result in BACE1 accumulation in axonal swellings. S. LOMOIO*; R. WILLEN; K. Z. HO; W. KIM; E. K. ROBINSON; R. E. TANZI; G. TESCO. *Tufts Univ. Sch. of Med., Massachusetts Gen. Hospital, Harvard Med. Sch.*

8:30 **626.03** Disruption of endothelin-converting enzyme activity promotes the accumulation and aggregation of Aβ produced within endosomal-lysosomal vesicles and increases Aβ associated with exosomes. E. A. ECKMAN*; D. CLAUSEN; R. PEREZ-GONZALEZ; E. LEVY; J. PACHECO-QUINTO. *Biomed. Res. Inst. of New Jersey, Nathan S. Kline Inst. for Psychiatric Res., NYU Langone Med. Center, Nathan S. Kline Inst. for Psychiatric Res.*

8:45 **626.04** ● Conditional depletion of BACE1 in the adult mouse, characterization of behavioral and biochemical phenotypes. S. LOMBARDO*; A. TARR; T. ROSAHL; M. E. KENNEDY; G. TESCO. *Tufts Univ., Tufts Univ. Sch. of Med., Merck & Co., Merck Res. Labs.*

9:00 **626.05** ● Partial loss of BACE1's activity protects olfactory neuronal death after traumatic axonal injury. M. W. ALBERS*; L. CAO; S. HERRICK; I. COSTANTINO; S. REITZ; A. NEE; A. KEIM; A. D. ALBERS; M. E. KENNEDY. *Massachusetts Gen. Hosp., Masschusetts Gen. Hosp., Endicott Col., Merck Res. Labs.*

9:15 **626.06** BACE-1 regulate amyloid Beta (1-42)-induced neuroinflammation by modulating microglial function. N. SINGH*; X. HU; R. YAN. *UCONN Hlth., UCONN Hlth.*

9:30 **626.07** Axonal organization defects in the hippocampus of adult conditional BACE1 knockout mice. R. J. VASSAR*. *Northwestern Univ. Feinberg Sch. of Med.*

9:45 **626.08** Germline ABCC1 mutation is associated with altered APP processing in a familial case of late-onset Alzheimer's disease. W. M. JEPSEN*; M. DE BOTH; A. L. SINIARD; A. HENDERSON-SMITH; K. RAMSEY; R. CASELLI; G. SERRANO; T. G. BEACH; M. HUENTELMAN. *Translational Genomics Res. Inst., Mayo Clin., Banner Sun Hlth. Res. Inst.*

10:00 **626.09** ● Sez6 protein family members are required for normal neuronal development and function: Implications for BACE inhibition. A. NASH*; B. HRUPKA; H. GIJSEN; M. PIGONI; S. F. LICHTENTHALER; H. TAKESHIMA; K. MUNRO; J. M. GUNNERSEN. *The Univ. of Melbourne, Janssen Pharmaceutica, DZNE - German Ctr. For Neurodegenerative Dis., Kyoto Univ.*

10:15 **626.10** Early synaptic dysfunction in aging and Alzheimer's disease. L. V. LOPES*; M. TEMIDO FERREIRA; D. G. FERREIRA; J. E. COELHO; D. BLUM; H. MARIE; T. F. OUTEIRO; P. A. POUSINHA. *Inst. de Medicina Molecular, Fac Med. Lisbon, Inst. de Medicina Mol., Inst. De Medicina Mol., Inserm UMR_S1172, Inst. de Pharmacologie Moleculaire et Celluaire (IPMC), Univ. Med. Ctr. Goettingen, CNRS IPMC UMR 7275.*

10:30 **626.11** LIMK1 depletion prevents deficits in an APP transgenic mouse model of Alzheimer's disease. L. M. ITTNER*; A. VAN HUMMEL; A. A. ITTNER; Y. D. KE. *Univ. of New South Wales.*

NANOSYMPOSIUM

627. Alzheimer's Disease and Other Dementias: Abeta and Tau Mechanisms and Therapeutics

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 7

8:00 **627.01** A new method to evaluate γ-secretase trimming activity in development of disease-modifying drugs targeting γ-secretase. S. TAGAMI*; K. YANAGIDA; T. IKEUCHI; M. IKEDA; M. OKOCHI. *Osaka Univ. Grad. Sch. of Med., Niigata University, Brain Res. Inst.*

8:15 **627.02** The role of pannexin 1 in Alzheimer's disease. Y. ZHANG*; W. SIN; F. CAI; J. BECHBERGER; C. NAUS; W. SONG. *Univ. of British Columbia.*

8:30 **627.03** Vasoactivity as the driving force for paravascular clearance in the awake Alzheimer's model mouse brain. S. J. VAN VELUW*; S. S. HOU; M. CALVO RODRIGUEZ; M. ARBEL-ORNATH; A. SNYDER; M. P. FROSCH; S. M. GREENBERG; B. J. BACSKAI. *Massachusetts Gen. Hosp., Mass. Gen. Hosp. and Harvard Med. Sch., MGH, Mass Gen. Hosp.*

8:45 **627.04** An Isoaspartate-Abeta specific antibody attenuates Alzheimer's disease-like pathology and behavioral deficits in 5xFAD transgenic mice. S. SCHILLING*; K. GNOTH; A. PIECHOTTA; S. BARENDRECHT; S. GEIßLER; E. JANSIG; R. EICHENTOPF; V. NYKIEL; H. DEMUTH; H. CYNIS; J. RAHFELD. *Fraunhofer IZI-MWT.*

9:00 **627.05** Identification of neurotoxic cross-linked Aβ heterodimers in Alzheimer's disease brain. W. HONG*; G. BRINKMALM; T. O'MALLEY; W. LIU; Z. WANG; X. SUN; M. FROSCH; E. PORTELIUS; H. ZETTERBERG; K. BLENNOW; D. WALSH. *Brigham and Women'S Hosp. and Harvard Med. Sch., The Sahlgrenska Acad. at the Univ. of Gothenburg, Massachusetts Gen. Hosp. and Harvard Med. Sch.*

9:15 **627.06** ● Heterogeneity and predictability of tau seeding in the human brain, relevance for heterogeneity in clinical and neuropathological phenotypes and immunotherapy for Alzheimer's disease. S. DUJARDIN*; C. COMMINS; T. V. KAMATH; D. L. CORJUC; B. T. CORJUC; J. A. GONZALEZ; P. M. DOOLEY; S. L. DEVOS; B. D. MOORE; A. SERRANO-POZO; K. ATCHISON; M. P. FROSCH; F. ELWOOD; M. E. KENNEDY; B. T. HYMAN, MD,PhD. *Massachusetts Gen. Hospital, Harvard Med. Sc, Massachusetts Gen. Hospital, Harvard Med. Sc, Merck Res. Labs.*

9:30 **627.07** Physiological role of dendritic tau protein on AMPA receptor dynamics. M. KANATANI*; H. BANNAI; Y. SOEDA; S. MAEDA; A. TAKASHIMA. *Gakushuin Univ., JST PRESTO, RIKEN CBS, Gakushuin Univ., Keio Univ. Sch. of Med.*

9:45 **627.08** Peptidyl-prolyl isomerase, CyP40, disrupts tau fibrils. L. J. BLAIR*; J. D. BAKER; L. B. SHELTON; D. ZHENG; C. A. DICKEY. *USF Byrd Inst., Univ. of South Florida.*

10:00 **627.09** Tau phosphorylation undergoes circadian oscillations controlled by body temperature and disrupted by sleep deprivation. I. GUISLE*; M. GRATUZE; F. MORIN; V. MONGRAIN; S. HÉBERT; E. PLANEL, Jr. *CHUL, Univ. Laval, Ctr. for Advanced Res. in Sleep Med.*

10:15 **627.10** Characterization of Alzheimer's disease risk factors in a *C. elegans* model of tauopathy. S. J. BENBOW*; B. C. KRAEMER. *Veterans Affairs Puget Sound Hlth. Care Syst., Univ. of Washington Sch. of Med., Univ. of Washington, Univ. of Washington.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:30 **627.11** Role of MicroRNAs regulating expression of proteins involved in Alzheimer's disease. D. K. LAHIRI*; R. WANG; N. CHOPRA; B. MALONEY; N. H. GREIG; K. SAMBAMURTI. *Indiana Univ. Sch. of Med., Intramural Res. Program, Natl. Inst. On Aging, NIH, MUSC.*

NANOSYMPOSIUM

628. Parkinson's Disease: Mechanisms and Genetics

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 25

8:00 **628.01** DJ-1 is critical for the integrity and function of endoplasmic reticulum-mitochondria tethering. X. ZHU*; Y. LIU. *Case Western Reserve Univ.*

8:15 **628.02** Phoshorylation at Ser 65 diminishes calcium-dependent calpain cleavage of Parkin: Relevance to Parkinson's disease. F. CHEUNG; H. WANG; P. ROCKWELL; M. E. FIGUEIREDO-PEREIRA*. *Hunter Col., Hunter Col.*

8:30 **628.03** Enhancing mitochondrial biogenesis and function in Parkinson's disease. M. DELEIDI*; D. C. SCHÖNDORF; D. IVANYUK; P. BADEN; A. SANCHEZ-MARTINEZ; S. DE CICCO; C. YU; L. SCHWARZ; G. DI NAPOLI; V. PANAGIOTAKOPOULOU; S. NESTEL; B. HEIMRICH; T. GASSER; A. WHITWORTH. *German Ctr. for Neurodegenerative Diseases/Dzne, DZNE Tübingen, DZNE, MRC-MBU Cambridge, Lukas Schwarz, Univ. of Freiburg.*

8:45 **628.04** ● In silico simulation of parkin cellular pathways: Elucidating mechanisms of Parkinson's disease. J. C. HALL*; B. HARDAGE; J. W. RYAN; A. D. LEE; B. BEHROUZ. *NeuroInitiative.*

9:00 **628.05** The small GTPase Rin modulates alpha-synuclein inclusions: Implications for familial and idiopathic Parkinson's disease. J. OBERGASTEIGER*; G. FRAPPORTI; C. ÜBERBACHER; C. ASCIONE; C. CORTI; A. CASTONGUAY; M. LÉVESQUE; M. MORARI; A. A. HICKS; P. P. PRAMSTALLER; M. VOLTA. *Inst. For Biomedicine, Eurac Res., Dept. of psychiatry and neurosciences, Univ. Laval, Canada, Univ. of Ferrara.*

9:15 **628.06** ● Exploration of the modifier role of GBA in patient-derived cellular models of familial Parkinson's disease. Z. HANSS*; I. BOUSSAAD; F. MASSART; N. CASADEI; S. GOLDWURM; R. KRÜGER. *Univ. of Luxembourg, Univ. of Tübingen, Univ. of Turin, Parkinson Institute, IstitutiClinici di Perfezionamento, Ctr. Hospitalier de Luxembourg.*

9:30 **628.07** Impaired autophagic clearance in patient-derived dopaminergic neurons carrying a Parkinson's disease-linked mutation in VPS35. S. LARSEN*; P. A. BARBUTI; I. BOUSSAAD; P. ANTONY; G. D. MELLICK; R. KRÜGER. *Luxembourg Ctr. for Systems Biomedicine, Griffith Inst. for Drug Discovery, Ctr. Hospitalier de Luxembourg.*

NANOSYMPOSIUM

629. Neurotoxicity, Inflammation, and Neuroprotection: Neuroinflammation: Neurodegeneration

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 24

8:00 **629.01** Time-course of neuropathological events in hyperhomocysteinemic amyloid depositing mice. D. HAWTHORNE; E. M. WEEKMAN*; T. L. SUDDUTH; B. R. PRICE; A. WOOLUMS; D. M. WILCOCK. *Univ. of Kentucky.*

8:15 **629.02** ● Aberrant resident memory CD8 T cells mediate pathological neurodegeneration and age-related cognitive decline. C. J. WHEELER*; A. PANWAR; A. RENTSENDORJ; M. JHUN; R. CORDNER; N. YEAGER; R. PECHNICK; G. DUVALL; A. MARDIROS; D. GOLCHIAN; H. SCHUBLOOM; L. JIN; Y. KORONYO; M. KORONYO-HAMAOUI; K. L. BLACK; R. COHEN. *Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., Western Univ. Med. Sch., City of Hope Med. Ctr., M.I.N.D. Institute, Univ. of California Davis, Emory Univ.*

8:30 **629.03** The bright side of osteopontin/SPP1 in Alzheimer's disease: Immunomodulation, Aβ clearance, and synaptic preservation. M. KORONYO-HAMAOUI*; Y. KORONYO; J. SHEYN; D. FUCHS; S. LI; K. L. BLACK; A. RENTSENDORJ. *Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., Wenzhou Uinversity.*

8:45 **629.04** A novel mixed model of dementia using an Alzheimer's rat transgenic model with hypertension. S. A. FRAUTSCHY*; C. ZHU; M. R. JONES; S. HU; X. ZUO; C. OKUMA; P. DENVER; P. KIM; E. KO; D. CASTRO; H. V. VINTERS; R. M. COHEN; G. M. COLE. *UCLA and VA, Emory.*

9:00 **629.05** Tau pathology-induced insulin resistance in animal models of Alzheimer`s disease. R. A. GONÇALVES*; N. WIJESEKARA; S. E. BOEHNKE; N. M. LYRA E SILVA; S. T. FERREIRA; D. P. MUNOZ; P. E. FRASER; F. G. DE FELICE. *Federal Univ. of Rio De Janeiro, Ctr. for Neurosci. Studies, Queens Univ., Tanz Ctr. for Res. in Neurodegenerative Diseases, Univ. of Toronto, Krembil Discovery Tower, Federal Univ. of Rio De Janeiro.*

9:15 **629.06** Neuronal pentraxins: Synaptic-derived plasma biomarkers in Alzheimer's disease. Q. MA*; E. TENG; X. ZUO; M. JONES; B. TETER; E. Y. ZHAO; C. ZHU; F. RELAMPAGOS; T. BILOUSOVAD; K. H. GYLYS; L. G. APOSTOLOVAE; M. J. LADU; M. A. HOSSAING; S. A. FRAUTSCHY; G. COLE. *UCLA, Indiana Univ. Sch. of Med., Univ. of Illinois at Chicago, Chicago, IL, USA, The Johns Hopkins Univ. Sch. of Medicine,.*

9:30 **629.07** ● The Alzheimer amyloid-β protein impairs peripheral glucose tolerance via corticosteroid perturbation. R. D. HENDRIX; A. K. ODLE; G. V. CHILDS; S. W. BARGER*. *Univ. of Arkansas for Med. Sci., Univ. of Arkansas for Med. Sci., Univ. of Arkansas for Med. Sci., Univ. of Arkansas for Med. Sci., Central Arkansas Veterans Healthcare Syst.*

9:45 **629.08** TDP43promotesneurodegenerationby impairing theneurovascular unit. M. B. SELENICA*. *Col. of Pharmacy, Byrd Alzheimer Institute, USF.*

10:00 **629.09** ● ApoE4 aggregation and hypolipidation is implicated in Alzheimer's disease pathology in cellular, animal and human studies. V. RAWAT; O. LIRAZ; J. JOHANSSON; H. CHUI; M. G. HARRINGTON; D. M. MICHAELSON; H. N. YASSINE*. *USC, Tel Aviv Univ., Resverlogix Corp, Huntington Med. Res. Inst., Tel-Aviv Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:15 **629.10** ApolipoproteinE isotype-dependent modulation of microRNA-146a transcription. B. TETER*; A. VERDUZCO; M. LADU; P. M. SULLIVAN; S. A. FRAUTSCHY; G. M. COLE. *Univ. Calif. Los Angeles, Veterans Admin. GLAHS, UCLA, Scripps Res. Inst., Univ. of Illinois, Chicago, Duke University, Durham Veterans Affairs Med. Ctr., Univ. Calif. Los Angeles, Veterans Admin. GLAHS.*

10:30 **629.11** Identification and functional significance of tau citrullination in models of tauopathies. D. LEE; Z. QUADRI; A. KOVALENKO; C. MA; M. WATLER; J. CALAHATIAN; L. SANDUSKY-BELTRAN; J. B. HUNT; L. B. SHELTON*; M. B. SELENICA. *Univ. of South Florida, New York Univ., Univ. of South Florida.*

NANOSYMPOSIUM

630. The Chemical Senses : Dynamics and Plasticity of Olfactory and Gustatory Coding

Theme D: Sensory Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 23

8:00 **630.01** Active sampling optimizes processing of changes in odor concentration. R. SHUSTERMAN*. *Univ. of Oregon, Univ. of Haifa.*

8:15 **630.02** A mirror symmetric excitatory link coordinates odor maps across olfactory bulbs. M. GROBMAN; T. DALAL; H. LAVIAN; R. SHMUEL; K. BELELOVSKY; A. KORNGREEN; R. HADDAD*. *Bar ilan university, Bar Ilan Univ.*

8:30 **630.03** Brief sensory deprivation triggers cell type-specific structural and functional plasticity in olfactory bulb neurons. E. GALLIANO*; C. HAHN; D. J. BYRNE; M. S. GRUBB. *King's Col. London, Univ. of Cambridge.*

8:45 **630.04** Distinct dynamics for representations of odor and choice in piriform cortex. A. E. MUNSCH; K. M. FRANKS*; K. A. BOLDING. *Duke Univ.*

9:00 **630.05** Imposing structure on odor representations during learning in OFC and mPFC. C. BOBOILA*; P. WANG; N. STEIN; R. AXEL. *Columbia Univ., Columbia Univ.*

9:15 **630.06** Sleep deprivation enhances encoding of odors in piriform cortex and food intake through piriform-insula connectivity. T. KAHNT*; S. BHUTANI; J. D. HOWARD; R. REYNOLDS; P. C. ZEE; J. A. GOTTFRIED. *Northwestern Univ., Northwestern Univ., Univ. of Pennsylvania.*

9:30 **630.07** DeepNose: An artificial neural network that represents the space of odorants. N. TRAN*; D. R. KEPPLE; S. SHUVAEV; A. KOULAKOV. *Cold Spring Harbor Lab. Watson Sch. of Bio, Cold Spring Harbor Lab.*

9:45 **630.08** Hyperbolic geometry of the olfactory space. F. ZHOU*; B. H. SMITH; T. O. SHARPEE. *UCSD, Arizona State Univ., Salk Inst.*

10:00 **630.09** The coding of valence and identity in the mammalian taste system. L. WANG*; S. GILLIS-SMITH; Y. PENG; J. ZHANG; X. CHEN; C. D. SALZMAN; N. J. P. RYBA; C. S. ZUKER. *Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ., NIH.*

10:15 **630.10** Otop1 defines a new family of proton channels in the taste and vestibular systems. Y. TU; B. TENG; H. TURNER; R. CHANG; W. YE; D. ARTIGA; E. MULHALL; E. R. LIMAN*. *Univ. of Southern California (USC), Yale Univ. Sch. of Med., UCSF, Harvard Med. Sch.*

10:30 **630.11** The taste of calories in the gut. K. BUCHANAN; M. M. KAELBERER; M. KLEIN; M. M. MONTOYA; D. V. BOHORQUEZ*. *Duke Univ.*

NANOSYMPOSIUM

631. Depression and Bipolar Disorders: Neural Mechanisms

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 5

8:00 **631.01** Targeting cholinergic interneurons of thenucleus accumbens rescues depressive behaviors. J. CHENG*; G. UMSCHWEIF; Y. SAGI; P. GREENGARD. *Rockefeller Univ.*

8:15 **631.02** Comparison of RNAseq in medium spiny neuron subpopulations isolated using nuclear-FACS, whole cell-FACS or RiboTag affinity purification. H. KRONMAN*; F. RICHTER; R. CHANDRA; B. LABONTÉ; M. LOBO; E. NESTLER. *Icahn Sch. of Med. at Mount Sinai, Univ. of Maryland Baltimore, Laval Univ., Univ. of Maryland Sch. of Med.*

8:30 **631.03** ● Enhanced affective dysregulation and dopamine hypofunction in female rodents during the early postpartum period. M. RINCÓN-CORTÉS*; A. A. GRACE. *Univ. of Pittsburgh.*

8:45 **631.04** Effects of depression and childhood adversity on the volumes of the amygdala subnuclei and hippocampal subfields. A. AGHAMOHAMMADI SERESHKI*; N. J. COUPLAND; P. SILVERSTONE; K. HEGADOREN; R. CARTER; P. SERES; N. V. MALYKHIN. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

9:00 **631.05** Acetylcholinergic mechanisms of depressive-like behaviors induced by seasonally-relevant short active photoperiod. Z. A. COPE*; C. VAN DE CHAPPELLE; M. A. KWIATKOWSKI; L. LAVADIA; D. DULCIS; J. W. YOUNG. *Univ. of California San Diego, Univ. of Utrecht, Univ. of California San Diego, VA.*

9:15 **631.06** ● A novel approach to investigate targeted hypercortisolemia in discrete brain regions modulating major depression disorder. A. C. JOHNSON*; W. K. SIMMONS; M. P. PAULUS; B. GREENWOOD-VAN MEERVELD. *VA Med. Ctr., Laureate Inst. For Brain Res., Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr.*

9:30 **631.07** HCN2 channels in the ventral tegmental area regulate behavioral responses to chronic stress. C. R. VICKSTROM*; P. ZHONG; X. LIU; Y. HU; L. YU; H. YU; Q. LIU. *Med. Col. of Wisconsin, Univ. of California, Berkeley, Med. Col. of Wisconsin, West Virginia Univ., Med. Col. of Wisconsin.*

9:45 **631.08** Investigating photoperiod effects during sensitive developmental periods for serotonergic circuit function and behavior. J. K. SIEMANN*; N. REDDY; C. A. GRUETER; B. A. GRUETER; D. G. MCMAHON. *Vanderbilt Univ., Vanderbilt Univ. Sch. of Med.*

NANOSYMPOSIUM

632. Circuitry and Cell-Type Specific Neurophysiology of Addiction

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 30B

8:00 **632.01** CB1 receptor-mediated regulation of limbic plasticity and HPA activity during memory reconsolidation shapes cocaine memory strength. J. A. HIGGINBOTHAM*; N. JONES; R. WANG; S. TAN; M. A. PRESKER, JR; R. FUCHS. *Washington State Univ., Rutgers - The State Univ. of New Jersey.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:15 **632.02** Methamphetamine triggers dopamine release through calcium dependent processes. J. T. YORGASON*; D. M. HEDGES; M. C. WOODBURY; B. WILLIAMS; S. STAPLEY; N. LEWIS; J. J. NELSON; F. P. BELLINGER; M. ANDRES; S. C. STEFFENSEN. *Brigham Young Univ., Univ. of Utah, Brigham Young Univ., Brigham Young Univ., Univ. of Hawai'i at Manoa Dept. of Cell and Mol. Biol., Univ. of Hawai'i, Ph.D.*

8:30 **632.03** Hypocretin/orexin in rostromedial tegmental nucleus: Anatomy and function on cocaine self-administration in rats. S. J. SIMMONS*; R. M. MARTORANA; E. M. CLARK; F. H. TRAN; J. L. BARR; J. M. MUSCHAMP. *Temple University, Lewis Katz Sch. of Med.*

8:45 **632.04** Optogenetic dissection of cell type-specific neural circuits underlying nicotine reward versus aversion in mice. C. J. JORDAN*; G. BI; E. L. GARDNER; Z. XI. *Natl. Inst. on Drug Abuse.*

9:00 **632.05** Cell type specific neuroadaptations and metaplasticity in the nucleus accumbens core in a novel model of THC self administration in rats. D. NEUHOFER*; L. N. BELOATE; V. CHIOMA; S. M. SPENCER; P. W. KALIVAS. *MUSC, Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. S Carolina.*

9:15 **632.06** Cocaine alters projection-specific synaptic connectivity in the nucleus accumbens. C. BAIMEL*; L. M. MCGARRY; A. G. CARTER. *New York Univ.*

9:30 **632.07** Microglial activation in the nucleus accumbens during nicotine withdrawal. A. ADELUYI; M. FISHER; L. R. FREEMAN; S. CHAN; S. DAVIS; M. WYATT; J. R. TURNER*. *Univ. of South Carolina Col. of Pharm., Univ. of South Carolina, Furman Univ., Med. Univ. of South Carolina Col. of Pharm., Univ. of South Carolina.*

9:45 **632.08** Neuron subtype-specific role of ten-eleven translocation protein 1 (TET1) in cocaine addiction. H. XU; G. KAPLAN; A. BROWN; R. HEDINGER; V. JOSEPH; J. FENG*. *Florida State Univ.*

10:00 **632.09** Local inhibitory circuitry in the nucleus accumbens. S. L. SCUDDER*; E. E. MACDONALD; A. G. CARTER. *New York Univ.*

10:15 **632.10** Time course of changes in parvalbumin and perineuronal nets in the rat medial prefrontal cortex after activation of a cocaine-associated memory. B. A. SORG; A. E. GONZALEZ; J. H. HARKNESS*; J. M. BLACKTOP; E. T. JORGENSEN; T. E. BROWN. *Washington State Univ., Washington State Univ., Washington State University, Vancouver, Washington State Univ. Vancouver, Univ. of Wyoming, Univ. of Wyoming.*

10:30 **632.11** Role of anterior dorsal lateral hypothalamic area perineuronal nets in cue-induced reinstatement of cocaine-seeking behavior. J. M. BLACKTOP*; B. A. SORG. *Washington State Univ. Vancouver, Washington State Univ.*

10:45 **632.12** ● ▲ Perineuronal net removal decreases cue-induced reinstatement in cocaine self-administering rats. J. WINGERT*; J. H. HARKNESS; R. TODD; B. A. SORG. *Washington State Univ. Vancouver, Washington State University, Vancouver, Washington State Univ., Washington State Univ.*

11:00 **632.13** ● Oxidative stress and sleep: The role of perineuronal nets. J. H. HARKNESS; P. N. BUSHANA; R. TODD; W. C. CLEGERN; B. A. SORG*; J. P. WISOR. *Washington State University, Vancouver, Washington State Univ., Washington State Univ., Washington State Univ., Washington State Univ.*

NANOSYMPOSIUM

633. Animal Cognition and Behavior: Learning and Memory: Cortical-Hippocampal Interactions II

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 1

8:00 **633.01** Navigation using grid-like representations in artificial agents. A. BANINO*; C. BARRY; D. KUMARAN. *Deepmind, UCL, DeepMind.*

8:15 **633.02** Hippocampal cognitive maps formed through spatial navigation generalize to non-spatial contexts. K. R. SHERRILL*; R. J. MOLITOR; M. L. MACK; A. R. PRESTON. *Univ. of Texas At Austin, Univ. of Toronto.*

8:30 **633.03** Assessing the role of hippocampal replay in retrospective revaluation. H. L. PENAGOS*; S. J. GERSHMAN; M. A. WILSON. *MIT, Harvard Univ., MIT.*

8:45 **633.04** Hippocampal remapping as learned clustering of experience. H. SANDERS*; M. A. WILSON; S. GERSHMAN. *MIT, MIT, Harvard Univ.*

9:00 **633.05** Global and local hippocampal representations during virtual reality spatial navigation. I. BRUNEC*; B. BELLANA; J. OZUBKO; J. ROBIN; M. BARENSE; M. MOSCOVITCH. *Univ. of Toronto, Rotman Res. Institute, Baycrest, SUNY Geneseo.*

9:15 **633.06** ● Compression by grid cells to support hierarchical reinforcement learning in the cognitive map. K. L. STACHENFELD; D. MCNAMEE; M. M. BOTVINICK*; S. GERSHMAN. *DeepMind, Princeton Univ., Univ. of Cambridge, Princeton Univ.*

9:30 **633.07** Mice adapt differently to changes in the reward and transition structure of the environment. S. SATHIYAKUMAR*; A. CARSON; B. A. RICHARDS. *Univ. of Toronto, Univ. of Toronto Scarborough, Univ. of Toronto Scarborough.*

9:45 **633.08** Probing variability in a cognitive map using manifold inference from neural dynamics. R. J. LOW*; S. J. LEWALLEN; D. ARONOV; R. NEVERS; D. W. TANK. *Princeton Univ.*

10:00 **633.09** Hippocampal representation of contexts and journeys during goal-directed navigation. J. CRIVELLI-DECKER*; A. CLARKE; C. RANGANATH. *UC Davis, Univ. of Cambridge.*

10:15 **633.10** Constructing neural cognitive maps of time, space and concepts. Z. TIGANJ*; N. A. CRUZADO; A. LUZARDO; M. W. HOWARD. *Boston Univ., Boston Univ.*

10:30 **633.11** Navigation of abstract discrete worlds by rhesus macaques. J. BUTLER*; S. MARK; T. E. J. BEHRENS; S. KENNERLEY. *Univ. Col. London, Univ. of Oxford, Univ. Col. London.*

10:45 **633.12** Sculpting cognitive maps: Multi-scale predictive representations shape memory and planning. I. MOMENNEJAD*; I. BRUNEC; N. D. DAW. *Princeton Univ., Univ. of Toronto.*

11:00 **633.13** A non-spatial account of place and grid cells based on clustering models of concept learning and memory. R. M. MOK*; B. C. LOVE. *Univ. Col. London.*

11:15 **633.14** Events with common structure become organized within a hierarchical cognitive map in hippocampus and frontoparietal cortex. N. W. MORTON*; M. L. SCHLICHTING; A. R. PRESTON. *The Univ. of Texas at Austin, Univ. of Toronto.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

634. Human Cognition and Behavior: Human Learning: Feedback, Reinforcement, and Reward

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 4

8:00 **634.01** Outcome contingency modulates reward coding but not task coding in the brain. D. WISNIEWSKI*; B. U. FORSTMANN; M. BRASS. *Ghent Univ., Univ. of Amsterdam.*

8:15 **634.02** Proactive control enhances sustained and transient effort in rewarded tasks: Combined EEG and pupillometry studies. M. KOSTANDYAN*; K. BOMBEKE; T. CARSTEN; R. M. KREBS; W. NOTEBAERT; N. C. BOEHLER. *Ghent Univ., Imec-Mict-UGent, Ghent Univ.*

8:30 **634.03** Reward-related brain activity during successful memory encoding. M. S. COHEN*; L. Y. CHENG; K. A. PALLER; P. J. REBER. *Northwestern Univ., Northwestern Univ.*

8:45 **634.04** ● The effects of sensory reward cues during cost-benefit decision making. M. V. CHERKASOVA*; L. CLARK; J. BARTON; A. STOESSL; C. A. WINSTANLEY. *Univ. of British Columbia, Univ. of British Columbia.*

9:00 **634.05** Differences in the value of feedback in perceptual learning are revealed in the attention and the visual sensory processing areas, but not in the reinforcement processing. D. KIM*; D. KANG; S. NISHINA; Y. SASAKI; T. WATANABE. *Asan Med. Ctr., Brown Univ., Honda Res. Inst. Japan.*

9:15 **634.06** Humans underestimate reward probability and overestimate environmental volatility in a multi-armed bandit task - insights from a Bayesian analysis of human learning and decision-making. D. GUO*; A. J. YU. *UCSD, Univ. of California San Diego.*

9:30 **634.07** ● Development of prefrontal cortical connectivity and the enduring effect of learned value on cognitive control. J. Y. DAVIDOW*; M. A. SHERIDAN; K. R. VAN DIJK; R. M. SANTILLANA; J. SNYDER; C. M. VIDAL BUSTAMANTE; B. R. ROSEN; L. H. SOMERVILLE. *Harvard Univ., Univ. of North Carolina, Children's Hosp. Boston, Harvard Med. Sch., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

9:45 **634.08** Hippocampal pattern separation supports reinforcement learning. I. C. BALLARD*; A. D. WAGNER; S. M. MCCLURE. *Univ. of California, Berkeley, Stanford Univ., Arizona State Univ.*

10:00 **634.09** Neuroeconomic mechanisms for heterogeneous traders with real stock-trading platforms and a transition from nonbubble-related deliberation to bubble-related reinforcement learning underlying herding or overextrapolation. J. L. HARACZ*; H. L. TOHID. *Indiana Univ., UC Davis.*

10:15 **634.10** Reduced exploration during reward-based learning in gambling addiction. J. PETERS*; A. WIEHLER; K. CHAKROUN. *Dept. of Psychology, Biol. Psychology, ICM - Hop. Pitie Salpetriere, Dept. of Systems Neurosci.*

10:30 **634.11** Neural correlates of cue reactivity induced by smoking-related videos in adult daily smokers. S. HUANG*; A. S. WEIGARD; S. L. HENRY; S. J. WILSON; C. HUANG-POLLOCK. *The Pennsylvania State Univ.*

10:45 **634.12** Neural correlates of value-driven attentional capture in addiction. O. MORGAN*; J. A. CREIGHTON; M. B. SLAPIK; B. A. ANDERSON; C. L. MARVEL. *Johns Hopkins Univ. Sch. of Med., Texas A&M.*

11:00 **634.13** ▲ Tactile motion is used to guide hand movement. P. HSU*; J. HUANG; Y. PEI. *Chang Gung Univ., Chang Gung Mem. Hosp. at Linkou, Chang Gung Mem. Hosp. at Linkou, Chang Gung Univ.*

NANOSYMPOSIUM

635. Advances in Molecular, Genetic, and Imaging Techniques

Theme I: Techniques

Wed. 8:00 AM – *San Diego Convention Center*, SDCC 2

8:00 **635.01** Towards a viral reporter toolbox for prospective marking of human and mouse neocortical cell classes and types. B. P. LEVI*; J. K. MICH; J. T. TING; L. T. GRAYBUCK; A. H. CETIN; B. E. KALMBACH; S. YAO; E. E. HESS; S. SOMASUNDARAM; Z. YAO; J. A. MILLER; M. MORTRUD; R. P. GWINN; C. COBBS; A. KO; C. D. KEENE; B. TASIC; H. ZENG; E. LEIN. *Allen Inst. for Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci., Swedish Neurosci. Inst., Swedish Neurosci. Inst., Dept. of Neurolog. Surgery, Harborview Med. Ctr., Univ. of Washington Sch. of Med.*

8:15 **635.02** Cell type-specific enhancer discovery through scRNA-seq and scATAC-seq for a new generation of viral tools. L. T. GRAYBUCK*; A. SEDENO-CORTES; T. NGUYEN; T. K. KIM; M. WALKER; G. LENZ; B. E. KALMBACH; E. J. GARREN; J. K. MICH; S. YAO; M. MORTRUD; B. P. LEVI; J. T. TING; E. LEIN; A. H. CETIN; T. L. DAIGLE; H. ZENG; B. TASIC. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci., Allen Inst. For Brain Sci., Allen Inst. For Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci.*

8:30 **635.03** Dissection of the protocadherin enhancer by crispr DNA-fragment editing. J. SHOU; J. LI; Q. WU*. *Shanghai Jiao Tong Univ.*

8:45 **635.04** A neuron-optimized CRISPR/dCas9 toolbox for robust and specific gene regulation across neuronal subpopulations. K. E. SAVELL*; J. S. REVANNA; N. A. GOSKA; M. E. ZIPPERLY; J. J. TUSCHER; C. G. DUKE; F. A. SULTAN; J. J. DAY. *Univ. of Alabama at Birmingham.*

9:00 **635.05** The importance of characterizing Cre-alleles: A comparative study of the impact of neuronal development and behavior in mice with conditional deletion of the homeodomain transcription factors Six6 and Vax1 using two different Gnrh-promoter driven Cre-alleles. H. M. HOFFMANN*; E. PANDOLFI; J. S. LEE; R. J. HU; C. TRANG; V. A. NGUYEN; D. SKOWRONSKA-KRAWCZYK; M. R. GORMN; P. L. MELLON. *Michigan State Univ., UCSD.*

9:15 **635.06** Multispectral transsynaptic labeling reveals *Drosophila* neural circuits at the single neuron resolution. Y. LI*; E. EDWARDS; T. HUANG; Y. ZHAO; M. GHAZZI; C. LOIS; D. CAI. *Univ. of Michigan, Caltech.*

9:30 **635.07** Second-generation monosynaptic tracing. I. R. WICKERSHAM*; L. JIN; M. MATSUYAMA; H. A. SULLIVAN; Y. HOU; T. K. LAVIN; N. E. LEA; K. R. BABCOCK; M. PRUNER. *MIT.*

9:45 **635.08** Genetically encoded reporter for bimodal optical and PET imaging in the mammalian brain. M. SHIMOJO*; M. ONO; H. TAKUWA; M. FUJINAGA; T. KIKUCHI; C. SEKI; M. TOKUNAGA; J. MAEDA; Y. TAKADO; M. TAKAHASHI; T. MINAMIHISAMATSU; N. SUZUKI; Y. TOMITA; M. ZHANG; A. MAXIMOV; T. SUHARA; N. SAHARA; M. HIGUCHI. *Natl. Inst. of Radiological Sci., Natl. Inst. of Radiological Sci., Keio Univ. Sch. of Med., The Scripps Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

636. Neural Cell Proliferation

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 A1 **636.01** Understanding the role of 16p11.2 CNV genes in human cerebral corticogenesis. S. MORSON*; Y. YANG; D. J. PRICE; T. PRATT. *The Univ. of Edinburgh.*

9:00 A2 **636.02** Ogt regulates adult hippocampal neurogenesis and cognition. C. W. WHITE*, III; X. FAN; E. WHEATLEY; G. BIERI; S. A. VILLEDA. *Univ. of California, San Francisco, Univ. of California, San Francisco, Stanford Univ.*

10:00 A3 **636.03** HDAC3 differentially regulates the proliferation of two progenitor pools by Wnt/β-catenin signaling in the developing tectum. W. SHEN*; J. GAO; Z. GUO; L. ZHENG; N. DING; Y. LIAO. *Hangzhou Normal Univ., Hangzhou Normal Univ.*

11:00 A4 **636.04** ▲ Dlx1/2 promote olfactory bulb interneuron generation through activating Sp8/9 expression. T. GUO*; H. DU; Z. YANG. *Fudan Univ.*

8:00 A5 **636.05** Eml1 is involved in primary cilium formation at early stages of cortical development. A. UZQUIANO*; D. ROMERO; A. HOULLIER; F. DINGLI; G. ARRAS; D. LOEW; C. DIAZ-CIFUENTES; N. BAHI-BUISSON; F. FRANCIS. *Inst. Du Fer A Moulin, Inserm U839, Sorbonne University, Univ. Pierre et Marie Curie, Inst. Curie, PSL Res. University, Ctr. de Recherche, Lab. de Spectrométrie de Masse Protéomique, Paris Descartes - Sorbonne Paris Cité University, Imagine Inst., Inserm U1163, Embryology and Genet. of Congenital Malformations.*

9:00 A6 **636.06** Microglia interface with the mitotic neural precursor cells that line the surface of the lateral ventricles. S. C. NOCTOR*; H. SHEPHERD; J. KEITER; N. BARGER; A. KREUTZ; A. F. TARANTAL. *UC Davis, UC Davis, Brigham Young Univ. - Idaho, UC Davis, UC Davis, UC Davis, UC Davis, UC Davis, California Natl. Primate Res. Ctr.*

10:00 A7 **636.07** Rac is required for the survival of cortical neurons. K. KATAYAMA*; Y. ZHENG. *Wakayama Med. Univ., Cincinnati Children's Hosp. Mrdical Ctr.*

11:00 A8 **636.08** Leukemia inhibitory factor signaling and STAT3 phosphorylation at Ser727 in fetal mouse brain development. T. TSUKADA*; H. SAKAGAMI; H. SHIMADA; S. TAKATA; H. SAKATA-HAGA; H. SHOJI; H. IIZUKA; T. HATTA. *Kanazawa Med. Univ., Kanazawa Med. Univ., Kanazawa Med. Univ., Kanazawa Med. Univ.*

8:00 A9 **636.09** Cx43 as a marker gene of ependymal cells in the spinal cord of zebrafish embryo. J. KIM*; I. JUNG. *Chonnam Natl. Univ. Hosp.*

9:00 A10 **636.10** Fubp1 controls neural stem cell differentiation through cooperation with notch. M. KANG; I. HWANG; T. KIM; J. SUNG; D. KIM*; J. PAIK. *Kyungpook Natl. Univ., Weill Cornell Med.*

10:00 A11 **636.11** GLI2 promotes cell proliferation and migration through transcriptional activation of ARHGEF16 in human glioma cells. L. CHEN*; L. XU; D. HUANG; Y. WANG; M. CHENG; W. SHI; H. XIONG; D. ZALLI; S. LUO. *Nanchang Univ., Nanchang Univ., Queen Mary Univ. of London.*

11:00 A12 **636.12** The small regulatory cytokine, Midkine-a, mediates stem cell proliferation and microglial phagocytosis during photoreceptor regeneration in zebrafish. M. NAGASHIMA*; P. F. HITCHCOCK. *Univ. of Michigan.*

8:00 A13 **636.13** Classical MHC I molecule, H2-K^b, negatively regulates neural stem cell function through inhibition of FGFR1 signaling. K. LIN*; S. MÜLLER; L. K. SMITH; S. A. VILLEDA. *UCSF, UCSF.*

9:00 A14 **636.14** ▲ Systemic effect of a neurogenesis marker in a murine model. A. A. BARRIENTOS-BONILLA; P. B. PENSADO-GUEVARA; A. PUGA-OLGUIN; L. M. ZAVALA-FLORES; A. VILLANUEVA-OLIVO; I. T. CIBRIAN-LLANDERAL; D. HERNANDEZ-BALTAZAR*. *Univ. Veracruzana, Univ. Veracruzana, Ctr. de Investigación Biomédica del Noreste, Univ. Autónoma de Nuevo León, CONACYT-Instituto de Neuroetologia, CONACYT-Instituto de Neuroetologia.*

10:00 A15 **636.15** MicroRNA expression in brain exosomes is altered in a Kainate model of chronic Temporal Lobe Epilepsy. D. GITAI*; Y. DOS SANTOS; R. UPADHYA; M. KODALI; A. K. SHETTY. *Federal Univ. of Alagoas, Inst. For Regen Med, Texas A&M Univ. Coll Med., Olin E. Teague Veterans' Med. Ctr.*

11:00 A16 **636.16** Intranasal administration of exosomes from human iPSC-derived NSCs enhances neural stem/progenitor cell proliferation and neurogenesis in the normal adult hippocampus. A. K. SHETTY*; R. UPADHYA; S. ATTALURI; M. PINSON; J. XU; B. SHUAI. *Inst. For Regen Med, Texas A&M Univ. Coll Med., Olin E. Teague Veterans' Med. Center, CTVHCS.*

8:00 A17 **636.17** Status epilepticus leads to increased concentration of neuron-derived exosomes in the blood with downregulation of mir-363-5p, mir-322-3p, and mir-320-3p. M. LEELAVATHI NARAYANA*; R. UPADHYA; S. ATTALURI; B. SHUAI; M. KODALI; D. GITAI; A. K. SHETTY. *Inst. For Regen Med, Texas A&M Univ. Coll Med., Olin E. Teague Veterans' Med. Center, CTVHCS.*

9:00 A18 **636.18** MHCI molecules regulate cell proliferation of central nervous system during embryonic period stage. P. LI*; Y. SHEN; Y. HU; J. ZHANG. *Inst. of Life Sciences, Southeast Univ., Med. School, Southeast Univ.*

10:00 A19 **636.19** Systemically elevating Interleukin-6 in neonatal male mice enhances the production of multipotential progenitors at the expense of neural stem cells. S. W. LEVISON*; E. KUMARI; A. NASUHIDEHNAVI; V. H. SAVANUR; K. D. BUONO. *Rutgers Univ., ICON Lab. Services.*

11:00 A20 **636.20** Extracellular matrix-associated CYR61 maintains neural stem cells during forebrain development. J. ZHENG*; S. QI; J. WU; Q. SHEN. *Tsinghua Univ., Tongji Univ., Tongji Hosp.*

8:00 A21 **636.21** Resolving cellular equipotency of developing optic vesicles. B. XU*; H. WANG; J. YAN; J. HE. *Inst. of Neuroscience, CAS.*

9:00 A22 **636.22** Mechanisms of selective autophagy-mediated regulation of neuronal differentiation during nervous system development. A. LEE*; K. ZARBALIS; L. N. BORODINSKY. *Univ. of California Davis, UC Davis/Shriners Hosp. for Children.*

10:00 A23 **636.23** Aspm knockout ferret reveals an evolutionary mechanism governing cerebral cortical size. B. BAE*; M. B. JOHNSON; A. KODANI; R. BORGES-MONROY; K. IM; J. F. ENGELHARDT; C. A. WALSH. *Yale Univ. Sch. of Med., Boston Children's Hosp., Children's Hosp. Boston, Univ. of Iowa.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 A24 **636.24** Role of Hippo signalling in adult neural stem cell homeostasis. W. FAN*; J. JURADO ARJONA; S. PÉRON; C. BERGER; B. BERNINGER. *Johannes Gutenberg Univ. Mainz, Johannes Gutenberg Univ.*

8:00 A25 **636.25** Dissecting the roles of store-operated calcium entry during development of the cerebral cortex. A. ARJUN*; S. LAUNER; J. TONG; R. I. PETROVA; Y. KHAN; G. PANAGIOTAKOS. *Univ. of California San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco.*

9:00 A26 **636.26** The long noncoding RNA lncNSPC is required for the maintenance of neural stem and progenitor cell (NSPC) potential. S. QI*; J. ZHENG; Q. BAI; Q. SHEN. *Tsinghua Univerity, Tongji Univ., Tongji Hosp.*

10:00 A27 **636.27** PDK1 regulates the transition of APs to BPs during the cortical neurogenesis. Y. WEI*; X. HAN; C. ZHAO; J. GAO. *Inst. of Life Science,Southeast Univ., Southeast Univ., Nanjing Med. Univ.*

11:00 A28 **636.28** The transcriptional regulator snon promotes the proliferation of granule neuron precursors in the brain in a temporally specific manner. X. CHEN*; D. WU; Y. IKEUCHI; J. GOODMAN; N. REDDY; S. MAJIDI; S. SMITH; A. GODEC; A. OLDENBORG; S. BONNI; H. GABEL; A. BONNI. *Washington Univ. Sch. of Med., Washington Univ. in St. Louis, Inst. of Industrial Sci., Dept. of Biochem. and Mol. Biol., Washington Univ. Sch. of Med., Washington Univ. in St. Louis, Sch. of Medi.*

POSTER

637. Neural Cell Migration and Lineage Specification

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 A29 **637.01** A novel mechanism for ephrin reverse signaling in the control of neuronal migration. P. F. COPENHAVER*; C. BATES; A. D. RAINHA; C. KAWAMOTO; H. LEE. *Oregon Hlth. and Sci. Univ.*

9:00 A30 **637.02** Cell-autonomous and non-autonomous mechanisms controlling projection neuron migration. A. H. HANSEN*; J. RENNO; C. STREICHER; S. LAUKOTER; F. M. PAULER; L. ANDERSEN; T. RUELICKE; S. HIPPENMEYER. *IST Austria, Inst. of Lab. Animal Science, Univ. of Vet. Med.*

10:00 A31 **637.03** Human forebrain endothelial cells: New avenue for interneuron-based therapy of neuropsychiatric disorders. D. DATTA*; S. SUBBURAJU; S. KAYE; A. VASUDEVAN. *Harvard Med. Sch.*

11:00 A32 **637.04** Reelin- and dab1-expressing superficial dorsal horn neurons co-express lmx1b and migrate together during development. G. METTA YVONE*; C. L. CHAVEZ-MARTINEZ; P. E. PHELPS. *UCLA.*

8:00 A33 **637.05** The role of the microRNA 122 in the migration and maturation of superficial cortical neurons. U. TOMASELLO*; L. DE VEVEY; E. KLINGLER; J. PRADOS; M. NIQUILLE; D. JABAUDON; V. BORRELL; A. DAYER. *Univ. De Geneve, Univ. of Geneva, Univ. of Geneva, Inst. of Neuroscience, CSIC.*

9:00 A34 **637.06** Mitochondrial trafficking and localization are important for neuronal migration. A. K. MYERS*; G. CHO; J. A. GOLDEN. *Brigham and Women's Hosp.*

10:00 B1 **637.07** Erythropoietin signaling regulates neuronal migration in the developing neocortex. P. E. CONSTANTHIN; A. CONTESTABILE; V. PETRENKO; P. SALMON; J. Z. KISS*. *Univ. of Geneva, Dept. of Neurosciences.*

11:00 B2 **637.08** Zeb1 represses neural differentiation and cooperates with Ctbp2 to dynamically regulate cell migration during neocortex development. H. WANG*; J. ZHENG; Z. XIAO; X. YANG; Q. SHEN. *Sch. of Life Sciences, Tsinghua Univ., Sch. of Life Sci. and Technology, Tongji Univ., Tongji Hosp., Med. School, Tsinghua Univ.*

8:00 B3 **637.09** Deciphering a calcium-regulated pathway that controls radial migration via excitation-morphogenesis coupling. S. HORIGANE*; S. TAKEMOTO-KIMURA; S. KAMIJO; A. ADACHI-MORISHIMA; H. FUJII; H. BITO. *Nagoya University, Res. Inst. of Environme, Mol. neuroscience, Nagoya Univ. Grad. Sch. of Med., Dept. of Neurochemistry, Grad. Sch. of Medicine, The Univ. of Tokyo.*

9:00 B4 **637.10** A mercaptoacetamide-based class II histone deacetylase inhibitor suppresses cell migration and invasion in monomorphic malignant human glioma cells by inhibiting FAK/STAT3 signaling. H. NAM*; J. NAM; J. LEE; H. HOE. *Korea Brain Res. Inst., Korea Brain Reserach Inst.*

10:00 B5 **637.11** The role of a novel BICD2 mutation in brain development and lissencephaly. H. CHENG*; F. NIAN; M. TSAI; J. TSAI. *Natl. Yang-Ming Univ., Kaohsiung Chang Gung Mem. Hosp.*

11:00 B6 **637.12** Functions of KBP in neural development and its role in causing Goldberg-Shprintzen syndrome. H. CHANG*; C. HUANG; J. TSAI. *Natl. Yang-Ming Univ.*

8:00 B7 **637.13** The role of a novel mutation in forkhead box domain protein in brain development and focal cortical dysplasia. C. LIU*; Y. LIU; C. CHEN; K. CHANG; Y. SHIH; S. KWAN; H. CHEN; J. TSAI. *Natl. Yang-Ming Univ., Neurolog. Institute, Taipei Veterans Gen. Hosp., Dept. of Pediatrics, Taipei Veterans Gen. Hosp.*

9:00 B8 **637.14** Delayed GABAergic interneuron migration through impaired actin remodelling in a mouse model with deletion of the autism gene MYO9B. L. EID*; P. K. R. PEDABALIYARASIMHUNI; L. MARCOUX; X. JIANG; A. LUPIEN-MEILLEUR; L. TOUSSAINT; M. LACHANCE; J. LACAILLE; G. HICKSON; E. ROSSIGNOL. *Ctr. de Recherche du CHU Sainte-Justine, Univ. de Montréal, Univ. de Montréal, Univ. de Montréal.*

10:00 B9 **637.15** Determining the role of neurite initiation *in vivo* using a novel labeling approach to *in utero* electroporation. R. J. TAYLOR*; K. L. TAYLOR; J. CARRINGTON; M. MCDERMOTT; K. RICHTERS; E. W. DENT. *Univ. of Wisconsin Madison, Univ. of Wisconsin.*

11:00 B10 **637.16** The effects of mutant Pea3 on cell invasion and cell migration. M. USTUN*; I. KURNAZ. *Gebze Tech. Univ.*

8:00 B11 **637.17** Developmental and physiological defects in a mouse model of cobblestone lissencephaly. W. WONG*; Y. C. WONG; C. R. JONAK; D. K. BINDER; E. ZAGHA; M. M. RICCOMAGNO. *Univ. of California, Riverside, Univ. of California, Riverside Sch. of Med., Univ. of California, Riverside.*

9:00 B12 **637.18** Prenatal exposure to opioids and neurodevelopmental toxicity in the developing chicken embryo model. M. HADERA*; J. M. ANDERSEN; R. E. PAULSEN. *Univ. of Oslo, Sch. of Pharm., Oslo Univ. Hosp.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 B13 **637.19** Metabolic regulation and glucose sensitivity of cortical radial glial cells. B. G. RASH*; N. MICALI; A. J. HUTTNER; Y. M. MOROZOV; T. L. HORVATH; P. RAKIC. *Yale Univ., Yale Univ., Yale Univ.*

11:00 B14 **637.20** Developing lineages of the human cerebral cortex. T. NOWAKOWSKI*; A. BHADURI; A. A. POLLEN; R. DELGADO; G. SCHMUNK; B. ALVARADO; M. MOSTAJO-RADJI; E. DI LULLO; C. SANDOVAL-ESPINOSA; M. HAEUSSLER; J. W. KENT; A. R. KRIEGSTEIN. *Univ. of California San Francisco, Univ. of California San Francisco, UCSF, Univ. of California, San Francisco, UCSF, UCSC, Univ. of California San Francisco.*

8:00 B15 **637.21** Temporal specific regulation of neural differentiation by Foxg1 in the developing cerebral cortex. Q. BAI; Q. SHEN*. *Tongji Univ., Tongji Univ.*

9:00 B16 **637.22** The roles of tri-methylation of histone h3 lysine 27-mediated pathways in neurodevelopment. C. LIU*; P. LIU; Y. XU; G. TANG; H. DU; S. DAI; Z. TENG. *Inst. of Zoology, Chinese Acad. of Sci.*

POSTER

638. Transplantation and Regeneration

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 B17 **638.01** 3D bioengineered neural tissue to mitigate acute cerebral inflammation after brain transplantation in rats. V. LIAUDANSKAYA*; D. JGAMADZE; A. N. BERK; D. J. BISCHOFF; B. J. GU; H. HAWKS-MAYER; M. J. WHALEN; H. I. CHEN; D. L. KAPLAN. *Tufts Univ., Univ. of Pennsylvania, Neurosci. Ctr. at Massachusetts Gen. Hosp.*

9:00 B18 **638.02** ● Connectivity of human organoid-derived retinal tissue transplanted into subretinal space of a large-eye animal (cat). I. O. NASONKIN*; R. K. SINGH; L. OCCELLI; O. CUZZANI; F. BINETTE; G. S. HOGGE; S. PETERSEN-JONES. *BioTime, Inc., Michigan State Univ.*

10:00 B19 **638.03** Precocious deposition of perineuronal nets on parvalbumin inhibitory neurons transplanted into adult visual cortex. D. FIGUEROA VELEZ*; K. BRADSHAW; M. HABEEB; S. P. GANDHI. *Univ. of California, Irvine, Univ. of California Irvine Dept. of Neurobio. and Behavior, Irvine, Univ. of California Irvine Dept. of Neurobio. and Behavior.*

11:00 B20 **638.04** Transplanted neural progenitor cell survival and development in a jaundiced rat model of kernicterus. F. YANG*; J. VIVIAN; S. M. SHAPIRO; J. A. STANFORD. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Children's Mercy Hosp. & Clinics.*

8:00 B21 **638.05** Functional recovery after the systemic administration of mesenchymal stem cells in a rat model of neonatal hypoxic-ischemia. T. SAKAI*; M. SASAKI; Y. KATAOKA-SASAKI; S. OKA; M. NAKAZAKI; S. FUKUMURA; M. KOBAYASHI; H. TSUTSUMI; J. D. KOCSIS; O. HONMOU. *Tomakomai City Hosp., Sapporo Med. Univ., Yale Univ. Sch. Med.*

9:00 B22 **638.06** Human neural progenitor cells reverse symptoms and extend longevity in a rat model of ataxia. W. M. TIERNEY*; B. ORTEGA; A. LEMUS; T. L. UHLENDORF; J. OCHOA; W. VAN TRIGT; A. KOPYOV; O. V. KOPYOV; R. W. COHEN. *California State University, Northridge, Celavie Biosciences, LLC.*

10:00 B23 **638.07** Transplanting immortal orexin neurons in narcolepsy. S. K. PINTWALA*; J. CHALMERS; J. FRAIGNE; D. BELSHAM; J. PEEVER. *Univ. of Toronto, Univ. of Toronto.*

11:00 B24 **638.08** Neovascularization for optimal survival of neural transplants. J. E. KRZYSPIAK*; B. GALINSKI; P. J. LITUMA; J. YAN; S. G. KEE; S. ZUKIN; D. WEISER; P. CASTILLO; K. KHODAKHAH; J. M. HEBERT. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. Med.*

8:00 B25 **638.09** Development of murine/human microglia chimeras to study neurological disease. M. A. COBURN*; J. HASSELMANN; D. X. FIGUEROA; A. MCQUADE; C. H. TU; J. CHADAREVIAN; H. DAVTYAN; S. GANDHI; M. BLURTON-JONES. *Univ. of California, Irvine.*

9:00 B26 **638.10** Psychophysical assessment of tactile sensory functions in microsurgical rat models. S. WU*; C. WEN; J. HUANG; Y. PEI; C. LIN; H. CHENG; Z. PENG; H. YANG; F. WEI. *Linkou Chang Gung Mem. Hosp., Chang Gung Univ., Taoyuan Chang Gung Mem. Hosp., Linkou Chang Gung Mem. Hosp., Linkou Chang Gung Mem. Hosp., Natl. Taipei Univ. of Technol.*

10:00 B27 **638.11** Optimizing the survival of transplanted engineered neural tissue grafts using necrostatin-1 and methylprednisolone. G. MAN*; D. JGAMADZE; B. GU; J. LIM; V. LIAUDANSKAYA; D. L. KAPLAN; H. I. CHEN. *Univ. of Pennsylvania, Tufts Univ.*

11:00 B28 **638.12** Development of biomaterial-based cell transplantation strategies using zebrafish as an *in vivo* system. B. B. PATEL*; E. M. KOZIK; J. A. KUHLMAN; M. MCNAMARA; N. N. HASHEMI; D. S. SAKAGUCHI. *Iowa State Univ., Iowa State Univ.*

POSTER

639. Genes and Molecules Implicated in Autism Spectrum Disorders

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 B29 **639.01** Protecting dna: Shortened telomere length is associated with autism spectrum disorder but is not related to symptoms or cognition. C. R. LEWIS; N. WALKER; F. TAGUINOD; K. AGRAWAL; W. JEPSEN; M. J. HUENTELMAN; C. J. SMITH; S. RINGENBACH; B. B. BRADEN*. *Tranlsational Genomics Res. Inst., Southwest Autism Res. and Resource Ctr., Arizona State Univ., Arizona State Univ. - Tempe Campus.*

9:00 B30 **639.02** Investigating the DNA methylation signature of the brain in Rett syndrome patients. M. RASTEGAR*; D. KROFT; K. SHEIKHOLESLAMI; S. AMIRI; V. SIU; T. PEMBERTON; M. DEL BIGIO. *Univ. of Manitoba, Univ. of Manitoba, Univ. of Toronto, Western Univ., Univ. of Manitoba.*

10:00 B31 **639.03** Reducing noise in spit and brain: Multi-tissue deconvolution analysis reveals epigenetic differences in young children diagnosed with autism spectrum disorder. B. S. MULLIGAN*; J. M. STEPHEN; E. L. BEARER. *Mind Res. Network, UNM Sch. of Med., Caltech.*

11:00 B32 **639.04** *In vivo* Perturb-Seq: Finding common ground for heterogeneous variants in autism spectrum disorder. X. JIN*; M. KO; S. SIMMONS; J. LEVIN; F. ZHANG; P. ARLOTTA. *Harvard Univ., Broad Inst., Harvard Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 DP01/C1 **639.05** (Dynamic Poster) Altered brain-wide neural dynamics in mouse models of autism. D. GUTIERREZ-BARRAGAN; M. A. BASSON; S. PANZERI; A. GOZZI*. *Inst. Italiano di Tecnologia, King's Col. London, Fondazione Inst. Italiano Di Tecnologia.*

9:00 C2 **639.06** Cell type-specific disruption of cortico-striatal circuitry drives repetitive and perseverative behaviors in fragile X syndrome model mice. F. LONGO*; S. ARYAL; J. TABOR; F. ALBANESE; J. D. ZHU; E. SANTINI; E. KLANN. *New York Univ., New York Univ. Sch. of Med., Columbia Univ. Med. Ctr.*

10:00 C3 **639.07** Perineuronal nets are increased on parvalbumin+ interneurons of the dorsomedial striatum in three mouse models of autism spectrum disorder. B. A. BRIONES*; M. N. PITCHER; A. D. ZYCH; A. E. HAYE; S. MURTHY; E. GOULD. *Princeton Univ., Princeton Univ.*

11:00 C4 **639.08** Cortical hyperexcitation in early development results in autistic behavioral phenotypes. W. E. MEDENDORP*; A. PAL; U. HOCHGESCHWENDER. *Central Michigan Univ., Central Michigan Univ., Central Michigan Univ.*

8:00 C5 **639.09** Auditory processing deficits in Cntnap2-knock-out rats: Implications for neurodevelopmental disorders. S. SCHMID*; K. E. SCOTT; B. L. ALLMAN. *Univ. of Western Ontario, Univ. of Western Ontario.*

9:00 C6 **639.10** Cerebrovascular deficits in a mouse model of the 16p11.2 deletion syndrome. J. OUELLETTE*; X. TOUSSAY; C. H. COMIN; M. HO; Y. TRUONG; C. MORSE; J. THIBODEAU; M. YIN; M. LA CALLE; C. R. KENNEDY; D. BURGER; L. D. COSTA; D. J. STEWART; A. J. SHUHENDLER; B. LACOSTE. *The Ottawa Hosp. Res. Inst., Univ. of Ottawa, IFSC, Univ. of Sao Paulo, Univ. of Ottawa, The Ottawa Hosp. Res. Institute, Kidney Res. Ctr., FUJIFILM VisualSonics, Inc., Montreal Neurolog. Institute, McGill Univ., Univ. of Ottawa Brain and Mind Res. Inst.*

10:00 C7 **639.11** ● Pro social effects of Oxytocin agonist in a PFC circuit model. M. BENEKAREDDY*; P. JANZ; C. GRUNDSCHOBER; F. KNOFLACH. *Roche Pharma Res. & Early Development, Roche I, Univ. of Freiburg, Roche Innovation Ctr., F. Hoffmann-La Roche Ltd.*

11:00 C8 **639.12** Effect of the environmental enrichment on the multiunitary activity of lobules VI & VII of the cerebellum in the autistic rat. O. E. CRUZ MAGOS*; J. A. PÉREZ RODRÍGUEZ; G. HERRERA MEZA; P. CARRILLO CASTILLA; P. PACHECO; L. I. GARCÍA; J. MANZO. *Univ. Veracruzana, Univ. Veracruzana, Univ. Veracruzana, Univ. Veracruzana, Univ. Veracruzana, Univ. Veracruzana.*

POSTER

640. Down Syndrome

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 C9 **640.01** Network based brain transcriptome analysis in Down syndrome. S. SEOL*; J. KWON; J. HAN; H. KANG. *Chung-Ang Univ., Konkuk Univ.*

9:00 C10 **640.02** Characterization of early communicative behavior in mouse model of Down syndrome Ts65Dn and its response to pharmacological treatment using the NMDA-receptor antagonist memantine. B. ZAMPIERI*; M. W. JOHNSON; A. C. COSTA. *Case Western Reserve Univ., Case Western Reserve Univ.*

10:00 C11 **640.03** Characterization of developmental changes in Dyrk1a protein expression in the cortex, hippocampus and cerebellum in male and female Down syndrome mice. L. E. HAWLEY*; A. J. PARKER; M. E. STRINGER; C. R. GOODLETT; R. J. ROPER. *IUPUI, IUPUI.*

11:00 C12 **640.04** Young adults with Down syndrome show smaller hippocampal subfields measured with high-field MRI. K. A. KOENIG*; S. OH; M. STASKO; E. LISSMORE; E. ROTH; A. BIRNBAUM; T. SCHEIDEMANTEL; H. TAYLOR; N. ROIZEN; S. RUEDRICH; A. C. COSTA. *Cleveland Clin., Hankuk Univ. of Foreign Studies, Case Western Reserve Univ., Univ. Hosp.*

8:00 C13 **640.05** Interferon signaling in Down syndrome. K. SULLIVAN*; K. SMITH; D. EVANS; H. LEWIS; A. PANDEY; A. HILL; A. RACHUBINSKI; K. WOLTER-WARMERDAM; F. HICKEY; T. BLUMENTHAL; J. M. ESPINOSA. *Linda Crnic Inst. for Down Syndrome, Children's Hosp. Colorado.*

9:00 C14 **640.06** Quantitative analysis of retinal function during development by electroretinography in the Ts65Dn, a mouse model of Down syndrome. J. J. SCOTT-MCKEAN*; A. C. S. COSTA. *Case Western Reserve Univ., Case Western Reserve Univ.*

10:00 C15 **640.07** Neurogenesis deficits in Down syndrome: Testing recovery with GABAα5 negative allosteric modulator, β2 adrenergic agonist and IGF-1 in Ts65Dn mice. M. POTIER*; C. ALBAC; F. STAGNI; M. GRILLI; E. SALVALAI; R. BARTESAGHI. *CNRS INSERM UPMC, ICM, Univ. of Bologna, Dept. Pharm. Sci, Un. Piemonte Orientale.*

11:00 C16 **640.08** Discovery and characterization of novel selective NKCC1 inhibitors for Down syndrome and brain disorders with depolarizing GABAergic transmission. A. SAVARDI*; M. BORGOGNO; J. ORTEGA MARTÍNEZ; R. NARDUCCI; G. LA SALA; M. SUMMA; R. BERTORELLI; S. BERTOZZI; A. ARMIROTTI; A. CONTESTABILE; M. DE VIVO; L. CANCEDDA. *Inst. Italiano di Tecnologia, Univ. degli Studi di Genova, Inst. Italiano di Tecnologia, Univ. degli Studi di Bologna, Inst. Italiano di Tecnologia, Inst. Italiano di Tecnologia, Dulbecco Telethon Inst.*

8:00 C17 **640.09** Overeating in a mouse model of Down syndrome is associated with a dopaminergic deficit in the prefrontal cortex. M. FRUCTUOSO CASTELLAR*; I. DE TOMA; K. LANGOHR; J. DAIROU; N. JANEL; M. DIERSSEN. *Inst. Du Cerveau Et De La Moelle, Ctr. for Genomic Regulation (CRG), Univ. Pompeu Fabra (UPF), Hosp. Del Mar Med. Res. Inst. (IMIM), Univ. Politècnica De Catalunya/BarcelonaTech, Univ. Paris Diderot, Sorbonne Paris Cité, CNRS UMR 8251, Ctr. de Investigación Biomédica en Red de Enfermedades Raras (CIBERER).*

9:00 C18 **640.10** Cognitive decline in young and adults with Down syndrome. O. GARCIA*; E. M. RAMOS GALICIA; N. ARIAS TREJO. *Facultad de Psicologia, UNAM, Facultad de Psicologia, UNAM, Facultad de Psicologia, UNAM.*

10:00 C19 **640.11** Withdrawn

11:00 C20 **640.12** Effects of mild-to-moderate physical training on the gait dynamics of young Ts65Dn mice: A mouse model for Down syndrome. M. STASKO*; J. CHU; I. BASTEN; A. C. S. COSTA. *Case Western Reserve Univ., Univ. Hosp. Brussels, Case Western Reserve Univ., Case Western Reserve Univ.*

8:00 C21 **640.13** Systematic functional analysis of 21st chromosome genes using *C. elegans.* J. T. PIERCE*; S. M. SANCHEZ; S. NORDQUIST; S. R. SMITH. *Univ. of Texas at Austin.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 C22 **640.14** Spinogenesis impairment can be rescued by neonatal treatment with a beta 2-adrenergic agonist in a mouse model of Down syndrome. F. STAGNI*; M. SALVALAI; B. UGUAGLIATI; M. EMILI; S. GUIDI; A. GIACOMINI; V. BORTOLOTTO; M. GRILLI; R. BARTESAGHI. *Univ. of Bologna, Univ. of Piemonte Orientale.*

10:00 C23 **640.15** Developmental alterations in the subiculum of fetuses with Down syndrome and in the Ts65Dn model of Down syndrome. S. GUIDI*; F. STAGNI; A. GIACOMINI; M. EMILI; B. UGUAGLIATI; M. BONASONI; R. BARTESAGHI. *Bologna Univ., IRCCS.*

POSTER

641. Developmental Disorders: Animal Models of Neurodevelopmental Disease III

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 C24 **641.01** Altered motor function and perseverative behaviors in a mouse model of a human gain-of-function mutation in the GRIK2 kainate receptor gene. E. BINELLI*; T. NOMURA; W. P. NOBIS; J. R. STOLZ; A. CONTRACTOR; G. T. SWANSON. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Northwestern Univ. Dept. of Physiol.*

9:00 C25 **641.02** Genomic aberrations in embryonic neural progenitor cells may underlie cellular pathologies of lysophosphatidic acid induced hydrocephalus in mice. W. S. MCDONALD*; J. CHUN. *Sanford Burnham Prebys Med. Discovery Inst.*

10:00 C26 **641.03** Conserved role of DNM1in circadian rhythm control in humans and *Drosophila.* F. V. BOLDUC*; R. HE; C. ROSENFELT. *Univ. of Alberta, Univ. of Alberta.*

11:00 C27 **641.04** Subconvulsive stimulation in early postnatal life reduces NeuN and parvalbumin antigenicity while increasing interneuronal activity within the dentate gyrus and amygdala cortical complex in juvenile rats. L. K. FRIEDMAN*; B. A. KAHEN; J. E. HOFFMAN. *New York Med. Col., New York Med. Col.*

8:00 C28 **641.05** Postnatal-induced autism impairs social behavior and hovering in juvenile rats. B. A. KAHEN*; L. K. FRIEDMAN. *New York Med. Col.*

9:00 C29 **641.06** Silencing of *Drosophila* ortholog of TCF4 leads to behavioural impairment. L. TAMBERG*; M. JAAGO; A. SHUBINA; T. TIMMUSK; M. PALGI. *Tallinn Univ. of Technol.*

10:00 C30 **641.07** CHD7 controls cerebellar development and granule cell differentiation. N. REDDY*; S. MAJIDI; C. J. FERGUSON; J. V. GOODMAN; T. YAMADA; A. BONNI. *Washington Univ. in St. Louis, Washington Univ. in St. Louis, Sch. of Medi.*

11:00 C31 **641.08** Paternal ethanol exposure prior to conception impacts offspring brain and behavioral development. K. E. CONNER*; R. T. BOTTOM; K. J. HUFFMAN. *Univ. of California, Univ. of California.*

8:00 C32 **641.09** Neuro-behavioral effects of prenatal ethanol exposure in pre-pubescence: A transgenerational mouse model of FASD. R. T. BOTTOM*; O. O. KOZANIAN; D. J. ROHAC; K. J. HUFFMAN. *Univ. of California, Riverside, Univ. of California, Riverside.*

9:00 C33 **641.10** ▲ A spontaneous marmoset model of dysgenesis of the corpus callosum. D. SZCZUPAK; C. LIU; C. C. YEN; R. LENT; F. F. TOVAR-MOLL; A. C. SILVA*. *NIH, Inst. D'or for Res. and Educ., NIH.*

10:00 C34 **641.11** Binge-like alcohol produces long-lasting epigenetic marks on the stress axis only during the prenatal to prepubertal period but not after puberty. G. BERGER; L. CHASTAIN; O. GANGISETTY; V. MURUGAN; M. CABRERA; D. K. SARKAR*. *Rutgers Univ., Rutgers, SUNJ.*

11:00 C35 **641.12** ▲ Cranial nerve abnormalities in fetal alcohol spectrum disorders. N. K. BAER*; B. M. BJORKE. *Carleton Col., Carleton Col.*

8:00 C36 **641.13** Unable to Attend Perinatal exposure to low doses of ethanol induces changes in cerebral areas analyzed at early postnatal days, which could be involved in characteristic adult behaviour. H. A. BRUSCO*; N. M. VILLALBA; C. MADARNAS; L. A. NOVAK; D. B. SORIANO; L. R. CALTANA; V. N. SANCHEZ. *IBCN (UBA-CONICET) Facultad De Medicina UBA.*

9:00 C37 **641.14** Single-day binge early postnatal alcohol exposure causes region-specific patterns of short- and long-term damage in prefrontal-thalamic circuitry of rat. Z. GURSKY*; E. C. SPILLMAN; A. Y. KLINTSOVA. *Univ. of Delaware.*

10:00 C38 **641.15** Polygenic contributions of general transcription factors, Gtf2i and Gtf2ird1, in Williams Beuren syndrome critical region to cognitive phenotypes. N. D. KOPP*; J. D. DOUGHERTY. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

11:00 D1 **641.16** Late neurological consequences of early-life Zika virus infection in mice. P. DA SILVA FROST*; I. NEM DE OLIVEIRA SOUZA; J. V. FRANÇA; J. NASCIMENTO-VIANNA; R. L. S. NERIS; L. FREITAS; D. J. L. L. PINHEIRO; C. O. NOGUEIRA; G. A. NEVES; L. CHIMELLI; F. G. DE FELICE; É. A. CAVALHEIRO; S. T. FERREIRA; A. THOMPSON DA POIAN; C. P. FIGUEIREDO; I. ASSUNÇÃO-MIRANDA; J. R. CLARKE. *UFRJ, Federal Univ. of Rio De Janeiro, Federal Univ. of Rio De Janeiro, Federal Univ. of Rio De Janeiro, Federal Univ. of Rio De Janeiro, Escola Paulista de Medicina, Federal Univ. of São Paulo,, Escola Paulista de Medicina, Federal Univ. of São Paulo, Federal Univ. of Rio De Janeiro, Univ. Federal do Rio De Janeiro, State Inst. of Brain Paulo Niemeyer, Fed Univ. Rio De Janeiro, Escola Paulista de Medicina, Federal Univ. of São Paulo, Fed. Univ. Rio De Janeiro, Federal Univ. of Rio De Janeiro.*

8:00 D2 **641.17** Chorioamnionitis induced by group B streptococcus serotype III: Intrauterine growth retardation and motor impairments in male rats. M. ALLARD*; M. BROCHU; J. BERGERON; M. SEGURA; G. SEBIRE. *McGill Univ., Univ. de Sherbrooke, Univ. de Montréal.*

9:00 D3 **641.18** ▲ Behavioral analysis of the progeny of rats exposed to the toxoplasma gondii extract. E. ROMERO NUÑEZ*; B. PINEDA; A. JIMENEZ-ANGUIANO; S. MUÑIZ HERNÁNDEZ; D. F. GONZÁLEZ ESQUIVEL; C. RÍOS; V. PÉREZ DE LA CRUZ. *Inst. Nacional de Neurología y Neurocirugía, Univ. Autonoma Metropolitana-Iztapalapa, Inst. Nacional de Cancerología.*

10:00 D4 **641.19** Subtle effects of chronic glycogen synthase kinase 3β inhibition on the behaviour and neuroanatomy of five mouse models of autism. Z. BUCHWALD*; A. KINMAN; T. CHIEN; K. EASSON; J. ELLEGOOD; J. FOSTER; E. ANAGNOSTOU; J. LERCH. *Mouse Imaging Center, Hosp. For Sick Children, McMaster Univ., Holland Bloorview Kids Rehabil. Hosp.*

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* Indicates abstract's submitting author

POSTER

642. Structural and Functional Development of Sensory Systems

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 D5 **642.01** Origin and function of directionality in spontaneous retinal waves. X. GE*; A. GRIBIZIS; M. C. CRAIR. *Yale Univ.*

9:00 D6 **642.02** Spontaneous thalamic waves regulate cortico-thalamic innervation in the visual system. V. MORENO-JUAN*; G. LOPEZ-BENDITO. *Inst. de Neurociencias UMH/CSIC.*

10:00 D7 **642.03** Embryonic thalamic calcium waves control barrel map formation through the developmental regulation of cortical excitability. N. ANTÓN-BOLAÑOS; A. SEMPERE-FERRÀNDEZ; F. MARTINI; L. PÉREZ SAIZ; H. GEZELIUS; A. FILIPCHUK; A. ESPINOSA; M. A. VALDEOLMILLOS; G. LOPEZ-BENDITO*. *Inst. De Neurociencias, Sci. for Life Lab., UNIC, CNRS.*

11:00 D8 **642.04** LDB1 is required for the early development of the dorsal telencephalon and the thalamus. V. KINARE; S. PAL; S. P. TOLE*. *Sophia Col. for Women, Tata Inst. of Fundamental Res., Tata Inst. of Fundamental Res.*

8:00 D9 **642.05** Genetic mechanisms in early cortical progenitors control thalamocortical innervation. S. PAL*; G. GODBOLE; T. PRAMANIK; S. TOLE. *Tata Inst. of Fundamental Res.*

9:00 D10 **642.06** Development of coherent orientation selective responses to monocular and binocular stimuli in ferret visual cortex. J. T. CHANG*; D. E. WHITNEY; D. FITZPATRICK. *Max Planck Florida Inst. for Neurosci.*

10:00 D11 **642.07** V1 pyramidal neurons lose dendritic inhibition and somatic disinhibition across critical period closure. C. E. YAEGER*; D. L. RINGACH; J. T. TRACHTENBERG. *UCLA, UCLA.*

11:00 D12 **642.08** Modeling the development and binocular matching of orientation preferences of binocular neurons in layer 2/3 of V1. X. XU*; H. RIECKE. *Northwestern Univ., Northwestern Univ.*

8:00 D13 **642.09** ● Function of vasoactive intestinal peptide (VIP)-expressing interneurons in the developing auditory cortex. J. HU*; J. BIGELOW; R. J. MORRILL; J. L. RUBENSTEIN; A. R. HASENSTAUB. *Univ. of California, San Francisco, UCSF, Univ. of California, San Francisco, Univ. of California San Francisco, UCSF.*

9:00 D14 **642.10** Developmental regulation of top-down inputs onto L1 neurons in the Primary Auditory Cortex. L. A. IBRAHIM*; N. YUSUF; R. MACHOLD; G. J. FISHELL. *Harvard Med. Sch., NYU Langone Med. Ctr. Neurosci. Inst.*

10:00 D15 **642.11** Neural dynamics in the developing piriform cortex. Z. ZHANG*; D. C. COLLINS; J. X. MAIER. *Wake Forest Sch. of Med.*

11:00 D16 **642.12** The development of multisensory integration is influenced by network correlation and sensory experience. T. L. TRUSZKOWSKI*; J. BLEIER; S. COHEN; C. D. AIZENMAN. *Brown Univ., Brown Univ.*

8:00 D17 **642.13** Experience dependent development of prey capture performance in larval zebrafish. K. LAGOGIANNIS*; M. MEYER. *King's Col. London.*

9:00 D18 **642.14** Multiple body maps in newborn macaques. M. J. ARCARO*; P. F. SCHADE; M. S. LIVINGSTONE. *Harvard Med. Sch.*

10:00 D19 **642.15** Neural correlates of dynamic human visual search in cerebral visual impairment using virtual reality simulation. C. R. BENNETT*; E. S. BAILIN; T. K. GOTTLIEB; C. M. BAUER; P. J. BEX; L. B. MERABET. *Massachusetts Eye and Ear Infirmary, Harvard Med. Sch., Northeastern Univ.*

11:00 D20 **642.16** Associations between white matter microstructure alterations and sensorimotor performance in adolescents with prenatal alcohol exposure. K. A. UBAN*; S. BODISON; E. KAN; E. R. SOWELL. *Children's Hosp. Los Angeles, USC, Children's Hosp. Los Angeles.*

8:00 D21 **642.17** Development of sensory competition in the visual cortex: An fMRI study in school-aged children. N. KIM*; M. P. PINSK; S. KASTNER. *Princeton Univ.*

9:00 D22 **642.18** ● Signatures of auditory brain maturation and their relation to attention and response inhibition. S. VAN BIJNEN*; T. PARVIAINEN. *Univ. of Jyväskylä, Ctr. For Interdisciplinary Brain Res.*

10:00 D23 **642.19** Effect of in ovo sound stimulation on the development of auditory cortex and hippocampus of neonatal chicks. P. KATHPALIA*; T. C. NAG; M. BHAT; T. S. ROY; S. WADHWA. *All India Inst. of Med. Sci., North Delhi Municipal Corp. Med. Col.*

11:00 D24 **642.20** Xenoplastic transplantation of inner ears reveals conserved afferent targeting and circuit formation in hindbrain vestibular networks. C. GORDY*; B. FRITZSCH; H. STRAKA. *Ludwig-Maximilians-University Munich, Univ. of Iowa, LMU Munich - Biocenter Martinsried.*

8:00 D25 **642.21** Quantification and localization of carbohydrate sulfotransferase (Chst15) in developing hypothyroid cochlea. M. C. TOMPACH*; D. FORREST; D. S. SHARLIN. *Minnesota State University, Mankato, NIDDK, NIH.*

9:00 D26 **642.22** Early developmental expression of $P2X_2$ and $P2X_3$ purinergic receptors in cephalic tissues of opossums Monodelphis domestica. A. BEAUVAIS*; J. PFLIEGER. *Univ. de Montreal.*

10:00 D27 **642.23** Distribution of the mechanically activated channel Piezo2 in the facial skin of developing opossums, Monodelphis domestica. J. LAFORGE*; J. PFLIEGER. *Univ. de Montreal.*

11:00 D28 **642.24** Neuropeptides in the developing mouse brain. J. BAKKER; S. S. BARDE; S. STEFFENS; F. GIRACH; B. SZAROWSKA; I. ADAMEYKO; K. MELETIS; T. G. HOKFELT*; T. HARKANY. *Karolinska Institutet, Med. Univ. of Vienna, Ctr. for Brain Res., Karolinska Inst. - Biomedicum.*

8:00 D29 **642.25** Type III Neuregulin 1 potentiates TrkA signaling in sensory neurons through activation of src family kinases. S. LONCAR*; L. W. ROLE; D. A. TALMAGE. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

9:00 D30 **642.26** Onecut transcription factors control the development of sensory neurons in the dorsal root ganglia. G. MASGUTOVA*; A. HARRIS; F. CLOTMAN. *Univ. Catholique De Louvain.*

10:00 D31 **642.27** Mapping function-related epigenomes in mouse dorsal root ganglia neurons. C. QIAN*; Q. LI; X. WANG; C. ZHANG; T. LIN; A. KOSANA; B. C. DONG; F. ZHOU. *JHMI, Johns Hopkins Hosp., Johns Hopkins Univ., Johns Hopkins Univ. Sch. Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
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* Indicates abstract's submitting author

11:00 D32 **642.28** Morphological and electrophysiological development of rat spinal substantia gelatinosa neurons. J. WU*; S. PENG; H. KUANG; D. ZHANG; L. CHEN; L. XU; T. LIU. *Nanchang Univ., The First Affiliated Hosp. of Nanchang Univ.*

8:00 D33 **642.29** Hypothalamic inflammatory and barrier changes in rodent offspring born of females following surgical weight loss. R. A. SPANN*; C. A. ZAMARRIPA; N. ARAVINDAN; B. DUNCAN; B. E. GRAYSON. *Univ. of Mississippi Med. Ctr.*

9:00 D34 **642.30** A comparative analysis of the visual system in two whale species. M. A. SMITH*; E. S. PLYLER; J. C. GEORGE; J. THEWISSEN; S. D. CRISH. *Northeast Ohio Med. Univ., North Slope Borough, Northeast Ohio Med. Univ., Northeast Ohio Med. Univ.*

POSTER

643. Development of Motor, Sensory, and Limbic Systems: Limbic System

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 D35 **643.01** Novel role for mineralocorticoid receptors in the development and maintenance of hippocampal area CA2 pyramidal cell phenotype. K. E. MCCANN; D. J. LUSTBERG; K. E. CARSTENS; S. FARRIS*; E. K. SHAUGHNESSY; M. ZHAO; G. M. ALEXANDER; S. M. DUDEK. *NIEHS/NIH.*

9:00 D36 **643.02** Development of amygdala-prefrontal cortex circuits in primates: A longitudinal neuroimaging study in infant macaques. Z. A. KOVACS-BALINT*; J. STEELE; E. J. FECZKO; O. MIRANDA-DOMINGUEZ; M. PINCUS; E. L. MORIN; E. EARL; L. LI; M. STYNER; J. BACHEVALIER; D. FAIR; M. SANCHEZ. *Emory Univ., Emory Univ., Oregon Hlth. Sci. Univ., Oregon Hlth. Sci. Univ., Marcus Autism Ctr., Emory Univ., Univ. of North Carolina, Emory Univ., Emory Univ.*

10:00 D37 **643.03** The role of kainate receptors in the development of amygdala internal glutamatergic circuit in neonatal rats. M. RYAZANTSEVA*; J. E. ENGLUND; A. SHINTYAPINA; S. E. LAURI. *Helsinki Univ., Univ. of Helsinki.*

11:00 D38 **643.04** Childhood maturation of immature neurons in the human paralaminar amygdala. S. F. SORRELLS*; M. F. PAREDES; V. H. PEREZ; K. SANDOVAL; E. J. HUANG; J. GARCIA-VERDUGO; A. ALVAREZ-BUYLLA. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. de Valencia, Univ. of California San Francisco, Univ. of California San Francisco.*

8:00 D39 **643.05** Dbx1 and Foxp2 dependent formation of the social brain. M. J. HERRERO*; M. GOODRICH; J. E. LISCHINSKY; A. FOLCARELLI; S. SETHI; T. SASAKI; C. LAZARSKI; Y. IMAMURA; L. WANG; N. SMITH; K. HASHIMOTO-TORII; J. G. CORBIN. *Children's Natl. Med. Ctr., New York Univ. Med. Ctr., Penn State Col. of Medicine. Genome Sci. and Bioinformatics Core.*

9:00 D40 **643.06** ▲ Social status and an obesogenic diet affect amygdala, hippocampus and prefrontal cortex development in infant and juvenile macaques. M. H. KYLE*; A. KALDAS; M. PINCUS; J. GODFREY; Z. KOVAKS-BALINT; E. MORIN; L. LI; B. R. HOWELL; M. STYNER; K. ETHUN; M. E. WILSON; M. SANCHEZ. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Inst. of Child Develop., Univ. of North Carolina, Ctr. for Behavioral Neurosci.*

10:00 D41 **643.07** Amygdala nuclei composition across adolescence using a high-resolution probabilistic atlas. C. E. CAMPBELL*; A. F. MEZHER; J. TYSZKA; W. M. PAULI; B. J. NAGEL; M. M. HERTING. *USC, Caltech, Caltech, Oregon Hlth. and Sci. Univ.*

11:00 D42 **643.08** Structural differences in amygdalae nuclei in children with classical congenital hyperplasia. M. M. HERTING*; M. CANALES; A. MEZHER; M. PARKER; M. E. GEFFNER; M. S. KIM. *USC, Stanford Univ., Children's Hosp. Los Angeles.*

POSTER

644. Adolescent Development: Animal Models II

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 D43 **644.01** ▲ For adolescent rats, periodic environmental enrichment affects hippocampal c-FOS expression evoked by an acute enriching experience. M. PAVELKA*; S. L. SANTIAGO; P. M. CLAYTON; E. B. TURNER; M. R. WOOD; C. T. FENNELL; M. C. ZRULL. *Appalachian State Univ., Appalachian State Univ.*

9:00 D44 **644.02** ▲ For adolescent rats, acute, but not periodic, environmental enrichment affects c-FOS expression in the amygdala. C. FENNELL*; C. A. PEGGS; C. E. GAILLARD; A. PEREZ; S. L. SANTIAGO; M. C. ZRULL. *Appalachian State Univ., Appalachian State Univ., Appalachian State Univ.*

10:00 D45 **644.03** Epigenetic transmission of enhanced response to nicotine in the neonatal quinpirole model of schizophrenia. W. D. GILL*; M. J. CHANDLEY; L. J. HERNANDEZ; W. S. WHICKER; C. L. KAESTNER; K. C. BURGESS; R. W. BROWN. *East Tennessee State Univ., East Tennessee State Univ., East Tennessee State Univ.*

11:00 D46 **644.04** Tumor necrosis factor-alpha modulation results in alleviation of prepulse inhibition deficits and reduction in microglial cell activation produced by neonatal polyinosinic:polycytidylic acid treatment in rats. H. W. SHELTON*; W. D. GILL; K. C. BURGESS; P. GABBITA; R. W. BROWN. *East Tennessee State Univ., P2D Biosci.*

8:00 D47 **644.05** ▲ Establishing a model of post-traumatic stress disorder in adolescent rats. E. WRIGHT*; M. RUYLE; J. MERCADO; B. CHELINE; T. E. KOELTZOW. *Bradley Univ., Bradley Univ.*

9:00 D48 **644.06** ▲ Single Prolonged Stress elicits robust behavioral effects in adolescent Wistar Kyoto rats. M. T. RUYLE; E. B. WRIGHT; J. A. MERCADO; B. C. CHELINE; T. E. KOELTZOW*. *Bradley Univ.*

10:00 D49 **644.07** Adolescent ketamine pre-exposure does not alter cocaine preference in adult female mice. I. GARCIA*; A. R. ZAVALA; S. D. IÑIGUEZ. *Univ. of Texas at El Paso, California State Univ.*

11:00 D50 **644.08** Extracellular-regulated kinase 2 in the lateral habenula regulates reactivity to stress in adolescent male rats. L. F. PARISE*; O. K. SIAL; A. M. CARDONA; E. L. VIEREGG; P. N. SKANSI; C. BOLAÑOS-GUZMAN. *Texas A&M Univ.*

8:00 D51 **644.09** Juvenile combination treatment with fluoxetine and aripiprazole does not alter cocaine-seeking behavior in adulthood. S. A. CASTILLO*; A. R. ZAVALA; S. D. IÑIGUEZ. *The Univ. of Texas At El Paso, The Univ. of Texas At El Paso, California State Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 E1 **644.10** ▲ Neonatal caffeine does not disrupt locomotor activity in adolescence but attenuates the expression of locomotor sensitization to methylphenidate. R. MEHTA*; B. SORTMAN; C. GERAGHTY; C. J. RICHARD; A. R. ZAVALA. *California State University, Long Beach.*

10:00 E2 **644.11** The effects of early-life ketamine administration on the rewarding effects of alcohol in male and female adolescent sprague dawley rats. D. FRANCO*; E. NUNEZ LARIOS; R. A. CABRERA; S. D. INIGUEZ; A. R. ZAVALA. *California State Univ. Long Beach, Univ. of Texas at El Paso.*

11:00 E3 **644.12** Social stress during adolescence followed by western-style diet leads to physiological dysregulation, depressive phenotype, and decreases in reward sensitivity in adulthood. O. K. SIAL*; L. F. PARISE; P. N. SKANSI; A. M. CARDONA; E. L. VIEREGG; T. GNECCO; C. A. BOLAÑOS-GUZMÁN. *Texas A&M Univ.*

8:00 E4 **644.13** Fluoxetine pre-exposure decreases cocaine and sucrose preference in female mice. F. J. FLORES RAMIREZ*; M. ARENIVAR; A. THEMANN; M. RODRIGUEZ; O. LIRA; J. PRECIADO-PINA; A. R. ZAVALA; S. D. IÑIGUEZ. *Univ. of Texas At El Paso, California State Univ.*

9:00 E5 **644.14** ▲ Alprazolam exposure during adolescence dysregulates reward sensitivty and second messenger signalingin adulthood. A. M. CARDONA; L. F. PARISE; O. K. SIAL; E. L. VIEREGG; J. P. ROZOFSKY; C. A. BOLANOS-GUZMAN*. *Texas A&M Univ.*

10:00 E6 **644.15** ▲ The role of glucagon-like peptide 1 receptors on the rewarding effects of oxycodone in male and female adolescent rats. Y. C. BROWN*; C. J. RICHARDS; A. R. ZAVALA. *California State University, Long Beach.*

11:00 E7 **644.16** Differential consequences of post-natal and post-weaning environment on the relative playfulness of F344 and Lewis rats. S. M. SIVIY*; C. M. CAMPBELL; J. A. GENTES; L. GUSTAFSON. *Gettysburg Col.*

8:00 E8 **644.17** Individual differences in social play behaviour in rats: How do they affect adult social behaviour and reward sensitivity? M. ACHTERBERG*; H. M. B. LESSCHER; L. J. M. J. VANDERSCHUREN. *Fac. of Vet. Med.*

9:00 E9 **644.18** Nicotinic driven adolescent shift of local/long-range input balance onto a prefrontal top-down projection establishes adult attentional control. E. NABEL; M. DEMARS; Y. GARKUN; K. CARO; J. SHORT; G. TACCHERI; S. IM; S. LOPEZ; K. J. NORMAN; M. SADAHIRO; H. KOIKE; M. G. BAXTER; 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., Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

10:00 E10 **644.19** Prefrontal parvalbumin Interneurons require juvenile social experience to establish adult social behavior. L. BICKS*; K. YAMAMURO; M. FLANIGAN; E. K. LUCAS; H. KOIKE; M. S. PENG; J. M. KIM; Z. DONG; R. L. CLEM; S. J. RUSSO; S. AKBARIAN; H. MORISHITA. *Icahn Sch. of Med. at Mount Sinai, Mount Sinai Sch. of Med., Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Mount Sinai Sch. of Med., Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

11:00 E11 **644.20** Prefrontal top-down cortico-cortical projection in control of attentional behavior. K. J. NORMAN*; H. KOIKE; S. LOPEZ; E. NABEL; M. FLANIGAN; Y. GARKUN; Z. DONG; M. DEMARS; M. G. BAXTER; S. J. RUSSO; H. MORISHITA. *Icahn Sch. of Med., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Mount Sinai Sch. Med., Icahn Sch. of Med. at Mount Sinai.*

8:00 E12 **644.21** Selective sub-populations of prefrontal excitatory and inhibitory neurons require juvenile social experience to establish adult excitability. K. YAMAMURO*; L. K. BICKS; Y. GARKUN; H. MORISHITA. *Dept. of Psychiatry, Icahn Sch. of Med., Dept. of Neuroscience, Icahn Sch. of Med. at Mount Sinai, Dept. of Ophthalmology, Icahn Sch. of Med. at Mount Sinai, Mindich Child Hlth. and Develop. Institute, Icahn Sch. of Med. at Mount Sinai, Friedman Brain Institute, Icahn Sch. of Med. at Mount Sinai.*

POSTER

645. Adolescent Development: Mechanisms of Vulnerability

Theme A: Development

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 E13 **645.01** Developmental and sex differences in kappa opioid receptor activity in limbic brain areas. S. J. CROSS*; D. BE; C. CARMONA; F. M. LESLIE. *Univ. of California Irvine, Univ. of California Irvine.*

9:00 E14 **645.02** ● ▲ Sex and pubertal stage: Effects on the awakening cortisol response. J. J. HUGGINS; P. E. MARTINEZ*; E. D. ROBINSON; K. D. THOMPSON; K. M. REDING; S. WEI; L. A. SCHENKEL; S. M. BRADY; J. A. YANOVSKI; K. F. BERMAN; S. J. SOLDIN; L. K. NIEMAN; P. J. SCHMIDT. *NIH/National Inst. of Mental Hlth., NIH, NIH/National Inst. of Mental Hlth., NIH/Eunice Kennedy Shriver Natl. Inst. of Child Hlth. and Human Develop., NIH/National Inst. of Mental Hlth., NIH, NIH/National Inst. of Diabetes and Digestive and Kidney Dis., NIH/National Inst. of Mental Hlth.*

10:00 E15 **645.03** ● A novel genomic approach predicts brain volume and behavior in healthy children based on DCC co-expression network. A. MORGUNOVA*; K. J. O'DONNELL; M. J. MEANEY; P. P. SILVEIRA; C. A. FLORES. *McGill Univ., McGill Univ., Douglas Mental Hlth. Univ. Inst., McGill Univ., Canadian Inst. for Advanced Res. (CIFAR), Singapore Inst. for Clin. Sci., McGill Univ., Douglas Mental Hlth. Univ. Inst.*

11:00 E16 **645.04** Cognitive control networks and related vulnerabilities for alcohol abuse in adolescents with childhood trauma. S. SILVEIRA; K. B. NOONER; B. J. NAGEL; S. TAPERT; M. D. DEBELLIS; J. MISHRA*. *Univ. of California San Diego, Univ. of North Carolina Wilmington, Oregon Hlth. and Sci. Univ., Univ. of California San Diego, Duke Univ. Med. Ctr.*

8:00 E17 **645.05** Chronic stress in adolescence and its relationship with the development of mood disorders. M. A. PEREZ HERNANDEZ*; A. ESCALANTE-VARELA; N. ISMAIL; R. SHARMA; B. BERNAL-MORALES; T. CIBRIAN-LLANDERAL. *Univ. Veracruzana, Inst. Veracruzano de Salud Mental Rafael Velasco Fernandez, Univ. of Ottawa, Univ. Veracruzana, Univ. Veracruzana.*

9:00 E18 **645.06** ● Adolescent levels of circulating miR-218 predict susceptibility to chronic social defeat stress in adult mice. A. TORRES BERRIO*; A. MORGUNOVA; C. FLORES. *Icahn Sch. of Med. At Mount Sinai, McGill Univ., McGill Univ.*

Wed. AM

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 E19 **645.07** Environmental cues alter the timing of adolescent neural development in Siberian hamsters. D. HOOPS*; R. F. KYNE; A. HE; K. C. SCHATZ; L. LIN; C. FLORES; M. J. PAUL. *McGill Univ., Univ. At Buffalo, McGill Univ., Univ. at Buffalo, Univ. at Buffalo, McGill Univ., Univ. at Buffalo, SUNY.*

11:00 E20 **645.08** Cannabinoid exposure in adolescence dysregulates genes that orchestrate dopamine development and enhances cocaine-motivated behavior. N. E. ZLEBNIK*; S. CUESTA; S. KUMMER; D. NOUEL; J. M. WENZEL; C. FLORES; J. F. CHEER. *Univ. of Maryland Sch. of Med., McGill Univ., Univ. of Pompeu Fabra, Univ. of Maryland Sch. of Med., McGill Univ., Univ. of Maryland Sch. of Med.*

8:00 E21 **645.09** Effects of adolescent WIN exposure on perineuronal net emergence in PFC. E. JACOBS-BRICHFORD*; H. CHEN; A. W. LASEK; J. D. ROITMAN. *Univ. of Illinois At Chicago, UIC, Univ. of Illinois At Chicago, Univ. of Illinois at Chicago.*

9:00 E22 **645.10** Chronic intermittent ethanol exposure produces long-lasting changes in immune function and corticosterone sensitivity when experienced during adolescence, but not in adulthood. A. S. VORE*; T. M. BARNEY; J. E. MONDELLO; T. DEAK. *Binghamton Univ.*

10:00 E23 **645.11** Neuroimmune and epigenetic mechanisms underlying the adolescent binge ethanol-induced loss of basal forebrain cholinergic neurons: Restoration with anti-inflammatory drugs and voluntary exercise. R. P. VETRENO*; J. P. BOHNSACK; S. C. PANDEY; W. LIU; F. T. CREWS. *Univ. of North Carolina At Chapel Hill, Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Univ. of North Carolina at Chapel Hill, Skipper Bowles Ctr. Alcohol.*

11:00 E24 **645.12** The effects of amphetamine exposure in adolescence on Netrin-1 receptors, dopamine development, and cognitive maturation are sex-specific. L. M. REYNOLDS*; S. ISRAEL; S. CUESTA; M. WODZINSKI; M. HE; C. FORTIN-CLAES; C. FLORES. *McGill Univ., McGill Univ.*

8:00 E25 **645.13** Opposite effects of low versus high doses of amphetamine in adolescence on dopamine development and behavior. J. RESTREPO*; S. CUESTA; L. M. REYNOLDS; C. POPESCU; S. HE; C. FORTIN; J. EPELBAUM; S. SILVESTRIN; C. FLORES. *McGill Univ., Douglas Mental Hlth. Univ. Inst., McGill Univ.*

9:00 E26 **645.14** Locus coeruleus glutamatergic synapses experience divergent forms of plasticity during the adolescence to adulthood transition. A. LOCARNO*; I. MISEVICIUTE; F. PAPALEO; G. MARSICANO; B. LUTZ; F. E. GEORGES; R. TONINI. *Fondazione Inst. Italiano Di Tecnologia, Fondazione Inst. Italiano Di Tecnologia, INSERM U1215, Univ. Med. Ctr. Mainz, IMN-UMR-CNRS-5293.*

POSTER

646. Monoamines II

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 E27 **646.01** Sex determines the behavioral and biochemical impact of dopaminergic dysfunction in the DAT Val559 mouse model. A. STEWART*; R. GOWISHANKAR; R. PEART; K. SPIESS; G. L. DAVIS; M. K. HAHN; R. D. BLAKELY. *Florida Atlantic Univ., Vanderbilt Univ., Vanderbilt Univ., Florida Atlantic Univ., Florida Atlantic Univ.*

9:00 E28 **646.02** Investigating cognitive flexibility in DAT Val559 mice, a construct valid model of DA-associated neuropsychiatric disorders. M. J. RABIL*; G. L. DAVIS; A. STEWART; M. K. HAHN; R. D. BLAKELY. *Florida Atlantic Univ., Vanderbilt Univ., Florida Atlantic Univ.*

10:00 E29 **646.03** Screening the *C. elegans* million mutation project library to identify regulators of dopamine signaling. O. REFAI*; P. RODRIGUEZ; R. D. BLAKELY. *Florida Atlantic Univ., FAU Brain Inst.*

11:00 E30 **646.04** Epigenetic effects of amphetamine in dopamine transporter regulation: Insights from *C. elegans.* S. M. SOSSI*; K. R. KUDUMALA; G. AMBIGAPATHY; L. CARVELLI. *Florida Atlantic Univ., Univ. of North Dakota Sch. of Med. & Hlth. Sci.*

8:00 E31 **646.05** Investigating the behavioral impact of regulated dopamine transporter endocytosis in *Drosophila melanogaster.* R. R. FAGAN*; C. G. SWEENEY; P. EMERY; H. E. MELIKIAN. *Univ. of Massachusetts Med. Sch., Univ. of Massachusetts Med. Sch., Univ. of Massachusetts Med. Sch.*

9:00 E32 **646.06** Presynaptic Gq-coupled receptor activation drives D2-dependent, biphasic dopamine transporter surface trafficking. P. J. KEARNEY*; H. E. MELIKIAN. *UMASS Med. Sch.*

10:00 E33 **646.07** PKC-stimulated dopamine transporter internalization: Interdependent roles of Rin, Ack1 and transporter amino- and carboxy termini. H. E. MELIKIAN*; C. G. SWEENEY; B. S. ALEJANDRO; L. C. O'CONNOR; R. R. FAGAN. *UMASS Med. Sch.*

11:00 E34 **646.08** Potential role of brain H3Q5 histaminylation in circadian rhythmicity. R. M. BASTLE*; T. RAHMAN; A. LEPACK; S. FULTON; A. AL-KACHAK; L. FARRELLY; Y. LYU; S. ZHAO; A. RAMAKRISHNAN; N. BHANU; R. THOMPSON; H. MOLINA; H. LI; L. SHEN; B. GARCIA; T. MUIR; I. MAZE. *Icahn Sch. of Med. at Mount Sinai, Tsinghua Univ., Univ. of Pennsylvania, Princeton Univ., Rockefeller Univ., Icahn Sch. of Med. at Mount Sinai.*

8:00 E35 **646.09** Aberrant chromatin regulatory mechanisms in Down syndrome. Y. LU*; A. LEPACK; A. L. EAGLE; R. M. BASTLE; W. WENDERSKI; T. FANUTZA; L. FARRELLY; A. K. FRIEDMAN; J. STAFFORD; A. BHATTACHARYYA; S. L. FULTON; A. AL-KACHAK; H. MOLINA; H. LI; P. J. KENNY; R. ROPER; R. D. BLITZER; A. ROBISON; K. BRENNAND; I. S. MAZE. *Icahn Sch. of Med. at Mount Sinai, Michigan State Univ., Icahn Sch. of Med. at Mount Sinai, Howard Hughes Med. Inst. - Stanford Univers, Icahn Sch. of Med. at Mount Sinai, Dept. of Neurosci., Hunter College, City Univ. of New York, NYU LMC, Univ. of Wisconsin Madison Waisman Ctr., Mount Sinai Icahn Sch. of Med., Rockefeller Univ., Tsinghua Univ., ICAHN Sch. of Med. at Mount Sinai, Indiana Univ. Purdue Univ. at Indianapolis Dept. of Biol., Icahn Sch. of Med. at Mount Sinai, Michigan State Univ.*

9:00 E36 **646.10** Functions for histone dopaminylation in cocaine-induced transcriptional and behavioral plasticity. A. LEPACK*; C. T. WERNER; L. FARRELLY; A. W. SMITH; S. L. FULTON; A. F. STEWART; R. M. BASTLE; Y. LU; R. THOMPSON; E. S. CALIPARI; T. MUIR; D. M. DIETZ; P. J. KENNY; I. S. MAZE. *Icahn Sch. of Med. At Mount Sinai, State Univ. of New York at Buffalo, Dept. of Neurosci., Icahn Sch. of Med. at Mount Sinai, Mount Sinai Icahn Sch. of Med., Univ. At Buffalo, Icahn Sch. of Med. at Mount Sinai, Princeton Univ., Vanderbilt Univ. Sch. of Med., State Univ. of New York At Buffalo, Ichan Sch. of Med., Icahn Sch. of Med. At Mount Sinai.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 E37 **646.11** Histone serotonylation and its dynamic effects on DNA methylation. L. FARRELLY*; S. ZHAO; R. THOMPSON; Y. LU; L. SHEN; A. RAMAKRISHNAN; T. MUIR; H. LI; I. MAZE. *Dept. of Neurosci., Tsinghua Univ., Princeton Univ.*

11:00 E38 **646.12** Histone serotonylation in the adult brain: Novel mechanisms of neuroepigenetic plasticity and disease. A. AL-KACHAK*; L. A. FARRELLY; S. L. FULTON; A. E. LEPACK; R. M. BASTLE; Y. LU; C. MENARD; O. BERTON; A. AGUSTINUS; S. J. RUSSO; Y. DAVID; I. S. MAZE. *Icahn Sch. of Med. At Mount Sinai, NIH, Mem. Sloan Kettering Cancer Ctr.*

8:00 E39 **646.13** Epigenetic profiling of chromatin accessibility in MDD identifies glial dysfunction in reward-processing cortex. S. L. FULTON*; J. FULLARD; J. BENDL; K. GLEASON; A. LEPACK; C. A. TAMMINGA; P. ROUSSOS; I. S. MAZE. *Mount Sinai Icahn Sch. of Med., Mount Sinai Icahn Sch. of Med., Univ. of Texas Southwestern, Icahn Sch. of Med. At Mount Sinai, Univ. of Texas Southwestern Med. Ctr. at Dallas, Icahn Sch. of Med. At Mount Sinai.*

9:00 E40 **646.14** Treatment of drug-resistant seizures with chloride extrusion enhancer CLP257. V. I. DZHALA*; K. STALEY. *Massachusetts Gen. Hosp.*

10:00 E41 **646.15** Characterization of neuronal chloride microdomains. N. RAHMATI*; K. NORMOYLE; J. GLYKYS; K. STALEY. *Harvard Med. Sch. & Massachusetts Gen. Hos.*

11:00 E42 **646.16** Comparing phasic dopamine dynamics in the striatum, nucleus accumbens, amygdala, and medial prefrontal cortex. Z. R. HOLLOWAY*; T. FREELS; J. COMSTOCK; H. NOLEN; H. J. SABLE; D. B. LESTER. *Univ. of Memphis.*

8:00 E43 **646.17** The relationship between neuronal extracellular matrix, intracellular cytoskeleton, and mobile chloride. K. P. NORMOYLE*; K. J. STALEY. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

9:00 E44 **646.18** ▲ Autoreceptor inhibition of dopamine release in the nucleus accumbens is altered by D2 antagonism and dopamine transporter inhibition. N. PAIGE; H. J. SABLE*; D. B. LESTER. *Univ. of Memphis, Univ. of Memphis.*

10:00 E45 **646.19** High-fat vs. vegan diet: Effects on nucleus accumbens dopamine release in mice. M. K. ESTES*; J. BLAND; K. ECTOR; D. B. LESTER. *Univ. of Memphis.*

11:00 E46 **646.20** ● SUVN-502, a pure 5-HT_6 receptor antagonist potentiates the effects of donepezil or memantine on electrophysiological activity in rat hippocampus. R. V. NIROGI*; G. BHYRAPUNENI; V. S. BENADE; S. DARIPELLI; T. BANDYALA; P. ACHANTA; S. KESHARI SARAF. *Suven Life Sci.*

POSTER

647. Synaptic Transmission: Modulation: ACh, Amino Acids, and GABA

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 E47 **647.01** Metabolism of ^{13}C-labeled glucose reveals altered neuronal oxidation and glutamate-glutamine cycling in UCP2$^{-/-}$ mice. G. M. CHOWDHURY*; Y. JU; T. HORVATH; G. SANACORA; D. L. ROTHMAN; K. L. BEHAR; G. HERMES. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

9:00 E48 **647.02** Ovariectomy reduces the suppression of excitatory synaptic transmission induced by physostigmine in layer II of the entorhinal cortex. A. A. BATALLAN BURROWES*; I. A. IASENZA; F. CARTER; W. SHAMS; C. CHAPMAN. *Concordia Univ., Concordia Univ., Concordia Univ., Concordia Univ., Concordia Univ.*

10:00 E49 **647.03** Dietary large neutral amino acids suppress kynurenic acid production in rat brain. T. FUKUWATARI*; A. KUSUMOTO; A. SEKINE; A. MARUYAMA; M. SANO; N. MORI; K. SHIBATA. *The Univ. of Shiga Prefecture.*

11:00 E50 **647.04** ▲ Ethanol modulates kynurenic acid synthesis - in an *in vitro* study. H. BARAN*; B. KEPPLINGER. *Karl Landsteiner Res. Inst. Mauer.*

8:00 E51 **647.05** ● Nicotinic cholinergic receptors in VTA glutamate neurons modulate excitatory transmission. Y. YAN*; C. PENG; M. C. ARVIN; X. JIN; V. J. KIM; M. D. RAMSEY; Y. WANG; S. BANALA; D. L. WOKOSIN; J. MCINTOSH; L. D. LAVIS; R. M. DRENAN. *Northwestern Univ., Janelia Res. Campus, Howard Hughes Med. Inst., Univ. of Utah.*

9:00 F1 **647.06** Nicotinic acetylcholine receptors mediate and modulate cholinergic circuit activity in mouse myenteric ganglia. J. F. MARGIOTTA; A. KALINOSKI; A. PERRIN; M. J. HOWARD*. *UT Hlth. Sci.*

10:00 F2 **647.07** Cholinergic interneurons facilitate disinhibition of pyramidal neurons in the rat cerebral cortex. K. KANEKO*; S. MATSUMURA; Y. OI; M. KOBAYASHI. *Nihon Univ. Sch. of Dent., Nihon Univ. Sch. of Dent., Nihon Univ. Sch. of Dentisitry, Nihon Univ. Sch. Dent.*

11:00 F3 **647.08** A novel aspect of cholinergic transmission in central nervous system. I. MURAMATSU*; T. MASUOKA; M. NISHIO; T. ISHIBASHI. *Kanazawa Med. Univ.*

8:00 F4 **647.09** ▲ Cell-type specific cholinergic modulation of the claustrum. A. NAIR*; M. GRAF; G. J. AUGUSTINE. *Natl. Univ. of Singapore, Nanyang Technological Univ.*

9:00 F5 **647.10** Decreased synaptic physiological properties in aged central cholinergic neurons. S. GRIGORYEV*; Y. BESSONOVA; H. LAWAL. *DSU.*

10:00 F6 **647.11** Differential involvement of distinct types of interneurons in cholinergic-induced oscillations in the basolateral amygdala. J. X. BRATSCH-PRINCE*; J. W. WARREN; G. C. JONES; A. J. MCDONALD; D. D. MOTT. *Univ. of South Carolina Sch. of Med.*

11:00 F7 **647.12** Input-specific and activity-dependent cholinergic regulation of synaptic transmission in basolateral amygdala. S. C. TRYON*; J. W. WARREN; M. E. LONG; G. C. JONES; A. J. MCDONALD; D. D. MOTT. *Univ. of South Carolina Sch. of Med., Univ. of South Carolina.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 F8 **647.13** Cholinergic modulation of excitability of pyramidal neurons of the basolateral amygdala. T. ANDERSON-SIEG*; N. VU; J. X. BRATSCH-PRINCE; M. E. LONG; G. C. JONES; J. W. WARREN; A. J. MCDONALD; D. D. MOTT. *Univ. of South Carolina Sch. of Med.*

9:00 F9 **647.14** Recruitment of a basal forebrain cholinergic engram in conditioned fear. P. M. RAJEBHOSALE*; D. A. TALMAGE; L. W. ROLE. *State Univ. of New York At Stony Brook, Stony Brook Univ., Stony Brook Univ.*

10:00 F10 **647.15** Yin and yang of cholinergic modulation in the hippocampus. R. SHARMA*; S. NADKARNI. *IISER-PUNE, Indian Inst. of Sci. Educ. and Res. Pune.*

11:00 F11 **647.16** Role of cholinergic signaling in fear memory. L. JIANG*; D. A. TALMAGE; L. W. ROLE. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

8:00 F12 **647.17** Cholinergic modulation of reverberatory activity in cultured neuronal networks. X. LI*; P. LAU; G. BI. *USTC.*

9:00 F13 **647.18** Autaptic cultures of single neurons for studying autonomic synaptic transmission. S. KANG*; C. LEE; S. KIM; S. JEONG. *Yonsei Univ. Wonju Col. of Med., Max Planklinstitute Exptl. of Medizin, Yonsei Univ. Wonju Col. of Med., Yonsei Univ. Wonju Col. of Med.*

10:00 F14 **647.19** Acetylcholine release indirectly inhibits Schaffer collateral inputs onto CA1 pyramidal neurons via an increase in inhibitory interneuron excitability and the activation of postsynaptic $GABA_B$ receptors. P. GOSWAMEE; R. MCQUISTON*. *Virginia Commonwealth Univ.*

11:00 F15 **647.20** GABA cotransmission from cholinergic neurons in the cortex and basal forebrain. A. J. GRANGER*; B. L. SABATINI. *Harvard Med. Sch., Harvard Med. Sch. Dept. of Neurobio.*

8:00 F16 **647.21** Inhibitory role of peripheral GABA receptors on salivation. J. LEE; D. R. GIOVANNUCCI*. *Univ. of Toledo/College of Med., Univ. of Toledo/College of Med.*

9:00 F17 **647.22** Reducing inhibition improves E/I balance and hippocampal circuit function in PGC-1α null mice. D. BHATTACHARYA*; A. F. BARTLEY; Q. LI; L. E. DOBRUNZ. *Univ. of Alabama at Birmingham.*

10:00 F18 **647.23** Long-range inhibitory nNOS cells: Characterization of an inhibitory neuron population in the mouse hippocampus. Z. CHRISTENSON WICK*; Z. MONTES; C. H. LEINTZ; C. XAMONTHIENE; E. KROOK-MAGNUSON. *Univ. of Minnesota, Univ. of Minnesota.*

11:00 F19 **647.24** Effect of alterations in the vesicular acetylcholine transporter on acetylcholine-linked behaviors in *Drosophila.* S. WILLIAMS*; H. O. LAWAL. *Delaware State Univ., Delaware State Univ.*

8:00 F20 **647.25** Role and function of a5-$GABA_A$Rs in the neocortex: A molecular signature of dendritic synapses from Martinotti cells? C. DONATO; J. ZORRILLA DE SAN MARTIN*; A. AGUIRRE; C. CABEZAS; A. BARBERIS; M. POTIER; A. BACCI. *Inst. Du Cerveau Et De La Moelle Epinière (ICM), Plasticity of ihibitory networks Lab, Fondazione Inst. Italiano di Tecnologia, Via Morego 30, Genova Italy.*

9:00 F21 **647.26** GABA and glutamate co-release from hippocampal VGluT3-expressing interneurons. K. A. PELKEY*; D. CALVIGIONI; C. FANG; G. VARGISH; R. CHITTAJALLU; C. J. MCBAIN. *NIH.*

10:00 F22 **647.27** Specific alterations of GABAergic sub-circuits in the prefrontal cortex of a mouse model of Down syndrome. J. ZORRILLA DE SAN MARTIN; C. DONATO; A. AGUIRRE; M. POTIER; A. BACCI*. *ICM - Inst. du Cerveau et de la Moelle épinière, Inst. du Cerveau et de la Moelle Epiniere (ICM).*

11:00 F23 **647.28** Optical measurements of anesthetic action on GABA exocytosis. I. A. SPEIGEL*; H. C. HEMMINGS, Jr. *Weill Med. Col. of Cornell Univ.*

8:00 F24 **647.29** ● Action of $G_{i/o}$ DREADDson GABAergic projections within the basal ganglia. L. VOYVODIC; K. P. ABRAHAO; D. M. LOVINGER*. *Natl. Inst. on Alcohol Abuse and Alcoholism Rockville Office, Natl. Inst. on Alcohol Abuse and Alcoholism Rockville Office.*

POSTER

648. Synaptic Transmission: Modulation: Mechanisms of Action

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 F25 **648.01** ● ▲ A comparison of botulinum toxin A light chain and heavy chain gene fragments in adenoviral vector-mediated gene-based synaptic inhibition. L. DI*; Y. KIM; M. S. TORA; O. P. KEIFER, Jr.; Y. H. CHEN; P. HANNIKAINEN; A. DONSANTE; B. J. MADER; N. M. BOULIS. *Emory Univ. Sch. of Med.*

9:00 F26 **648.02** Mechanisms of presynaptic suppression of GABA release by opioid receptors in the hippocampus. X. J. HE*; M. R. BANGHART. *Univ. of California San Diego, Univ. of California San Diego.*

10:00 G1 **648.03** CAPS1 finely regulates the exocytosis of synaptic vesicles in calcium- and/or synapse type-dependent manners, affecting on learning and memory. C. ISHII*; Y. SHINODA; T. SADAKATA; Y. SANO; Y. ISHII; N. SHIBANO; Y. KATO; M. YAMAZAKI; A. YAMATO; T. FURUICHI. *Tokyo Univ. of Sci., Tokyo Univ. of Pharm. and Life Sci., Gunma Univ.*

11:00 G2 **648.04** Modulation of synaptic transmission: Quantitative analysis of Gbg specificity to a_{2a} adrenergic receptor and SNARE. Y. YIM*; K. BETKE; W. MCDONALD; R. GILSBACH; Y. CHEN; K. HYDE; Q. WANG; L. HEIN; H. E. HAMM. *Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med., Vanderbilt Univ., Univ. of Freiburg, Univ. of Alabama at Birmingham, Vanderbilt Univ. Sch. of Med.*

8:00 G3 **648.05** Iqsec3 controls activity-dependent npas4-mediated gabaergic synapse development. D. B. PARK*; S. KIM; J. KIM; S. HONG; S. KIM; H. KIM; E. YANG; J. JEON; J. KIM; H. KIM; E. CHEONG; J. KO; J. UM. *DGIST, Yonsei-University, KAIST, Korea Univ. Col. Med.*

9:00 G4 **648.06** Adulthood ErbB4 is critical for normal GABA release and behaviors. H. WANG*; F. LIU; W. CHEN; X. SUN; W. CUI; Z. DONG; K. ZHAO; H. ZHANG; E. FEI; B. PAN; B. LI; W. XIONG; L. MEI. *Case Western Reserve Univ., Augusta Univ., Nanchang Univ., Guangzhou Med. Univ.*

10:00 G5 **648.07** Loss of STEP61 couples BDNF-driven loss of inhibition to NMDAR potentiation in rodent and human spinal pain processing. C. M. KANDEGEDARA*; A. DEDEK; J. XU; E. C. TSAI; P. J. LOMBROSO; M. E. HILDEBRAND. *Carleton Univ., Ottawa Hosp. Res. Inst., Connecticut Mental Hlth. Ctr., Yale Univ. Sch. Med.*

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11:00 G6 **648.08** MAPK-dependent presynaptic potentiation in the LHb is responsible for depressive behaviors. H. PARK*; H. RYU; S. ZHANG; S. KIM; C. CHUNG. *Konkuk Univ.*

8:00 G7 **648.09** ▲ Sex differences in endocannabinoid-modulation of neurotransmission during adolescence. A. FERRARO; P. WIG; C. G. REICH*. *Ramapo Col. of New Jersey.*

9:00 G8 **648.10** ● SUVN-G3031, H3 receptor inverse agonist modulates brain neurotransmitters with role in the treatment of narcolepsy. V. BENADE*; V. KAMUJU; S. GANDIPUDI; G. BHAYRAPUNENI; P. JAYARAJAN; K. BOJJA; K. KANDUKURI; S. MANCHINEELLA; R. NIROGI. *Suven Life Sci. Ltd.*

10:00 G9 **648.11** Cannabidiol regulates mesolimbic dopamine system transmission through peroxisome proliferator-activated receptor gamma signaling in the nucleus accumbens. T. D. JUNG*; W. J. RUSHLOW; S. R. LAVIOLETTE. *Western Univ.*

11:00 G10 **648.12** Corticosterone rapidly inhibits vagal afferent to NTS signaling via cannabinoid subtype 1 receptors. F. J. SHAFFER; J. E. M. LINDBERG; I. N. KARATSOREOS; J. H. PETERS*. *Washington State Univ.*

8:00 G11 **648.13** Effects of chronic intermittent ethanol exposure on excitatory inputs onto cerebellar purkinje neurons. P. A. ZAMUDIO-BULCOCK*; J. J. WOODWARD. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

9:00 G12 **648.14** Alcohol-induced neuroadaptation of IL-1 signaling at GABAergic synapses in the mouse prelimbic cortex. F. P. VARODAYAN*; M. Q. STEINMAN; T. D. DAVIS; S. A. WOLFE; T. NADAV; S. E. MONTGOMERY; W. B. KIOSSES; M. D. BURKART; A. J. ROBERTS; M. BAJO; M. ROBERTO. *The Scripps Res. Inst., UCSD, La Jolla Inst. for Allergy and Immunol.*

10:00 H1 **648.15** Acute osmotic stress produces differential effects on synaptic vs. paracrine signaling in oxytocinergic magnocellular neurons in the mouse paraventricular nucleus. W. SHENG*; S. W. HARDEN; C. J. FRAZIER. *Univ. of Florida.*

11:00 H2 **648.16** NeuroLnc, a nuclear long non-coding RNA that regulates neuronal activity and development. V. KLÜVER*; S. KEIHANI; S. MANDAD; V. BANSAL; J. D. WREN; H. URLAUB; S. BONN; S. O. RIZZOLI; E. F. FORNASIERO. *Univ. Med. Ctr., Univ. Med. Ctr. and Max Planck Inst. of Biophysical Chem., German Ctr. for Neurodegenerative Dis. (DZNE), Univ. of Oklahoma Hlth. Sci. Ctr.*

8:00 H3 **648.17** Examining the role of *Drosophila* synaptotagmin 7 in synaptic transmission. M. C. QUINONES-FRIAS*; Z. GUAN; Y. AKBERGENOVA; T. LITTLETON. *MIT, MIT.*

9:00 H4 **648.18** Reintroduction of synapsin II in knockout mice using neonatal viral injections. R. SCHWARK*; R. ANDRADE; M. BYKHOVSKAIA. *Wayne State Univ. Sch. of Med.*

10:00 H5 **648.19** Effects of general anesthesia on cortical neuronal activity in adults and neonates. D. P. AKSENOV*; M. MILLER; C. DIXON; A. WYRWICZ. *NorthShore Univ. HealthSystem.*

11:00 H6 **648.20** Subanesthetic-dose ketamine induces sustained cortical disinhibition through downregulation of neuregulin-1/ErbB4 signaling. X. QIAO*; C. NGUYEN; X. XU. *Univ. of California Irvine.*

8:00 H7 **648.21** Effects of ketamine and its metabolite 2R,6R-hydroxynorketamine on synaptic transmission and dendritic properties in dorsal CA1 neurons. C. KIM*; D. JOHNSTON. *The Univ. of Texas At Austin.*

9:00 H8 **648.22** ● Human induced pluripotent stem cell (hiPSC) - derived motor neurons co-cultured with primary astrocytes exhibit functional network sensitivity to botulinum neurotoxin. B. J. BLACK*; J. J. PANCRAZIO. *The Univ. of Texas At Dallas.*

10:00 H9 **648.23** ● Characterization of the nociceptin system in neural circuits underlying highly palatable food intake as a model of reward. J. A. HARDAWAY; K. BOYT; W. J. MARTIN; T. L. WALLACE; T. KASH*. *Univ. of North Carolina at Chapel Hill, UNC Chapel Hill, Blackthorn Therapeut., UNC- Chapel Hill.*

11:00 H10 **648.24** ● Modulation of ventral tegmental area (VTA) neurons by the nociceptin/orphanin fq (N/OFQ) system. J. R. DRISCOLL*; E. B. MARGOLIS; T. L. WALLACE; W. J. MARTIN. *Univ. of California San Francisco, UCSF, BlackThorn Therapeut., Blackthorn Therapeut.*

8:00 H11 **648.25** Histamine significantly increases ASIC-1a contribution to excitatory synaptic transmission at the calyx of Held. O. D. UCHITEL*; C. GONZALEZ-INCHAUSPE. *IFIBYNE UBA CONICET.*

9:00 H12 **648.26** Effects of thyroid hormone, pregnenolone sulfate and pH on function of nicotinic acetylcholine receptors. S. X. MOFFETT; E. A. KLEIN; G. BRANNIGAN; J. V. MARTIN*. *Rutgers Univ.*

POSTER

649. Glia in Energy Homeostasis and Disease

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 H13 **649.01** Global transcriptome analysis reveals genes and signaling pathways regulated by lactate in cortical neurons. M. B. MARGINEANU*; H. FIUMELLI; P. J. MAGISTRETTI. *King Abdullah Univ. of Sci. and Technol.*

9:00 H14 **649.02** Unexpected diversity of metabolic regulatory profiles revealed by cascade tuning in a computational model of the neuro-glio-vasculature. J. S. COGGAN*; P. SHICHKOVA; D. KELLER; H. MARKRAM; F. SCHUERMANN; P. J. MAGISTRETTI. *Blue Brain Project / EPFL, Blue Brain Project, EPFL, Blue Brain Project, Brain Mind Institute, EPFL, EPFL, Blue Brain Project, EPFL - Blue Brain Project, King Abdullah Univ. of Sci. and Technol. (KAUST).*

10:00 H15 **649.03** Contribution of astrocytic Connexin 43 in energy homeostasis. F. GUILLEBAUD*; K. POIROT; B. LEBRUN; M. DALLAPORTA; S. RAMI; J. TROADEC. *Aix Marseille Univ.*

11:00 H16 **649.04** Metabolic changes in astrocytes: Implications for psychiatric disorders. Y. JOUROUKHIN*; A. V. SHEVELKIN; L. NUCIFORA; C. TERRILLION; O. MYCHKO; F. NUCIFORA; M. PLETNIKOV. *Johns Hopkins Univ. Sch. of Med.*

Wed. AM

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8:00 H17 **649.05** ▲ Dissimilarities in energy-metabolizing enzymes between dorsal root ganglion neurons and Schwann cells. K. TRIYASAKORN; W. GAO; S. W. LEUNG; A. BHUSHAN; J. C. LAI*. *Idaho State Univ. Col. of Sci. and Engin., Idaho State Univ. Col. of Sci. and Engin., Jefferson Col. of Pharmacy, Thomas Jefferson Univ., Idaho State Univ. Col. of Pharm.*

9:00 H18 **649.06** The effect of BDNF signaling in VMH astrocytes on energy and glucose balance control. D. AMEROSO*; C. DULLA; M. RIOS. *Tufts Univ. Sackler Sch. of Grad. Biomed.*

10:00 I1 **649.07** Reduced astrocyte-oligodendrocyte gap junction coupling in the anterior cingulate cortex of depressed suicides. A. TANTI*; G. TURECKI; N. MECHAWAR. *McGill Group For Suicide Studies.*

11:00 I2 **649.08** Nrf2 function in oligodendrocyte development and injury responses. D. VERDEN*; M. C. NEAL; C. SCHROEDER; P. S. HERSON; W. B. MACKLIN. *Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

8:00 I3 **649.09** TRPA1 channels regulate oligodendrocyte intermodal potassium conductance during ischaemia. N. B. HAMILTON*; M. CORNILLOT; M. KHARAGHANI; C. LA MACHE; K. KOLODZIEJCZYK; D. ATTWELL. *King's Col. London, King's Col. London, Cardiac Services BC, Univ. Col. London.*

9:00 I4 **649.10** Changes of myelin morphology and development in early stage of Alzheimer's disease mouse model. Y. WU*. *Peking Univ.*

10:00 I5 **649.11** ▲ Deep learning for cell-specific high-throughput quantification of oligodendrocyte ensheathment. Y. XU*; D. CHITSAZ; R. A. BROWN; J. P. ANTEL; T. E. KENNEDY. *Montreal Neurolog. Institute, McGill Univ., McGill Univ., McGill Univ., Montreal Neurolog. Inst.*

11:00 I6 **649.12** ● Antisense oligonucleotides (ASOs) efficiently target glial cells and provide a novel therapeutic platform for demyelinating disorders. B. POWERS*; T. HAGEMANN; C. MAZUR; F. RIGO; A. MESSING; E. SWAYZE. *Ionis Pharmaceuticals, Univ. of Wisconsin-Madison.*

8:00 I7 **649.13** The therapeutic potential of fingolimod against ischemia-induced suppression of oligodendrocyte differentiation. K. YASUDA*; T. MAKI; S. SAITO; Y. YAMAMOTO; H. KINOSHITA; K. NATSUE; M. IHARA; R. TAKAHASHI. *Kyoto Univ., Natl. Cerebral and Cardiovasc. Ctr., Kyoto Univ.*

9:00 I8 **649.14** Enhancing oligodendrocyte myelination rescues synaptic loss and improves functional recovery after chronic hypoxia. F. WANG; J. Y. YANG; N. YANG; J. X. CHEN; S. P. FANCY; L. XIAO; J. R. CHAN; F. MEI*. *Third Military Med. Univ., Third Military Med. Univ., Univ. of California at San Francisco.*

10:00 I9 **649.15** ▲ Glutathione antioxidant system is transiently upregulated in juvenile oligodendrocytes: Implications for development and ischemic response. M. NEAL*; D. VERDEN; W. B. MACKLIN. *CU Anschutz, UC Denver Anchutz Med. Campus, Univ. Colorado Med. Sch.*

11:00 I10 **649.16** A reliable method for isolation and culture of different glial cells from adult pig brain. G. K. TANTI*; R. SRIVASTAVA; S. R. KALLURI; C. NOWAK; B. HEMMER. *Tech. Univ. Munich, Klinikum rechts der Isar, Tech. Univ. Munich, Munich Cluster for Systems Neurol. (SyNergy).*

POSTER

650. Glial Mechanisms in Neurodegenerative Diseases

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 I11 **650.01** Remodeling the brain after stroke by astrocytic phagocytosis via ABCA1-mediated pathway. Y. MORIZAWA*; S. KOIZUMI. *Tohoku Univ., Dept. Neuropharmacol / Univ. Yamanashi.*

8:00 DP02/I12 **650.02** (Dynamic Poster) AAV mediated trans-synaptic tagging of astrocytes: A novel tool for studying neuron-astrocyte interactions. L. GEORGIOU*; B. KUHN. *Okinawa Inst. of Sci. and Technol. (OIST).*

10:00 I13 **650.03** Early upregulation of $K_V3.4$ expression and activity in reactive astrocytes of Alzheimer's disease Tg2576 mice. R. CICCONE; F. BOSCIA; I. PICCIALLI; A. CASAMASSA; A. VINCIGUERRA; A. G. SADILE*; G. DI RENZO; L. ANNUNZIATO; A. PANNACCIONE. *FEDERICO II Univ. of Naples, Univ. of Campania Luigi Vanvitelli.*

11:00 I14 **650.04** The effect of γ-synuclein treatment on adult human cortical astrocyte proliferation and BDNF expression. T. LE; C. L. WINHAM; E. C. WILKIE; E. R. JELLISON; A. O. KOOB*. *Univ. of Hartford, Univ. of Connecticut Hlth. Ctr.*

8:00 I15 **650.05** Withdrawn

9:00 I16 **650.06** Direct effects of polychlorinated biphenyls and synuclein on astrocyte function. M. S. MCCANN*; K. MAGUIRE-ZEISS. *Georgetown Univ., Georgetown Univ. Med. Ctr.*

10:00 I17 **650.07** Astrocyte specific expression of TDP-43 alters memory and anxiety. C. M. KHALID-JANNEY*; S. DAVIS; D. CARTER; M. A. GITCHO. *Delaware State Univ.*

11:00 J1 **650.08** Astrocytes are target of a-synuclein oligomers: Implications for astrocyte reactivity and synapse formation in Parkinson's disease model. L. P. DINIZ*; I. MATIAS; M. GARCIA; A. P. B. ARAUJO; S. V. ALVES-LEON; J. M. SOUZA; D. FOGUEL; C. P. FIGUEIREDO; C. BRAGA; L. F. ROMÃO; F. C. A. GOMES. *Federal Univ. of Rio de Janeiro, Federal Univ. of Rio de Janeiro,.*

8:00 J2 **650.09** Differential gene expression in reactive mouse astrocytes and astrocytes from the $SOD1^{G93A}$ mutated ALS model. R. D. PÉREZ*; L. LEYTON. *ICBM, Fac. Medicine,University of Chile.*

9:00 J3 **650.10** Using mild uncoupling in mitochondria of astrocytes to rescue spatial memory in Alzheimer's disease. N. ROSENBERG*; A. ROCHER; L. RESTIVO; Y. BERNARDINELLI; M. BRIQUET; J. CHATTON. *Univ. of Lausanne, Neonomia.*

10:00 J4 **650.11** Age-related changes in astrocyte swelling and their volume regulation. M. ANDEROVA*; D. KOLENICOVA; D. KIRDAJOVA; L. VALIHRACH; J. TURECKOVA; J. KRISKA; A. SULAKOVA; B. ELIASOVA; M. KUBISTA. *Inst. Exper Med. ASCR, Second Fac. of Medicine, Charles Univ. in Prague,, Inst. of Biotechnology, Acad. of Sci. of the Czech Republic.*

11:00 J5 **650.12** Normal aging induces A1-like astrocyte reactivity. L. CLARKE*; S. A. LIDDELOW; C. CHAKRABORTY; A. E. MUNCH; M. HEIMAN; B. A. BARRES. *Stanford Univ., NYU Neurosci. Inst., MIT.*

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* Indicates abstract's submitting author

8:00 DP03/J6 **650.13** (Dynamic Poster) *In vivo* multiphoton astrocytic imaging in the APPswe/PS1dE9 mouse model of Alzheimer's disease. P. KELLY*; S. S. HOU; M. CALVO RODRIGUEZ; S. J. VAN VELUW; B. J. BACSKAI. *Mgh/ Harvard Med. Sch.*

9:00 J7 **650.14** Role of insulin-like growth factor 1 in astrocytic regulation of learning and memory in aging. D. PRABHU*; J. MARSHALL; K. BLACKBURN; N. M. ASHPOLE. *Univ. of Mississippi, Univ. of Mississippi.*

POSTER

651. Glial-Neuron Interactions

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 J8 **651.01** EphrinB/EphB forward signaling in Müller cells causes apoptosis of retinal ganglion cells by increasing tumor necrosis factor alpha production in rat experimental glaucomatous model. Z. WANG*; S. LIU; S. ZHONG; X. LI; F. GAO; F. LI; M. ZHANG; Y. MIAO; X. YANG. *Fudan Univ.*

9:00 J9 **651.02** GLAST regulates its own mRNA levels. D. HERNÁNDEZ-MELCHOR; M. ESCALANTE; L. CID; E. LOPEZ-BAYGHEN*; A. ORTEGA. *Cinvestav-IPN, Toxicology, Cinvestav-IPN, Toxicology, Cinvestav-IPN, Dept. De Toxicología.*

10:00 J10 **651.03** Real-time imaging of activity-driven synapse-microglia interaction *in vitro.* M. ANDOH*; R. KOYAMA; Y. IKEGAYA. *Grad Sch. Pharma Sci, Univ. Tokyo.*

11:00 J11 **651.04** Noradrenergic modulation of microglial dynamics and synaptic plasticity. R. STOWELL*; G. O. SIPE; A. K. MAJEWSKA. *Univ. of Rochester, MIT, Univ. of Rochester Med. Ctr.*

8:00 J12 **651.05** Cellular localization of lysophosphatidic acid receptor 1 in the mouse brain. N. KAJITANI*; M. OKADA-TSUCHIOKA; H. ABE; W. OMORI; K. ITAGAKI; M. TAKEBAYASHI. *NHO Kure Med. Ctr. and Chugoku Cancer Ctr., NHO Kure Med. Ctr. and Chugoku Cancer Ctr., Fac. of Life Sciences, Kumamoto Univ.*

9:00 J13 **651.06** The cystine/glutamate antiporter system x_c^- as modulator of corticostriatal neurotransmission. A. MASSIE*; E. BENTEA; A. VILLERS; C. MOORE; A. FUNK; S. M. O'DONOVAN; L. VERBRUGGEN; E. DEPASQUALE; M. J. CHURCHILL; H. SATO; L. RIS; C. K. MESHUL; R. E. MCCULLUMSMITH. *Vrije Univ. Brussel, Univ. of Cincinnati, Univ. of Mons, Portland VA, Niigata Univ., Oregon Hlth. and Sci. Univ.*

10:00 J14 **651.07** Neuronal-Müller glial signaling in the developing retina. J. M. TWORIG*; M. B. FELLER. *Univ. of California Berkeley.*

11:00 K1 **651.08** Microglial derived matrix metalloproteinases (MMPs) in synuclein mediated neuroinflammation. K. SANCHEZ*; K. A. MAGUIRE-ZEISS. *Georgetown Univ., Georgetown Univ. Med. Ctr.*

8:00 K2 **651.09** Transient plasticity of perisynaptic astrocyte processes during reinstated heroin seeking. A. KRUYER*; M. D. SCOFIELD; P. W. KALIVAS. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. S Carolina.*

9:00 K3 **651.10** Microglial motility and interaction with dendritic spines is elevated in the hippocampus of awake mice due to increased neuronal activity. F. C. NEBELING*; S. POLL; L. C. SCHMID; J. STEFFFEN; K. KEPPLER; M. FUHRMANN. *DZNE German Ctr. for Neurodegenerative Dis.*

10:00 K4 **651.11** Vascular compartmentalization of functional hyperemia from the synapse to the pia. R. L. RUNGTA*; E. CHAIGNEAU; B. OSMANSKI; S. CHARPAK. *INSERM U1128, Paris.*

11:00 K5 **651.12** Acute manganese exposure increases glutamate uptake in Bergmann glial cells. M. ESCALANTE LOPEZ*; L. C. R. HERNÁNDEZ KELLY; A. ORTEGA. *Cinvestav.*

8:00 K6 **651.13** In silico modeling of astrocytes and neuron-astrocyte interactions. T. MANNINEN*; A. SAUDARGIENE; R. HAVELA; M. LINNE. *Tampere Univ. of Technol., Lithuanian Univ. of Hlth. Sci.*

9:00 K7 **651.14** ATP released from astrocytes mediates herpes simplex virus type 1 (HSV-1) infection in neurons. R. PIACENTINI*; D. D. LI PUMA; M. E. MARCOCCI; G. LAZZARINO; G. DE CHIARA; C. RIPOLI; B. TAVAZZI; A. T. PALAMARA; C. GRASSI. *Univ. Cattolica, Med. Sch., Sapienza Univ. of Rome, Univ. Cattolica, Med. Sch., Natl. Res. Council, San Raffaele Pisana, IRCCS.*

10:00 K8 **651.15** Octopus glia: Identification of glia-specific molecular markers in cephalopods. G. C. WINTERS*; H. E. WEBER; C. J. BOSTWICK; L. L. MOROZ. *Univ. of Florida Whitney Lab. for Marine Biosci., Transylvania Univ.*

11:00 K9 **651.16** Forebrain GABAergic neurons regulate astrocyte gene expression through the morphogen sonic hedgehog. W. T. FARMER*; S. CHIERZI; G. CHEN; J. THÉROUX; C. ERNST; K. K. MURAI. *McGill Univ., McGill Univ.*

8:00 K10 **651.17** Characterization of the initial stages of myelination in the medial nucleus of the trapezoid body. D. T. HELLER*; D. KOLSON; A. BRANDEBURA; J. WAN; J. QIAN; P. MATHERS; G. A. SPIROU. *West Virginia Univ., West Virginia Univ. Sch. of Med., Indiana Univ. Sch. of Med., Johns Hopkins, West Virginia Univ. Sch. of Med., West Virginia Univ. Sch. Med.*

9:00 K11 **651.18** Aloe vera colon fermentation compounds suppresses the substance P-induced production of IL-6 and IL-8 by human U373MG glioblastoma/astrocytoma cells. A. TORNERO*. *Inst. Politecnico Nacional.*

10:00 K12 **651.19** Effects of microglia elimination in the spinal cord on glial plasticity observed following peripheral axon injury. J. HUTCHINSON*; J. GOINS; V. RAJATHI; L. G. ISAACSON. *Miami Univ., Miami Univ., Miami Univ.*

11:00 K13 **651.20** Sequential analysis of glial cell plasticity in the spinal cord following peripheral axon injury. V. RAJATHI*; S. BHATI; S. P. BROWN; J. GOINS; J. HUTCHINSON; L. G. ISAACSON. *Miami Univ., Miami Univ., Miami Univ., Miami Univ.*

8:00 K14 **651.21** ▲ Effects of minocycline administration on the superior cervical ganglion following transection of the cervical sympathetic trunk. R. SNYDER*; M. POWELL; J. GOINS; L. G. ISAACSON. *Miami Univ., Miami Univ., Miami Univ.*

9:00 K15 **651.22** ▲ Aging and an immune challenge interact to potentiate activation of hippoccampal microglia in a rodent model with features of delirium. N. SALLA*; K. C. ESSLINGER; L. M. DEFLITCH; N. TANAKA; S. L. PATTERSON. *Temple Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 K16 **651.23** ▲ Aging and an immune challenge result in increased activation of microglial complement proteins in the rat hippocampus. A. S. ARNOLD*; C. R. FITZGERALD; L. G. RODRIGUES; J. D. WEIR; N. TANAKA; S. L. PATTERSON. *Temple Univ.*

POSTER

652. Glial Mechanisms: Glia-Neuron Interactions: CNS

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 K17 **652.01** Specific MHCI overexpression in astrocytes induces behavioral and neuropathological abnormalities in mice. K. HADA*; A. SOBUE; B. WULAER; N. ITOH; A. NAKAJIMA; T. NABESHIMA; T. NAGAI; K. YAMADA. *Nagoya Univ. Grad. Sch. of Med., Advanced Diagnos. Syst. Res. Lab. Fujita Hlth. University, Grad. Sch. of Hlth. Sci., Aino Univ.*

9:00 K18 **652.02** Novel astrocyte-secreted factor promotes synapse maturation and limits plasticity through GluA2-AMPAR clustering. E. BLANCO SUAREZ*; T. LIU; A. KOPELEVICH; N. J. ALLEN. *Salk Inst. For Biol. Studies.*

10:00 L1 **652.03** Contribution of astrocytic purinergic signalling in serotonin neuromodulation. C. A. WOTTON*; L. K. BEKAR. *Univ. of Saskatchewan.*

11:00 L2 **652.04** Astroglial activity during gamma oscillations in acute hippocampal slices. H. JAKOBI*; T. HONDRICH; P. GESCHWILL; J. SCHNEIDER; E. KIRSCHBAUM; F. HAMPRECHT; O. KANN; M. BOTH; R. SPRENGEL. *Max Planck Res. Group of Dr. Rolf Sprengel, Inst. of Physiol. and Pathophysiology, Inst. of Physiol. and Pathophysiology, Heidelberg Collaboratory for Image Processing.*

8:00 L3 **652.05** Role of astroglial TNFR2 in cognition, memory and anxiety. P. ILLIANO*; H. DESU; M. PLASTINI; S. MUDALEGUNDI; M. M. MOOSA; M. KARJANMAA; R. BRAMBILLA. *Univ. of Miami, Univ. of Southern Denmark, Univ. of Miami Miller Sch. of Med.*

9:00 L4 **652.06** Olfactory bulb astrocytes modulate activity-dependent sensory processing and map refinement. K. UNG*; B. R. ARENKIEL; B. TEPE; E. HANSON; C. K. MCCLARD; G. LIU; B. DENEEN. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

10:00 L5 **652.07** Investigating neuron-astrocyte functional interactions using a bioengineered 3D coculture platform. C. CVETKOVIC*; N. BASU; R. KRENCIK. *Houston Methodist Res. Inst.*

11:00 L6 **652.08** Developmental analysis of astrocytes and astrocyte-derived synapse promoting proteins in the mouse visual cortex *in vivo.* I. FARHY TSELNICKER*; C. DOWLING; N. J. ALLEN. *The Salk Inst. For Biol. Studies.*

8:00 L7 **652.09** The neuropeptide PACAP orchestrates glutamate signaling between astrocytes and neurons in the nucleus accumbens core: implications for cocaine seeking. E. M. HESS*; S. KASSEL; L. KONG; N. RADDATZ; E. VAN NEWENHIZEN; E. AFREEN; E. BARDONNER; D. KORPICS; Q. LIU; A. GEURTS; J. R. MANTSCH; S. CHOI; D. A. BAKER. *Marquette Univ., Univ. of Wisconsin-Madison, Marquette Univ., Med. Col. of Wisconsin, Med. Col. of Wisconsin, Marquette Univ., Marquette Univ.*

9:00 L8 **652.10** ● A neuron-glia co-culture model system to study neuroinflammation. N. M. TAYLOR*; S. HAKIM; A. BHATTACHARYA; Y. HE. *Janssen.*

10:00 L9 **652.11** An astrocyte-neurons model of emergent spatial modulation of synapses mediated by endocannabinoid. Y. NAKAHAMA; O. ARAKI*; T. URAKAWA. *Tokyo Univ. of Sci.*

11:00 L10 **652.12** Optogenetic stimulation of astrocytic Gq signaling differentially alters synaptic transmission in hippocampal CA1 and layer V of sensorimotor cortex. C. SOBIESKI*; N. M. WOJNOWSKI; C. RAMAKRISHNAN; R. A. DEFAZIO; K. DEISSEROTH; C. A. CHRISTIAN. *Univ. of Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign, Stanford Univ. Dept. of Psychology, Univ. of Michigan.*

8:00 L11 **652.13** Astrocytic excitatory amino acid transporters (EAATs) differentially regulate metabotropic glutamate receptor (mglur) activation in normoxia and chronic intermittent hypoxia (CIH). D. MARTINEZ*; E. M. HASSER; D. D. KLINE. *Univ. of Missouri.*

9:00 L12 **652.14** Astrocyte volume changes associated with cortical seizures *in vivo.* T. R. MURPHY*; T. A. FIACCO; D. K. BINDER. *Univ. of California, Riverside, Univ. of California, Riverside.*

10:00 L13 **652.15** Regulation of excitatory and inhibitory synapses through astrocytic ephrin-B1 in developing and adult hippocampus. A. Q. NGUYEN*; J. KOEPPEN; S. HANNA; A. VENGALA; A. OBENAUS; I. M. ETHELL. *Univ. of California, Riverside, Loma Linda Univ., Univ. of California, Riverside.*

11:00 L14 **652.16** Noradrenergic enhancement of antidepressant-induced LPA_1 signalling in astrocytes. P. ONALI*; S. DEDONI; M. C. OLIANAS. *Univ. of Cagliari, Dept.Biomedical Sci.*

8:00 L15 **652.17** Optogenetic manipulation of preBötzinger complex astrocytes modulates activity of inspiratory rhythm-generation circuits. S. SHEIKHBAHAEI*; H. KOIZUMI; R. ZHANG; A. V. GOURINE; J. C. SMITH. *Natl. Inst. of Hlth. (NIH)- NINDS, Univ. Col. London.*

9:00 L16 **652.18** Increased endoplasmic reticulum stress and gliosis in a model of high altitude retinopathy and CNS hypoxia. L. A. MESENTIER-LOURO*; A. CAMARGO; V. KUMAR; M. A. SHARIATI; R. DALAL; A. J. OH; Y. J. LIAO. *Stanford Univ.*

10:00 L17 **652.19** Withdrawn

11:00 L18 **652.20** Astrocytes as orchestrators of long-range synchronization and hippocampal sharp wave ripple generation. S. BERRY*; C. LEWIS; F. F. VOIGT; F. HELMCHEN; U. GERBER. *Univ. of Zurich, Neurosci. Ctr. Zurich.*

8:00 M1 **652.21** ● Myelinated inhibitory axons in mouse and human neocortex. K. D. MICHEVA*; E. F. CHANG; A. L. NANA; W. W. SEELEY; J. T. TING; C. COBBS; E. LEIN; S. J. SMITH; R. J. WEINBERG; D. V. MADISON. *Stanford Univ. Sch. Med., UCSF, Univ. of California San Francisco, Univ. of California San Francisco, Allen Inst. For Brain Sci., The Ben and Catherine Ivy Ctr. for Advanced Brain Tumor Treatment, Swedish Neurosci. Inst., Allen Inst. for Brain Sci., Allen Inst. For Brain Sci., Univ. North Carolina.*

9:00 M2 **652.22** Astrocyte depolarizations modulate astrocytic glutamate clearance in a Kir4.1 dependent manner. M. ARMBRUSTER*; C. G. DULLA. *Tufts Univ., Tufts Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 M3 **652.23** ▲ The role of astrocytic ephrin-B1 in activity dependent synapse remodeling during memory formation. S. WOODRUFF*; J. KOEPPEN; A. NGUYEN; I. ETHELL. *UC Riverside.*

11:00 M4 **652.24** Reorganization of perineuronal nets and astrocyte phenotype in the rat's Medial Preoptic Area. J. NOGUEIRA BORDE*; D. MÉNDEZ; M. M. FERREÑO; N. URIARTE. *Facultad de Medicina Univ. De La República, Facultad de Ciencias, Univ. de la República.*

8:00 M5 **652.25** Processing of afferent information at the level of NTS: Astrocytic ATP release evoked by afferent stimulation modulates baroreflex sensitivity. S. MASTITSKAYA*; P. S. HOSFORD; N. MARINA; S. KASPAROV; A. G. RAMAGE; A. V. GOURINE. *Univ. Col. London, Univ. of Bristol.*

9:00 M6 **652.26** Disrupted astrocyte interneuron communication in astrocytes lacking fibroblast growth factor receptor 1. K. M. SMITH*; N. A. ESTEVE; N. M. DUNN; M. A. HENDRICK; D. J. ROGERS. *Univ. of Louisiana At Lafayette, Univ. of Louisiana At Lafayette, Univ. of Louisiana at Lafayette.*

10:00 M7 **652.27** Pyridazine-derivatives enhance structural and functional plasticity of tripartite synapse via activation of local translation in astrocytic processes. J. B. FOSTER*; F. ZHAO; X. WANG; C. C. ASKWITH; K. J. HODGETTS; C. G. LIN. *The Ohio State Univ., Brigham and Women's Hosp. and Harvard Med. Sch.*

11:00 M8 **652.28** The role of hippocampal astrocytic swelling on neuronal hyperexcitability in conditions of elevated potassium. E. M. WALCH*; N. CUVELIER; T. R. MURPHY; D. DAVILA; A. VENKATESH; I. M. HOLMAN; C. KHACHATUROVA; T. A. FIACCO. *Univ. of California Riverside, UC Riverside, Univ. of California, Riverside, Univ. of California, Riverside, UC Riverside, UC Riverside.*

8:00 M9 **652.29** ▲ Molecular mechanisms of astrocyte-neuron interactions in the development of synchronized activity in neuronal networks. G. GUEVARA; K. R. SANCHEZ; J. SUN; M. A. HARRINGTON; M. TEMBURNI*. *Delaware State Univ.*

9:00 M10 **652.30** Effects of heroin on neuron-astrocyte interaction. M. D. SCOFIELD*. *Med. Univ. of South Carolina.*

POSTER

653. Demyelinating Disorders: Molecular and Cellular Mechanisms: Therapeutics

Theme B: Neural Excitability, Synapses, and Glia

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 M11 **653.01** Mixed lineage kinase domain-like protein MLKL breaks down myelin following nerve injury. C. PAN*; Z. YING; S. CHEN; Z. JIANG; F. WANG; X. WANG. *Natl. Inst. of Biol. Sciences, Beijing.*

9:00 M12 **653.02** Schwann cell-specific deletion of phosphatidylinositol 4-kinase type IIIα (PI4KA) alters actin dynamics contributing to severe myelination defects in mice. A. ALVAREZ-PRATS*; Y. KIM; T. BABA; D. ABEBE; T. BALLA. *Eunice Kennedy Shriver NICHD, NIH.*

10:00 M13 **653.03** The mechanism of central nervous system (CNS) remyelination promoted by circulating TGF-beta. H. MACHIKA*; R. MURAMATSU; T. YAMASHITA. *Osaka Univ., Natl. Inst. of Neuroscience, Natl. Inst. of Neurol. and Psychiatry.*

8:00 DP04/M14 **653.04** (Dynamic Poster) Neuroinflammation causes changes to the nodes of Ranvier in multiple sclerosis normal appearing white matter. P. GALLEGO DELGADO*; R. REYNOLDS; A. A. FAISAL; J. MENG; R. JAMES; E. BROWNE. *Imperial Col. London, Imperial Col. London, Imperial Col.*

8:00 M15 **653.05** An astrocytic membrane protein, MLC1 inhibits cell motility for stable cell communication. J. HWANG*; H. LIM. *KBRI.*

9:00 M16 **653.06** NAA depletion rescues myelin degeneration in the Canavan disease mouse model Aspa^{nur7} but results to hypomyelination and lethality. M. TRAKA*; M. BARNEY; B. PARDO. *Midwestern Univ., Univ. of Chicago, Autonomous Univ. of Madrid.*

10:00 M17 **653.07** Semaphorin4a causes oligodendrocyte cell death and demyelination. B. CHIOU*; E. LUCASSEN; A. KALLIANPUR; J. R. CONNOR. *Penn State Col. of Med., Penn State Col. of Med., Cleveland Clinic/Lerner Res. Inst., Cleveland Clin. Lerner Col. of Med.*

11:00 M18 **653.08** Oligodendroglial TNFR2 regulates neuroinflammation and remyelination following CNS disease. H. DESU*; P. MADSEN; P. ILLIANO; M. PLASTINI; J. SHI; R. BRAMBILLA. *Univ. of Miami Miller Sch. of Med., Univ. of Rochester Med. Ctr., Univ. of Miami, Univ. of Miami, Univ. of Miami Miller Sch. of Med.*

8:00 N1 **653.09** Role of mitochondrial dysfunction in oligodendrocytes in the etiopathogenesis of multiple sclerosis. M. PLASTINI*; P. MADSEN; H. DESU; P. ILLIANO; C. MORAES; R. BRAMBILLA. *Univ. of Miami, Univ. of Rochester Med. Ctr., Univ. of Miami Miller Sch. of Med., Univ. of Miami, Univ. of Miami Miller Sch. of Med.*

9:00 N2 **653.10** ● A molecular characterisation of meningeal inflammatory infiltrates in progressive multiple sclerosis. R. REYNOLDS*; L. FUENTES-FONT; C. GLOVER. *Imperial Col. London, MedImmune PLC.*

10:00 N3 **653.11** Pericyte deficiency leads to fibrin(ogen)-dependent white matter demyelination and axonal degeneration. A. M. NIKOLAKOPOULOU*; A. MONTAGNE; Z. ZHAO; A. P. SAGARE; D. LAZIC; Y. WANG; B. V. ZLOKOVIC. *USC, USC, USC, USC, Keck Sch. of Med. At USC, Keck Sch. of Med. of the Univ. of Southern California.*

11:00 N4 **653.12** The expression and role of CCN3 during central nervous system development and remyelination. N. DE LA VEGA GALLARDO*; R. G. PENALVA; J. FALCONER; J. MOFFAT; M. NAUGHTON; Z. LIN; B. PERBAL; R. INGRAM; D. C. FITZGERALD. *Queen's Univ. Belfast, Emory Univ. Sch. of Med., Univ. Côte d'Azur.*

8:00 N5 **653.13** Revealing the pathogenesis of contactin-1 autoantibodies in inflammatory neuropathies. J. GRUENER*; C. VILLMANN; C. L. SOMMER; K. DOPPLER. *Univ. of Wuerzburg, Univ. Wuerzburg.*

9:00 N6 **653.14** Glial cell responses in CNS demyelination and myelin repair. G. SAMTANI*; D. R. MICHAUD; K. KONGANTI; S. J. KIM; J. LI. *Texas A&M Inst. for Neurosci., Texas A&M Univ., Texas A&M Inst. for Genome Sci. and Society.*

10:00 N7 **653.15** Remodeling of GABAergic innervation may contribute to cortical hyperexcitability and seizures in chronically demyelinated mice. A. S. LAPATO*; C. R. JONAK; K. LAUDERDALE; D. K. BINDER; S. K. TIWARI-WOODRUFF. *Univ. of California Riverside Sch. of Medic, Univ. of California Riverside, Univ. of California Riverside Div. of Biomed. Sci., Univ. of California Riverside Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 N8 **653.16** Cortical cell-type differences at baseline in the presence of Cx deficiency. S. KEIL*; M. FREIDEN; C. ABRAMS. *Univ. of Illinois Chicago, Univ. of Illinois Chicago.*

8:00 N9 **653.17** Region specific changes in gliosis following reduced extracellular vesicle release in the twitcher mouse model of Krabbe disease. C. R. REITER*; D. WOZNIAK; J. MARSHALL; G. SCESA; I. GIVOGRI; E. R. BONGARZONE. *Univ. of Illinois at Chicago, Aurora Univ., Univ. of Illinois at Chicago.*

9:00 N10 **653.18** A co-ultramicronized palmitoylethanolamide/luteolin composite mitigates clinical disability score and disease-relevant molecular markers in a mouse model of experimental autoimmune encephalomyelitis. S. D. SKAPER*; G. CONTARINI; L. FACCI; M. BARBIERATO; D. FRANCESCHINI; M. ZUSSO; P. GIUSTI. *Univ. of Padua.*

10:00 N11 **653.19** Selective estrogen receptor modulators significantly enhance remyelination in an estrogen receptor-independent manner. K. RANKIN*; F. MEI; Y. SHEN; S. R. MAYORAL; C. DESPONTS; D. LORRAIN; C. CORDANO; S. BARANZINI; A. GREEN; J. R. CHAN; R. BOVE. *Univ. of California San Francisco, Inception Sci.*

11:00 N12 **653.20** Overcoming CSPG-mediated inhibition of remyelination by targeting PTPσ in experimental models of multiple sclerosis. S. R. BADEA*; H. SUN; J. HUANG; W. WU. *The Univ. of Hong Kong, The Univ. of Hong Kong, Southern Med. Univ., The Univ. of Hong Kong, Jinan Univ.*

8:00 O1 **653.21** Diffusion tensor imaging can identify aspects of therapeutic estrogen receptor beta ligand-induced remyelination in a mouse model of multiple sclerosis. K. ATKINSON*; J. LEE; S. KIM; A. DREW; J. HASSELMANN; J. S. SOTO; N. G. HARRIS; A. OBENAUS; J. KATZENELLENBOGEN; S. K. TIWARI-WOODRUFF. *Univ. of California, Riverside, Loma Linda Univ., Univ. of Illinois at Urbana-Champaign, Univ. of California, Irvine, UCLA, UCLA, Loma Linda Univ.*

9:00 O2 **653.22** 'Effects of ketogenic diet and ketone esters on remyelination in cuprizone/rapamycin model of demyelination'. N. ALAEIILKHCHI*; K. L. KOLEHMAINEN; O. SEIRA; A. J. MOULSON; W. TETZLAFF. *Intl. Collaboration on Repair Discoveries, Univ. of British Columbia, ICORD/UBC, Intl. Collaboration On Repair Discoveries, Univ. of British Columbia, ICORD.*

10:00 O3 **653.23** Overexpression of glutathione S transferase 4 alpha regulates OPC proliferation, differentiation and their capacity to remyelinate. K. CARLSTROM*; F. PIEHL. *Dept. of Clin. Neurosci.*

11:00 O4 **653.24** Loss of Schwann cell connexin32 regulates iNOS and tyrosine nitration. M. FREIDIN*; F. QARNI; C. K. ABRAMS. *Univ. of Illinois At Chicago, Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

8:00 O5 **653.25** Involvement of astrocyte monocarboxylate transporter 1 in mouse models of demyelination. T. PHILIPS*; J. D. ROTHSTEIN. *Johns Hopkins Univ., Johns Hopkins Univ.*

POSTER

654. Parkinson's Disease: Deep Brain Stimulation

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 O6 **654.01** Hyperdirect pathway activation by DBS: An intraoperative ECoG study using paired pulses. H. C. WALKER*; M. AWAD; B. L. GUTHRIE; A. NAKHMANI; C. L. GONZALEZ; Z. T. IRWIN. *UAB, Univ. of Alabama at Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

9:00 O7 **654.02** Investigation of non-invasive predictors for outcome during DBS surgery for PD. M. AWAD*; C. L. GONZALEZ; A. NAKHMANI; Z. IRWIN; B. L. GUTHRIE; H. C. WALKER. *Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

10:00 O8 **654.03** ● Anodic stimulation misunderstood: Application of anodic stimulation for preferential activation of fiber orientations in deep brain stimulation. D. N. ANDERSON*; G. DUFFLEY; J. VORWERK; A. D. DORVAL; C. R. BUTSON. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

11:00 O9 **654.04** ● Effect of deep brain stimulation (DBS) on spinal cord circuitry in Parkinson's disease. J. ANDREWS; F. ROY; T. SANKAR*; F. BA; R. B. STEIN. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. Alberta.*

8:00 O10 **654.05** The subthalamic nucleus is differentially modulated by vocalization and limb movement. R. KELLEY*; K. TJADEN; D. M. CORCOS; J. D. GREENLEE, M.D. *Univ. of Iowa, Univ. at Buffalo, Northwestern Univ., Univ. Iowa.*

9:00 O11 **654.06** ● The activating function based volume of tissue activated: An axon orientation and projection independent method for predicting neural activation by deep brain stimulation. G. DUFFLEY*; D. N. ANDERSON; J. VORWERK; A. D. DORVAL; C. R. BUTSON. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

10:00 O12 **654.07** Hand movement and therapeutic deep brain stimulation differentially modulate cross regional pallidocortical phase amplitude coupling in Parkinson's disease. M. MALEKMOHAMMADI*; N. AUYONG; A. O'KEEFFE; N. POURATIAN. *UCLA.*

11:00 O13 **654.08** Longitudinal relationships between deep brain stimulation electrode impedances and local field potential recordings in the subthalamic nucleus. A. KOVACH-BRINDA*; A. DOYLE; L. WILMERDING; J. KRIEG; M. JOHNSON. *Univ. of Minnesota Twin Cities, Univ. of Minnesota Twin Cities, Univ. of Minnesota Twin Cities.*

8:00 O14 **654.09** Frequency-specific optogenetic deep brain stimulation of subthalamic nucleus improves parkinsonian motor behaviors. C. YU*; I. R. CASSAR; J. SAMBANGI; W. M. GRILL. *Duke Univ., Duke Univ., Duke Univ.*

9:00 O15 **654.10** Evaluating the robustness of fiber pathway activation with deep brain stimulation directional and multiple-electrode designs. A. JANSON*; D. N. ANDERSON; C. R. BUTSON. *Scientific Computing and Imaging Inst., Univ. of Utah, Univ. of Utah.*

10:00 O16 **654.11** ● Pallidal deep-brain stimulation disrupts pallidal beta oscillations and coherence with primary motor cortex in Parkinson's disease. D. D. WANG*; C. DE HEMPTINNE; S. MIOCINOVIC; P. A. STARR. *UCSF, Univ. of California San Francisco, Emory Univ., Univ. of California San Francisco Dept. of Neurolog. Surgery.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 P1 **654.12** Phase-dependent suppression of beta oscillations in Parkinson's disease. A. HOLT*; E. KORMANN; A. GULBERTI; M. POTTER-NERGER; C. MCNAMARA; H. CAGNAN; S. LITTLE; J. KOPPEN; C. BUHMANN; M. WESTPHAL; C. GERLOFF; A. K. ENGEL; P. BROWN; W. HAMEL; C. K. MOLL; A. SHAROTT. *Univ. of Oxford, Univ. Med. Ctr. Hamburg-Eppendorf, Univ. Col. of London, Inst. of Neurol., Dept. of Neurophysiol. and Pathophysiology.*

8:00 P2 **654.13** ● Fractional anisotropy within the subthalamic nucleus: An imaging biomarker for early Parkinson's disease? A high-resolution 7Tesla magnetic resonance imaging study. R. PATRIAT*; J. KAPLAN; J. NIEDERER; S. A. HUFFMASTER; M. PETRUCCI; N. HAREL; C. D. MACKINNON. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

9:00 P3 **654.14** Closed-loop algorithm for optimizing deep brain stimulation in Parkinson's disease using an objective measure of rigidity. K. H. LOUIE*; M. N. PETRUCCI; P. J. TUITE; T. I. NETOFF; C. D. MACKINNON; S. E. COOPER. *Univ. of Minnesota, Univ. of Minnesota.*

POSTER

655. Parkinson's Disease: LRRK2 Mechanisms, Targets, and Pathways

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 P4 **655.01** Effects of dietary amino acids on Parkinson's disease-related phenotypes in a LRRK2 *Drosophila* model. V. G. CHITTOOR*; I. MARTIN. *Oregon Hlth. and Sci. Univ.*

9:00 P5 **655.02** Neuron-released alpha-synuclein triggers neuro-inflammatory responses via lrkk2 and nuclear translocation of nuclear factor of activated t-cells (nfat1). C. KIM*; M. IBA; K. RAVINDRAN; A. KAGANOVICH; A. MAMAIS; A. ADAME; M. KIM; R. RISSMAN; S. YOU; S. LEE; M. COOKSON; E. MASLIAH. *Natl. Inst. on Aging, Dept. Neurosciences, Sch. of Medicine, Univ. of California, San Diego, Departments of Surgery and Biomed. Sciences, Cedars-Sinai Med. Center, Los Angeles,, Dept. of Biomed. Sciences, Neurosci. Res. Institute, and Dept. of Medicine, Seoul Natl. Univ. Col. of Med.*

10:00 P6 **655.03** Pathogenic LRRK2 alters endolysosomal trafficking through impairing Rab8a function. P. RIVERO-RÍOS*; J. MADERO-PÉREZ; A. P. THOMAS; E. GREGGIO; S. HILFIKER. *IPBLN-CSIC, New Jersey Med. Sch. Rutgers, Univ. of Padova.*

11:00 P7 **655.04** The combined use of pathogenic and protective variants as a tool to explore the role of LRRK2 in autophagy and calcium signalling. S. AZEGGAGH*; D. C. BERWICK; K. P. S. J. MURPHY; S. A. ALLMAN. *The Open Univ.*

8:00 P8 **655.05** Mechanism of G2019S LRRK2-induced neurodegeneration *in vivo*: Role of kinase and GTPase enzymatic activities. A. TRAN NGUYEN*; N. LEVINE; E. TSIKA; D. MOORE. *Van Andel Res. Inst., Swiss Federal Inst. of Technol. (EPFL).*

9:00 P9 **655.06** The Michael J. Fox Foundation's strategy to generate, characterize, and distribute preclinical antibody tools for investigating Rab molecular biology. N. POLINSKI*; T. N. MARTINEZ; M. CHOU; D. R. ALESSI; P. DAVIES; P. LIS; M. MUQIT; P. TAYLOR; C. HABER; S. PADMANABHAN; M. BAPTISTA; K. D. DAVE. *Michael J Fox FDTN, Abcam, Univ. of Dundee, BioLegend, Inc, PEPperPRINT GmbH.*

10:00 P10 **655.07** LRRK2 phosphorylation of auxilin mediates synaptic defects in dopaminergic neurons from patients with Parkinson's disease. M. NGUYEN*; D. KRAINC. *Northwestern Univ.*

11:00 P11 **655.08** Investigation of the role of LRRK2 in murine macrophage RAW264.7 cells. I. NAZISH; R. BANDOPADHYAY*. *Reta Lila Weston Institute, UCL Inst. of Neurol., Inst. of Neurol.*

8:00 P12 **655.09** ● Identification of LRRK2 substrates reveal converging mechanism in familial and sporadic Parkinson's disease. P. S. DESHPANDE*; D. FLINKMAN; V. SIINO; L. LAUREN; L. SUN; S. IMANISHI; Y. HONG; L. ELO; V. KAASINEN; S. PELTONEN; P. JAMES; E. COFFEY. *Turku Ctr. for Biotechnology, Åbo Akademi Univer, Immunotechnology, Lund Univ., Div. of Clin. Neurosciences, Turku Univ. Hosp. and Univ. of Turku, Dept. of Dermatology, Univ. of Turku and Turku Univ. Hosp.*

9:00 P13 **655.10** Role of leucine-rich repeat kinase 2 in Parkinson's disease levodopa-induced dyskinesia. R. MARONGIU*; L. VELAZQUEZ; J. L. JOYCE; M. G. KAPLITT. *Weill Cornell Med., Columbia Univ.*

10:00 P14 **655.11** Role of ArfGAP1 phosphorylation and expression in LRRK2 induced neurodegeneration. M. ISLAM*; D. MOORE. *Van Andel Res. Inst.*

11:00 P15 **655.12** Alpha-synuclein and LRRK2 cooperation in mitochondrial dysfunctions in Parkinson's disease. G. LIOT*; C. GARDIER; N. CRESTO; M. GAILLARD; N. DUFOUR; A. BEMELMANS; E. BROUILLET. *CEA MIRCen.*

8:00 Q1 **655.13** The association of LRRK2 and GBA1 in Parkinson's disease pathogenesis. D. YSSELSTEIN*; D. KRAINC. *Northwestern Univ.*

9:00 Q2 **655.14** Alpha-synuclein-induced dopaminergic neurodegeneration is attenuated by AAV2-TOM20 overexpression. B. R. DE MIRANDA*; E. M. ROCHA; S. CASTRO-SCHEIRER; J. T. GREENAMYRE. *Univ. of Pittsburgh.*

10:00 Q3 **655.15** A central role for lrrk2 in idiopathic Parkinson's disease. R. DI MAIO*; E. K. HOFFMAN; E. M. ROCHA; M. T. KEENEY; L. H. SANDERS; B. R. DEMIRANDA; A. ZHARIKOV; A. VAN LAAR; A. STEPAN; T. A. LANZ; J. K. KOFLER; E. A. BURTON; D. R. ALESSI; T. G. HASTINGS; J. T. GREENAMYRE. *Univ. of Pittsburgh, Duke Univ., Pfizer Worldwide Res. and Develop., Univ. of pittsburgh, Univ. of pittsburgh, Univ. of Dundee.*

11:00 Q4 **655.16** VPS35 D620N inhibits autophagy through disrupted hyaluronic acid-CD44 signaling. A. A. RAHMAN*; H. Y. JIN; A. SOTO; I. STOJKOVSKA; J. ALBRIGHT; N. LAI; P. URQUHART; A. WEBB; J. VELARDE; E. OE; C. BROWN; B. MORRISON. *Boise State Univ., The Scripps Res. Inst., Northwestern Univ., Boise State Univ.*

8:00 Q5 **655.17** Mitochondria and nadph oxidase 2 interplay: Relevance in Parkinson's disease. M. T. KEENEY*; E. HOFFMAN; J. MCCOY; P. J. PAGANO; J. T. GREENAMYRE; R. DI MAIO. *Univ. of Pittsburgh, Univ. of Plttsburgh.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 Q6 **655.18** Pharmacological inhibition of LRRK2 prevents rotenone-induced neurodegeneration and endolysosomal dysfunction. E. N. ROCHA*; B. R. DE MIRANDA; R. DI MAIO; S. CASTRO-SCHEIRER; M. T. KEENEY; J. L. MCCOY; J. T. GREENAMYRE. *Univ. of Pittsburgh.*

10:00 Q7 **655.19** Sex differences in sensitivity to rotenone reflect male-to-female ratios in human Parkinson's disease incidence. J. T. GREENAMYRE*; E. M. ROCHA; B. R. DE MIRANDA. *Univ. of Pittsburgh.*

11:00 Q8 **655.20** Neurodegeneration induced by dysregulation of dopamine sequestration is rescued by restoration of vesicular packaging. M. L. BUCHER*; C. W. BARRETT; A. D. MORTIMER; C. J. MOON; J. T. GREENAMYRE; T. G. HASTINGS. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 Q9 **655.21** Pharmacogenomic repression of alpha-synuclein with beta2 adrenoreceptor agonist is protective in a new rotenone model of delayed, progressive Parkinson's disease. A. D. VAN LAAR*; M. T. KEENEY; A. ZHARIKOV; S. MITTAL; C. SCHERZER; J. T. GREENAMYRE. *Univ. of Pittsburgh, Univ. of Pittsburgh Sch. of Med., Celegene, Brigham and Women's Hosp.*

9:00 Q10 **655.22** Target identification and lead discovery for autophagy factors by lipidomic screening. A. D. SOTO*; B. MORRISON. *Boise State Univ.*

10:00 Q11 **655.23** ● p53 inducible gene 3 (PIG3) directly modulates apoptotic responses in human neuronal models of Parkinson's disease *in vitro.* J. C. CHAUFTY*; I. D. MAJUMDAR; K. HA; V. SWAMINATHAN; L. SHANAHAN; S. AKELLA; J. RANJAN; R. ROESSLER; M. KIEBISH; S. GESTA; B. SCHUELE; V. K. VISHNUDAS; N. R. NARAIN; R. SARANGARAJAN; P. P. NARAIN. *BERG, LLC, Parkinson's Inst. and Clin. Ctr.*

11:00 Q12 **655.24** ● Altered cellular and metabolomic phenotypes observed in LRRK2^{G2019S} patient-specific iPSC-derived neurons are partially rescued in PIG3-deficient cells. R. ROESSLER*; I. D. MAJUMDAR; K. HA; A. KITAYEV; J. RANJAN; C. HILL; J. CHAUFTY; S. GESTA; B. SCHUELE; V. K. VISHNUDAS; P. P. NARAIN; R. SARANGARAJAN; M. KIEBISH; N. R. NARAIN. *Berg LLC, Parkinson's Inst. and Clin. Ctr.*

8:00 Q13 **655.25** Differential ultrastuctural reorganization of thalamo-cortical and cortico-cortical glutamatergic innervation in the primary motor cortex of MPTP-treated parkinsonian non-human primates. R. M. VILLALBA*; J. PARE; Y. SMITH. *Yerkes Resch Ctr. and Udall Ctr. of Excelence For Parkinson's disease, Emory Un, Emory Univ. Sch. of Medicine. Dept Neurol.*

9:00 Q14 **655.26** Ultrastructural features of single pallidothalamic terminals in control and MPTP-treated Parkinsonian monkeys visualized using 3D electron microscopic reconstruction approaches. A. J. SWAIN*; H. KELLY; Y. SMITH. *Yerkes Natl. Primate Res. Ctr., Emory Univ., Sch. of Med.*

10:00 R1 **655.27** Metabotropic glutamate receptor 5 (mglur5) in the monkey motor thalamus: Subsynaptic association with corticothalamic and cerebellothalamic glutamatergic afferents. G. M. JEYARAJ*; J. PARE; Y. SMITH. *Yerkes Natl. Primate Res. Center, UDALL Cen, Dept. of Neurology, Emory Univ.*

11:00 R2 **655.28** Altered excitatory input to GABAergic interneurons in the ventral motor thalamus of MPTP-treated parkinsonian nonhuman primates. J. PARE*; D. ALBAUGH; T. WICHMANN; Y. SMITH. *Emory Univ., Emory Univ., Emory Univ. Sch. Med., Yerkes Natl. Primate Res. Ctr., Udall Ctr. Excel. For Parkinson's Dis. and Dept. of Neurol.*

POSTER

656. Parkinson's Disease: Therapeutic Strategies: Clinical Trials

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 R3 **656.01** Does drug-induced dyskinesia affect voluntary movements of patients with Parkinson's disease? C. DUVAL*; E. GOUBAULT; K. LEBEL; S. BOGARD. *UQAM, Univ. of Quebec at Montreal, Uniersité de Montréal, Univ. of Quebec At Montreal.*

9:00 R4 **656.02** Development of high affinity D_2 receptor agonists as PET imaging agents for Parkinson's and schizophrenia: Preclinical studies. S. SUBBURAJU*; A. W. SROMEK; P. SEEMAN; J. L. NEUMEYER. *McLean Hosp., McLean Hospital/Harvard Med. Sch., Univ. of Toronto, McLean Hospital/Harvard Med. Sch.*

10:00 R5 **656.03** Clinical trial to evaluate the feasibility and neuroprotective potential of photobiomodulation therapy on Parkinson's disease. C. MORO*; J. MOLET; D. AGAY; N. TORRES; S. CHABARDES; C. CHABROL; S. RENAULT; A. POIZAT; O. FAIVRE; J. MITROFANIS; A. BENABID. *Cea-Grenoble, Leti-Clinatec, Univ. Sydney.*

11:00 R6 **656.04** ● SMA facilitation using fNIRS-mediated Neurofeedback for gait impairment in Parkinson's disease patients: Interim analysis of randomized clinical trial. M. MIHARA*; H. OTOMUNE; Y. KAJIIYAMA; H. FUJIMOTO; Y. MITANI; N. HATTORI; Y. WATANABE; Y. SUNADA; H. MOCHIZUKI. *Kawasaki Med. Sch., Osaka Univ. Grad. Sch. of Med., Osaka Univ. Global Ctr. for Med. Engin. and Informatics, Morinomiya Hosp., Osaka Univ. Grad. Sch. of Med.*

8:00 R7 **656.05** Effect of robot-assisted gait training on gait automaticity in Parkinson's disease. S. YUN*; H. LEE; W. LEE; S. LEE; B. OH; K. KIM; H. SEO. *Seoul Natl. Univ. Hosp., Konkuk Univ. Med. Ctr., Seoul Natl. Univ. Col. of Med.*

9:00 R8 **656.06** ● Abnormal motor cortex plasticity induced by transcranial static magnetic field stimulation in dyskinetic patients with Parkinson's disease. M. DILEONE; C. AMMANN; V. CATANZARO; I. OBESO; A. OLIVIERO; J. A. OBESO; G. FOFFANI*. *CINAC, Univ. Hosp. HM Puerta del Sur, Hosp. Nacional de Parapléjicos.*

10:00 R9 **656.07** ● Does high-cadence cycling promote changes in inhibitory brain circuits in Parkinson's disease? A. L. RIDGEL*; Y. CHUNG; J. HERSHBERG; C. BROWN; B. E. FISHER. *Kent State Univ., Keck Sch. of Med. of USC, USC.*

11:00 R10 **656.08** ● Comparison of deep brain stimulation lead impedance between Medtronic and St.Jude Medical/ Abbott systems during the perioperative period. E. L. HARGREAVES*; N. A. BUCKLEY; D. O. CONNOLLY; D. L. CAPUTO; S. F. DANISH. *Robert Wood Johnson Med. Sch. -- Rutgers Univ., Robert Wood Johnson Med. Sch. - Rutgers Univ., Robert Wood Johnson Med. Sch. - Rutgers Univ., Cancer Insitute of New Jersey - Rutgers Univ.*

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* Indicates abstract's submitting author

8:00 R11 **656.09** Quantitative differences in white matter connections of DBS contacts and clinical outcome in Parkinson's disease. V. E. RAGLAND*; J. ARNEDO; J. TORANZO; M. J. USCAMAYTA AYVAR; A. C. MOLINA; G. A. DE ERAUSQUIN. *Univ. of Texas Rio Grande Valley, UTRGV Sch. of Med.*

9:00 R12 **656.10** Quantitative analysis of pneumocephalus-related brain shift in deep brain stimulation patients. P. M. LAURO*; A. M. ALDRIDGE; W. F. ASAAD. *Brown Univ., Brown Univ., Brown Univ.*

10:00 R13 **656.11** Effects of group singing on stress and motor symptoms in persons with Parkinson's disease. E. L. STEGEMOLLER*; A. F. ZAMAN; E. SHIRTCLIFF. *Iowa State Univ., Iowa State Univ. Dept. of Kinesiology.*

11:00 R14 **656.12** ● A retrospective analysis of chronic STN LFP beta signals recorded by the Medtronic Activa® PC+S implanted in Parkinson subjects. M. CASE; S. STANSLASKI; V. VASOLI; J. XIAO; S. GOETZ; T. DENISON; R. S. RAIKE*. *Medtronic, Medtronic Inc.*

8:00 R15 **656.13** Pilot study on the interaction between exercise, medication, and Parkinson's disease symptoms. S. L. HOWARD*; C. A. KNIGHT. *Univ. of Delaware.*

9:00 R16 **656.14** Tractography-based machine learning algorithm for prediction of acute stimulation-induced side effects in DBS for Parkinson's disease. S. C. NANIVADEKAR*; P. TAYLOR; D. EHRLICH; C. LUNGU; S. G. HOROVITZ. *NIH, NIH.*

10:00 R17 **656.15** Alterations in the control and coordination of grasping forces in Parkinson's disease following aerobic exercise. J. L. ALBERTS*; A. PENKO; A. E. JANSEN. *Cleveland Clin., Cleveland Clin.*

11:00 R18 **656.16** Food consumption and serum indicators of oxidative stress in patients with early-stage Parkinson's disease: A pilot study. M. NAVARRO MEZA*, SR; M. OROZCO-IBARRA; E. MORALES-SANCHEZ; F. PACHECO-MOISES; E. BECERRA-HERNÁNDEZ; F. SANTOYO-TELLES; G. GABRIEL ORTIZ. *Ctr. Universitario del Sur/ Univ. de Guad, Lab. of Mol. and Cell. Neurobiology,, Dept. of Hlth. Sci., Dept. of Chemistry. Univ. Ctr. of Exact and Engin. Sciences., Ctr. Univ. of South., Div. of Neurosciences.*

8:00 S1 **656.17** ▲ Burden and caregiving in Parkinson's disease due to apathy. J. G. AVILA-LORETO*; M. ARROYO-MEDRANO; T. VILLASEÑOR-CABRERA. *Univ. De Guadalajara, Univ. de Guadalajara.*

9:00 S2 **656.18** Effects of the manipulation of an artwork on time perception in Parkinson's disease patients. J. O. BUENO*; M. R. MOTTA; V. TUMAS. *Univ. São Paulo, Univ. São Paulo, Univ. São Paulo.*

10:00 S3 **656.19** A personalized neuromechanical simulation of hand pronation and supination task in persons with Parkinson's disease: Effects of tonic dopamine levels and disease progression. L. ZIEGELMAN*; Y. HU; R. SUN; M. E. HERNANDEZ. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

POSTER

657. Huntington's Disease: Molecular Mechanisms I

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 S4 **657.01** Mutant Huntington gene-silencing through CRISPR-Cas9 restores the mitochondrial biogenesis in *in vitro* model of Huntington's disease. N. KOLLI*; M. LU; P. MAITI; J. ROSSIGNOL; G. L. DUNBAR. *Central Michigan Univ., Central Michigan Univ., Central Michigan University/St. Mary's of Michigan, Field Neurosciences Inst. Lab., Central Michigan Univ.*

9:00 S5 **657.02** Comparison of the effects of PHP. eB vectors encoding truncated or point-mutated EAAT2 isoforms as opposed to wild-type EAAT2 in single striatal astrocytes of Q175 heterozygote mice. S. HIRSCHBERG*; A. DVORZHAK; S. ANGELOV; P. KOVERMANN; R. GRANTYN. *Charité Univ. Med. Berlin, Forschungszentrum Jülich.*

10:00 S6 **657.03** Evidence for the axonal transport of a HTT-RAB4 vesicle complex which is disrupted in Huntington's disease. S. GUNAWARDENA*; J. WHITE; H. HOFMAR-GLENNON; C. THANT; K. ZIMMERMAN; G. IACOBUCCI. *SUNY at Buffalo, The State Univ. of New York at Buffalo.*

11:00 S7 **657.04** Investigating the role of aging in Huntington's disease pathogenesis. E. MACHIELA*; M. SCHMIDT; N. S. CARON; S. MEHTA; V. B. MATTIS; A. L. SOUTHWELL. *Univ. of Central Florida, Univ. of British Columbia, Ctr. for Mol. Med. and Therapeut., Cedars-Sinai, Cedars-Sinai, Univ. of Central Florida.*

8:00 S8 **657.05** HTT lowering-mediated changes in cerebrospinal fluid mutant huntingtin concentration: What does it mean? A. L. SOUTHWELL*; N. S. CARON; C. YANICK; Y. XIE; S. E. SMITH; J. SONG; I. SEONG; B. R. LEAVITT; M. R. HAYDEN. *Univ. of Central Florida, Univ. of British Columbia, Seattle Childrens Res. Inst., Korea Advanced Inst. of Sci. and Technol., Massachusetts Gen Hosp.*

9:00 S9 **657.06** Human Huntington's disease iPSC-derived corticalneurons display altered transcriptomics, morphology, and maturation. V. B. MATTIS*; S. R. MEHTA; C. TOM; Y. WANG; C. BRESEE; D. J. RUSHTON; P. P. MATHKAR; J. TANG. *Cedars-Sinai, Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr.*

10:00 S10 **657.07** Huntington's disease phenotypes and disrupted corticostriatal connectivity observed in a novel human iPSC-derived *in vitro* co-culture model. C. CASEY*; Y. QUI; M. P. BENTHAM; E. SMITH; G. LIGNANI; S. SCHORGE; G. BATES; G. SCHIAVO; R. ANDRE; A. WOOD-KACZMAR; S. J. TABRIZI. *Univ. Col. London, Univ. Col. London.*

11:00 S11 **657.08** Investigating the role of the innate immune system in HD. G. O'REGAN*; R. ANDRE; J. POCOCK; S. J. TABRIZI. *Univ. Col. London.*

8:00 S12 **657.09** ▲ Allele-specific gene editing for Huntington's disease mediated by a self-inactivating CRISPR/Cas9 system. S. REGIO*; G. VACHEY; M. REY; N. DEGLON. *CHUV Pavillon 3.*

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* Indicates abstract's submitting author

9:00 S13 **657.10** Cell type specific adenosine modulations in the mouse model of Huntington's disease. Y. CHANG*; C. CHANG; H. CHEN; Y. CHERN. *Inst. of Biomed. Sciences, Academia Sinica, Taiwan Intl. Grad. Program in Interdisciplinary Neuroscience, Natl. Yang-Ming Univ. and Academia Sinica.*

10:00 S14 **657.11** The role and function of microglia in synaptic loss in Huntington's disease. J. C. SAVAGE*; M. ST.-PIERRE; H. EL-HAJJ; M. G. SANCHEZ; F. CICCHETTI; M. TREMBLAY. *Ctr. De Recherche Du CHU De Quebec, Univ. Laval.*

11:00 S15 **657.12** Evaluation of effector domains fused to dCas9 to provide allele-specific silencing in Huntington's disease iPSC-derived neurons. J. WALDO*; P. DENG; J. A. HALMAI; J. L. CARTER; T. NGUYEN; S. DEL CAMPO; D. CAMERON; D. SEGAL; J. NOLTA; K. FINK. *California State Univ. Sacramento, Univ. of California Davis Hlth. Systems, Univ. of California Davis Hlth. Systems, Univ. of California, Davis, Humboldt State Univ.*

8:00 S16 **657.13** ● Compensation in neurodegenerative disease. S. GREGORY*; J. LONG; S. KLOPPEL; A. RAZI; E. SCHELLER; L. MINKOVA; E. JOHNSON; A. DURR; R. ROOS; B. R. LEAVITT; J. MILLS; J. C. STOUT; R. SCAHILL; S. TABRIZI; G. E. REES. *Univ. of Iowa, Univ. Hosp. for Old Age Psychiatry, NED Univ. of Engin. & Technol., Univ. Col. London, Dept. of Psychiatry and Psychotherapy, Med. Center, Univ. of Freiburg, Univ. Col. London, Pitié-Salpêtrière Univ. Hosp., Leiden Univ. Med. Ctr., Ctr. For Mol. Med. & Therapeut., Monash Univ., Univ. Col. London.*

9:00 S17 **657.14** Cortical axon secretion of BDNF in the striatum is disrupted in a knock-in mouse model of Huntington's disease. H. PARK*. *Korea Brain Res. Inst. (KBRI), Univ. of California.*

10:00 S18 **657.15** Mutant Huntingtin does not affect bioenergetics in human striatal neurons derived from inducible pluripotent stem cells of Huntington's disease patient. J. HAMILTON*; T. BRUSTOVETSKY; Y. PAN; A. SRIDHAR; J. MEYER; T. R. CUMMINS; N. BRUSTOVETSKY. *Indiana Univ. Sch. of Med., IUPUI, Stark Neurosciences Res. Inst.*

11:00 T1 **657.16** Early synaptic dysfunction in the hippocampus of Q175FDN Huntington disease mice. A. S. RAVALIA; J. Y. LAU; J. G. QUIRION; M. P. PARSONS*. *Mem. Univ.*

8:00 T2 **657.17** ● Rescue of homeostatic plasticity in YAC128 cortical neurons by pridopidine through modulation of Sigma1R and BDNF signaling. A. I. SMITH-DIJAK*; W. NASSRALLAH; L. ZHANG; M. GEVA; M. R. HAYDEN; L. A. RAYMOND. *Univ. of British Columbia, Teva Pharmaceut. Industries, Ltd.*

9:00 T3 **657.18** Characterization of neurodevelopmental delays in iPSC-derivede striatal cultures from patients with Huntington's disease. P. P. MATHKAR*; D. SURESH; J. DUNN; V. B. MATTIS. *BOG Regenerative Med. Institute, Cedars Sinai.*

10:00 T4 **657.19** Characterizing neurodevelopmental deficits in corticogenesis in Huntington's disease using 3D organoid models. S. MEHTA*; V. MATTIS; P. MATHKAR. *Cedars-Sinai.*

11:00 T5 **657.20** Modelling the trajectory of cortical atrophy in Huntington's disease. E. JOHNSON*; G. ZIEGLER; W. PENNY; G. E. REES; S. J. TABRIZI; R. I. SCAHILL; S. GREGORY. *Univ. Col. London, German Ctr. for Neurodegenerative Dis., Univ. of East Anglia.*

POSTER

658. Neurotoxicity, Inflammation, and Neuroprotection: Neuroinflammation: Microglia

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 T6 **658.01** Microglia responses to lipopolysaccharide are likely primarily directed towards vasculature and are exacerbated by pronounced and prolonged hypothermia at high doses. J. F. BOWYER*; K. M. TRANTER; S. M. LANTZ; S. SARKAR; J. P. HANIG; J. N. HESS. *Natl. Ctr. for Toxicological Res. Div. of Neurotoxicology, Ctr. for Drug Evaluation and Research/ FDA.*

9:00 T7 **658.02** ● The "colour-wheel" of activated primary microglia and their multifaceted effects on endogenous neural stem cells *in vitro.* M. SCHROETER*; S. U. VAY; L. J. FLITSCH; M. RABENSTEIN; R. ROGALL; S. BLASCHKE; G. R. FINK; M. A. RUEGER. *Dept. of Neurology, Univ. Hosp. Cologne, Univ. of Cologne, Univ. of Cologne, Res. Ctr. Jülich, Univ. of Cologne.*

10:00 T8 **658.03** Investigations on improving the culturing conditions to retain the *in vivo*-like phenotype of primary microglia. S. BARENDRECHT*; R. EICHENTOPF; B. HIETEL; S. SCHILLING; H. CYNIS. *Fraunhofer IZI-MWT.*

11:00 T9 **658.04** Development of a cox-2 pet tracer as an activated microglia-specific biomarkers in cns disorders. F. F. WAGNER*; M. WEIWER; M. RILEY; M. PLACZEK; D. WILTON; M. MELANSON; A. CAMPBELL; J. SACHER; B. BAJRAMI; A. FAYET; C. ROMANO; J. GALE; Y. ZHANG; J. COTTRELL; B. A. STEVENS; J. HOOKER. *Broad Inst., MGH, Boston Children's Hosp., Broad Inst.*

8:00 T10 **658.05** Lysophosphatidic acid (LPA) promotes a pro inflammatory response in microglia cells via the JNK signaling pathway. J. PLASTIRA*; E. BERNHART; M. GOERITZER; C. KOYANI; W. SATTLER. *Mol. Biol. and Biochem.*

9:00 T11 **658.06** The voltage-gated potassium channel Kv1.3 is required for microglial pro-inflammatory activation *in vivo.* J. DI LUCENTE*; H. M. NGUYEN; H. WULFF; L. JIN; I. MAEZAWA. *UC Davis, UC Davis.*

10:00 T12 **658.07** Microglia is not the resource but the modulator of the cytokines/chemokines in inflammatory neurovascular unit. K. SATO*; K. HOSHIKAWA; Y. KANDA; Y. SHIGEMOTO-MOGAMI. *Natl. Inst. Hlth. Sci., Natl. Inst. Hlth. Sci.*

11:00 T13 **658.08** Microglia gain functional IL-1R1 following chronic peripheral inflammation. D. NEMETH*; X. LIU; D. J. DISABATO; C. NEGRAY; N. QUAN. *Inst. For Behavioral Med. Res., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., Ohio State Univ.*

8:00 T14 **658.09** Effect of *in vivo* activation of Fas-mediated apoptosis cascade by AP20187 on microglia in MaFIA mice. S. BELTRAN-CASTILLO*; J. EUGENIN; R. VON BERNHARDI. *Pontificia Univ. Católica De Chile, Univ. de Santiago, USACH.*

9:00 T15 **658.10** Dissociation of mRNA and protein molecular signatures in activated microglia. J. KRIZ*; H. BOUTEJ; L. BÉLAND; R. RAHIMIAN. *Laval Univ., Univ. Laval.*

10:00 T16 **658.11** Unable to Attend Post-inspiratory complex (pico) rhythm irregularities after neuroinflammation. I. M. AGOSTO*; J. RAMIREZ. *Seattle Children's Res. Inst., Univ. Washington.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 T17 **658.12** A time course study of melatonin's effect on microglia responses to neural implants as revealed by two-photon imaging. Q. YANG*; X. PAN; A. GOLABCHI; J. ELES; T. D. Y. KOZAI; X. T. CUI. *Univ. of Pittsburgh.*

8:00 T18 **658.13** ● Neuroimmune activation and off-target toxicity testing of cell therapies using a novel brain-on-a-chip system. J. T. SHOEMAKER*; J. VUKASINOVIC; C. XU; Z. WEN; M. C. LAPLACA. *Lena Biosciences, Inc., Emory Univ. Sch. of Med., Georgia Inst. of Technol.*

9:00 U1 **658.14** Investigation of TSPO as a target for imaging neuroinflammation. M. VICENTE-RODRIGUEZ*; N. SINGH; C. SIMMONS; K. RANDALL; A. HAJI-DHEERE; W. NIMA CONSORTIUM; F. TURKHEIMER; C. A. PARKER; D. CASH. *King's Col. London, The Wellcome Trust Consortium for the Neuroimmunology of Mood Disorders and Alzheimer's Dis. (NIMA), PET Centre, St Thomas' Hosp., Exptl. Med. Imaging, GlaxoSmithKline R&D.*

10:00 U2 **658.15** Luteolin inhibits fibrillary beta-amyloid$_{1-40}$-induced inflammation ina human blood-brain barrier model by suppressing the p38 MAPK-mediated NF-kappaB signaling pathways. R. LIU*; J. ZHANG; J. XING; L. WANG; H. JIANG; S. GUO. *Inst. of Materia Medica, Inst. of Medicinal Biotechnology, Chinese Acad. of Med. Sci. and Peking Union Med. Col., Xinjiang Inst. of Materia Medica, Beijing Friendship Hospital,Capital Med. Univ.*

11:00 U3 **658.16** Inflammation-associated release of MMP-9 increases neuronal vulnerability in an *in vitro* model of early Alzheimer's pathogenesis. T. DEMARSE; T. J. COHEN; P. R. CARNEY; R. B. MEEKER*. *Univ. of North Carolina, Univ. of North Carolina - Chapel Hill, Univ. of North Carolina at Chapel Hill.*

8:00 U4 **658.17** Glucose enhances endothelial cell-mediated activation of a pro-inflammatory phenotype in BV-2 microglia *in vitro.* J. M. IANNUCCI*; H. VITTAL RAO; P. GRAMMAS. *Univ. of Rhode Island, Univ. of Rhode Island.*

9:00 U5 **658.18** Increased vascular density in an experimental rat model with neurodegeneration and inflammation. M. S. THOMSEN*; L. J. ROUTHE; S. S. HELGUDÓTTIR; T. MOOS. *Aalborg Univ.*

10:00 U6 **658.19** The role of equilibrative nucleoside transporter-2 in the modulation of neuroinflammation. C. LEE*; K. WU; Y. KAO; C. LIN. *Natl. Taiwan Univ.*

POSTER

659. Neurotoxicity, Inflammation, and Neurodegeneration

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 U7 **659.01** Protein expression profile of IL-1ß, phosphorylated p38 and VEGF-A in the hippocampus after 4-aminopyridine-induced seizures in adult mice. M. E. URENA-GUERRERO*; J. L. CASTAÑEDA-CABRAL; J. MURGUÍA-CASTILLO; B. GARCÍA-SANTIAGO; C. BEAS-ZÁRATE. *Univ. de Guadalajara (CUCBA), Univ. de la Sierra de Juárez.*

9:00 U8 **659.02** Effects of short term sleep deprivation on the brain's immune compartment. B. KORIN*; S. AVRAHAM; H. AZULAY-DEBBY; F. HAKIM; A. ROLLS. *Technion - Israel Inst. of Technol., Technion - Israel Inst. of Technol., Rambam Hlth. Care Campus, Cancer Res. Center, EMMS Hosp.*

10:00 U9 **659.03** The role of lysophosphatidic acid in post-hemorrhagic hydrocephalus. P. SANCHEZ PAVON*; V. A. BLAHO; N. LUMMIS; J. CHUN. *SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE, Sanford Burnham Prebys Med. Discovery Inst. Grad. Sch. of Biomed. Sci., Univ. of California San Diego Biomed. Sci. Grad. Program.*

11:00 U10 **659.04** Peripheral macrophage infiltration post-stroke in the primate is attenuated by reactive astrocytes through NogoA-LILRB2 mediated signalling. A. G. BOGHDADI*; L. TEO; B. CAO; S. M. STRITTMATTER; S. K. NILSSON; J. A. BOURNE. *Monash Univ., CSIRO, Yale Univ.*

8:00 U11 **659.05** Protective effects of the endogenous neurosteroid (3α,5α)3-hydroxypregnan-20-one (3α,5α-THP) on proinflammatory TLR4 signaling in immune cells and brain. I. BALAN*; M. C. BEATTIE; T. O'BUCKLEY; L. AURELIAN; A. L. MORROW. *Univ. of Maryland Baltimore, Dept. of Psychiatry and Pharmacology, Bowles Ctr. for Alcohol Studies, Univ. of North Carolina at Chapel Hill.*

9:00 U12 **659.06** Conditional knockout strategies reveal opposing effects of prostaglandin receptor EP2 signaling in immune cells and neurons after status epilepticus. N. H. VARVEL*; D. CHEN; A. BIEGEL; R. J. DINGLEDINE. *Emory Univ., Dept. of Pharmacology, Emory Univ., Emory Univ. Sch. Med.*

10:00 V1 **659.07** Allostatic conditions of glioblastoma stem cells are maintained by mutual influence of chronic oxidative stress, basic intracellular ph and clic1 protein associated chloride current. I. VERDUCI; T. FLORIO; F. BARBIERI; V. CARLINI; M. PERETTI; F. M. RACITI; A. DAGA; M. MAZZANTI*. *Univ. di Milano, Univ. di Genova, Ospedale Policlinico San Martino.*

11:00 V2 **659.08** Different biguanide-related drugs eradicate human glioblastoma stem cell through the inhibition of chloride intracellular channel 1 activity. T. FLORIO*; F. BARBIERI; R. WURTH; I. VERDUCI; M. CATTANEO; A. SOLARI; A. DAGA; L. M. VICENTINI; M. MAZZANTI. *Univ. of Genova, Univ. of Genova, Deutsches Krebsforschungszentrum, Univ. of Milano, Univ. di Milano, Ospedale Policlinico San Martino.*

8:00 V3 **659.09** Inhibition of glioblastoma cell invasion and survival by targeting integrin beta 1 using anti-tumorigenic novel quinazoline derivatives. T. K. KHAN*. *Rockefeller Neurosciences Inst.*

9:00 V4 **659.10** Microglial depletion compromises survival, brain growth and sensorimotor reflexes acquisition in mouse pups exposed to perinatal cerebellar insults. S. TREMBLAY*; A. PAI; W. MENG; D. GOLDOWITZ. *CMMT.*

10:00 V5 **659.11** Dehydration-induced anorexia increases microglia density in the rat prefrontal cortex. P. REYES ORTEGA*; A. MARTINEZ-TORRES; D. REYES-HARO. *Inst. de Neurobiología UNAM, INB-UNAM, Inst. de Neurobiologia|910003400|0.*

11:00 V6 **659.12** Autistic neuronal differentiation factors derived from astrocyte and microglia: Variant differentiation of cultured neurosphere in valproate-treated glia-conditioned medium. C. NISHIKAWA; K. SATO; N. HOZUMI; Y. FUETA; S. UENO; Y. SEKINO; Y. KANDA; Y. NOMURA; S. YOSHIDA*. *Toyohashi Univ. Technol., Natl. Inst. Hlth. Sci., Univ. Occupational/Environmental Hlth., The Univ. of Tokyo, Grad. Sch. of Pharma, Queens Col. & Grad. Ctr. CUNY.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 V7 **659.13** Epimedium koreanum Nakai inhibits PMA-induced cancer cell migration and invasion in malignant human glioma cells. J. KIM*; W. LEE; J. NAM; J. LEE; Y. WE; J. MA; H. HOE. *Korea Brain Res. Inst., Hyoo Med. Clin., Korean Med. (KM)-Application Ctr.*

9:00 V8 **659.14** Evaluation of the cyclin dependent kinase inhibitor cr8 to mitigate neuroinflammatory responses following cessation of nerve agent-induced seizures. D. D. PALMER*; C. E. KAROLENKO; N. GARIBAY; K. LAITAPAYA; B. LAGER; J. CHANDLER; E. A. JOHNSON; J. W. SKOVIRA. *US Army Med. Res. Inst. of Chem. Def.*

10:00 V9 **659.15** The serine protease tPA modulates the phosphorylation of mTOR and autophagy during ischemic events. A. THIEBAUT*; D. VIVIEN; B. D. ROUSSEL. *INSERM U1237.*

11:00 V10 **659.16** ▲ MET activation modulates sctPA-mediated NMDA receptor signalling and neurotoxicity. E. HEDOU; A. THIEBAUT; A. CHEVILLEY; I. BARDOU; C. ALI; T. CREPALDI; P. COMOGLIO; D. VIVIEN; B. D. ROUSSEL*. *INSERM U1237, Candiolo Cancer Inst. IRCCS-FPO, Caen Univ. Hosp.*

8:00 V11 **659.17** Developing an animal model for studying cognitive impairment in chronic kidney disease. J. Y. HO*; C. F. LAU; W. Y. TANG; J. Y. TIAN; R. YOU; C. C. C. PANG; D. S. K. CHEUNG; S. S. Y. YUNG; R. C. C. CHANG. *The Hong Kong Polytechnic Univ., The Univ. of Hong Kong, The Hong Kong Polytechnic Univ.*

9:00 V12 **659.18** Autphagy induction in brain by severe hypoglycemia and its modulation by the ketone bodybeta-hydroxybutirate. M. TORRES ESQUIVEL*; M. FLORES-MÉNDEZ; T. MONTIEL; L. MASSIEU. *Univ. Nacional Autonoma De México, Univ. Nacional Autonoma de México.*

10:00 V13 **659.19** A novel neuroinvasive infection modality for francisella tularensis elicits neuroinflammation resulting in cellular damage. M. G. RAMOS MUNIZ*; R. CONTRERAS; A. TENA; C. T. SPENCER. *Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

11:00 V14 **659.20** Mammary tumor and mastectomy synergistically promote chronic neuroinflammation in a breast cancer survivor model. K. EMMER*; W. H. WALKER, II; N. ZHANG; A. C. DEVRIES. *The Ohio State Univ., West Virginia Univ.*

8:00 V15 **659.21** Transcriptome of the mice hippocampus differently affected after subarachnoid hemorrhage (SAH). A. S. REGNIER-GOLANOV*; L. PETERSON; E. I. BOVSHIK; E. V. GOLANOV; G. W. BRITZ. *Houston Methodist Hosp., Houston Methodist Res. Inst., Houston Methodist Hosp.*

POSTER

660. Neurotoxicity, Inflammation, and Neuroprotection: Neuroinflammation: Animal Models

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 V16 **660.01** Unable to Attend Inflammation and CX3CR1 are involved in pathology of pain-mediated cognitive/emotional dysfunction after orthopedic surgery in mice. S. KIM*; B. KOO. *Dept. of Anesthesiol. and Pain Med., Yonsei Univ. Col. of Med.*

9:00 W1 **660.02** Glycolysis drives leukocyte migration and subsequent neuropathology in an animal model of multiple sclerosis. D. K. KAUSHIK*; A. BHATTACHARYA; C. SILVA; V. WEE YONG. *Univ. of Calgary, Univ. of Calgary.*

10:00 W2 **660.03** ● Treatment with a CCR3 antagonist rescues neuroinflammation and cognitive dysfunction in acute and chronic LPS models. S. REGE*; H. HACKBART; E. CZIRR; S. P. BRAITHWAITE; S. S. MINAMI. *Alkahest, Inc.*

11:00 W3 **660.04** Translational PET imaging of neuroinflammation in pre-clinical rodent models of neurogenerative diseases. J. RYTKÖNEN*; P. POUTIAINEN; D. MISZCZUK; A. J. NURMI; T. HUHTALA. *Charles River Discovery, Kuopio Univ. Hosp.*

8:00 W4 **660.05** Pathological hallmarks of a genetic and an induced Gaucher disease mouse model. J. NEDDENS*; E. SANTIAGO-MUGICA; S. FLUNKERT; V. NIEDERKOFLER; R. RABL; D. AMSCHL; M. POSCH; E. AUER; B. HUTTER-PAIER. *QPS Austria GmbH.*

9:00 W5 **660.06** PEALut treatment: Role in preclinical and clinical delirium manifestations. R. CRUPI*; R. SIRACUSA; M. CORDARO; D. IMPELLIZZERI; A. PERITORE; R. DI PAOLA; S. CUZZOCREA. *Univ. of Messina, St. Louis Univ. Sch. of Med.*

10:00 W6 **660.07** Systemic interleukin-1 receptor antagonist reduces hippocampal injury and improves cognitive deficits in juvenile rats following neonatal exposure to lipopolysaccharide. L. FAN*; L. TIEN; J. W. LEE; S. LU; C. P. TALATI; N. B. OJEDA; X. DAI; M. A. TUCCI; A. J. BHATT; R. D. SAVICH; Y. PANG. *Univ. of Mississippi Med. Ctr., Fu Jen Catholic Univ., Univ. of Mississippi Med. Ctr.*

11:00 W7 **660.08** Pregabalin exerts a direct neuroprotective effect in an animal model of multiple sclerosis. J. FERNANDEZ ORTH*; P. HUNDEHEGE; P. ROEMER; T. MUENTEFERING; S. EICHLER; L. EPPING; S. ALBRECHT; F. ZIPP; M. CERINA; A. MENKE; K. BIRKNER; R. GOLLAN; K. GOEBEL; T. RUCK; H. WIENDL; A. GORJI; S. BITTNER; S. G. MEUTH. *Inst. for Translational Neurol., Neurol. Clin., Inst. for Translational Neurologyf, Dept. of Neurol. and Dept. of Neurosurg., Neurol. Clin.*

8:00 W8 **660.09** Sex-specific effects of central immune activation on memory consolidation. C. K. POSILLICO*; R. E. GARCIA-HERNANDEZ; N. C. TRONSON. *Univ. of Michigan, Univ. of Michigan.*

9:00 W9 **660.10** Sepsis-induced antinociception is associated with neuroinflammation and glial activation. L. ANGENENDT DA COSTA*; R. A. CAZUZA; N. N. SANTOS-JUNIOR; C. R. CATALÃO; J. M. G. TESSARI; M. J. A. ROCHA; C. R. A. LEITE-PANISSI. *Univ. of São Paulo.*

10:00 W10 **660.11** Systemic lipopolysaccharide induced spinal inflammation associated allodynia and hyperalgesia were reduced by minocycline in neonatal rats. L. TIEN*; Y. LEE; L. FAN. *Fu Jen Catholic Univ., Univ. of Mississippi Med. Ctr.*

11:00 W11 **660.12** Cognitive deficits in survivors of childhood leukemia: Development of a mouse model. C. J. LAAKER; M. A. SMAIL; A. HILTZ; K. R. LLOYD; B. L. SMITH; J. KONSMAN; T. M. REYES*. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati, CNRS UMR 5287 INCIA / Univ. Bordeaux.*

8:00 W12 **660.13** ▲ Regulation of pro-inflammatory cytokines using brassicaceae and asteraceae plants (kale, arugula, dandelion) in diet-induced obese pre-diabetic c57bl/6 mice. A. A. OYETUNDE*; T. SIMON; D. HICKS; B. TENG; L. BANNER. *California State Univ. Northridge.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 W13 **660.14** Effect of myrtillocactus geometrizans (garambullo) on the stress-oxidative and memory in the hippocampus of rats fed a hypercaloric diet. C. SANDOVAL SALAZAR*; D. RAMÍREZ-RAYA; S. JIMENEZ-GARCÍA; X. RAMÍREZ-GOMEZ; V. BELTRÁN-CAMPOS. *Univ. de Guanajuato, Univ. de Guanajuato.*

10:00 W14 **660.15** Evaluation of neuronal damage in rats infected with Neurocisticercosis during a year after infection. R. H. CÉLIZ*; D. G. DÁVILA; R. H. GILMAN; R. P. CARMEN; A. D. DELGADO; E. BERNAL; M. R. VERASTEGUI. *Univ. Peruana Cayetano Heredia, Univ. Peruana Cayetano Heredia, Johns Hopkins Bloomberg Sch. of Publ. Hlth.*

POSTER

661. Neurotoxicity, Neuroinflammation, HIV, and Infections II

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 W15 **661.01** Resting state MEG signature of HIV and cannabis in young adults: Preliminary data. S. L. NICHOLS*; A. ROBB SWAN; A. ANGELES QUINTO; C. FENNEMA-NOTESTINE; R. LEE; M. HUANG. *Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego.*

9:00 W16 **661.02** Neuroinflammation in pediatric HIV infection. N. ALGARZAE; H. CARRYL; M. SWANG; D. BREWER; K. VAN ROMPAY; K. DE PARIS; M. W. BURKE*. *Howard Univ., UC Davis, Univ. of North Carolina, Howard Univ. Col. of Med.*

10:00 W17 **661.03** Change in telomere length and cognitive function over 12 months in the context of HIV, major depressive disorder and childhood trauma. J. S. WOMERSLEY*; G. SPIES; S. M. J. HEMMINGS; S. SEEDAT. *Univ. of Stellenbosch.*

11:00 W18 **661.04** Divergent roles of osteopontin in the HIV-infected brain through its interaction with cell adhesion molecules & the extracellular matrix. F. J. MAHMUD*; A. M. BROWN; T. BOUCHER. *Johns Hopkins Hosp., Johns Hopkins Univ. Sch. of Med.*

8:00 X1 **661.05** A combination of free and exosomal cathepsin B released from HIV-infected macrophages trigger multiple mechanisms of neuronal dysfunction. Y. M. CANTRES-ROSARIO*; S. C. ORTIZ-RODRIGUEZ; A. SANTOS; L. M. MELENDEZ. *Univ. of Puerto Rico, Med. Sci. Campus, Univ. of Puerto Rico, Bayamon Campus.*

9:00 X2 **661.06** FAAH inhibition attenuates neurotoxic microglial responses via non-classic cannabinoid receptor mechanisms in a cell culture model of neuroAIDS. D. J. HERMES*; C. XU; R. B. MEEKER; M. NIPHAKIS; B. CRAVATT; K. MACKIE; A. H. LICHTMAN; B. M. IGNATOWSKA-JANKOWSKA; S. FITTING. *Univ. of North Carolina, Univ. of North Carolina, Scripps Res. Inst., Indiana Univ. Bloomington, Virginia Commonwealth Univ., Okinawa Inst. of Sci. and Technol., Univ. of North Carolina.*

10:00 X3 **661.07** HIV Tat impairs endocannabinoid signaling. M. M. WU*; S. A. THAYER. *Univ. of Minnesota, Univ. of Minnesota.*

11:00 X4 **661.08** ● Role of microglia specific p38 signaling in neuroAIDS. D. BHULLAR*; R. MAUNG; D. OJEDA-JUÁREZ; N. YUAN; R. SHAH; M. KAUL. *Univ. of California, Riverside, Sanford Burnham Prebys Med. Discovery Inst., UCSD.*

8:00 X5 **661.09** Antiretroviral drugs increase excitability of pyramidal neurons in the medial prefrontal cortex of rats by enhancing Ca^{2+} channel function but reducing K^{+} channel activity. L. CHEN; L. AL-HARTHI; X. HU*. *Rush Univ. Med. Ctr., Rush Univ. Med. Ctr.*

9:00 X6 **661.10** HIV-induced synaptic excitotoxicity via cGMP-regulated protein kinase II activation in the FIV infection model. K. E. SZTUKOWSKI*; K. NIP; P. N. OSTWALD; M. F. SATHLER; J. SHOU; J. H. ELDER; C. MILLER; F. HOFMANN; S. VANDEWOUDE; S. KIM. *Colorado State Univ., Colorado State Universtiy, Colorado State Univ., Colorado State Univ., The Scripps Res. Inst., Colorado State Univ., Tech. Univ. of Munich, Germany, Colorado State Univ.*

10:00 X7 **661.11** Wnt signaling regulates astrocyte activation during the pathogenesis of HIV-1 gp120-induced pain. X. LIU*; S. YUAN; J. ZHENG; C. BAE; S. TANG. *Univ. of Texas Med. Br. at Galveston.*

11:00 X8 **661.12** ● IFNAR1 knockout affects neuronal MAP-2 expression in the presence and absence of neurotoxic HIV-1 envelope protein gp120. H. SINGH*; R. MAUNG; D. OJEDA-JUÁREZ; R. SHAH; M. KAUL. *Univ. of California, Riverside, Sanford Burnham Prebys Med. Discovery, Sanford Burnham Prebys Med. Discovery.*

8:00 X9 **661.13** Co-receptor tropism in HIV-1 gp120 induced synaptic dysfunction. L. K. SMITH; H. K. MCKEE; T. B. KUHN*. *Univ. of Alaska Fairbanks, Univ. of Alaska Fairbanks, Univ. Alaska Fairbanks.*

9:00 X10 **661.14** Lipocalin-2 deficiency limits alterations of neurotransmission-related gene networks in a transgenic model of HIV-induced brain injury. D. OJEDA-JUÁREZ*; R. SHAH; A. B. SANCHEZ; R. MAUNG; M. KAUL. *Univ. of California, Riverside, Sanford Burnham Prebys Med. Discovery Inst., UCSD, SOM, Univ. of California Riverside.*

10:00 X11 **661.15** Gene expression analysis reveals sexual dimorphism for long-term effects of methamphetamine abuse and HIV-associated brain injury. M. KAUL*; R. MAUNG; D. OJEDA-JUAREZ; N. Y. YUAN; A. J. ROBERTS; A. B. SANCHEZ; _. TMARC GROUP. *SOM, Univ. of California Riverside, Sanford Burnham Prebys Discovery Med. Inst., Univ. of California San Diego, The Scripps Res. Inst.*

11:00 X12 **661.16** ▲ Effects of 7,8-dihydroxyflavone on glial metabolic response in the hippocampus of the HIV-1 transgenic mice. D. PATEL*. *Univ. of Maryland.*

8:00 X13 **661.17** Identifying a role for E2F1 in synaptodendritic damage in mouse models of HIV. C. MEURICE*; T. J. CIRINO; B. KIM; J. P. MCLAUGHLIN; D. VOLSKY; K. L. JORDAN-SCIUTTO. *Univ. of Pennsylvania, Univ. of Florida, Mt Sinai, Univ. of Florida, Mt. Sinai, Univ. of Pennsylvania.*

9:00 X14 **661.18** Epitranscriptomics: Correlation of N^6-methyladenosine RNA methylation and pathway dysregulation in the hippocampus of HIV transgenic rats. V. R. CANONIGO*; F. YU; B. ZORMAN; P. SUMAZIN; P. P. SANNA. *The Scripps Res. Inst., European Bioinformatics Inst. (EMBL-EBI), Baylor Col. of Med., The Scripps Res. Inst.*

10:00 Y1 **661.19** Immunomodulation of the type I interferon response protects against mortality in a murine model of neonatal HSV-1 encephalitis. D. GIRALDO*; D. R. WILCOX; R. LONGNECKER. *Northwestern Univ.*

Wed. AM

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

662. Stroke Recovery: Non-Pharmacological Approaches to Therapy Cellular and Brain Stimulation

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 Y2 **662.01** ▲ Induced human pluripotent stem cell immature astrocytes for neural repair after white matter stroke. S. GALLEGOS*; I. L. LLORENTE; W. LOWRY; S. CARMICHAEL. *UCLA, UCLA.*

9:00 Y3 **662.02** Paracrine signals from reactive astrocytes that control microglial proliferation after brain injury. J. J. MCINNIS; J. L. SPEES*. *Univ. of Vermont, Univ. of Vermont.*

10:00 Y4 **662.03** ● Human directly reprogrammed neural precursor cell transplants promote motor recovery in a mouse model of stroke irrespective of xenograft survival. I. VONDERWALDE*; A. AZIMI; G. ROLVINK; J. AHLFORS; M. S. SHOICHET; C. M. MORSHEAD. *Univ. of Toronto, Univ. of Toronto, New World Labs.*

11:00 Y5 **662.04** beta1 integrin signaling promotes neuronal migration along vascular scaffolds in the post-stroke brain. T. FUJIOKA*; N. KANEKO; I. AJIOKA; K. NAKAGUCHI; T. OMATA; H. OHBA; R. FÄSSLER; J. M. GARCÍA-VERDUGO; K. SEKIGUCHI; N. MATSUKAWA; K. SAWAMOTO. *Nagoya City Univ. Grad. Sch. of Med. Sci., Nagoya City Univ. Grad. Sch. of Med. Sci., Tokyo Med. and Dent. Univ., Max Planck Inst. of Biochem., Univ. de Valencia, Inst. for Protein Research, Osaka Univ., Natl. Inst. of Physiological Sci.*

8:00 Y6 **662.05** Health economical research for cell therapy against stroke. H. SHICHINOHE*; M. KAWABORI; K. HOUKIN. *Hokkaido Univ. Hosp., Hokkaido Univ.*

9:00 Y7 **662.06** A 3D scaffold and human cell neurovascular niche to test interactions between human neural and vascular cells *in vitro* and in stroke models. L. A. FLANAGAN*; J. ARULMOLI; D. T. T. PHAN; C. C. W. HUGHES. *UCI Neurol., Univ. of California, Irvine, Univ. of California, Irvine.*

10:00 Y8 **662.07** Gpr56 intronic enhancer RNA is local regulator for gene expression and potential marker for ischemic stroke. J. JOO*; T. PARK; Y. JANG; B. HA; J. HEO; S. JEONG. *Korea Brain Res. Inst., Korea Brain Res. Inst.*

11:00 Y9 **662.08** The role of mir-155 in the vascular barrier function after hypoxia. T. ROITBAK*; T. LORDKIPANIDZE; E. CABALLERO-GARRIDO; J. PENA-PHILIPPIDES; A. S. GARDINER; R. PAN. *Univ. of New Mexico, Ilia State Univ., Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico.*

8:00 Y10 **662.09** Monitoring post-stroke frailty in nicotine exposed female rats. A. P. RAVAL*; W. MORENO; O. FURONES-ALONSO; T. RUNDEK; W. DIETRICH, III; H. M. BRAMLETT. *Univ. of Miami, Univ. of MIami, Univ. of Miami, Univ. of Miami Sch. of Med., Univ. of Miami.*

9:00 Y11 **662.10** Effect of rtms onset post-stroke: A systematic review and meta-analysis. E. VAN LIESHOUT*, V; B. VAN DER WORP; A. VISSER-MEILY; R. DIJKHUIZEN. *UMC Utrecht.*

10:00 Y12 **662.11** Action-observation treatment through an interactive home-based platform promoting child-to-child interaction improves hand function in children suffering from unilateral cerebral palsy. A. NUARA*; P. AVANZINI; G. RIZZOLATTI; M. FABBRI-DESTRO. *Univ. di Parma, CNR Inst. of Neurosci.*

8:00 DP05/Y13 **662.12** ● (Dynamic Poster) Vagus nerve stimulation intensity and frequency modulate cortical plasticity and motor recovery after brain injury. D. PRUITT*; T. DANAPHONGSE; M. LUTCHMAN; N. PATEL; J. LE; P. REDDY; R. RENNAKER; M. KILGARD; S. HAYS. *Univ. of Texas at Dallas.*

8:00 Y14 **662.13** Peri-lesional recordings and epidural stimulation in a non-human primate stroke model. D. TOTTEN*; J. M. CARMENA; R. J. MORECRAFT; K. GANGULY. *Univ. of California, San Francisco, UC Berkeley, Univ. South Dakota Schl Med.*

9:00 Y15 **662.14** Efficacy of multiple sessions of quadripulse stimulation in patients with stroke. A report of two cases. K. SHINDO*; F. KANEKO; M. OKAWADA; K. AKABOSHI; M. LIU. *Shonan Keiiku Hosp., Keio Univ. Sch. of Med.*

10:00 Y16 **662.15** Changes in the rat brain following transient ischemic stroke - An MRI study. R. KUMAR; T. G. JACOB; U. SHARMA; N. JAGANNATHAN; T. ROY*. *All India Inst. Med. Sci., All India Inst. Med. Sci., All India Inst. Med. Sci.*

11:00 Y17 **662.16** Remote ischemic post-conditioning accelerates hematoma resolution after intracerebral hemorrhage by modulating innate immune activation. M. BRAUN*; K. VAIBHAV; M. B. KHAN; M. HODA; B. BABAN; D. C. HESS; K. M. DHANDAPANI. *Augusta Univ., Augusta Univ., Augusta Univ., Augusta Univ.*

POSTER

663. Brain Injury and Trauma: Animal Models of Brain Injury: Physiology and Behavior II

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 Y18 **663.01** Mechanisms underlying epileptogenisis following blast induced traumatic brain injury in rat model. M. MURUGAN*; D. SUBRAMANIAN; V. SANTHAKUMAR; N. CHANDRA. *New Jersey Inst. of Technol., Rutgers New Jersey Med. Sch., Univ. of California.*

9:00 Z1 **663.02** Developing, validating, and phenotyping a novel mouse model of combined TBI and PTSD. P. TEUTSCH*; C. E. JONES; M. M. LIM. *Veterans Affairs Portland Hlth. Care Syst., Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

10:00 Z2 **663.03** Mild blast induced traumatic brain injury disrupts the neuroendocrine stress response in male and female mice. A. L. RUSSELL*; I. M. HERNANDEZ; R. J. HANDA; T. J. WU. *Uniformed Services Univ., Uniformed Services Univ., Colorado State Univ., Uniformed Services Univ.*

11:00 Z3 **663.04** ● Cerebrolysin improves long-term histological outcomes and functional recovery in rats after moderate closed head injury. Y. ZHANG*; M. CHOPP; Y. ZHANG; Z. ZHANG; M. LU; T. ZHANG; H. WU; S. WINTER; E. DOPPLER; L. ZHANG; A. MAHMOOD; Y. XIONG. *Henry Ford Hosp., Henry Ford Hosp., Oakland Univ., Henry Ford Hosp., EVER Neuro Pharma GmbH.*

8:00 Z4 **663.05** Lysophosphatidyl choline induces post-hemorrhagic hydrocephalus through conversion to lysophosphatidic acid via autotaxin. A. FRANTZ*; N. LUMMIS; P. SANCHEZ-PAVON; Y. YUNG; J. CHUN. *Sanford-Burnham Med. Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 Z5 **663.06** ● Repeated mild closed head impacts to tau mice leads to selective neuroinflammation of the optic nerve and white matter tracts. H. CHENG*; J. FATHMAN; A. SCHUMACHER; J. WALKER. *Novartis (GNF), Novartis (GNF).*

10:00 Z6 **663.07** The effect of repetitive mild traumatic brain injury on Alzheimer's mice containing mutations for amyloid precursor protein and tau. N. COSCHIGANO*; K. CRAVEN; S. LIPPI; J. FLINN. *George Mason.*

11:00 Z7 **663.08** Long-term effects of traumatic brain injury on fear. J. POPOVITZ*; K. HARKINS; S. P. MYSORE; H. M. ADWANIKAR. *Johns Hopkins Univ., Johns Hopkins Univ.*

8:00 Z8 **663.09** Assessment of plasma based neuronal enriched extracellular vesicle protein cargo for potential biomarkers of mild traumatic brain injury. N. H. GREIG*; H. KARNATI; D. TWEEDIE; C. G. PICK; B. J. HOFFER; R. E. BECKER; D. KAPOGIANNIS. *Intramural Res. Program, Natl. Inst. on Aging, NIH, Intramural Res. Program, Natl. Inst. on Aging, NIH, Tel-Aviv University., Aristea Translational Med., Case Western Reserve Univ. Sch. of Med., Natl. Inst. on Aging.*

9:00 Z9 **663.10** Functional suppression of premotor activity in a transient model of motor cortex injury. K. C. ELLIOTT*; J. A. BORRELL; S. BARBAY; R. J. NUDO. *Univ. of Kansas Med. Ctr.*

10:00 Z10 **663.11** Action of the anti-epileptic drug phenytoin on mild traumatic brain injury in a mouse model. J. SPIESS*; C. WEISS; G. GARCIA; J. PINA-CRESPO; P. H. RIGBY; J. F. DISTERHOFT. *Cortrop Inc., Sanford Burnham Med. Res. Inst., Northwestern Univ. Med. Sch., L3 Applied Technologies.*

11:00 Z11 **663.12** From trauma to neurodegeneration: A one year time course of functional and neuropathological outcomes following experimental traumatic brain injury. A. ARULSAMY*; F. CORRIGAN; L. E. COLLINS-PRAINO. *The Univ. of Adelaide, Univ. of South Australia.*

8:00 Z12 **663.13** Longitudinal structural changes in the brain following fluid percussion injury followed by diffusion MRI. G. SMITH*; C. SANTANA-GOMEZ; R. STABA; N. G. HARRIS. *UCLA David Geffen Sch. of Med., UCLA David Geffen Sch. of Med.*

9:00 Z13 **663.14** ● Characterization of an awake model of concussive-like injury in rats. L. PHAM*; H. A. KIM; R. C. WORTMAN; R. D. BRADY; B. R. CHRISTIE; G. R. DRUMMOND; S. R. SHULTZ; C. G. SOBEY; S. J. MCDONALD. *La Trobe Univ., Monash Univ., Univ. of Victoria.*

10:00 Z14 **663.15** Evaluation of pathological high-frequency oscillations (pHFOs) during waking and sleep behavior in post-traumatic brain injury model. C. E. SANTANA-GOMEZ*; G. SMITH; N. G. HARRIS; R. STABA. *David Geffen Sch. of Med. at UCLA, Dept. Neurosurgery, UCLA.*

11:00 Z15 **663.16** MRI monitoring of macaque monkeys for neuroscience: Two case studies. F. BALEZEAU*; J. NACEF; K. L. MURPHY; Y. KIKUCHI; F. SCHNEIDER; F. ROCCHI; R. S. MUERS; R. FERNANDEZ-PALACIOS O'CONNOR; C. BLAU; R. C. SAUNDERS; M. A. HOWARD, III; A. THIELE; T. D. GRIFFITHS; C. I. PETKOV. *Newcastle Univ., Newcastle Univ., Newcastle Univ. Med. Sch., Newcastle Univ., Inst. of Neurosci., NIMH, Univ. of Iowa Hosp. and Clinics.*

8:00 Z16 **663.17** Role of amyloid precursor protein in axonal pathology. V. LACOVICH*; K. TEXLOVÁ; B. P. HEAD; V. POZO DEVOTO; M. NOVAKOVÁ; M. FEOLE; G. STOKIN. *Intl. Clin. Res. Ctr. FNUSA-ICRC, VA Med. Ctr.*

9:00 Z17 **663.18** ▲ Genetic analysis of anxiety behavior following mild traumatic brain injury in *Drosophila melanogaster.* G. FORT; M. CHAMPAGNE; R. K. KELLY; D. MORAN; J. MARRIOTT; A. CROCKER*. *Middlebury Col., Middlebury Col.*

10:00 Z18 **663.19** The influence of a nematode parasite on host serotonergic system. D. M. ZANCAN*; C. V. MACHADO; F. J. V. FUENTEALBA; F. C. NICOLA. *Univ. Federal Do Rio Grande Do Sul (UFRGS), Univ. Federal Do Rio Grande Do Sul (UFRGS).*

11:00 AA1 **663.20** Chronic *in vivo* imaging of neurovascular changes in cortex following mild traumatic brain injury. E. WITKOWSKI*; E. ERDENER; K. KILIC; D. BOAS; I. DAVISON. *Boston Univ., Boston Univ.*

8:00 AA2 **663.21** Glial immune-related pathways as mediators of closed head TBI effects on behavior in *Drosophila.* B. VAN ALPHEN*; S. STEWART; M. IWANASZKO; A. RAMAKRISHNAN; T. Q. ITOH; R. ALLADA. *Northwestern Univ., Baylor Col. of Med., Northwestern Univ., Kyushu Univ., Northwestern Univ.*

9:00 AA3 **663.22** Unable to Attend Noise exposure at different developmental ages can induce different short and long term habituation memory alterations. Correlation with hippocampal oxidative state. S. J. MOLINA; M. RODRIGUEZ GONZÁLEZ; G. E. BUJÁN; F. CAPANI; L. R. GUELMAN*. *CEFYBO (UBA-CONICET), Univ. De Buenos Aires, Facultad De Medicina, Inst. Inv. Cardiológicas, ININCA (UBA-CONICET), CEFyBO (UBA-CONICET).*

10:00 AA4 **663.23** A novel animal model of blast-induced traumatic brain injury (TBI). J. LI; N. LI; L. WU; Y. PANG; T. CHEN; Y. OU; Y. TU; D. SANDLIN; J. P. SHAFFERY; H. ZHU*; W. ZHOU. *Univ. MS Med. Ctr. Dept ENT, Kun Ming Med. Sch., Univ. of Mississippi Med. Ctr. / Dept of Pediatrics, Univ. Mississippi Med. Ctr. Dept Psychiatry.*

11:00 AA5 **663.24** A combined rat model of mild traumatic brain injury and cerebral microdialysis. I. O. MASSE*; L. MOQUIN; C. PROVOST; A. P. GRATTON; L. DE BEAUMONT. *Hôpital Du Sacré-Cœur De Montréal, Douglas Hosp. Res. Ctr., Hôpital Du Sacré-Cœur De Montréal.*

8:00 AA6 **663.25** ▲ Microstructural and ultrastructural brain injury in a preclinical model of acquired symptomatic hydrocephalus: Exploring the spectrum of cilia injury. T. R. YELLOWHAIR*; J. NEWVILLE; C. SHROCK; J. MAXWELL; S. ROBINSON; L. JANTZIE. *Univ. of New Mexico Sch. of Med., Johns Hopkins Sch. of Med., Univ. of New Mexico Hosp., Johns Hopkins Univ.*

9:00 AA7 **663.26** Neonatal erythropoietin and melatonin as non-surgical combination therapy prevents posthemorrhagic hydrocephalus of prematurity in rats. C. L. SHROCK*; T. R. YELLOWHAIR; J. C. NEWVILLE; F. S. CONTEH; A. Y. OPPONG; J. R. MAXWELL; F. J. NORTHINGTON; L. L. JANTZIE; S. ROBINSON. *Johns Hopkins Univ., Univ. of New Mexico, Johns Hopkins Sch. of Med.*

10:00 AA8 **663.27** Long term neuromodulation after experimental TBI results in rebound hyperexcitability indicated by enhanced fMRI activation and altered functional connectivity. A. PAYDAR*; J. S. SCHOENFIELD; E. YAN; A. KAMALI; T. KOCHAN; N. G. HARRIS. *UCLA, Dept. of Neurosurgery, BIRC.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 AA9 **663.28** Quantitative measurement of CBV in mild traumatic brain injury using MRI. J. QIAO*; T. MORRISON; A. MALLETTE; L. TIMMS; P. P. KULKARNI; S. KAMARTHI; C. F. FERRIS; S. SRIDHAR. *Northeastern Univ., Northeastern Univ., Northeastern Univ., Northeastern Univ., Northeastern Univ. Dept. of Psychology, Northeastern Univ., Northeastern University, Ctr. for Translational NeuroImaging, Northeastern Univ.*

8:00 AA10 **663.29** ● Traumatic brain injury: Characterization of a cryoinjury model using MRI and histopathology. V. SHENOY*; H. BATTAPADY; L. LOOSE; S. JOHNSON; D. LOSE; P. HARRIS; S. LUNN; B. D. TRAPP. *Renovo Neural, Cleveland Clin. Fndtn.*

POSTER

664. Brain Injury and Trauma: Human Studies I

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 AA11 **664.01** Increased rightward frontal alpha asymmetry after mild traumatic brain injury. V. KUUSINEN*; L. SUN; J. PERÄKYLÄ; K. H. OGAWA; K. M. HARTIKAINEN. *Behavioral Neurol. Res. Unit, Univ. of Tampere, Turku PET Ctr., St. Mary's Col. of California.*

9:00 BB1 **664.02** Investigation of the relationship of vocal-biomarker features and fMRI ROI time-series for the diagnosis of traumatic brain injury (TBI) in humans. D. E. STURIM*; J. WILLIAMSON; G. CICCARELLI; Y. GWON; T. QUATIERI. *MIT Lincoln Lab.*

10:00 BB2 **664.03** Sleep-like bistability, loss of causality and complexity in the cerebral cortex of patients with unresponsive wakefulness syndrome. M. FECCHIO*; M. ROSANOVA; S. CASAROTTO; S. SARASSO; A. GIRARDI CASALI; A. PIGORINI; A. COMANDUCCI; F. SEREGNI; G. DEVALLE; G. CITERIO; O. BODART; O. GOSSERIES; M. BOLY; S. LAUREYS; M. MASSIMINI. *Univ. of Milan, Univ. Federal de São Paulo, Cambridge Univ. Hosp. NHS Fndn. Trust, IRCCS Fondazione Don Gnocchi Onlus, Univ. of Milan Bicocca, Univ. and Univ. Hosp. of Liège, Univ. of Wisconsin.*

11:00 BB3 **664.04** ▲ Elevated levels of BNDF, depression, anxiety, and stress following mild traumatic brain injury. T. SUSA*; R. BRANDT; K. J. KANGAS; C. BAMMERT; E. N. OTTEM; M. T. MOORE; J. M. CARLSON. *Northern Michigan Univ., Northern Michigan Univ., Northern Michigan Univ., Northern Michigan Univ., Northern Michigan Univ.*

8:00 BB4 **664.05** ● Prognostic inflammatory biomarkers for traumatic brain injury: A TRACK-TBI pilot study. M. HABER*; J. PODDELL; F. KORLEY; D. WILSON; A. R. FERGUSON; P. MUKHERJEE; K. WANG; A. VALADKA; A. PUCCIO; D. OKONKWO; G. MANLEY; R. DIAZ-ARRASTIA. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Michigan, Quanterix Corp., Brain and Spinal Injury Ctr. (BASIC), UCSF, Univ. of California San Francisco, Univ. of Florida, Virginia Commonwealth Univ., Univ. of Pittsburgh, UCSF, Univ. of Pennsylvania.*

9:00 BB5 **664.06** Sleep-wake disturbances following brain injury and relation to outcome. S. N. HOWELL*; G. S. GRIESBACH. *Ctr. for Neuro Skills, Ctr. for Neuro Skills.*

10:00 BB6 **664.07** Does motor memory usage change in concussed individuals performing a sensorimotor adaptation task? D. LANTAGNE*; L. A. MROTEK; S. A. BEARDSLEY; D. G. THOMAS; D. LEIGH; S. I. AHAMED; R. A. SCHEIDT. *Marquette Univ., Med. Col. of Wisconsin, Marquette Univ., Marquette Univ., Med. Col. of Wisconsin, Northwestern Univ.*

11:00 BB7 **664.08** Circulating microRNA expression in acute and chronic human TBI. H. A. WEISZ*; D. BOONE; H. SPRATT; C. ROBERTSON; H. S. LEVIN; M. SHEFFIELD-MOORE; D. DEWITT; D. S. PROUGH; H. L. HELLMICH. *Univ. of Texas Med. Br., Univ. of Texas Med. Br. At Galveston, Univ. of Texas Med. Br., Baylor Col. of Med., Baylor Col. Med., Univ. of Texas Med. Br.*

8:00 BB8 **664.09** The impact of traumatic brain injury on physiological markers and sleep patterns. C. K. SINGH*; L. A. KREBER; M. SCHAFER; G. CASTILLO; G. S. GRIESBACH. *Ctr. For Neuro Skills.*

9:00 BB9 **664.10** Towards a more ecologically valid and objective measurement of mTBI recovery in adolescents: fNIRs and miRNA reveal underlying physiological differences within an expected window of recovery. N. SIDEMAN; H. AYAZ; C. J. HAMMOND; A. SARGENT; D. M. APPELT; S. L. ALLEN; B. J. BALIN*. *Thomas Jefferson Univ. Hosp., Drexel Univ., Philadelphia Col. of Osteo. Med., Philadelphia Col. Osteo. Med., Philadelphia Col. of Osteo. Med., Philadelphia Col. of Osteo. Med.*

10:00 BB10 **664.11** ● Functional rerouting along the structural connectome is associated with improved cognitive recovery after mild traumatic brain injury. P. MUKHERJEE*; K. W. JAMISON; J. P. OWEN; A. RAJ; A. KUCEYESKI. *Univ. of California San Francisco, Weill Cornell Med. Col., Univ. of Washington, Univ. of California, San Francisco.*

11:00 BB11 **664.12** Sex-related differences in the effect of concussion history on cognitive-motor integration performance in varsity athletes. A. PIERIAS*; D. J. GORBET; T. MELOCHE; L. M. HYNES; M. WOJTOWICZ; L. E. SERGIO. *York Univ., York Univ., York Univ., York Univ., York Univ.*

8:00 BB12 **664.13** Subtle motor signs and executive function in chronic pediatric traumatic brain injury. J. CRASTA*; B. S. SLOMINE; S. MOSTOFSKY; S. SUSKAUER. *Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ., Johns Hopkins Univ.*

9:00 BB13 **664.14** Low intensity focused ultrasound in disorders of consciousness: A preliminary report. M. M. MONTI*; C. SCHNAKERS; J. A. CAIN; J. P. COETZEE; N. M. SPIVAK; P. M. VESPA. *UCLA, Casa Colina Rehabil. Hosp., UCLA, UCLA, UCLA.*

10:00 BB14 **664.15** Differential patterns of neural activation related to emotional face recognition in short-term and long-term recovery from concussion:Two fMRI case studies. J. RICKER; K. A. SMITH; A. SCHMIDT; A. E. CRIPPS; P. THALLA; H. C. CROMWELL*; X. WANG. *Bowling Green State Univ., Bowling Green State Univ., Univ. of Toledo, Univ. of Toledo.*

11:00 BB15 **664.16** Time-dependent prefrontal white matter differences and changes in attentional bias to threat following mild traumatic brain injury. J. M. CARLSON*; T. SUSA; M. T. MOORE. *Northern Michigan Univ., Northern Michigan Univ., Northern Michigan Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 BB16 **664.17** Associations between chronic low-level blast exposure and combat experience with personality, mood, and cognition. A. A. QUICK; M. TIERNEY; E. M. WASSERMANN; S. T. AHLERS; E. POLEJAEVA; K. DELL; W. CARR; M. L. LOPRESTI; C. GOFORTH; C. M. MODICA*. *Naval Med. Res. Ctr., Natl. Inst. of Neurolog. and Disorders and Stroke, Henry M. Jackson Fndn. for the Advancement of Military Med., Naval Med. Res. Ctr., Univ. of Florida, Walter Reed Army Inst. of Res., Walter Reed Army Inst. of Res., Pennsylvania State Univ., Walter Reed Army Inst. of Res., Uniformed Services Univ. of the Hlth. Sci.*

9:00 BB17 **664.18** A review of tools used to prevent or diagnosis concussions in sports. A. ADAMI*; J. VILLAPANDO. *San Diego Miramar Col., Alpha Fiber.*

10:00 CC1 **664.19** Advanced white matter mapping in the subconcussive brain. B. A. CARON*; F. PESTILLI; N. PORT. *Indiana Univ.*

11:00 CC2 **664.20** The role of paravascular spaces for epileptogenesis after traumatic brain injury. G. BARISANO*; D. DUNCAN; F. SEPEHRBAND; R. CABEEN; H. KIM; P. VESPA; A. W. TOGA; M. LAW. *USC, Keck Med. Ctr. of USC, UCLA.*

8:00 CC3 **664.21** ● Highly sensitive single molecular array immunoassay measurement of t-Tau, NF-L, GFAP, and UCH-L1 biomarkers in concussion/mild traumatic brain injury serum samples. A. CHENNA; C. J. PETROPOULOS; J. W. WINSLOW*. *Monogram Biosci. Inc, Lab. Corp. of America, Inc, Monogram Biosciences, Lab. Corp. of America, Inc., Monogram Bioscience/Labcorp Specialty Testing.*

POSTER

665. Brain Injury and Trauma: Peripheral Nerve Trauma, Crush, and Toxic Injury

Theme C: Neurodegenerative Disorders and Injury

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 CC4 **665.01** Conditioning electrical stimulation to enhance motor and sensory recovery following peripheral nerve injury. J. SENGER*; M. CHAN; H. MACANDILI; V. M. K. VERGE; K. E. JONES; C. CHAN; C. A. WEBBER. *Univ. of Alberta, Univ. of Alberta, Univ. of Saskatchewan, Univ. of Alberta.*

9:00 CC5 **665.02** Conditioning electrical stimulation before peripheral nerve repair surgery promotes greater motor and sensory nerve regeneration than postoperative electrical stimulation. C. A. WEBBER*; J. SENGER; H. MACANDILI; A. CHAN; K. CHAN. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

10:00 CC6 **665.03** Axon regeneration is enhanced in the absence of asparagine endopeptidase (AEP, δ secretase). A. W. ENGLISH*; K. YE. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med.*

11:00 CC7 **665.04** Pro-inflammatory macrophage phenotype and activation are regulated by CRYAB *in vitro* and after peripheral nerve damage. S. S. OUSMAN*; E. F. LIM; V. HOGHOOGHI. *Hotchkiss Brain Institute, Univ. of Calgary, Hotchkiss Brain Institute, Univ. of Calgary.*

8:00 CC8 **665.05** ▲ Nerve injury effects rapid mobilization of NGF receptors to the axonal membranes of sensory neurons and increased receptor activation, which can be enhanced by electrical stimulation. B. R. MCMILLAN; R. ZHAI; J. JOHNSTON; V. M. VERGE*. *Univ. Saskatchewan-CMSNRC.*

9:00 CC9 **665.06** The addition of heat-releasable neurotrophin-3 and chondroitinase ABC to a nerve guidance conduit does not improve compound muscle action potential amplitudes in a rat model of sciatic never repair. A. DONSANTE*; K. E. MCDANIEL; N. S. HARDCASTLE; D. M. O'CONNOR; J. XUE; Y. XIA; N. BOULIS. *Emory Univ., Georgia Inst. of Technol. and Emory Univ.*

10:00 CC10 **665.07** Extending the maximum critical nerve gap in the rat sciatic nerve model using curved conduits. G. S. BENDALE*; Y. TONG; E. SHIMIZU; S. ANAND; B. N. JOHNSON; M. I. ROMERO-ORTEGA. *Univ. of Texas At Dallas, UT Dallas, Virginia Tech., Univ. of Texas at Dallas.*

11:00 CC11 **665.08** Improving generalization of recovery using vagus nerve stimulation after peripheral nerve injury. M. DARROW*; A. D. RUIZ; M. BILAL; A. ZALLOUM; A. SEYEDA; M. SHETH; D. PARMAR; J. TRAN; M. P. KILGARD; S. A. HAYS. *Univ. of Texas At Dallas, Univ. of Texas At Dallas, Texas Biomed. Device Ctr., Univ. of Texas At Dallas, Univ. of Texas At Dallas.*

8:00 CC12 **665.09** *In vivo* non-viral delivery of gene and cell therapies to peripheral and central nervous system. J. T. MOORE*; N. HIGUITA-CASTRO; C. WIER; A. SUNYECZ; R. CHO; M. REILLY; C. SEN; S. J. KOLB; D. GALLEGO-PEREZ. *Ohio State Univ., Ohio State Univ., Ohio State Univ., Ohio State Univ., Ohio State Univ.*

9:00 CC13 **665.10** Lithium attenuates diabetic neuropathic pain through augmentation of spinal glycinergic inhibitory control. C. LIN*; W. LIAO; C. TSAI. *Kaohsiung Chang Gung Mem. Hosp. and Chang Gung Univ. Col. of Medi, Chia-Yi Chang Gung Mem. Hosp., Kaohsiung Chang Gung Mem. Hosp. and Chang Gung Univ. Col. of Medi,.*

10:00 CC14 **665.11** Involvement of vascular endothelial growth factor in regeneration of injured inferior alveolar nerve. Y. NISHIDA*; Y. YAMADA; H. KANEMARU; T. MAEDA; A. OHAZAMA; K. SEO. *Niigata Univ. Grad. Sch. of Med. and, Niigata Univ. Grad. Sch. of Med. and Dent. Sci., Niigata Univ. Grad. Sch. of Med. and Dent. Sci., Niigata Univ. Grad. Sch. of Med. and Dent. Sci.*

11:00 CC15 **665.12** ▲ Effectiveness of portland cement on the repair of inferior dental nerve in mice C57bl/6. M. VIVEROS SANCHEZ*; A. L. GARCIA-HERNANDEZ; I. O. PEREZ-MARTINEZ. *UNAM, Lab. of Oral Inmunology and Osseous Regulation, Lab. of Neurobio. of Oral Sensations.*

8:00 CC16 **665.13** Effective neuromodulation of pelvic floor nerves despite damage induced by multiparity and aging in incontinent rabbits. A. G. HERNANDEZ-REYNOSO*; K. LÓPEZ-GARCÍA; R. ZEMPOALTECA; D. L. CORONA QUINTANILLA; F. CASTELÁN; M. I. ROMERO-ORTEGA; M. MARTINEZ-GOMEZ. *Univ. of Texas at Dallas, Inst. de Investigaciones Biomedicas, UNAM, Inst. de Investigaciones Biomedicas, UNAM, Univ. Autónoma de, Univ. Nacional Autonoma de Mexico, Univ. of Texas at Dallas, Inst. de Investigaciones Biomédicas UNAM.*

9:00 DD1 **665.14** Restoring central networks improves motor and sensory function after nerve damage. E. MEYERS*; N. KASLIWAL; E. LAI; M. ROMERO-ORTEGA; R. RENNAKER; M. KILGARD; S. HAYS. *Univ. of Texas At Dallas.*

10:00 DD2 **665.15** Focal reduction of monocarboxylate transporter 1 (MCT1) in macrophages delays peripheral nerve regeneration. M. K. JHA*; F. YANG; C. XUE; Y. LEE; A. HOKE; J. D. ROTHSTEIN; B. M. MORRISON. *Johns Hopkins Univ., City Univ. of Hong Kong.*

Wed. AM

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* Indicates abstract's submitting author

POSTER

666. Peripheral Mechanisms of Neuropathic Pain

Theme D: Sensory Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 DD3 **666.01** Role of ASIC channels in mouse models of painful diabetic neuropathy. J. NOEL*; A. NEGM; K. STOBBE; E. DEVAL; E. LINGUEGLIA; C. ROVERE. *IPMC, CNRS UMR7275.*

9:00 DD4 **666.02** Neuropathy-associated Nav1.7 variant, I228M causes energy deficit and impairs neurite integrity of DRG neurons. S. LEE*; J. G. J. HOEIJMAKERS; C. G. FABER; I. S. J. MERKIES; G. LAURIA; S. G. WAXMAN. *Yale Univ. Sch. of Med., Veterans Affairs Connecticut Healthcare Syst., Maastricht Univ. Med. Center+, St. Elisabeth Hosp., IRCCS Fndn. "Carlo Besta" Neurolog. Inst., Univ. of Milan.*

10:00 DD5 **666.03** Mouse models of diabetic neuropathy: Decreased K_{ATP} channel expression and function in the peripheral and central nervous system. A. H. KLEIN*; C. FISHER; J. L. JANECEK; M. L. GRAHAM. *Univ. of Minnesota Duluth, Univ. of Minnesota.*

11:00 DD6 **666.04** Participation of the trek1 potassium channel in neuropathy-induced mechanical hypersensitivity. K. MENDEZ RESENDIZ*; J. MURBARTIAN. *CINVESTAV, Cinvestav, Sede Sur.*

8:00 DD7 **666.05** RE1 silencing transcription factor (REST) mediates nerve injury-induced downregulation of cholinergic receptor muscarinic 2 in primary sensory neurons. J. ZHANG*; S. CHEN; H. CHEN; H. PAN. *Univ. of Texas MD Anderson Cancer Ctr.*

9:00 DD8 **666.06** HMGB1 redox isoforms selectively activate neurons and modulate pain-like behavior. Q. ZENG*; M. ADDORISIO; M. GUNASEKARAN; S. CHAVAN; U. ANDERSSON; K. TRACEY; H. YANG. *Feinstein Inst. For Med. Res., Karolinska Univ. Hosp. Solna.*

10:00 DD9 **666.07** Peripheral macrophage recruitment to the dorsal root ganglia is critical to pain development after spinal cord injury. S. J. CHHAYA*; J. D. HOULE; M. R. DETLOFF. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

11:00 DD10 **666.08** *In vivo* imaging reveals nociceptors acquire *de novo* cold sensitivity to drive cold allodynia in neuropathic pain. D. I. MACDONALD*; A. P. LUIZ; E. C. EMERY; J. N. WOOD. *UCL.*

8:00 DD11 **666.09** Mitochondrial perturbations in sensory neurons exposed to fragments of myelin basic protein. S. K. HULLUGUNDI*; A. G. REMACLE; J. H. SIAMWALA; J. SCHILLING; A. V. CHERNOV; J. DOLKAS; A. Y. STRONGIN; H. PATEL; V. I. SHUBAYEV. *Univ. of California San Diego, VA San Diego Healthcare System,, Sanford Burnham Prebys Med. Discovery Inst.*

9:00 DD12 **666.10** Decreased protein expression of anoctamin-1 contributes to reduce neuropathic pain induced by spinal nerve ligation. G. GARCÍA*; V. A. MARTINEZ-ROJAS; E. J. GUTIÉRREZ-LARA; J. MURBARTIAN. *Cinvestav Sede Sur, Cinvestav Sede Sur, CINVESTAV, Cinvestav, Sede Sur.*

10:00 DD13 **666.11** Macrophage angiotensin II type-2 receptor triggers neuropathic pain. A. J. SHEPHERD*; A. D. MICKLE; J. P. GOLDEN; M. R. MACK; A. D. DE KLOET; V. K. SAMINENI; B. S. KIM; E. G. KRAUSE; R. W. GEREAU, IV; D. P. MOHAPATRA. *Washington University, Sch. of Med., Univ. of Florida, Col. of Med., Univ. of Florida.*

11:00 DD14 **666.12** Analgesic and preventive effects of free radical scavengers in chemotherapy-induced neuropathic pain in rats. H. KIM*; S. ABDI. *MD Anderson Cancer Ctr.*

8:00 DD15 **666.13** Extended use of diagnostic skin punch biopsies of SFN patients to multiply limited material for new *in vitro* tools to investigate small fiber pathology. F. KARL*; T. MALZACHER; K. LUISA; S. NADINE; C. SOMMER; F. GROEBER-BECKER; N. ÜÇEYLER. *Univ. of Wuerzburg, Translational Ctr. Wuerzburg 'Regenerative Therapies in Oncology and Musculoskeletal Diseases', Wuerzburg Br. of the Fraunhofer-Institute Interfacial Engin. and Biotechnology, IGB.*

9:00 DD16 **666.14** Effect of neuronal globotriaosylceramide deposits on pain and sensory impairment in Fabry disease. L. HOFMANN*; D. HOSE; S. D. DIB-HAJJ; S. WAXMAN; C. SOMMER; E. WISCHMEYER; N. ÜÇEYLER. *Univ. of Wuerzburg, Yale Sch. of Med. and VAMC, Univ. of Wuerzburg.*

10:00 DD17 **666.15** Epigenetic modification by sigma-1 receptor at the dorsal root ganglion in neuropathic pain. N. GOGUADZE*; H. WU; T. SU. *NIDA, IRP, NIH.*

11:00 DD18 **666.16** ● Functional and transcriptional changes in primary somatosensory neurons after peripheral nerve injury. I. TOCHITSKY*; W. RENTHAL; D. YARMOLINSKY; I. M. CHIU; Y. CHENG; B. SINGH; M. E. GREENBERG; C. J. WOOLF. *Boston Children's Hosp. and Harvard Med. Sch., Harvard Med. Sch., Boston Children's Hosp., Harvard Med. Sch., Boston Children's Hosp. Harvard Med. Sch., Harvard Med. Sch., Children's Hosp. Boston.*

8:00 EE1 **666.17** Histone demethylase LSD1 in peripheral sensory neurons regulates neuropathic pain in rats with chronic compression of dorsal root ganglion. L. LIANG*; S. WANG; X. ZHU; Y. CHEN; Y. WANG; F. HUO; S. JIA; S. LU. *Xi'An Jiaotong Univ. Hlth. Sci. Ctr., Yantai Affiliated Hosp. of Binzhou Med. Univ., Key Lab. of Envrn. and Genes Related to Dis.*

9:00 EE2 **666.18** Neuropathic pain susceptibility in prenatal alcohol exposed (PAE) females is mediated by the proinflammatory actions of lymphocyte function-associated antigen (LFA)-1 on immune and glial cells. S. NOOR*; J. SANCHEZ; Z. PERVIN; J. SANCHEZ; M. S. SUN; L. EPLER; S. DAVIES; D. SAVAGE; N. MELLIOS; L. JANTZIE; E. MILLIGAN. *Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico.*

10:00 EE3 **666.19** The analgesic efficacy of low frequency stimulation in docetaxel-induced neuropathic pain decreases ultrasound vocalizations in mice. S. KANG*; Y. RYU; S. SEO; O. KWON; K. CHOI; S. CHO; H. YOO; J. LEE. *Korea Inst. of Oriental Med., East West Cancer Center, Dunsan Korean Med. Hosp. of Daejeon Univ., Dept. of surgery, Chungnam Natl. Univ. Hosp.*

11:00 EE4 **666.20** A conditioning lesion induces an arachidonic acid-containing phosphatidylcholine level increase and lysophosphatidic acid precursors level decrease in the dorsal root ganglion of mice. Y. MIHARA*; T. OMURA. *Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med.*

8:00 EE5 **666.21** The immunoreactive expression pattern of neun as a neuronal-nuclei qualifier for high-throughput data analysis in rat dorsal root ganglion: 2-day adjuvant-induced arthritis. M. B. ANDERSON*; K. E. MILLER. *Oklahoma State Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 EE6 **666.22** BIRT377, an inhibitor of lymphocyte function-associated antigen 1, suppresses allodynia in males and females through different immune signaling cytokines. M. S. SUN*; S. NOOR; A. G. VANDERWALL; M. A. HAVARD; J. E. SANCHEZ; N. W. HARRIS; M. V. NYSUS; J. P. NORENBERG; E. D. MILLIGAN. *Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico.*

10:00 EE7 **666.23** Over-expression of secreted amyloid precursor protein alpha ameliorates pathological hallmarks of type 1 diabetes. G. L. ODERO*; B. D. AULSTON; D. R. SMITH; G. W. GLAZNER. *Albrechtsen Res. Ctr., Albrechtsen Res. Ctr., Univ. of Manitoba.*

11:00 EE8 **666.24** ● Loss of heat pain sensitivity in patients with diabetic and chemotherapy-induced neuropathic pain is nociceptor fiber specific and spontaneous pain may not assess by contact or radiant heat. M. I. NEMENOV*; M. KLUKINOV; D. C. YEOMANS; M. SCHMELZ. *Lasmed LLC, Stanford Univ., Stanford Univ., Heidelberg Univ.*

8:00 EE9 **666.25** A novel role of oxidized omega-6 polyunsaturated fatty acids in diabetic pain. P. M. LOCOCO*; A. R. FURR; D. A. ARRIS; K. M. HARGREAVES. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

9:00 EE10 **666.26** Spatial organization of oral tongue cancer invasion into peripheral nerves in a murine oral carcinogenesis model. A. BHATTACHARYA*; R. VEERAMACHANENI; B. L. SCHMIDT; D. G. ALBERTSON. *NYU Col. of Dent., NYU Col. of Dent., NYU Col. of Dent.*

10:00 EE11 **666.27** Sex differences in cell-specific toll-like receptor 4 signaling on neuropathic pain development. T. A. SZABO-PARDI*; N. M. AGALAVE; K. A. LINDQUIST; M. D. BURTON. *Univ. of Texas At Dallas.*

11:00 EE12 **666.28** Development of pain hypersensitivity in a model of non-compressive disc herniation. M. M. MULEY; Y. TU; M. W. SALTER*. *Hosp. for Sick Children.*

8:00 EE13 **666.29** Reduced skin innervation in Charcot-Marie-Tooth disease type 1A patients. B. HARTMANNSBERGER*; K. DOPPLER; J. STAUBER; B. SCHLOTTER-WEIGEL; P. YOUNG; C. L. SOMMER. *Univ. of Wuerzburg, Ludwig Maximilian Univ. of Munich, Univ. of Muenster.*

POSTER

667. Touch: Barrel Cortex II

Theme D: Sensory Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 EE14 **667.01** Development of inhibitory wiring specificity in mouse cerebral cortex. A. G. GOUR*; K. M. BOERGENS; P. LASERSTEIN; Y. HUA; M. HELMSTAEDTER. *Max Planck Inst. For Brain Res.*

9:00 FF1 **667.02** Connectomic study of mice barrel cortex after sensory deprivation in adult. K. SONG*; M. HELMSTAEDTER. *Max-Planck Inst. For Brain Res.*

10:00 FF2 **667.03** The inhibitory input connectome of apical tuft dendrites in mouse cerebral cortex. A. KARIMI*; J. ODENTHAL; F. DRAWITSCH; K. BOERGENS; M. HELMSTAEDTER. *MPI Brain Res.*

11:00 FF3 **667.04** FluoEM: virtual labeling of axons in 3D EM data for long-range connectomics. F. P. DRAWITSCH*; A. KARIMI; K. M. BOERGENS; M. HELMSTAEDTER. *Max Planck Inst. for Brain Res.*

8:00 FF4 **667.05** High-throughput connectomics in mouse barrel cortex. M. SCHURR*; J. STRAEHLE; L. DADASHEV; A. MOTTA; H. KEBIRI; N. SHETTAR; M. HELMSTAEDTER. *MPI For Brain Res.*

9:00 FF5 **667.06** ▲ Deep learning for axon tracing in high-resolution connectomics. M. SCHMIDT*; A. MOTTA; B. STAFFLER; M. BERNING; M. HELMSTAEDTER. *MPI Brain Res.*

10:00 FF6 **667.07** Comparative connectomics in the mammalian cerebral cortex. S. LOOMBA*; J. STRAEHLE; K. BOERGENS; M. HELMSTAEDTER. *Max Planck Inst. For Brain Res.*

11:00 FF7 **667.08** Dense connectomic reconstruction in layer 4 of the somatosensory cortex. A. MOTTA*; M. BERNING; K. M. BOERGENS; B. STAFFLER; M. BEINING; S. LOOMBA; C. SCHRAMM; H. WISSLER; M. HELMSTAEDTER. *Max Planck Inst. For Brain Res.*

8:00 FF8 **667.09** A parametric texture discrimination task reveals an essential role of primary somatosensory cortex in mice. J. PARK*; C. RODGERS; Y. HONG; R. M. BRUNO. *Columbia Univ., Columbia Univ. Med. Ctr., Columbia Univ.*

9:00 FF9 **667.10** Differential roles of cortex and striatum in tactile detection. Y. HONG*; B. C. PIL; R. BRUNO. *Columbia Univ.*

10:00 FF10 **667.11** Stabilization of cortical neuron ensembles by sensory association learning. J. LEE*; S. M. BERNHARD; N. J. AUDETTE; A. L. BARTH. *Carnegie Mellon Univ.*

11:00 FF11 **667.12** Anatomical correlates of learning at Pom thalamocortical inputs in the neocortex. A. RAY*; N. J. AUDETTE; D. A. KULJIS; M. MATSUSHITA; M. P. BRUCHEZ; A. L. BARTH. *Carnegie Mellon Univ., Ctr. for the Neural Basis of Cognition, Univ. of Pittsburgh, Univ. of Washington, Carnegie Mellon Univ., Carnegie Mellon Univ.*

8:00 FF12 **667.13** Refinement of spatiotemporal cortical dynamics in mice learning to discriminate between two textures. A. GILAD*; F. HELMCHEN. *Univ. of Zurich.*

9:00 FF13 **667.14** Discrimination learning with tactile stimuli in rodents. N. PACCHIARINI*; R. C. HONEY; K. D. FOX. *Cardiff Univ., Cardiff Univ.*

10:00 FF14 **667.15** ▲ The spatio-temporal dynamics of bilateral whisking in a touch task: Effect of optogenetic activation of somatosensory and motor cortices. M. STAAB*; K. SEHARA; S. DOMINIAK; M. E. LARKUM; R. N. SACHDEV. *Humboldt Univ. of Berlin, Humboldt-Universität zu Berlin, Humboldt Univ. of Berlin, Charite-Berlin.*

11:00 FF15 **667.16** ▲ Rapid learning in a whisker-dependent sensory association task using homecage automated training. S. BERNHARD*; N. J. AUDETTE; A. T. HODGE; A. BARTH. *Carnegie Mellon Univ.*

8:00 FF16 **667.17** Sensory responsiveness of cortical neurons predicts their behavioral salience in an operant conditioning task. H. W. DALGLEISH*; A. M. PACKER; L. E. RUSSELL; M. HAUSSER. *Univ. Col. London.*

9:00 FF17 **667.18** ▲ Effect of sensory associative learning on parvalbumin neuron plasticity in the barrel cortex. E. PARK*; D. A. KULJIS; M. P. BRUCHEZ; A. L. BARTH. *Carnegie Mellon Univ., Carnegie Mellon Univ., Carnegie Mellon Univ., Carnegie Mellon Univ.*

10:00 GG1 **667.19** Sensorimotor specificity of decision-related activity in somatosensory cortex. E. FINKEL*; E. E. LUBIN; A. J. CHANG; J. Y. COHEN; D. H. O'CONNOR. *Johns Hopkins Sch. of Med.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

668. Touch and Proprioception

Theme D: Sensory Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 GG2 **668.01** The mechanically activated Piezo channels are sufficient for conferring specific modalities of mechanosensation. M. ZHANG*; B. XIAO. *Tsinghua Univ.*

9:00 GG3 **668.02** Limb sensory mapping: Toward a full map of the sensory innervation in larval zebrafish pectoral fins. K. HENDERSON*; M. E. HALE. *Univ. of Chicago.*

10:00 GG4 **668.03** Zebrafish mechanosensory afferents exhibit morphological and physiological regionalization along the body axis. H. R. KATZ*; E. MENELAOU; M. E. HALE. *Univ. of Chicago.*

11:00 GG5 **668.04** Describing sensory innervation and texture encoding in forelimbs using a fish fin model. A. R. HARDY*; M. E. HALE. *Univ. of Chicago.*

8:00 GG6 **668.05** ● Characterization of mechanoreceptors involving the sense of touch using a modified single fiber recording technique. M. SONEKATSU*; J. G. GU. *Univ. of Alabama At Birmingham.*

9:00 GG7 **668.06** Alterations in tactile sensation following lidocaine iontophoresis: A case of turning slow into fast? A. MARSHALL*; F. P. MCGLONE; A. MAKDANI; F. O'NEILL. *Salford Royal Hosp. Fndn. Trust, Liverpool John Moores Univ.*

10:00 GG8 **668.07** Chemical neurotransmission in slowly adapting touch receptors. B. U. HOFFMAN*; Y. BABA; E. V. MOSHAROV; S. WOO; D. D. ROYBAL; A. PATAPOUTIAN; D. L. SULZER; E. A. LUMPKIN. *Columbia Univ., Columbia Univ., Columbia Univ., Genomics Inst. of the Novartis Res. Fndn., Columbia Univ., HHMI/The Scripps Res. Inst., Columbia Univ. Physicians & Surgeons.*

11:00 GG9 **668.08** What can mechanosensory neurons tell the mouse brain about whisking? K. S. SEVERSON*; D. XU; H. YANG; D. H. O'CONNOR. *Johns Hopkins Univ. Sch. of Med., Univ. of California, Riverside.*

8:00 GG10 **668.09** Effect of surface texture on the encoding of touch, pressure, and shear in the glabrous skin of a Rhesus macaque. M. F. LIU*; J. E. WINBERRY; C. VERSTEEG; T. W. SIMPSON; E. R. OBY; A. D. DEGENHART; A. P. BATISTA; R. A. GAUNT; S. J. BENSMAIA; L. E. MILLER; D. J. WEBER. *Univ. of Pittsburgh, Univ. of Chicago, Northwestern Univ., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Chicago, Northwestern Univ.*

9:00 GG11 **668.10** Effect of noradrenaline on synaptic response facilitated by peripheral mechanical stimulation by an *in vivo* patch-clamp recording. M. SONOHATA*; A. DOI; T. YASAKA; M. MAWATARI; M. YOSHIMURA. *Saga Univ., Kumamoto Hlth. Sci. Univ., Kagoshima Univ., Nakamura Hosp.*

10:00 GG12 **668.11** Speed invariant coding of texture in somatosensory cortex. J. D. LIEBER*; K. H. LONG; S. J. BENSMAIA. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

11:00 GG13 **668.12** Fingertip skin deformation during the pre-loading phase of lifting. F. SCHILTZ*; A. BARREA; J. THONNARD; P. LEFEVRE. *Catholic Univ. of Louvain, Univ. Catholique de Louvain, Univ. Catholique de Louvain, ICTEAM and Inst. of Neuroscience, Univ. Catholique de Louvain.*

8:00 GG14 **668.13** A quantitative perceptual model for tactile roughness. C. TYMMS*; E. P. GARDNER; D. ZORIN. *New York Univ., New York Univ. Sch. of Med.*

9:00 GG15 **668.14** Adaptation of fingertip forces to 3D printed surfaces and loads during grasp and lift. P. RAGHAVAN*; S. BILALOGLU; C. TYMMS; M. CAUGHEY; J. STONE; A. SHALABI; R. NARASIMHAN; Y. LU; D. ZORIN; E. P. GARDNER. *New York Univ. Langone Med. Ctr., New York Univ. Sch. of Med., New York Univ., NYIT Col. of Osteo. Med., New York Univ., Cornell Univ., NYU Steinhardt, New York Univ., New York Univ. Sch. of Med.*

10:00 GG16 **668.15** Localizing sensorimotor cortex using vibro-tactile stimulation. T. XIE*; Z. WU; P. BRUNNER; X. SHENG; X. ZHU; G. SCHALK; L. CHEN. *Wadsworth Ctr., New York State Dept. of Hlth., Shanghai Jiao Tong Univ., Huashan Hospital, Fudan Univ., Albany Med. Col., State Univ. of New York.*

11:00 GG17 **668.16** The effects of remote subthreshold electrical stimulation on skin sensitivity in the lower extremity. E. PLATER*; R. PETERS; L. BENT. *Univ. of Guelph, Univ. of Calgary.*

8:00 HH1 **668.17** Study on brain imaging when using micro-cone to reduce pain using fmri. S. FUKASAWA*; H. EDA; S. IDE. *Grad. Sch. for GPI, ToyoResin, Grad. Sch. for GPI.*

9:00 HH2 **668.18** Characterizing breast sensation and its relationship with sexual arousal. K. H. LONG; A. K. SURESH; S. J. BENSMAIA*. *Univ. of Chicago, Univ. of Chicago.*

10:00 HH3 **668.19** Sensitivity of foot cutaneous mechanoreceptors is altered by ankle-joint posture. S. G. SMIITH*; S. BEAUDETTE; S. BROWN; L. BENT. *Univ. of Guelph, Univ. Guelph.*

11:00 HH4 **668.20** Direct effects of simulated knee movements on firing behavior of muscle spindles located within a one-joint ankle extensor. H. MAAS*; W. NOORT. *Vrije Univ. Amsterdam.*

8:00 HH5 **668.21** Neural substrates of a proprioceptive discrimination task. N. ELANGOVAN*; A. MAHNAN; J. KONCZAK. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

9:00 HH6 **668.22** An integrative neuromorphic approach to modeling of voluntary motor function. S. CHAKRAVARTHI RAJA*; F. J. VALERO-CUEVAS. *USC, USC, USC.*

POSTER

669. Visual Pathways: To and From the Cortex

Theme D: Sensory Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 HH7 **669.01** Pulvinar modulates contrast responses in visual cortex as a function of cortical hierarchy. N. CORTES*; B. O. SOUZA; C. F. CASANOVA. *Univ. De Montreal, École D'Optométrie, Univ. De Montréal, Univ. Montreal.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 HH8 **669.02** Corticogeniculate feedback enhances suppression of extraclassical surround in select LGN neuron subtypes. A. J. MURPHY*; J. M. HASSE; F. BRIGGS. *Univ. of Rochester, Univ. of Rochester, Univ. of Rochester, Univ. of Rochester, New York Univ., Univ. of Rochester.*

10:00 HH9 **669.03** Retinotopic mapping of the optic radiation tract. O. ABDULLAH*; K. DESIMONE; A. TEMUDO; K. SREENIVASAN. *New York Univ., New York Univ. Abu Dhabi.*

11:00 HH10 **669.04** Visual response properties of mouse TRN are consistent with its potential role for feedback-mediated surround suppression. G. BORN*; M. A. SPACEK; C. LAO; L. BUSSE. *LMU Munich, Grad. Sch. for Systemic Neurosciences, LMU Munich, Inst. of Physiological Genomics, Viral Vector Facility, LMU Munich, Bernstein Ctr. for Computat. Neurosci. Munich.*

8:00 HH11 **669.05** ▲ Laminar origins of the cortical projections to the lateral posterior thalamic nucleus in the mouse. E. FRIGON; R. TREMBLAY-LALIBERTÉ; S. STROMEI-CLÉROUX; D. BOIRE*. *UQTR.*

9:00 HH12 **669.06** Modulatory signals from the visual cortex to the pulvinar increase along the hierarchical order of cortical areas. R. ABBAS FARISHTA*; D. BOIRE; C. CASANOVA. *Univ. de Montréal, UQTR.*

8:00 DP06/HH13 **669.07** (Dynamic Poster) Visually evoked gamma oscillations organize into standing, traveling and rotational waves that are detected in visual and association cortices in the anesthetized mouse brain. A. AGGARWAL*; C. BRENNAN; B. SHORTAL; A. MCKINSTRY-WU; D. CONTRERAS; M. B. KELZ; A. PROEKT. *Univ. of Pennsylvania, Univ. of Pennsylvania, Perelman Sch. of Med., Univ. of Pennsylvania, Perelman Sch. of Med.*

11:00 HH14 **669.08** Neuronal mechanisms of motion detection underlying blindsight assessed with functional magnetic resonance imaging. M. W. MACLEAN*; V. HADID; L. LAZZOUNI; D. K. NGUYEN; F. LEPORE. *Univ. de Montréal, Ctr. de Recherche en Neuropsychologie et Cognition, Univ. de Montréal, Univ. de Montréal, Ctr. Hospitalier de l'Université de Montréal.*

8:00 HH15 **669.09** The synaptic impact of directionally selective LGN neurons on primary visual cortex. Y. I. BERESHPOLOVA*; C. R. STOELZEL; J. ALONSO; H. A. SWADLOW. *Univ. of Connecticut, SUNY Optometry.*

9:00 HH16 **669.10** Monosynaptic rabies tracing reveals input-output connections between visual cortex and the lateral posterior nucleus of the thalamus. R. M. CASSIDY*; E. M. CALLAWAY. *The Salk Inst. for Biol. Studies.*

10:00 HH17 **669.11** Hypersensitivity of the parvocellular visual pathway in trait-anxious individuals. Y. YOU*; W. LI. *Florida State Univ., Florida State Univ.*

11:00 II1 **669.12** Effects of cortical feedback and behavioral state on naturalistic movie responses in mouse dLGN. M. A. SPACEK*; G. BORN; L. BUSSE. *LMU Munich, Grad. Sch. of Systemic Neurosciences, Bernstein Ctr. for Computat. Neurosci.*

8:00 II2 **669.13** Role of early visual experience in shaping binocularity in the thalamocortical pathway. C. HUH*; K. ABDELAAL; K. J. SALINAS; D. GU; J. ZEITOUN; D. X. FIGUEROA VELEZ; J. P. PEACH; C. FOWLKES; S. P. GANDHI. *Univ. of California Irvine, Univ. of California Irvine, Johns Hopkins Univ., Univ. of California Irvine.*

9:00 II3 **669.14** Modulation of binocular rivalry with monocular visual tetanization and non-invasive stimulation of the visual cortex. D. ABULEIL*; D. L. MCCULLOCH; B. THOMPSON. *Univ. of Waterloo.*

10:00 II4 **669.15** Monocular V1 neurons are sensitive to both eyes. K. DOUGHERTY*; M. A. COX; J. A. WESTERBERG; A. V. MAIER. *Vanderbilt Univ., Vanderbilt Univ.*

11:00 II5 **669.16** Optokinetic eye movements in mouse to stereoscopic motion. V. CHOI*; N. J. PRIEBE. *Univ. of Texas at Austin, Univ. Texas, Austin.*

8:00 II6 **669.17** Ocular dominance and homeostatic opponent cortical processing. D. Y. TS'O*; R. MILLER. *SUNY - Upstate Med. Univ.*

9:00 II7 **669.18** Interocular normalization in monkey primary visual cortex. A. REYNAUD*; S. ROUX; S. CHEMLA; F. CHAVANE; R. HESS. *McGill Univ., CNRS.*

10:00 II8 **669.19** Novel evidence of high resolution and high field diffusion mri reveal a primate lgn-lgn connection. L. DAI; D. PRITCHETT; A. VAN HOEK; J. R. KORENBERG. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

POSTER

670. Observing and Altering Basal Ganglia Activity From Mouse to Human

Theme E: Motor Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 II9 **670.01** ▲ Methylphenidate and fluoxetine improve approach-avoidance task in non-human primate: A behavioral study associated to PET imaging. M. MILLOT; E. MARTINEZ; G. DRUI; Y. SAGA; E. METEREAU; P. N. TOBLER; V. SGAMBATO*; L. TREMBLAY. *Neurosci. Cognitive Ctr. - CNRS UMR 5229, CNRS UMR5229 - Ctr. of Cognitive Neurosci., Ctr. de Neurosci. Cognitive, Univ. of Zurich, CNRS & Univ. Lyon 1.*

9:00 II10 **670.02** A rodent two-hit model of task-specific dystonia. K. KERNODLE*; W. T. DAUER; D. K. LEVENTHAL. *Univ. of Michigan, Univ. of Michigan, VA Ann Arbor Hlth. Syst.*

10:00 II11 **670.03** Single unit activity patterns of globus pallidus in patients with cervical and generalized dystonia. A. SEDOV*; S. USOVA; A. TOMSKIY; V. POPOV; A. GAMALEYA; R. MEDVEDNIK; A. G. SHAIKH. *Semenov Inst. of Chem. Physics, Russian Aca, Burdenko Res. Ctr. of Neurosurg., Case Western Reserve.*

11:00 II12 **670.04** Temporal variability in the firing of external globus pallidus neurons in monkeys. A. GALVAN*; X. HU; A. DEVERGNAS; T. WICHMANN. *Emory Univ.*

8:00 II13 **670.05** The contribution of the globus pallidus and the entopeduncular nucleus to the preparation and execution of voluntary gait modifications in the cat. Y. MULLIE*; I. ARTO; J. A. LEONARD; T. DREW. *Univ. de Montreal.*

9:00 II14 **670.06** Neuronal correlates of beat-based timing in the primate striatum. M. KAMEDA*; S. OHMAE; M. TANAKA. *Hokkaido Univ., Baylor Col. of Med.*

10:00 II15 **670.07** Spectral-spatial separation of motor conflict and stopping in the basal ganglia-cortical circuits. J. CHOI*; M. MALEKMOHAMMADI; S. NIKETEGHAD; A. R. ARON; U. RUTISHAUSER; N. POURATIAN. *UCLA, UCLA, UCSD, Cedars-Sinai Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 II16 **670.08** Coupling between cortical gamma and basal ganglia firing activity during selective upper limb control. P. FISCHER*; W. J. LIPSKI; W. NEUMANN; P. FRIES; P. BROWN; M. RICHARDSON. *Univ. of Oxford, MRC Brain Network Dynamics Unit, Univ. of Oxford, Univ. of Pittsburgh, Dept. of Neurolog. Surgery, Univ. of Pittsburgh Sch. of Med., Charité Univ. Med. Berlin, Ernst Struengmann Inst. (ESI), Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh Brain Inst.*

8:00 II17 **670.09** Electrophysiological correlate of Upper and Lower limb in the human basal ganglia. G. TINKHAUSER*; S. SHAH; K. PETERMAN; P. FISCHER; T. NYGYUEN; I. DEBOVE; A. NOWACKI; F. TORRECILLOS; S. KHAWALDEH; A. POGOSYAN; H. TAN; M. SCHUEPBACH; C. POLLO; P. BROWN. *MRC Brain Network Dynamics Unit, Dept. of Neurol., Dept. of Neurosurg.*

9:00 II18 **670.10** Magnetothermal deep brain stimulation in freely moving mice. S. HESCHAM*; P. CHIANG; J. MOON; M. CHRISTIANSEN; Y. TEMEL; P. ANIKEEVA. *Maastricht Univ., MIT, ETH Zürich.*

10:00 JJ1 **670.11** Timing and amplitude of beta bursts in the subthalamic nucleus predict single-trial motor performance. F. TORRECILLOS*; G. TINKHAUSER; P. FISCHER; A. GREEN; T. AZIZ; T. FOLTYNIE; P. LIMOUSIN; L. ZRINZO; K. ASHKAN; P. BROWN; H. TAN. *Nuffield Dept. of Clin. Neurosciences, MRC Brain Network Dynamics Unit, Bern Univ. Hosp. and Univ. of Bern, Sobell Dept. of Motor Neurosci. and Movement Disorders, King's Col. Hosp.*

11:00 JJ2 **670.12** Optogenetic stimulation of thalamocortical projections alters cortical phase-amplitude coupling. M. CAIOLA*; A. GALVAN; T. WICHMANN. *Emory Univ., Emory Univ., Emory Univ. Sch. Med.*

8:00 JJ3 **670.13** Corticothalamic functional connectivity in healthy and parkinsonian (MPTP-treated) nonhuman primates: An optogenetic study. D. ALBAUGH*; Y. SMITH; A. GALVAN; T. WICHMANN. *Emory Univ., Yerkes Res. Ctr., Udall Ctr. Excel. For Parkinson's Dis. and Dept. of Neurol., Emory Univ., Emory Univ. Sch. Med.*

9:00 JJ4 **670.14** The chemogenetic suppression of the primate subthalamic nucleus impairs voluntary movements by disturbing the firing pattern in the internal segment of the globus pallidus. T. HASEGAWA*; S. CHIKEN; K. KOBAYASHI; A. NAMBU. *Natl. Inst. for Physiological Sci., SOKENDAI, Natl. Inst. for Physiological Sci.*

10:00 JJ5 **670.15** The impact of glutamatergic and GABAergic inputs to the subthalamic nucleus activity in monkey. Z. POLYAKOVA*; N. HATANAKA; S. CHIKEN; H. KITA; A. NAMBU. *Natl. Inst. Physiol Sci., SOKENDAI, Sokendai, Univ. Tennessee Hlth. Sci. Cent.*

11:00 JJ6 **670.16** ● Influence of dbs lead model and brain shift on electrode position and bending of proximal lead: A high-resolution postoperative ct study. J. NIEDERER*; R. PATRIAT; R. R. SHAMIR; D. P. DARROW; M. C. PARK; L. E. SCHROCK; N. HAREL. *Univ. of Minnesota Twin Cities, Surgical Information Sciences, Inc., Univ. of Minnesota, Univ. of Minnesota.*

8:00 JJ7 **670.17** Deep brain stimulation at the interface of ventroanterior and ventrolateral nuclei of the thalamus as a novel effective neuromodulatory approach for Parkinson's disease. H. R. TUCKER*; E. MAHONEY; A. CHETRI; G. KIM; A. AUDIL; B. MOOLICK; E. MOLHO; J. G. PILITSIS; D. SHIN. *Albany Med. Col., Albany Med. Col.*

9:00 JJ8 **670.18** Effects of dopaminergic medication on choice bias in Parkinson's disease. A. J. VAN NULAND*; R. C. HELMICH; I. TONI; R. COOLS; H. E. M. DEN OUDEN. *Radboud Univ., Radboud Univ. Med. Ctr.*

10:00 KK1 **670.19** Aberrant striatal activity in parkinsonism and levodopa-induced dyskinesia. M. RYAN*; C. BAIR-MARSHALL; A. B. NELSON. *UC San Francisco, UCSF.*

8:00 DP07/KK2 **670.20** (Dynamic Poster) Massively sparse coding of dynamics in basal ganglia. T. D. SANGER*. *USC.*

8:00 KK3 **670.21** Identifying gait dysfunction in Parkinson's disease using local field potentials. C. YEH; P. FISCHER; C. CHEN; H. TAN*; P. BROWN. *Univ. of Oxford, Chang Gung Mem. Hosp.*

9:00 KK4 **670.22** Motor synchronization to rhythmic auditory stimulation (RAS) attenuates dopamine responses in the ventral striatum in young healthy adults. Y. KOSHIMORI*; A. STRAFELLA; M. VALLI; V. SHARMA; S. CHO; S. HOULE; M. THAUT. *Univ. of Toronto, Ctr. for Addiction and Mental Hlth., Univ. of Toronto, Toronto Western Hosp., Krembil Res. Inst.*

10:00 KK5 **670.23** Human spike recordings acquired in the context of an open-source, intraoperative paradigm. J. A. THOMPSON*; G. FELSEN; S. OJEMANN; A. ABOSCH; A. TEKRIWAL. *Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med.*

POSTER

671. Voluntary Movements: Finger and Grasp Control: Normal Human Behavior

Theme E: Motor Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 KK6 **671.01** Control of dynamic force tasks: Low-frequency oscillations in force and modulation of muscle activity. S. PARK*; C. KIM; B. YACOUBI KEYHANI; E. A. CHRISTOU. *Univ. of Florida.*

9:00 KK7 **671.02** Influence of transcranial static magnetic field stimulation over primary motor cortex on pinching force control. K. NAKAGAWA*; K. NAKAZAWA. *The Univ. of Tokyo, Japan Society for the Promotion of Sci., Toronto Rehabil. Inst.*

10:00 KK8 **671.03** Motor cortical excitability was modulated after strong voluntary contraction. W. DAI*; K. KATO; J. ZHANG; K. KANOSUE. *Waseda Univ., Fuculty of Sport Sciences, Waseda Univ., Sch. of kinesiology, Shanghai Univ. of Sport.*

11:00 KK9 **671.04** Rapid learning and unlearning of sensory delays in self-touch. K. KILTENI*; C. HOUBORG; H. EHRSSON. *Karolinska Institutet.*

8:00 KK10 **671.05** Action observation suppresses I-waves in a muscle specific manner. A. CRETU*; N. WENDEROTH. *Neural Control of Movement Lab., Neural Control of Movement Lab, ETH Zurich.*

9:00 KK11 **671.06** Modulation of capacity for motor learning by transcranial alternating current stimulation. H. SUGATA*; K. YAGI; S. YAZAWA; Y. NAGASE; K. TSURUTA; T. IKEDA; K. MATSUSHITA; K. KAWAKAMI. *Oita Univ., Junwakai Mem. Hosp., Junwakai Mem. Hosp., Junwakai Mem. Hosp., Kanazawa Univ., Gifu Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 KK12 **671.07** ▲ Digit force magnitude and inter-digit force coordination effects on performance of a complex isometric pinch force tracking task. J. VINES; M. SCHLEICHER; R. ADLIS; D. LEE; C. HILTON; R. T. EAKIN; L. D. ABRAHAM*. *Univ. of Texas at Austin, The Univ. of Texas at Austin, The Univ. of Texas at Austin.*

11:00 LL1 **671.08** Kinematic fluctuation contributes to unintentional error in writing movements. C. YAMADA*; Y. ITAGUCHI; K. FUKUZAWA. *Waseda Univesity, Keio Univ., Waseda Univ.*

8:00 LL2 **671.09** Ipsilateral corticospinal excitability and contralateral corticomuscular drive are related phenomena. C. M. LAINE*; N. KO; F. J. VALERO-CUEVAS; B. E. FISHER. *USC, USC.*

9:00 LL3 **671.10** An fNIRS study of sensorimotor cortical hemodynamics in hand motor tasks coupled with pneumotactile stimulation at different traverse velocities. M. HOZAN*; J. GREENWOOD; M. K. SULLIVAN; S. M. BARLOW. *Univ. of Nebraska-Lincoln, Univ. of Nebraska-Lincoln, Univ. of Nebraska-Lincoln.*

10:00 LL4 **671.11** Reconsolidation task performed with untrained limb enhances motor skill acquisition. T. GYODA*; K. ISHIDA; T. WATANABE; I. NOJIMA. *Nagoya Univ.*

11:00 LL5 **671.12** Multimodal reference frame during rhythmic arm movements in different body orientations with respect to gravity. L. OPSOMER*; F. CREVECOEUR; J. MCINTYRE; J. THONNARD; P. LEFÈVRE. *Univ. Catholique De Louvain, ICTEAM, Univ. Catholique de Louvain, CNRS, Univ. Paris Descartes, Hlth. Division, Tecnalia Res. & Innovation, Ikerbasque Sci. Fndn.*

8:00 LL6 **671.13** Enhancement of intermuscular coherences in human upper limb during natural manipulation task. H. OHTSUKA*; S. SUZUKI; S. IRIE; R. ARIYASU; T. KOMIYAMA; T. NAKAJIMA. *Kyorin Unversity Sch. of Med., Heisei Ougi Hosp, Hlth. Sci. Univ. of Hokkaido, Chiba Univ.*

9:00 LL7 **671.14** MEG correlates of fine motor control. P. FERRARI*; C. HAN; L. D. ABRAHAM; M. H. MCMANIS; D. M. SCHNYER; J. S. SULZER. *Univ. of Texas At Austin, Univ. of Texas At Austin, Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas, Austin, Univ. of Texas At Austin.*

10:00 LL8 **671.15** Mismatch between expected and observed movements: Uncertainty alters motor resonance. G. RENS*; M. DAVARE. *KU Leuven.*

11:00 LL9 **671.16** Decoding muscle activation patterns from kinematics using a detailed musculoskeletal model with active muscle stiffness. A. SOBINOV*; M. BOOTS; V. GRITSENKO; M. MANSOURI; C. BERINGER; M. BONINGER; L. E. FISHER; J. L. COLLINGER; R. A. GAUNT; S. YAKOVENKO. *West Virginia Univ., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, West Virginia Univ.*

8:00 LL10 **671.17** Characterizing motor cortex interhemispheric inhibition and relationships with manual dexterity in older adults. M. R. BORICH*; S. L. WOLF. *Emory Univ., Emory Univ. Sch. Med.*

9:00 LL11 **671.18** Effects of TMS over the anterior intraparietal area on force and perceptual estimates in the size-weight illusion. V. VAN POLANEN; G. BUCKINGHAM; M. DAVARE*. *KU Leuven, Univ. of Exeter, Inst. of Neurol., KU Leuven.*

10:00 LL12 **671.19** Motor unit coherence indicates changes in corticospinal influence during different hand motor tasks. C. KIM; M. A. PEREZ; L. M. MCPHERSON*. *Florida Intl. Univ., Univ. of Miami.*

11:00 LL13 **671.20** High-dimensional control of volitional hand movements. Y. YAN; D. D. MOORE; J. M. GOODMAN; B. P. DELHAYE*; S. J. BENSMAIA. *Univ. of Chicago.*

8:00 LL14 **671.21** The perception of the angle of a finger joint is independent of load. B. PRENDERGAST*; J. M. GOODMAN; M. BOYARINOVA; J. E. WINBERRY; S. J. BENSMAIA. *Univ. of Chicago.*

POSTER

672. Brain-Machine: Technical Development and Theory

Theme E: Motor Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 MM1 **672.01** Modeling functional dependencies in high-dimensional spike-field activity. R. BIGHAMIAN*; Y. WONG; B. PESARAN; M. M. SHANECHI. *USC, Monash Univ., New York Univ. Ctr. for Neural Sci., USC.*

9:00 MM2 **672.02** ▲ Learning dynamic neural encoding models with behaviorally-relevant latent states. O. G. SANI*; M. M. SHANECHI. *USC.*

10:00 MM3 **672.03** Learning causal graphs in spike-field multiscale network encoding models. C. WANG*; M. M. SHANECHI. *USC.*

11:00 MM4 **672.04** Identifying multiscale hidden dynamics to decode movement. H. ABBASPOURAZAD*; Y. WONG; B. PESARAN; M. M. SHANECHI. *USC, Monash Univ., New York Univ. Ctr. for Neural Sci.*

8:00 MM5 **672.05** Approaching a 24/7 at-home Braingate BCI system through design thinking, user-centered design and agile development. J. R. BREA*; B. E. SHANAHAN; J. SAAB; T. HOSMAN; J. D. SIMERAL; L. R. HOCHBERG. *Brown Univ., Brown Univ., VA RR&D Ctr. for Neurorestoration and Neurotechnology, Massachusetts Gen. Hosp., Harvard Med. Sch.*

9:00 MM6 **672.06** Closed-loop BCI simulation through replay of recorded neural signals. J. N. KELEMEN*; D. MILSTEIN; L. R. HOCHBERG; D. M. BRANDMAN; J. D. SIMERAL. *Massachusetts Gen. Hosp., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Harvard Med. Sch., Brown Univ.*

10:00 MM7 **672.07** Comparison of decoding accuracy: Retrospectively trained recurrent neural network and Kalman vs the same-day Kalman decoder. T. HOSMAN*; M. VILELA; J. SAAB; C. D. HEELAN; D. BRANDMAN; J. D. SIMERAL; L. R. HOCHBERG. *Brown Univ., Brown Univ., Brown Univ., Connexon Systems, Brown Univ., Dept. of VA Med. Ctr., Massachusetts Gen. Hosp., Harvard Med. Sch.*

11:00 MM8 **672.08** Processing thousands of full-broadband neural channels in real-time on a mobile platform. C. D. HEELAN*; B. E. SHANAHAN; L. R. HOCHBERG; A. V. NURMIKKO; J. D. SIMERAL. *Brown Univ., Connexon Systems, Brown Univ., Dept. of VA Med. Ctr., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ.*

8:00 MM9 **672.09** ● ▲ Implantable wireless brain computer interface. J. NAKAHARA*; V. RANGANATHAN; J. SMITH; C. T. MORITZ. *The Univ. of Washington, The Univ. of Washington, Univ. of Washington.*

Wed. AM

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 MM10 **672.10** A 'Divide-and-Conquer' strategy to avoid overfitting when decoding brain state from field potentials for closed-loop control applications. D. M. TAYLOR*; T. JOHNSON; V. GOPALAKRISH; E. TUNC; S. MORALLE; S. RUSS. *Cleveland Clin., Cleveland VAMC, Case Western Reserve Univ.*

10:00 MM11 **672.11** EEG-based brain-computer interface using deep neural network for point by point decoding: A pilot study. Y. FUJIWARA*; S. HONDA; J. USHIBA. *Grad. Sch. of Sci. and Tech., Keio Univ., SDM Res. Institute, Keio Univ., Dept. of Biosci. and Informatics, Fac. of Sci. and Technology, Keio Univ., Keio Inst. of Pure and Applied Sci. (KiPAS).*

11:00 MM12 **672.12** Decode predictive cortical activity for dynamic brain-machine interface. H. CUI*; C. LI; Y. ZHANG; T. WANG; X. XU; Q. WANG. *Inst. of Neuroscience, CAS.*

8:00 MM13 **672.13** Decoding and modeling parietal cortex activity to probe representational drift. A. LOBACK*; D. RAMAN; T. O'LEARY. *Univ. of Cambridge.*

9:00 MM14 **672.14** Brain interchange: A novel brain computer interface system. J. RICKERT*; M. SCHUETTLER; C. STOLLE; F. WENZEL; N. GRIGAT; F. KOHLER; M. OBERT; S. RIEGER; T. STIEGLITZ; T. BALL. *CorTec GmbH, BrainLinks - BrainTools, Univ. of Freiburg, Med. Ctr. - Univ. of Freiburg.*

10:00 NN1 **672.15** Neuromorphic computing algorithms and hardware for low-power neural decoding and brain-machine interfaces. D. G. CLARK*; J. A. LIVEZEY; E. F. CHANG; K. E. BOUCHARD. *Lawrence Berkeley Natl. Lab., UCSF.*

11:00 NN2 **672.16** A scalable closed-loop network of wireless implants with up to 128 channels of recording and stimulation. C. A. SEGURA*; J. G. HELLMAN; A. CZARNECKI; A. J. MIRANDA; M. C. MURESAN; E. H. GREENWALD; C. K. BJUNE; J. R. LACHAPELLE; J. R. BURNS, IV; B. D. NUGENT; D. J. GUYON; W. T. UY; C. J. WARDMAN; G. D. GRANT; T. S. SRIRAM; A. G. STODDARD; A. M. ZORN; J. J. WHEELER. *Draper.*

8:00 NN3 **672.17** ● A backscatter communication technique for distributed microimplantable wireless neural interfaces and implementation with neural dust. D. K. PIECH*; J. M. CARMENA; M. M. MAHARBIZ. *Univ. of California Berkeley, UC Berkeley, UC Berkeley, UC Berkeley, UC Berkeley.*

9:00 NN4 **672.18** Technological challenges for large channel count, high bandwidth human brain-interface systems. C. CLEMENT*; T. L. LAABS; J. P. DONOGHUE. *Wyss Ctr. for Bio and Neuro Engin.*

10:00 NN5 **672.19** A personalized closed-loop system for control of EEG under medically-induced coma. Y. YANG*; J. T. LEE; J. A. GUIDERA; K. Y. VLASOV; J. PEI; E. N. BROWN; K. SOLT; M. M. SHANECHI. *USC, MIT, Massachusetts Gen. Hosp., Harvard Med. Sch., MIT, USC.*

11:00 NN6 **672.20** ● A low-invasive microcoil integrated neural probe for deep brain magnetic stimulation. J. KIM*; H. PARK; Y. HUH; J. CHO. *KIST Korea Inst. of Sci. & Tech., Yonsei Univ., Catholic Kwandong Univ.*

8:00 NN7 **672.21** The possibility of low TMS field for neuronal stimulation. H. BAGHERZADEH*; Q. MENG; X. DU; L. HONG; F. CHOA. *Univ. of Maryland, Baltimore County, university of Maryland school of Medicine,MPRC.*

9:00 NN8 **672.22** Frequency specific effects of direct intracranial electrical stimulation in the human brain. S. BICKEL*; J. L. HERRERO; E. M. YEAGLE; M. R. MERCIER; S. KHUVIS; P. LAKATOS; A. D. MEHTA. *Hofstra Northwell Sch. of Med., Hofstra Northwell Sch. of Med., Feinstein Inst. for Med. Res., CNRS, Nathan Kline Inst.*

10:00 NN9 **672.23** Real-time convolutional compressed sensing enables online spike recovery from high-density electrode recordings with inherent overlap resolution. S. WEINGÄRTNER*; X. CHEN; T. MOORE. *Stanford Univ. and Howard Hughes Med. Inst.*

POSTER

673. Posture and Gait: Reflexes and Reflex Modulation

Theme E: Motor Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 NN10 **673.01** Role of nucleus reticularis gigantocellularis in control of posture. P. V. ZELENIN; M. D. G. VEMULA; V. F. LYALKA; T. DELIAGINA*. *Karolinska Inst.*

9:00 NN11 **673.02** ▲ Cutaneous reflexes from the hand are influenced by the reliability of a light touch reference during standing. A. J. MCMAHON; H. HACKETT; J. KRUTZ; J. E. MISIASZEK*. *Univ. of Alberta, Fac. of Rehabil. Med., Neurosci. and Mental Hlth. Inst.*

10:00 NN12 **673.03** The nociceptive withdrawal response in intact, unanesthetized rats preserves postural stability over accuracy. C. L. CLELAND*; Y. KIM; K. M. SAMMONS; G. VERDI; C. A. CHRZAN; K. SEAMON. *James Madison Univ.*

11:00 NN13 **673.04** Synaptic coupling of median nerve cutaneous afferents with ankle muscle motor pools. A. TOTH*; K. K. FENRICH; K. E. JONES; J. E. MISIASZEK. *Univ. of Alberta, Univ. of Alberta, Univ. Alberta.*

8:00 NN14 **673.05** Revealing abnormal lower-limb reflex couplings in post-stroke gait using H-reflex stimulation. J. S. SULZER*; T. AKBAS; K. MANELLA; R. K. LEE. *Univ. of Texas at Austin, Univ. of St. Augustine for Hlth. Sci., St. David's Med. Ctr.*

9:00 NN15 **673.06** ● Electrophysiological window into the neuromodulation of the functional dynamics of spinal sensorimotor networks. G. TACCOLA*; S. CULACLII; P. GAD; H. ZHONG; N. KOKIKIAN; R. M. ICHIYAMA; W. LIU; V. EDGERTON. *SISSA, UCLA, UCLA, UCLA, Univ. Leeds, UCLA.*

10:00 NN16 **673.07** Inhibitory pathway specifically modulated in the contralateral leg during walking. O. D. LAFLAMME*; T. AKAY. *Dalhousie Univ.*

11:00 OO1 **673.08** ▲ Stochastic resonance effects in mechanically-evoked cutaneous reflex responses. T. SHARMA*; R. M. PETERS; L. R. BENT. *Univ. of Guelph, Univ. of Calgary.*

8:00 OO2 **673.09** Whole body vibration: Effects on soleus and flexor carpi radialis h-reflexes in healthy subjects. M. M. SABBAHI*; F. OVAK BITTAR. *Texas Electrophysiology and Physical Therapy, Texas Physical Therapy and Rehab.*

9:00 OO3 **673.10** Influence of inter-stimulus intervals on transcranial magnetic stimulation-conditioning of soleus H-reflexes. J. XU*; A. LOPEZ; M. HOQUE; M. BORICH; T. KESAR. *Emory Univ. Sch. of Med.*

10:00 OO4 **673.11** Evidence for separate descending control of clasp-knife inhibition and force feedback in the feline spinal cord. E. KAJTAZ*; M. A. LYLE; K. A. CHEFFER; L. R. MONTGOMERY; D. R. HOWLAND; T. NICHOLS. *Georgia Inst. of Technol., Emory Univ., Kentucky Spinal Cord Injury Res. Ctr., Univ. of Louisville, Robley Rex VA Med. Ctr., Univ. of Louisville, Univ. of Louisville.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
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* Indicates abstract's submitting author

11:00 OO5 **673.12** Impact of spinal cord injury on adaptations in stance during down-slope walking. L. R. MONTGOMERY*; K. A. CHEFFER; E. KAJTAZ; M. A. LYLE; T. NICHOLS; D. R. HOWLAND. *Univ. of Louisville, Univ. of Louisville, Robly Rex Veterans Affairs Med. Ctr., Univ. of Louisville, Georgia Inst. of Technol., Emory Univ.*

8:00 OO6 **673.13** Cutaneous reflex modulation in arm muscles during self-triggered and prolonged stimulation. Y. SUN*; G. PEARCEY; E. ZEHR. *Univ. of Victoria.*

9:00 OO7 **673.14** The arms and legs work better when used together: Amplification of rhythmic activity-dependent suppression of soleus Hoffmann reflexes. G. E. PEARCEY*; E. ZEHR. *Univ. of Victoria, Rehab Neurosci. Lab.*

10:00 OO8 **673.15** Neurophysiological and performance changes during long-term Yuishinkai martial arts training: A pilot study. A. HARRISON*; P. ZEHR; H. MUSTAFA; Y. SUN; G. PEARCEY. *Univ. of Victoria.*

11:00 OO9 **673.16** Transspinal stimulation during treadmill walking alters soleus H-reflex excitability in healthy humans. L. M. MURRAY*; J. LI; M. A. ISLAM; T. S. PULVERENTI; M. KNIKOU. *CUNY Col. of Staten Island, Staten Island Tech. High Sch., City Univ. of New York, City Univ. of New York.*

8:00 OO10 **673.17** Transspinal stimulation affects muscle activation patterns during treadmill walking in healthy humans. M. A. ISLAM*; J. LI; T. S. PULVERENTI; L. M. MURRAY; M. KNIKOU. *City Univ. of New York, Staten Island Tech. High Sch., CUNY Col. of Staten Island, City Univ. of New York.*

9:00 OO11 **673.18** Spinal neural interactions during transspinal and afferent stimulation in humans. M. KNIKOU*; L. M. MURRAY; T. S. PULVERENTI; M. ISLAM. *City Univ. of New York, CUNY Col. of Staten Island, City Univ. of New York.*

POSTER

674. Motor Control and Modulation of Respiration

Theme E: Motor Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 OO12 **674.01** Novel zebrafish models to understand respiratory depression and analgesia by opioids and to identify safe opioid pain therapies. S. ZAIG; C. DA SILVEIRA SCARPELLINI; X. WEN; G. MONTANDON*. *St. Michael's Hosp., Univ. of Toronto, St. Michael's Hosp.*

9:00 OO13 **674.02** AAV-mediated conditional expression of Cyto-111 in primary neuron cultures: Towards understanding idiotypic toxicity and therapeutic efficacy. S. WOLFE*; P. BODNER; E. VAZQUEZ-CINTRON; K. ICHTCHENKO; C. SHOEMAKER; M. EISEN; P. MCNUTT. *USAMRICD, New York Univ., Tufts Univ.*

10:00 OO14 **674.03** Withdrawn

11:00 OO15 **674.04** The regulator of G-protein signaling 4 modulates opioid-induced respiratory depression. J. DANAF*; H. LIU; R. HORNER; G. MONTANDON; C. DA SILVEIRA SCARPALLINI; W. WANG. *St. Michael's Hosp., Dept. of Medicine, Univ. of Toronto, Dept. of Physiology, Univ. of Toronto.*

8:00 OO16 **674.05** Sympathetic overactivity after chronic intermittent hypoxia has different mechanisms in male and female rats. W. H. BARNETT*; G. M. P. R. SOUZA; B. H. MACHADO; Y. I. MOLKOV. *Georgia State Univ., Univ. of São Paulo.*

9:00 OO17 **674.06** cAMP-dependent modulation of I_h underlies the $P2Y_1$receptor-mediated excitation of the preBötzinger complex inspiratory network *in vitro.* Y. ZHANG*; T. A. JAIB; A. V. GOURINE; S. KASPAROV; T. ALVARES; F. D. GREGORY. *Univ. of Alberta, Univ. Col. London, Univ. Bristol, Univ. of Alberta, Univ. of Alberta.*

10:00 OO18 **674.07** ● Intra-neuronal delivery of a single chain antibody as a post-symptomatic treatment of botulism. E. VAZQUEZ-CINTRON*; J. CONNOLLY; L. TENEZACA; M. EISEN; C. ONDECK; D. L. NGUYEN; P. M. MCNUTT; K. ICHTCHENKO; M. MANGKHALAKHILI. *US Army Med. Res. Inst., The United States Army Med. Res. Inst. of Chem. Def., Cytodel, Inc, USAMRICD, USAMRICD, USAMRICD, USAMRICD, NYU Sch. of Med., USAMRICD.*

11:00 PP1 **674.08** Effects of bilateral suprachiasmatic nucleus lesion on circadian rhythms of baseline breathing and hypercapnic ventilatory responses in mice. B. S. PURNELL*; G. F. BUCHANAN. *Univ. of Iowa, Univ. of Iowa.*

8:00 PP2 **674.09** *In vivo* implementation of a neuromorphic controller for ventilatory pacing. R. SIU*; J. J. ABBAS; B. K. HILLEN; R. JUNG. *Florida Intl. Univ., Arizona State Univ.*

9:00 PP3 **674.10** Effects of serotonin depletion on respiratory and cardiac responses to the 5-HT agonist 8-OH-DPAT and on brain tryptophan hydroxylase immunoreactivity. J. L. BUTLER; N. MICHALAK; B. A. HEIDENREICH*. *Illinois State Univ., Illinois State Univ.*

10:00 PP4 **674.11** Leptin regulates breathing by potentiating a background conductance in LepRb-expressing galaninergic neurons in the Nucleus of the Solitary Tract (NTS). J. DO*; L. FLOREANI; G. SEKERKOVA; D. R. MCCRIMMON; M. MARTINA. *Northwestern Univ., SISSA.*

11:00 PP5 **674.12** Automated analysis of breathing using BreathMetrics: A respiratory signal processing toolbox. T. J. NOTO*. *Northwestern Univ.*

8:00 PP6 **674.13** ● Etonogestrel: Effect on ventilation in adult female rats. J. SAINI*; L. DEHOOG; S. PAGLIARDINI. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

9:00 PP7 **674.14** Mitochondrial density and morphology in phrenic motor neurons is size-dependent. S. RANA*; M. J. FOGARTY; C. B. MANTILLA; G. C. SIECK. *Mayo Clin., Mayo Clin., Mayo Clin.*

10:00 PP8 **674.15** Glutamatergic synaptic input to phrenic motor neurons depends on motor neuron size. G. C. SIECK*; S. RANA; W. ZHAN; C. B. MANTILLA. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*

11:00 PP9 **674.16** Cervical spinal hemisection induced changes in phrenic motor neuron TrkB mRNA expression depend on motor neuron size. C. B. MANTILLA*; S. RANA; W. ZHAN; G. C. SIECK. *Mayo Clin., Mayo Clin.*

8:00 PP10 **674.17** Diaphragm neuromuscular transmission failure in aged rats. M. J. FOGARTY*; G. C. SIECK; C. B. MANTILLA. *Mayo Clin., Mayo Clin., Mayo Clin.*

Wed. AM

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

675. Motor Neurons and Muscle: Motorneuron-Muscle Interface and Muscle Physiology/Biochemistry

Theme E: Motor Systems

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 PP11 **675.01** Optineurin inhibits C2C12 myogenesis but is not associated with TWEAK-related muscle atrophy. Y. NAGANO*; M. ARAKI; K. ISHIKAWA; T. SHISHIDO; T. KURASHIGE; T. TAKAHASHI; H. KAWAKAMI; M. MATSUMOTO; H. MARUYAMA. *Hiroshima Univ., NHO Kure Med. Ctr., Hiroshima Univ., Sakai City Med. Ctr.*

9:00 PP12 **675.02** Effect of age on axonal regeneration following peripheral nerve injury: Assessment of myelin content by magnetic resonance imaging (MRI) and post-mortem analysis. E. GIORGETTI*; M. OBRECHT; M. PANESAR; M. RONCO; C. LAMBERT; N. ACCART; M. NASH; M. BIDINOSTI; N. BECKMANN. *Novartis Inst. For Biomed. Res., Novartis Inst. For Biomed. Res.*

8:00 DP08/PP13 **675.03** (Dynamic Poster) Unique functional digit representation in human motor cortex across columns and layers. L. HUBER*; E. FINN; D. GLEN; R. REYNOLDS; B. POSER; P. BANDETTINI. *Natl. Inst. of Hlth. Office of Intramural, NIMH, NIH, MBIC, NIH.*

11:00 PP14 **675.04** Neuroanatomical and functional substrates associated with a single muscle representation. A. M. ALBISHI*; B. FISHER; J. KUTCH. *USC.*

8:00 PP15 **675.05** Evidence of neuromuscular junction remodelling during periods of prolonged muscle inactivity in amphibians. D. GE*; P. G. NOAKES; N. A. LAVIDIS. *The Univ. of Queensland, Univ. of Queensland, The Univ. of Queensland.*

9:00 PP16 **675.06** Modeling the action potential-driven force production in fast skeletal muscles. H. KIM*; T. G. SANDERCOCK; C. HECKMAN. *Daegu Gyeongbuk Inst. of Sci. & Technol., Northwestern Univ.*

10:00 PP17 **675.07** Role of fez1 in motor neuron function and associated locomotion function. Z. WANG*; V. J. T. KOK; J. J. E. CHUA; K. LIM. *Natl. Neurosci. Inst., Natl. Univ. of Singapore.*

11:00 PP18 **675.08** An integrated, mathematical model of excitation-contraction coupling and calcium-activated mitochondrial metabolism in skeletal muscle fibers. S. SENNEFF*; M. LOWERY. *Univ. Col. Dublin.*

8:00 PP19 **675.09** *In vivo* expression of a designer ubiquitinase delays muscle paralysis and accelerates muscle recovery following botulinum toxin A intoxication. B. M. WINNER*; E. VASQUES-CINTRON; C. PHUNG; A. BRADFORD; C. ONDECK; P. BODNER; P. MCNUTT. *USAMRICD, Univ. of New Hampshire.*

9:00 PP20 **675.10** Spinal electromagnetic stimulation results in frequency dependent depression with healthy adults. S. A. SISTO*; H. A. PETROSYAN; C. ZOU; C. LEONE; A. TESFA; M. FAHMY; M. ZAIDI; V. L. ARVANIAN. *Univ. at Buffalo, Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Northport Veterans Affairs Med. Ctr., SUNY Stony Brook Sch. of Med., Norhtport VAMC.*

10:00 PP21 **675.11** Neuromuscular transmission failure in an animal model of early onset spasticity. J. E. BRANDENBURG*; M. J. FOGARTY; G. C. SIECK. *Mayo Clin., Mayo Clin., Mayo Clin.*

11:00 PP22 **675.12** Determination of cellular and molecular mechanisms of 1,1'-methylenebis{4-[(hydroxyimino)methyl] pyridinium} (MMB4) toxicity on rabbit neuromuscular junctions. K. PAGARIGAN*; J. MACHAMER; B. WINNER; A. BRADFORD; C. PHUNG; C. ONDECK; P. MCNUTT. *USAMRICD.*

8:00 QQ1 **675.13** Fine motor control of a peripheral nerve injured arm achieved through an implantable muscle stimulator. T. M. SIBINDI*; G. G. L. GAMMAD; L. ONG; I. DEWANY; C. W. C. LIM; S. YEN; C. D. LIBEDINSKY. *Natl. Univ. of Singapore, Paris Descartes Univ.*

9:00 QQ2 **675.14** Evidence for MuSK-mediated BMP signaling at the neuromuscular junction. L. A. FISH*; D. JAIME; A. YILMAZ; L. A. MADIGAN; J. R. FALLON. *Brown Univ., Brown Univ., The Hebrew Univ. of Jerusalem.*

10:00 QQ3 **675.15** ● Antigen-specific immunotherapy of myasthenia gravis in domestic dogs - a pilot study. J. LUO*; O. A. GARDEN. *Univ. of Pennsylvania.*

11:00 QQ4 **675.16** Functional outcomes of crosstalk between neural networks and engineered muscle tissues in a novel microfabricated three-dimensional co-culture platform. A. PASSARO*; O. AYDIN; M. ELHEBEARY; G. J. PAGAN-DIAZ; A. FAN; S. NUETHONG; R. BASHIR; T. A. SAIF; S. STICE. *Univ. of Georgia, Univ. of Georgia, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Georgia.*

8:00 QQ5 **675.17** Altered muscle satellite cell distribution and phenotype in patients with spastic cerebral palsy. S. K. YEAGER*; K. G. ROBINSON; E. L. CROWGEY; R. E. AKINS. *Nemours Alfred I duPont Hosp. for Children.*

9:00 QQ6 **675.18** Toward developing biorobots that walk. C. KAUFMAN*; S. C. LIU; G. NASERI; R. BASHIR; M. GILLETTE. *Univ. of Illinois, Urbana-Champaign, Univ. of Illinois, Urbana-Champaign, Univ. of Illinois, Urbana-Champaign.*

10:00 QQ7 **675.19** Estrogens influence differentially on myofiber CSA of the pubococcygeus and iliococcygeus muscles in female rats. M. D. CARRASCO RUIZ*; E. CUEVAS ROMERO; P. PACHECO; C. CORTES; J. R. EGUIBAR; A. HANDALL; M. MARTINEZ GOMEZ; F. CASTELAN. *Univ. Autonoma De Tlaxcala, Univ. Autonoma de Mexico, Univ. Nacional Autonoma de México, B. Univ. Autonoma de Puebla, Univ. Autonoma de Mexico, Mexico, Univ. Autonoma de Mexico, Mexico.*

11:00 QQ8 **675.20** ● Human IPSC-derived motor neurons: Coculture with skeletal myoblasts and investigating TDP-43 mutations. B. F. FREITAS; L. K. FONG; J. LIU; B. MELINE; C. CHAVEZ; T. FEASTER*; C. MCMAHON; D. MANN; W. WANG; J. ARJOMAND; U. SCHMIDT; E. JONES. *FUJIFILM Cell. Dynamics, Inc, Genea Biocells US Inc., FUJIFILM Cell. Dynamics, Genea Biocells US Inc., Genea Biocells Us Inc.*

8:00 QQ9 **675.21** Plasma concentrations of alpha-pyrrolidinovalerophenone (PVP) predict the extent of motor activation after systemic administration of the drug to rats. M. H. BAUMANN*; H. M. WALTERS; J. S. ELMORE; D. WALTHER; D. M. ANDRENYAK; D. E. MOODY. *IRP, NIDA, NIH, DHHS, Johns Hopkins Med. Inst., Univ. of Utah.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

676. Neuroethology: New Insights in Sensory and Motor Systems

Theme F: Integrative Physiology and Behavior

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 QQ10 **676.01** The effect of self-generated movement on lateral line sensitivity in the toadfish, Opsanus tau. L. S. ROGERS*, JR; J. C. VAN WERT; A. F. MENSINGER. *Univ. of Minnesota Duluth, Marine Biol. Lab.*

9:00 QQ11 **676.02** Serotonergic SK channel modulation promotes adaptive optimized coding of natural stimuli. M. G. METZEN*; C. G. HUANG; M. J. CHACRON. *McGill Univ.*

10:00 QQ12 **676.03** Correlation based stimulus encoding in electrosensory processing. V. HOFMANN*; M. J. CHACRON. *McGill Univ.*

11:00 QQ13 **676.04** Sensorimotor activity in midbrain circuits of freely swimming electric fish. I. UYANIK*; N. J. COWAN; E. S. FORTUNE. *Johns Hopkins Univ., Johns Hopkins Univ. Dept. of Mechanical Engin., New Jersey Inst. of Technol.*

8:00 QQ14 **676.05** Reproductive state dependent visual sensitivity in an African cichlid fish. J. M. BUTLER*; S. M. WHITLOW; L. S. ROGERS; R. L. PUTLAND; A. F. MENSINGER; K. P. MARUSKA. *Louisiana State Univ., Univ. of Minnesota Duluth.*

9:00 QQ15 **676.06** ● Social regulation of dopaminergic modulation of spinal motor circuit activation in zebrafish (Danio Rerio). K. CLEMENTS*; F. HEAGY; T. MILLER; F. ISSA. *East Carolina Univ.*

10:00 QQ16 **676.07** ● Neuronal representation and sensorimotor integration of auditory cues in zebrafish larva. M. PRIVAT*; S. ROMANO; A. JOUARY; T. PIETRI; J. BOULANGER-WEILL; N. ELBAZ; D. SOARES; G. SUMBRE. *Inst. De Biologie De L'Ens, IBIOBA-Max Planck Partner Inst., Champalimaud, Ecole Normale Superieure, IBENS INSERM U1024, Inst. de Biologie de l'ENS, NJIT.*

11:00 QQ17 **676.08** Altruistic allogrooming in subordinate male mice. T. KUO*; Y. SU. *Inst. of Systems Neuroscience, Natl. Tsing.*

8:00 QQ18 **676.09** ● Multiple running wheels with ID sensors for group-housed mice. C. K. JUNG*; O. JANKE; J. FÜNER; Y. WINTER. *Phenosys Gmbh, Preclinics GmbH, Humboldt Univ. - Inst. Biologie.*

9:00 QQ19 **676.10** Looming threat as an ethological stimulus for use in anxiety studies. B. L. AGUILAR*; J. TOIB; L. MALKOVA; P. A. FORCELLI. *Georgetown Univ., Georgetown Univ., Georgetown Univ., Georgetown Univ.*

10:00 QQ20 **676.11** Why animal wiggle their sensors when following signals. C. CHEN*; M. A. MACIVER. *Northwestern Univ., Northwestern Univ.*

11:00 QQ21 **676.12** The mousecam: A miniature head-mounted camera system for freely moving mice integrates detailed behavioural monitoring with multichannel electrophysiology. J. POORT; A. F. MEYER; J. O'KEEFE; M. SAHANI*; J. F. LINDEN. *Univ. Col. London, Univ. Col. London, Univ. Col. London, Univ. Col. London.*

8:00 QQ22 **676.13** Understanding the role of sensory feedback on a robotic platform during peristaltic locomotion. A. KANDHARI*; H. J. CHIEL; R. D. QUINN; K. A. DALTORIO. *Case Western Reserve Univ., Case Western Res. Univ., Case Western Reserve Univ.*

9:00 QQ23 **676.14** Preserved gene coexpression networks between human cortex and songbird pallium. G. GEDMAN*; B. HAASE; O. FEDRIGO; E. D. JARVIS. *The Rockefeller Univ., Rockefeller Univ., Rockefeller Univ.*

10:00 QQ24 **676.15** Modeling visual perception, learning, and memory of wood ant navigation in naturalistic environments. A. J. MENDOZA*; D. D. LENT. *California State Univ. Fresno.*

11:00 QQ25 **676.16** What does it mean to be a tactile specialist? Lessons from peripheral anatomy and central processing in 7 species of waterfowl. E. R. SCHNEIDER*; C. R. LATTIN; E. O. ANDERSON; M. MASTROTTO; J. E. BROWN; E. O. GRACHEVA; S. N. BAGRIANTSEV. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

8:00 QQ26 **676.17** Bite force in the naked mole-rat (Heterocephalus glaber). B. W. CAIN; D. KUKLA; J. KODURI; D. K. SARKO*. *Southern Illinois Univ. Sch. of Med., Southern Illinois Univ., Southern Illinois Univ., Southern Illinois University, Sch. of Med.*

9:00 RR1 **676.18** Short-term inflammatory pain in the African naked mole-rat is driven by P2Xr and can be attenuated by the endocannabinoid system. B. M. BROWE*; C. RAMIREZ; T. J. PARK. *Univ. of Illinois At Chicago.*

10:00 RR2 **676.19** Neural mechanisms for discrimination of communication and echolocation calls in the big brown bat (Eptesicus fuscus). A. SALLES*; S. MACIAS; H. SUNDAR; M. ELHILALI; C. F. MOSS. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

11:00 RR3 **676.20** Inactivation of the superior colliculus alters orienting behavior in the echolocating bat. B. L. BOUBLIL*; M. J. WOHLGEMUTH, III; C. F. MOSS. *Johns Hopkins Univ., Johns Hopkins Univ.*

8:00 RR4 **676.21** Claustrum and endopiriform nucleus in the fruit bat. R. ORMAN*; R. KOLLMAR; M. STEWART. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

9:00 RR5 **676.22** Sensorimotor activity in the superior colliculus of the echolocating bat as it moves freely in 3D space. M. J. WOHLGEMUTH*, III; N. B. KOTHARI; C. F. MOSS. *Johns Hopkins Univ., Johns Hopkins Univ.*

POSTER

677. Brain Blood Flow, Metabolism, and Homeostasis: Blood Brain Barrier

Theme F: Integrative Physiology and Behavior

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 RR6 **677.01** Assessment of vascular amyloid pathology in brain microvessels isolated from persons with mild cognitive impairment or Alzheimer's disease. P. BOURASSA*; C. TREMBLAY; D. A. BENNETT; F. CALON. *Ctr. De Recherche Du CHU De Québec, Rush Alzheimer's Dis. Center, Rush Univ. Med. Ctr.*

9:00 RR7 **677.02** Identification of novel internalized cell surface proteins in human brain capillary endothelial cells by SWATH-MS. S. ITO*; M. OISHI; T. MASUDA; T. FURIHATA; S. OHTSUKI. *Kumamoto Univ., Kumamoto Univ., Chiba Univ.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 RR8 **677.03** ▲ Blood-brain barrier: Pilot investigations on regional distribution of sodium-hydrogen exchanger and tight junction protein expression after cortical kcl injection. J. KIM*; K. COTTIER; E. GALLOWAY; T. VANDERAH; T. DAVIS; T. LARGENT-MILNES. *Univ. of Arizona, Univ. of Arizona.*

11:00 RR9 **677.04** The effect of circulating angiotensin II on blood-brain barrier vascular permeability in the hippocampus of normotensive rats. S. HAMASAKI*; T. MUKUDA; Y. KOYAMA; T. KAIDOH. *Tottori Univ.*

8:00 RR10 **677.05** Association between blood-brain barrier transport system alterations and brain parenchymal abnormalities in a mouse model of diet-induced insulin resistance assessed using quantitative proteomics. S. OGATA*; S. ITO; T. MASUDA; S. OHTSUKI. *Kumamoto Univ., Kumamoto Univ., AMED-CREST.*

9:00 RR11 **677.06** Contributions of the glycocalyx, endothelium, and extravascular compartment to the blood-brain barrier. N. KUTUZOV*; H. FLYVBJERG; M. LAURITZEN. *Univ. of Copenhagen, Tech. Univ. of Denmark.*

10:00 RR12 **677.07** Transport activity impairment of creatine transporter (G561R), a novel mutation associated with creatine transporter deficiency, by abnormal N-glycosylation and cellular locaization. T. UEMURA*; S. ITO; T. MASUDA; Y. OTA; M. TACHIKAWA; T. WADA; M. HIRAYAMA; T. TERASAKI; S. OHTSUKI. *Kumamoto Univ., Kumamoto Univ., AMED-CREST, Tohoku Univ., Kyoto Univ.*

8:00 DP09/RR13 **677.08** (Dynamic Poster) Two-photon fluorescence imaging *in vivo* as a platform to investigate cell-penetrating peptides and liposome-based nanocarriers for drug delivery across the blood-brain barrier. K. KUCHARZ*; M. KRISTENSEN; K. KRISTENSEN; M. LUND; T. ANDRESEN; B. BRODIN; M. LAURITZEN. *Univ. of Copenhagen, Univ. of Copenhagen, Tech. Univ. of Denmark, Glostrup Hosp.*

8:00 RR14 **677.09** Single-domain antibody against insulin-like growth factor-1 receptor (IGF1R) undergoes receptor-mediated transcytosis and delivers pharmacologically efficacious levels of pain-suppressing neuropeptide galanin across the blood-brain barrier. W. ALATA*; A. YOGI; E. BRUNETTE; U. IQBAL; K. KEMMERICH; M. MORENO; D. STANIMIROVIC. *Natl. Res. Council (NRC).*

9:00 SS1 **677.10** Poldip2 depletion blocks COX-2 expression and protects against LPS-induced blood-brain barrier disruption. D. KIKUCHI; A. CAMPOS; R. SADIKOT; B. LASSÈGUE; K. GRIENDLING; M. S. HERNANDES*. *Emory Univ., Hosp. Sírio-Libanês, Emory Univ.*

10:00 SS2 **677.11** ● A novel human cell based model for evaluating brain iron uptake of pharmaceutical compounds and ferritin. B. CHIOU; E. NEAL; A. B. BOWMAN; E. LIPPMANN; I. A. SIMPSON; J. R. CONNOR*. *Penn State Col. of Med., Vanderbilt Univ., Vanderbilt Univ. MC, Penn State Univ. Col. of Med.*

11:00 SS3 **677.12** A human stem cell derived blood brain barrier model that provides a translational method to predict adeno-associated virus barrier penetration for therapeutic gene delivery to the brain. T. P. GRAY*. *Biogen.*

8:00 SS4 **677.13** Intranasal delivery of full-length immunoglobulin G antibodies to the central nervous system in APP/PS1 and non-transgenic mice: Feasibility, permeation enhancement and implications for Alzheimer's disease immunotherapy. G. NEHRA*; N. N. KUMAR; K. VANG; T. XIE; R. G. THORNE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

9:00 SS5 **677.14** Hypoxia-induced vascular responses in the adult mouse brain. M. D. SWEENEY*; M. T. HUUSKONEN; A. MONTAGNE; C. MURPHY; K. KISLER; Z. ZHAO; B. ZLOKOVIC. *USC.*

10:00 SS6 **677.15** Pericyte ablation from the adult brain leads to acute disruption of the neurovascular unit. B. V. ZLOKOVIC*; A. M. NIKOLAKOPOULOU; K. KISLER; A. P. SAGARE; D. LAZIC; A. MONTAGNE; M. D. SWEENEY; Y. WANG; M. T. HUUSKONEN; Z. ZHAO. *Keck Sch. of Med. of the Univ. of Southern California, USC.*

11:00 SS7 **677.16** Acquisition of BBB properties by the developing brain vasculature is controlled by a retinoic acid-WNT signaling axis. S. BONNEY*; B. J. C. DENNISON; E. PETERMAN; M. WENDLANDT; J. A. SIEGENTHALER. *Univ. of Colorado Denver.*

8:00 SS8 **677.17** ApoM deficiency induces an increase in the BBB permeability via the sphingosine-1-phosphate signaling pathway *in vivo*. M. M. JANIUREK*; K. KUCHARZ; C. CHRISTOFFERSEN; L. NIELSEN; M. LAURITZEN. *Univ. of Copenhagen, Rigshospitalet, Univ. of Copenhagen, Aarhus Univ., Rigshospitalet-Glostrup.*

9:00 SS9 **677.18** Sphenopalatine ganglion stimulation disrupts tight junction protein architecture and increases blood-brain barrier permeability. R. F. SCHMIDT*; M. J. LANG; G. P. STRICSEK; R. H. ROSENWASSER; A. D. SHARAN; L. IACOVITTI. *Thomas Jefferson Univ.*

10:00 SS10 **677.19** Rapid and reversible disruption of the blood-brain barrier through carbogen inhalation. K. LIAO*; H. WANG; V. C. WEI; T. W. LAI. *China Med. Univ. Hosp., Gradaute Inst. of Clin. Med. Science, China Med. Univ.*

11:00 SS11 **677.20** Cellular response following focused ultrasound mediated blood-brain barrier opening: A two-photonmicroscopy study. C. POON*; K. HYNYNEN. *Sunnybrook Hlth. Sci. Ctr., Univ. of Toronto / Sunnybrook Res. Inst.*

8:00 SS12 **677.21** Monosodium glutamate-induced neonatally excitotoxicity modifies regionally the blood-brain barrier properties in the adult male rat. B. F. FAJARDO-FREGOSO*; J. L. CASTAÑEDA-CABRAL; C. BEAS-ZÁRATE; M. E. UREÑA-GUERRERO. *Univ. de Guadalajara (CUCBA).*

9:00 SS13 **677.22** What are the molecular mechanisms of blood-brain barrier dysfunction in disease? C. P. PROFACI*; K. BAJC; S. H. FU; J. P. MILLER; T. Z. ZHANG; R. DANEMAN. *Univ. of California San Diego, Univeresity of California San Diego.*

10:00 SS14 **677.23** Factors influencing therapeutic antisense oligonucleotide distribution in the CNS following intrathecal administration: Implications for neurodegenerative diseases. B. WILKEN-RESMAN*; M. E. PIZZO; R. G. THORNE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

11:00 TT1 **677.24** Altered cerebral capillary densities and cognitive performance in neuronal HIF-1α/HIF-2α knockout mice. J. C. LAMANNA; V. MISTRY; A. ABDOLLAHIFAR; K. XU*. *Case Western Reserve Univ.*

8:00 TT2 **677.25** A constrained model of extracellular space using literature parameters and Monte Carlo simulation. C. NICHOLSON*. *New York Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

678. Sleep Behavior

Theme F: Integrative Physiology and Behavior

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 TT3 **678.01** Sleep in crayfish: Relation between brain electrical activity and autonomics variables. M. OSORIO-PALACIOS; I. OLIVER-DOMÍNGUEZ; L. MONTIEL-TREJO; K. MENDOZA-ANGELES*; J. HERNÁNDEZ-FALCÓN. *Univ. Nacional Autónoma de México.*

9:00 TT4 **678.02** Validation of developmental sleep disruption using an orbital shaker in the prairie vole (microtus ochrogaster). M. E. KAISER*; C. E. JONES; R. A. OPEL; M. M. LIM. *Oregon Hlth. & Sci. Univ., Portland VA Res. Fndn., Veterans Affairs Portland Hlth. Care Syst., OHSU.*

10:00 TT5 **678.03** ▲ Dendritic spine density and morphology on prefrontal pyramidal neurons is altered in adult prairie voles after early life sleep disruption. A. Q. CHAU*; C. E. JONES; P. TEUTSCH; R. OLSON; M. M. LIM. *Veterans Affairs Portland Hlth. Care Syst., Oregon Hlth. & Sci. Univ.*

11:00 TT6 **678.04** Early life sleep disruption increases cortical parvalbumin and impairs social and behavioral development in prairie voles. M. M. LIM*; A. Q. CHAU; D. L. COCKING; J. R. QUINTANA; E. A. HAMMOCK; C. E. JONES. *Veterans Affairs Portland Hlth. Care Syst., Oregon Hlth. & Sci. Univ., Florida State Univ.*

8:00 TT7 **678.05** Acute footshock stress increases ethanol preference in adult prairie voles after early life sleep disruption. C. E. JONES*; P. TEUTSCH; A. E. RYABININ; M. M. LIM. *Oregon Hlth. & Sci. Univ., VA Portland Healthcare Syst., Oregon Hlth. & Sci. Univ.*

9:00 TT8 **678.06** Taar1 agonism promotes wakefulness without impairment of cognition in cynomolgus macaques. A. V. GOONAWARDENA*; S. R. MORAIRTY; R. DELL; T. WALLACE; A. WILLOUGHBY; M. C. HOENER; T. S. KILDUFF. *SRI Intl., F. Hoffmann-La Roche.*

10:00 TT9 **678.07** ▲ Sleep rebound after acute stress exposure in high- and low- yawning sublines of rats. A. FIERRO-ROJAS*; C. CORTES; J. EGUIBAR. *Benemérita Univ. Autónoma de Puebla, Benemérita Univ. Autónoma de Puebla.*

11:00 TT10 **678.08** Withdrawn

8:00 TT11 **678.09** Withdrawn

9:00 TT12 **678.10** GABAergic neurons in substantia nigra promote sleep. D. LIU*; C. MA; W. CHANG; Y. DAN. *Univ. of California Berkeley, Howard Hughes Med. Inst.*

10:00 TT13 **678.11** Contextual fear conditioning produces robust sex differences in non-freezing behaviors and hippocampal EEG activity. P. A. GEIST*; S. DATTA. *Univ. of Tennesee.*

11:00 TT14 **678.12** Brain derived neurotrophic factor mediates regulation of sleep and cognition via changes in synaptic transmission. R. D. THAKKAR*; P. A. GEIST; J. GARNER; S. DATTA. *Univ. of Tennessee, Univ. of Tennesee, Univ. of Tennessee, Univ. of Tennessee.*

8:00 TT15 **678.13** A novel insight into the relationship between depression and sleep: The transitional sleep period between non-REM and REM sleep is altered in a depressive rodent phenotype. A. BARNES*; S. DATTA. *Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee.*

9:00 TT16 **678.14** Sleep deprivation increases the duration of ketamine anesthesia and selectively potentiates latency of post-anesthesia rapid eye movement sleep. B. MITCHELL*; P. A. GEIST; S. DATTA. *Univ. of Tennessee, Univ. of Tennesee, Univ. of Tennessee.*

10:00 TT17 **678.15** Differential effects of sex, estrous cycle and estradiol on the manic-like behaviors of locomotion, rearing and 50-kHz ultrasonic vocalizations induced by sleep deprivation in Wistar rats. C. P. DE SOUZA*; A. S. DORNELLAS; M. WÖHR; R. K. SCHWARTING; R. ANDREATINI. *UFPR, Philipps-University of Marburg, Philipps-University of Marburg.*

11:00 TT18 **678.16** Effects of an anesthetic dose of ketamine and sleep deprivation-induced rebound sleep on behavioral outcomes. K. BURFORD*; B. MITCHELL; R. D. THAKKAR; S. DATTA. *Univ. of Tennessee-Knoxville, Univ. of Tennessee, Univ. of Tennessee, Univ. of Tennessee.*

8:00 TT19 **678.17** Reduced compensatory mechanisms following homeostatic sleep preasure in an animal model for MSA reflect impaired sleep quality in patients. T. FENZL*; L. HÄRTNER; V. LEIS; M. KREUZER; G. WENNING; N. STEFANOVA. *Tech. Univ. Munich, Clin. For Anesthesio, Med. Univ. Innsbruck, Leopold Franzens Univ.*

9:00 TT20 **678.18** Inter-session reproducibility of brain network structure in resting and task states. J. NAKUCI*; J. O. GARCIA; N. WASYLYSHYN2W; S. H. THOMPSON; J. C. ELLIOTT; M. CIESLAK; B. GIESBRECHT; S. T. GRAFTON; J. M. VETTEL; S. F. MULDOON. *Univ. at Buffalo, U.S. Army Res. Lab., Univ. of Pennsylvania, Univ. of California, Santa Barbara, Univ. of California, Univ. of California, Army Res. Lab., Univ. at Buffalo.*

10:00 TT21 **678.19** Longitudinal examination of naturalistic sleep, global brain dynamics, and visual working memory performance in healthy adults. N. LAUHARATANAHIRUN*; J. O. GARCIA; S. M. THURMAN; N. WASYLYSHYN; S. H. TOMPSON; M. CIESLAK; G. OKAFOR; B. GIESBRECHT; S. T. GRAFTON; E. FLYNN-EVANS; E. B. FALK; J. M. VETTEL. *U.S. Army Res. Lab., Univ. of Pennsylvania, UC Santa Barbara, NASA.*

11:00 TT22 **678.20** Individual differences in state-based performance effects derived from functional connectivity in a 16 week longitudinal study. K. R. GAMBLE*; J. O. GARCIA; H. ROY; N. LAUHARATANAHIRUN; S. M. THURMAN; N. WASYLYSHYN; S. H. TOMPSON; M. CIESLAK; B. GIESBRECHT; S. T. GRAFTON; E. FALK; J. M. VETTEL. *Army Res. Lab., U.S. Army Res. Lab., U.S. Army Res. Lab., US Army Res. Lab., US Army Res. Lab., U.S. Army Res. Lab., UCSB, Univ. of California, Santa Barbara, UCSB, Univ. of Pennsylvania, Army Res. Lab.*

8:00 TT23 **678.21** The relationship between sleep and autonomic health in college students. M. D. OLIVER*; D. R. BALDWIN; S. DATTA. *Univ. of Tennessee.*

9:00 TT24 **678.22** Travel in collegiate varsity student-athletes: Relationship to mood across seasons and the factors that influence this relationship. E. VILLEGAS*, JR; D. MCCARTNEY; M. HOLLIDAY; A. BOHR; M. MCQUEEN; T. D. HERNANDEZ. *Univ. of Colorado Boulder, Univ. of Colorado, Univ. of Colorado Boulder, Univ. of Colorado at Boulder.*

10:00 UU1 **678.23** Age and gender-related associations between objective sleep measures and inflammatory markers in bipolar affective disorder. E. E. LEE*; C. KAUFMAN; L. T. EYLER. *UCSD, UCSD, UC San Diego.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 UU2 **678.24** ▲ Cognitive symptoms in females and males with obstructive sleep apnea. D. M. ARON*; A. P. AGUILA; H. L. SAFT; R. AYSOLA; J. A. OGREN; R. M. HARPER; P. M. MACEY. *Univ. of California at Los Angeles, Natl. Jewish Hlth., Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*

8:00 UU3 **678.25** Linking naturalistic sleep fluctuations to the energy landscape in dynamic brain modules. J. O. GARCIA*; A. ASHOURVAN; S. M. THURMAN; N. WASYLYSHYN; S. H. TOMPSON; N. LAUHARATANAHIRUN; M. CIESLAK; J. C. ELLIOTT; G. OKAFOR; B. GIESBRECHT; S. T. GRAFTON; E. FLYNN-EVANS; D. S. BASSETT; J. M. VETTEL. *U.S. Army Res. Lab., Univ. of Pennsylvania, Univ. of California, Santa Barbara, NASA Ames Res. Ctr.*

POSTER

679. Biological Rhythms and Sleep: Behavior

Theme F: Integrative Physiology and Behavior

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 UU4 **679.01** Circadian regulation of sleep in a mouse model of Dravet syndrome. R. E. SANCHEZ*; I. BUSSI; M. BEN-HAMO; H. O. DE LA IGLESIA. *The Univ. of Washington, Univ. of Washington, Univ. of Washington.*

9:00 UU5 **679.02** Sleep disturbance in the model rats of cerebrovascular dementia. M. NAGAO*; K. KUBOTA; S. KATSURABAYASHI; K. IWASAKI. *Ins. Aging and Brain Sci., Fukuoka Univ., Fac. Pharmaceut. Sciences, Fukuoka Univ.*

10:00 UU6 **679.03** Activation of basal forebrain cholinergic neurons reverses sevoflurane anesthesia and induces a wake-like state in rats. J. DEAN*; M. BRITO; T. LIU; A. FRYZEL; G. A. MASHOUR; D. PAL. *Univ. of Michigan Dept. of Mol. and Integrative Physiol., Univ. of Michigan, Univ. of Michigan.*

11:00 UU7 **679.04** Effects of sleep deprivation on memory and sleep patterns in young and aged adult mice. M. R. LOPEZ*; R. K. YUAN; M. C. GARAZA; A. GRENIER; V. R. CERDA; M. WOOD; C. M. GAGLIARDI; I. A. MUZZIO. *Univ. of Texas At San Antonio, Harvard Med. Sch.*

8:00 UU8 **679.05** Sleep and depressive-like behavior in rat: Differential effects between early life stress exposure and adulthood acute stress exposure. A. VALDÉS-CRUZ*; A. E. DÍAZ-FUENTES; M. G. MARTÍNEZ-MONTALVO; S. ESCALERA-OLVERA; S. ALMAZÁN-ALVARADO. *Inst. Nacional de Psiquiatría RFM.*

9:00 UU9 **679.06** Comparison of sleep loss and recovery between binge cocaine and standard acute sleep deprivation. T. E. BJORNESS*; R. W. GREENE. *VA Med. Ctr. of North Texas, UTSW & VAMC.*

10:00 UU10 **679.07** Role of weekend recovery sleep in neurobehavioral deficits in chronic sleep deprivation paradigm of night shift work in mice. S. SHIYANA*; K. KONDEPUDI; M. BISHNOI; K. CHOPRA. *Panjab Univ., Univ. Inst. of Pharmaceut. Sci., Natl. Agri-Food Biotech. Inst.*

11:00 UU11 **679.08** Coupling arousal and motor behavior: A dopamine hypothalamic circuit. J. J. FRAIGNE*; S. K. PINTWALA; M. HAMIEH; J. H. PEEVER. *Univ. of Toronto.*

8:00 UU12 **679.09** Adolescent sleep disruption induces long-lasting impairment in social novelty preference. W. BIAN*; L. DE LECEA. *Stanford Univ.*

9:00 UU13 **679.10** Sleep in mice resilient and susceptible to social defeat stress. C. L. GRAY; J. SANCHEZ; J. EHLEN*. *Morehouse Sch. of Med.*

10:00 UU14 **679.11** Search for neural circuits of narcolepsy-cataplexy. E. HASEGAWA*; T. MAEJIMA; T. YOSHIDA; M. YOSHIOKA; M. YANAGISAWA; M. MIEDA; T. SAKURAI. *Intl. Inst. For Integrative Sleep Medi, Univ. of Kanazawa, Hokkaido Univ.*

11:00 UU15 **679.12** Activity of Amygdala GABA neurons during cataplexy. Y. SUN; E. BENDELL; B. ZOU; C. BLANCO-CENTURION; S. LUO; A. VIDAL-ORTIZ; P. J. SHIROMANI; M. LIU*. *Med. Univ. of SC, Ralph H. Johnson VA Med. Ctr.*

8:00 UU16 **679.13** Vigilance dynamics are translated by head nodding in a mouse model of drowsiness. A. SHIN*; J. WOO; J. KIM; D. KIM. *KAIST, Chungnam Techno Park.*

9:00 UU17 **679.14** Spatial, functional, and translational profiling of the brain during sleep/wake behavior. Y. HAN*; P. LUU; A. NADTOCHIY; T. V. TRUONG; S. E. FRASER; D. K. DICKMAN. *USC, USC, USC, USC, USC, USC.*

10:00 UU18 **679.15** Changes in sleep architecture, respiratory behavior, and indices of pain correlate after thoracic spinal cord contusion. H. KLOEFKORN*; S. IDLETT; M. HALDER; B. GOOLSBY; L. M. AIANI; N. P. PEDERSEN; S. HOCHMAN. *Emory Univ., Emory Univ., Emory Univ., Emory Univ., Emory Univ. Sch. Med.*

11:00 UU19 **679.16** The Role of corticothalamic input in sleep regulation. J. HONG*; E. CHEONG. *Yonsei Univ.*

8:00 UU20 **679.17** The roles of sleep oscillations in sensory and memory processing: New insights using transgenic and auditory stimulation approaches in mice. C. BLANCO DUQUE*; R. PURPLE; T. YAMAGATA; G. ANG; L. E. MCKILLOP; M. M. KAHN; D. M. BANNERMAN; V. V. VYAZOVSKIY. *Univ. of Oxford, Univ. of Oxford, Univ. of Oxford.*

9:00 UU21 **679.18** Control of non-REM sleep by a thalamo-amygdala circuit. C. MA*; S. AN; Z. K. BARGER; W. CHANG; D. LIU; Y. DAN. *UC Berkeley.*

10:00 UU22 **679.19** A mouse model of neuroinflammation resulting from sleep disruption at high altitude. N. P. CRAMER*; A. GRILLAKIS; X. XU; Y. EUDY; K. WHITING; Z. GALDZICKI. *Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci.*

11:00 VV1 **679.20** ▲ Acute kynurenine challenge reduces rapid eye movement (REM) sleep duration and impairs hippocampal-dependent contextual memory in adult male and female rats. S. A. BUCK*; A. BARATTA; S. BEGGIATO; J. A. MONG; A. POCIVAVSEK. *Univ. of Maryland Sch. of Med., Univ. of Ferrara, Univ. of Maryland Sch. of Med.*

8:00 VV2 **679.21** Modulation of startle response in rem sleep behavior disorder. R. FRAU*; F. TRACCIS; M. FIGORILLI; M. PULIGHEDDU. *Univ. of Cagliari.*

9:00 VV3 **679.22** Activation of adenosine monophosphate-activated protein kinase (AMPK) and sleep deprivation induced phenotypes. D. EACRET*; S. JIN; S. F. KIM; M. T. MANNERS; S. C. VEASEY; J. A. BLENDY. *Univ. of Pennsylvania, Univ. of Pennsylvania, Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Univ. of Pennsylvania, Perelman Sch. of Med.*

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* Indicates abstract's submitting author

10:00 VV4 **679.23** ● SUVN-G3031, H3 receptor inverse agonist produces wake promoting activity in rats with hypocretin-2-saporin lesions of the lateral hypothalamus. S. DARIPELLI*; G. BHAYRAPUNENI; C. TIRUMALASETTY; V. BENADE; R. SUBRAMANIAN; S. PETLU; N. PRAVEENA; P. JAYARAJAN; A. SHINDE; R. BADANGE; V. BHATTA; R. NIROGI. *Suven Life Sci. Ltd.*

8:00 DP10/VV5 **679.24** ● (Dynamic Poster) Validation of a sensory feedback system for selective sleep restriction in rodents. D. M. HUFFMAN; A. A. AJWAD; A. AGARWAL; B. F. O'HARA; K. D. DONOHUE; S. SUNDERAM*. *Univ. of Kentucky, Signal Solutions, LLC, Univ. of Kentucky, Univ. of Kentucky.*

8:00 VV6 **679.25** A new method for recording rodents' physical activity using an implantable accelerometer. D. FUNABASHI; I. KITA; T. NISHIJIMA*. *Tokyo Metropolitan Univ.*

9:00 VV7 **679.26** ● ONEIROS, a new telemetric and logger device to record sleep electrophysiology, physiology, temperatures, behavior, arousal threshold and sleep homeostasis. P. LIBOUREL*; S. ARTHAUD; B. BARRILLOT; J. ROUX; G. UNGUREAN; P. LUPPI; C. PEYRON; N. C. RATTENBORG; B. MASSOT. *CRNL, Max Planck Inst. for Ornithology, INL, UMR5270 CNRS, INSA Lyon.*

POSTER

680. Central Pathways Controlling Food Intake and Energy Balance

Theme F: Integrative Physiology and Behavior

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 VV8 **680.01** Ghrelin signaling targets segregated clusters of neurons within the nucleus of the solitary tract. M. P. CORNEJO*; P. N. DE FRANCESCO; G. GARCIA ROMERO; E. PORTIANSKY; J. M. ZIGMAN; M. REYNALDO; M. PERELLO. *IMBICE, LAI, Univ. of Texas Southwestern Med. Ctr.*

9:00 VV9 **680.02** The minor spliceosome is required for proper hypothalamic development resulting in overeating and obesity in U11 cKO mice. A. WHITE*; K. C. HYATT; R. KANADIA. *Univ. of Connecticut.*

8:00 DP11/VV10 **680.03** ● (Dynamic Poster) Pacap from the ventromedial hypothalamic nucleus is necessary for both energy balance and glucose homeostasis. J. N. FLAK*; B. LOWELL; R. A. ROSS. *Univ. of Michigan, Beth Israel Deaconess Med. Ctr., Harvard Univ., Beth Israel Deaconess Med. Ctr., McLean Hosp.*

11:00 VV11 **680.04** Acute exposure to a high fat diet during the juvenile period: Effects on cognition and post translational modifications in adulthood. T. M. MILEWSKI*; K. A. BUCKHAULTS; A. J. LARA; P. T. ORR; K. A. STUMPO. *Univ. of Scranton, Univ. of Scranton, Univ. of Scranton.*

8:00 VV12 **680.05** ▲ Binge eating induction does not modify sensitivity to the reinforcing properties of sucrose. W. ZEPEDA-RUIZ*; D. N. VELÁZQUEZ-MARTÍNEZ. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autónoma de México.*

9:00 VV13 **680.06** Juvenile and adolescent acesulfame potassium consumption induces hippocampal-dependent learning deficits and anxiety in young adulthood. L. TSAN*; V. W. LEE; L. A. SCHIER; S. E. KANOSKI. *USC, USC, USC.*

10:00 VV14 **680.07** Early exposure to high fat diet affects feeding related behavior. H. SONG*; M. KIM; H. CHOI. *Seoul Natl. Univ.*

11:00 VV15 **680.08** Genetic dissection of a lateral septum circuit that regulates feeding behavior. K. KIM*; H. PARK; J. PARK; S. KIM. *Seoul Natl. Univ.*

8:00 VV16 **680.09** The subtle effects of dietary glucose and fructose on the ultrastructure of the hippocampus. G. M. MARCELLO*; E. ANDRÁSOFSZKY; V. E. MARKEVICIUS; P. SOTONYI; J. Z. SZABO; B. RACZ. *Univ. of Vet. Med. Budapest, Univ. of Vet. Med. Budapest.*

9:00 VV17 **680.10** Nicotinic acetylcholine receptors in the arcuate nucleus and their implications for feeding behavior. C. A. CALARCO*; Z. LI; S. R. TAYLOR; S. LEE; W. ZHOU; J. FRIEDMAN; Y. S. MINEUR; C. GOTTI; M. PICCIOTTO. *Yale Univ., The Rockefellar Univ., UCSD, Univ. of Chicago, Yale Univ., Rockefeller Univ/ HHMI, Yale Univ. Sch. Med., CNR, Neurosci. Inst., Yale Univ. Sch. Med.*

10:00 VV18 **680.11** A new intracellular emetic signaling system: The pivotal role of Glycogen Synthase Kinase 3 (GSK-3) in vomiting evoked by a variety of emetogens in the least shrew (Cryptotis parva). W. ZHONG*; N. DARMANI. *Western Univ. of Hlth. Sci.*

11:00 VV19 **680.12** ▲ A model of binge eating with solid palatable food. S. ORTEGA-TINOCO*; W. A. ZEPEDA-RUIZ; D. N. VELÁZQUEZ-MARTÍNEZ. *UNAM, Facultad de Psicología.*

8:00 VV20 **680.13** Functional characterization of a parabrachial microcircuit underlying satiety. E. RODRIGUEZ*; D. RYU; F. WANG. *Duke Univ.*

9:00 VV21 **680.14** Nucleus accumbens projections to the ventral tegmental area mediate primary reward behavior. C. BOND; R. TRINKO; E. FOSCUE; R. J. DILEONE*. *Yale Univ. Sch. Med.*

10:00 VV22 **680.15** Leptin-sensitive raphe neurons send projections to hypothalamic nuclei. N. D. MAXWELL*; L. P. REAGAN; J. R. FADEL; F. Z. LOYO-ROSADO; C. A. GRILLO. *Univ. of South Carolina Sch. of Med., WJB Dorn VA Med. Ctr.*

11:00 WW1 **680.16** Genetic mapping of central glucose sensing circuits. S. YANG*. *Academia Sinica.*

8:00 WW2 **680.17** Single cell transcriptomic analysis of the lateral hypothalamic area reveals molecularly distinct populations of inhibitory and excitatory neurons. L. E. MICKELSEN; M. BOLISETTY; B. R. CHIMILESKI; A. FUJITA; P. ROBSON; A. C. JACKSON*. *Univ. of Connecticut, The Jackson Lab. for Genomic Med.*

9:00 WW3 **680.18** Hypothalamic MeCP2 protein levels are altered in mice exposed to high fat diet *in utero.* A. O'BRIEN; J. FRAYRE; M. J. MORRIS; E. NA*. *Texas Woman's Univ., Texas Woman's Univ.*

10:00 WW4 **680.19** Nine candidate genes involved in postoperative nausea and vomiting: Transcriptome analysis in the nucleus of the solitary tract of the musk shrew. D. KONNO*; S. SUGINO; T. F. SHIBATA; K. MISAWA; Y. IMAMURA-KAWASAWA; K. KIDO; M. NAGASAKI; M. YAMAUCHI. *Tohoku Univ. Grad. Sch. of Med., Tohoku Univ. Grad. Sch. of Med., Tohoku Univ. Tohoku Med. Megabank Organization, Pennsylvania State Univ. Col. of Med., Pennsylvania State Univ. Col. of Med., Pennsylvania State Univ. Col. of Med., Kanagawa Dent. Univ. Grad. Sch. of Dent.*

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* Indicates abstract's submitting author

11:00 WW5 **680.20** Hindbrain-originating catecholaminergic projections to the paraventricular hypothalamic nucleus are dispensable for recruitment of ERK1/2 in the lateral part of the central amygdalar nucleus following glycemic challenge in the rat. A. M. KHAN*; E. M. WALKER; K. NEGISHI; A. N. CLARK; A. G. WATTS. *Univ. of Texas at El Paso, USC.*

8:00 WW6 **680.21** High-spatial resolution analysis of α-melanocyte stimulating hormone immunoreactivity in the adult male rat using a canonical brain atlas. B. E. PINALES*; A. M. KHAN. *Univ. of Texas at El Paso.*

9:00 WW7 **680.22** ▲ Automatic derivation of atlas plate correspondences between rat brain atlases using feature-based matching and dynamic programming. J. G. PEREZ*; O. FUENTES; A. M. KHAN. *The Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

10:00 WW8 **680.23** Hypothalamic chemoarchitecture of the adult male rat: High spatial resolution mapping of copeptin, LIM homeobox 6, and melanin-concentrating hormone. A. MARTINEZ*; L. M. BARRAZA ESCUDERO; D. CASTRO; S. A. CHAVEZ; M. CORONADO; S. GALLEGOS; A. PINEDA SANCHEZ; M. S. P. RUIZ; V. G. RUIZ; K. NEGISHI; A. M. KHAN. *Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

11:00 WW9 **680.24** ▲ High spatial resolution mapping of anorexigenic neuropeptides expressed in the hypothalamus: A chemoarchitecture study in the adult male rat. K. A. S. BURNETT; B. E. PINALES; E. J. PEREZ; D. RODARTE; A. M. CARDONA; K. J. GALVAN; G. G. HERNANDEZ; A. C. LEZAMA; K. T. LORENZANA; A. VASQUEZ; P. PARADA; J. I. PAZ; J. RASCON; R. THOMASON; K. BAUTISTA; J. BARNES; C. D'ARCY*; A. M. KHAN. *Univ. Texas El Paso, Univ. of Texas at El Paso.*

8:00 WW10 **680.25** ▲ Spatial analysis of melanin-concentrating hormone axonal fiber distributions in the medial prefrontal cortex of the adult male rat. E. MEJIA*; A. ENRIQUEZ; K. NEGISHI; A. M. KHAN. *1997, Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

9:00 WW11 **680.26** Mesoscale characterization of medial prefrontal afferents from the hypothalamus: A spatial analysis of hypocretin/orexin and melanin-concentrating hormone neurons. K. NEGISHI*; A. M. KHAN. *Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

10:00 WW12 **680.27** Identification and atlas mapping of mouse hypothalamic neurons that co-express tyrosine hydroxylase and the vesicular GABA transporter in *in situ* hybridization and immunohistochemistry studies. M. J. CHEE*; K. NEGISHI; K. SCHUMACKER; R. M. BUTLER; G. WITTMANN; A. M. KHAN. *Carleton Univ., Univ. of Texas at El Paso, Tufts Med. Sch., Univ. of Texas at El Paso.*

11:00 WW13 **680.28** Central circuitry involved in the control of brown and white adipose tissue in normal rats and obese rats fed with high energy diet from early age. G. CANO*; S. L. HERNAN; H. R. ALLEN; A. G. RICHIE; D. R. UKASIK; D. TUPONE; A. F. SVED. *Univ. of Pittsburgh Dept. of Neurosci., Oregon Hlth. and Sci. Univ.*

POSTER

681. Reward and Cell Signaling

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 WW14 **681.01** Low nanomolar concentrations of isradipine selectively reduce *in vivo* burst firing of dopamine neurons in the lateral substantia nigra. J. SHIN*; L. KOVACHEVA; D. THOMAS; S. STOJANOVICH; C. A. PALADINI; G. GEISSLINGER; J. ROEPER. *Inst. of Neurophysiology, Neurosci. Ctr., Inst. of Clin. Pharmacol., UTSA.*

9:00 XX1 **681.02** New players in reward ventral tegmental area circuitry in mice: Electrophysiological and anatomical characterization of somatostatin-positive neurons. E. NAGAEVA*; M. FORSS; I. ZUBAREV; L. ELSILÄ; E. DE MIGUEL; E. KORPI. *Univ. of Helsinki, Aalto Univ.*

10:00 XX2 **681.03** ▲ Structural and functional changes of input-specific excitatory synapses on nigral dopamine cells caused by cocaine. K. WINDSOR; P. VOIT; A. TOLER; A. LITCH; S. HEMANI; A. KARLA; C. GUO; P. FERRER; G. M. BEAUDOIN*, III. *Trinity Univ., Trinity Univ.*

11:00 XX3 **681.04** Glutamate transporters on ventral tegmental area astrocytes orchestrate avoidance and approach behaviors. J. A. GOMEZ*; J. PERKINS; G. M. BEAUDOIN, III; N. COOK; S. QURAISHI; M. J. WANAT; C. A. PALADINI. *The Univ. of Texas at San Antonio, The Univ. of Texas at San Antonio, Trinity Univ., Univ. of Texas at San Antonio, UTSA.*

8:00 XX4 **681.05** GluN2C-containing NMDA receptors relay the reward signal in the ventral tegmental area. G. A. HERNANDEZ*; E. POIRIER; W. M. KOUWENHOVEN; D. LÉVESQUE; P. ROMPRÉ. *Univ. de Montreal, Univ. de Montreal.*

9:00 XX5 **681.06** *In vivo* characterization of dopamine neuron subthreshold activity. J. M. PERKINS*; A. S. KULKARNI; K. M. COSTA; J. ROEPER; C. A. PALADINI. *Univ. of Texas at San Antonio, Goethe Univ., Goethe Univ. Frankfurt, UTSA.*

10:00 XX6 **681.07** Glt-1 on astrocytes in the vta regulates cocaine-seeking behavior. N. COOK*; A. S. KULKARNI; J. A. GOMEZ; C. A. PALADINI. *UTSA, Univ. of Texas At San Antonio, The Univ. of Texas At San Antonio, UTSA.*

11:00 XX7 **681.08** Hypothalamic - habenular - midbrain communication differentially regulates food preference in lean and obese rodents. R. M. O'CONNOR*; M. V. M. DI BONAVENTURA; W. M. HOWE; A. G. DIFELICEANTONIO; K. DEVARAKONDA; P. J. KENNY. *Icahn Sch. of Medicine, Mount Sinai.*

8:00 XX8 **681.09** β-arrestin2 in dopamine receptor-containing neurons modulates the behavioral effects of cocaine and morphine. K. A. PORTER-STRANSKY*; S. L. KARNE; C. JEROME; N. M. URS; M. G. CARON; D. WEINSHENKER. *Emory Univ., Univ. of Florida, Duke Univ. Hosp., Emory Univ. Sch. Med.*

9:00 XX9 **681.10** Deletion of β-arrestin2 in D2-expressing cells alters dopamine, but not morphine sensitivity in D2 nucleus accumbens neurons. A. K. PETKO*; C. JEROME; M. G. CARON; N. URS; D. WEINSHENKER; C. PALADINI. *Univ. of Texas at San Antonio, Emory Univ. Sch. Med., Duke Univ. Hosp., Duke Univ.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 XX10 **681.11** Neuronal cilia mediate neuromodulatory signaling in a food-motivated progressive ratio task. J. MCINTYRE*; K. R. JASSO; V. CAMPANO; B. LEWIS; S. PARKS; B. SETLOW. *Univ. of Florida, Univ. of Florida.*

11:00 XX11 **681.12** Nutritional programming during pregnancy and lactation sensitizes food addiction-like behavior in offspring of rats. L. MONTALVO MARTINEZ*; L. A. REYES-CASTRO; E. ZAMBRANO-GONZALEZ; R. ORTIZ-LÓPEZ; A. CAMACHO. *Autonomous Univ. of Nuevo León, Natl. Inst. of Med. Sci. and Nutr. Salvador Zubirán, Technological Inst. and of Superior Studies of Monterrey, Univ. Autónoma de Nuevo León.*

8:00 XX12 **681.13** Reward and punishment encodingencoding has shown divisive normalization in primary motor cortex. Y. ZHAO*; J. P. HESSBURG; J. T. FRANCIS. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

POSTER

682. Post-Traumatic Stress Disorder: Preclinical Models

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 XX13 **682.01** ”Unhealthy” diet high in fat or sucrose on negative valence behavior in mice. E. I. FLANDREAU*; D. EUDAVE; M. BELOW; A. BUCHHEIT. *Grand Valley State Univ., Grand Valley State Univ.*

9:00 XX14 **682.02** Chemogenetic activation of medial prefrontal cortex excitatory neurons alleviated the impaired fear extinction of an animal model of PTSD. J. OMURA*; M. FUCHIKAMI; M. ARAKI; T. MIYAGI; S. MORINOBU. *Hiroshima Univ., Kibi Intl. Univ.*

10:00 YY1 **682.03** Effects of intracerebroventricular administration of CGRP on fear response. S. MISHIMA*; A. OTSUKA; K. FUKUMOCHI; K. NISHIMURA; N. HASHIKAWA; N. HASHIKAWA-HOBARA. *Okayama Univercity of Sci., Okayama Univ. of Sci., Okayama Univ. of Sci.*

11:00 YY2 **682.04** The role of glucocorticoid receptor in the induction and the prevention of the hippocampal abnormalities in an animal model of PTSD. M. ARAKI*; M. FUCHIKAMI; J. OMURA; T. MIYAGI; S. MORINOBU. *Hiroshima Univ., Kibi Intl. Univ.*

8:00 YY3 **682.05** Pre-conception predator stress induces physiological and behavioral changes in offspring. S. BHATTACHARYA, A1B3X9; A. FONTAINE; P. MACCALLUM; K. JARVIS; Q. YUAN; G. MARTIN; F. BAMBICO; J. J. BLUNDELL*. *Mem. Univ., Mem. Univ., Mem. Univ., Mem. Univ.*

9:00 YY4 **682.06** Glutamatergic mechanisms mediate enduring vulnerability to drug use following an acute stressor. C. GARCIA-KELLER*; Y. KUPCHIK; C. MONFORTON; B. JACOBS; D. ROBERT-WOLFE; J. HEINSBROEK; L. M. CANCELA; P. W. KALIVAS. *Med. Univ. of South Caroline, Hebrew Univ. of Jerusalem, IFEC-CONICET. Dept Pharm. Sch. of Chem Sci. Nat Univ. of Cordoba.*

10:00 YY5 **682.07** Sex differences in sensitivity to an unpredictable versus predictable stressor in a novel inhibitory avoidance-based rat model of comorbid alcohol and anxiety disorders. M. Q. STEINMAN*; D. KIRSON; S. A. WOLFE; S. R. SPIERLING; M. BAJO; S. SURESHCHANDRA; N. K. HOANG; A. SINGHAL; C. S. OLEATA; I. MESSAOUDI; E. P. ZORRILLA; M. ROBERTO. *The Scripps Res. Inst., Univ. of California, Irvine.*

11:00 YY6 **682.08** Beta-hydroxybutyrate attenuates anxiety-related behavior in rodent PTSD model. T. YAMANASHI*; M. IWATA; K. TSUNETOMI; N. KAJITANI; M. NAGATA; A. MIURA; R. MATSUO; T. NISHIGUCHI; R. S. DUMAN; K. KANEKO. *Tottori Univ., Yale Univ. Sch. Med.*

8:00 YY7 **682.09** Transitional impairments in fear memory in rodent ptsd model that could be prevented by intranasal npy. X. LIU*; L. I. SEROVA; E. L. SABBAN. *New York Med. Col.*

9:00 YY8 **682.10** Determination of the relative reinforcing effect of MDMA by fixed ratio (FR) and progressive ratio (PR) intravenous self-administration testing in rats. S. L. SMITH*; M. HALLAM; D. HEAL. *Renasci Ltd.*

10:00 YY9 **682.11** Behavioral effects of a novel α_{2C}-adrenoceptor selective antagonist, ORM-10921, in an animal model of posttraumatic stress disorder (PTSD). D. WOLMARANS*; C. L. ERICHSEN; D. J. STEIN; B. H. HARVEY. *North-West Univ., North-West Univ., Univ. of Cape Town, MRC Unit on Risk and Resilience in Mental Disorders, MRC Unit on Risk and Resilience in Mental Disorders.*

11:00 YY10 **682.12** Female gonadal hormones during trauma may account for their higher risk of developing PTSD. C. V. CHEN*; I. LIBERZON. *Univ. of Michigan, Univ. of Michigan Hlth. Syst.*

8:00 YY11 **682.13** Role of adult hippocampal neurogenesis in SPS-induced extinction retention deficit. E. RODRIGUEZ*; J. A. GRECO; J. ABELSON; I. LIBERZON. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan Hlth. Syst.*

9:00 YY12 **682.14** Alterations in serum/glucocorticoid-regulated kinase transcript: Evidence for peripheral and CNS effects in PTSD. B. LEE*; M. J. GIRGENTI; B. HARE; M. S. MAZEI-ROBISON; R. S. DUMAN. *Yale Univ. Sch. Med., Michigan State Univ.*

10:00 YY13 **682.15** Enhanced fear memory and regional brain glucose metabolism (FDG PET) following sub-anesthetic intravenous ketamine infusion in rats. K. CHOI*; K. RADFORD; T. PARK; S. JAISWAL; H. PAN; A. KNUTSEN; L. OSBORNE-SMITH; B. DARDZINSKI. *Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ., Uniformed Services Univ., Uniformed Services Univ., Oregon Hlth. and Sci. Univ., USUHS.*

11:00 YY14 **682.16** ▲ Development of a mouse model of early life stress-enhanced fear learning. D. SCHLEICHER; J. J. QUINN; A. K. RADKE*. *Miami Univ.*

8:00 YY15 **682.17** Single prolonged stress PTSD model triggers progressive severity of anxiety, sensitivity to NPY and alterations in gene expression in the hypothalamus. E. L. SABBAN*; L. I. SEROVA. *New York Med. Col.*

9:00 YY16 **682.18** BDNF Val66Met single nucleotide polymorphism enhances fear generalization in auditory fear conditioning. N. TSE*; J. D. RYAN; F. LEE. *Weill Cornell Med. Grad. Sch. of Med., Weill Cornell Med., Weill Cornell Med. Col.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 YY17 **682.19** Vulnerability to traumatic stress predicts increased ethanol consumption in male and female rats. R. R. DENNY*; E. M. UNTERWALD. *Temple Univ., Temple Univ. Sch. of Med.*

11:00 YY18 **682.20** Molecular and systems-level interrogation of the ventral hippocampus in mediating fear generalization. J. D. RYAN*; D. JING; N. TSE; F. LEE. *Weill Cornell Med., Weill Cornell Med., Weill Cornell Med.*

8:00 YY19 **682.21** Pax7 neurons in the interpeduncular nucleus regulate fear memory. J. LIANG*; Y. REN; Q. FENG; M. LUO. *Natl. Insitute of Biol. Sciences, Beijing.*

9:00 YY20 **682.22** ▲ Selective manipulation of BDNF promoter IV-expressing cells in the hippocampus modulates fear expression and hippocampal-prefrontal synchrony in mice. H. QUILLIAN*; H. L. HALLOCK; Y. MAI; J. L. HILL; K. R. MAYNARD; K. MARTINOWICH. *Lieber Inst. for Brain Develop., Astellas Res. Inst. of America.*

10:00 YY21 **682.23** Regulation of fear expression by activity-dependent BDNF in direct hippocampal-to-prelimbic projections. H. L. HALLOCK*; J. L. HILL; Y. MAI; H. M. QUILLIAN, IV; H. CHEN; G. R. HAMERSKY; B. J. MAHER; K. MARTINOWICH. *Lieber Inst. for Brain Develop., Astellas Pharma, Lieber Inst. for Brain Develop., Lieber Inst.*

11:00 YY22 **682.24** Behavioral effects of early life stress in the predator confront model of PTSD. N. COBRA BARREIRO BARROCA*; E. H. LIMA UMEOKA; M. SANTOS DA SILVA; J. ANTUNES-RODRIGUES; M. F. JURUENA; N. CYSNE COIMBRA; N. GARCIA-CAIRASCO. *Univ. of São Paulo, Univ. of São Paulo.*

8:00 YY23 **682.25** Susceptibility and resilience to predator odor stress differs between male and female rats. E. M. BLACK*; Z. D. BRODNIK; N. W. SNYDER; J. R. BARSON; R. A. ESPAÑA. *Drexel Univ. Col. of Med., Drexel Univ., A.J. Drexel Autism Inst.*

9:00 YY24 **682.26** True prophylactic treatment effect in a rat PTSD model on plasticity in ventral hippocampal, lateral amygdala, and medial prefrontal cortex and molecular targets. R. M. MILLER*; E. SAITO; B. DABNEY; R. HANSEN; G. MELENDEZ; S. M. PICKARD; C. EDWARDS; L. APONIK; T. CROFTS; S. MANGUM; J. G. EDWARDS. *Brigham Young Univ., Brigham Young Univ.*

10:00 ZZ1 **682.27** Differential baseline and activity-dependent transcriptional profiles between modifiable and modification-resistant memories. J. M. PERISH*; A. SANDOVAL; H. ELAHI; J. PLOSKI. *The Univ. of Texas at Dallas.*

11:00 ZZ2 **682.28** Sex differences in revealing susceptibility to a PTSD-like phenotype in rats (RISP model). D. CRETHERS; K. ALEXANDER; R. NALLOOR; K. BUNTING; A. I. VAZDARJANOVA*. *Augusta Univ., Charlie Norwood VA Med. Ctr.*

8:00 ZZ3 **682.29** Modulation of associative learning and reflexive behavior depends on timing of administration of the fatty acid amide hydrolase (FAAH) inhibitor URB597. E. G. LOWERY-GIONTA*; L. P. SIMMONS; E. BERGMAN; M. ETUMA; N. L. MOORE. *Walter Reed Army Insitute of Res., Walter Reed Army Inst. of Res., Walter Reed Army Inst. of Res., Walter Reed Army Inst. of Res.*

9:00 ZZ4 **682.30** Reflexive, exploratory, and learning behavior characterization of nociceptin/orphanin FQ (NOP) receptor antagonists in a rodent model of traumatic stress. R. M. ENGA*; E. M. BERGMAN; I. H. JEONG; M. D. MAY; M. C. VENTURA; N. L. T. MOORE. *Walter Reed Army Inst. of Res.*

POSTER

683. Other Psychiatric Disorders

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 ZZ5 **683.01** ● Modulation of hippocampal gamma oscillations by amphetamine and guanfacine. B. H. DENNIS; F. WEISZ; A. BRITO DA SILVA; M. O. CUNNINGHAM; S. A. NEALE; T. E. SALT*. *Neurexpert Ltd, UCL Inst. Ophthalmology, Newcastle Univ.*

9:00 ZZ6 **683.02** Gene expression analysis of ASD patients using LCLs. M. TORITSUKA*; M. MAKINODAN; T. YAMAUCHI; Y. YAMASHITA; D. IKAWA; T. KOMORI; S. KIMOTO; K. HAMANO-IWASA; R. TAKADA; A. OMORI; E. SUMIDA; H. KITAOKA; M. HONDA; H. MATSUZAKI; T. KISHIMOTO. *Nara Med. Univ., Univ. of Fukui.*

10:00 ZZ7 **683.03** An image reconstruction approach to characterizing the topography of emotional face space related to borderline personality disorder. C. CHANG*; A. C. RUOCCO; N. DROBOTENKO; A. C. LEE; A. NESTOR. *Univ. of Toronto, Rotman Res. Institute, Baycrest Ctr.*

11:00 ZZ8 **683.04** ▲ Interleukin 6 involvement in a rodent model of chronic fatigue syndrome. R. D. CUEVAS OLGUIN*; T. MARES-BARBOSA; R. VELÁZQUEZ-CONTRERAS; M. MIRANDA-MORALES; S. ROSE-JOHN; M. ATZORI. *UASLP, Univ. Autonoma De San Luis Potosi, Christian Universitet, Univ. Autónoma de San Luis Potosí.*

8:00 ZZ9 **683.05** The interaction between muscarinic and mGlu2/3 in animal models of schizophrenia. J. M. WIERONSKA*; P. CIEśLIK; M. WOźNIAK; A. PILC. *Dept. of Neurobiology, Inst. of Pharmacol., Inst. of Pharmacol. PAS, Inst. of Pharmacol.*

9:00 ZZ10 **683.06** The impact of cortical interneurons on synaptic development in neuropsychiatric disorders. A. KATHURIA*; R. KARMACHARYA. *Harvard Med. Sch., Harvard Univ.*

10:00 ZZ11 **683.07** Induction of hippocampal hyperactivity by dentate gyrus inhibition. D. SCOTT*; C. A. TAMMINGA. *UT Southwestern, Univ. of Texas Southwestern Med. Ctr. at Dallas.*

11:00 ZZ12 **683.08** SK_3 KO in 5-HT neurons inhibits binge-like eating in mice. Y. HE*; X. CAI; P. XU; Y. YANG; C. WANG; H. LIU; I. HYSENI; Y. XU. *Baylor Col. of Med.*

8:00 ZZ13 **683.09** Autonomic imbalance in women with premenstrual syndrome: A model disease of allostatic load. Y. MENG; R. ZHOU*, SR. *Nanjing Univ., Nanjing Univ.*

9:00 ZZ14 **683.10** Anticipation of negative stimuli lead to blunted activation of negative emotion in females with premenstrual syndrome. L. CHEN*; R. ZHOU, SR. *Nanjing Univ., Nanjing Univ., Ctr. for Exptl. Social and Behavioral Res. of Jiangsu Province.*

10:00 ZZ15 **683.11** Investigating the neurobehavioral mechanisms of motivational control in Attention Deficit/Hyperactivity Disorder. A. O. CECELI*; J. Y. NATSHEH; D. CRUZ; E. TRICOMI. *Rutgers Univ. - Newark, Kessler Fndn., Rutgers Univ.*

11:00 ZZ16 **683.12** Withdrawn

8:00 ZZ17 **683.13** ● Significant interaction between purinergic P2X4 receptors and dopamine D1 receptors in mediation of prepulse inhibition of acoustic startle reflex and underlying molecular mechanisms. S. KHOJA*; L. ASATRYAN; M. W. JAKOWEC; D. L. DAVIES. *USC, USC, USC.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 ZZ18 **683.14** Temporal dynamics in schizophrenia and autism spectrum disorder: Convergence, divergence and classification. L. RABANY*; S. BROCKE; V. CALHOUN; B. PITTMAN; S. CORBERA; B. E. WEXLER; M. D. BELL; K. A. PELPHREY; G. D. PEARLSON; M. ASSAF. *Inst. of Living, Olin Neuropsychiatry Res. Center, Inst. of Living, The Mind Res. Network, Yale University, Sch. of Medicine, Dept. of Psychiatry, Central Connecticut State University, Dept. of Psychological Sci., George Washington Univ., Olin Neuropsychiatry Res. Center, Inst. of.*

10:00 ZZ19 **683.15** Exploration of novel dopaminergic circuitry regulating impulsivity. B. KIM*; S. YOON; R. NAKAJIMA; Y. LEE; J. CHOI; B. YOON; G. AUGUSTINE; J. BAIK. *Korea Univ., Korea Inst. of Sci. and Technol., Nanyang Technological Univ.*

11:00 ZZ20 **683.16** Changes in fMRI BOLD signal pre- and post- weight restoration in subjects treated for anorexia nervosa: Implications for the use of neuroimaging in eating disorders research. D. DEVILLE*; K. L. KERR; S. MOSEMAN; J. BODURKA; W. K. SIMMONS. *Laureate Inst. for Brain Res., Oklahoma State Univ., Laureate Psychiatric Clin. and Hosp., Univ. of Oklahoma, Jannsen Res. & Develop.*

8:00 ZZ21 **683.17** Cognitive impacts of fatigue induced in a mouse model of radiation therapy. B. S. WOLFF; L. R. FENG; K. FUKUHARA*; L. SALIGAN. *NIH, Natl. Inst. of Nursing Res., NIH.*

9:00 ZZ22 **683.18** Normalization of VTA dopamine neuron activity activity by mGluR2/3 agonist pomaglumetad methionil in the methylazoxymethanol acetate model of schizophrenia. S. SONNENSCHEIN*; A. A. GRACE. *Univ. of Pittsburgh, Univ. of Pittsburgh Dept. of Neurosci.*

10:00 ZZ23 **683.19** Titration-based BDNF dual effect underlies the opposed behavioral effect of CB1 and TRPV1 agonists. C. A. DINIZ*; C. BIOJONE; S. R. L. JOCA; E. CASTRÉN; F. S. GUIMARÃES; P. C. CASAROTTO. *Sch. of Med. of Ribeirão Preto - Univ., Neurosci. Center, Univ. of Helsinki, Sch. of Pharmaceut. Sci. - Univ. of São Paulo.*

11:00 ZZ24 **683.20** ▲ Effects of chronic exercise training on fatigue: A meta-analysis & meta-regression analysis. S. CHEN*; N. THOM; M. P. HERRING; D. C. MONROE. *Univ. of California-Los Angeles, Wheaton Col., Univ. of Limerick, UC Irvine.*

8:00 ZZ25 **683.21** Beta-arrestin2 is required for the behavioral responses to lysergic acid diethylamide. W. C. WETSEL*; R. M. RODRIGUIZ; V. M. POGORELOV; V. NADKARNI; J. D. MCCORVY; B. L. ROTH. *Duke Univ. Med. Ctr., Med. Col. Wisconsin, Univ. of North Carolina Chapel Hill Med. Sch.*

9:00 ZZ26 **683.22** Overexpression of dopamine D2 receptors on ventral striatal indirect pathway neurons reduces survival in the activity-based anorexia paradigm. A. C. WELCH*; M. S. MCMURRAY; S. C. DULAWA. *Univ. of California San Diego, Miami Univ.*

10:00 AAA1 **683.23** Decreased empathy and functional network alteration in a mice model of ostracism. S. JUNG*; J. YOON; J. CHUNG; Y. JEONG. *Korea Advanced Inst. of Sci. and Technol., KAIST, KAIST.*

11:00 AAA2 **683.24** Role of striatal cholinergic interneurons in the regulation of dopaminergic neurotransmission and implication for striatal-dependent processes. M. FAVIER*; H. JANICKOVA; M. A. PRADO; V. F. PRADO; S. EL MESTIKAWY. *Douglas Mental Hlth. Univ. Inst., McGill Univ., Robarts Res. Institute/University of Western Ontario, Douglas Mental Hlth. Univ. Institute/McGill Univ.*

8:00 AAA3 **683.25** Cocaine drives schizophrenia-like behaviors via cholinergic neurons within ventral striatum. S. HAM*; H. IM. *Korea Inst. of Sci. and Technol.*

9:00 AAA4 **683.26** Regulation of amygdalar corticotropin releasing hormone in the peripartum period. S. ZOUBOVSKY*; J. SCHULKIN; L. MUGLIA. *Univ. of Cincinnati, Georgetown Univ., Cincinnati Children's Hosp. Med. Ctr.*

10:00 AAA5 **683.27** ● Neural white matter distinctions in biologically classified psychosis. C. R. BURTON*; B. S. JACKSON; L. HUANG; D. A. PARKER; D. J. SCHAEFFER; E. S. GERSHON; M. S. KESHAVAN; G. D. PEARLSON; C. A. TAMMINGA; B. A. CLEMENTZ; J. E. MCDOWELL. *Univ. of Georgia, Univ. of Georgia, Western Univ., Univ. of Chicago, Harvard Med. School, Beth Israel Deaconess Med. Ctr., Yale Univ. Sch. of Medicine, Olin Neuropsychiatry Res. Center, Inst. of Living/Hartford Hosp., Univ. of Texas Southwestern Med. Ctr., Univ. of Georgia.*

POSTER

684. Other Psychiatric Disorders II

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 AAA6 **684.01** ▲ Grooming displays robust face validity in the neonatal clomipramine exposure rat model of obsessive compulsive disorder. L. PEEBLES*; K. HILBER; J. BICE; Z. BUSBY; W. FRYLING; M. STELZNER; D. S. KREISS. *Macalester Col., Binghamton Univ.*

9:00 AAA7 **684.02** ▲ Overcoming the one trial tolerance of rat behavior in the elevated plus maze (EPM). K. M. HILBER*; C. BRANTNER; E. CARTER; W. FRYLING; F. LI; S. MOCHIDA; H. MUDRICK; K. NAZAROVA; M. STELZNER; D. S. KREISS. *Macalester Col., Binghamton Univ.*

10:00 AAA8 **684.03** A novel negative allosteric modulator (NAM) of the cannabinoid receptor 1 (CB_1) as a potential therapeutic ligand for the treatment of psychiatric disorders arising from dopamine dysregulation. V. LAM*; G. BAILLIE; I. R. GREIG; M. H. ABDELRAHMAN; L. A. TREMBLEAU; R. A. ROSS. *Univ. of Toronto, Univ. of Dundee, Univ. of Aberdeen.*

11:00 AAA9 **684.04** Novel negative allosteric modulator (NAM) of Cannabinoid Receptor 1 (CB_1) ameliorates symptoms due to dopamine dysregulation in psychiatric disorders. C. A. MIELNIK*; I. R. GREIG; M. H. ABDELRAHMAN; L. A. TREMBLEAU; A. SALAHPOUR; A. J. RAMSEY; R. A. ROSS. *Univ. of Toronto, Univ. of Aberdeen, Univ. of Aberdeen.*

8:00 AAA10 **684.05** ● Withdrawn

9:00 AAA11 **684.06** ● SXC-2023, a potential therapeutic for various CNS disorders, is safe and well-tolerated in phase I clinical studies. C. E. BEYER; M. NEARY*; D. G. LAWTON; P. P. COTTER; T. BECK. *Promentis Pharmaceuticals, INC.*

10:00 AAA12 **684.07** Circuit- and symptom-specific targeted therapy of fragile X syndrome rescues cognitive impairments and normalizes synaptic plasticity in central amygdala. E. A. KNAPSKA*; A. PUSCIAN; M. WINIARSKI; J. BOROWSKA; S. LESKI; T. GORKIEWICZ; M. CHATURVEDI; J. CHMIELEWSKA; M. DZIEMBOWSKA; L. KACZMAREK. *Nencki Inst. of Exptl. Biol. PAS, Yale Sch. of Med., Nencki Inst. of Exptl. Biol., Nencki Inst., Ctr. of New Technologies, Univ. of Warsaw, Univ. of Warsaw, Nencki Inst.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 AAA13 **684.08** Superficial but not basolateral amygdala volume decreases in medication-free patients with obsessive-compulsive disorder. L. ZHANG; X. HU; L. LU; X. HU; X. BU; H. LI; S. TANG; Y. GAO; Y. YANG; Q. GONG; X. HUANG*. *West China Hosp. of Sichuan Univ., West China Hosp. of Sichuan Univ., West China Hosp. of Sichuan Univ.*

8:00 AAA14 **684.09** Chronic pain upregulates kappa opioid receptor signaling in the amygdala. A. L. SEVERINO*; S. LIU; S. PICKENS; R. KARMOUTA; H. NASEF; F. M. LESLIE; F. I. CARROLL; C. J. EVANS; C. M. CAHILL. *UCLA, Shirley and Stefan Hatos Fndn. Ctr. for Pharmacol., UC Irvine, Res. Triangle Inst.*

9:00 AAA15 **684.10** The atypical antipsychotics amisulpride and clozapine do not share discriminative stimulus properties in C57BL/6 mice. F. ZHANG*; R. RICE; T. M. HILLHOUSE; H. NANGUNURI; K. A. WEBSTER; A. N. BALDWIN; T. J. DONAHUE; J. H. PORTER. *Virginia Commonwealth Univ., Weber State Univ.*

10:00 AAA16 **684.11** Chemogenetic activation of prefrontal cortex rescues synaptic and behavioral deficits in a mouse model of 16p11.2 deletion syndrome. B. A. REIN*; W. WANG; F. ZHANG; T. TAN; P. ZHONG; Z. YAN. *SUNY Univ. At Buffalo.*

11:00 AAA17 **684.12** The influence of molecular dentate gyrus lesion on behavior and mossy fiber - CA3 synapses in mice. F. DYBOWSKI*; C. A. TAMMINGA. *UT Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr. at Dallas.*

8:00 AAA18 **684.13** Altered cortical development and neural excitability in the medial prefrontal cortex of B-cell CLL/lymphoma 9 mutant mice. Y. KUANG*. *Shanghai Jiaotong Univ.*

9:00 AAA19 **684.14** Effects of the satiety signal oleoylethanolamide on binge-like food consumption in female rats. A. ROMANO; M. V. MICIONI DI BONAVENTURA; C. GALLELLI; J. KOCZWARA; M. E. GIUSEPPONI; E. MICIONI DI BONAVENTURA; C. D'ADDARIO; T. CASSANO; S. GAETANI; C. CIFANI*. *Sapienza Univ. of Rome, Univ. of Camerino, Sch. of Pharm., Univ. of Teramo, Dept. of Clin. and Exptl. Medicine, Univ. of Foggia.*

10:00 AAA20 **684.15** Electrophysiological markers of distress in neuropsychiatric illness. E. MATTESON*; N. R. PROVENZA; C. LOHMAN; A. BARRIOS-ANDERSON; N. MCLAUGHLIN; D. A. BORTON. *Brown Univ., Brown Univ., Butler Hosp., The Warren Alpert Med. Sch. of Brown Univ., Carney Inst. for Brain Sci.*

POSTER

685. Genetic Influences on Addiction

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 AAA21 **685.01** Genetic effects on mu-opioid receptor ligand biased signaling. X. ZHANG*; S. HUTCHINS; R. GILMORE; E. VALLENDER. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

9:00 AAA22 **685.02** Systems genetics discovery of genetic, genomic, and gene-by-environment mechanisms driving substance use and sensation seeking. P. E. DICKSON*; T. A. ROY; T. D. WILCOX; G. MITTLEMAN; E. J. CHESLER. *The Jackson Lab., Ball State Univ.*

10:00 AAA23 **685.03** Utilizing the BxD genetic reference panel to identify the causal genetic variants of nicotine withdrawal deficits in hippocampal learning. L. R. GOLDBERG; M. G. KUTLU; D. ZEID; L. SEEMILLER; S. GADIWALLA; T. J. GOULD*. *Penn State, Vanderbilt Univ. Sch. of Med.*

11:00 AAA24 **685.04** Sex-dimorphic gene x environment interactions predict tobacco and cannabis lifetime use. M. BORTOLATO*; S. BROWN; W. HOSSAIN; A. M. MANZARDO; M. G. BUTLER; P. J. FITE. *Univ. of Utah, Univ. of Kansas, Univ. of Kansas, Univ. of Kansas, Univ. of Kansas Med. Ctr.*

8:00 AAA25 **685.05** Effects of environmental enrichment on behavioral measures of behavioral regulation in heterogeneous stock rats. K. ISHIWARI*; A. M. GEORGE; C. D. MARTIN; P. J. MEYER; O. POLESSKAYA; A. A. PALMER; J. B. RICHARDS. *Univ. at Buffalo, Univ. at Buffalo, UCSD.*

9:00 AAA26 **685.06** Genetic analysis of multiple measures of locomotor activity in 2,325 outbred heterogeneous stock rats. A. S. CHITRE*; O. POLESSKAYA; J. GAO; A. HORVATH; A. HUGHSON; T. WANG; K. ISHIWARI; C. L. ST. PIERRE; H. WLADECKI; R. CHENG; K. HOLL; J. A. TRIPI; C. P. KING; P. MEYER; L. C. SOLBERG WOODS; T. E. ROBINSON; S. B. FLAGEL; H. CHEN; A. A. PALMER. *Univ. of California San Diego, Univ. of Michigan, The Univ. of Tennessee Hlth. Sci. Ctr., Univ. at Buffalo, Washington Univ., Med. Col. of Wisconsin, Univ. at Buffalo, Wake Forest Baptist Med. Ctr., Univ. of Michigan.*

10:00 BBB1 **685.07** Genome-wide association study of behavioral regulation traits in outbred heterogeneous stock rats. C. D. MARTIN*; K. ISHIWARI; A. M. GEORGE; P. MEYER; A. S. CHITRE; O. POLESSKAYA; A. A. PALMER; J. B. RICHARDS. *Univ. at Buffalo Dept. of Psychology, Res. Inst. on Addictions, Univ. at Buffalo, Res. Inst. On Addictions, Univ. At Buffalo, Univ. of California San Diego, Year, UCSD.*

11:00 BBB2 **685.08** Deciphering the molecular mechanisms underlying heterogeneous nuclear ribonucleoprotein H1 (hnRNP H1) regulation of methamphetamine-induced dopamine release and addictive behaviors. Q. RUAN*; N. YAZDANI; J. BEIERLE; K. ZHENG; J. J. CHEUNG; M. A. COELHO; E. A. FULTZ; A. F. HEALY; F. MORTAZAVI; W. LIN; P. E. A. ASH; D. L. ROSENE; A. EMILI; B. WOLOZIN; K. K. SZUMLINSKI; C. D. BRYANT. *Boston Univ. Sch. of Med., Univ. of California, Santa Barbara, Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

8:00 BBB3 **685.09** Mouse inbred strain survey of oxycodone addiction traits in an opioid multi-stage addiction assessment paradigm. J. A. BEIERLE*; J. SCOTELLARO; J. KELLIHER; R. K. BABBS; M. ZHENG; G. PELTZ; C. D. BRYANT. *Boston Univ., Stanford Univ., Boston Univ. Sch. of Med.*

9:00 BBB4 **685.10** Reward threshold as measured via intracranial self-stimulation in Hnrnph1$^{+/-}$ mice showing reduced methamphetamine addictive behaviors. K. N. BORRELLI*; K. R. DUBINSKY; J. L. SCOTELLARO; E. H. CHARTOFF; W. A. CARLEZON, Jr; C. D. BRYANT. *Boston Univ. Sch. of Med., Harvard Med. Sch., Harvard Med. Sch./ Mclean Hosp.*

10:00 BBB5 **685.11** Cyfip1-mediated molecular mechanisms in the regulation of cocaine addiction. A. KAMALI TAFRESHI; K. PRASAD; G. BARBAYANNIS; A. TASLEEM; S. STRATTON; I. DENIZ; D. L. BENSON; O. BOZDAGI*. *Rutgers Univ., Icahn Sch. of Med. at Mount Sinai.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 BBB6 **685.12** Distinct mRNA profiles for reward devaluation, heroin addiction-like behavior and heroin-induced 'relapse' in the nucleus accumbens of vulnerable and resilient rats. J. E. DOUTON*; C. G. IMPERIO; A. J. MCFALLS; K. E. VRANA; W. M. FREEMAN; P. S. GRIGSON. *Pennsylvania State University, Col. of Med., Pennsylvania State University, Col. of Med., Oklahoma Univ. Hlth. Sci. Ctr., Pennsylvania State University, Col. of Med.*

8:00 BBB7 **685.13** Neuroepigenetic remodeling in cocaine addiction associated alternative splicing and behavior. S. XU*; M. CARPENTER; Q. HU; S. LOMBROSO; S. MCCLORY; K. LYNCH; M. E. WIMMER; C. PIERCE; E. A. HELLER. *Univ. of Pennsylvania, Univ. of Pennsylvinia, Univ. of Pennsylvinia, Temple Univ., Univ. Pennsylvania Sch. of Med., Perelman Sch. of Medicine, Univ. of Pennsyl.*

9:00 BBB8 **685.14** Homeostatic mechanisms of alcohol-induced sleep disturbances in *Drosophila*. M. E. RAMIREZ ROMAN*; C. BILLINI; G. DE JESUS; D. BUFFILL; M. PEREZ; L. DE JESUS; J. L. AGOSTO; N. S. ATKINSON; A. GHEZZI. *Univ. of Puerto Rico, Rio Piedras Campus, Univesity of Texas Austin.*

10:00 BBB9 **685.15** ▲ Analysis of ethanol and ketamine cross-drug interaction reveals potential targets for pharmaco-epigenetic intervention in drug addiction. A. M. PADILLA*; M. RAMÍREZ; C. BILLINI; M. FRANCIA; J. AGOSTO; A. GHEZZI. *Univ. of Puerto Rico Rio Piedras, Univ. of Puerto Rico Río Piedras, Univ. of Puerto Rico, Univ. of Puerto Rico Rio Piedras.*

POSTER

686. Drugs of Abuse and Addiction: Alcohol: Other Behavioral Effects

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 BBB10 **686.01** Sex differences in intermittent access voluntary alcohol consumption and probabilistic reversal learning tested in protracted withdrawal. C. G. AGUIRRE*; Y. SEGURA; S. KOLLI; A. STOLYAROVA; V. MARTY; A. IZQUIERDO; I. SPIGELMAN. *Univ. of California- Los Angeles, Univ. of California- Los Angeles.*

9:00 BBB11 **686.02** Gender-dependent effects of cannabidiol on ethanol binge drinking in mice. J. MANZANARES*; A. VIUDEZ-MARTÍNEZ; M. GARCÍA-GUTIÉRREZ. *Inst. de Neurociencias, Univ. Miguel Hernandez-Csic.*

10:00 BBB12 **686.03** ▲ Maternal Separation modifies the circadian rhythm of water intake. K. REYES-SANTIAGO*; L. MOLINA ARCIA; M. MENDEZ DIAZ; A. E. RUIZ-CONTRERAS; O. PROSPERO-GARCIA. *Univ. Nacional Autonoma de Mexico, Univ. Nacional Autonoma de Mexico Facultad de Medicina, Lab. Neurogenomica Cognitiva, Fac. Psicologia, UNAM.*

11:00 BBB13 **686.04** ▲ Effects of ethanol pre-exposure and age on the acquisition and extinction of conditioned taste aversion in C57Bl/6J mice. J. M. CHOQUETTE; I. K. GALIC; E. M. GRAFELMAN; S. D. DICKINSON*. *St. Olaf Col.*

8:00 BBB14 **686.05** Adolescent intermittent ethanol impairs behavioral flexibility in rats. G. A. GOMEZ ACOSTA*; N. Y. A. SEY; Y. I. SHIH; C. A. BOETTIGER; D. L. ROBINSON. *Univ. of North Carolina at Chapel Hill.*

9:00 CCC1 **686.06** Perinatal lead exposure modifies the locomotor effects of ethanol in *Caenorhabditis elegans:* Role of ethanol metabolism. P. A. ALBRECHT*; A. V. CARRANZA; R. DEZA-PONZIO; L. E. FERNÁNDEZ-HUBEID; L. M. CANCELA; R. ASÍS; M. ASCHNER; M. B. VIRGOLINI. *Fac de C Químicas.Universidad Nacional de Córdoba, Fac de C Químicas.Universidad Nacional de Córdoba, Albert Einstein Col. of Med.*

10:00 CCC2 **686.07** Assessing motivational drive to attain ethanol in *Drosophila melanogaster.* J. CATALANO*; N. MEI; R. AZANCHI; S. SONG; T. BLACKWATER; F. MAHMUD; K. R. KAUN. *Brown Univ., Brown Univ., Brown Univ.*

11:00 CCC3 **686.08** ▲ Day-night variation in ethanol related behaviors in *Drosophila* and mice. K. M. CAPRI*; M. J. MARONI; M. H. CHASSE; A. V. CUSHMAN; J. A. SEGGIO. *Bridgewater State Univ.*

8:00 CCC4 **686.09** ▲ Effects of social environment on alcohol responses. C. M. SIERRA*; P. R. SABANDAL; K. HAN. *The Univ. of Texas at El Paso.*

9:00 CCC5 **686.10** ▲ CRF_2receptor regulation of anxiety- and depressive-like behavior following protracted withdrawal from ethanol. L. MARSHALL; F. SANTOME; G. R. VALDEZ*. *Grand Valley State Univ.*

10:00 CCC6 **686.11** ▲ Energy drinks and its combination with ethanol, increases anxiety and depression in Wistar rats. M. MUNOZ ARENAS*; D. POBLANO PÁEZ; B. B. VÁZQUEZ GONZÁLEZ; A. D. DIAZ. *Facultad de Ciencias Químicas, BUAP, Facultad de Ciencias Quimicas, BUAP.*

11:00 CCC7 **686.12** Role of perineuronal nets in the IfL during fear extinction and reinstatement after AIE. K. L. MARQUARDT*; L. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. S Carolina.*

8:00 CCC8 **686.13** Reward processing alterations for natural reward in alcohol-preferring (P) rats: Incentive contrast, reward discrimination, and alcohol consumption. J. J. MCGRAW*; R. S. GOLDSMITH; H. C. CROMWELL. *Bowling Green State Univ., Bowling Green State Univ.*

9:00 CCC9 **686.14** Modulation of alcohol-seeking behavior by optogenetic induction of corticostriatal LTP in D2-MSNs of transgenic rats. A. BINETTE*; Y. CHENG; X. WANG; J. WANG. *Texas A&M Hlth. Sci. Ctr.*

10:00 CCC10 **686.15** Involvement of the hippocampus in context-induced alcohol-seeking in rats. F. C. CRUZ*; J. M. F. JESUS; T. S. YOKOYAMA; C. R. ZANIBONI; P. PALOMBO; S. A. ENGI; P. C. BIANCHI; R. M. LEÃO. *Univ. Federal de Sao Paulo, UNESP - State Univ. of São Paulo, Univ. Federal da Bahia.*

11:00 CCC11 **686.16** The role of the amygdala in context-induced reinstatement of alcohol self-administration in rats. R. M. LEÃO*; L. T. CAMARGO; P. PALOMBO; P. C. BIANCHI; P. E. OLIVEIRA; F. C. C. CRUZ. *Federal Univ. of Bahia - UFBA, Univ. of Sao Paulo USP, UNESP - State Univ. of São Paulo, Univ. Estadual Paulista, Univ. Federal de Sao Paulo.*

8:00 CCC12 **686.17** Early emotional manifestations of problematic alcohol drinking in rats. S. PANDEY*; J. R. BARSON. *Drexel Univ. Col. of Med.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

687. Drugs of Abuse and Addiction: Cocaine Reinforcement

Theme G: Motivation and Emotion

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 CCC13 **687.01** Prenatal and postnatal alcohol exposure alters cocaine reinforcing effects in adult mice. L. CANTACORPS*; S. MONTAGUD-ROMERO; M. LUJÁN; O. VALVERDE. *Univ. Pompeu Fabra, IMIM-Hospital del Mar Res. Inst.*

9:00 CCC14 **687.02** ▲ Requirement of brain ghrelin signaling in the acquisition of cocaine reward. D. P. DUNN; J. M. R. BASTACKY; S. ABTAHI; E. HOWELL; P. J. CURRIE*. *Dept. Psychology, Reed Col.*

10:00 DDD1 **687.03** Continuous social stress: Individual effects on cocaine self-administration in mice. D. T. ARENA*; K. A. MICZEK. *Tufts Univ., Tufts Univ.*

11:00 DDD2 **687.04** A role for Cdkn1a in mediating the epigenetic inheritance of cocaine resistance in male offspring. S. E. SWINFORD-JACKSON*; B. FANT; M. E. WIMMER; M. C. KNOUSE; A. S. THOMAS; R. C. PIERCE. *Univ. of Pennsylvania, Temple Univ.*

8:00 DDD3 **687.05** Altered cocaine reward, but not reinforcement, in a neuregulin 1 mouse model of schizophrenia. R. CHESWORTH*; T. KARL. *Sch. of Med., Western Sydney Univ., Neurosci. Res. Australia, Univ. of NSW.*

9:00 DDD4 **687.06** Estradiol mediates the development of motivational features of an addicted phenotype in female rats. A. BAKHTI-SUROOSH*; T. NESIL; W. J. LYNCH. *Univ. of Virginia, Univ. of Virginia, Univ. of Virginia.*

10:00 DDD5 **687.07** Intermittent access to cocaine enhances drug-directed motivation without altering response to food stimuli. C. P. KING*; J. A. TRIPI; H. A. PEARSON; P. MEYER. *Univ. at Buffalo.*

11:00 DDD6 **687.08** ▲ Chronic restraint stress and vulnerability to develop cocaine self-administration: Dysregulation of glutamate homeostasis in nucleus accumbens core. M. P. AVALOS; A. S. GUZMAN; D. RIGONI; C. GARCIA-KELLER; F. A. BOLLATI; L. M. CANCELA*. *IFEC-CONICET. Dept Pharm. Sch. of Chem Sci. Nat Univ. of Cordoba, Med. Univ. of South Caroline.*

8:00 DDD7 **687.09** Large-scale phenotyping of addiction-like behaviors in outbred rats identifies three types of individuals: Resistant, vulnerable, and prone to compulsive-like cocaine use. O. GEORGE*; M. BRENNAN; D. CONLISK; L. MATURIN; L. SOLBERG WOODS; A. A. PALMER; G. DE GUGLIELMO. *Scripps Resch Inst., The Scripps Res. Inst., Wake Forest Univ., UCSD.*

9:00 DDD8 **687.10** FDA-approved 5-$HT_{1B/1D}$ receptor agonist, zolmitriptan, decreases cocaine self-administration in male and female rats. R. GARCIA*; D. CHARMCHI; A. COTTER; J. BONADONNA; J. L. NEISEWANDER. *Arizona State Univ.*

10:00 DDD9 **687.11** ▲ A novel dopamine d3-receptor antagonist MC250041 reduces cocaine and sucrose self administration. S. M. DOYLE*; J. BONADONNA; A. ADAMS; J. HESTERMAN; A. VANNAN; R. LUEDTKE; R. H. MACH; B. E. BLASS; P. CHEN; K. KORZEKWA; M. YE; J. NEISEWANDER. *Arizona State Univ., Arizona State Univ., Univ. of North Texas, Univ. of Pennsylvania Perelman Sch. of Med., Tempe Univ., Tempe Univ.*

11:00 DDD10 **687.12** Transcriptional adaptations in the ventral pallidum following cocaine self-administration. M. ENGELN*; R. CHANDRA; H. QADIR; R. HERMAN; H. NAM; M. E. FOX; S. L. COLE; M. LOBO. *Univ. of Maryland Baltimore, Univ. of Maryland, Col. Park.*

8:00 DDD11 **687.13** Cocaine-induced histone methylation on Egr3 and Nab2 promoters. R. CHANDRA*; B. B. EVANS; M. MCGLINCY; A. CHOW; K. K. COVER; M. ENGELN; M. K. LOBO. *Univ. of Maryland Baltimore, Univ. of Maryland, Baltimore, Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

9:00 DDD12 **687.14** Chemogenetic inhibition of prelimbic cortical output to paraventricular nucleus of the thalamus prevents anxiety-related behaviors and attenuates cocaine seeking. G. GIANNOTTI*; S. M. BARRY; B. M. SIEMSEN; J. PETERS; R. A. REICHARD; T. C. JHOU; J. F. MCGINTY. *Med. Univ. of South Carolina.*

8:00 DP12/DDD13 **687.15** (Dynamic Poster) Biphasic effect of abstinence from cocaine self administration on structural plasticity and AMPA receptor expression in prelimbic cortical neurons projecting to the nucleus accumbens core. B. M. SIEMSEN*; G. GIANNOTTI; J. A. MCFADDIN; M. D. SCOFIELD; J. F. MCGINTY. *Med. Univ. of South Carolina.*

POSTER

688. Animal Cognition and Behavior: Decision Making: Prefrontal Cortex

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 DDD14 **688.01** Parallel but independent hierarchies of temporal and reward integration across cortex. M. MORADI SPITMAAN*; H. SEO; D. LEE; A. SOLTANI. *Dartmouth Col., Yale Univ. Sch. of Med., Yale Sch. of Med., Dartmouth Col.*

9:00 DDD15 **688.02** A novel paradigm for studying causal inference and temporal credit assignment in nonhuman primates. S. K. MURRAY*; D. LEE; H. SEO. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med.*

10:00 DDD16 **688.03** Resetting the integrator in perceptual decision-making is reflected in FEF activity. M. SHINN*; H. SEO; D. EHRLICH; D. LEE; J. D. MURRAY. *Yale Univ., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

11:00 DDD17 **688.04** Behavioral mechanisms of reward signaling in the medial and orbital prefrontal cortices. L. M. AMARANTE*; M. S. CAETANO; M. LAUBACH. *American Univ., Univ. Federal Do ABC.*

8:00 DDD18 **688.05** Divergence across the rostral-to-caudal axis of the mPFC in the motivational control of behavior. H. C. GOLDBACH*; T. K. SWANSON; M. LAUBACH. *American Univ.*

9:00 DDD19 **688.06** Strategic factors in the two-armed bandit task: Computational model, validation in rodents, and role of mPFC. T. K. SWANSON*; H. C. GOLDBACH; F. Z. FERNANDEZ; B. B. AVERBECK; M. LAUBACH. *American Univ., American Univ., NIMH/NIH.*

10:00 DDD20 **688.07** Prelimbic-accumbal pathway encoding during learning predicts and is causally linked to behavioral flexibility. E. A. WEST*; M. NIEDRINGHAUS; R. M. CARELLI. *Univ. of North Carolina at Chapel Hill.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 DDD21 **688.08** Effects of prior cocaine exposure on delay-based decision making and prelimbic cortical activity. M. L. NGBOKOLI*; T. M. MOSCHAK; R. M. CARELLI. *Univ. of North Carolina At Chapel Hill.*

8:00 DDD22 **688.09** Integration of value across dimensions in ventromedial prefrontal cortex. G. LOCONTE; H. AZAB; M. WANG; B. Y. HAYDEN*. *Univ. of Minnesota, Univ. of Rochester, Univ. of Rochester, Univ. of Minnesota.*

9:00 DDD23 **688.10** Cocaine exposure sharpens ventral striatum's encoding of variables in a gambling task. P. MEHTA*; B. J. SLEEZER; B. Y. HAYDEN. *Cornell Univ., Univ. of Minnesota.*

10:00 DDD24 **688.11** Economic decision-making in freely moving monkeys performing a delay-based foraging task. T. CASH-PADGETT*; B. Y. HAYDEN. *Univ. of Minnesota.*

11:00 EEE1 **688.12** Independent coding of reward and perceptual salience in the lateral intraparietal area in value-based decisions. Z. WU*; X. CAI; A. CHEN. *East China Normal Univ., NYU Shanghai.*

8:00 EEE2 **688.13** Transient tuning of dACC neurons with mixed selectivity in a naturalistic pursuit task. J. TU*; S. M. YOO; B. Y. HAYDEN. *Univ. of Minnesota.*

9:00 EEE3 **688.14** Foraging behavior and risk preference in freely moving Rhesus macaques. B. R. EISENREICH*; B. Y. HAYDEN. *Univ. of Minnesota, Univ. of Minnesota.*

10:00 EEE4 **688.15** An attentionally-aligned model of value-comparison. H. AZAB*; R. MORENO BOTE; B. Y. HAYDEN. *Univ. of Rochester, Pompeu Fabra Univ., Univ. of Minnesota.*

11:00 EEE5 **688.16** The role of the orbitofrontal cortex in expectation and motivation. Z. S. GILLIS*; E. L. RICH. *Icahn Sch. of Med. At Mount Sinai.*

8:00 EEE6 **688.17** Representations and dynamics in OFC and ACC in a value based decision making task. P. ENEL*; J. D. WALLIS; E. RICH. *Icahn Sch. of Med. At Mount Sinai, Univ. of California Berkeley.*

9:00 EEE7 **688.18** An analysis of the activity in frontal cortex ensembles during a 3-lever decision making task. J. K. SEAMANS*; E. EMBERLY; B. CARACHEO. *UBC, Simon Fraser Univ., UBC Brain Res. Ctr.*

10:00 EEE8 **688.19** How over interpretation of simple behavioral models can lead to unexpected results: In search of the optimal sampling distributions for delay values on the Restaurant Row task. N. J. POWELL*; S. GUPTA; A. R. MALHOTRA; J. K. SEAMANS. *Univ. of British Columbia, Univ. of British Columbia, UBC.*

11:00 EEE9 **688.20** A circuit mechanism for pro-variance bias in decision-making: Behavior, computational modeling, and pharmacology. N. H. LAM*; S. E. CAVANAGH; L. T. HUNT; S. KENNERLEY; J. D. MURRAY. *Yale Univ., Univ. Col. London, Univ. of Oxford, Yale Univ.*

8:00 EEE10 **688.21** Behavioural and neural evidence for irrational biases during evidence accumulation decisions. S. KENNERLEY*; L. T. HUNT; S. E. CAVANAGH. *Univ. Col. London, Univ. of Oxford.*

9:00 EEE11 **688.22** An investigation of predictive coding and behavioural flexibility in the primate prefrontal cortex using multi-area, multi-electrode electrophysiological methods. E. BOSCHIN*; J. M. GALEAZZI GONZALEZ; M. O'NEILL; Z. WU; M. J. BUCKLEY. *Univ. of Oxford.*

10:00 EEE12 **688.23** Multi-neuronal, multi-area, neurophysiological interactions underlying dynamic stimulus- and action-value coding in the macaque prefrontal cortex during learning and decision making. M. O'NEILL*; E. A. BOSCHIN; J. M. GALEAZZI GONZALEZ; Z. WU, ESQ; M. J. BUCKLEY. *Univ. of Oxford.*

11:00 EEE13 **688.24** Exploring the underlying computations and functional interactions of macaque prefrontal areas in rule-based decision making: Recording simultaneously from multiple chronically implanted multi-electrode arrays. J. M. GALEAZZI*; J. M. GALEAZZI GONZALEZ*; E. A. BOSCHIN; M. O'NEILL; Z. WU; M. J. BUCKLEY. *Univ. of Oxford.*

8:00 EEE14 **688.25** The effects of frontopolar cortex lesions on resting state functional connectivity networks in non-human primates. M. J. BUCKLEY*; M. AINSWORTH; A. BELL; Z. WU. *Oxford Univ.*

9:00 EEE15 **688.26** ACC LFP-aided decoding of EEG signals during sequential foraging decisions. A. RAMAKRISHNAN*; D. BERKAY; M. L. PLATT. *Univ. of Pennsylvania.*

10:00 EEE16 **688.27** Using EEG and pupillometry in a foraging task to establish biomarkers for anxiety. D. BERKAY*; A. RAMAKRISHNAN; J. A. STYLLI; M. L. PLATT. *Univ. of Pennsylvania.*

11:00 EEE17 **688.28** Decoding spatial position reveals prospection and working memory in rodent rat cingulate cortex. A. J. GRUBER*; A. MASHHOORI; D. R. EUSTON. *Univ. of Lethbridge, Univ. of Lethbridge, Univ. Lethbridge.*

POSTER

689. Spatial Navigation: Entorhinal Cortex

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 EEE18 **689.01** Early network dynamics underlying the maturation of the medial entorhinal cortex. F. DONATO*; S. G. COGNO; H. A. OBENHAUS; R. I. JACOBSEN; M. MOSER; E. I. MOSER. *Kavli Inst. For Systems Neurosci.*

9:00 EEE19 **689.02** Episodic time coding in lateral entorhinal cortex. A. TSAO*; J. SUGAR; L. LU; C. WANG; J. J. KNIERIM; M. MOSER; E. I. MOSER. *Kavli Inst. for Systems Neurosci., Johns Hopkins Univ.*

10:00 EEE20 **689.03** ▲ Object-vector coding in medial entorhinal cortex: Object shape and object dimensions. E. R. SKYTØEN; Ø. A. HØYDAL; S. O. ANDERSSON; E. I. MOSER*; M. MOSER. *NTNU, NTNU, Kavli Inst. Systems Neurosci.*

11:00 EEE21 **689.04** The relationship between the relative firing rates of individual grid fields and hippocampal remapping. C. LYKKEN*; B. R. KANTER; J. DICKINSON; K. ASUMBISA; C. G. KENTROS. *NTNU, Univ. of Oregon.*

8:00 EEE22 **689.05** Functional characterization of neurons in layer V of the medial entorhinal cortex. D. C. ROWLAND*; H. A. OBENHAUS; R. R. NAIR; C. G. KENTROS; E. I. MOSER; M. MOSER. *NTNU, NTNU, Kavli Inst. Systems Neurosci.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 EEE23 **689.06** Miniaturized two-photon microscopy enables the study of functional network topography in the medial entorhinal cortex. H. A. OBENHAUS*; T. ROSE; W. ZONG; A. TSAO; F. DONATO; Ø. A. HØYDAL; P. M. GOLTSTEIN; M. MOSER; L. CHEN; H. CHENG; E. I. MOSER; T. BONHOEFFER. *Kavli Inst. For Systems Neurosci., Max Planck Inst. of Neurobio., Inst. of Mol. Medicine, Peking-Tsinghua Ctr. for Life Sciences, Beijing Key Lab. of Cardiometabolic Mol. Medicine, Peking Univ., James H. Clark Ctr. for Biomed. Engin. and Sci.*

10:00 EEE24 **689.07** Positive acceleration selectively controls theta frequency in the hippocampus and entorhinal cortex. E. KROPFF CAUSA*; J. E. CARMICHAEL; M. MOSER; E. I. MOSER. *Leloir Inst. - IIBBA - CONICET, Kavli Inst. Systems Neurosci, Dartmouth Col.*

11:00 EEE25 **689.08** Grid cell formation and early postnatal experience. I. U. KRUGE*; T. WAAGA; T. WERNLE; E. I. MOSER; M. MOSER. *NTNU.*

8:00 EEE26 **689.09** Correlation structure of grid cells is preserved during sleep. R. GARDNER*; L. LU; T. WERNLE; M. MOSER; E. I. MOSER. *Kavli Inst. for Systems Neurosci., Baylor Col. of Med., Kavli Inst. for Systems Neuroscience/ Cnc, Kavli Inst. Systems Neurosci.*

9:00 FFF1 **689.10** ▲ Theta-phase dynamics of retrospective and prospective positions signals in medial entorhinal cortex. A. Z. VOLLAN*; R. J. GARDNER; M. B. MOSER; E. I. MOSER. *Kavli Inst. For Systems Neurosci.*

10:00 FFF2 **689.11** The effect of recent experience on hippocampal remapping and spatial memory impairment. V. A. KVEIM*; B. R. KANTER; C. LYKKEN; C. G. KENTROS. *Kavli Inst.*

11:00 FFF3 **689.12** Optical stimulation of the pathway from the basolateral amygdala to the medial entorhinal cortex in rats enhances retention of spatial learning. K. L. WAHLSTROM*; R. T. LALUMIERE. *Univ. of Iowa, Univ. of Iowa.*

8:00 FFF4 **689.13** Factoring space and time in the hippocampal-entorhinal system. D. MCNAMEE*; K. L. STACHENFELD; M. M. BOTVINICK; S. GERSHMAN. *Univ. of Cambridge, Univ. Col. London, Princeton Neurosci. Inst., DeepMind, Univ. Col. London, Harvard Univ.*

9:00 FFF5 **689.14** A topographical map of space: Micro-organization of grid cells in the medial entorhinal cortex. Y. GU*; S. LEWALLEN; A. A. KINKHABWALA; C. DOMNISORU; K. YOON; J. L. GAUTHIER; I. R. FIETE; D. W. TANK. *Princeton Univ., Harvard Univ., Caltech, Baylor Col. of Med., UT Austin.*

10:00 FFF6 **689.15** Relatively specific inhibition of grid cells by somatostatin positive interneurons in medial entorhinal cortex. R. M. HAYMAN*; N. BURGESS. *Inst. of Neurol., UCL.*

11:00 FFF7 **689.16** A computational model of visual recognition memory via grid cells. A. BICANSKI*; N. BURGESS. *UCL.*

8:00 FFF8 **689.17** Entorhinal neurons exhibit cue locking in rodent VR. G. CASALI*; C. DOWELL; S. SHIPLEY; R. HAYMAN; C. BARRY. *UCL.*

9:00 FFF9 **689.18** Relationship between place cell recruitment and the spatial scale of open-field environments revealed using a novel scalable recording apparatus. S. TANNI*; C. BARRY. *Univ. Col. London.*

10:00 FFF10 **689.19** Absence of visual input affects place and grid cell activity. Y. LU*; G. CHEN; N. BURGESS; T. WILLS; F. CACUCCI. *Univ. Col. London.*

11:00 FFF11 **689.20** 2-photon imaging of mouse hippocampus during virtual navigation of open arenas. G. CHEN*; R. M. HAYMAN; Y. LU; J. KING; T. KECK; F. CACUCCI; N. BURGESS. *Univ. Col. of London, Inst. of Neurol., UCL, UCL, UCL, UCL.*

8:00 FFF12 **689.21** Grid cell phase coding does not require constant rhythmicity. D. BUSH*; N. BURGESS. *UCL Inst. of Cognitive Neurosci.*

9:00 FFF13 **689.22** Predictive coding in the bat hippocampus. D. OMER*; N. ULANOVSKY. *Weizmann Inst. of Sci.*

10:00 FFF14 **689.23** Representation of 3D space in the entorhinal cortex of flying bats. G. GINOSAR*; A. FINKELSTEIN; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci.*

11:00 FFF15 **689.24** Representation of large-scale spaces in the hippocampus of flying bats. T. ELIAV*; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci.*

POSTER

690. Animal Cognition and Behavior: Social Memory and Cognition I

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 FFF16 **690.01** The beneficial role of noisy inhibitory signaling in collective behavior. H. C. BELL*; F. D. BROCCARD; Y. ZHU; J. C. NIEH. *Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego.*

9:00 FFF17 **690.02** Effect of anterior cingulate cortex lesions on social vicarious reinforcement in monkeys. B. M. BASILE*; J. SCHAFROTH; C. KARASKIEWICZ; S. W. CHANG; E. A. MURRAY. *Natl. Inst. of Mental Health, NIH, Yale Univ.*

10:00 FFF18 **690.03** ▲ Effect of primate amygdala and anterior cingulate cortex lesions in viewing biologically relevant stimuli. J. SCHAFROTH*; B. M. BASILE; D. R. LUCAS, III; E. A. MURRAY. *Natl. Inst. of Hlth., Natl. Inst. of Mental Health, NIH, NIH, NIMH, NIH.*

11:00 FFF19 **690.04** Single-neuronal correlates of group behavior and reciprocity in three interacting macaques. R. BÁEZ-MENDOZA*; E. P. MASTROBATTISTA; A. J. WANG; K. HU; Z. M. WILLIAMS. *Massachusetts Gen. Hospital-Harvard Med. Sch.*

8:00 FFF20 **690.05** Dorsal premotor neurons distinguish between self and other's future choices. L. FERRUCCI*; R. CIRILLO; E. MARCOS; S. FERRAINA; A. GENOVESIO. *Univ. of Rome Sapienza, Sapienza Univ. of Rome, Sapienza Univ. Rome, Sapienza Univ.*

9:00 FFF21 **690.06** A method to analyze sociability in the common marmoset based on 3D tracking. D. BUITRAGO-PIZA*; G. M. PARFITT; B. W. CORRIGAN; J. C. MARTINEZ-TRUJILLO. *Western Univ., Western Univ., Univ. of Western Ontario, Univ. of Western Ontario.*

10:00 FFF22 **690.07** ● Evaluation of the 3-chamber sociability test in the olfactory bulbectomized (OB) rat model of depression. K. L. MCHUGH*; H. DOHERTY; P. CALCAGNO; M. CLARKE; D. EYERMAN; C. SANCHEZ; M. ROCHE; D. P. FINN; J. KELLY. *Natl. Univ. of Ireland Galway, Galway Neurosci. Ctr. NCBES, Natl. Univ. of Ireland, Galway, Alkermes, Inc.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 FFF23 **690.08** ▲ The medial prefrontal cortex is involved in social odor recognition memory in rats. S. ROBINSON*; S. J. ALDRICH; L. GRANATA; R. D. HEINZ; C. M. DAVIS. *Hamilton Col., Johns Hopkins Univ. Sch. of Med.*

8:00 FFF24 **690.09** Alteration in the brain induced by memory retrieval. M. MARUI*; K. ADACHI; S. TOMONAGA; T. HAYASHI; M. NAGASAWA. *Meijo Univ., Kyoto Univ.*

9:00 GGG1 **690.10** The role of Igsf9b in prefrontal cortical function. C. ALEXANDROPOULOS*; S. YANG; N. MACK; Y. LI; W. GAO. *Drexel Univ. Col. of Med.*

10:00 GGG2 **690.11** Social dominance in a rat model of fragile-X syndrome. K. SAXENA*; J. WEBSTER; A. HALLAS-POTTS; R. MACKENZEI; G. TAYLOR; P. SPOONER; D. THOMSON; P. KIND; S. CHATTARJI; R. MORRIS. *Univ. of Edinburgh, Univ. of Cambridge, Ctr. for Brain Develop. and Repair, The Patrick Wild Ctr., The Univ. of Edinburgh, Natl. Ctr. for Biol. Sci.*

11:00 GGG3 **690.12** Analysis of the role of 5-HT2aR as a target for enhanced social cognition and episodic memory. N. V. WEISSTAUB*; A. SACSON; J. F. MORICI; P. BEKINSCHTEIN. *Inst. de Neurociencia Cognitiva Y Traslacional, Inst. de Neurociencia Cognitiva y Traslacional, Inst. de Neurociencia Cognitiva y Traslacional.*

8:00 GGG4 **690.13** mTOR-dependent interferon signaling in microglia and social memory deficits in a mouse model of tuberous sclerosis. M. F. LOPEZ-ARANDA*; I. CHATTOPADHYAY; G. M. BOXX; E. R. FRALEY; T. SILVA; M. ZHOU; M. PHAN; R. MANDANAS; K. BACH; S. LIU; N. LI; G. CHENG; A. RZHETSKY; S. A. WHITE; Y. ZHOU; A. J. SILVA. *Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of Chicago, Univ. of California Los Angeles, Univ. of California Los Angeles, Sch. of Basic Med. Sci., Univ. of Chicago, Inst. of Brain Function and Dis. Qingdao Univ.*

9:00 GGG5 **690.14** Contribution of nucleus accumbens to impulsive choice behavior based on the last reward experience. J. YUZA*; M. OKUBO; Y. KOMURA; R. KAJIWARA. *Meiji Univ., Meiji Univ., AIST, Meiji Univ. / Dept. of Electro. & Bioinfo.*

10:00 GGG6 **690.15** Striatal electrophysiological fingerprint during social interaction in freely moving rats. R. L. REDONDO*; R. LUETOLF; J. TAMPE; O. FAJARDO; M. BAINIER; P. SCHOENENBERGER. *F. Hoffmann-La Roche Ltd, F. Hoffmann-La Roche Ltd.*

11:00 GGG7 **690.16** Role of orbitofrontal cortex in social recognition and social-enhanced safety learning in rats. K. D. ANDREWS*; E. A. LUNGWITZ; A. D. DIETRICH; N. S. RACE; S. MAJUMDAR; R. SHI; T. W. MCALLISTER; W. A. TRUITT. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Purdue Univ., Purdue Univ., Indiana Univ. Sch. of Med.*

8:00 GGG8 **690.17** Social enrichment enhances, while social isolation impairs, social recognition memory in male rats. M. TOYOSHIMA*; M. SUGITA; Y. ICHITANI; K. YAMADA. *Univ. of Tsukuba.*

9:00 GGG9 **690.18** Activation of oxytocin receptor-expressing neurons in anterior cingulate cortex during helping behaivor in rats. A. YAMAGISHI*; N. SATO. *Kwansei Gakuin Univ.*

10:00 GGG10 **690.19** Rousseau's rats. Cooperation, communication and constructing social contracts in an iterated Stag Hunt task. S. M. RENNIE*; E. J. DEWITT; A. SILVA; J. FRAZAO; M. MOITA. *Fundação Champalimaud.*

11:00 GGG11 **690.20** Searching for neural substrate underlying rule-observance behavior of competing mice in social conflict. J. BYUN*; A. ALKAHWAJI; H. SHIN. *Inst. For Basic Sci.*

8:00 GGG12 **690.21** Age affects social interaction and social novelty seeking in mice. A. C. BARCELOS*; F. MOURO; A. SEBASTIÃO. *Inst. De Medicina Mol., Faculdade de Medicina, Univ. de Lisboa, Portugal, Hosp. Garcia de Orta.*

9:00 GGG13 **690.22** Muscarinic acetylcholine receptors play a role in social learning in female mice. K. S. ERVIN*; S. HOWARD; P. SANKAR; E. CHOLERIS. *Univ. of Guelph, Univ. of Guelph.*

10:00 GGG14 **690.23** Memory and integration of faces and vocalizations in neuronal populations in the primate prefrontal cortex. S. SHAH*; T. LINCOLN; K. KEVELSON; L. M. ROMANSKI. *Univ. of Rochester Sch. of Med. and Den, Univ. of Rochester Sch. of Med. and Dent.*

11:00 GGG15 **690.24** Contrasting characteristic behaviors in common laboratory mouse strain. R. SULTANA; O. M. OGUNDELE*; C. C. LEE. *Louisiana State Univ., Louisiana State Univ., Louisiana State Univ. Sch. of Vet. Med.*

8:00 GGG16 **690.25** Functional assessment of the neuronal circuits underlying social hierarchy through whole-brain IEG screening and targeted DREADD manipulation. H. K. OYIBO*; G. B. KELLER. *Friedrich Miescher Inst. for Biomed. Resear.*

POSTER

691. Animal Cognition and Behavior: Social Memory and Cognition II

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 GGG17 **691.01** Causal manipulations of live social gaze by microstimulating the primate prefrontal cortex. S. FAN*; O. DAL MONTE; N. A. FAGAN; C. C. J. CHU; S. W. CHANG. *Yale Univ.*

9:00 GGG18 **691.02** Social action monitoring in the mirror and the mentalizing systems of the macaque brain. T. NINOMIYA*; A. NORITAKE; M. ISODA. *Natl. Inst. for Physiological Sci.*

10:00 GGG19 **691.03** Social curiosity in rhesus monkeys. J. A. JOINER*; N. A. FAGAN; S. W. C. CHANG. *Yale Univ., Yale Univ.*

11:00 GGG20 **691.04** Neural coding of live social gaze interactions. O. DAL MONTE*; S. FAN; N. A. FAGAN; C. C. J. CHU; S. W. CHANG. *Yale Univ., Yale Univ.*

8:00 GGG21 **691.05** Tensor component analysis (TCA) of spiking activity related to social gaze dynamics in prefrontal cortex and the amygdala. C. C. CHU*; O. DAL MONTE; S. FAN; N. FAGAN; S. W. CHANG. *Yale Univ., Yale Univ.*

9:00 GGG22 **691.06** Observation learning in rats: Effect of strain and hormonal status. R. TROHA*; J. WANG; T. SHAO; E. MARKUS. *Univ. of Connecticut.*

10:00 GGG23 **691.07** Observational learning in rats: Effects of number and quality of observations. E. J. MARKUS*; R. TROHA; D. DONG; N. HERNANDEZ; T. SHAO. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 GGG24 **691.08** Dual gating by vasopressin of hippocampal CA2 soma and presynaptic terminals in lateral septum. F. LEROY*; L. M. BOYLE; J. PARK; A. ASOK; D. H. BRANN; T. MEIRA; E. W. BUSS; E. R. KANDEL; S. A. SIEGELBAUM. *Columbia Univ., Columbia Univ. / HHMI, Columbia Univ. / HHMI.*

8:00 GGG25 **691.09** Social memory encoding by Vasopressin 1b receptor-expressing Pyramidal neurons in CA2 hippocampal subfield of mice. A. CYMERBLIT-SABBA*; M. STACKMANN; S. K. WILLIAMS AVRAM; M. C. GRANOVETTER; A. SMITH; H. LEE; J. SONG; W. YOUNG III. *NIMH, Univ. of Kansas, Kyungpook Natl. Univ.*

9:00 GGG26 **691.10** Oxytocin receptor-positive dentate neurons mediate the effects of state-dependent memory on social behavior. M. MEYER*; K. NISHIMORI; J. RADULOVIC. *Northwestern Univ. - Chicago, Grad Sch. of Agric Sci, Tohoku Univ., Northwestern Univ.*

10:00 GGG27 **691.11** Ventral hippocampal inputs to the mPFC regulate social memory. M. PHILLIPS*; L. POZZO-MILLER. *Univ. of Alabama at Birmingham, Univ. Alabama-Birmingham.*

11:00 HHH1 **691.12** Socially learned food preferences are associated with sex-specific changes in dorsal hippocampal dopamine release in mice. R. MATTA*; M. J. RUSSELL; C. L. LIMEBEER; L. A. PARKER; E. CHOLERIS. *Univ. of Guelph.*

8:00 HHH2 **691.13** Delineating the hippocampal circuitry underlying pair bonding in prairie voles. J. A. TEMPLE*; M. A. BEST; H. R. DOUGHERTY; Z. R. DONALDSON. *Univ. of Colorado Boulder, Univ. of Colorado, Boulder.*

9:00 HHH3 **691.14** Exploring the role of hippocampal area CA2 in the pilocarpine mouse model of mesial temporal lobe epilepsy. A. WHITEBIRCH*; K. S. VADDURI; B. SANTORO; S. A. SIEGELBAUM. *Columbia Univ., Columbia Univ. Coll P & S.*

10:00 HHH4 **691.15** Modified firing in hippocampal area CA2 in a mouse model of schizophrenia during social tasks. M. L. DONEGAN*; F. STEFANINI; S. FUSI; J. A. GORDON; S. A. SIEGELBAUM. *Columbia Univ., Natl. Inst. of Mental Hlth., Columbia Univ. Coll P & S.*

11:00 HHH5 **691.16** Correlations of autism-like behaviors and altered hippocampal circuit following febrile seizures. Y. YU*; J. KANG; K. LEE; D. YOO; D. PARK; K. PARK; D. KIM. *Soonchunhyang Univ.*

POSTER

692. Learning and Memory: Pharmacology

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 HHH6 **692.01** ▲ Maturation of excitatory synapses studied in parallel with spatial navigation ability in the juvenile rat. N. VALIBEIGI*; C. KIMBALL; D. CHEN; R. H. OGOE; D. G. MCHAIL; T. C. DUMAS. *Krasnow Inst. for Advanced Study, George Mason Univ., Krasnow Inst., Krasnow Inst., George Mason Univ.*

9:00 HHH7 **692.02** ● NYX-458, a novel small molecule NMDA receptor modulator, enhances novel object recognition in rats. E. M. COLECHIO*; T. K. BHATTACHARYA; J. AGUADO; J. GAJDA; A. BARTH; E. RODRIGUEZ; P. KANSARA; E. POLLARD; M. A. KHAN; P. K. STANTON; X. L. ZHANG; M. S. BOWERS; J. R. MOSKAL; C. N. CEARLEY. *Aptinyx, Inc., Aptinyx Inc, Aptinyx, Inc, New York Med. Col.*

10:00 HHH8 **692.03** ● NYX-458, a NMDA receptor modulator, when tested in aged F344 rats, facilitates LTP and reverses age-related cognitive deficits as measured by the Morris water maze. A. L. BARTH*; J. D. AGUADO; A. MOGHADAM; P. K. STANTON; M. A. KHAN; J. R. MOSKAL; C. CEARLEY. *Aptinyx Inc, Aptinyx Inc., New York Med. Col., New York Med. Col., Northwestern Univ., Aptinyx Inc.*

11:00 HHH9 **692.04** Neuroprotective effects of chronic memantine treatment on okadaic acid (ICV) induced neurotoxicity at behavioral, structural and molecular level in rats. G. BESELIA*; M. DASHNIANI; M. BURJANADZE; N. CHKHIKVISHVILI; L. KRUASHVILI; M. CHIGLADZE. *I. Beritashvili Ctr. of Exptl. Biomedicine, Petre Shotadze Tbilisi Med. Acad.*

8:00 HHH10 **692.05** Dopamine and norepinephrine transporter inhibitors act synergistically to enhance long-term memory. M. M. PANTONI*; C. DOAN; T. QIU; L. HAMMAM; S. G. ANAGNOSTARAS. *UC San Diego.*

9:00 HHH11 **692.06** ● Iso-alpha-acids, bitter components in beer, improve memory function via dopaminergic activation in hippocampus. Y. ANO*; A. HOSHI; S. UCHIDA; K. YAMADA; K. KONDO. *Kirin Company, Limited, Kirin Company, Limited, Kyowa Hakko Kirin Co., Ltd.*

10:00 HHH12 **692.07** The effects of serotonergic hallucinogens on temporal processing. B. AKDOGAN*; S. DEWIL; B. COTTEN; A. WANAR; J. GINGRICH; P. D. BALSAM. *Columbia Univ., Barnard Col., New York State Psychiatric Inst.*

11:00 HHH13 **692.08** Effects of 5-HT6 receptor blockade on repetitive behaviors in the BTBR mouse model of autism spectrum disorder. S. PETERSON*; R. POSADAS; A. HERNANDEZ; J. DURO; D. LOPEZ-SANCHEZ; D. A. AMODEO. *California State Univ. San Bernardino, California State Univ. San Bernardino.*

8:00 HHH14 **692.09** Neurobehavioral effects of chronic risperidone administration on juvenile male rats. M. F. DE BUTTE*; L. BOMAN. *West Texas A&M Univ.*

9:00 HHH15 **692.10** ● Fenfluramine is a sigma-1 receptor positive modulator in mice. T. MAURICE*; A. GAMMAITONI; B. S. GALER; P. MARTIN. *INSERM UMR-S1198, Zogenix Inc.*

10:00 HHH16 **692.11** Cognitive enhancement and metabolic effects of Vyvanse in rats. H. M. MURPHY*; C. H. WIDEMAN. *John Carroll Univ., John Carroll Univ.*

11:00 HHH17 **692.12** Exploration of polyfunctional flavonoids based compounds in Alzheimer's disease: Design, synthesis and biological evaluations. M. SINGH*; O. SILAKARI. *Chitkara Univ., Punjabi Univ.*

8:00 HHH18 **692.13** Exercise mediates anesthetic recovery in diabetic and control rats. C. SINON*; A. OTTENSMEYER; A. SLONE; M. PARDUE; P. S. GARCIA. *Emory Univ., Emory Univ., Vanderbilt Univ., Georgia Inst. of Technol., Atlanta VA Med. Ctr. / Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 HHH19 **692.14** Effects of the chronic administration of caffeine and pramipexole on recognition memory and nerve growth factor expression in the hippocampus of mice. L. MARTINEZ MENDIETA*; P. HORTA LÓPEZ; F. LUNA MORALES; V. ALATRISTE BUENO; D. I. LIMÓN; I. MARTÍNEZ GARCÍA. *Benemérita Univ. Autónoma de Puebla, Benemérita Univ. Autónoma de Puebla.*

10:00 HHH20 **692.15** ▲ Standardized extract of ginkgo biloba modulates expression of the brain derived neurotrophic factor (bdnf) in the dorsal hippocampal formation of the rats subjected to the novel object recognition memory. B. G. MURATORI*; C. ZAMBERLAM; T. BIUDE; B. NOZIMA; J. CERUTTI; S. CERUTTI. *Univ. Federal of São Paulo, Univ. Federal of São Paulo, Univ. Federal of São Paulo.*

11:00 HHH21 **692.16** Subchronic treatment with Morin improves memory in healthy mice. H. MARTINEZ-CORIA*; N. SERRANO GARCIA; G. S. LOPEZ-CHAVEZ; A. Y. GONZALEZ-MUÑIZ; H. E. LOPEZ-VALDES; M. OROZCO-IBARRA; M. A. TORRES-RAMOS. *Univ. Nacional Autonoma de Mexico, Inst. Nacional de Neurología y Neurocirugía.*

8:00 HHH22 **692.17** Cognitive consequences of opioid analgesics on nonhuman primate memory. C. JOHNSON*; B. M. ROEDER; J. B. DAUNAIS; J. R. STAPLETON-KOTLOSKI; J. A. ROWLAND; E. E. ROGERS; C. T. WHITLOW; L. J. PORRINO; S. A. DEADWYLER; R. E. HAMPSON. *Wake Forest Sch. of Med., Wake Forest Sch. of Med., Wake Forest Univ. Sch. of Med., Wake Forest Univ. Sch. of Med., Wake Forest Univ. Sch. of Med., Wake Forest Sch. of Med., Wake Forest Sch. of Med.*

9:00 HHH23 **692.18** Behavioral and molecular effects of peripubertal cannabidiol treatment on perinatal delta-9-tetrahydrocannabinol exposed rats. V. MICALE*; T. STARK; G. GIURDANELLA; M. KUCHAř; C. D'ADDARIO; F. DRAGO; R. MECHOULAM; S. SALOMONE; A. SULCOVA. *Natl. Inst. Mental Hlth., Dept of Biomed. and Biotechnological Sci., Masaryk Univ., Univ. of Teramo, Dept of Biomed. and Biotechnological Sciences,, Hebrew Univ. of Jerusalem.*

10:00 HHH24 **692.19** Two rounds of transcriptional regulation in the insular cortex are necessary for conditioned taste aversión storage. L. A. RODRÍGUEZ-BLANCO*; A. RIVERA-OLVERA; M. L. ESCOBAR. *Facultad de Psicologia, UNAM, UNAM, Fac Psicologia.*

11:00 HHH25 **692.20** Effect of the inhibition of palmitoylation on the formation and maintenance of spatial memory. O. G. URREGO MORALES*; I. DELINT-RAMÍREZ; F. BERMUDEZ-RATTONI. *Univ. Nacional Autonoma de Mexico, Univ. of Texas Southwestern Med. Ctr., UNAM.*

8:00 HHH26 **692.21** Prenatal alcohol-induced deficits in trace fear conditioning and Morris water maze place learning are ameliorated by the histamine H_3 receptor inverse agonist SAR152954. J. L. WAGNER*; S. D. DAVIES; A. H. MOEZZI; K. S. LUJAN; E. J. RAPPAPORT; D. A. HAMILTON; D. SAVAGE, II. *Univ. of New Mexcio, Univ. of New Mexcio.*

9:00 HHH27 **692.22** Pharmacological blockade of adenosine A_{2A}but not A_1 receptors enhances goal-directed valuation in satiety-based instrumental behavior. J. CHEN*; Y. LI; Y. HE; X. PAN; Y. RUAN; L. HUANG; C. HE; Z. WANG; X. ZHANG. *Wenzhou Med. Univ., Sch. of Optometry and Ophthalmology and Eye Hospital, The Inst. of Mol. Medicine, Wenzhou Med. Univ., Dept. of Neurology, The 2nd Affiliated Hosp. and Yuying Children's Hosp. of Wenzhou Med. Univ.*

10:00 HHH28 **692.23** ▲ Antagonism of muscarinic, but not estrogen receptors, impairs divided attention in male rats. N. PISTORY*; P. R. NICKLAS; M. L. GROFT; K. ZIMMER; D. E. MOSURA; W. R. HAWLEY; P. J. MCLAUGHLIN. *Edinboro Univ. of Pennsylvania.*

11:00 HHH29 **692.24** ● Potentiation of muscarinic acetylcholine receptor 4 (m_4) as compensation for transcription factor 4(tcf4) deficiency. A. MOORE*; A. J. WU; J. D. WEISS; L. CHEN; R. G. GOGLIOTTI; C. M. NISWENDER; J. D. SWEATT. *Vanderbilt Univ., Vanderbilt Univ.*

8:00 HHH30 **692.25** Pharmacokinetics and safety of intranasal versus subcutaneous insulin for brain delivery in the mouse. M. NEDELCOVYCH*; L. LOVELL; A. GADIANO; Y. WU; A. MANNING; A. G. THOMAS; S. S. KHUDER; S. YOO; J. XU; J. MCARTHUR; N. J. HAUGHEY; D. VOLSKY; R. RAIS; B. S. SLUSHER. *Johns Hopkins Univ., Johns Hopkins Drug Discovery, Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ., Johns Hopkins, Annenberg Bldg., 21-42.*

9:00 HHH31 **692.26** ● A central nervous system-penetrant soluble guanylate cyclase stimulator reduced spine density loss in aged rats and mice. S. CORREIA*; J. E. JONES; C. REX; G. LIU; A. CARVALHO; P. GERMANO; R. R. IYENGAR; C. J. WINROW; M. G. CURRIE; J. R. HADCOCK. *Ironwood Pharmaceuticals, Afraxis Inc.*

10:00 HHH32 **692.27** ● The brain penetrant soluble guanylate cyclase stimulator IWP-247 improved thigmotaxis and increased hippocampal N-acetylaspartate (NAA) concentrations in aged rats. J. E. JONES*; C. J. WINROW; S. S. CORREIA; S. JACOBSON; R. HODGSON; J. PUOLIVALI; K. LEHTIMÄKI; A. CARVALHOA; P. GERMANO; J. V. TOBIN; K. TANG; R. R. IYENGARA; M. G. CURRIE; J. R. HADCOCK. *Ironwood Pharmaceuticals, Charles River Discovery.*

11:00 HHH33 **692.28** Synaptic consolidation as a temporally variable process: Uncovering theparameters modulating its time-course. M. A. CASAGRANDE*; J. HAUBRICH; L. K. PEDRAZA; B. POPIK; J. A. QUILLFELDT; L. D. ALVARES. *Univ. Federal do Rio Grande do Sul, McGill Univ.*

8:00 HHH34 **692.29** ● A central nervous system-penetrant soluble guanylate cyclase stimulator increases cerebral blood flow and modulates fMRI-BOLD responses in rodents. C. J. WINROW*; J. E. JONES; P. GERMANO; S. JACOBSON; S. S. CORREIA; K. W. TANG; J. TOBIN; R. R. IYENGAR; P. P. KULKARNI; C. F. FERRIS; M. CURRIE; J. R. HADCOCK. *Ironwood Pharmaceuticals, Axial Biotherapeutics, Northeastern Univ. Dept. of Psychology, Northeastern University, Ctr. for Translational NeuroImaging.*

POSTER

693. Human Cognition and Behavior: Human Long-Term Memory: Medial Temporal Lobe I

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 HHH35 **693.01** Distinct patterns of activity are associated with spatial memory encoding in the anterior but not posterior hippocampus. H. A. FRITCH; S. P. MACEVOY; B. M. JEYE; S. D. SLOTNICK*. *Boston Col.*

9:00 HHH36 **693.02** Human medial temporal lobe contributions to learned approach-avoidance conflict detection and resolution. S. CHU*; M. MARGERISON; S. THAVABALASINGAM; E. B. O'NEIL; R. ITO; A. C. H. LEE. *Univ. of Toronto.*

Wed. AM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 DP14/HHH37 **693.03** (Dynamic Poster) Crossmodal integration performance is specifically related to medial perirhinal cortex thickness in very early Alzheimer's disease. S. KRUMM*; A. U. MONSCH; J. REINHARDT; R. W. KRESSIG; K. I. TAYLOR. *Felix Platter Hosp., Univ. of Basel, Univ. Hosp. Basel, Univ. Hosp. Zurich, Univ. of Zurich, Univ. of Basel, Univ. of Cambridge.*

11:00 HHH38 **693.04** Factors, other than amnesia, that predict performance on tests of news event memory. A. T. J. CAWLEY-BENNETT; I. E. ASP; S. GOLSHAN; C. N. SMITH*. *Veterans Affairs San Diego Healthcare Syst., Univ. of California San Diego, Univ. of California San Diego.*

8:00 HHH39 **693.05** Eye movements support the link between conscious memory and medial temporal lobe function. Z. J. URGOLITES*; C. N. SMITH; L. R. SQUIRE. *UCSD, Veterans Affairs San Diego Healthcare Syst., UCSD, UCSD.*

9:00 HHH40 **693.06** How does the hippocampus simultaneously learn episodes and regularities? B. SHERMAN*; N. B. TURK-BROWNE. *Yale Univ.*

10:00 HHH41 **693.07** Distinct hippocampal representations of predicted features and objects. L. RAIT*; P. KOK; N. TURK-BROWNE. *Yale Univ.*

11:00 HHH42 **693.08** Volume of posterior hippocampus is positively related to object-location associative memory in healthy adults. J. SNYTTE; A. ELSHIEKH; R. K. OLSEN; L. MANNING; M. N. RAJAH*. *McGill Univ., Rotman Res. Inst., McGill Univ.*

8:00 HHH43 **693.09** Neural basis of episodic memory intermediate-term after medial temporal lobe resection. W. JEONG*; H. LEE; J. KIM; C. CHUNG. *Seoul Natl. Univ. Hosiptal, Seoul Natl. Univ. Col. of Med., Natl. Ctr. for Mental Hlth., Seoul Natl. Univ. Col. of Natural Sci.*

9:00 HHH44 **693.10** Human episodic memory system is composed of several components served by specific temporal sub-regions: Insights from temporal lobe resection. D. KIM*; J. KIM; C. CHUNG. *Seoul Natl. Univ., Seoul Natl. Univ. Hosp., Seoul Natl. Univ. Col. of Med.*

10:00 HHH45 **693.11** Scaled environmental representations in the medial temporal lobe. H. R. EVENSMOEN*; H. RISE; L. RIMOL; A. K. HABERG. *NTNU.*

11:00 HHH46 **693.12** ▲ Auditory and visual mnemonic discrimination are correlated in healthy young adults. L. GIRAUD-CARRIER; D. K. BJORNN; C. TOWNE; B. KIRWAN*. *Brigham Young Univ., Brigham Young Univ.*

8:00 HHH47 **693.13** Preferential viewing of changes in familiar scenes is impaired in patients with medial temporal lobe lesions but spared when they are (occasionally) aware of what has changed. C. N. SMITH; L. R. SQUIRE*. *Veterans Affairs San Diego Healthcare Syst., UCSD, UCSD, UCSD.*

9:00 HHH48 **693.14** Comparison of semi-automated hippocampal subfield segmentation methods in a pediatric sample. M. L. SCHLICHTING*; M. L. MACK; K. F. GUARINO; A. R. PRESTON. *Univ. of Toronto, Loyola Univ. Chicago, The Univ. of Texas at Austin.*

10:00 HHH49 **693.15** Behaviorally relevant events modulate hippocampal representations and functional connectivity. R. MOYAL*; H. B. TURKER; A. PHELPS; W. LUH; K. M. SWALLOW. *Cornell Univ., Cornell Univ.*

11:00 HHH50 **693.16** Measures of episodic recollection for real-world events in patients with medial temporal lobe damage. N. HEYWORTH*; L. R. SQUIRE. *Univ. of California San Diego, VA Med. Ctr., Univ. of California San Diego, Univ. of California San Diego.*

8:00 HHH51 **693.17** Hippocampal subfields show dissociable integration and separation signatures for overlapping memories. R. J. MOLITOR*; K. R. SHERRILL; N. W. MORTON; A. R. PRESTON. *Univ. of Texas at Austin.*

9:00 HHH52 **693.18** Oscillatory theta dynamics and single unit activity in the human hippocampus during associative memory processing. S. HANSLMAYR*; R. CHELVARAJAH; D. ROLLINGS; V. SAWLANI; H. HAMER; S. GOLLWITZER; G. KREISELMEYER; P. R. ROELFSEMA; M. W. SELF; F. ROUX. *Univ. of Birmingham, Queen Elizabeth Hosp., Queen Elizabeth Hosp., Univ. Hosp. Erlangen, Netherlands Inst. for Neurosci., NIN, Univ. of Birmingham.*

10:00 HHH53 **693.19** Cardiorespiratory fitness predicts default mode network effective connectivity in young adults. K. L. KERN*; C. A. KRONMAN; R. K. NAUER; M. F. DUNNE; T. W. STORER; K. SCHON. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Boston Univ., Brigham and Women's Hosp.*

11:00 HHH54 **693.20** Sharp wave ripple cross-structure phase locking to cortical oscillations predicts the modulation of cortical activity in human intracranial recordings. I. SKELIN*; J. ZHENG; H. ZHANG; B. L. MCNAUGHTON; J. LIN. *Univ. of Lethbridge, Univ. of California, Irvine, Univ. of California Irvine, The Univ. of Lethbridge, Univ. of California, Irvine.*

8:00 HHH55 **693.21** Spontaneous generalized memory representations following paired-associates training. S. ASHBY*; C. R. BOWMAN; D. ZEITHAMOVA. *Univ. of Oregon.*

9:00 HHH56 **693.22** Hippocampal characteristics influence the structure of idle thought. J. TSENG*; J. POPPENK. *Queen's Univ., Queen's Univ.*

10:00 HHH57 **693.23** Distinct connectivity patterns along the hippocampal anterior-posterior axis. L. FRANK*. *Univ. of Oregon.*

11:00 HHH58 **693.24** Interactions of hippocampal characteristics with sleep structure in gist memory consolidation. N. MATORINA*; G. MARVEL; J. POPPENK. *Queen's Univ.*

8:00 HHH59 **693.25** Preliminary results of the Hippocampal Subfields Group harmonized protocol for segmenting human hippocampal subfields on 3T MRI. V. A. CARR*; R. LA JOIE; R. K. OLSEN; L. E. M. WISSE; K. M. C. AMUNTS; J. C. AUGUSTINACK; A. BAKKER; A. R. BENDER; D. BERRON; S. L. DING; A. C. BURGGREN; R. DE FLORES; M. CHAKRAVARTY; A. D. EKSTROM; P. KANEL; O. KEDO; R. INSAUSTI; N. V. MALYKHIN; S. G. MUELLER; N. OFEN; J. B. PLUTA; D. J. PALOMBO; D. SCHOEMAKER; C. E. L. STARK; T. STEVE; L. WANG; M. A. YASSA; Q. YU; P. A. YUSHKEVICH; A. M. DAUGHERTY. *San Jose State Univ., UCSF, Rotman Res. Inst., Univ. of Pennsylvania, Res. Ctr. Juelich, Massachusetts Gen. Hosp., Johns Hopkins Univ., Michigan State Univ., Lund Univ., Allen Inst. for Brain Sci., UCLA, Univ. of Caen, McGill Univ., UC Davis, Florida State Univ., Res. Ctr. Jülich, Univ. of Castilla-La Mancha, Univ. of Alberta, Wayne State Univ., Univ. of British Columbia, Univ. of California Irvine, Univ. of Alberta, Northwestern Univ., Univ. of California Irvine, Wayne State Univ.*

9:00 HHH60 **693.26** Semantic learning in developmental amnesia: Can recognition facilitate recall? R. ELWARD*; J. LIMOND; M. MISHKIN; F. VARGHA-KHADEM. *Univ. Col. London, Univ. of Exeter, NIMH, UCL Inst. of Child Hlth.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 HHH61 **693.27** Similarities in perirhinal cortex response patterns related to decision outcome in recognition-memory judgments. A. BLUMENTHAL*; C. B. MARTIN; S. KOHLER. *Univ. of Western Ontario, Univ. of Toronto, Univ. Western Ontario.*

11:00 III1 **693.28** Anterior and posterior hippocampal contributions to extraction of schematic information from naturalistic experiences. J. POPPENK*; N. DOAN; J. WASERMAN; I. PETRAR-SILCA. *Queen's Univ.*

POSTER

694. Human Cognition and Behavior: Human Long-Term Memory: Medial Temporal Lobe II

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 III2 **694.01** Grid realignment predicts human contextual memory. L. C. SOMMER*; J. B. JULIAN; C. F. DÖLLER. *Kavli Inst. For Systems Neuroscience, NTNU.*

9:00 III3 **694.02** Temporal mapping in the human entorhinal cortex. J. L. BELLMUND*; L. DEUKER; C. F. DOELLER. *Kavli Inst. for Systems Neuroscience, NTNU, Ruhr-University.*

10:00 III4 **694.03** Creating an artificial memory context alters associative memory formation. S. H. COLLIN*; P. VAN DEN BROEK; T. VAN MOURIK; P. DESAIN; C. F. DOELLER. *Princeton Neurosci. Inst., Donders Institute, Radboud Univ., Kavli Inst. for Systems Neuroscience, NTNU.*

11:00 III5 **694.04** Mapping the human navigation network with high-field fMRI: A voxel-wise encoding model. M. NAU*; T. NAVARRO SCHRÖDER; C. F. DOELLER. *Kavli Inst. for Systems Neuroscience, NTNU.*

8:00 III6 **694.05** Decoding spatial behavior from raw hippocampal activity using deep learning. M. FREY*; S. TANNI; T. NAVARRO SCHRÖDER; C. BARRY; C. F. DOELLER. *Kavli Inst. for Systems Neuroscience, NTNU, UCL.*

9:00 III7 **694.06** Electrophysiological markers of grid cell population activity across species. T. NAVARRO SCHRÖDER*; M. MØRREAUNET; M. NAU; T. STAUDIGL; J. B. JULIAN; J. BELLMUND; J. SCHOFFELEN; C. F. DOELLER. *Kavli Inst. for Systems Neuroscience, NTNU, Donders Institute, Radboud Univ., Max Planck Inst. for Human Cognitive and Brain Sci.*

10:00 III8 **694.07** Knowledge transfer between physical and conceptual spaces. D. KUHRT*; J. L. S. BELLMUND; C. F. DOELLER. *Kavli Inst. For Systems Neuroscience, NTNU.*

11:00 III9 **694.08** Deformed navigation in ageing. A. M. WINTHER*; J. L. S. BELLMUND; S. LI; N. W. SCHUCK; C. F. DOELLER. *Kavli Inst. for Systems Neuroscience, NTNU, Fac. of Psychology, TU Dresden, Max Planck Inst. For Human Develop.*

8:00 III10 **694.09** The role of hexadirectional coding in spatiotemporal integration. I. POLTI*; M. NAU; V. VAN WASSENHOVE; C. F. DOELLER. *Kavli Inst. for Systems Neuroscience, NTNU, CEA, DRF/Joliot, NeuroSpin; INSERM, U992, Cognitive Neuroimaging Unit, Univ. Paris-Sud; Univ. Paris-Saclay.*

9:00 III11 **694.10** Mapping conceptual space. S. THEVES*; G. FERNANDEZ; C. F. DOELLER. *Donders Institute, Radboud Univ., Kavli Inst. for Systems Neuroscience, NTNU.*

10:00 III12 **694.11** Theta phase coordinated memory reactivation reoccurs in a slow-oscillatory rhythm during NREM sleep. T. STAUDIGL*; T. SCHREINER; C. F. DOELLER; O. JENSEN; B. RASCH. *Donders Institute, Radboud Univ., NTNU, Univ. of Birmingham, Univ. of Fribourg.*

11:00 III13 **694.12** Value inference across cognitive maps. M. M. GARVERT*; N. SCHUCK; C. F. DOELLER. *Max Planck Inst. For Human Cognitive and Brain, Max Planck Inst. For Human Develop., Kavli Inst. for Systems Neuroscience, NTNU.*

8:00 III14 **694.13** Temporal dynamics of event integration. L. S. SCHURMANN*; J. SCHOFFELEN; S. H. COLLIN; B. MILIVOJEVIC; C. F. DOELLER. *Donders Institute, Radboud Univ., Princeton Neurosci. Inst., NTNU.*

9:00 III15 **694.14** Functional parcellation of the rodent and human hippocampus at 7T. A. G. DAHL*; S. A. HUBER; T. NAVARRO SCHRÖDER; C. F. DOELLER. *Kavli Inst. for Systems Neuroscience, NTNU.*

10:00 III16 **694.15** ▲ Evidence for a discretized organization of the hippocampal long-axis in humans. S. A. HUBER*; T. NAVARRO SCHRÖDER; A. KOBRO-FLATMOEN; J. SCHWARZBACH; M. P. WITTER; C. F. DOELLER. *Kavli Inst. for Systems Neuroscience, NTNU, Univ. Regensburg.*

11:00 III17 **694.16** ● Memory interaction and integration in young and aged adults. K. E. TOBIN*; T. T. TRAN; A. R. PRESTON; A. BAKKER. *Johns Hopkins Sch. of Med., Johns Hopkins Univ., The Univ. of Texas At Austin.*

8:00 III18 **694.17** ● Memory for Object identity and object positions in novel environmental scenes. T. T. TRAN*; K. E. TOBIN; V. PULIYADI; M. GALLAGHER; A. BAKKER. *Johns Hopkins Univ., Johns Hopkins Sch. of Med.*

9:00 III19 **694.18** Medial temporal-medial prefrontal theta phase synchrony binds human associative memory. H. ZHANG*; J. ZHENG; J. LIN. *Univ. of California Irvine.*

10:00 III20 **694.19** Effect of repeated immediate reactivation on memory performance. M. E. MONTCHAL*; M. YASSA. *UC Irvine.*

11:00 III21 **694.20** Hippocampal cingulum white matter integrity contributes to spatial discrimination in older adults. F. MARQUEZ*; J. A. NOCHE; M. S. LARSON; D. DELISLE; E. MURRAY; L. MCMILLAN; M. WITBRACHT; S. SIRIVONG; J. GRILL; M. A. YASSA. *Univ. of California Irvine, Univ. of California Irvine Dept. of Neurobio. and Behavior, Univ. of California Irvine.*

8:00 III22 **694.21** Structural integrity deficits of uncinate fasciculus predict medial temporal lobe activity during an emotional pattern separation task. S. J. GRANGER*; S. L. LEAL; E. A. MURRAY; M. A. YASSA. *Univ. of California, Irvine, Univ. of California, Berkeley, Univ. of California Irvine.*

9:00 III23 **694.22** Gamma power in the human medial temporal lobe and prefrontal cortex predicts error and learning in a spatial memory task. R. F. STEVENSON*; J. T. JANECEK; J. ZHENG; L. MNATSAKANYAN; S. VADERA; R. T. KNIGHT; J. J. LIN; M. A. YASSA. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California Berkeley.*

10:00 III24 **694.23** Interference resolution in memory: Beyond the medial temporal lobe. C. CHWIESKO*; M. A. YASSA. *Univ. of California Irvine.*

Wed. AM

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 III25 **694.24** Effect of a six-week mild exercise intervention on volume of the hippocampal dentate gyrus and CA3. K. BYUN*; K. SUWABE; K. HYODO; N. TUSTISON; M. A. YASSA; H. SOYA. *Univ. of Tsukuba, Meiji Yasuda Life Fndn. of Hlth. and Welfare, Univ. of Virginia, Univ. of California, Irvine.*

8:00 III26 **694.25** Functional connectivity in a Down syndrome model of preclinical Alzheimer's disease. N. DIPROSPERO*; L. MCMILLAN; A. P. SMITH; M. S. LARSON; E. DORAN; I. T. LOTT; M. A. YASSA. *Univ. of California, Irvine, Univ. of California, Irvine, UC Irvine Med. Ctr., UC Irvine Med. Ctr.*

POSTER

695. Human Cognition and Behavior: Language

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 III27 **695.01** Neurite architecture of the planum temporale predicts neurophysiological processing of auditory speech. P. FRIEDRICH*; S. OCKLENBURG; C. FRAENZ; C. T. SCHLÜTER; C. BESTE; O. GUNTURKUN; E. GENC. *Ruhr-University, Ruhr-University, Universitätsklinikum Carl Gustav Carus.*

9:00 III28 **695.02** State-dependent TMS reveals the differential contribution of ATL and IPS in the representation of social and magnitude abstract concepts. S. F. CAPPA*; E. CATRICALÀ; F. CONCA; A. FERTONANI; S. FINAZZI; C. RODELLA; V. BORSA; C. MINIUSSI. *IUSS, IRCCS S. Giovanni di Dio, IUSS, Univ. of Brescia; CIMeC, Univ. of Trento,.*

10:00 III29 **695.03** Visual word recognition across the adult life span: A MEG study. M. KARADAG; C. WHITING; J. KLIMOVA; A. CLARKE; L. K. TYLER*; W. MARSLEN-WILSON. *Univ. of Cambridge, Univ. of Glasgow.*

11:00 III30 **695.04** Brain connectivity was modulated by sentence difficulty as revealed by fMRI-ICA in Chinese relative clause. K. XU*; Y. HUANG; J. DUANN. *Natl. Central Univ., Natl. Central Univ.*

8:00 III31 **695.05** Functional dissociation of language and working memory revealed by pattern analysis of subject-specific conjunction maps. T. L. SCOTT*; T. K. PERRACHIONE. *Boston Univ., Boston Univ.*

9:00 III32 **695.06** Behavior, sex, and the brain: Relationships with dyslexia risk gene DYX1C1. A. J. KRAFNICK*. *Dominican Univ.*

10:00 III33 **695.07** Intrinsic connectivity within individuals reveals a distributed left-lateralized network that is language-responsive. R. M. BRAGA*; L. M. DINICOLA; K. R. VAN DIJK; J. R. POLIMENI; R. L. BUCKNER. *Harvard Univ., Imperial Col. London, Massachusetts Gen. Hosp., MGH/ Harvard Med. Sch.*

11:00 III34 **695.08** ▲ Effects of the specific rehabilitation of defecit and pragmatic typo in patients with aphasia. J. C. GALICIA*, SR; M. A. MACÍAS; T. J. VILLASEÑOR; M. E. JIMÉNEZ; E. R. VILLUENDAS. *Univ. de Guadalajara, Univ. de Guadalajara, Univ. Michoacána de San Nicolás de Hidalgo.*

8:00 III35 **695.09** The neural representation of number-noun phrases: An ECoG study. V. C. CARUSO*; G. B. COGAN; J. M. PEARSON; T. OVERATH; M. M. HAGLUND; S. R. SINHA; C. MUH; J. M. GROH. *Duke Univ., Duke Univ., Duke Univ.*

9:00 III36 **695.10** EEG correlates of natural, narrative speech processing at the level of phrases. J. HOOGENDOORN; M. P. BRODERICK; G. M. DI LIBERTO; E. C. LALOR*. *Trinity Col. Dublin, Trinity Col. Dublin, École Normale Supérieure, Univ. of Rochester.*

10:00 III37 **695.11** Performance to verbal learning and verbal semantic predict based on resting state neural oscillations pattern. V. OSWALD*; Y. ZEROUALI; A. BOULET-CRAIG; P. JOLICOEUR; S. LIPPÉ; K. JERBI; P. ROBAEY. *Univ. de Montréal, Univ. de Montreal, Univeristé de Montreal, Univ. de Montréal.*

11:00 III38 **695.12** ▲ Saccadic corruption of the top-down hypothesis for visual processing. A. CURTIS*; C. M. KADIPASAOGLU; K. FORSETH; N. TANDON. *Rice Univ., Univ. of Texas Med. Sch. at Houston, UT Hlth. Sci. Ctr. In Houston, Univ. of Texas Med. Sch. at Houston.*

8:00 III39 **695.13** Evidence-accumulation models confirm the epistemic property of writing: A predictive coding and active inference study of writing to learn. A. M. SILVA; R. LIMONGI*. *Pontifical Catholic Univ. of Valparaíso, Technological Univ. of Chile.*

9:00 III40 **695.14** ● Functional connectivity in the language network in response to syntactic complexity and acoustic degradation: A functional near-infrared spectroscopy study. B. E. WHITE*; C. LANGDON. *Gallaudet Univ.*

10:00 III41 **695.15** In search of the cognitive abilities required for comprenhension of indirect request in Spanish speking young adults. G. L. LICEA HAQUET*; M. GIORDANO. *Inst. De Neurobiología UNAM, Inst. de Neurobiología UNAM.*

11:00 III42 **695.16** Differential involvement of the left and right hemispheres on the processing of verbs and pseudo-words. G. L. LICEA HAQUET; M. GIORDANO; A. REYES AGUILAR*; B. I. ARCE LÓPEZ. *Univ. Nacional Autónoma de México, Univ. Nacional Autonoma de Mexico, Univ. Nacional Autónoma de México.*

8:00 III43 **695.17** Semantic and phonological errors described by a hierarchical computational model of speech production. M. TOPALIDOU; E. NEFTCI; G. S. HICKOK*. *Univ. of California Irvine, Univ. California.*

9:00 III44 **695.18** Subtle emotional distinctions in primate vocalizations (chimps and vervets) can be recognized by naive humans; evolution of proto-language in left hemisphere and musical scales (ragas) in the right hemisphere - mediated by a primordial emotional language of intonation and prosody via ultra normal peak-shift. V. S. RAMACHANDRAN*; S. KANDALAFT; K. VAYYALA; C. CHUNHARAS; Z. MARCUS. *UCSD.*

10:00 III45 **695.19** Onset-driven activation of lexico-semantic cohorts dynamically activates bilateral fronto-temporal language systems. A. CLARKE*; L. K. TYLER; B. RANDALL; E. KOCAGONCU; W. MARSLEN-WILSON. *Univ. of Cambridge.*

11:00 III46 **695.20** ● End-to-end decoding of speech from human cortex. J. G. MAKIN*; E. F. CHANG. *Univ. of California, San Francisco, UCSF.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 III47 **695.21** Spatiotemporal characteristics of semantic processing: An fMRI and EEG study of sentence comprehension. K. S. ABOUD*; L. E. CUTTING. *Vanderbilt Univ.*

9:00 III48 **695.22** Pauses and neural indicators during speech: English (l1/l2), Spanish (l1/l2), and Heritage Spanish. N. ENRIQUEZ*; F. LLORELLA; J. CRUZ; L. DIAZ. *Univ. of Houston, Univ. of Gerona, Univ. Pompeu Fabra.*

10:00 III49 **695.23** ▲ Language proficiency and executive function: An fNIRS study. V. DARGAM*; M. BARALT; A. DARCY MAHONEY; R. JUNG; A. K. THOTA; L. RINCON GONZALEZ; C. MYLAND; V. LEON. *Florida Intl. Univ., The George Washington Univ. Sch. of Nursing, Florida Intl. Univ.*

11:00 III50 **695.24** Proficiency in a second language modulates the engagement of the first language network. Y. LIN*; F. LIN; W. KUO. *Natl. Yang-Ming Univ., Natl. Taiwan Univ.*

8:00 III51 **695.25** ● Assessment of neural networks related to post-stroke aphasia with the EEG phase synchrony index. T. KAWANO*; N. HATTORI; Y. UNO; M. HATAKENAKA; H. YAGURA; H. FUJIMOTO; T. YOSHIOKA; M. NAGASAKO; H. OTOMUNE; H. MOCHIZUKI; K. KITAJO; I. MIYAI. *Morinomiya Hosp., Osaka Univ. Grad. Sch. of Med., RIKEN Ctr. for Brain Sci., Osaka Univ.*

9:00 III52 **695.26** Effects of categorical cues on naming. R. TANAKA*; Y. ITAGUCHI; C. YAMADA; K. FUKUZAWA. *Waseda Univ., Keio Univ., Waseda Univesity, Waseda Univ.*

10:00 III53 **695.27** ● Stress alters functional connectivity in language processing regions of the brain during verbal fluency tasks. N. NAIR*; J. P. HEGARTY, II; B. J. FERGUSON; S. J. HOOSHMAND; P. HECHT; M. R. TILLEY; S. E. CHRIST; D. Q. BEVERSDORF. *Univ. of Missouri, Stanford Univ., Thompson Ctr. For Autism, Univ. of Missouri, Avanir Pharmaceuticals Inc., Central Methodist Univ., Univ. of Missouri Columbia, Univ. of Missouri Columbia.*

11:00 III54 **695.28** Wernicke aphasia patients do not understand that they do not understand language: An initial case study. E. L. ALTSCHULER*. *Metropolitan Hosp.*

8:00 DP13/III55 **695.29** (Dynamic Poster) Behavioral and electrophysiological evidence of incidental learning, generalization and retention of speech categories from continuous speech. C. WU*; R. LIU; S. LIM; L. L. HOLT. *Carnegie Mellon Univ., MARi, Boston Univ., Carnegie Mellon Univ.*

POSTER

696. Human Cognition and Behavior: Language Developmental Processes

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 III56 **696.01** Developmental changes in speech perception at the syllable, word and sentence level. O. B. KOLOZSVÁRI*; W. XU; N. LOULELI; N. AZAIEZ ZAMMIT CHATTI; J. A. HÄMÄLÄINEN. *Univ. of Jyväskylä, Ctr. for Interdisciplinary Brain Res.*

9:00 III57 **696.02** Effects of early sign language use on anatomical structures of visual regions: Surface-based and DTI analyses. Q. CHENG*; D. KLEIN; J. CHEN; E. HALGREN; R. I. MAYBERRY. *UCSD, McGill Univ.*

10:00 III58 **696.03** Brain responses to native and non-native syllables in typical readers and in children with reading or attentional problems. N. AZAIEZ ZAMMIT CHATTI*; O. H. LOBERG; N. LOULELI; O. B. KOLOZSVÁRI; J. A. HÄMÄLÄINEN; P. H. LEPPANEN. *Univ. of Jyväskylä.*

11:00 III59 **696.04** Morphological representations in pre-school children with and without risk for dyslexia. N. LOULELI*; L. NIEMINEN; N. AZAIEZ ZAMMIT CHATTI; O. B. KOLOZSVARI; J. A. HÄMÄLÄINEN; P. H. T. LEPPÄNEN. *Dept. of Psychology, Univ. of Jyvaskyla, Ctr. of Applied Language Studies, Univ. of Jyvaskyla.*

8:00 III60 **696.05** Children with Down syndrome anticipate information. N. ARIAS-TREJO*; A. A. ANGULO-CHAVIRA; J. B. BARRÓN-MARTÍNEZ. *UNAM, Inst. de Neurociencias, Univ. de Guadalajara.*

9:00 III61 **696.06** An fMRI study of the cerebellum during reading in children and adults. S. ASHBURN*; L. D. FLOWERS; E. M. NAPOLIELLO; G. F. EDEN. *Georgetown Univ., Georgetown Univ.*

10:00 III62 **696.07** Functional MRI of language lateralisation in developmental amnesia. S. M. BUCK*; T. BALDEWEG; R. ELWARD; D. CARMICHAEL; F. VARGHA-KHADEM. *Inst. of Child Hlth., UCL Inst. of Child Hlth., UCL Institte of Child Hlth., UCL Inst. of Child Hlth., UCL Inst. of Child Hlth.*

11:00 III63 **696.08** ▲ Linguistic skills and brain electrical activity during auditory processing in typically developing children. V. V. MORALES- GARCÍA*; I. G. GALÁN LÓPEZ. *UNAM.*

8:00 III64 **696.09** A novel long noncoding RNA essential for human neural progenitors cells differentiation links two pathways of inherited dyslexia. B. PRAJAPATI*; M. FATIMA; M. FATMA; R. MIDHA; S. DEVASENAPATHY; T. NASKAR; R. KUMARI; M. MUKERJI; M. FARUQ; N. SINGH; P. SETH; S. SINHA. *Natl. Brain Res. Ctr., Inst. of Genomics & Integrative Biol., All India Inst. of Med. Sci.*

9:00 III65 **696.10** Functional connectivity in Portuguese-English bilingual-biliterate adolescents without and with developmental dyslexia: Studying the role of orthographic depth. E. BRIGNONI-PEREZ*; A. FAY; N. BIANCHINI; A. BUCHWEITZ. *Georgetown Univ., PUCRS.*

10:00 III66 **696.11** Brain responses to letters and speech sounds and their correlations with cognitive skills related to reading in children. W. XU*; S. P. MONTO; O. B. KOLOZSVÁRI; J. A. HÄMÄLÄINEN. *Univ. of Jyväskylä, Ctr. for Interdisciplinary Brain Res.*

11:00 III67 **696.12** Neurobiological underpinnings of rapid white matter plasticity during intensive reading instruction. E. HUBER*; J. YEATMAN. *Univ. of Washington.*

8:00 III68 **696.13** Exploring the link between age-related hearing loss, resting-state network connectivity, and speech comprehension in older adults. M. C. FITZHUGH*; L. C. BAXTER; C. ROGALSKY. *Arizona State Univ., Barrow Neurolog. Inst. and St. Joseph's Hosp. and Med. Ctr.*

9:00 JJJ1 **696.14** Aging modulates the effects of cognitive demands on brain-wide network architectures. Q. ZHOU*; L. LIU; H. LI; Y. ZHANG; C. LU; G. DING. *Beijing Normal Univ.*

Wed. AM

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

697. Human Cognition and Behavior: Decision Making and Reasoning: Physiology and Basic Mechanisms

Theme H: Cognition

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 JJJ2 **697.01** Theta phase sychrony in a spatial cognitive control network. L. K. CHINN*; J. MYERS; E. J. GOLOB. *Tulane Univ., Univ. of Texas At San Antonio.*

9:00 JJJ3 **697.02** Phase-locking of neurons in human medial frontal cortex to hippocampal theta is engaged by declarative memory-based decisions. J. MINXHA*; R. ADOLPHS; A. MAMELAK; U. RUTISHAUSER. *Caltech, Cedars Sinai, Cedars-Sinai Med. Ctr.*

10:00 JJJ4 **697.03** Neural representation of the target selection "to buy" in the human EEG. H. SAWAHATA*; Y. NAKAMURA; R. P. HASEGAWA. *AIST.*

11:00 JJJ5 **697.04** Electrophysiological and hemodynamic correlates of self-committed and observed decision monitoring. M. PEREIRA*; N. FAIVRE; I. ITURRATE; L. SERAFINI; S. MARTIN; A. DESVACHEZ; O. BLANKE; M. WIRTHLIN; D. VAN DE VILLE; J. DEL R. MILLÁN. *Ecole Polytechnique Fédérale de Lausanne (EPFL).*

8:00 JJJ6 **697.05** Neurophysiological underpinnings of the diminished capacity for regulating speed-accuracy tradeoffs in older age. J. DULLY*; G. LOUGHNANE; S. KELLY; R. G. O'CONNELL. *Trinity Col. Inst. of Neurosci., Trinity Col., Univ. Col. Dublin, Trinity Col. Dublin.*

9:00 JJJ7 **697.06** Cortical electroencephalographic activity in the different phases of decision-making. J. P. GARCÍA HERNÁNDEZ*; P. M. CORTES-ESPARZA; M. L. RAMÍREZ-RENTERÍA; M. A. GUEVARA; M. HERNANDEZ-GONZÁLEZ. *Inst. de Neurociencias, Inst. de Neurociencias, Univ. de Guadalajara.*

10:00 JJJ8 **697.07** Integrated analysis of EEG and MRI data reveals critical role of dorsal attention network in human evidence accumulation. M. BROSNAN*; T. SILK; K. SABAROEDIN; S. GENE; D. P. NEWMAN; G. LOUGHNANE; A. FORNITO; R. G. O'CONNELL; M. A. BELLGROVE. *Monash Univ., Murdoch Children's Res. Inst., Monash Univ., Murdoch Children's Res. Inst., Trinity Col., Monash Clin. and Imaging Neurosci., Trinity Col. Dublin, Monash Univ.*

11:00 JJJ9 **697.08** Neural responses to heartbeats impact value encoding in subjective, preference-based decision-making in ventro-medial prefrontal cortex. D. C. AZZALINI*; S. PALMINTERI; C. TALLON-BAUDRY. *École Normale Supérieure.*

8:00 JJJ10 **697.09** STN-DBS, not L-DOPA, restores the contextual regulation of perceptual decisions. L. J. RONDOT*; M. ULLA; V. WYART; J. LEMAIRE; J. DREHER; F. DURIF; P. DOMENECH. *Inst. du Cerveau et de la Moelle, Univ. Hosp. of Clermont-Ferrand, Vigimed Med. Ctr., Dept. d'Etudes Cognitives, ENS, Auvergne Univ., Inst. des Sci. Cognitives Marc Jeannerod, CNRS, Henri Mondor Hosp. (AP-HP).*

9:00 JJJ11 **697.10** ● Insula processes salience prediction error for primary reinforcers. J. KIM*; L. HELLRUNG; M. GRÜSCHOW; E. KAPETANIOU; A. BAGAINI; D. HINZ; P. N. TOBLER. *Univ. of Zurich.*

10:00 JJJ12 **697.11** Predictive coding depends on causal inference and NMDA receptor-mediated feedback in the brain. S. MOHANTA*; D. POLYAKOV; M. J. REDINBAUGH; N. A. KAMBI; J. M. PHILLIPS; S. TANABE; W. FILBEY; J. KILDOW; S. TWADELL; J. L. AUSTERWEIL; R. D. SANDERS; Y. B. SAALMANN. *Univ. of Wisconsin, Madison, Univ. of Wisconsin, Madison, Univ. of Wisconsin, Madison.*

11:00 JJJ13 **697.12** ▲ Examining the interaction between striatal dopamine and externalizing behaviors on prediction errors during decision making. E. A. NEWELL*; K. A. BYRNE. *Clemson Univ.*

8:00 JJJ14 **697.13** Does dopamine modulate the willingness to exert cognitive control? L. HOFMANS*; D. PAPADOPETRAKI; R. VAN DEN BOSCH; J. I. M. MÄÄTTÄ; B. I. H. M. LAMBREGTS; A. WESTBROOK; R. COOLS. *Radboud Univ., Radboud Univ. Med. Ctr., Brown Univ.*

9:00 JJJ15 **697.14** Corticostriatal representation of information value during ambiguous decision-making. U. R. KARMARKAR*; S. YE; V. RIMEIKYTE; E. KASTMAN; J. W. BUCKHOLTZ. *Rady Sch. of Mgmt., Sch. of Global Policy and Strategy, UCSD, Harvard Business Sch., Cornell Univ., Harvard Univ., Harvard Univ.*

10:00 JJJ16 **697.15** Serotonin signaling in human striatum during active social exchange. T. M. LOHRENZ*; K. T. KISHIDA; A. HULA; J. P. WHITE; R. J. MORAN; A. LAXTON; S. B. TATTER; M. R. WITCHER; I. SAEZ; E. R. LAWRENCE; P. E. PHILLIPS; P. DAYAN; P. R. MONTAGUE. *Virginia Tech. Carilion Res. Inst., Wake Forest Univ. Sch. of Med., Wake Forest Univ., Univ. Col. London, Wake Forest Sch. of Med., Univ. of California Berkeley, Univ. of Washington, Virginia Tech.*

11:00 JJJ17 **697.16** The relative frequency of neuronal perikaryal sizes differentiates five classes in higher-order nuclei of the human thalamus. E. ARMSTRONG*; G. KAHVECI; S. LAGO; J. LENCHNER; M. ROBINSON; E. SEVER. *Lake Erie Col. of Osteo. Med.*

8:00 JJJ18 **697.17** Alpha-band phase coherence modulation at right fronto-central region reflects a sustained proactive control mechanism involved in a stop-signal task. W. LEE*; E. JEONG; M. KANG. *Sungkyunkwan Univ.*

9:00 JJJ19 **697.18** EEG gamma activity is altered in working memory during test recall. J. G. FOY; S. M. MCQUADE; L. M. KEARNS; C. DE PIEROLA; M. R. FOY*. *Loyola Marymount Univ.*

10:00 JJJ20 **697.19** Dissociable roles for theta and beta frequency neural oscillations in cognitive control. D. A. VOGELSANG*; J. RIDDLE; K. HWANG; D. CELLIER; M. D'ESPOSITO. *D'Esposito Lab., Univ. of California, Berkeley.*

11:00 JJJ21 **697.20** No-go specific EEG activities during response inhibition training associated specifically with subsequent chocolate eating behavior. K. YAMANAKA*. *Showa Women's Univ.*

8:00 JJJ22 **697.21** The strategy in the brain: The micro-structural correlations predict the hyper-direct pathway and 'hub' in the reactive inhibition. F. ZHANG*; S. IWAKI. *Natl. Inst. of Advanced Industrial Sci., Univ. of Tsukuba.*

9:00 JJJ23 **697.22** Neural oscillatory correlates of effort based influences on proactive inhibition. T. TSUCHIYA*; J. M. FINE; M. SANTELLO. *Arizona State Univ., Arizona State Univ.*

10:00 JJJ24 **697.23** EEG signature of instructed sensory-motor mapping implementation. M. SENOUSSI*; D. TALSMA; T. VERGUTS. *Ghent Univ.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 JJJ25 **697.24** Transcranial focused ultrasound over right inferior frontal gyrus improves response inhibition. M. SANTELLO*; J. M. FINE; M. FINI; W. J. TYLER. *Arizona State Univ.*

8:00 JJJ26 **697.25** Electrophysiological evidence for common processing of task-switching and novelty processing. T. R. DYKSTRA*; E. HAZELTINE; J. R. WESSEL. *Univ. of Iowa.*

9:00 JJJ27 **697.26** Successfully stopping a movement has global motor effects as evident in a pause of tonic EMG of a task-unrelated effector. S. JANA*; A. R. ARON. *Univ. of California San Diego.*

10:00 JJJ28 **697.27** Hypoxic exercise-induced cognitive fatigue depends on arterial oxygen desaturation: A neuroimaging study. G. OCHI*; H. SOYA. *Lab. of Exerc Biochem & Neurosci, Univ. of Tsukuba, Dept. of Sports Neuroscience, Advanced Res. Initiative for Human High Performance, Univ. of Tsukuba.*

11:00 JJJ29 **697.28** Preparing to stop and preparing to go have dissociable signatures in sensorimotor beta and mu. V. MURALIDHARAN*; X. YU; M. X. COHEN; A. R. ARON. *Univ. of California San Diego, Radboud Univ.*

8:00 JJJ30 **697.29** Preventing a thought from coming to mind elicits increased right frontal beta just as stopping action does. A. CASTIGLIONE*; J. WAGNER; M. C. ANDERSON; A. R. ARON. *Univ. of California San Diego, Med. Res. Council, Univ. of Cambridge, UC San Diego.*

9:00 JJJ31 **697.30** ● Decision related signals at single-neuron resolution in human motor cortex. S. N. FLESHER*; C. CHANDRASEKARAN; F. R. WILLETT; S. D. STAVISKY; M. WANG; P. G. REZAII; L. R. HOCHBERG; J. M. HENDERSON; K. V. SHENOY. *Stanford Univ., Stanford Univ., Stanford Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

POSTER

698. Systems Biology and Bioinformatics: Bioinformatics

Theme I: Techniques

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 JJJ32 **698.01** Declining RNA integrity is associated with selectively weakened detection of mitochondrial pathway genes in human cadaver brain tissue samples. E. S. JOHNSON*; K. HARGIS-STAGGS; E. M. BLALOCK. *Univ. of Kentucky.*

9:00 JJJ33 **698.02** Machine learning for genome based diagnosis and mechanism discovery in autism spectrum disorder. D. N. AMATYA*; S. T. SCHAFER; G. MCVICKER; T. O. SHARPEE; S. NAVLAKHA; F. H. GAGE. *Salk Inst., Salk Inst., Salk Inst., The Salk Inst., Salk Inst.*

10:00 JJJ34 **698.03** Exploring differences in hippocampal gene expression across three different animal models of mood disorder: Prototyping a meta-analysis pipeline. H. KHALIL*; M. H. HAGENAUER; C. AYDIN; Q. WEI; F. MENG; B. S. MCEWEN; C. NASCA; S. J. WATSON, Jr.; H. AKIL. *The Univ. of Michigan, Univ. of Michigan, Universty of Michigan, Mol. & Behav. Neurosci. Inst., Univ. of Mich., Rockefeller Univ., The Rockefeller Univ.*

11:00 JJJ35 **698.04** A meta-analysis of multimodal gene co-expression networks in several regions of the mammalian brain as a basis for predicting novel neurobehavioral gene-phenotype associations via semi-supervised statistical machine learning. J. WILLIAMS; P. M. NOLAN*; M. SIMON; A. MALLON; G. GKOUTOS. *MRC Harwell Inst., Univ. of Birmingham.*

8:00 JJJ36 **698.05** Deconvolvution of bulk rna sequencing data to estimate neuron type abundance across human cortical regions. R. J. LOUGHNAN*; T. DONOGHUE; B. VOYTEK; E. A. MUKAMEL. *Univ. of California San Diego.*

9:00 JJJ37 **698.06** Variation among intact tissue samples reveals the core transcriptional features of human CNS cell classes. K. W. KELLEY*; H. NAKAO-INOUE; A. V. MOLOFSKY; M. C. OLDHAM. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco.*

10:00 JJJ38 **698.07** ● Translating ribosome affinity purification (TRAP) molecular profiling of CNS cell types: A data resource for the neuroscience community. J. A. VEKICH; K. BOBKOV; C. S. HOLUB; D. DAS; R. YAMASHITA; M. EKSTRAND; A. AMADOR; E. BOSHOFF; P. TASKAR; H. SCHIFFER; J. ATIENZA; J. SERRATS; N. CHEN; E. YOO; G. CORBETT; J. POWELL; N. BRICE; N. KAUSHAL; W. J. RAY; J. P. DOYLE*. *Takeda California, Envoy Therapeut., Takeda Cambridge.*

11:00 JJJ39 **698.08** Integrating gene and protein data into SenseLab databases for neuroinformatics-driven discovery. M. SURLES-ZEIGLER*; T. M. MORSE; R. A. MCDOUGAL; G. M. SHEPHERD. *Yale Univ., Yale Univ. Sch. Med., Yale Univ., Yale Univ. Sch. of Med.*

8:00 DP15/JJJ40 **698.09** ● ▲ (Dynamic Poster) A novel high-content platform for evaluation of dendritic spines in late-stage preclinical drug discovery. C. A. SHANKULA; J. K. ALEXANDER; K. KORJENIC; C. S. REX*. *Afraxis, Inc., Alexander Scientific Analysis and Programming, L.L.C., Afraxis Inc.*

9:00 JJJ41 **698.10** Predicting pathogenicity of structural variation in neurodevelopmental disorders using machine learning. P. TANDON*; O. SHANTA; D. ANTAKI; W. BRANDLER; M. KLEIBER; O. HONG; J. SEBAT. *UCSD.*

10:00 JJJ42 **698.11** 2D/3D image integration on the BAH viewer. Y. OKAMURA-OHO*; D. MIYAMOTO; H. IKENO; M. MORITA; H. YOKOTA; S. WEMLER; A. SATO; T. FURUICHI; Y. OKUMURA; Y. YAMAGUCHI. *Jissen Women's Univ., RIKEN Ctr. for Advanced Photonics, BReNt-Brain Res. Network, The Univ. of Tokyo, Univ. of Hyogo, Wemler Software, Tokyo Univ. of Sci., RIKEN Ctr. for Brain Sci.*

11:00 JJJ43 **698.12** *In vivo* morphological imaging of brain cancer using Gaussian weighted Laplace prior regularization. H. HUI; X. YANG; J. TIAN*. *Inst. of Automation, Chinese Acad. of Scienc, Key Lab. of Mol. Imaging, CAS.*

8:00 JJJ44 **698.13** Using the open metadata Markup Language (odML) and Semantic Web methods to facilitate interoperability of diverse neurophysiology data. J. L. TEETERS*; P. JEŽEK; M. SONNTAG; Y. SHALIVSKYY; A. KOUTSOU; J. GREWE; F. T. SOMMER; T. WACHTLER. *UC Berkeley, Univ. of West Bohemia, Ludwig-Maximilians-Universität München, Eberhard-Karls-Universität.*

9:00 JJJ45 **698.14** KRSA: A user-friendly tool for identifying significant differences in kinase activity from kinome array data. E. DEPASQUALE*; E. BENTEA; N. NAWREEN; J. L. MCGUIRE; J. MELLER; R. E. MCCULLUMSMITH. *Univ. of Cincinnati, Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati.*

Wed. AM

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 JJJ46 **698.15** New and improved CrePortal, a comprehensive recombinase expressing mice resource at Mouse Genome Informatics (MGI: www.infomatics.jax.org). H. ONDA*; E. S. MAYOTTE; L. BECHTEL; S. A. MURRAY; C. L. SMITH. *The Jackson Lab.*

11:00 JJJ47 **698.16** ● The international neuromodulation registry: A graph database representation of patient-specific data with combined predictive modeling for neuromodulation therapies. D. HEDGES*; G. DUFFLEY; R. GOURIPEDDI; C. R. BUTSON. *Univ. of Utah, Univ. of Utah Dept. of Bioengineering, Univ. of Utah.*

POSTER

699. Physiological Methods: Optical Methodology: Probes

Theme I: Techniques

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 JJJ48 **699.01** ● Liquid crystal polymer-based multichannel depth probe with polymeric optical fiber for optogenetic stimulation and electrical recording of CaMKIIα expressing CA1 pyramidal cells of mouse. C. KIM; S. SHIN; J. KIM; S. LEE; S. KIM*. *Seoul Natl. Univ., KAIST.*

9:00 JJJ49 **699.02** All-optical screening of near-infrared genetically encoded voltage indicators. M. MATLASHOV; C. SONG*; M. COLAVITA; M. MONAKHOV; D. M. SHCHERBAKOVA; S. D. ANTIC; V. V. VERKHUSHA; T. KNOPFEL. *Albert Einstein Col. of Med., Imperial Col. London, Uconn Hlth., UConn Hlth.*

10:00 JJJ50 **699.03** Multifunctional neural probe development via thermal drawing. A. CANALES*; S. PARK; M. ANTONINI; C. LU; P. ANIKEEVA. *MIT, Applied Materials.*

11:00 JJJ51 **699.04** Long-term time-lapse observation of cells with photo-stimulation by using portable *in vitro* cell imaging system. A. KIMURA*; M. HARUTA; T. NODA; K. SASAGAWA; T. TOKUDA; J. OHTA. *Nara Inst. of Sci. and Technol., Nara Inst. of Sci. and Technol.*

8:00 JJJ52 **699.05** Fast-decay red fluorescent genetically-encoded calcium indicators. S. KERRUTH*; C. COATES; K. TÖRÖK. *St George's, Univ. of London.*

9:00 JJJ53 **699.06** Fiber photometry at depth with tapered optical fibers. F. PISANO*; M. PISANELLO; E. MAGLIE; M. HYUN; A. BALENA; L. SILEO; M. DE VITTORIO; B. L. SABATINI; F. PISANELLO. *Italian Inst. of Technol., Dept. di Ingegneria dell'Innovazione, Univ. del Salento, Harvard Med. Sch.*

10:00 JJJ54 **699.07** Diverse mechanisms of glutamate sensing by chemically labelled and genetically encoded fluorescent protein probes. C. COATES; N. HELASSA; K. TÖRÖK*. *SGUL.*

11:00 JJJ55 **699.08** Analyzing the two-photon absorption of red fluorescent genetically-encoded calcium ion indicators. R. MOLINA*; Y. SHEN; Y. QIAN; R. E. CAMPBELL; T. E. HUGHES; M. DROBIZHEV. *Montana State Univ., Univ. of Alberta.*

8:00 JJJ56 **699.09** Sensing Ca^{2+} without perturbing neurons: The design, validation and applications of GCaMP-X. X. LIU*; Y. HE; Y. LIU; P. LI; S. YUE; Y. YANG. *Beihang Univ., Tsinghua Univ.*

9:00 JJJ57 **699.10** Monitoring voltage fluctuations of intracellular membranes. M. SEPEHRI RAD*; L. B. COHEN; B. J. BAKER. *Korea Inst. of Sci. and Technol., Yale Univ., Dept. of Neuroscience, Korea Univ. of Sci. and Technol.*

10:00 JJJ58 **699.11** A red shifted GEVI that can resolve population signals in slice. B. KANG*; B. YI; S. LEE; B. J. BAKER. *Korea Inst. of Sci. and Technol., UST, Korea Inst. of Sci. and Technol., Seoul Natl. Univ., KIST Korea Inst. of Sci. & Tech.*

11:00 JJJ59 **699.12** The empirical nature of trafficking motifs on genetically encoded voltage indicators. S. LEE*; B. KANG; M. KIM; Y. SONG; B. J. BAKER. *Korea Inst. of Sci. and Technol., Seoul Natl. Univ., Korea Univ. of Sci. and Technol. (UST), Advanced Inst. of Convergence Technol.*

8:00 JJJ60 **699.13** Multifunctional tapered optical fibers for optical excitation and electrical extracellular recording using direct laser writing and two-photon lithography. A. BALENA*; A. RIZZO; E. D. LEMMA; F. PISANO; M. PISANELLO; L. SILEO; M. DE VITTORIO; F. PISANELLO. *Inst. Italiano di Tecnologia, Univ. del Salento.*

9:00 JJJ61 **699.14** CDr20, a novel microglia specific probe for *in vivo* imaging. M. FUKUDA*; B. KIM; J. LEE; D. SU; S. SANU; A. T. T. KHOO; T. KWON; X. LIEU; X. LIU; S. CHOI; D. S. Y. WAN; J. KIM; Y. CHANG; H. S. JE. *Duke-Nus Grad. Med. Sch., Singapore Bioimaging Consortium, Daegu-Gyeongbuk Med. Innovation Fndn., Pohang Univ. of Sci. and Technol., Ulsan Natl. Inst. of Sci. and Technol., Inst. for Basic Sci. (IBS), Singapore Univ. of Technol. and Design, Seoul Natl. Univ., Inst. for Basic Sci., Yong Loo Lin Sch. of Medicine, Natl. Univ. of Singapore.*

10:00 JJJ62 **699.15** Serotonin imaging using serotonin-imprinted fluorescent polymer nanoparticles as a probe. R. MORI*; K. UMETA; Y. KATSUMATA; S. ISHIDA; Y. YOSHIMI. *Shibaura Inst. of Technol.*

11:00 JJJ63 **699.16** Development, characterization, and deployment of a new generation of genetically encoded voltage indicators. F. ST-PIERRE*; Z. LIU; Y. GOU; S. GUAN; X. LU; J. LEE; J. YANG; P. SUZUKI; S. CAO; A. TOLIAS. *Baylor Col. of Med., Rice Univ.*

8:00 JJJ64 **699.17** *In vivo* imaging of odor-evoked electrical activity in targeted cell populations in the olfactory bulb of transgenic mice expressing the GEVI ArcLight. J. PLATISA*; L. MADISEN; H. ZENG; L. B. COHEN; V. A. PIERIBONE; D. A. STORACE. *The John B Pierce Lab., Yale Univ., Allen Inst. for Brain Sci., KIST Ctr. for Functional Connectomics.*

9:00 JJJ65 **699.18** Biophysical approaches for designing voltage-sensing probes. M. J. IWANICKI*; J. A. MANCINI; S. MUKHERJEE; C. C. MOSER; B. Y. CHOW; B. M. DISCHER. *Univ. of Pennsylvania.*

10:00 JJJ66 **699.19** Engineering next generation voltage indicators using high-throughput screening. D. S. KIM*; B. J. ARTHUR; A. S. ABDELFATTAH; G. CAO; I. KOLB; A. SINGH; O. NOVAK; Y. SUN; J. P. HASSEMAN; G. TSEGAYE; A. K. TSANG; D. N. MERRYWEATHER; V. JAYARAMAN; L. D. LAVIS; E. R. SCHREITER; L. L. LOOGER; K. SVOBODA. *Howard Hughes Med. Inst., Acad. of Sci. of the Czech Republic.*

11:00 JJJ67 **699.20** A nanophotonic multi-beam probe for simultaneous deep brain optogenetic stimulation and electrical recording *in vivo*. Q. LI*; A. MOHANTY; S. P. ROBERTS; M. A. TADAYON; M. LIPSON; A. KEPECS. *Cold Spring Harbor Lab., Columbia Univ., Columbia Univ., Dept. of Electrical Engin.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 JJJ68 **699.21** Engineering of voltage sensing domains for optical resolution of differing neuronal activities. A. JUNG*; J. CHOI; E. HWANG; B. J. BAKER. *KIST Korea Inst. of Sci. & Tech., Korea Inst. of Sci. and Technol.*

9:00 JJJ69 **699.22** Development and application of a novel genetically-encoded serotonin sensor. J. WAN*; M. JING; J. FENG; J. ZOU; J. ZENG; C. WEI; H. WANG; M. LUO; S. TANG; Y. LI. *Peking Univ., PKU-IDG/McGovern Inst. for Brain Res., Peking Univ. Sch. of Life Sci., Peking-Tsinghua Ctr. for Life Sci., USC, China Agr. Univ., Natl. Inst. of Biol. Sci., Sch. of Life Sciences, Tsinghua Univ.*

10:00 JJJ70 **699.23** A specific genetically-encoded sensor for norepinephrine. J. FENG*; M. JING; C. ZHANG; H. WANG; Y. ZHANG; H. LI; J. ZHU; J. DU; Y. LI. *Peking Univ., PKU-IDG/McGovern Inst. for Brain Res., Peking Univ. Sch. of Life Sci., Chinese Acad. of Sci., Wuhan Natl. Lab. for Optoelectronics, Univ. of Virginia.*

11:00 LLL1 **699.24** a family of genetically-encoded fluorescent acetylcholine indicators. M. JING*; P. ZHANG; G. WANG; J. FENG, Mrs; Y. LI, miss; L. MESIK; L. I. ZHANG; M. LUO; Y. SONG, mrs; H. LI, mr; J. ZHU; M. XU; Y. LI. *Peking Univ., Univ. of Virginia, Univ. of Virginia, Peking Univ., USC, Natl. Inst. of Biol. Sci., Wuhan Natl. Lab. for Optoelectronics, Univ. VA Sch. Med., Inst. of Neuroscience, Chinese Acad. of Scie.*

8:00 LLL2 **699.25** A toolbox of genetically-encoded fluorescent sensors for monitoring purinergic neurotransmitters. Y. LI*; H. WANG; Z. WU; H. WU; L. DONG; K. HE; M. XU. *Peking Univ., Peking-Tsinghua Ctr. for Life Sci., Peking Univ. Sch. of Life Sci., PKU-IDG/McGovern Inst. for Brain Res., Sch. of Life Sci. Tsinghua Univ., Inst. of Neuroscience, Chinese Acad. of Scie, Chinese Acad. of Sci. Ctr. for Excellence in Brain Sci. and Intelligence Technology, Chinese Acad. of Sci.*

9:00 LLL3 **699.26** A genetically-encoded fluorescent sensor enables rapid and specific detection of dopamine in flies, fish, and mice. J. ZENG*; F. SUN; M. JING; J. ZHOU; J. FENG; S. F. OWEN; Y. LUO; F. LI; T. YAMAGUCHI; Z. YONG; Y. GAO; W. PENG; L. WANG; S. ZHANG; J. DU; D. LIN; M. XU; A. C. KREITZER; G. CUI; Y. LI. *Peking Univ., State Key Lab. of Membrane Biology, Peking Univ. Sch. of Life Sci., Peking-Tsinghua Ctr. for Life Sci., PKU-IDG/McGovern Inst. for Brain Res., NIH/NIEHS, Gladstone Inst., Inst. of Neuroscience, CAS, New York Univ. Sch. of Med., China Agr. Univ., Shanghai Jiao Tong Univ. Sch. of Med.*

POSTER

700. Physiological Methods: Electrophysiology: Electrode Arrays II

Theme I: Techniques

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 LLL4 **700.01** ● Electrophysiological phenotype characterization of human iPSC-derived dopaminergic neuronal lines by means of high-resolution microelectrode array. M. FISCELLA*; N. LEARY; S. RONCHI; A. HIERLEMANN. *ETH Zurich, MaxWell Biosystems AG.*

9:00 LLL5 **700.02** ● Evaluation of convulsant-induced firings in cultured human iPS cell-derived neurons using principal component analysis. Y. ISHIBASHI*; A. ODAWARA; A. OKAMURA; K. KINOSHITA; T. SHIRAKAWA; I. SUZUKI. *Tohoku Inst. of Technol., Tohoku Inst. of Technol., Tohoku University, AIMR, Japan Society for the Promotion of Sci., Astellas Parma Inc., Astellas Pharma Inc., Consortium for Safety Assessment using Human iPS Cells (CSAHi), Tohoku Inst. of Technol.*

10:00 LLL6 **700.03** An *in vitro* 3D platform for functional and structural interrogation of neuronal circuits. B. M. MOLINA; P. D. JONES; L. JENTSCH; P. CESARE*. *NMI, NMI, NMI.*

11:00 LLL7 **700.04** ● Analysis of convulsant-induced firings in cultured human iPS cell-derived neurons using deep learning. N. MATSUDA*; A. ODAWARA; A. OKAMURA; K. KINOSHITA; T. SHIRAKAWA; I. SUZUKI. *Tohoku Instititute of Technol., Tohoku Univ., Japan Society for the Promotion of Sci., Astellas Pharma Inc., Consortium for Safety Assessment using Human iPS Cells (CSAHi).*

8:00 LLL8 **700.05** Drug-induced seizure activities depending on the ratio of excitatory / inhibitory neurons in cultured human iPSC-derived neurons. R. YOKOI*; N. MATSUDA; Y. ISHIBASHI; A. ODAWARA; I. SUZUKI. *Tohoku Inst. of Technol., Tohoku Univ. ,AIMR, Japan Society for the Promotion of Sci., iPS-non-Clinical Experiments for Nervous Syst. Project, Consortium for Safety Assessment using Human iPS Cells.*

9:00 LLL9 **700.06** ▲ Real-time measurement of dopamine release in cultured human iPS cell-derived dopaminergic neurons using carbon nanotube MEA system. S. NOJI*; N. MATSUDA; A. ODAWARA; I. SUZUKI. *Tohoku Inst. of Technol., Tohoku Univ., Japan Society for the Promotion of Sci.*

10:00 LLL10 **700.07** ● Trial for drug-induced seizure liability evaluation using microelectrode array and primary rodent neurons: Multi-site pilot study ofHESI NeuToxMEA subteam. N. MIYAMOTO*; A. OJIMA; S. INABA; T. YOSHINAGA. *EISAI Co., Ltd., Techno Pro R&D company, Techno Pro Inc.*

11:00 LLL11 **700.08** The evaluation of drug-induced seizure activities using MEA system in cultured human iPSC-derived neurons : Pilot study of HESI NeuTox MEA subteam. I. SUZUKI*; A. ODAWARA; N. MATSUDA; Y. ISHIBASHI. *Tohoku Inst. of Technol., Tohoku Univ., Japan Society for the Promotion of Sci.*

8:00 LLL12 **700.09** Glutamate detection in real time with novel microelectrode for *ex vivo* recording. C. TAN; P. T. DOUGHTY; N. J. UDSTAD; C. D. PERNICI; S. SIDDIQUI; P. U. ARUMUGAM; T. A. MURRAY*. *Louisiana Tech. Univ., Louisiana Tech. Univ.*

9:00 LLL13 **700.10** A high throughput acute slice micro-electrode array assay for toxicology screening. G. CHENG*; S. NOJI; S. YASUOKA; R. ARANT; M. TRUJILLO; I. SUZUKI. *Alpha Med. Scientific Inc./ Automate Scientific Inc, Tohoku Inst. of Technol., Alpha Med. Scientific Inc., Alpha MED Scientific, Inc., Alpha MED Scientific Inc.*

10:00 LLL14 **700.11** Artificial stimulation at user-defined cell positions following electrical imaging using CMOS-based high-density microelectrode arrays. A. CORNA*; M. REH; D. HOFFMANN; F. JETTER; M. KRIEBEL; G. ZECK. *Ctr. for Ophthalmology, Natural and Med. Sci. Inst. (NMI) at the Univ. of Tübingen.*

Wed. AM

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 LLL15 **700.12** PEDOT polymer electrodes for non-invasive 8 channel full band DC EEG recordings from freely moving piglets and sports horses. N. V. DE CAMP*; J. BERGELER. *Free Univ. Berlin, Humboldt Univ. Berlin, Med. Ctr. of the Johannes Gutenberg Univ. Mainz, Free Univ. Berlin, Med. Ctr. of the JGU Mainz.*

8:00 LLL16 **700.13** Long-term high-density extracellular recordings enable studies of muscle cell physiology and pathology. M. LEWANDOWSKA; E. BOGATIKOV; A. HIERLEMANN; A. R. PUNGA*. *Uppsala Univ., ETH Zürich.*

9:00 LLL17 **700.14** Sensory percepts elicited by macrosieve stimulation of peripheral nerve: A rat behavioral model. N. S. CHANDRA; W. M. MCCARRON; H. BURTON; D. W. MORAN*; L. S. GREEN; W. Z. RAY; M. R. MACEWAN. *Washington Univ., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ., Washington Univ. Sch. of Med.*

10:00 LLL18 **700.15** Reliability and acute *in vivo* testing of the lyse-and-attract cuff electrode. C. LARSON*; S. ELYAHOODAYAN; A. COBO; K. SCHOLTEN; D. SONG; E. MENG. *USC.*

11:00 LLL19 **700.16** Functional electrical stimulation of ischemic stroke rat. C. SONG*; C. YEO. *DGIST.*

8:00 LLL20 **700.17** A transdural very-near field wireless power and data link for implantable neural interfaces. M. P. POWELL*; D. A. BORTON. *Brown Univ., Brown Univ., Dept. of Veterans Affairs, Providence Med. Ctr.*

9:00 LLL21 **700.18** Transparent graphene electrodes for high resolution *in vivo* optical and electrophysiological mapping of epileptic networks. N. DRISCOLL*; H. TAKANO; B. MURPHY; R. VISHNUBHOTLA; D. A. COULTER; A. JOHNSON; B. LITT; F. VITALE. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Bioengineering, Univ. of Pennsylvania, Physics, Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:00 LLL22 **700.19** Epidermal electrotherapy for epilepsy. S. PARK*; J. KIM; M. KANG; W. LEE; B. PARK; H. KIM; S. CHOI; S. YANG; J. AHN; S. YANG. *Yonsei Univ., Incheon Natl. Univ., Seoul Natl. Univ. Sch. of Dent., City Univ. of Hong Kong.*

11:00 LLL23 **700.20** Paired recordings using high-density CMOS probes and patch-clamp: A ground-truth dataset and an experiment in collaboration. A. MARQUES SMITH*; J. NETO; J. NOGUEIRA; L. CALCATERRA; D. KIM; G. DIMITRIADIS; A. R. KAMPFF; G. LOPES; J. FRAZAO. *Univ. Col. London, Univ. Col. London, 2Champalimaud Neurosci. Programme, Champalimaud Ctr. for the Unknown.*

8:00 LLL24 **700.21** Fabrication, testing, and refinement of a silicon-based cochlear nucleus array. N. NOLTA*; P. GHELICH; M. JACOBS; D. B. MCCREERY; M. HAN. *Univ. of Connecticut, Huntington Med. Res. Inst.*

9:00 LLL25 **700.22** Examination of the neurobiological mechanisms underlying Vagus Nerve stimulation in a non-human primate. A. J. SUMINSKI; A. Z. RAJALA; J. P. NESS; C. FILLA; D. GWOZDZ; E. MUELLER; J. R. NOVELLO; S. HURLEY; W. ZENG; W. LAKE; L. C. POPULIN*. *Univ. of Wisconsin-Madison, Univ. of Wisconsin, Madison, Univ. of Wisconsin, Univ. of Wisconsin, Univ. Wisconsin.*

10:00 LLL26 **700.23** Evaluation of neural interfaces for electrical stimulation of the rat trigeminal nerve. A. J. SUMINSKI*; J. P. NESS; W. ZENG; J. NOVELLO; S. K. BRODNICK; J. PISANIELLO; A. M. DINGLE; S. O. POORE; W. B. LAKE; J. C. WILLIAMS. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

11:00 LLL27 **700.24** Development of nanoelectrodes array using iridium oxide/gold nanowires for fast imaging of neural network. H. YOON*; M. H. KIM; A. SHIMKEVITCH; S. HAN; M. FREEMAN. *Norfolk State Univ.*

8:00 LLL28 **700.25** Microfluidic implantation of multi-channel flexible electrodes for neural recording. A. V. RODRIGUEZ*; B. FAN; D. G. VERCOSA; C. KEMERE; J. T. ROBINSON. *Rice Univ., Rice Univ., Rice Univ., Rice Univ.*

9:00 LLL29 **700.26** ● Neural implant insertion system using ultrasonic micro-vibration to improve penetrating microelectrode array insertion mechanics: *In vitro* and *in vivo* evaluations. R. S. CLEMENT*; N. N. TIRKO; J. K. GREASER; C. A. SCRUGGS; T. J. HIGGINS; R. B. BAGWELL. *Actuated Med. Inc.*

10:00 LLL30 **700.27** ● Effects of cerumen and electrodermal response on in-ear electroencephalography. A. PAUL*; S. R. DEISS; D. TOURTELOTTE; G. CAUWENBERGHS. *Univ. of California San Diego, UC San Diego, Starkey Hearing Technologies, UCSD.*

11:00 LLL31 **700.28** ● Low-cost, mobile, and wearable eeg. N. BELKAYA*; A. RAMAKRISHNAN; M. L. PLATT. *Univ. of Pennsylvania.*

8:00 LLL32 **700.29** Multi-day 24-hour recording from single units in human cortex. C. ZAWORA*; J. H. WITTIG, JR; K. A. ZAGHLOUL. *NINDS, NIH, NINDS, Natl. Inst. of Neurolog. Disorders and Stroke, NIH.*

POSTER

701. Biomarker and Drug Discovery: Affective Disorders and Schizophrenia

Theme I: Techniques

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 LLL33 **701.01** The cell cycle-related genes as biomarkers for schizophrenia. S. OKAZAKI*; S. BOKU; I. OTSUKA; N. EGUCHI; I. SORA; A. HISHIMOTO. *Kobe Univ. Grad. Sch. of Med.*

9:00 LLL34 **701.02** Plasma brain-type fatty acid-binding protein is a potential candidate biomarker for psychiatric disorders. M. KOGA*; S. NAKAGAWA; A. SATO; Y. WAKATSUKI; K. KITAGAWA; R. KAMEYAMA; N. UDO; S. ASAKURA; Y. FUJII; Y. KAKO; K. ITO; N. MITSUI; H. NARITA; K. TOYOSHIMA; A. KATO; I. KUSUMI. *Natl. Def. Med. Col., Hokkaido Univ. Grad. Sch. of Med., Yamaguchi Univ. Grad. Sch. of Med.*

10:00 LLL35 **701.03** New measurement system for prepulse inhibition of acoustic startle response in common marmosets. K. HAZEHARA*; K. NAKAMURA. *Primate Res. Institute, Kyoto Univ.*

11:00 LLL36 **701.04** Altered cerebrospinal fluid levels of matrix metalloproteinases in mood disorders and schizophrenia. W. OMORI; K. HATTORI; M. OKADA-TSUCHIOKA; K. ITAGAKI; N. KAJITANI; H. ABE; H. KUNUGI; M. TAKEBAYASHI*. *Natl. Hosp Org Kure Med. Centr, Natl. Ctr. of Neurol. and Psychiatry Hosp., Dept. of Neuropsychiatry Fac. of Life Science, Kumamoto Univ.*

8:00 LLL37 **701.05** The potential usefulness of long noncoding RNAs as biomarkers of major depressive disorder. T. SEKI*; H. YAMAGATA; S. UCHIDA; C. CHEN; K. HARADA; K. MATSUO; Y. WATANABE; S. NAKAGAWA. *Yamaguchi Univ. Sch. of Med.*

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9:00 LLL38 **701.06** Serine racemase knockout mice demonstrate schizophrenia-like EEG biomarker deficits. D. D. AGUILAR*; M. R. ZIELINSKI; J. M. MCNALLY. *VABHS, Harvard Med. Sch.*

10:00 LLL39 **701.07** ● An *in vivo* automated functional screening method identifies modulators of neural activity for accelerated drug discovery. R. LAGOY*; D. ALBRECHT. *Worcester Polytechnic Inst.*

11:00 LLL40 **701.08** ● Auditory steady state responses (ASSRs) in awake-behaving primates: A translatable biomarker for drug-discovery in schizophrenia. B. J. HANSEN*; S. J. TYE; A. MANOHAR; M. J. MARINO; J. M. USLANER; D. A. HENZE. *Merck Res. Labs., Merck Res. Labs.*

8:00 LLL41 **701.09** Mitochondrial Translocator Protein (TSPO) binding: A common occurrence in CNS-active plant species used in Peruvian traditional medicine. C. GALLO*; G. POLETTI; R. ROJAS; A. VAISBERG. *Univ. Peruana Cayetano Heredia, Univ. Peruana Cayetano Heredia.*

9:00 LLL42 **701.10** The neurosteroid allopregnanolone mediates sensorimotor gating deficits induced by D1 receptor activation. F. TRACCIS*; L. J. MOSHER; S. FANNI; P. SABA; G. GIUA; P. DEVOTO; M. BORTOLATO; R. FRAU. *Univ. of Cagliari, Univ. of Utah, Tourette Syndrome Ctr., Sleep Med. Ctr., Natl. Inst. of Neurosci. (INN).*

10:00 LLL43 **701.11** Plasma levels of metabolites differentiate first episode psychosis in schizophrenia and bipolar disorders patients. A. C. COSTA*; H. P. G. JOAQUIM; L. L. TALIB; W. F. GATTAZ. *Lab. of Neurosci. LIM27 - HCFMUSP, Lab. of Neurosci. LIM-27 - HCFMUSP, Lab. of Neurosci. LIM27 - HCFMUSP.*

11:00 LLL44 **701.12** Kynurenine pathway is altered in plasma of schizophrenia patients. L. L. TALIB*; A. C. COSTA; H. P. JOAQUIM; W. F. GATTAZ. *Psychiatry Inst. HCFMUSP, Lab. of Neurosci. LIM27 - HCFMUSP, Psychiatry Intitute HCFMUSP, Lim-27.*

8:00 LLL45 **701.13** ● An efficient, data-driven, trans-diagnostic screen for neurobehavioral health. Y. LIU*; M. S. MELLEM; H. GONZALEZ; W. J. MARTIN; P. AHAMMAD. *Blackthorn Therapeut.*

9:00 LLL46 **701.14** ● T-448 is a specific inhibitor of LSD1 enzyme activity that has minimal impact on LSD1- GFI1B complex through the generation of a compact formyl-FAD adduct. R. BABA*; S. MATSUDA; H. OKI; S. MORIMOTO; M. TOYOFUKU; S. IGAKI; Y. KAMADA; K. MATSUMIYA; K. TSUCHIDA; R. HARA; M. ITO; H. KIMURA. *Takeda Pharmaceut. Co. Limited, Takeda Pharmaceut. Co. Limited, Takeda Pharmaceut. Co. Limited.*

10:00 LLL47 **701.15** ● T-448, a novel LSD1 inhibitor with superior hematological safety profile, increases histone H3K4 methylation and improves learning function in NMDA receptor-hypofunction mice. S. MATSUDA*; R. BABA; S. MORIMOTO; M. TOYOFUKU; S. IWASAKI; R. HIBINO; H. KAMADA; T. HIRAKAWA; M. IWATANI; K. TSUCHIDA; R. HARA; M. ITO; H. KIMURA. *Takeda Pharmaceut. Co. Limited, Takeda Pharmaceut. Co. Limited, Takeda Pharmaceut. Co. Limited, Takeda Pharmaceut. Co. Limited.*

11:00 LLL48 **701.16** Inferring pkc(x) function in cns based on the extracted knowledge about protein's isoform. R. GURINOVICH*; Y. BUINITSKAYA; A. PASHUK; V. PUNTUS; A. SCERBACOV; Y. PETROVSKIY. *Sci.AI, sci.AI, sci.AI.*

8:00 LLL49 **701.17** Imaging mass spectrometry revealed the alteration of amine neurotransmitters in Scrapper-knockout mice brain. F. ETO; T. MATSUDA; M. SETOU; I. YAO*. *Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med.*

9:00 LLL50 **701.18** Electrochemical recording of striatal dopamine in non-human primates performing reward-biased tasks. H. N. SCHWERDT*; L. STANWICKS; K. AMEMORI; H. SHIMAZU; T. YOSHIDA; S. AMEMORI; R. LANGER; M. J. CIMA; A. M. GRAYBIEL. *MIT.*

POSTER

702. Computation, Modeling, and Simulation: Network Models: Theory II

Theme I: Techniques

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 LLL51 **702.01** Parallel computing of a spiking neural network model of layered cortical sheet consisting of multiple cortical regions with long-range connections. J. IGARASHI*; T. YAMAZAKI; H. YAMAURA. *RIKEN, The Univ. of Electro-Communications, The Univ. of Electro-Communications.*

9:00 LLL52 **702.02** Examination of the roles of basal ganglia afferents in action selection and learning by spiking neuron models. J. LIÉNARD; B. GIRARD; K. DOYA*. *Okinawa Inst. of Sci. and Technol., CNRS / Sorbonne Univ., Okinawa Inst. of Sci. and Technol.*

10:00 LLL53 **702.03** Implementation and simulation of a cerebellar model on a tile-based general spiking neural network simulator for K supercomputer. T. YAMAZAKI*; H. YAMAURA; J. IGARASHI. *The Univ. of Electro-Communications, RIKEN.*

11:00 LLL54 **702.04** The predictive neuron, how active dendrites enable spatiotemporal computation in the neocortex. S. AHMAD*; J. HAWKINS. *Numenta.*

8:00 LLL55 **702.05** A mechanism for sensorimotor object recognition using cortical grid cells. M. LEWIS*; S. PURDY; S. AHMAD; J. HAWKINS. *Numenta.*

9:00 LLL56 **702.06** Grid cells in the neocortex, a framework for cortical computation. J. HAWKINS*; S. AHMAD; M. LEWIS; S. PURDY. *Numenta, Inc.*

10:00 LLL57 **702.07** Stability and dynamics in finite-size stochastic neuronal spiking networks. D. TODOROV*; W. TRUCCOLO. *Brown Univ.*

11:00 LLL58 **702.08** Self-organized swarm control using neural principles of spatial phase coding. G. M. HWANG*; K. SCHULTZ; J. D. MONACO; R. W. CHALMERS; C. W. LAU; B. Y. YEH; K. ZHANG. *Johns Hopkins Univ. Applied Physics Lab., Johns Hopkins Univ.*

8:00 LLL59 **702.09** Swimming and synchrony in a reduced model of the xenopus tadpole central pattern generator: Bifurcations of limit cycles. R. BORISYUK*; A. FERRARIO; R. MERRISON-HORT; S. SOFFE; W. LI. *Plymouth Univ., Univ. of Bristol, Univ. of St Andrews.*

9:00 LLL60 **702.10** Rhythmic control of neural network sequential dynamics. R. LATORRE; P. VARONA*; M. I. RABINOVICH. *Univ. Autonoma de Madrid, Univ. of California.*

Wed. AM

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10:00 LLL61 **702.11** Coherent chaos and self-tuned criticality in a recurrent neural network. I. D. LANDAU*; H. SOMPOLINSKY. *The Hebrew Univ. of Jerusalem, Harvard Univ.*

11:00 MMM1 **702.12** Simulating source localized power spectra with structural connectivity and neural mass model. X. XIE*; A. KUCEYESKI; N. D. SCHIFF; S. A. SHAH; A. RAJ. *Weill Cornell Grad. Sch. of Med. Sci., Weill Cornell Med. Col., Univ. of California, San Francisco.*

8:00 MMM2 **702.13** Combination and stability properties of echo-state recurrent neural networks. L. KOZACHKOV*; E. K. MILLER; J. SLOTINE. *MIT, MIT, MIT.*

9:00 MMM3 **702.14** A mathematical model for the circadian rhythmicity of pain sensitivity in the dorsal horn. J. CRODELLE*; S. PILTZ; V. BOOTH; M. HASTINGS HAGENAUER. *Courant Institute, NYU, Univ. of Michigan, Univ. of Michigan.*

10:00 MMM4 **702.15** Activity patterns in networks of excitatory and inhibitory spiking neurons with synaptic noise. A. C. ROQUE*; R. F. O. PENA; M. A. ZAKS. *Univ. de Sao Paulo, Humboldt-Universität zu Berlin.*

POSTER

703. Neuronal Network Models Applied to Neuroscience

Theme I: Techniques

Wed. 8:00 AM – *San Diego Convention Center*, SDCC Halls B-H

8:00 MMM5 **703.01** Testing a deep convolutional neural network for hippocampus automated MRI segmentation in a longitudinal sample. N. NOGOVITSYN*; M. MULLER; S. HASSEL; S. ARNOTT; A. D. DAVIS; G. D. HALL; J. HARRIS; M. ZAMYADI; R. MILEV; B. N. FREY; R. W. LAM; S. C. STROTHER; S. ROTZINGER; S. KENNEDY; G. MACQUEEN. *Univ. of Calgary, Rotman Res. Inst., McMaster Univ., Univ. of British Columbia, Univ. of Alberta, Queen's Univ., McMaster Univ., Univ. of British Columbia, Univ. of Toronto.*

9:00 MMM6 **703.02** Efficient estimation of neuronal couplings from multi-point activity data: How effective is the McCulloch-Pitts model for inference? Y. TERADA*; T. OBUCHI; T. ISOMURA; Y. KABASHIMA. *RIKEN, Tokyo Inst. of Technol.*

10:00 MMM7 **703.03** A common cortical state underlying neuronal population coding. Z. J. XU*; X. GU; C. T. LI; D. W. MCLAUGHLIN; D. ZHOU; D. CAI. *New York Univerisity, New York Univ. Abu Dhabi, Inst. of Neuroscience, Chinese Acad. of Sci., New York Univ., Shanghai Jiao Tong Univ.*

11:00 MMM8 **703.04** Weighted stochastic blockmodels of the human connectome across the life span. J. FASKOWITZ*; X. YAN; X. ZUO; O. SPORNS. *Indiana Univ., Indiana Univ. Network Sci. Inst., Inst. of Psychology, Chinese Acad. of Sci.*

8:00 MMM9 **703.05** Which spike train distance is most suitable for distinguishing rate and temporal coding? T. KREUZ*; E. A. SATUVUORI. *Inst. For Complex Systems, Univ. of Florence, Inst. for Complex Systems, Amsterdam Movement Sci. (AMS), Inst. for Brain and Behaviour Amsterdam (iBBA), Fac. of Behavioural and Movement Sciences, Dept. of Human Movement Sci.*

9:00 MMM10 **703.06** DeepBehavior: A deep learning toolbox for automated analysis of animal and human behavior imaging data. A. ARAC*; P. ZHAO; S. CARMICHAEL; P. GOLSHANI. *UCLA, UCLA, UCLA Sch. Med., UCLA Dept. of Neurol.*

10:00 MMM11 **703.07** Multi-day, stable, functional neuronal network measurement in three dimensions from a depth exceeding 1mm. A. PLAUSKA*; G. SZALAY; M. MAROSI; T. TOMPA; D. P. PINKE; G. HORVÁTH; D. NAGY; C. CSUPERNYÁK; B. HEIZER; L. JUDÁK; P. MAÁK; M. VERESS; A. FEHÉR; G. KATONA; B. RÓZSA. *Inst. of Exptl. Medicine, HAS, Budapest Univ. of Technol. and Econ., Pázmány Péter Catholic Univ.*

11:00 MMM12 **703.08** A manifold learning approach to imaging mass spectrometry analysis in mice brain. H. SUETANI*; F. ETO; I. YAO. *Oita Univ., Riken Ctr. for Brain Science, RIKEN, Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med.*

8:00 MMM13 **703.09** Large-scale automated deep neural network training framework for robust inference of neural ensemble dynamics. M. R. KESHTKARAN*; C. PANDARINATH. *Emory Univ. / Georgia Tech., Emory Univ.*

9:00 MMM14 **703.10** Automatic alignment of neural data by piecewise linear time warping. A. H. WILLIAMS*; B. POOLE; N. MAHESWARANATHAN; A. K. DHAWALE; D. H. BRANN; B. OLVECZKY; E. TRAUTMANN; T. FISHER; S. RYU; K. V. SHENOY; R. SHUSTERMAN; C. D. WILSON; D. RINBERG; S. GANGULI. *Stanford Univ., Harvard Univ., Harvard Univ., Palo Alto Med. Fndn., Howard Hughes Med. Inst. - Stanford Univers, Univ. of Oregon, New York Univ.*

10:00 MMM15 **703.11** Prediction of amyloid PET positivity from multi-modal magnetic resonance imaging using deep learning. S. BANG*; Y. PARK; M. BYUN; D. YI; J. LEE; Y. LEE; Y. KIM; K. KANG; C. SOHN; D. LEE; J. LEE. *Hanyang Univ., Inst. of Human Behavioral Medicine, Med. Res. Ctr. Seoul Natl. Univ., Biomed. Res. Institute, Seoul Natl. Univ. Hosp., Seoul Natl. Univ. Hosp., SMG-SNU Boramae Med. Ctr., Seoul Natl. Univ. Hosp., Seoul Natl. Univ. Col. of Med.*

11:00 MMM16 **703.12** Spike-triggered regression (STR) method for neuronal network reconstruction. Y. ZHANG*; Y. XIAO; D. ZHOU; D. CAI. *New York Univ. Abu Dhabi, New York Univ., Shanghai Jiao Tong Univ.*

8:00 MMM17 **703.13** Supervised dimensionality reduction on spike trains with smooth-constrained autoencoder. Y. WU*; A. A. FAISAL. *Imperial Col. London, Imperial Col. London.*

9:00 MMM18 **703.14** Driving fatigue detection by brain activity estimated from electrodermal activity. P. SEO*; D. YEO; H. KIM; S. HER; S. CHOI; K. KIM. *Yonsei Univ.*

10:00 MMM19 **703.15** Unable to Attend Zero shot generative adversarial network for EEG based classification. S. HWANG*; K. HONG; H. BYUN. *Yonsei Univ., Yonsei Univ., Yonsei Univ.*

11:00 MMM20 **703.16** Unsupervised discovery of neural sequences in large scale recordings. A. H. BAHLE*; E. L. MACKEVICIUS; A. H. WILLIAMS; N. I. DENISENKO; S. GU; M. S. GOLDMAN; M. S. FEE. *MIT, Stanford Univ., Univ. of California Davis Ctr. for Neurosci.*

8:00 MMM21 **703.17** Simulation-based evaluation of PCA application to neuronal population activity. A. FILIPPOW*; B. DANN; H. SCHERBERGER. *German Primate Ctr., Univ. of Göttingen.*

9:00 MMM22 **703.18** Balancing friendship networks while breaking up: Integrative network properties during avalanche homeostasis in nonhuman primates. S. R. MILLER*; S. YU; S. PAJEVIC; D. PLENZ. *UMCP, NIMH, Inst. of Automation, Chinese Acad. of Sci., NIH.*

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* Indicates abstract's submitting author

10:00 MMM23 **703.19** Generalized linear model approach for predicting neural spiking activity from oscillatory phase. T. D. JOHNSON*; T. P. COLEMAN; L. M. RANGEL. *UCSD, UCSD.*

11:00 MMM24 **703.20** Interactive data visualization for electrophysiological data. E. L. DENOVELLIS*; E. P. STEPHEN; U. EDEN; M. A. KRAMER. *Boston Univ., MIT, Boston Univ.*

8:00 MMM25 **703.21** ● RRIDs in the scientific literature, how can this help us all do better work? A. E. BANDROWSKI*; Z. BABIC; M. E. MARTONE; J. S. GRETHE; E. VIETH; J. MENKE; I. FROMAN; R. VITA; T. GILLESPIE. *UCSD, UCSD, UCSD, SciCrunch, UCSD.*

9:00 MMM26 **703.22** Specifying PKC(x) isoform in different cellular location and anatomical locations of the cns based on the extracted knowledge. Y. BUINITSKAYA*; R. GURINOVICH; A. PASHUK; V. PUNTUS; A. DMITRIEVSKIY; A. SCERBACOV; Y. PETROVSKIY. *sci.AI, sci.AI.*

10:00 MMM27 **703.23** ● ▲ RRIDs reduce the use of contaminated cell lines in scientific papers. Z. BABIC*; A. E. BANDROWSKI; M. E. MARTONE; J. S. GRETHE; T. GILLESPIE; B. OZYURT. *UCSD, UCSD, UCSD, UCSD, UCSD.*

11:00 MMM28 **703.24** An online platform for reproducible neural data analyses. E. M. MEYERS*; L. RITHICHOO; T. ZHANG; P. LU. *Hampshire Col., Mount Holyoke Col., Hampshire Col.*

8:00 MMM29 **703.25** Maximum likelihood and machine learning based methods for automated cell sorting of large-scale neural calcium imaging data. B. AHANONU*; L. J. KITCH; T. H. KIM; M. C. LARKIN; E. OTTO HAMEL; J. LECOQ; D. E. ALDARONDO; M. J. SCHNITZER. *Stanford Univ., Stanford Univ., Stanford Univ., Allen Inst., Princeton Univ., Stanford Univ., Stanford Univ.*

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LECTURE *San Diego Convention Center*

704. Light Detection in the Eye: The Big Picture — CME

Wed. 1:00 PM - 2:10 PM — SDCC Ballroom 20

Speaker: K. YAU*, Johns Hopkins Univ. Sch. of Med.*

This lecture will discuss multiple photoreceptor cell-types existing in the eye. Retinal rods and cones serve predominantly image-forming vision, using a cGMP signaling cascade for phototransduction. A few percent of retinal ganglion cells express the pigment melanopsin and are bona fide photoreceptors. They serve mostly, but not exclusively, non-image-forming vision. They use a combination of cGMP signaling and phospholipase-C signaling for phototransduction, with some using both signaling pathways in the same cell. Still other ocular photoreceptor cells exist both inside and outside the retina.

SYMPOSIUM *San Diego Convention Center*

705. Unveiling the Extracellular Space of the Brain: From Super-Resolved Microstructure to In Vivo Function — CME

Wed. 1:30 PM - 4:00 PM — SDCC 6A

Chair: V. U. NÄGERL, *University of Bordeaux*
Co-Chair: S. HRABETOVA, *State University of New York*

The extracellular space (ECS) of the brain provides the physical stage and signaling platform where neuronal and glial players perform in concert. While the ECS takes up a fifth of brain volume, its topology is incredibly complex and miniaturized, defying traditional investigative approaches. This symposium will review our current knowledge of the ECS, evaluating recent methodological and conceptual progress that throws new light on this understudied yet critically important compartment of the brain.

1:30 **705.01** Introduction.

1:35 **705.02** Exploring the structure and function of brain extracellular space with biophysical and computational methods. S. HRABETOVA. *State Univ. of New York, Downstate Med. Ctr.*

2:10 **705.03** Super-resolution imaging and local viscosity of the extracellular space in live brain tissue by single-nanotube tracking. L. COGNET. *Univ. of Bordeaux.*

2:45 **705.04** STED imaging of extracellular space and its structural dynamics in live brain tissue. V. U. NÄGERL. *CNRS, Univ. of Bordeaux.*

3:20 **705.05** Use-dependent plasticity of synaptic microenvironment. D. RUSAKOV. *Univ. Col. London.*

3:55 **705.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

706. The Emerging Role of the Amygdala in Modulating the Somatosensory and Emotional Components of Pain and Itch — CME

Wed. 1:30 PM - 4:00 PM — SDCC 6B

Chair: B. J. KOLBER, *Duquesne University*

Pain involves a complex mix of sensory, cognitive, and emotional processes. This symposium will address the emerging role of the amygdala in modulating all of these components in the mammalian limbic system. Speakers will provide important and novel mechanistic insight at the cellular, synaptic, and circuit levels achieved through cutting-edge microscopy, recording, and rodent behavioral techniques.

1:30 **706.01** Introduction.

1:35 **706.02** Cell-type-specific ON/OFF switch for pain in the central amygdala. Y. CARRASQUILLO. *NIH.*

2:10 **706.03** Amygdala CRF neurons: Pain-related neuroplasticity and behavioral consequences. V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr.*

2:45 **706.04** The central amygdala regulates widespread mechanical sensitivity. F. KATO. *Jikei Univ. Sch. of Med.*

3:20 **706.05** ● Functional and genetic dissection of central amygdala neurons underlying sensory and aversive components of itch. R. W. GEREAU, IV. *Washington Univ. Sch. of Med.*

3:55 **706.06** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

707. From Recent to Remote Memory and Back — CME

Wed. 1:30 PM - 4:00 PM — SDCC 6C

Chair: Y. ZIV, *Weizmann Institute of Science*
Co-Chair: I. GOSHEN, *The Hebrew University*

What makes some memories fade rapidly and others persist for a lifetime? Studies have indicated that recent and remote memories of a similar experience have different qualities and may be supported by different brain circuits. Integrating knowledge from ongoing work, this minisymposium brings together experts studying the topic at different levels of organization, measuring how networks, neurons, and spines change over time, and manipulating neurons and glia to test their involvement in long-term memory.

1:30 **707.01** Introduction.

1:35 **707.02** Identification of an inhibitory hippocampal-thalamic pathway that is necessary for remote memory retrieval. F. XIA. *Hosp. for Sick Children.*

1:55 **707.03** Prefrontal circuit dynamics in goal directed memory. P. RAJASETHUPATHY. *Rockefeller Univ.*

2:15 **707.04** Hippocampal mechanisms for memory retrieval. B. J. WILTGEN. *UC Davis.*

2:35 **707.05** Cellular substrates for network information processing in hippocampal CA1. A. ATTARDO. *Max Planck Inst. of Psychiatry.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:55 **707.06** Bidirectional recent and remote memory modulation by CA1 astrocytes manipulation. I. GOSHEN. *The Hebrew Univ.*

3:15 **707.07** Stability and dynamics in neural codes for long-term memory of places and events. Y. ZIV. *Weizmann Inst. of Sci.*

3:35 **707.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

708. The Basal Ganglia: Beyond Action Selection — CME

Wed. 1:30 PM - 4:00 PM — SDCC 6E

Chair: E. A. YTTRI, *Carnegie Mellon University*

New approaches — both behavioral and physiological — have enabled a new depth of interrogation of the neural correlates of behavior. Perhaps nowhere has this process been more powerful than in the basal ganglia, where recent insight is shifting the operational paradigm of function from a binary gating of action to a nuanced shaping of behavior. This minisymposium will cover the implications of animal model work and connect findings with human studies of healthy and clinical subjects.

1:30 **708.01** Introduction.

1:35 **708.02** A role for the basal ganglia: Superior colliculus circuit in decision-making. M. BASSO. *UCLA.*

1:55 **708.03** The missing, the short, and the long: Levodopa responses and dopamine actions. R. ALBIN. *Univ. of Michigan.*

2:15 **708.04** Action monitoring and learning functions of the dorsal striatum. D. M. ROBBE. *Inst. de Neurobiologie de la Méditerranée.*

2:35 **708.05** Basal ganglia and cortex: Who's in charge here? R. S. TURNER. *Univ. of Pittsburgh.*

2:55 **708.06** How does the GPe fit into the indirect pathway? A. GITTIS. *Carnrgie Mellon Univ.*

3:15 **708.07** The role of the cortico-striatal axis in goal-oriented movement. E. A. YTTRI. *Carnegie Mellon Univ.*

3:35 **708.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

709. Sonic Hedgehog and Cell-Specific Programming: Circuits, Disease, and Repair — CME

Wed. 1:30 PM - 4:00 PM — SDCC 28A

Chair: C. C. HARWELL, *Harvard Medical School*
Co-Chair: R. IHRIE, *Vanderbilt University*

An emerging body of research has uncovered diverse roles for Sonic Hedgehog signaling in a wide range of neurodevelopmental contexts affecting the function of brain circuits, including the production and maintenance of diverse cell types and the establishment of cell-specific wiring. This minisymposium will highlight recent developments describing the role of Sonic Hedgehog in conferring cell specific identity, circuit connectivity, and injury repair in the developing and mature nervous system.

1:30 **709.01** Introduction.

1:35 **709.02** Making bigger and folded brains: Conserved functions of hedgehog signaling. Y. HAN. *St. Jude Children's Res. Hosp.*

1:55 **709.03** Positional identity, Hh signaling, and mTOR in the postnatal stem cell niche. R. IHRIE. *Vanderbilt Univ.*

2:15 **709.04** Neurons diversify astrocytes in the adult cerebellum through sonic hedgehog signaling. T. FARMER. *McGill Univ. Hlth. Ctr.*

2:35 **709.05** Sonic hedgehog signaling in astrocyte-synapse interactions. D. GARCIA. *Drexel Univ.*

2:55 **709.06** Hedgehog interacting protein in visual circuit development. J. TRIPLETT. *Childrens Natl. Med. Ctr.*

3:15 **709.07** Neuron derived Sonic hedgehog directs cortical circuit assembly. C. C. HARWELL. *Harvard Med. Sch.*

3:35 **709.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

710. Multitransmitter Neurons: The Function and Regulation of Neurotransmitter Cotransmission — CME

Wed. 1:30 PM - 4:00 PM — SDCC 29D

Chair: A. J. GRANGER, *Harvard Medical School*

Many neurons signal through multiple small-molecule neurotransmitters, adding an additional layer of complexity to our understanding of synaptic transmission. This minisymposium will discuss recent examples of multitransmitter neurons, emphasizing the physiological and behavioral function of cotransmission and how the neurotransmitter(s) a neuron releases may be regulated by development or activity.

1:30 **710.01** Introduction.

1:35 **710.02** Layer- and cell type-selective co-transmission by a basal forebrain cholinergic projection to the olfactory bulb. R. P. SEAL. *Univ. of Pittsburgh.*

1:55 **710.03** Role of glutamate co-release in selective dopamine neuron degeneration. T. S. HNASKO. *UCSD.*

2:15 **710.04** The fine balancing act of direction selective GABAergic/cholinergic retinal starburst amacrine cells. G. AWATRAMANI. *Univ. of Victoria.*

2:35 **710.05** The function of GABA co-release from excitatory basal ganglia inputs to the lateral habenula. S. SHABEL. *UT Southwestern Med. Ctr.*

2:55 **710.06** Dynamic co-expression and co-transmittion of acetylcholine and glutamate from adult zebrafish motoneurons to regulate locomotion. K. AMPATZIS. *Karolinska Institutet, Dept. of Neurosci.*

3:15 **710.07** Function of GABA co-transmission from dopamine neurons. Y. ZHANG. *Univ. of Oxford.*

3:35 **710.08** Closing Remarks.

NANOSYMPOSIUM

711. Astrocytes: Disease Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 32

1:00 **711.01** Behavioral changes and their molecular basis in mice lacking interleukin-33. E. DOHI*; E. Y. CHOI; I. V. L. ROSE; A. MURATA; S. CHOW; M. NIWA; S. KANO. *Johns Hopkins Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:15 **711.02** Chronic neurodegenerative stress siphons energetic resources from nearby healthy tissue. M. L. COOPER*; W. S. LAMBERT; D. J. CALKINS. *Vanderbilt Univ., Vanderbilt Eye Inst., Vanderbilt Univ. Med. Ctr.*

1:30 **711.03** Astrocytic dysfunction: Insights and role in the irradiated brain. M. M. ACHARYA*; A. D. BADDOUR; B. D. ALLEN; T. H. NGUYEN; D. T. LE; N. RU; J. D. BADDOUR; M. MARKARIAN; R. A. ARANDA; J. REEMMER; D. BOISON; J. E. BAULCH. *Univ. of California Irvine, Legacy Res. Inst.*

1:45 **711.04** Susceptibility to carbonyl stress in schizophrenia derived neural cellsderived neural cells. Y. HORIUCHI*; M. ISHIKAWA; S. KOIKE; A. MORI; K. TORIUMI; N. OBATA; M. MIYASHITA; M. ISHIKAWA; Y. OGASAWARA; H. OKANO; M. ARAI. *Tokyo Metropolitan Inst. of Med. Sci., Keio Univ. Sch. of Med., Meiji Pharmaceut. Univ.*

2:00 **711.05** Fingolimod phosphate inhibits astrocyte inflammatory activity in mucolipidosis IV. L. WOOD*; L. WEINSTOCK; A. FURNESS; S. HERRON; S. SMITH; S. SANKAR; S. DEROSA; D. GAO; M. MEPYANS; A. ROSATO; D. MEDINA; A. VARDI; N. FERREIRA; S. CHO; A. FUTERMAN; S. SLAUGENHAUPT; Y. GRISHCHUK. *Georgia Inst. of Technol., Georgia Inst. of Technol., Massachusetts Gen. Hosp., Georgia Inst. of Technol., Telethon Inst. of Genet. and Med. (TIGEM), Weizmann Inst. of Sci., Univ. of Zurich-Vetsuisse, Massachusetts Gen. Hospital/Harvard Med. Sch.*

2:15 **711.06** Astrocytes modulate excitatory neurons within BLA-NAc circuit to rescue deficiency in risk avoidance of DISC1 mice. X. ZHOU*; Q. XIAO; L. XIE; F. YANG; J. TU. *Shenzhen Inst. of Advanced Technology, CAS.*

2:30 **711.07** Spontaneous astrocytic Ca^{2+} activity abounds in electrically suppressed ischemic penumbra of aged mice. J. C. FORDSMANN*; R. P. MURMU; C. CAI; A. BRAZHE; K. J. THOMSEN; S. A. ZAMBACH; M. LØNSTRUP; B. L. LIND; M. J. LAURITZEN. *Univ. of Copenhagen, Moscow State Univ., Glostrup Hosp.*

NANOSYMPOSIUM

712. Imaging Studies and Biomarkers in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 31C

1:00 **712.01** ● *In vivo* stable isotope labeling & quantitative mass spectrometry imaging of Aβ plaque deposition and neuronal metabolism in human AD brain. N. C. WILDBURGER*; G. S. DAY; W. SIGURDSON; M. SULLIVAN; A. PETERS; L. WATKINS; R. E. SCHMIDT; R. J. BATEMAN. *Washington Univ. in St. Louis Sch. of Med., Washington Univ. in St. Louis Sch. of Med.*

1:15 **712.02** Global brain oxygen metabolism is reduced but vascular function is intact in amnestic mild cognitive impairment. B. P. THOMAS*; M. SHENG; B. Y. TSENG; T. TARUMI; K. MARTIN-COOK; K. B. W. WOMACK; M. C. CULLUM; B. D. LEVINE; B. RYPMA; R. ZHANG; H. LU. *Univ. of Texas Southwestern Med. Ctr., Ctr. for Brain Health, Univ. of Texas at Dallas, Inst. of Exercise and Envrn. Medicine, Presbyterian Hosp., Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr., Johns Hopkins Univ.*

1:30 **712.03** ● Endogenous compensation for Alzheimer's neuropathology is genotype dependent. T. W. SCHMITZ*; H. SOREQ; J. POIRIER; R. N. SPRENG. *McGill Univ., Hebrew Univ. Jerusalem, Douglas Mental Hlth. Univ. Inst., McGill Univ.*

1:45 **712.04** Blood-based protein variants distinguish different proteinopathies in Alzheimer's patients: Relationship with cognitive decline and disease progression. S. M. WILLIAMS*; P. SCHULZ; M. R. SIERKS. *Arizona State Univ.*

2:00 **712.05** Quantitative proteomics of plasma-derived neuronal exosomes during the progression of Alzheimer's disease. S. CANCHI*; C. N. WINSTON; J. J. MORESCO; J. R. YATES, III; R. A. RISSMAN. *UCSD Sch. Med., Veteran's Affairs San Diego Healthcare Syst., The Scripps Res. Inst.*

2:15 **712.06** ● Proteomic and biophysical characterization of Extracellular Vesicles isolated from Alzheimer's disease brain tissues. A. M. DELEO; M. SETHI; S. MURAOKA; M. MEDALLA; Y. WANG; S. GOLANTLA; H. E. GENDELMAN; S. IKEZU; J. ZAIA; T. IKEZU*. *Boston Univ. Schol of Med., Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Univ. of Nebraska Med. Ctr., Boston Univ. Sch. of Med.*

2:30 **712.07** MarkVCID: Vascular contributions to cognitive impairment and dementia biomarkers development and validation. R. A. CORRIVEAU*; J. T. GLADMAN; L. MCGAVERN; M. S. ALBERT; K. ARFANAKIS; A. CAPRIHAN; C. DECARLI; M. FORNAGE; K. G. HELMER; G. JICHA; A. H. KASHANI; J. KRAMER; H. LU; J. RINGMAN; G. A. ROSENBERG; J. A. SCHNEIDER; K. SCHWAB; S. SESHADRI; R. TRACY; D. J. J. WANG; D. M. WILCOCK; S. M. GREENBERG. *NINDS/NIH, Johns Hopkins Univ., Illinois Inst. of Technol., Univ. of New Mexico, Univ. of California Davis, Univ. of Texas Hlth. Sci. Ctr., Massachusetts Gen. Hosp., Univ. of Kentucky, USC, Univ. of California, Rush Univ., Boston Univ., Univ. of Vermont.*

NANOSYMPOSIUM

713. Alzheimer's Disease and Other Dementias: Abeta: Pathologic Mechanisms

Theme C: Neurodegenerative Disorders and Injury

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 33

1:00 **713.01** Selective neuronal vulnerability in Alzheimer's disease: A network-based analysis. J. ROUSSARIE*; V. YAO; Z. PLAUTZ; S. KASTURIA; C. ALBORNOZ; E. F. SCHMIDT; L. BRICHTA; A. BARNEA; N. HEINTZ; P. R. HOF; M. HEIMAN; M. FLAJOLET; O. TROYANSKAYA; P. GREENGARD. *Rockefeller Univ., Princeton Univ., Rockefeller Univ., Rockefeller Univ., Rockefeller Univ., Icahn Sch. of Med. at Mount Sinai, MIT.*

1:15 **713.02** A recipe for neurotoxicity: The prion protein, promiscuous binding, and soluble protein aggregates? G. T. CORBETT*; A. ASFAW; T. C. HALL; Z. WANG; W. LIU; J. COLLINGE; M. PERKINTON; A. BILLINTON; D. M. WALSH. *Brigham & Women's Hospital/Harvard Med. Sch., Univ. Col. London Inst. of Prion Dis., AstraZeneca Neurosci. Innovative Medicines.*

1:30 **713.03** Aβ42/40 ratio regulates tau pathology in 3D human neural cell culture models of AD. D. KIM*; S. KWAK; E. BRAND; K. J. WASHICOSKY; J. PARK; D. VON MAYDELL; K. BRENNER; J. L. ARONSON; E. BYLYKBASHI; S. CHOI; R. E. TANZI. *Massachusetts Gen. Hospital/ Harvard Med. Sch.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:45 **713.04** hAb-KI mice: A novel tool for investigating risk factors in sporadic Alzheimer's cases. D. BAGLIETTO-VARGAS*; S. FORNER; A. C. MARTINI; L. TRUJILLO-ESTRADA; C. NUÑEZ-DIAZ; E. A. KRAMÁR; S. JIANG; D. P. MATHEOS; C. DA CUNHA; A. GUTIERREZ; K. N. GREEN; M. A. WOOD; A. MORTAZAVI; G. R. MACGREGOR; A. J. TENNER; F. M. LAFERLA. *Univ. of California, Irvine|910005640|0, Univ. of California, Univ. of Malaga /CIBERNED.*

2:00 **713.05** The role of PICALM and associated APP adaptor proteins in APP endocytosis. L. MERTHAN*; B. VON EINEM; C. VON ARNIM. *Ulm University/Neurology.*

2:15 **713.06** Phosphatase activity during sleep/wake cycles regulates APP processing and brain ISF amyloid-beta levels. J. R. CIRRITO*; C. E. WALLACE; H. EDWARDS. *Washington University, St. Louis, Washington Univ., Washinton Univ.*

2:30 **713.07** Direct regulation of mitochondrial activity by mtorc1 unveils a novel lysosome to mitochondria signaling pathway disrupted by amyloid-β oligomers. A. NORAMBUENA; H. WALLRABE; R. CAO; D. BIGLER WANG; A. SILVA; Z. SVINDRYCH; A. PERIASAMY; S. HU; D. KIM; R. E. TANZI; G. S. BLOOM*. *Univ. of Virginia, Univ. of Virginia, Dartmouth Col., Massachusetts Gen. Hospital/ Harvard Med. Sch., Massachusetts Gen Hosp, Harvard Med. Sch.*

2:45 **713.08** Asymmetric beta-amyloid deposits leading to partial smell dysfunction by breakdown of neural reconstitution. G. SON*; S. YOO; A. JAHANSHAHI; H. W. STEINBUSCH; K. CHANG; Y. SUH; C. MOON. *DGIST, Convergence Res. Advanced Ctr. for Olfaction, DGIST, Sch. for Mental Hlth. and Neuroscience, Maastricht University, EURON, Dept. of Pharmacology, Sch. of Medicine, Gachon Med. Sch., Dept. of Neurology, Gil Med. Center, Gachon Univ.*

3:00 **713.09** Discovery of novel small-molecule inhibitor of tau oligomerization by FRET-based high-throughput screening. C. H. LO*; C. K. W. LIM; Z. DING; D. D. THOMAS; J. N. SACHS. *Univ. of Minnesota, Univ. of Minnesota, Photonic Pharma.*

NANOSYMPOSIUM

714. Alzheimer's Disease and Other Dementias: Tau: Experimental Models

Theme C: Neurodegenerative Disorders and Injury

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 5

1:00 **714.01** Enhanced tau pathology via RanBP9 and Hsp90/Hsc70 chaperone complexes. J. A. WOO*; T. LIU; C. FANG; C. TROTTER; D. KANG. *USF Hlth. Byrd Inst., USF Hlth. Byrd Inst.*

1:15 **714.02** Distinct roles of Slingshot-1 in mitochondrial dysfunction and mitophagy. C. FANG*; J. A. WOO; T. LIU; X. ZHAO; S. CAZZARO; C. L. TROTTER; D. E. KANG. *USF Hlth. Byrd Inst.*

1:30 **714.03** Activated cofilin in tau-mediated microtubule dynamics and tauopahty. D. E. KANG*; J. A. WOO; T. LIU; C. TROTTER; C. C. FANG; S. CAZZARO; T. KEE; K. YRIGOIN; P. LEPOCHAT; X. ZHAO; X. WANG; S. LIGGETT. *USF Hlth. Byrd Inst.*

1:45 **714.04** P2X7R inhibitor blocks exosome secretion and delays proteopathic tau accumulation in P301S tau mice. J. DELPECH*; Z. RUAN; A. VAN ENOO; M. BOTROS; S. IKEZU; T. IKEZU. *Boston Univ.*

2:00 **714.05** DOPA decarboxylase modulates tau-induced toxicity in a *Caenorhabditis elegans* model of tau toxicity. R. L. KOW*; J. M. WHEELER; B. C. KRAEMER. *Veterans Affairs Puget Sound Hlth. Care Syst., Univ. of Washington, Univ. of Washington, Seattle Inst. of Biomed. and Clin. Res., Univ. of Washington, Univ. of Washington.*

2:15 **714.06** Exploring the interaction between iron and tau in a mouse model of tauopathy. S. S. RAO*; G. MCCOLL; D. FINKELSTEIN; P. ADLARD. *Florey Inst. of Neurosci. and Mental Hlth.*

2:30 **714.07** High FKBP52 levels causes tau aggregation leading to hippocampal-dependent memory impairments. M. CRIADO MARRERO*; N. GEBRU; R. BLACKBURN; X. WANG; J. D. BAKER; L. B. SHELTON; L. J. BLAIR; Y. VIDAL AGUIAR; T. SMITH; H. PENNY. *Univ. of South Florida, Univ. of South Florida, USF Hlth., USF Byrd Inst.*

2:45 **714.08** Specific functional deficits in learning memory in tau transgenic mice without antibodies. J. J. VAN DER HOVEN*; L. S. SUH; A. E. VAN HUMMEL; M. PRZYBYLA; Y. D. KE; A. A. ITTNER; L. M. ITTNER. *UNSW Sydney, Motor Neuron Dis. Unit, Sch. of Med. Science, UNSW Sydney, Dementia Res. Centre, Macquarie Univ.*

NANOSYMPOSIUM

715. ALS Mechanisms

Theme C: Neurodegenerative Disorders and Injury

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 7

1:00 **715.01** Cell-autonomous requirement of TDP-43 for oligodendrocyte survival and myelination. S. LING*; J. WANG; W. HO; K. NAVE. *Natl. Univ. of Singapore, Max Planck Inst. of Exptl. Med.*

1:15 **715.02** A genome-wide RNAi screen identifies novel mechanisms controlling TDP-43 toxicity in a *C. elegans* model of ALS and FTLD-TDP. N. LIACHKO*; A. SAXTON; B. C. KRAEMER. *VA Puget Sound Hlth. Care Syst., Univ. of Washington.*

1:30 **715.03** FUS induces neurodegeneration through its low-complexity domain in the *Drosophila retina.* T. HASHIMOTO*; T. MATSUMOTO; Y. KISHINO; K. MATSUKAWA; N. WATANABE; T. WAKABAYASHI; T. IWATSUBO. *The Univ. of Tokyo.*

1:45 **715.04** Stress granule assembly disrupts nucleocytoplasmic transport. K. ZHANG*; J. DAIGLE; K. CUNNINGHAM; A. N. COYNE; K. RUAN; J. C. GRIMA; J. D. ROTHSTEIN; T. E. LLOYD. *Johns Hopkins University, Sch. of Med., Johns Hopkins University, Sch. of Medicine,, Johns Hopkins Univ. Sch. of Med., Johns Hopkins Neurosci., Johns Hopkins Univ., Johns Hopkins Schl Med.*

2:00 **715.05** Large ventrolateral glycinergic interneurons are less excitable in a SOD1 mouse model of ALS. K. A. QUINLAN*. *Univ. of Rhode Island, Univ. of Rhode Island.*

2:15 **715.06** Small non-coding RNAs generated by the ALS-associated ribonuclease angiogenin deliver novel and accessible biomarkers of disease progression in ALS. M. C. HOGG; M. RAYNER; S. SUSDALZEW; M. CRIVELLO; I. WOODS; N. MONSEFI; A. RESLER; M. TROLESE; G. NARDO; C. BENDOTTI; L. H. VAN DEN BERG; M. VAN ES; J. H. PREHN*. *Royal Col. of Surgeons in Ireland, Mario Negri Inst. for Pharmacol. Res., Univ. Med. Ctr. Utrecht.*

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* Indicates abstract's submitting author

2:30 **715.07** Abnormal excitability and susceptibility in familial ALS iPSC derived neurons. S. LEE*; O. WISKOW; S. GHOSH; X. HUANG; K. ROET; B. J. WAINGER; B. P. BEAN; K. EGGAN; C. J. WOOLF. *Boston Children's Hosp., Harvard Univ., Massachusetts Gen. Hosp., Harvard Med. Sch.*

2:45 **715.08** ● Assessing the neuroprotective effects of cromolyn sodium in the SOD1^{G93A}mouse model of amyotrophic lateral sclerosis. G. SADRI-VAKILI*; E. GRANUCCI; K. MUELLER; A. GRICIUC; H. LE; A. DIOS; S. PAGANONI; J. BERRY; M. CUDKOWICZ; D. ELMALEH; R. TANZI. *Massachusetts Gen. Hosp.*

3:00 **715.09** New mouse models of mutant CHCHD10 mitochondrial disease. C. J. ANDERSON; K. BREDVIK; S. MEADOWS; S. R. BURSTEIN; A. STEPANOVA; H. KAWAMATA; C. LUTZ; G. MANFREDI*. *Weill Cornell Med., Weill Cornell Med., Weill Cornell Med. Col., Weill Cornell Med., The Jackson Labs., Weill Med. Col. Cornell Univ.*

3:15 **715.10** Loss of o-glcnac contributes to nuclear pore complex defects in als/ftd and sals. J. GRIMA*; J. D. ROTHSTEIN. *Johns Hopkins University, Sch. of Med., Johns Hopkins Univ.*

3:30 **715.11** Skeletal muscle-driven mechanisms of motor neuron degeneration in SBMA. A. GROMOVA*; H. C. MIRANDA; A. R. LA SPADA. *UC San Diego, Duke Univ.*

NANOSYMPOSIUM

716. Brain Injury: From Animal Models to Physiology, Behavior, and Treatments

Theme C: Neurodegenerative Disorders and Injury

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 4

1:00 **716.01** MRI markers of brain injury in a ferret model of closed head rotation and acceleration. E. B. HUTCHINSON*; S. KING; Y. KIM; A. KOROTCOV; A. BOSOMTWI; L. D. REYES; S. C. SCHWERIN; S. L. JULIANO; B. DARDZINSKI; C. PIERPAOLI. *NIH, Henry M. Jackson Fndn., USUHS, USUHS.*

1:15 **716.02** Locomotor adaptations in a mouse model of controlled cortical impact. S. LEMARCHANT*; G. COURTAND; M. A. MAYORGA RODRIGUEZ; L. CARDOIT; M. WOLFF; F. E. PERRIN; G. BARRIÈRE. *CNRS UMR5287, INSERM U 1198, Univ. of Montpellier.*

1:30 **716.03** Gene expression, morphological, and behavioral changes associated with a mouse model of mild repetitive TBI and treatment with activators of Nrf2 and PPAR-γ transcription factors. W. A. RATLIFF*; D. QUBTY; T. MICHAELS; C. M. SMITH; C. G. PICK; B. A. CITRON. *Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., Tel Aviv Univ., VA New Jersey Hlth. Care Syst.*

1:45 **716.04** Traumatic brain injury-induced neuronal damage induces cortical rod microglia that promote persistent neuroinflammation. K. G. WITCHER*; C. BRAY; J. DZIABIS; D. B. MCKIM; B. BENNER; R. ROWE; P. G. POPOVICH; J. LIFSHITZ; O. KOKIKO-COCHRAN; D. EIFERMAN; J. P. GODBOUT. *Ohio State Univ., Ohio State Univ., The Ohio State Univ., Univ. of Arizona Col. of Med. Phoenix, The Ohio State Univ., Univ. of Arizona/Phoenix Children's Hosp., Ohio State Univ. Dept. of Neurosci.*

2:00 **716.05** Repetitive closed-skull traumatic brain injury in mice leads to long-term axonal injury and cognitive impairments. A. BROWN*; X. XU; M. COWAN; F. BERALDO; A. L. SCHRANZ; P. MCCUNN; M. J. DALEY; T. BUSSEY; R. BARTHA; M. PRADO. *Robarts Res. Inst., Univ. of Western Ontario, Univ. of western Ontario.*

2:15 **716.06** Examining sleep disruption as an immune stressor after traumatic brain injury. O. KOKIKO-COCHRAN*; J. KUMAR; K. G. WITCHER; R. ATLURI; J. VELASQUEZ; C. GAFFNEY; J. FONTANA; J. GODBOUT. *Ohio State Univ., Ohio State Univ.*

2:30 **716.07** Newly developed high-throughput screening assay identifies Berberine as a potential drug to protect blood-brain barrier from toxic stresses. Y. SUZUKI*; K. KADOYA; T. ENDO; Y. MATSUI; Y. RUFEI; T. ASANO; S. NAKAGAWA; N. IWASAKI. *Hokkaido Univ., Nagasaki Univ.*

2:45 **716.08** The pivotal action of the gut-brain axis on brain trauma pathogenesis. F. GOMEZ-PINILLA*; S. D. REGE; L. ROYES; Z. YING. *UCLA, Federal Univ. of Santa Maria, UCLA.*

3:00 **716.09** Effects of acute insulin-induced hypoglycemia on cerebral microvascular function. W. R. EVANS*; J. A. SPERLING; V. N. SURE; S. S. SAKAMURI; P. SPENCER; R. MOSTANY; D. W. BUSIJA; P. V. G. KATAKAM. *Tulane Univ. Sch. of Med., Tulane Univ.*

3:15 **716.10** Augmenting M-current as a treatment for traumatic brain injury. F. A. VIGIL*; E. BOZDEMIR; V. BUGAY; L. ESPINOZA; R. J. VERAZA; S. H. CHUN; D. M. HOLSTEIN; I. SANCHEZ; M. HOBBS; J. D. LECHLEITER; R. BRENNER; M. S. SHAPIRO. *Univ. of Texas Hlth. San Antonio.*

3:30 **716.11** Soluble tau strains after TBI ? A. BITTAR*; T. F. HASAN; N. BHATT; R. AL LAHHAM; S. A. MCALLEN; A. ELLSWORTH; M. CARRETERO-MURILLO; R. KAYED. *UTMB.*

3:45 **716.12** ● CRMP2-binding compound accelerates motor function recovery after cortical damage. S. JITSUKI*; H. ABE; W. NAKAJIMA; H. MASUYAMA; T. OKUDA; T. TAKAHASHI. *Yokohama City Univ. Grad. Sch. of Med., Yokohama City Univ. Grad. Sch. of Med., Toyama Chem. Co., Ltd.*

NANOSYMPOSIUM

717. Pain Imaging and Perception

Theme D: Sensory Systems

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 30E

1:00 **717.01** Corticostriatal plasticity in the transition to chronic pain: Effects of levodopa. D. RECKZIEGEL*; M. GHANTOUS; T. ABDULLAH; R. JABAKHANJI; T. J. SCHNITZER; A. APKARIAN. *Northwestern Univ., Northwestern Univ.*

1:15 **717.02** An fMRI signature of tonic pain based on whole-brain functional connectivity. J. LEE*; H. KIM; M. CEKO; B. PARK; M. ROY; T. D. WAGER; C. WOO. *Inst. For Basic Sci., ICS, McGill Univ., Univ. of Colorado Boulder Dept. of Psychology and Neurosci.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:30 **717.03** Brain representation of nociception is local while pain experience is distributed. B. PETRE*; L. Y. ATLAS; S. GEUTER; L. KOBAN; A. KRISHNAN; M. LÓPEZ-SOLÀ; M. ROY; C. WOO; T. D. WAGER. *Univ. of Colorado Boulder, NIH (NCCIH, NIDA), Johns Hopkins Univ., Univ. of Colorado Boulder, Cincinnati Children's Hosp. Med. Ctr., McGill Univ., Univ. of Colorado Boulder Dept. of Psychology and Neurosci.*

1:45 **717.04** Opioid analgesia in the human central pain system. A. TINNERMANN*; C. SPRENGER; C. BÜCHEL. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Cambridge.*

2:00 **717.05** Reduced hyperalgesia and increased dorsolateral prefrontal cortex response following acupuncture is associated with analgesia in low back pain. K. ISENBURG; I. A. MAWLA; J. LEE; J. GERBER; J. KIM; H. KIM; S. CHAN; R. GOLLUB; J. KONG; B. ROSEN; V. NAPADOW*. *Massachusetts Gen. Hosp., Univ. of Michigan Med. Sch., Korea Inst. of Oriental Med.*

2:15 **717.06** Brain concordance between patients and clinicians underpins non-verbal communication, positive affect, and treatment analgesia - a fMRI hyperscanning study. D. ELLINGSEN*; K. ISENBURG; C. JUNG; J. LEE; J. GERBER; I. A. MAWLA; R. SCLOCCO; R. R. EDWARDS; J. KELLEY; I. KIRSCH; V. NAPADOW. *Massachusetts Gen. Hospital, Harvard Med. Sc, Univ. of Oslo, Korea Inst. of Oriental Med., Univ. of Michigan Med. Sch., Brigham and Women's Hosp., Endicott Col., Harvard Med. Sch.*

2:30 **717.07** Hippocampal shape as a potential biomarker for sex dimorphism in chronic pain. T. B. ABDULLAH*; D. RECKZIEGEL; E. VACHON-PRESSEAU; L. HUANG; T. SCHNITZER; A. APKARIAN. *Northwestern Univ. Feinberg Sch. of Med., Northwestern University, Feinberg Sch. of Med., Northwestern University, Feinberg Sch. of Med., Northwestern University, Feinberg Sch. of Med., Northwestern University, Feinberg Sch. of Med.*

2:45 **717.08** Slow neural oscillation tracks dynamic nociceptive input and correlates with individual pain perception. Y. GUO*; R. J. BUFACCHI; M. MOAYEDI; G. IANNETTI. *Univ. Col. London, Univ. of Toronto.*

NANOSYMPOSIUM

718. Vestibular Systems: VOR, Locomotion, and Gaze

Theme D: Sensory Systems

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

1:00 **718.01** Visual-vestibular conflict detection is better during active than passive head movement. P. R. MACNEILAGE*; M. MOROZ; I. GARZORZ; E. FOLMER. *Univ. of Nevada, Reno, Ludwig-Maximilian Univ. of Munich, Univ. of Nevada, Reno.*

1:15 **718.02** Traditional analysis of VOR nystagmus results in weak diagnostic features. H. GALIANA*; H. L. SMITH. *Mcgill Univ. Fac Med., McGill Univ. Hlth. Centers.*

1:30 **718.03** ● Control of gaze shifts evaluated with a vestibular prosthesis. J. O. PHILLIPS*; E. CHUNG; L. LING; A. NOWACK; K. NIE; J. RUBINSTEIN. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

1:45 **718.04** Multi-dimensional vestibular self-motion system in the human brain. N. HAGURA*; K. AOYAMA; H. BAN; A. YOKOI; Y. IKEGAYA; T. MAEDA; H. ANDO; E. R. FERRÈ. *CiNet, Osaka Univ., Univ. of Tokyo, Natl. Inst. of Information and Communication Technol., Grad Sch. Pharma Sci, Univ. Tokyo, Osaka Univ., Royal Holloway Univ. of London.*

2:00 **718.05** Pulsed ultrasound stimulates vestibular organs and evokes phase locked action potentials. M. M. IVERSEN*; B. R. POPE; R. D. RABBITT. *Univ. of Utah.*

2:15 **718.06** Using Manganese enhanced magnetic resonance imaging (MEMRI) to assess calcium dependent activity in linear acceleration detection pathways following Otolith stimulation. S. KALLAKURI; A. CACACE; A. APAWU; M. HALI; R. BRAUN; A. HOLT*. *Wayne State Univ. Sch. of Med., Wayne State Univ. Communication Sci. and Disorders, John D. Dingell VAMC.*

2:30 **718.07** Learned preference drives locomotor development in zebrafish. D. E. EHRLICH*; D. SCHOPPIK. *NYU Langone Med. Ctr.*

NANOSYMPOSIUM

719. Vision: Extrastriate Cortex

Theme D: Sensory Systems

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 23

1:00 **719.01** A network of topographic maps for visual event timing in human association cortex. B. M. HARVEY*; S. O. DUMOULIN; A. FRACASSO; J. M. PAUL. *Utrecht Univ., Spinoza Ctr. For Neuroimaging, VU Univ., Spinoza Ctr. for Neuroimaging, Univ. of Glasgow, Univ. Med. Ctr. Utrecht.*

1:15 **719.02** Capacity limits for word recognition in brain and behavior. A. L. WHITE*; J. PALMER; J. D. YEATMAN; G. M. BOYNTON. *Univ. of Washington, Univ. of Washington.*

1:30 **719.03** Bayesian modeling of fMRI data to infer neural subpopulation tuning functions in visual cortex. R. A. COWELL*; P. SADIL; J. SERENCES; D. E. HUBER. *Univ. of Massachusetts, Univ. of Massachusetts Amherst, UCSD.*

1:45 **719.04** Topographic numerosity maps dynamically adjust to the presented numerosity range. Y. CAI*; J. A. VAN DIJK; W. ZUIDERBAAN; W. VAN DER ZWAAG; B. M. HARVEY; S. O. DUMOULIN. *Spinoza Ctr. for Neuroimaging, VU Univ. Amsterdam, Utrecht Univ.*

2:00 **719.05** The mapping of the brain's mind eye in the absence of visual experience: A population receptive field mapping of the soundscape space. S. HOFSTETTER*; W. ZUIDERBAAN; S. O. DUMOULIN; A. AMEDI. *The Hebrew Univ., Spinoza Ctr. for Neuroimaging, Spinoza Ctr. for Neuroimaging, Fac. of Med. Hebrew Univ. of Jerusalem.*

2:15 **719.06** Differential representation of object category information across lateral and medial ventral temporal cortex revealed with ultra-high-resolution fMRI. E. MARGALIT*; K. JAMISON; K. S. WEINER; L. VIZIOLI; R. ZHANG; K. N. KAY; K. GRILL-SPECTOR. *Stanford Univ., Weill Cornell Med. Col., Univ. of Minnesota Twin Cities, UC Berkeley, UC Berkeley, Stanford Univ.*

2:30 **719.07** The human connectome project 7t retinotopy dataset: A freely available resource of human visual organization. N. C. BENSON*; K. W. JAMISON; M. J. ARCARO; A. T. VU; M. F. GLASSER; D. C. VAN ESSEN; K. UGURBIL; J. WINAWER; K. N. KAY. *New York Univ., Weill Cornell Med. Col., Harvard Med. Sch., VA Med. Ctr., Washington Univ. Sch. of Med., Washington Univ. Sch. Med., Univ. of Minnesota, New York Univ., Univ. of Minnesota Twin Cities.*

2:45 **719.08** Decoding counterfactual information in extrastriate cortex during visual room navigation with 3T and 7T fMRI after immersion training in virtual reality. A. PATON; Y. LAZAROVA; L. PETRO; L. MUCKLI*. *Univ. of Glasgow.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

720. Neural Activity Patterns for Speech and Sign Language in Disease and Health

Theme E: Motor Systems

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

1:00 **720.01** Self-monitoring in l1 and l2 speech production: An meg study. S. BAKST*; C. A. NIZIOLEK. *Univ. of Wisconsin–Madison.*

1:15 **720.02** Neural correlates of sign language and spoken language revealed by electrocorticography. J. SHUM; L. FANDA; B. MAHMOOD; D. FRIEDMAN; P. DUGAN; W. DOYLE; O. DEVINSKY; A. FLINKER*. *NYU, NYU Comprehensive Epilepsy Ctr., NYU.*

1:30 **720.03** ● Single neuron population dynamics in dorsal motor cortex during human speech. S. D. STAVISKY*; F. R. WILLETT; B. A. MURPHY; P. REZAII; W. D. MEMBERG; B. WALTER; J. A. SWEET; J. P. MILLER; R. F. KIRSCH; L. R. HOCHBERG; A. B. AJIBOYE; K. V. SHENOY; J. M. HENDERSON. *Stanford Univ., Stanford Univ., Stanford Univ., Case Western Reserve Univ., Louis Stokes Cleveland Dept. of Veterans Affairs Med. Ctr., Univ. Hosp. Cleveland Med. Ctr., Univ. Hosp. Cleveland Med. Ctr., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Howard Hughes Med. Inst. - Stanford Univ., Stanford Univ., Stanford Univ.*

1:45 **720.04** Cortical and subcortical representations of consonant articulatory features. A. CHRABASZCZ*; W. J. NEUMANN; O. STRETCU; W. J. LIPSKI; A. BUSH; C. DASTOLFO-HROMACK; D. WANG; D. J. CRAMMOND; S. SHAIMAN; M. W. DICKEY; L. L. HOLT; R. S. TURNER; J. A. FIEZ; M. RICHARDSON. *Univ. of Pittsburgh, Charité - Universitätsmedizin Berlin, Carnegie Mellon Univ.*

2:00 **720.05** Local field potentials in the human subthalamic nucleus predict scaling of speech production. C. A. DASTOLFO-HROMACK*; A. ALHOURANI; W. J. LIPSKI; D. J. CRAMMOND; S. SHAIMAN; M. W. DICKEY; L. L. HOLT; R. S. TURNER; J. A. FIEZ; M. RICHARDSON. *Univ. of Pittsburgh, Univ. of Louisville, Univ. Pittsburgh, Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. Pittsburgh, Univ. of Pittsburgh.*

2:15 **720.06** Neuronal firing in the subthalamic nucleus encodes chunks in speech sequences. W. J. LIPSKI*; M. RICHARDSON; A. BUSH; D. WANG; C. DASTOLFO-HROMACK; A. CHRABASZCZ; D. J. CRAMMOND; S. SHAIMAN; R. S. TURNER; J. A. FIEZ. *Univ. Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:30 **720.07** Neural correlates of aberrant vocal motor control in spasmodic dysphonia. H. KOTHARE*; S. L. SCHNEIDER; K. C. YUNG; L. B. HINKLEY; D. MIZUIRI; S. HONMA; C. GARRETT; M. NAUNHEIM; M. S. COUREY; S. S. NAGARAJAN; J. F. HOUDE. *Univ. of California, San Francisco, San Francisco Voice & Swallowing, Mount Sinai Hlth. Syst.*

2:45 **720.08** Effect of STN-DBS on sensorimotor integration mechanisms of voice motor control in Parkinson's disease. R. BEHROOZMAND*; K. JOHARI; J. D. GREENLEE, M.D. *Univ. of South Carolina, Univ. of South Carolina, Univ. Iowa.*

NANOSYMPOSIUM

721. Depression and Bipolar Disorders: Treatment and Drug Discovery

Theme G: Motivation and Emotion

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 24

1:00 **721.01** Carbamoylated erythropoietin produces antidepressant-like effects in male and female BALB/c mice. D. SAMPATH*; J. MCWHIRT; M. SATHYANESAN; S. S. NEWTON. *Univ. of South Dakota, Univ. of South Dakota.*

1:15 **721.02** ● Ketamine's (2R,6R)-hydroxynorketamine metabolite exerts mGluR2-dependent antidepressant actions. P. ZANOS*; P. ZANOS*; P. ZANOS*; P. ZANOS*; J. N. HIGHLAND; P. GEORGIOU; X. KANG; C. A. ZARATE, JR; T. D. GOULD. *Univ. of Maryland, Univ. of Maryland Sch. of Med., Univ. of Maryland, Baltimore, NIMH Psychoactive Drug Screening Program, Dept. of Pharmacol. and Div. of Chem. Biol. and Medicinal Chemistry, Univ. of North Carolina Chapel Hill Med. Sch., NIMH, Univ. of Maryland Sch. of Med.*

1:30 **721.03** CNTF promotes and reduces depressive-like behavior in female and male mice, respectively. C. JIA*; R. W. BROWN; H. M. MALONE; K. C. BURGESS; W. D. GILL; M. P. KEASEY; T. HAGG. *East Tennessee State Univ., East Tennessee State Univ. Dept. of Biomed. Sci., East Tennessee State Univ., East Tennessee State Univ.*

1:45 **721.04** Impairment of hippocampal PKA-CREB and NMDA signaling in a novel model for long-term depressive behaviors, and repaired selectively with antidepressants. G. CHEN*; Z. ZOU; W. XUE; X. ZHOU. *Nanjing Univ. of Chinese Med.*

2:00 **721.05** Influence of adolescent stress on regulation of the HPA axis and postpartum behaviors. S. LOCKHART; J. L. PAYNE; M. NIWA*; A. SAWA. *Johns Hopkins Univ. Sch. of Med.*

2:15 **721.06** Neuroimaging based prediction of individual treatment outcome with DLPFC-rTMS in depression: A machine learning approach. R. CASH*; L. COCCHI; R. ANDERSON; A. ZALESKY; P. FITZGERALD. *Monash Alfred Psychiatry Res. Ctr., QIMR Berghofer, Melbourne Neuropsychiatry Ctr.*

2:30 **721.07** ● Antidepressant effects of the ketamine metabolite hydroxynorketamine. C. A. BROWNE*; H. A. WULF; C. A. ZARATE, JR; I. LUCKI. *Uniformed Services Univ., NIMH.*

2:45 **721.08** Antidepressant and anxiolytic effects of tumor necrosis factor inhibition with XPro1595 in a rodent model of antidepressant-resistance. J. PRICE*; D. MALTAIS; K. BUTTERS; S. MCGEE; S. J. TYE. *Mayo Clin., Deakin Univ., Univ. of Queensland.*

3:00 **721.09** Extending the characterization of the Wistar-Kyoto genetic model of depression in the context of ketamine's antidepressant properties. L. ALEKSANDROVA*; C. J. BURKE; G. L. DALTON; D. R. EUSTON; S. M. PELLIS; S. B. FLORESCO; Y. T. WANG; A. G. PHILLIPS. *Univ. of British Columbia, Univ. of Lethbridge, Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

722. Looking For Biological Interventions for Cocaine Use Disorder

Theme G: Motivation and Emotion

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 1

1:00 **722.01** Resting-state connectivity defines neurobiological subtypes underlying different cognitive-emotional profiles in cocaine addiction. A. ZILVERSTAND*; P. CURTIN; M. A. PARVAZ; A. B. KONOVA; C. M. LISTON; N. ALIA-KLEIN; R. Z. GOLDSTEIN. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, New York Univ., Weill Cornell Med. Col.*

1:15 **722.02** Serotonin and norepinephrine signaling in dorsal CA1 drive sex differences in persistent cocaine-seeking. A. S. KOHTZ*; J. ZHAO; G. S. ASTON-JONES. *Brain Hlth. Inst., Brain Hlth. Inst., Rutgers Univ.*

1:30 **722.03** Pharmacological versus genetic ablation of b-arrestin2 signaling at the ghrelin receptor: Differential effect on cocaine-induced hyperlocomotion. K. TOTH*; L. M. SLOSKY; T. EVRON; N. M. URS; P. BOONE; M. G. CARON; L. S. BARAK. *Duke Univ., Campbell Univ., Univ. of Florida, Duke Univ., Duke Univ.*

1:45 **722.04** Administration of granulocyte-colony stimulating factor protects against cocaine-seeking in a rodent model. R. S. HOFFORD*; N. L. MERVOSH; E. G. PECK; E. S. CALIPARI; D. D. KIRALY. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Vanderbilt Univ. Sch. of Med.*

2:00 **722.05** Assessing the role of ASIC1A in cocaine self-administration in mice. R. J. TAUGHER*; A. GHOBBEH; M. M. CONLON; R. T. LALUMIERE; J. A. WEMMIE. *Univ. of Iowa, Veteran's Affairs Med. Ctr., Univ. of Iowa.*

2:15 **722.06** Learning to resist drugs through transient suppression of dopaminergic activity. P. J. VENTO*; D. PULLMANN; J. TOMBERLIN; S. L. BLACK; T. C. JHOU. *Med. Univ. of South Carolina, Col. of Charleston.*

2:30 **722.07** ● Accumbens brain-derived neurotrophic factor (BDNF) transmission inhibits cocaine seeking. A. BOBADILLA*; C. GARCIA-KELLER; V. CHAREUNSOUK; J. HYDE; D. MEDINA CAMACHO; J. HEINSBROEK; P. KALIVAS. *Med. Univ. of South Carolina.*

2:45 **722.08** Depletion of the gut microbiome differentially affects the development and persistence of cocaine sensitization. K. R. MECKEL*; N. L. MERVOSH; D. D. KIRALY. *Icahn Sch. of Med. at Mount Sinai.*

3:00 **722.09** CRF enhances a behavioral index of cocaine-seeking via CRF-R_2 in the nucleus accumbens core. M. Z. LEONARD*; H. COVINGTON; K. MICZEK. *Tufts Univ., Tufts Univ.*

3:15 **722.10** Susceptibility to traumatic stress accelerates the development of cocaine-associated dopamine transients and drives cocaine use vulnerability. Z. D. BRODNIK*; R. A. ESPAÑA. *Drexel Univ., Drexel Univ. Col. of Med.*

723. Molecular, Biochemical, and Genetic Techniques: Molecular Techniques

Theme I: Techniques

Wed. 1:00 PM – *San Diego Convention Center*, SDCC 25

1:00 **723.01** ● SponGee and SpiCee, genetically encoded tools for cell-specific and subcellular manipulation of cGMP and calcium *in vivo*. X. NICOL*; O. ROS; K. LOULIER; S. RIBES; S. COUVET; Y. ZAGAR; A. AGHAIE; D. LADARRÉ; A. LOUAIL; S. BAUDET; C. PETIT; Z. LENKEI; Y. MECHULAM. *CNRS, Sorbonne Univ., Inserm, Sorbonne Univ., UPMC / Inst. De La Vision, Unite Genetique & Physiologie Audition, ESPCI-ParisTech, Ecole Polytechnique.*

1:15 **723.02** Development of a single cell analysis tool for neurological disorders on 2D planar-patch-clamp plate with positional information. S. ISHIGAKI*; H. UNO; Z. WANG; Y. UKITA; R. BHARDWAJ; T. TUE; S. HASHIMOTO; T. OKA; K. KAWAHARA; Y. TAKAMURA; T. URISU; G. SOBUE. *Nagoya Univ. Grad. Sch. of Med., Nagoya Univ. Inst. of Innovation for Future Society, Grad. Sch. of Univ. of Yamanashi, Japan Advanced Inst. of Sci. and Technol., Grad Sch. of Med. Sci, Kanazawa Univ., World fusion Inc.*

1:30 **723.03** LC-MS/MS method to detect neurotransmitters during cocaine and amphetamine administration. A. G. ZESTOS*; R. T. KENNEDY; M. E. GNEGY. *American Univ., Univ. of Michigan, Univ. of Michigan.*

1:45 **723.04** Using AAV capsid engineering, molecular barcodes and spatial transcriptomics to dissect circuit repair in Parkinson's disease. M. DAVIDSSON; P. ALDRIN-KIRK; M. HARTNOR; J. RAJOVA; A. HEUER; T. CARDOSO; S. NOLBRANT; M. PARMAR; T. BJORKLUND*. *Mol. Neuromodulation, Wallenberg Neurosci., Developmental and Regenerative Neurobiology, Lund University, Lund, Sweden.*

2:00 **723.05** Engineering chemigenetic voltage indicators for *in vivo* voltage imaging. A. S. ABDELFATTAH*; T. KAWASHIMA; A. SINGH; O. NOVAK; H. LIU; Y. SHUAI; Y. HUANG; B. LIN; R. PATEL; J. J. MACKLIN; T. CHEN; G. C. TURNER; Z. LIU; M. KOYAMA; D. S. KIM; K. SVOBODA; M. B. AHRENS; L. D. LAVIS; E. R. SCHREITER. *HHMI Janelia Res. Campus, Natl. Yang-Ming Univ., Howard Hughes Med. Inst., HHMI / Janelia Farm Res. Campus, Janelia Res. Campus / HHMI, Howard Hughes Med. Institute, Janelia Farm Res. Campus.*

2:15 **723.06** Real-time and label-free electronic measurements of enzyme activity and kinetics. A. BALIJEPALLI; N. B. GUROS; R. C. ROBERT; A. CARDONE; N. D. AMIN; S. ZHANG; H. C. PANT*; C. A. RICHTER; S. T. LE; J. B. KLAUDA. *Natl. Inst. of Standards and Technol., Univ. of Maryland, Natl. Inst. of Standards and Technol., Univ. of Maryland, NIH, Theiss Res., NIH.*

2:30 **723.07** Investigating the molecular and cellular mechanisms of ultrasonic neuromodulation. S. YOO*; M. SHAPIRO. *Caltech, Caltech.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

724. Neural Circuit Development: Molecules and Mechanisms

Theme A: Development

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

1:00 A1 **724.01** T-type calcium channel bursting in thalamic association pathways precedes sensory pathways and can be activated by GABAergic input during early postnatal development. Q. MIAO*; J. L. NOEBELS. *Dept. of Neurol., Baylor Col. of Med.*

2:00 A2 **724.02** Rapid modulation of L-type voltage-gated calcium channels during brain development by vitamin D. H. M. GOOCH*; X. CUI; V. ANGGONO; T. H. BURNE; D. EYLES; P. SAH; J. MCGRATH. *Queensland Brain Inst.*

3:00 A3 **724.03** Axonal branches of layer 2/3 dual projection neurons targeting an ipsilateral distant area extend more rapidly than locally targeting branches in mouse neocortex. M. SATO*; Y. LIN; M. DOI; Y. OKA. *Osaka Univ. Grad. Sch. of Med., Osaka Univ. United Grad. Sch. of Child Develop.*

4:00 A4 **724.04** Physiological and pathological maturation of cortical neural networks. S. DOMINGUEZ*; N. GHANI; G. POUCHELON; S. COLOMBO; M. BOLAND; V. LETTS; S. PETRI; W. N. FRANKEL; D. GOLDSTEIN; G. J. FISHELL; G. BUZSAKI; D. KHODAGHOLY; J. GELINAS. *Columbia Univ., Harvard Med. Sch., Columbia Univ., Columbia Univ. Med. Ctr., Harvard Med. Sch., New York University, Sch. of Med.*

1:00 A5 **724.05** Postsynaptic mGluR signaling controls the development of somatostatin interneurons. G. POUCHELON*; E. FISHER; R. MACHOLD; G. FISHELL. *Harvard Med. Sch., New York Univ.*

2:00 A6 **724.06** BDNF shapes the functional maturation of cortical interneurons. E. FISHER*; G. POUCHELON; C. MAYER; R. C. BANDLER; G. J. FISHELL. *Harvard Med. Sch., Max Planck Inst. of Neurobio., NYU Neurosci. Institute, Langone Med. Ctr.*

3:00 A7 **724.07** ▲ Early prenatal exposure of rats to homocysteic acid leads to lasting changes in NMDA receptor subunit expression and GABAergic interneuron markers. A. LUNDERBERG*; S. SIMKO; J. ROYER; L. CHASE. *Hope Col.*

4:00 A8 **724.08** Mechanistic insights into autocrine an paracrine roles of endothelial GABA in the embryonic forebrain. Y. CHOI; A. VASUDEVAN. *Harvard Med. Sch.*

1:00 A9 **724.09** Towards molecular connectomics: Proteomic dissection of a specific hippocampal synapse type. N. APÓSTOLO*; S. N. SMUKOWSKI; V. RYBAKIN; K. M. VENNEKENS; S. PORTEGIES; N. V. GOUNKO; J. N. SAVAS; J. DE WIT. *VIB Ctr. for the Biol. of Dis., KU Leuven, Northwestern University, Feinberg Sch. of Med., KU Leuven, Utrecht Univ., VIB Bio Imaging Core.*

2:00 A10 **724.10** Patterning of cerebellar inhibitory interneurons by the gamma-Protocadherins. W. X. WANG*; J. L. LEFEBVRE. *Hosp. for Sick Children Res. Inst., Univ. of Toronto.*

3:00 A11 **724.11** Purkinje cell axonal torpedoes are associated with reduced spike propagation failures and enhanced cerebellar-related behaviour. D. LANG-OUELLETTE*; C. A. VAN EITREIM; P. DE VANSSAY DE BLAVOUS; C. ROSEN; M. VIRDEE; A. J. WATT. *McGill Univ.*

4:00 A12 **724.12** Organophosphate pesticides cause physiological and architectural changes to spinal neurons and somatic muscle in 72-hour zebrafish embryos. E. A. FRADINGER*; T. H. WATANABE; R. C. WILLRICH. *Whittier Col.*

1:00 DP01/A13 **724.13** (Dynamic Poster) A phase transition in activity of Hydra's nervous system as it reassembles from individual cells. J. LOVAS*; R. YUSTE. *Columbia Univ.*

2:00 A14 **724.14** Spontaneous neuronal activity in developing mouse cerebral organoids. M. GIRR; J. BOOS; P. MISUN; J. BARTRAM; M. RENNER; M. GAZORPAK; A. HIERLEMANN; M. SCHRÖTER*. *ETH Zurich, 2. Friedrich Miescher Inst. for Biomed. Res., ETH Zurich, ETH Zurich.*

3:00 A15 **724.15** Characterization of novel post-mitotic DNA dynamics in adult neurons. B. A. SIDDOWAY*; M. LEE; S. E. ROHRBACK; R. RIVERA; A. CERDA; G. E. KAESER; B. DILLINGHAM; C. LIU; C. PARK; M. R. MAYFORD; J. CHUN. *Sanford Burnham Prebys Med. Discovery Inst., Sanford Burnham Prebys Med. Discovery Inst., Univ. of California San Diego, Sanford Burnham Prebys UCSD, Univ. of California San Diego and Sanford Burnham Prebys, UCSD, Univ. of California San Diego, Sanford Burnham Prebys Med. Discovery Inst.*

4:00 A16 **724.16** Implication of the spatial position of immediate early genes for the formation of DNAdouble strand breaks. I. DELINT-RAMÍREZ*; R. MADABHUSHI. *UT Southwestern Med. Ctr.*

1:00 A17 **724.17** Optical analysis of functional development of the facial motor nucleus in the embryonic rat brainstem. K. SATO*; Y. MOMOSE-SATO. *Komazawa Women's Univ, Fac. of Human Hlth., Kanto Gakuin University, Col. of Nutr.*

2:00 A18 **724.18** Functional development of the mouse vestibular nucleus revealed by optical recording with a voltage-sensitive dye. Y. MOMOSE-SATO*; K. SATO. *Kanto Gakuin University, Col. of Nutr., Komazawa Women's Univ, Fac. of Human Hlth.*

3:00 A19 **724.19** ▲ Structural and functional remodeling of the axon initial segment in a mouse model of autism. M. P. JORDAN*; C. CORCELLI; S. VORWALD; N. JAMANN; C. SCHULTZ; M. ENGELHARDT. *Inst. of Neuroanatomy.*

POSTER

725. Fragile X Syndrome I

Theme A: Development

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

1:00 A20 **725.01** Multiple waves of developmental delays in fragile X cortical circuits *in vitro*. H. MOTANIS*; A. GOEL; C. PORTERA-CAILLIAU; D. V. BUONOMANO. *UCLA, Univ. of California, UCLA, UCLA.*

2:00 A21 **725.02** Impaired sensory discrimination in fragile X syndrome mice is mediated by abnormal interneuron dynamics. A. GOEL*; D. CANTU; J. GUILFOYLE; G. R. CHAUDHARI; A. NEWADKAR; B. TODISCO; D. DE ALBA; N. KOURDOUGLI; L. M. SCHMITT; E. PEDAPATI; C. A. ERICKSON; C. PORTERA-CAILLIAU. *Univ. of California, Cincinnati Children's Hosp. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 A22 **725.03** Fmr1 gene transplacement in cultured primary neurons for rapid assessment of rare mutations identified in psychiatric disease patients. M. M. NAGIEC*; M. FITZPATRICK; J. M. MADISON; K. DUONG; M. KOST-ALIMOVA; E. M. SCOLNICK; J. R. COTTRELL. *Broad Inst. of MIT and Harvard, Broad Inst. of MIT and Harvard.*

4:00 A23 **725.04** Role of Cdh1-APC as a regulator of FMRP and protein synthesis at the synapse. A. VALDEZ*; A. LAI; G. J. BASSELL. *Emory Univ., Emory Univ.*

1:00 A24 **725.05** ▲ A cross-sectional investigation of fragile X syndrome neurodevelopment in a neonatal FMR1 knockout mouse model using diffusion weighted MRI. S. G. GUO*; S. T. REYES; C. LEUZE; J. A. MCNAB; F. T. CHIN. *Stanford Univ., Stanford Univ., Stanford Univ. Dept. of Radiology, Stanford Univ. Dept. of Radiology, Stanford Univ. Sch. of Med.*

2:00 A25 **725.06** FMRP regulates mossy fiber-granule cell synaptic plasticity by modulating the Cav3-Kv4 complex. X. ZHAN*; H. ASMARA; N. CHEN; G. SAHU; C. SZALAY; F. ZHANG; G. W. ZAMPONI; R. W. TURNER. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

3:00 A26 **725.07** ▲ Pupil fluctuations track deficits in perceptual learning in Fragile X Syndrome mice. G. CHAUDHARI*; A. NEWADKAR; B. TODISCO; D. DE ALBA; A. GOEL; C. PORTERA-CAILLIAU. *UCLA.*

4:00 A27 **725.08** Enhancement of mitochondrial efficiency causes synaptic metabolic maturation, reversing the abnormal protein translation in Fragile X syndrome. P. LICZNERSKI*; H. PARK; P. MIRANDA; V. K. GRIBKOFF; R. CHEN; M. GRAHAM; R. J. LEVY; E. A. JONAS. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Columbia Univ.*

1:00 A28 **725.09** Abnormal neuronal exosomal miRNA signaling to astroglia contributes to glutamate transporter GLT1 dysregulation in FXS mouse models. Y. MEN*; J. YELICK; S. JIN; Y. YANG. *Tufts Univ.*

2:00 A29 **725.10** Behavioral assessment of mice with cell type-specific deletion of FMRP in somatostatin and parvalbumin interneurons. M. KALINOWSKA*; E. KLANN. *New York Univ., New York Univ. Ctr. for Neural Sci.*

3:00 A30 **725.11** Activation of autophagy rescues cognitive deficits in Fragile X mice. J. YAN*; M. W. PORCH; B. COURT-VAZQUEZ1; M. V. BENNETT; R. ZUKIN. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. Med.*

4:00 A31 **725.12** Genetic rescue of fragile X by conditional knockdown of Rictor. S. ROUDABUSH*; J. YAN; J. HWANG; B. COURT-VAZQUEZ; R. S. ZUKIN. *Albert Einstein Col. of Med.*

1:00 A32 **725.13** Cell-specific deletion of Fmr1 from excitatory neurons increases MMP-9 activity and contributes to abnormal development of mouse auditory cortex. M. RAIS*; A. PALACIOS; X. SHUAI; O. POPA; K. A. RAZAK; I. M. ETHELL. *Univ. of California, Riverside, Univ. of California, Riverside.*

2:00 A33 **725.14** Metaplasticity mediated by Kv4.2 is altered in the hippocampus of Fmr1 KO mice. T. NOMURA*; C. MORTON; A. CONTRACTOR. *Northwestern Univ., Northwestern Univ., Northwestern Univ. Dept. of Physiol.*

3:00 A34 **725.15** Gaba in fragile x syndrome: A study using magnetic resonance spectroscopy. S. GADE*; M. GU; T. HJOERNEVIK; J. H. PARK; B. SHEN; S. HALL; D. SPIELMAN; F. T. CHIN. *Stanford Univ., Oslo Univ. Hosp.*

POSTER

726. Fragile X Syndrome II

Theme A: Development

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

1:00 B1 **726.01** Calsyntenin-1 implicates in dendritic spine abnormalities and hippocampus-dependent memory deficits in Fragile X Syndrome mice. Z. ZHANG*; Z. ZHANG; K. CHENG; Y. PEI; J. LIU; G. HAN; G. LIU; X. ZHU; S. JIN; L. WANG; F. XU; Y. ZENG. *Wuhan Univ. of Sci. and Technol., Wuhan Inst. of Physics and Mathematics, Chinese Acad. of Sci.*

2:00 B2 **726.02** Mismatch between synapse elimination and synapse consolidation during early development in a mouse model of fragile X syndrome. X. WU*; Y. LIU; H. WANG. *Institude of Neuroscience, Zhejiang Univ.*

3:00 B3 **726.03** Probing astrocyte function in Fragile X syndrome using human induced pluripotent stem cell derived astrocytes. B. REN*; P. RAGUNATHAN; Y. JUNG; V. SAINI; B. OLDHAM; A. ARMSTRONG; N. RAJ; G. BASSELL; A. DUNAEVSKY. *Univ. of Nebraska Med. Ctr., Emory Univ. Sch. of Med.*

4:00 B4 **726.04** Inhibition of matrix metalloproteinase-9 activity to correct auditory hypersensitivity in fragile X syndrome. P. PIRBHOY*; J. W. LOVELACE; T. WEN; K. RAZAK; D. K. BINDER; I. M. ETHELL. *Univ. of California, Riverside, UC Riverside, Univ. of California Riverside Div. of Biomed. Sci., Univ. California Riverside Sch. of Med.*

1:00 B5 **726.05** Homeostatic intrinsic plasticity is not operating normally in FMR1 KO cortical neurons. P. BUELOW*; Y. KWON; R. H. PURCELL; G. J. BASSELL; P. A. WENNER. *Emory Univ., Emory Univ., Emory Univ., Emory Univ., Emory Univ. Sch. of Med.*

2:00 B6 **726.06** Fronto-amygdala connectivity in a rat model of fragile X syndrome. A. D. JACKSON*; S. M. TILL; D. J. A. WYLLIE; S. CHATTARJI; P. C. KIND. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Edinburgh, Inst. for Stem Cell Biol. and Regenerative Med., Natl. Ctr. for Biol. Sci.*

3:00 B7 **726.07** Pharmacological rescue of translation-relevant EEG phenotypes in a mouse model of fragile X syndrome. J. W. LOVELACE*; K. ESPINOZA; I. M. ETHELL; D. K. BINDER; K. A. RAZAK. *UC Riverside, UC Riverside, Univ. California Riverside Sch. of Med., Univ. of California Riverside Div. of Biomed. Sci., Univ. California, Riverside.*

4:00 B8 **726.08** Neurophysiological changes induced by a combined intervention with lovastatin and minocycline in patients with fragile-X-syndrome: A TMS study. A. LACROIX*; F. MORIN-PARENT; C. CHAMPIGNY; F. CORBIN; J. LEPAGE. *Univ. De Sherbrooke, Ctr. Hospitalier Universitaire De Sherbrooke, Sherbrooke Univ., Sherbrooke Univ.*

1:00 B9 **726.09** Modeling fragile x syndrome (fxs): gsk-3β, a promising therapeutic target for fxs. M. CIAMPOLI*; P. PORCEDDU; A. MISTO; A. M. REGGIANI. *Inst. Italiano Di Tecnologia.*

2:00 B10 **726.10** Disruption of the KH1 domain of Fmr1 leads to transcriptional alterations, impairments in white matter integrity, and attentional deficits in rats. C. E. GOLDEN*; M. BREEN; L. KORO; M. G. BAXTER; H. HARONY-NICOLAS; J. D. BUXBAUM. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Mount Sinai Sch. Med., Mt Sinai Sch. Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
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* Indicates abstract's submitting author

3:00 B11 **726.11** Amino acid starvation: Differential response to DHPG stimulation in hippocampal slices from WT and Fmr1 KO mice. S. COOKE; J. RUSSIN; I. LOUTAEV; C. B. SMITH*. *NIH, NIMH-SNPM.*

4:00 B12 **726.12** FMRP-NBEA-PKA pathway actin cytoskeleton misregulation in a fragile X syndrome model. J. C. SEARS*; K. S. BROADIE. *Vanderbilt Univ.*

1:00 B13 **726.13** Effect of sound exposure on developing auditory cortex in fragile X syndrome mouse model. A. KULINICH*; S. M. REINHARD; K. A. RAZAK; I. M. ETHELL. *Univ. of California, Riverside, Univ. of California, Riverside.*

2:00 B14 **726.14** Dendritic spine alterations of striatal spiny projection neurons in the mouse model of fragile X syndrome. J. A. BEATTY*; B. A. GREGORY; M. J. RAILING; T. P. O'MALLEY; A. M. NIETO; C. L. COX. *Michigan State Univ.*

3:00 B15 **726.15** fMRI in clinical research for fragile X syndrome:Preliminary results from the LOVAmix trial. A. LOUDGHI*; F. MORIN-PARENT; S. GHUMMAN; C. CHAMPIGNY; F. CORBIN; J. LEPAGE. *Univ. de Sherbrooke.*

4:00 B16 **726.16** Cytokine expression and sickness behavior following lipopolysaccharide stimulation in the Fmr1 knockout mouse. S. L. HODGES*; S. 0. NOLAN; L. TOMAC; I. MUHAMMED; P. WOMBLE; J. N. LUGO. *Baylor Univ., Baylor Univ.*

1:00 B17 **726.17** Dietary rescue of adult behavioral deficits in the Fmr1 knockout mouse. S. O. NOLAN*; S. L. HODGES; J. OKOH; M. BINDER; S. CONDON; P. WOMBLE; J. N. LUGO, JR. *Baylor Univ., Baylor Univ.*

2:00 B18 **726.18** Loss of FMRP leads to NMDAR dysfunction and dendritic atrophy in a specific subpopulation of hippocampal neurons. L. BETTIO*; S. YAU; J. CHIU; C. CHIU; B. R. CHRISTIE. *Univ. of Victoria, Hong Kong Polytechnic Univ.*

3:00 B19 **726.19** Genome-wide measurement of mRNA translation in fragile X syndrome. S. ARYAL*; F. LONGO; E. KLANN. *New York Univ.*

POSTER

727. Angelman and Other Developmental Disorders

Theme A: Development

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

1:00 B20 **727.01** Subcellular organization of the autism-associated protein UBE3A in human cerebral cortex. A. C. BURETTE*; M. C. JUDSON; A. N. LI; E. F. CHANG; W. W. SEELEY; B. D. PHILPOT; R. J. WEINBERG. *Univ. of North Carolina, UNC-CH, UCSF, UCSF, UCSF, Univ. North Carolina, Univ. North Carolina.*

2:00 B21 **727.02** The enteric nervous system in Rett syndrome. S. C. SCHOCK*; G. WAHBA; P. HUMPHREYS; E. NIZALIK; W. STAINES; D. GRYNSPAN. *Children's Hosp. of Eastern Ontario, Univ. of Ottawa, Children's Hosp. of Eastern Ontario, Children's Hosp. of Eastern Ontario.*

3:00 B22 **727.03** Creatine transporter disorder: New insights into epileptic phenotype and diagnostic biomarkers. F. CACCIANTE; G. SAGONA; M. GENNARO; L. LUPORI; R. MAZZIOTTI; E. PUTIGNANO; T. PIZZORUSSO; L. BARONCELLI*. *Scuola Normale Superiore, Univ. of Florence, Neurosci. Institute, CNR.*

4:00 B23 **727.04** Ectopic brain-derived insulin-like growth factor-1 partially rescues neuroanatomical defects associated with developmental hypothyroidism. A. GROND*; K. E. SAATMAN; D. S. SHARLIN. *Minnesota State University, Mankato, Univ. of Kentucky.*

1:00 B24 **727.05** A Novel GABA receptor-positive allosteric modulator ameliorates motor dysfunction in an Angelman syndrome mouse model with maternal deletion from Ube3a to Gabrb3. H. YAN*; Z. PEI; R. RODRIGUIZ; X. WANG; M. LEWIS; M. ACKLEY; F. SALITURO; A. ROBICHAUD; J. DOHERTY; W. WETSEL; Y. JIANG. *Duke Univ. Sch. of Med., Duke Univ. Sch. of Med., Sage Therapeutics, Inc., Duke Univ. Sch. of Med., Duke Univ. Sch. of Med.*

2:00 B25 **727.06** ▲ Reduction of cholinergic interneurons in the striatum of humans with williams syndrome. D. CUEVAS*; K. L. HANSON; K. M. GROENIGER; C. F. HORTON LEW; D. GREINER; B. C. HRVOJ-MIHIC; U. BELLUGI; E. HALGREN; K. SEMENDEFERI. *UC San Diego, UC San Diego, The Salk Inst. LCN-B, UC San Diego, UC San Diego.*

3:00 B26 **727.07** ▲ Parvalbumin-positive interneurons of the basolateral amygdala in Williams syndrome: A postmortem histological study. D. GREINER*; K. L. HANSON; C. F. HORTON LEW; K. M. GROENIGER; D. CUEVAS; B. HRVOJ-MIHIC; U. BELLUGI; E. HALGREN; K. SEMENDEFERI. *UC San Diego, UC San Diego, The Salk Inst. LCN-B, Ctr. for Multimodal Imaging and Genet., UC San Diego.*

4:00 B27 **727.08** A stereological study of glia density in the cortex in Williams syndrome. L. WILDER*; K. HANSON; C. HORTON LEW; C. BROWN; D. CUEVAS; D. GREINER; K. GROENIGER; U. BELLUGI; K. SEMENDEFERI. *Univ. California San Diego, UCSB Psychological and Brain Sci., The Salk Inst. LCN-B.*

1:00 B28 **727.09** Altered circadian rhythm in the Snord116-deleted mouse, an experimental model of Prader-Willi syndrome. M. BOLLA*; M. FALAPPA; L. CANCEDDA; V. TUCCI. *Italian Inst. of Technol., Italian Inst. of Technol., Inst. Italiano di Tecnologia, Telethon Dulbecco Institute, Italy, Inst. Italiano Di Tecnologia (IIT).*

2:00 B29 **727.10** Spatiotemporal tracking of human neurodevelopmental genes with cerebral organoids. D. SEN*. *North Carolina State Univ.*

3:00 B30 **727.11** Selective α1-NaKA inhibition rescues hippocampal CA1 activity dependent calcium dynamics and hippocampal deficits in a mouse model of Angelman syndrome. P. RAYI*; H. KAPHZAN. *Univ. of Haifa.*

4:00 B31 **727.12** A novel cyclic peptide facilitates learning and memory in Angelman syndrome. K. LAU; M. RIOULT-PEDOTTI; M. YAO; C. MARINO; P. MIGANI; J. MARSHALL*. *Brown Univ.*

1:00 B32 **727.13** ● Small molecule inhibitors of G9a reactivate the maternal PWS locus genes in Prader-Will-syndrome patient derived neural stem cells and differentiated neurons. H. WU*; C. NG; V. VILLEGAS; S. CHAMBERLAIN; A. M. CACACE. *Fulcrum Therapeut., Univ. of Connecticut Hlth. Ctr., FULCRUM Therapeut.*

2:00 C1 **727.14** Language-related assessments in a mouse AS model. P. A. PERRINO*; S. J. CHAMBERLAIN; I. EIGSTI; R. H. FITCH. *Univ. of Connecticut, Univ. of Connecticut Sch. of Med., Univ. of Connecticut, Univ. of Connecticut.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 C2 **727.15** Microglia regulates molecular factors related to brain arteriovenous malformation in endothelial cells. E. PARK*; P. R. CHEN; E. KIM. *UT Hlth. Sci. Ctr. at Houston, UT Hlth. Sci. Ctr. at Houston, Mem. Hermann Texas Med. Ctr.*

4:00 C3 **727.16** Temperament, language and social development in infants and toddlers with agenesis of the corpus collosum. J. TURNER*; J. ELISON; S. SUNG; R. ADOLPHS; L. K. PAUL. *Caltech, Univ. of Minnesota.*

1:00 C4 **727.17** Effects of Ube3a overexpression in sprague dawley rats. A. W. NENNINGER*; M. M. PETERS; E. J. WEEBER; K. R. NASH. *Univ. of South Florida.*

2:00 C5 **727.18** De novo mutations in the RNA Helicase DDX6 disrupt P-body assembly and cause intellectual disability, microcephaly, and dysmorphic features. C. BALAK*; M. BENARD; E. SCHAEFER; K. RAMSEY; M. ERNOULT-LANGE; F. MATTIOLI; N. BELNAP; V. GEOFFROY; M. COUREL; J. MULLER; M. NAYMIK; K. BACHMAN; M. CHO; R. RICHHOLT; A. LE BECHEC; W. M. JEPSEN; M. DE BOTH; S. RANGASAMY; J. DELEUZE; A. BOLAND; S. SZELINGER; H. DOLLFUS; I. PIRAS; J. CHELLY; D. W. CRAIG; J. MANDEL; V. NARAYANAN; M. HUENTELMAN; D. WEIL; A. PITON. *Translational Genomics Res. Inst., UPMC Univ. Paris 06, Inst. de Biologie Paris-Seine (IBPS), CNRS UMR 7622, Service de Génétique Médicale, Hôpitaux Universitaires de Strasbourg, Inst. de Génétique Médicale d'Alsace, Translational Genomics Res. Inst., Inst. de Génétique et de Biologie Moléculaire et Cellulaire, Lab. de Génétique Médicale, UMR_S INSERM U1112, IGMA, Faculté de Médecine FMTS, Univ. de Strasbourg, Lab. de Génétique médicale, UMR_S INSERM U1112, IGMA, Faculté de Médecine FMTS, Univ. de Strasbourg, Geisinger Med. Ctr., GeneDx, Luxembourg Ctr. for Systems Biomedicine, Ctr. Natl. de Recherche en Génomique Humaine, Inst. de Biologie François Jacob, CEA, UCLA Ctr. for the Hlth. Sci., Keck Sch. of Med.*

3:00 C6 **727.19** Automated motor outcomes in genetic models of ubiquitin protein ligase E3A gene (UBE3A) mediated neurodevelopmental disorders. M. C. PRIDE*; J. L. SILVERMAN. *UC Davis Sch. of Med.*

4:00 C7 **727.20** Reactivation of Ube3a in mouse models of Angelman syndrome following transplantation of engineered mesenchymal stem cells secreting zinc finger artificial transcription factors. P. DENG*; U. BEITNERE; R. LEE; N. A. COPPING; J. A. HALMAI; H. O'GEEN; A. A. ADHIKARI; B. P. PYLES; S. DEL CAMPO; S. P. PETKOVA; M. PRIDE; J. L. CARTER; S. S. CARTER; J. NOLTA; J. L. SILVERMAN; D. SEGAL; K. FINK. *UC Davis, UC Davis Mind Inst., UC Davis Med. Ctr., UC Davis Mind Inst., UC Davis Med. Ctr.*

1:00 C8 **727.21** Expression of UBE3A via lentivector delivery in hematopoietic stem cells to treat Angelman syndrome. J. L. SILVERMAN*; A. A. ADHIKARI; N. A. COPPING; R. D. LEE; J. R. BEEGLE; H. NELSON; H. O'GEEN; D. J. SEGAL; J. S. ANDERSON. *UC Davis Sch. of Med., MIND Inst., UC Davis Sch. of Med.*

POSTER

728. ADHD, SLI, Dyslexia, and Other Disorders

Theme A: Development

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

1:00 C9 **728.01** Deep brain stimulation for Gilles de la Tourette syndrome in children and youth: A meta-analysis with individual participant data. M. COULOMBE*; L. ELKAIM; N. M. ALOTAIBI; D. A. C. GORMAN; A. G. WEIL; A. FALLAH; S. KALIA; N. LIPSMAN; A. M. LOZANO; G. M. IBRAHIM. *Univ. De Montréal, Univ. de Montréal, Univ. of Toronto, Krembil Neurosci. Inst., Univ. of Toronto, The Hosp. for Sick Children, Univ. de Montréal, Sainte Justine Hosp., David Geffen Sch. of Med. at Univ. of California Los Angeles, UCLA Mattel Children's Hosp., Univ. of Toronto, Krembil Neurosci. Inst., Sunnybrook Hlth. Sci. Ctr., The Hosp. for Sick Children.*

2:00 C10 **728.02** Cyclin-dependent kinase 5 regulates dopamine transporter surface expression and internalization, clues to understand the dopaminergic system of p35 knock-out mice. G. FERNANDEZ*; M. MARI; F. KRAPACHER; G. PAGLINI. *INIMEC-CONICET-UNC.*

3:00 C11 **728.03** Targeted deletion of latrophilin-3 in Sprague-Dawley rats results in hyperactivity and reduced anxiety-like behavior: A new model of ADHD. S. L. REGAN*. *Univ. of Cincinnati.*

4:00 C12 **728.04** Cognitive training combining numerosity with visual perception promotes arithmetic fluency in children with dyscalculia. D. CHENG*; X. ZHOU; Q. XIAO. *Capital Inst. of Pediatrics, Beijing Normal Univ., Beijing Chinese Language and Culture Col.*

1:00 C13 **728.05** Multigenerational transmission of developmental nicotine exposure-induced ADHD-like phenotypes is modulated by the D397N polymorphism of CHRNA5 in adolescent mice. J. M. BUCK*; J. A. STITZEL; H. C. O'NEILL. *Univ. of Colorado Boulder, Univ. of Colorado Boulder, Univ. of Colorado Boulder Inst. for Behavioral Genet.*

2:00 C14 **728.06** Atypical attentional bias to emotional faces in children with ADHD. J. SONG; N. KWON; S. KIM*. *Duksung Women's Univ., Duksung Women's Univ.*

3:00 C15 **728.07** Improving working memory by applying the newly designed story grammar marker in children with specificlanguage impairmentof northern Taiwan. H. YANG; D. LIN; C. YANG; D. HUANG; D. HSU; S. WENG*. *Fac. of Natl. Taipei Univ. of Nursing A, Ming Chi Univ. of Technol.*

4:00 C16 **728.08** Early development of speech network before birth and their prediction to language performance of 2 years later. M. ZHU*; Y. LIU; Y. HE. *State Key Lab. of Cognitive Neurosci. and.*

1:00 C17 **728.09** The effects of methylphenidate on verbal creativity, verbal fluency, and problem-solving abilities in individuals with attention deficit hyperactivity disorder. B. M. KILLE*; B. J. FERGUSON; M. M. MCBRIDE; D. C. WANG; D. Q. BEVERSDORF. *Univ. of Missouri, Thompson Ctr. For Autism, Univ. of Missouri Columbia.*

2:00 C18 **728.10** ● Vibrotactile adaptation and Weber's Law in children with Tourette syndrome. Ü. EşEN; H. DOKTUR; D. YıLDıZ; C. TANıDıR; M. TOMMERDAHL; B. GUCLU*. *Bogazici Univ., Bakirkoy Res. and Training Hosp. for Psychiatry, Neurol. and Neurosurg., İstanbul Gelişim Univ., Univ. of North Carolina at Chapel Hill.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 C19 **728.11** Probing neuronal and molecular underpinnings of language-related disorders using human stem cell-derived neuronal networks. M. V. ANIJS*; F. M. S. DE VRIJ; S. A. KUSHNER; S. C. VERNES. *Max Planck Inst. For Psycholinguistics, Erasmus MC, Max Planck Inst. for Psycholinguistics, Donders Ctr. for Cognitive Neuroimaging.*

4:00 C20 **728.12** Guanfacine decreases impulsivity in a mouse model of Neurofibromatosis type 1. J. L. LUKKES*; S. D. FITZ; H. P. DROZD; D. W. CLAPP; A. I. MOLOSH; A. SHEKHAR. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

1:00 C21 **728.13** Altered gray matter volumes in language-associated regions in children with developmental language disorder and speech sound disorder. F. KURTH*; E. LUDERS; L. PIGDON; G. CONTI-RAMSDEN; S. REILLY; A. T. MORGAN. *Univ. of Auckland, Murdoch Childrens Res. Inst., Univ. of Manchester, Griffith Univ.*

2:00 C22 **728.14** Atomoxetine prevents working memory loss in hyperactive rats, mediating plastic changes in prefrontal cortex pyramidal neurons. N. I. MARTINEZ TORRES*; D. GONZÁLEZ-TAPIA; N. VÁZQUEZ-HERNÁNDEZ; I. GONZÁLEZ-BURGOS. *Ctr. de Investigación Biomédica de Occidente, Univ. de Guadalajara, Inst. Nacional de Ciencias de la Rehabilitación Integral, A.C.*

3:00 C23 **728.15** Deletions in the ANKS1B gene encoding AIDA-1 cause synaptic dysfunction and human disease. A. CARBONELL*; J. O. TINDI; H. ERDJUMENT-BROMAGE; C. CHO; T. A. NEUBERT; B. A. JORDAN. *Albert Einstein Col. of Med., Albert Einstein Col. of Med. of Yeshiva Univ., NYU Langone Sch. of Med., Albert Einstein Col. of Med., New York Univ. Sch. of Med., Albert Einstein Col. of Med.*

4:00 C24 **728.16** ● Decoding Dyslexia. L. A. GABEL*; E. JOHNSON; D. T. TRUONG; E. MURRAY; E. ESCH; K. VOSS; O. GRIGAUX; S. PANIAGUA; J. R. GRUEN. *Lafayette Col., Boise State Univ., Yale Univ., Lafayette Col., Yale Univ., Yale Sch. of Med.*

1:00 C25 **728.17** Cerebral organoids as a new way to model ADHD pathophysiology. C. A. SARAIVA LOPES*; S. KO; J. R. COPPETA; B. M. COHEN; M. TEICHER; K. KIM. *Mol. Neurobio. Lab., McLean Hosp., Draper Labs.*

2:00 C26 **728.18** Human ADHD gut microbiota induces ADHD-like features in mice. A. C. TENGELER; S. A. DAM; M. WIESMANN; J. NAAIJEN; B. FRANKE; T. L. KOZICZ*; A. ARIAS VASQUEZ; A. J. KILIAAN. *Radboudumc, Radboudumc, Radboudumc, Radboud Univ. Med. Ctr.*

3:00 C27 **728.19** Multimodal imaging of occipitotemporal cortex in children with dyslexia. C. WANG*; M. MANDELLI; C. WATSON; E. CAVERZASI; M. GORNO-TEMPINI. *Univ. of California San Francisco.*

4:00 C28 **728.20** Genetic polymorphisms of HTR1A and -1B and serotonin transporter binding measured by PET allow for accurate classification of ADHD: An imaging-genetics machine learning model. A. KAUTZKY*; T. VANICEK; H. SIGURDARDOTTIR; C. PHILIPPE; G. M. JAMES; G. S. KRANZ; G. GRYGLEWSKI; T. TRAUB-WEIDINGER; M. MITTERHAUSER; W. WADSAK; K. PAPAGEORGIOU; M. HACKER; S. KASPER; R. LANZENBERGER. *Med. Univ. of Vienna, Med. Univ. of Vienna, Med. Univ. of Vienna.*

1:00 C29 **728.21** Brain and behavioral consequences of developmental nicotine exposure in a GAD67-GFP mouse model. M. M. MARTIN*; M. X. TRUPIANO; D. M. MCCARTHY; P. G. BHIDE. *Florida State Univ.*

2:00 C30 **728.22** Norbinaltorphimine, a selective κ-opioid receptor antagonist, alleviates behavioral and neurotransmitter phenotypes in a mouse model of attention deficit hyperactivity disorder. L. ZHANG; J. BIEDERMAN; T. J. SPENCER; K. L. JAUNARAJS; D. G. STANDAERT; D. M. MCCARTHY; P. G. BHIDE*. *Florida State Univ. Col. of Med., Massachusetts Gen. Hosp. and Harvard Med. Sch., Univ. of Alabama at Birmingham.*

3:00 C31 **728.23** A selective κ-opioid receptor antagonist alleviates behavioral phenotypes in Fmr1 knockout mouse. D. M. MC CARTHY*; M. TRUPIANO; E. CARRAZANA; L. ZHANG; J. BIEDERMAN; T. J. SPENCER; P. G. BHIDE. *Florida State Univ., Avekshan LLC, Massachusetts Gen. Hosp. and Harvard Med. Sch.*

4:00 C32 **728.24** ▲ Adolescent stress and hypofrontality: Towards a rodent model of ADHD. K. S. JADHAV; A. C. CIOBANU; I. JELESCU; R. STOOP; B. BOUTREL*. *Ctr. for Psychiatric Neurosci., CHUV, EPFL, Ctr. For Psychiatric Neurosci.*

POSTER

729. Calcium Channels: Regulation and Modulation

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 C33 **729.01** Ghrelin selectively inhibits CaV3.3 subtype of low voltage activated Ca2+channels. E. R. MUSTAFA*; S. CORDISCO GONZALEZ; S. S. ROGRIGUEZ; J. RAINGO. *Multidisciplinary Inst. of Cell Biol.*

2:00 C34 **729.02** Leptin promotes cellular differentiation and increases ionic currents in cells of neuroblastoma n1e115. B. DOMINGUEZ MANCERA*; R. I. VERGARA-REYES; P. CERVANTES-ACOSTA; A. HERNANDEZ-BELTRAN; M. BARRIENTOS-MORALES. *Univ. Veracruzana, Dept Fisiología.*

3:00 C35 **729.03** Neural voltage-independent regulation of voltage-gated calcium channels in pancreatic β-cells. D. E. GARCIA-DIAZ*; I. ARENAS; J. GARDUÑO; J. BRAVO-MARTÍNEZ; L. DE LA CRUZ. *Univ. Nacional Autónoma de México.*

4:00 C36 **729.04** Dopamine receptor type 1 modulates $Ca_V2.2$ current density. J. RAINGO*; C. CHOU-FREED; V. MARTINEZ DAMONTE; S. RODRIGUEZ; C. MCCARTHY. *Multidisciplinary Inst. of Cell Biol. (IMBICE).*

1:00 C37 **729.05** Cell-specific epigenetic modification of the CACNA1B gene in nociceptors controls calcium channel function in normal and neuropathic pain. E. J. LOPEZ SOTO*; D. LIPSCOMBE. *Brown Univ.*

2:00 C38 **729.06** PIP_2 depletion inhibits N-type Ca^{2+} channels in acutely dissociated oxytocin neurons of rat supraoptic nucleus. M. KIRCHNER*; W. E. ARMSTRONG; R. C. FOEHRING. *Univ. of Tennessee Hlth. Sci. Ctr.*

3:00 D1 **729.07** A tri-protein complex of Cav1.3, RyR2 and KCa3.1 channels contributes to the slow AHP in hippocampal pyramidal neurons. G. SAHU*; R. WAZEN; P. COLARUSSO; G. ZAMPONI; S. CHEN; R. TURNER. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 D2 **729.08** L-type calcium channels cooperate with NMDA receptors to signal to the nucleus. N. MANDELBERG*; B. LI; S. D. SUN; R. W. TSIEN. *New York Univ. Sch. of Med., Sun Yat-Sen Univ., New York Univ.*

1:00 D3 **729.09** A dynamic T-type calcium-calmodulin interaction activates a signaling cascade for CaM kinases and CREB. H. ASMARA*; X. ZHAN; C. SZALAY; G. SAHU; P. K. STYS; G. ZAMPONI; R. W. TURNER. *Univ. of Calgary.*

2:00 D4 **729.10** CaBP1 regulates Ca_v1 L-type Ca^{2+} channels and their coupling to neurite growth and gene transcription in mouse spiral ganglion neurons. A. LEE*; T. YANG; J. CHOI; D. SOH; K. TOBIN; M. JOINER; M. HANSEN. *Univ. of Iowa, Univ. of Iowa.*

3:00 D5 **729.11** Cav1.4 calcium conductance is dispensable for presynaptic ribbon development in photoreceptors. S. A. BAKER*; V. KEROV; J. G. LAIRD; J. HARDIE; M. JOINER; B. WILLIAMS; S. GARDNER; M. ZIMMERMAN; A. LEE. *Univ. of Iowa Dept. of Biochem., Univ. of Iowa, Univ. of Iowa.*

4:00 D6 **729.12** Effect of isoflurane on axonal endoplasmic reticulum Ca^{2+}dynamics in hippocampal neurons. V. OSMAN*; H. C. HEMMINGS, Jr. *Weill Cornell Med., Weill Cornell Med.*

1:00 D7 **729.13** Functional modulation of the Cav3.1 calcium channel by alternative splicing at the C-terminus. R. WANG*; Z. WANG; F. SHAKOLA; E. KALONTAR; M. HOSSAIN; Y. YU; M. RUGGIU. *St. John's Univ.*

2:00 D8 **729.14** Ultrasonic sensitivity of neurons targeted by gene encoded nano-scale gas vesicles. T. ZHU*; X. HOU; Z. QIU; J. GUO; L. SUN. *The Hong Kong Polytechnic Univ.*

POSTER

730. HCN Channels

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 D9 **730.01** A role for 14-3-3 in the downregulation of HCN1 channels. C. K. LANKFORD*; J. HOUTMAN; S. BAKER. *Univ. of Iowa, Univ. of Iowa.*

2:00 D10 **730.02** I_H current modulates bicuculline-induced increased in rebound excitation of vta da neuron. K. Y. BOSQUE CORDERO*; R. VÁZQUEZ-TORRES; C. A. JIMENEZ-RIVERA. *Univ. of Puerto Rico Rio Piedras Campus, Univ. of Puerto Rico, Univ. of Puerto Rico, Physiol. Dept.*

3:00 D11 **730.03** Activation of group-I mGluR receptors increases I_h in mouse MNTB neurons. A. B. CORREA*; C. KUSHMERICK. *Univ. Federal De Minas Gerais.*

4:00 D12 **730.04** Exploring HCN channels in primary cortical neurons. Y. IACONE*; C. STAMPE JENSEN; T. BENNED-JENSEN; T. JESPERSEN; T. NYGAARD JØRGENSEN. *H. Lundbeck A/S, Copenhagen Univ.*

1:00 D13 **730.05** Reduced seizure propensity and enhanced function of hyperpolarization-activated cyclic nucleotide channels (HCN) in mice deficient in striatal enriched protein phosphatase (STEP). S. JANG*; H. CHUNG. *Univ. of Illinois at Urbana-Champaign.*

2:00 D14 **730.06** A unique subcellular distribution of HCN channels accelerates action potential propagation in GABAergic interneuron axons. F. C. ROTH*; J. F. STORM; H. HU. *Univ. of Oslo, Inst. of Basic Med. Sci.*

3:00 D15 **730.07** Downregulation of HCN channels in mouse hippocampal neurons by virus delivered gene-interfering tools. M. DEUTSCH*; A. GÜNTHER; A. BAUMANN. *Res. Ctr. Juelich, RIKEN.*

4:00 D16 **730.08** Chronic inflammation increases SUMOylation of the hyperpolarization activated cyclic nucleotide gated channel 2 (HCN2), which mediates the hyperpolarization activated current (I_h), is altered in rat dorsal root ganglion (DRG) neurons. L. A. FORSTER*; L. A. JANSEN; V. RYU; A. Z. MURPHY; D. J. BARO. *Georgia State Univ., Georgia State Univ.*

1:00 D17 **730.09** TRIP8b phosphorylation is altered in epilepsy and affects HCN1 channel binding. K. FOOTE*; R. J. HEUERMANN; J. S. TRIMMER; G. T. SWANSON; D. M. CHETKOVICH. *Northwestern Univ., Univ. of California, Davis, Northwestern Univ., Vanderbilt Univ.*

2:00 D18 **730.10** Locus coeruleus activation inhibits HCN currents via alpha 2 adrenergic receptor in mesencephalic trigeminal neurons. J. WON*; S. OH; Y. KANG. *Seoul Natl. Univ., Sch. of Dent, Seoul Nat'l Univ., Osaka Univ. Grad. Sch. Dent.*

POSTER

731. Network Interactions: Signal Propagation

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 D19 **731.01** Coding of information in live neuronal networks reconstructed from the hippocampus. D. POLI; Y. S. VAKILNA; T. B. DEMARSE; B. C. WHEELER*; G. J. BREWER. *Univ. of California Irvine, Univ. of North Carolina, Univ. of California San Diego, UC Irvine.*

2:00 D20 **731.02** From local to global signaling in olfactory bulb granule cell dendrites. M. MÜLLER*; O. BOSCH; V. DARIA; V. EGGER. *Univ. Regensburg, The Australian Natl. Univ.*

3:00 D21 **731.03** Inhibitory control of the prefrontal cortex by the claustrum. J. C. JACKSON*; M. M. KARNANI; B. V. ZEMELMAN; D. BURDAKOV; A. K. LEE. *The Francis Crick Inst., Univ. of Texas, HHMI Janelia Res. Campus.*

4:00 D22 **731.04** *In vivo* evidence of spatio-temporal spike pattern propagation in feedforward network of vibrissal primary somatosensory cortex. H. JANG*; J. KWAG. *Korea Univ.*

1:00 D23 **731.05** Involvement of hilar mossy cells in the functional coupling between CA3 and dentate gyrus during sharp wave-ripple activity. A. SWAMINATHAN*; I. WICHERT; D. SCHMITZ; N. MAIER. *Neurosci. Res. Center, Charité Universitäts, Bernstein Ctr. for Computat. Neurosci., Berlin Inst. of Hlth., Ctr. for Neurodegenerative Dis. Berlin, Einstein Ctr. for Neurosciences.*

2:00 D24 **731.06** Identifying avalanches in simulated mouse primary motor cortex (M1). D. W. DOHERTY*; S. DURA-BERNAL; S. A. NEYMOTIN; W. W. LYTTON. *SUNY Downstate Med. Ctr., State Univ. of New York Downstate Med. Ctr., Brown Univ., SUNY Downstate.*

1:00 DP02/D25 **731.07** (Dynamic Poster) Peak activation of the CA2 subregion of the hippocampus precedes peak activation of CA3 following perforant-path stimulation. C. A. WILHITE*; R. S. WITTE; S. L. COWEN. *The Univ. of Arizona, The Univ. of Arizona, The Univ. of Arizona.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 D26 **731.08** Visuomotor planning increases the magnitude of synaptically-mediated evoked potentials in macaque frontal cortex during optogenetic stimulation in parietal cortex. B. FERRENTINO*; R. A. SHEWCRAFT; B. PESARAN. *New York Univ., New York Univ.*

1:00 D27 **731.09** Voltage imaging in brain slices using genetically encoded voltage indicators. M. M. MILOSEVIC; E. J. MCKIMM; S. D. ANTIC*. *Uconn Hlth., Univ. of Connecticut Hlth., UConn Hlth.*

1:00 DP03/D28 **731.10** (Dynamic Poster) Spatiotemporal coupling of slow-wave and spindle activity during sleep. L. D. HARRIGER*; M. A. YASSA; B. A. MANDER; R. T. KNIGHT; J. J. LIN. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California Berkeley, Univ. of California, Irvine.*

3:00 D29 **731.11** Input-specific synaptic location and function of the alpha5 GABAA receptor subunit in the mouse CA1 hippocampal neurons. S. AMALYAN*; E. MAGNIN; R. FRANCAVILLA; L. DAVID; L. TOPOLNIK. *Univ. Laval.*

4:00 D30 **731.12** Synaptic mechanisms underlying the network state-dependent recruitment of the interneuron-specific interneurons in the mouse CA1 hippocampus. A. GUET MCCREIGHT; X. LUO; R. FRANCAVILLA; V. VILLETTE; F. SKINNER; L. TOPOLNIK*. *Univ. of Toronto, CRCHUQ-CHUL, Laval Univ.*

1:00 D31 **731.13** Hippocampal long-range VIP-GABAergic neurons projecting to subiculum comprise a heterogeneous population of cells that may coordinate contextual learning. R. FRANCAVILLA*; X. LUO; E. MUNOZ; O. CAMIRÉ; L. TOPOLNIK. *CHUQ.*

POSTER

732. Oscillations and Synchrony: Unit Studies

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 D32 **732.01** The coordinated activity of the cortical slow oscillation and the reuniens nucleus of the thalamus in anesthetized mice. D. BASHA*; S. CHAUVETTE; J. SEIGNEUR; I. TIMOFEEV. *Ctr. de recherche CERVO Brain Res. Ctr., Univ. Laval.*

2:00 D33 **732.02** Intrinsic and synaptic properties determine macroscopic phase response curves and coherence states of inter-communicating gamma oscillatory neural circuits. G. D. DUMONT*, ESQ; B. S. GUTKIN. *Ecole Normale Superieure, Group For Neural Theory, LNC INSERM U960, Ecole Normale Superieure.*

3:00 D34 **732.03** ▲ Measured connectivity of bursting neuronal networks with and without inhibition. H. LEMKE*; A. NANTWI; T. NGUYEN. *The Col. of New Jersey.*

4:00 D35 **732.04** Spike-timing-dependent plasticity effect on the temporal patterns of neural synchronization. J. ZIRKLE; L. L. RUBCHINSKY*. *Indiana Univ. Purdue Univ. Indianapolis, Indiana Univ. Sch. of Med.*

1:00 D36 **732.05** Probing the polarity of perisomatic GABAergic transmission in the adult mouse hippocampus *in vivo.* O. DUBANET*; A. BEYELER; K. LECORF; A. FRICK; H. HIRASE; X. LEINEKUGEL. *Bordeaux Univ., INSERM 1215, RIKEN Brain Sci. Inst. - Wako.*

2:00 D37 **732.06** Human sleep spindles are associated with a phase-dependent upregulation of unit activity that is consistent with spike-timing dependent plasticity. C. DICKEY*; A. SARGSYAN; J. MADSEN; E. N. ESKANDAR; S. S. CASH; E. HALGREN. *Univ. of California San Diego, Univ. of California San Diego, Boston Children Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Univ. of California San Diego.*

3:00 D38 **732.07** Computational analysis of cortical networks: The role of network structure, cellular and synaptic mechanisms in initiation, maintenance and suppression of network activity. J. ACIMOVIC*; H. TEPPOLA; T. MÄKI-MARTTUNEN; M. LINNE. *Tampere Univ. of Technol., Simula Res. Lab.*

4:00 D39 **732.08** Gamma oscillation gate basal forebrain cholinergic modulation of mPFC neuron ensemble. W. XI*; F. YANG; A. W. ROE; J. TIAN; Y. YU; S. DUAN. *ZIINT, 2nd Affiliate Hospital, Sch. of Medicine, ZJU, Inst. of Neuroscience, Sch. of Medicine, ZJU, Zhejiang Univ. Med. Sch.*

1:00 D40 **732.09** ▲ Medial septal pacemaker neurons synchronize in phase not in frequency during hippocampal theta generation. B. KOCSIS*; R. FIÁTH; A. DOMONKOS; P. BARTHO; T. FREUND; S. KÁLI; I. ULBERT; V. VARGA; B. HANGYA. *Hungarian Acad. of Sci. Inst. of Experim, Res. Ctr. For Natural Sciences, Hungarian Acad. of Sci., MTA TKI, Neurosci. Institute, NYU Langone Med. Ctr.*

2:00 D41 **732.10** ● Neuronal population activity underlying difference of spontaneous wakefulness and anesthesia network dynamics in layer 2/3 somatosensory cortex. B. RAHSEPAR*; J. NOUEIHED; F. R. FERNANDEZ; J. A. WHITE. *Boston Univ.*

3:00 D42 **732.11** Structured thalamocortical dynamics in monkeys during loss and recovery of consciousness. J. YANAR*; J. A. DONOGHUE; M. LUNDQVIST; M. MAHKNE; E. N. BROWN; E. K. MILLER. *MIT.*

POSTER

733. Oscillations and Synchrony: LFP Studies I

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 D43 **733.01** Disproportional local field potential and GCaAMP-6 signals of hippocampal neuronal population activities. P. LI*; A. CACCAVANO; S. VICINI; J. WU. *Sun Yat-Sen Mem. Hospital,Sun Yat-Sen Univ., Georgetown Univ., Georgetown Univ., Georgetown Univ. Med. Ctr.*

2:00 D44 **733.02** Layer-specific networks in the developing prefrontal cortex. S. H. BITZENHOFER*; J. A. PÖPPLAU; I. L. HANGANU-OPATZ. *Univ. Med. Ctr. Hamburg-Eppendorf.*

3:00 D45 **733.03** An electrophysiological marker of arousal level in humans during sleep and general anesthesia. J. D. LENDNER*; R. F. HELFRICH; J. LIN; M. P. WALKER; B. A. MANDER; P. G. LARSSON; R. T. KNIGHT. *Univ. of California Berkeley, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of Oslo.*

4:00 D46 **733.04** Distinct activity patterns in neuromodulatory centers are associated with differential modulation of cortical low and high gamma oscillations. N. K. TOTAH*; S. VAN KEULEN; N. LOGOTHETIS; O. ESCHENKO. *Max Planck Inst. for Biol. Cybernetics.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 D47 **733.05** Enhanced cerebello-cortical coherence of local field potentials during patterned stimulation of the cerebellar vermis. S. TREMBLAY*; C. A. CHAPMAN; R. COURTEMANCHE. *Concordia Univ., Concordia Univ.*

2:00 D48 **733.06** Different theta rhythms in the hippocampus synchronized with layer-specific gamma oscillations via cross-frequency coupling. V. LÓPEZ-MADRONA*; E. ALVAREZ-SALVADO; D. MORATAL; O. HERRERAS; E. PEREDA; C. MIRASSO; S. CANALS. *Inst. De Neurociencias De Alicante, NYU Langone Med. Ctr., CBIT, Univ. Politècnica de València, Cajal Inst. - CSIC, Univ. de La Laguna, IFISC, Univ. de les Illes Balears.*

3:00 D49 **733.07** Toward cellular-based explanations of LFP theta-gamma rhythm generation in the hippocampus. A. CHATZIKALYMNIOU; F. K. SKINNER*. *Krembil Res. Institute, Univ. Hlth. Network, Univ. of Toronto, Univ. of Toronto.*

4:00 D50 **733.08** The effect of transcranial magnetic stimulation to the prefrontal cortex in a non-human primate model. S. SHIRINPOUR*; A. Y. FALCHIER; G. LINN; M. P. MILHAM; C. E. SCHROEDER; A. OPITZ. *Univ. of Minnesota Twin Cities, Nathan Kline Inst., Columbia Univ. Col. of Physicians and Surgeons.*

1:00 D51 **733.09** Evaluating phase-synchrony dynamics in epilepsy patients using EMD-based mean-phase coherence analysis. S. FARAHMAND*; T. SOBAYO; D. J. MOGUL. *Illinois Inst. of Technol.*

2:00 E1 **733.10** Loudness effects on the spectral composition of stimulus-related activity in the macaque auditory cortex. Y. KAJIKAWA*; J. J. ORZYK; C. E. SCHROEDER. *Nathan Kline Inst., Columbia Univ. Col. of Physicians and Surgeons.*

3:00 E2 **733.11** Slow-wave oscillations in cultured neuronal networks reflect bursting and single spiking. S. THEISS*; S. ILLES. *Univ. of Duesseldorf, The Sahlgrenska Academy, Univ. of Gothenburg.*

4:00 E3 **733.12** Signs of cortical electrical activity after death. P. PANI*; F. GIARROCCO; E. BRUNAMONTI; M. GIAMUNDO; M. MATTIA; S. FERRAINA. *Sapienza Univ. of Rome, PhD program in Behavioral Neuroscience, Sapienza Univ., Inst. Superiore di Sanità.*

1:00 E4 **733.13** Only sub-gamma coherence predicts long-range, parietal-frontal effective connectivity in macaques. R. SHEWCRAFT*; B. PESARAN. *New York Univ., New York Univ. Ctr. for Neural Sci.*

2:00 E5 **733.14** Investigating the ventral hippocampal-prefrontal anxiety circuit: Sexual dimorphisms and effects of estrous stage. K. J. SCHOEPFER*; A. A. WILBER; W. WU; M. KABBAJ. *Florida State Univ., Florida State Univ., Florida State Univ.*

3:00 E6 **733.15** Auditory evoked neural responses in the auditory cortex of the cat during slow wave sleep and anesthesia. D. A. HORVATH*; A. JUHASZ; R. FIATH; K. TOTH; G. KARMOS; I. ULBERT. *RCNS HAS, Pazmany Peter Catholic Universtiy, Semmelweis Univ.*

4:00 E7 **733.16** Decreased phase amplitude coupling across laminar hippocampal CA1 following traumatic brain injury. C. COTTONE*; K. GAGNON; C. ADAM; M. SERGISON; H. I. CHEN; A. ULYANOVA; J. A. WOLF. *Univ. of Pennsylvania.*

1:00 E8 **733.17** Reactivity of prefrontal and thalamic spontaneous oscillations to hippocampal high-frequency stimulation. L. S. BUENO-JUNIOR*; R. N. RUGGIERO; J. P. LEITE. *Univ. of Sao Paulo.*

POSTER

734. Oscillations and Synchrony: LFP Studies II

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 E9 **734.01** ● ▲ Transcranial static magnetic field stimulation of the dorsolateral prefrontal cortex has region specific effects on neural oscillations. A. G. SHEFFIELD*; S. AHN; S. ALAGAPAN; F. FROHLICH. *UNC Chapel Hill, UNC at Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina.*

2:00 E10 **734.02** ● Entrainment of alpha oscillations by transcranial alternating current stimulation in the ferret. E. NEGAHBANI*; I. M. STITT; S. RADTKE-SCHULLER; T. DOAN; M. DANNHAUER; A. V. PETERCHEV; F. FROHLICH. *Univ. of North Carolina, Duke Univ., Duke Univ., Duke Univ., Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

3:00 E11 **734.03** ● Development of functional connectivity in the fronto-parietal network in ferrets. Y. LI*; S. RADTKE-SCHULLER; J. H. GILMORE; F. FROHLICH. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill.*

4:00 E12 **734.04** ● Characterizing social and cognitive development in nrem sleep and risk for asd. J. PAGE*; C. LUSTENBERGER; F. FROHLICH. *Frank Porter Graham Child Develop. Institute, U, ETH Mobile Hlth. Systems Lab., Univ. of North Carolina.*

1:00 E13 **734.05** ● Target engagement of alpha oscillations by transcranial alternating current stimulation (tacs) in patients with chronic low back pain. J. PRIM*; S. AHN; M. ALEXANDER; M. DAVILA; K. MCCULLOCH; F. FROHLICH. *Univ. of North Carolina, Carolina Ctr. for Neurostimulation, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

2:00 E14 **734.06** ● ▲ Physiological correlates of the ANS and HPA-axis in active and passive music therapy interventions. T. MCPHERSON*; D. BERGER; S. ALAGAPAN; F. FROHLICH. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

3:00 E15 **734.07** ● Targeting impaired neural oscillations in patients with schizophrenia by transcranial alternating current stimulation. S. AHN*; J. M. MELLIN; S. ALAGAPAN; M. L. ALEXANDER; J. H. GILMORE; L. F. JARSKOG; F. FROHLICH. *Univ. of North Carolina, Carolina Ctr. for Neurostimulation, North Carolina Psychiatric Res. Ctr., Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

4:00 E16 **734.08** ● Pilot double-blind, placebo-controlled clinical trial of transcranial alternating current stimulation (tacs) for the treatment of major depressive disorder (mdd). M. L. ALEXANDER*; S. ALAGAPAN; C. E. LUGO; J. M. MELLIN; C. M. LUSTENBERGER; D. R. RUBINOW; F. FROHLICH. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 E17 **734.09** ● Higher-order visual thalamus orchestrates cortico-cortical synchronization during sustained attention. W. A. HUANG*; S. RADTKE-SCHULLER; Z. C. ZHOU; F. FROHLICH. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

2:00 E18 **734.10** ● ▲ Pilot double-blind, placebo-controlled clinical trial of the effect of transcranial alternating current stimulation (tacs) on the stress-immune response. J. PARIKH*; S. AHN; M. L. ALEXANDER; S. ALAGAPAN; F. FROHLICH. *Univ. of North Carolina, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

3:00 E19 **734.11** ● Optically-resolved posterior parietal cortex neural populations show NMDA receptor-dependent visual deviance detection. Z. C. ZHOU*; Y. YU; Y. LI; F. FROHLICH. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

4:00 E20 **734.12** Bidirectional closed-loop optogenetic control of gamma oscillations reveals their role in memory consolidation. V. KANTA*; D. PARE; D. B. HEADLEY. *Rutgers, the State Univ. of New Jersey, Rutgers Univ. Newark, Rutgers, The State Univ. of New Jersey.*

1:00 E21 **734.13** Gamma oscillations in the basolateral amygdala - A computational perspective. F. FENG*; D. B. HEADLEY; Z. CHEN; V. KANTA; A. AMIR; D. PARE; S. NAIR. *Univ. of Missouri-Columbia, Rutgers, The State Univ. of New Jersey.*

2:00 E22 **734.14** Artificial neural networks for prediction of the local field potential. B. LATIMER*; Z. CHEN; T. BANKS; D. HO; V. KANTA CHANTZI; D. B. HEADLEY; D. PARE; S. S. NAIR. *Univ. of Missouri, Ctr. For Mol. and Behavioral Neurosci., Rutgers, The State Univ. of New Jersey, Rutgers Univ. Newark.*

3:00 E23 **734.15** Gamma oscillations in the basolateral amygdala: Regional specialization, microcircuit mechanisms, and behavioral correlates. D. B. HEADLEY*; P. KYRIAZI; D. PARE. *Rutgers, The State Univ. of New Jersey, Rutgers University, The State Univ. of New Je, Rutgers Univ. Newark.*

POSTER

735. Network Interactions

Theme B: Neural Excitability, Synapses, and Glia

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

1:00 E24 **735.01** Identification of functional brain networks recruited by acute treadmill running at different intensities. H. KASAHARA*; M. ISHIDA; R. MORIKAWA; A. NISHII; K. SHOJI; N. KUBOTA; T. NISHIJIMA; I. KITA. *Tokyo Metropolitan Univ., Tokyo Metropolitan Univ.*

2:00 E25 **735.02** Critical dynamics in resting state oscillatory brain activity is associated with dopamine-related polymorphism. J. M. SIMOLA*; M. PALVA; T. PAUNIO; K. KANTOJÄRVI; E. BRATTICO; S. PALVA. *Univ. of Helsinki, Univ. of Helsinki, Univ. of Helsinki, Aarhus Univ.*

3:00 E26 **735.03** Excitation/inhibition balance in the aMCC influences resting state activity in the CEN. L. V. DANYELI*; L. COLIC; D. DENZEL; F. VON DÜRING; L. R. DEMENESCU; M. LI; M. WALTER. *Leibniz Inst. For Neurobio., Univ. Tübingen, Clin. Affective Neuroimaging Lab., Max-Planck-Institute for Biol. Cybernetics, Univ. Magdeburg, Max-Planck-Institute for Biol. Cybernetics.*

4:00 E27 **735.04** Role of the parafacial respiratory group in the recruitment of abdominal expiratory activity during sleep. A. PISANSKI (HERNANDEZ ABAD)*; N. KOCH; X. DING; S. PAGLIARDINI. *Univ. of Alberta, Univ. of Alberta.*

1:00 E28 **735.05** Phase-specific effects of alpha tACS on functional resting-state connectivity in the motor network. K. F. HEISE*; E. BOKKEN; B. KING; G. ALBOUY; D. MANTINI; S. P. SWINNEN. *Katholieke Univ. Leuven.*

2:00 E29 **735.06** Characterization of excitatory and inhibitory neuron activity during up states *in vitro*: Up states are resilient to optical activation of PV neurons. J. L. ROMERO-SOSA; H. MOTANIS; D. V. BUONOMANO*. *UCLA, UCLA, UCLA.*

3:00 E30 **735.07** Quantification of spine density in the rat default mode network. S. DAVANGER*; L. VALENCIA-PESQUEIRA; R. HOLST. *Univ. Oslo, Univ. of Oslo, Oslo Univ. Hosp.*

4:00 E31 **735.08** EEG power predicts laminar specific fMRI connectivity. R. SCHEERINGA*; P. KOOPMANS; T. VAN MOURIK; O. JENSEN; D. G. NORRIS; M. BONNEFOND. *Radboud Univ. Nijmegen, Donders Inst., Univ. de Lyon, Univ. of Duisburg-Essen, Univ. of Birmingham, Radboud Univ.*

1:00 E32 **735.09** The role of NMDA conductance in average firing rate shifts caused by external periodic forcing: A computational study. N. NOVIKOV*; B. GUTKIN. *Higher Sch. of Econ., Group for Neural Theory, LNC INSERM U960, Ecole Normale Superieure.*

2:00 E33 **735.10** Optogenetic stimulation-induced plasticity of orbitofrontal-striatal circuits *in vivo*. S. BARISELLI*; A. V. KRAVITZ. *NIH, NIDDK, Natl. Inst. of Hlth.*

3:00 E34 **735.11** Think globally, act locally (and vice versa): The perils and neuroprotective features of topology in seizures and cognition. E. L. OHAYON*; A. LAM. *Neurolinx Res. Inst.*

4:00 E35 **735.12** Dissecting a prefrontal-striatal-temporal lobe circuit in rhesus macaques via retrograde vector-mediated expression. K. E. DASH*; W. LERCHNER; T. SETOGAWA; J. N. TURCHI; V. MINASSIAN; M. A. ELDRIDGE; V. D. COSTA; B. B. AVERBECK; B. J. RICHMOND. *NIH, NIMH, Natl. Inst. of Mental Hlth., Natl. Insitutes of Hlth., Natl. Inst. of Mental Hlth., Natl. Inst. of Hlth.*

1:00 E36 **735.13** Local circuit regulation via gap junctions and self-inhibition in the locus coeruleus. A. M. MCKINNEY*; X. JIANG. *Baylor Col. of Med.*

2:00 E37 **735.14** Inter-hemispheric effective connectivity predicts chronic subjective fatigue and motor corticospinal excitability in stroke survivors. S. ONDOBAKA*; A. KUPPUSWAMY. *Univ. Col. London.*

3:00 E38 **735.15** Cortical propagation of slow wave activity unveiled by fast line fMRI scanning and optic-fiber calcium recordings. F. AEDO-JURY*; M. SCHWALM; A. STROH. *Johannes Gutenberg Univ. of Mainz, Johannes Gutenberg Univ. of Mainz.*

4:00 E39 **735.16** Homeostasis and oscillatory modulation. E. PETERSON*; B. VOYTEK. *U.C. San Diego, Univ. of California San Diego Dept. of Cognitive Sci.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 E40 **735.17** Firing activity of protrudor and retractor XII motor neurons are differentially altered in 22q11.2DS. X. WANG*; C. BRYAN; A. LAMANTIA; D. S. MENDELOWITZ. *The George Washington University, SMHS, The George Washington Univ. Inst. for Neuroscience, SMHS, The George Washington Univ. Inst. for Neuroscience, SMHS.*

2:00 E41 **735.18** Tuning cortical network state from criticality to balanced dynamics by strengthening inhibition. J. LI*; W. L. SHEW. *Univ. of Arkansas, Univ. of Arkansas Fayetteville.*

3:00 E42 **735.19** The fractal cortex: Reconciling cortical network dynamics across scales of observation. W. L. SHEW*; S. CHAKRABORTY; T. KNOPFEL; V. AGRAWAL. *Univ. of Arkansas Fayetteville, Univ. of Arkansas, Imperial Col. London.*

4:00 E43 **735.20** Cortical network dynamics exhibit longest-ranged temporal correlations for critically-balanced excitation and inhibition. D. A. ROISEN*; S. H. GAUTAM; W. L. SHEW. *Univ. of Arkansas.*

1:00 E44 **735.21** ● Neuronal avalanches and long-range temporal correlations at the emergence of collective oscillations: What is the relation with branching processes? M. COPELLI*; L. DALLA PORTA. *Fed. Univ. Pernambuco (UFPE), Systems Neuroscience, Inst. d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS).*

2:00 E45 **735.22** Switching states of network connectivity in rat recordings during anaesthesia and sleep. W. CLAWSON*; D. BATTAGLIA; A. F. VICENTE; C. BERNARD; P. P. QUILICHINI. *INSERM U1106 INS.*

3:00 E46 **735.23** Spatio-temporal organization of cell assemblies in nucleus reuniens during slow oscillations. P. P. QUILICHINI*; D. ANGULO-GARCIA; M. FERRARIS; A. GHESTEM; C. BERNARD. *INSERM U1106 INS, Grupo de Modelado Computacional, Inst. de Matematicas Aplicadas.*

POSTER

736. Alzheimer's Disease and Other Dementias: Neuroinflammation

Theme C: Neurodegenerative Disorders and Injury

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

1:00 E47 **736.01** Retinal amyloidosis, gliosis and inflammatory biomarkers in mild cognitive impairment and Alzheimer's disease patients. A. RENTSENDORJ*; Y. KORONYO; D. FUCHS; J. SHEYN; G. REGIS; J. DOUSTAR; C. A. MILLER; K. L. BLACK; M. KORONYO-HAMAOUI. *Cedars Sinai Med. Ctr., USC, Cedars-Sinai Med. Ctr.*

2:00 E48 **736.02** ▲ Immunomodulation therapy targets large to medium Aβ deposits and surrounding inflammatory cells in old late-stage mouse models of Alzheimer's disease. J. DOUSTAR*; T. TORBATI; G. C. REGIS; D. FUCHS; Y. KORONYO; J. SHEYN; A. RENTSENDORJ; P. K. SHAH; K. BLACK; S. LI; M. KORONYO-HAMAOUI. *Cedars Sinai Med. Ctr., Western Univ. of Hlth. Sci., Cedars Sinai Med. Ctr., Cedars Sinai Med. Ctr., Cedars Sinai Med. Ctr., Wenzhou Uinversity.*

3:00 E49 **736.03** Synaptic protection, immune regulation, and oligomeric amyloid-β clearance by bone marrow-derived macrophages. D. FUCHS*; S. LI; J. SHEYN; A. RENTSENDORJ; E. Y. HAYDEN; T. TORBATI; K. L. BLACK; D. B. TEPLOW; Y. KORONYO; M. KORONYO-HAMAOUI. *Cedars-Sinai Med. Ctr., Wenzhou Univ., Univ. of California Los Angeles, Western Univ. of Hlth. Sci., Cedars-Sinai Med. Ctr.*

4:00 E50 **736.04** Inner retinal hallmark pathology and inflammation in Alzheimer's disease patients. Y. KORONYO*; A. RENTSENDORJ; E. BARRON; D. FUCHS; J. SHEYN; C. A. MILLER; K. L. BLACK; G. MELI; D. R. HINTON; M. KORONYO-HAMAOUI. *Cedars-Sinai Med. Ctr., Doheney Eye Inst., USC, European Brain Res. Inst. (EBRI), USC, Cedars-Sinai Med. Ctr.*

1:00 E51 **736.05** High fat diet exacerbates brain blood flow reductions caused by stalled capillaries in a mouse model of Alzheimer's disease. O. BRACKO; J. C. CRUZ HERNANDEZ; L. K. VINARCSIK; M. ALI; M. SWALLOW; J. ZHENG; B. N. NJIRU; N. NISHIMURA; C. B. SCHAFFER*. *Cornell Univ.*

2:00 F1 **736.06** Time lapse tracking with intravital imaging in an Alzheimer's disease mouse model reveals highly dynamic plaques after vascular occlusions. Y. ZHANG*; N. NISHIMURA. *Cornell Univ.*

3:00 F2 **736.07** Multi-exposure speckle imaging to measure the cerebral blood flow recovery associated with blocking leukocyte adhesion in mouse models of Alzheimer's disease. D. A. RIVERA*; O. BRACKO; N. NISHIMURA; C. B. SCHAFFER. *Cornell Univ.*

4:00 F3 **736.08** DeepVess: Automated, open-source segmentation and centerline extraction of 3D, *in vivo*, multiphoton images of cortical vasculature in Alzheimer's mouse models using deep convolutional neural networks. M. HAFT JAVAHERIAN*; L. FANG; V. MUSE; C. B. SCHAFFER; N. NISHIMURA; M. R. SABUNCU. *Cornell Univ., Cornell Univerisy.*

1:00 F4 **736.09** Regulation of osteopontin expression in disease associated microglia in Alzheimer's disease. W. FU*; S. LAU; X. ZHOU; C. CHUANG; Y. WANG; 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., HKUST Shenzhen Res. Inst.*

2:00 F5 **736.10** IL-33 ameliorates Alzheimer's disease-like pathology by modulating the transcriptome signature of microglia. S. LAU*; W. FU; Y. LAM; A. C. SHUI; T. H. CHEUNG; A. K. FU; N. Y. IP. *The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol.*

3:00 F6 **736.11** Innate immunity sex differences in STAT3 signaling in Alzheimer's disease. R. OSEAS*; M. F. UCHOA; K. R. DOTY; A. W. VESLING; B. P. LEUNG; R. RAZI; A. M. QUIHUIS; M. GUILLOT-SESTIER; T. C. TOWN. *USC, Zilkha Neurogenetic Inst.*

4:00 F7 **736.12** Metabolic changes in immunologically tolerant macrophages treated with amyloid-beta. M. F. UCHOA*; K. W. IM; A. W. VESLING; C. J. MILLER; R. RAZI; R. OSEAS; B. P. LEUNG; T. C. TOWN. *USC, USC, Zilkha Neurogenetic Inst.*

Wed. PM

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 F8 **736.13** Trem 2+ peripheral macrophages targeted with nanoparticles inhibits TGF-Beta signaling and mitigates Alzheimer's pathology in TgF344-AD rats. A. M. QUIHUIS*; T. M. WEITZ; B. P. LEUNG; D. KIM; J. RODRIGUEZ, Jr.; T. M. FAHMY; T. C. TOWN. *USC, Zilkha Neurogenetic Institute, Keck Sch. of Medi, USC, Texas A&M, Yale Univ., Zilkha Neurogenetic Inst.*

2:00 F9 **736.14** Glia maturation factor (gmf) mediated overexpression of voltage-dependent anion channel 1(vdac1) promotes mitochondrial dysfunction through oxidative stress and apoptosis in Alzheimer's disease. A. ZAHEER*; M. E. AHMED; R. THANGAVEL; D. KEMPURAJ; G. P. SELVAKUMAR; S. P. RAIKWAR; I. DUBOVA; S. ZAHEER; S. S. IYER. *Univ. of Missouri, Harry S. Truman Mem. Veterans Hosp.*

3:00 F10 **736.15** Myeloid cell-specific p38 MAP kinase deficiency exacerbates amyloid pathology: Potential link to altered gut microbiome. N. R. BHAT*; C. VASU; K. SAMBAMURTI; S. MOHANTY. *Med. Univ. South Carolina, Med. Univ. South Carolina.*

4:00 F11 **736.16** Modulation and trafficking of amyloid-β by microglia-derived microvesicles. M. R. NICHOLS*; L. GOUWENS; M. ISMAIL; V. ROGERS; N. ZELLER; E. GARRAD; F. AMTASHAR; N. MAKONI; D. OSBORN. *Univ. of Missouri-St. Louis.*

1:00 F12 **736.17** Characterization of the human antimicrobial peptides Aβ and amylin in a 3 D blood brain barrier cell culture infection model. D. VIJAYA KUMAR*; T. I. MITCHELL; W. A. EIMER; N. NAVALPUR SHANMUGAM; E. KIM; S. CHOI; R. E. TANZI; R. D. MOIR. *Massachusetts Gen. Hosp. & Harvard Med. Sch.*

2:00 F13 **736.18** Aβ42 is an antimicrobial peptide against neurotropic viruses. W. A. EIMER*; D. VIJAYA KUMAR; N. N. SHANMUGAM; S. CHOI; A. RODRIGUEZ; T. MITCHELL; K. J. WASHICOSKY; B. GYORGY; X. O. BREAKEFIELD; R. E. TANZI; R. D. MOIR. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp. & Harvard Med. Sch., Massachusetts Gen. Hosp. & Harvard Med. Sch., Massachusetts Gen. Hosp.*

3:00 F14 **736.19** Sex-and genotype differences in astrocyte reactivity in humanized apoe mice. A. EID*; I. MHATRE; Y. HAN; J. R. RICHARDSON. *Florida Intl. Univ., Kent State Univ.*

4:00 F15 **736.20** Regulation of metabolic genes in microglia in a murine model of Alzheimer's disease. J. F. CODOCEDO*; G. E. LANDRETH. *Indiana Univ. Sch. of Med.*

1:00 F16 **736.21** Aβ peptide binds, agglutinates and neutralizes endotoxins released during infection. T. I. MITCHELL*; D. VIJAYA KUMAR; W. A. EIMER; N. NAVALPUR; R. E. TANZI; R. D. MOIR. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachussetts Gen. Hosp.*

2:00 F17 **736.22** Age-dependent crosstalk between prostaglandin D2 receptor DP2 and microglia activation as a potential neurodegeneration mechanism in the transgenic rat model of Alzheimer's disease. C. H. WALLACE; R. SHRESTHA; A. RASHID; A. ALLIGER; L. XIE; P. SERRANO; P. ROCKWELL*; M. E. FIGUEIREDO-PEREIRA. *Hunter Col. of the City Univ. of New York, Hunter Col. of the City Univ. of New York, Hunter Col. of the City Univ. of New York.*

3:00 F18 **736.23** Effect of APOE lipoproteins on microglial response to intracranial infusion of Aβ - *in vivo* two-photon imaging and transcriptomic analysis. I. M. LEFTEROV*; F. LETRONNE; B. IORDANOVA; N. FITZ; C. WOLFE; K. NAM; B. PLAYSO; T. KOZAI; R. KOLDAMOVA. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 F19 **736.24** Toll-like receptor 4 antagonism as therapeutic for AD-associated neuroinflammation. A. NGUYEN; E. LOUKENAS; N. ALLABABIDI; D. BALU*; A. HANSEN; A. C. VALENCIA; J. M. YORK; F. NEUMANN; F. PERI; M. LADU. *Univ. of Illinois at Chicago, Innaxon Therapeut., Univ. of Milano-Bicocca.*

1:00 F20 **736.25** Microrna miR-155 modulates inflammation inAlzheimer's disease. M. S. ALOI*; K. E. PRATER; S. L. DAVIDSON; S. JAYADEV; G. A. GARDEN. *Univ. of Washington, Univ. of Washington.*

2:00 F21 **736.26** ▲ Platelet derived growth factors disrupt the blood-brain barrier and elevate amyloid pathology in 5xfad mice. Q. A. DUONG*; A. KADDOUMI. *Auburn Univ.*

3:00 F22 **736.27** Characterizing amyloid pathology-driven heterogeneity of the astrocyte response in a mouse model of Alzheimer's disease. D. TUMBLESON-BRINK*; A. OBLAK; S. PUNTAMBEKAR; B. T. LAMB. *Indiana University-Purdue University,Indianapolis, Indiana Univ. Sch. of Med., Indiana University-Purdue University, Indianapolis, Stark Neurosciences Res. Inst.*

4:00 F23 **736.28** Characterization of the neuroinflammatory response in Alzheimer's disease. A. C. FEVGA*; V. VAN DIS; T. M. LUIDER; D. A. MUSTAFA; J. M. KROS. *Erasmus Med. Ctr., Erasmus Med. Ctr., Erasmus Med. Ctr.*

1:00 F24 **736.29** ▲ Analysis of inflammatory biomarkers in a novel mouse model of Alzheimer's disease. M. SOBESKI*; S. L. P. LIPPI; J. M. FLINN. *George Mason Univ., George Mason Univ.*

2:00 F25 **736.30** Assessment of brain pathology in a novel hAPP/Tau mouse model of Alzheimer's disease: Effects of zinc supplementation. S. L. LIPPI*; K. M. CRAVEN; M. L. SMITH; M. A. SOBESKI; J. M. FLINN. *George Mason Univ.*

POSTER

737. Alzheimer's Disease and Other Dementias: Neuroinflammation and Immune Actions

Theme C: Neurodegenerative Disorders and Injury

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

1:00 F26 **737.01** Microglia prevent peripheral immune cell invasion and promote an anti-inflammatory environment in the brain of APP-PS1 transgenic mice. M. S. UNGER*; P. SCHERNTHANER; J. MARSCHALLINGER; H. MROWETZ; L. AIGNER. *Paracelsus Med. Univ. Salzburg, Spinal Cord Injury and Tissue Regeneration Ctr. Salzburg (SCI-TReCS), Stanford Univ. Sch. of Med.*

2:00 G1 **737.02** Influenza A virus infection in a mouse model of Alzheimer's disease. S. HOSSEINI*; K. MICHAELSEN-PREUSSE; A. HOLZ; K. SCHUGHART; M. KORTE. *Technische Univ. Braunschweig, Helmholtz Ctr. for Infection Res.*

3:00 G2 **737.03** Modeling glycosylation in Alzheimer's disease using patient-derived stem cells. K. ROSENBALM*; D. NIX; M. TIEMEYER. *UGA/CCRC.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 G3 **737.04** Differences in dietary inflammatory index in individuals with Alzheimer's dementia, mild cognitive impairment, and controls. A. K. HALT*; B. E. SUTTON; T. SHADRICK; D. DRYSDALE; M. MCBRIDE; D. Q. BEVERSDORF. *Univ. of Missouri, St. Ambrose Univ., Univ. of Missouri Columbia.*

1:00 G4 **737.05** Inflammatory cytokine IL-1beta downregulates LRP1 via microRNA-mediated gene silencing in endothelial cells. H. HSU*; C. RODRIGUEZ-ORTIZ; J. ZUMKEHR; M. KITAZAWA. *Univ. of California Irvine.*

2:00 G5 **737.06** ● Modulation of the inflammatory response by RNA-binding protein TIA1 in the P301S mouse model of tauopathy. C. LEBLANG*; B. WOLOZIN; J. LUEBKE. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

3:00 G6 **737.07** Transcriptomic profiling of microglia reveals distinct gene expression changes in response to aging and APOE isoform. K. NAM*; N. F. FITZ; C. M. WOLFE; F. LETRONNE; I. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh.*

4:00 G7 **737.08** The effects of stem cell factor and granulocyte colony-stimulating factor on removal of β-amyloid deposits in aged APP/PS1 mice. L. ZHAO*; Y. LIU; S. LONGO. *SUNY Upstate Med. Univ., SUNY Upstate Med. Univ.*

1:00 G8 **737.09** ● Altered inflammatory signalling in cerebrospinal fluid of mild cognitive impairment versus Alzheimer's disease: Analysis of cytokines/chemokines, amyloid-beta and tau. J. A. PRENDERVILLE; T. BURKE; C. W. MCDONNELL; M. BIANCHI*. *Transpharmation Ireland Limited.*

2:00 G9 **737.10** Neutrophil adhesion in brain capillaries contributes to cortical blood flow decreases and impaired memory function in a mouse model of Alzheimer's disease. O. BRACKO*; J. C. CRUZ HERNÁNDEZ; C. J. KERSBERGEN; V. MUSE; M. HAFT-JAVAHERIAN; M. BERG; L. PARK; L. K. VINARCSIK; I. IVASYK; Y. KANG; M. CORTES-CANTELI; M. PEYROUNETTE; V. DOYEUX; A. SMITH; J. ZHOU; G. OTTE; E. DAVENPORT; Y. DAVIT; S. STRICKLAND; C. IADECOLA; S. LORTHOIS; N. NISHIMURA; C. B. SCHAFFER. *Cornell Univ., Univ. de Toulouse, Weill Cornell Med., Ctr. Nacional de Investigaciones Cardiovasculares Carlos III (CNIC), Rockefeller Univ.*

3:00 G10 **737.11** Microglial ABCA7 contributes to the regulation of brain immune system. T. AIKAWA*; Y. REN; Y. YAMAZAKI; Y. A. MARTENS; M. HOLM; C. T. ANDERSON; Y. W. ASMANN; G. BU; T. KANEKIYO. *Mayo Clin., Mayo Clin.*

4:00 G11 **737.12** Fractalkine signaling drives distinct TREM2-dependant and TREM2-independant microglial responses to early amyloid pathology. S. PUNTAMBEKAR*; A. OBLAK; G. E. LANDRETH; B. T. LAMB. *Indiana University-Purdue University, Indianapolis, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Stark Neurosciences Res. Inst.*

1:00 G12 **737.13** Neuroprotective effects of digoxin on Alzheimer's dementia model in rats. M. A. ERDOGAN*; G. YIGITTURK; O. ERBAS. *Izmir Katip Celebi Univ. Fac. of Med., Ege Univ. Fac. of Med., Istanbul Bilim Univ. Fac. of Med.*

2:00 H1 **737.14** Expression of TREM2 and its association with glia maturation factor in human Alzheimer's disease brain. R. THANGAVEL*; I. DUBOVA; D. SAEED; G. GILER; K. KUKULKA; S. HERR; R. GOVINDARAJAN; K. DURAISAMY; M. AHMED; G. SELVAKUMAR; S. P. RAIKWAR; S. ZAHEER; S. S. IYER; A. ZAHEER. *Univ. of Missouri, Harry S. Truman Mem. Veteran's Hosp.*

3:00 H2 **737.15** Trem2 regulatory region activity in human cell lines . L. BEKRIS*; R. AKHTER; E. DYNE; M. KHRESTIAN; Y. SHAO. *Cleveland Clin. Genomic Med. Inst., Kent State Univ., Cleveland Clin. Lerner Res. Inst.*

4:00 H3 **737.16** ● Soluble TREM2 and inflammatory biomarkers in Alzheimer's disease. J. B. LEVERENZ*; M. KHRESTIAN; Y. SHAO; L. BEKRIS. *Cleveland Clin., Cleveland Clin.*

1:00 H4 **737.17** ● ▲ An anti-TREM2 antibody agonizes TREM2 and promotes microglial clustering around amyloid plaques in the 5XFAD mouse model of amyloid deposition. A. E. WOOLUMS; B. R. PRICE; T. L. SUDDUTH; E. M. WEEKMAN; T. SCHWABE; A. ROSENTHAL; D. M. WILCOCK*. *Univ. of Kentucky, Alector, LLC.*

2:00 H5 **737.18** Glia maturation factor (gmf) promotes alteration of mitochondrial dynamics and oxidative stress mediated apoptosis in sh-sy5y cells. M. E. AHMED*; S. GOVINDHASAMY PUSHPAVATHI1; R. THANGAVEL; K. DURAISAMY; S. RAIKWAR; D. IULLIA; S. ZAHEER; S. IYER; A. ZAHEER. *Univ. of Missouri, Harry S. Truman Mem. Veterans Hosp.*

3:00 H6 **737.19** Locus coeruleus noradrenergic system and beta-adrenergic receptor modulation of neuroinflammation in mouse models of Alzheimer's disease. A. K. EVANS*; B. YI; J. ERNEST; M. SHAMLOO. *Stanford Sch. of Med.*

4:00 H7 **737.20** A meta-analysis of complement proteins in Alzheimer's disease. S. KRANCE*; H. MAO; Y. ZOU; X. HE; M. PAKOSH; W. SWARDFAGER. *Univ. of Toronto, Univ. Hlth. Network.*

1:00 H8 **737.21** ● Comprehensive analysis of microglia across neuropathological stages of Alzheimer's disease (AD). K. R. MILLER*; S. PROKOP; S. R. LABRA; R. M. PITKIN; E. B. LEE; V. M. LEE; J. Q. TROJANOWSKI. *Nanostring Technologies, Univ. of Pennsylvania.*

2:00 H9 **737.22** Associations between inflammatory profiles and human neuropathology are altered based on apolipoprotein E4 genotype. N. AYTAN; J. FRIEDBERG; J. D. CHERRY; W. XIA; T. D. STEIN*. *Boston Univ. Med. Sch., Boston Univ. Med. Sch., Boston Unviersity, Boston Univ. Sch. of Med., Boston VA Med. Ctr.*

3:00 H10 **737.23** Effects of colonic inflammation induced by dextran sulfate sodium on the brain pathology of an Alzheimer's disease mouse model. M. SOHRABI*; C. K. COMBS; J. WIESER. *Univ. of North Dakota, Univ. of North Dakota Sch. of Med., Univ. of North Dakota.*

4:00 H11 **737.24** Il-6 correlates with spatial navigation dysfunction in amnestic mild cognitive impairment. N. ROGERS*; C. SANMARTIN; D. PONCE; J. VALDES; M. BEHRENS. *Univ. de Chile, Univ. Mayor, Ctr. de Invetigación Clínica Avanzada (CICA).*

1:00 H12 **737.25** Mir-146a regulates neutrophil extracellular trap formation that precedes Alzheimer's diseases with oligomeric Aβ deposits. S. KIM*. *Bundang Hosp. of Seoul Natl. Univ.*

Wed. PM

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 H13 **737.26** Arachidonic acid analogues and curcumin targeting cytosolic phospholipase A2 as anti-neuroinflammatory agents. C. LOW*; C. NG; S. KANNAN; Y. CHEN; F. C. TAN; Y. ONN; X. LEE; W. ONG; M. GO; C. S. VERMA; S. KESAVAPANY; M. ADMED; Y. L. LAM. *Yong Loo Lin Sch. of Med., Natl. Univ. of Singapore, Natl. Univ. of Singapore, Bioinformatics Inst. A*STAR, Natl. Univ. of Singapore, Inst. for Hlth. Technologies, Nanyang Technological Univ., Sch. of Physical and Mathematical Sciences, Nanyang Technological Univ.*

3:00 H14 **737.27** The role of immune cells in Alzheimer's disease analyzed by crossing 5xFAD mice with CX3CR1$^{+/GFP}$ and CCR2$^{+/RFP}$ mice. H. CYNIS*; Y. YOLUC; V. NYKIEL; S. GEISSLER; S. BARENDRECHT. *Fraunhofer IZI-MWT.*

4:00 H15 **737.28** An emerging role for Hsp27 in vascular cognitive impairment and dementia. B. R. PRICE*; T. L. SUDDUTH; C. A. DICKEY; D. M. WILCOCK. *Univ. of Kentucky, Univ. of Kentucky, Univ. of South Florida.*

1:00 H16 **737.29** Microglial ablation and repopulation with a CSF1-R inhibitor alters amyloid pathology in a mouse model of Alzheimer's disease. B. CASALI*; E. G. REED-GEAGHAN; G. E. LANDRETH. *Case Western Reserve Univ., Case Western Reserve Univ., Indiana Univ. Sch. of Med.*

2:00 H17 **737.30** Modulation of microglia polarization by sphingolipid. G. WANG*; L. ZHONG; H. QIN; Z. ZHU; A. ELSHERBINI; E. BIEBERICH. *Univ. of Kentucky Chandler Med. Ctr., Univ. of Kentucky.*

POSTER

738. Mechanisms of Synaptic Dysfunction in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 H18 **738.01** 27-Hydroxycholesterol as a molecular link between hypercholesterolemia and synapsis dysfunction. P. MERINO-SERRAIS*; R. LOERA-VALENCIA; P. RODRIGUEZ-RODRIGUEZ; C. PARRADO-FERNANDEZ; M. ISMAIL; S. MAIOLI; E. JIMENEZ-MATEOS; I. BJORKHEM; J. DEFELIPE; A. CEDAZO-MINGUEZ. *Karolinska Institutet, Royal Col. of Surgeons in Ireland, Karolinska Institutet, Inst. Cajal (CSIC).*

2:00 I1 **738.02** Soluble Amyloid beta42 act as allosteric activator of the core cholinergic enzyme, choline acetyltransferase. A. KUMAR*; E. LANA; R. KUMAR; C. LITHNER; T. DARREH-SHORI. *Karolinska Institutet, Karolinska Institutet.*

3:00 I2 **738.03** The effect of glycemic changes on brain metabolism and sleep/wake *in vivo* using biosensor technology. C. M. CARROLL*; M. STANLEY; M. PAIT; C. HOLLINGSWORTH; D. M. HOLTZMAN; S. L. MACAULEY. *Wake Forest Sch. of Med., Univ. of British Columbia, Wake Forest Univ., Washington Univ., Wake Forest Sch. of Med.*

4:00 I3 **738.04** Maintained LTP and memory are lost by amyloid-β_{1-42}-induced Zn^{2+} influx into dentate granule cells. Y. SATO*; T. MURAKAMI; H. FUJII; H. TAMANO; A. TAKEDA. *Univ. of Shizuoka.*

1:00 I4 **738.05** Postsynaptic protein Shank3 deficiency: Potential effects on cognitive performance and Shank3 interactome in a murine model of Alzheimer's disease. O. LANDRY*; A. FRANÇOIS; M. TRAVERSY; C. TREMBLAY; V. EMOND; K. GYLYS; J. D. BUXBAUM; F. CALON. *Laval Univ., CHU de Québec-CHUL Res. Ctr., UCLA, Mt Sinai Sch. Med., Inst. of Nutr. and Functional Foods.*

2:00 I5 **738.06** ▲ Dendritic spines provide cognitive resilience against Alzheimer's disease. K. A. CURTIS*; B. D. BOROS; K. M. GREATHOUSE; M. GEARING; J. H. HERSKOWITZ. *Univ. of Alabama at Birmingham, Emory Univ., The Univ. of Alabama at Birmingham.*

3:00 I6 **738.07** Beta-amyloid increases neuronal Ca^{2+}activity in hippocampal neurons via reduction of nicotinic acetylcholine receptor-mediated inhibitory inputs. J. SUN*; S. KIM. *Colorado State Univ.*

4:00 I7 **738.08** An innovative tool to modulate ADAM10 synaptic localization and activity in a mouse model of Alzheimer's disease. S. THERIN; S. MUSARDO; F. SEIBT; A. RIBEIRO; D. DI MARINO; C. BALDUCCI; G. FORLONI; V. GRIECO; C. GIUDICE; F. GARDONI; J. PITA-ALMENAR; M. DI LUCA; E. MARCELLO*. *Univ. of Milan, Univ. of Geneve, Janssen Pharmaceutica R&D Neurosci., Univ. della Svizzera Italiana, IRCCS Inst. di Ricerche Farmacologiche Mario Negri, Univ. of Milan, Univ. of Milan.*

1:00 I8 **738.09** A synapse to nucleus signalling pathway in Alzheimer's disease. A. RIBEIRO; S. MUSARDO; N. CARRANO; G. BARTHET; C. MULLE; F. GARDONI; E. MARCELLO; M. DILUCA*. *Univ. of Milan, Univ. of Geneva, Univ. of Bordeaux.*

2:00 I9 **738.10** Excitation:inhibition imbalance associates with increased pathology in Alzheimer's disease. S. GOURMAUD*; K. SANSALONE; D. J. IRWIN; D. M. TALOS; F. E. JENSEN. *Univ. of Pennsylvania.*

3:00 I10 **738.11** ● Impaired LTP-like synaptic plasticity in amnestic mild cognitive impairment. S. BUSS*; K. M. MCDONALD; V. M. CHEN; J. MACONE; D. PRESS; P. J. FRIED; A. PASCUAL-LEONE. *Beth Israel Deaconess Med. Ctr., Beth Israel Deaconess Med. Ctr., Beth Israel Deaconess Med. Ctr.*

4:00 I11 **738.12** GABAergic postsynaptic mechanism involved in hippocampal hyperactivity in a mouse model of Alzheimer's disease. Y. LI*; N. LI; K. ZHU; L. LI; X. XIAO; L. LI; Y. ZHENG; X. WANG. *Capital Med. Univ., Capital Med. Univ.*

1:00 I12 **738.13** Trisomic vs. disomic synaptic proteins: Their interaction with Alzheimer's disease pathology in Down's syndrome. M. ALWESMI*; M. KARABOVA; M. BROADSTOCK; C. BALLARD; P. T. FRANCIS. *King's Col. London, Princess Nourah bint Abdulrahman Univ.*

2:00 I13 **738.14** Repositioning of udenafil, a PDE5 inhibitor approved for male erecetile dysfunction, as an Ab and phospho-tau clearing drug in Alzheimer's disease. H. KIM*; Y. YOON; J. KOH. *Asan Inst. for Life Sci., Univ. of Ulsan Col. of Med., Univ. Ulsan Col. Med.*

3:00 I14 **738.15** ● Sigma-1 receptor interactions with lipid rafts. V. ZHEMKOV; M. KIM; I. BEZPROZVANNY*. *UT Southwestern Med. Ctr. Dallas, Peter the Great St. Petersburg State Polytechnic Univ.*

4:00 I15 **738.16** A novel mechanism of neurotoxicity in Alzheimer's disease: Astrocyte-derived extracellular vesicles. C. J. NOGUERAS-ORTIZ*; E. J. GOETZL; V. MACHAIRAKI; D. KAPOGIANNIS. *Natl. Inst. on Aging, Geriatric Res. Ctr., John Hopkins Sch. of Med., Natl. Inst. on Aging (NIA/NIH).*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 I16 **738.17** ● The Alzheimer's disease risk gene BIN1 regulates network hyperexcitability. Y. VOSKOBIYNYK*; J. COCHRAN; T. RUSH; J. ROTH; M. WAQAS; E. D. ROBERSON. *Univ. of Alabama at Birmingham.*

2:00 I17 **738.18** Genetic depletion of amylin receptors improves hippocampal synaptic transmission and plasticity in a transgenic mouse model of Alzheimer's disease. R. KIMURA*; W. FU; D. WESTAWAY; J. H. JHAMANDAS. *Tokyo Univ. of Science, Yamaguchi, Univ. of Alberta, Univ. of Alberta.*

3:00 J1 **738.19** Linking actin-dependent dendritic spine remodelling and ADAM10 activity in AD: The role of CAP2. L. L. VANDERMEULEN*; S. C. PELUCCHI; M. B. RUST; S. FRYKMAN; M. DI LUCA; E. MARCELLO. *Univ. of Milan, Univ. of Marburg, Karolinska Inst.*

4:00 J2 **738.20** Subunit-specific effects on AMPA-type glutamate receptors caused by amyloid beta oligomers during hippocampal long-term potentiation. H. TANAKA*; D. SAKAGUCHI; T. HIRANO. *Dept. of Biophysics, Grad. Sch. of Science, Kyoto Univ.*

POSTER

739. Alzheimer's Disease and Other Dementias: Mechanisms of Synaptic Dysfunction in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 J3 **739.01** Characterization of necroptosis machinery across Braak stages in Alzheimer's disease. E. C. TURNER*; A. CACCAMO; C. BRANCA; E. FERREIRA; S. ODDO. *ASU-Banner Neurodegenerative Res. Ctr.*

2:00 J4 **739.02** Necroptosis contributes to tau induced neuronal loss. R. VARTAK*; C. BRANCA; I. S. PIRAS; A. CACCAMO; S. ODDO. *Arizona State Univ., Translational Genomics Res. Inst.*

3:00 J5 **739.03** Pim1 inhibition as a novel therapeutic strategy for Alzheimer's disease. S. KNOWLES*; R. VELAZQUEZ; A. CACCAMO; S. ODDO. *Arizona State Univ., Arizona State University-Banner Neurodegenerative Dis. Res. Ctr. at the Biodesign Inst., Arizona State Univ.*

4:00 J6 **739.04** Role of S6K1 signaling pathway in AD brains. R. BELFIORE*; E. FERREIRA; A. CACCAMO; S. ODDO. *Arizona State Univ. Biodesign Inst., BIOMETEC, Univ. of Catania, Sch. of Life Sciences, Arizona State University, Tempe, Arizona, 85281, USA.*

1:00 J7 **739.05** Genetic reduction of Nrf2 exacerbates cognitive deficits in a mouse model of Alzheimer's disease. A. RODIN*; C. BRANCA; E. FERREIRA; A. CACCAMO; S. ODDO. *Arizona State Univ.*

2:00 J8 **739.06** RIPK1 regulatory activity in Alzheimer's disease. L. M. BUSTOS*; A. CACCAMO; C. BRANCA; I. S. PIRAS; E. FERREIRA; M. J. HUENTELMAN; W. S. LIANG; B. READHEAD; S. ODDO. *Arizona State Univ., Arizona State University-Banner Neurodegenerative Dis. Res. Ctr. at the Biodesign Institute, Arizona State Univ., Translational Genomics Res. Inst.*

3:00 J9 **739.07** Mlkl loss-of-function variant increases Alzheimer's disease risk through enhancing gamma-secretase activity. Z. ZHANG*; S. BAO; B. WANG; X. MA; L. CHU; Y. SONG. *The Univ. of Hong Kong, Natl. Res. Inst. for Family Planning.*

4:00 J10 **739.08** Specific miRNAs enriched in neural stem cell-derived exosomes reduce vulnerability of hippocampal synapses to the dysfunctional impact of amyloid beta and tau oligomers. M. MICCI*; O. ZOLOCHEVSKA; B. KRISHNAN; R. KAYED; W. ZHANG; E. BISHOP; C. ANACKER; G. TAGLIALATELA. *UTMB, UTMB, UTMB, Columbia Univ.*

1:00 J11 **739.09** Epigenetic modulation of synaptic resilience to amyloid beta oligomers in Alzheimer's disease. O. ZOLOCHEVSKA*; G. TAGLIALATELA. *Univ. of Texas Med. Br.*

2:00 J12 **739.10** Early hippocampal deficits in a mouse model of Alzheimer's disease. R. D. GOWAIKAR*; S. KUMAR; K. SINGH; S. KARUNAKARAN; V. RAVINDRANATH. *Indian Inst. of Sci., Ctr. for Brain Res.*

3:00 J13 **739.11** Aβ mediated F-actin loss and cognitive deficits are ameliorated by overexpression of glutaredoxin1 in Alzheimer's disease mouse model. R. KOMMADDI*; S. KARUNAKARAN; D. TOMAR; A. RAY; V. RAVINDRANATH. *Indian Inst. of Sci., Ctr. for Brain Res.*

4:00 J14 **739.12** ▲ Model of vascular dementia using endothelin induced stroke in mice. L. DIWAKAR; K. CHITHANATHAN; D. S. TOMAR; V. RAVINDRANATH*. *Indian Inst. of Sci., Indian Inst. of Sci., Ctr. for Brain Res.*

1:00 K1 **739.13** Localization and regulation of nanoscale machinery involved in the amyloidogenic pathway at an excitatory synapse. D. KUMARAN NAIR*; S. KEDIA; P. RAMAKRISHNA; S. NADKARNI. *Indian Inst. of Sci., Indian Inst. of Sci. Educ. and Res. Pune.*

2:00 K2 **739.14** A combination of sub-efficacious doses of phosphodiesterase 4 and 5 inhibitors rescued spatial, recognition and fear memory in a mouse model of Alzheimer's disease. D. PUZZO*; W. GULISANO; M. TROPEA; O. ARANCIO; A. PALMERI. *Univ. of Catania, Columbia Univ.*

3:00 K3 **739.15** Critical role of Nup153 in adult neural stem cells in a mouse model of Alzheimer's disease. C. COLUSSI*; L. LEONE; K. GIRONI; V. LONGO; S. FUSCO; M. D'ASCENZO; C. GRASSI. *Natl. Res. Council (CNR-IBCN), Univ. Cattolica, Med. Sch., Univ. Cattolica, Med. Sch.*

4:00 K4 **739.16** Gender differences in synaptosomal F-actin levels and cognitive functions in Alzheimer's disease mouse model. R. KOMMADDI; S. KARUNAKARAN*; K. CHITHANATHAN; V. RAVINDRANATH. *Indian Inst. of Sci., Ctr. For Brain Research, Indian Inst. of Sci., Ctr. for Brain Res.*

1:00 K5 **739.17** Unraveling the role of monomeric and oligomeric amyloid-β 1-40 and 1-42 at high and low concentrations in hippocampal synaptic plasticity and memory. W. GULISANO*; M. MELONE; D. D. LI PUMA; M. TROPEA; A. PALMERI; O. ARANCIO; C. GRASSI; F. CONTI; D. PUZZO. *Univ. of Catania, Univ. Politecnica della Marche, Ctr. for Neurobio. of Aging, INRCA IRCCS, Univ. Cattolica, Columbia Univ., Fondazione Policlinico Universitario A. Gemelli, Fndn. for Mol. Medicine, Univ. Politecnica delle Marche.*

2:00 K6 **739.18** Comparative transcriptional profiling in Alzheimer's disease using RNA-seq. A. VERMA*; K. V. RUPANAGUDI; A. RAMACHANDRAN; V. RAVINDRANATH. *Indian Inst. of Sci., Ctr. for Brain Res.*

3:00 K7 **739.19** Development of a new two-photon absorbing probe for β-amyloid plaques with a negligible background signal in tissue imaging. H. CHOI*; S. CHO; S. BAIK; K. AHN; I. MOOK-JUNG. *Seoul Natl. Univ., POSTECH.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 K8 **739.20** Tauopathy induced deradation of Per2 leads to circadian rhythm disruption in Alzheimer's disease. H. KIM*; A. KIM; J. PARK; H. SONG; S. CHO; I. MOOK-JUNG. *Seoul Natl. Univ. (College of Medicine), Col. of Medicine, Seoul Natl. Univ., Kyung Hee Univ., Seoul Natl. Univ., Seoul Natnl Univ. Col. Med.*

1:00 K9 **739.21** Amyloid-β and tau pathology is mediated by plexin in Alzheimer's disease pathogenesis. S. CHUNG*; J. YANG; H. KIM; W. LEE; A. KIM; K. SUH; H. CHOI; I. MOOK-JUNG. *Dept. of Biomed. Science, Seoul Natl. Univer, Seoul Natl. Univ. Col. of Med., Seoul Natl. Univ. (College of Medicine), Lab. for Alzheimer's Dis. Res., Col. of Medicine, Seoul Natl. Univ., Seoul Natl. Univ., Seoul Natnl Univ. Col. Med.*

2:00 K10 **739.22** mTORC1 signaling in Aβ-oligomer-based and transgenic murine models of Alzheimer's disease. D. C. FERREIRA*; F. C. RIBEIRO; A. AGUILAR-VALLES; F. G. DE FELICE; N. SONENBERG; S. T. FERREIRA. *Federal Univ. of Rio De Janeiro, Federal Univ. of Rio de Janeiro, McGill Univ., Queen's Univ., Federal Univ. of Rio De Janeiro.*

3:00 K11 **739.23** Abeta accelerates tau propagation in the neuronal cell line. K. SUH*; D. KIM; I. MOOK-JUNG. *Seoul Natl. Univ.*

4:00 K12 **739.24** Effects of broad-spectrum antibiotics induced gut microbiota manipulation on tau pathology in Alzheimer's disease model mouse. H. CHOI*; Y. KIM; D. LEE; I. MOOK-JUNG. *Seoul Natl. Univ. Col. of Med.*

1:00 K13 **739.25** Human mesenchymal stem cell-derived extracellular vesicles: A feasible therapeutic approach in Alzheimer's disease? M. LOSURDO*; M. PEDRAZZOLI; C. D'AGOSTINO; E. LONATI; L. RIZZI; L. MOLTENI; C. ELIA; E. DANDER; G. D'AMICO; A. TORSELLO; M. MATTEOLI; A. BULBARELLI; M. R. BUFFELLI; S. COCO. *Univ. of Milano Bicocca, Univ. of Verona, Humanitas Clin. and Res. Ctr., Res. Ctr. 'M. Tettamanti', Fondazione MBBM/San Gerardo Hosp., Univ. of Milano Bicocca, Natl. Res. Council, Inst. of Neurosci.*

2:00 K14 **739.26** Tau alters neural circuits in the early tauopathy. E. JUNG*; S. CHOI; S. CHOI; I. MOOK-JUNG. *Seoul Natl. University, Col. of Med., Neurosci. Res. Inst., Seoul Natl. Univ. Sch. of Dent.*

3:00 K15 **739.27** Blood acetylcholinesterase level is a potential biomarker for the early detection of cerebral amyloid deposition in cognitively normal individuals. D. LEE; J. PARK*; S. HAN; M. BYUN; D. YI; J. LEE; I. MOOK-JUNG. *Seoul Natl. Univ. Hosp., Seoul Natl. Univ., Neurosci. Res. Institute, Seoul Natl. University, Col. of Med., Dept. of Neuropsychiatry, Seoul Natl. Univ. Hospital, Seoul 03080, Seoul Natnl Univ. Col. Med.*

POSTER

740. Alzheimer's Disease and Other Dementias: Mechanisms of Synaptic Dysfunction in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 K16 **740.01** Metabolic and bioenergetic pathogenic changes in amyloid-a challenged neurons. A. A. ROSTAGNO*; K. SOTOLONGO; J. GHISO. *New York Univ. Sch. of Med.*

2:00 K17 **740.02** Early changes in NMDA receptor synaptic activity in the 5XFAD Alzheimer's disease mouse model. F. NIGUSSIE*; A. M. REESE; A. D. HOFF; K. R. MAGNUSSON. *Oregon State Univ., Oregon State Univ.*

3:00 K18 **740.03** Aberrant EphA4 signaling mediates synaptic fatigue in Alzheimer's disease. K. HUNG*; Y. SHEN; B. ZHOU; W. FU; A. 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.*

4:00 L1 **740.04** miRNA-mediated cognitive function improvement in Alzheimer's model mice. K. KIM*; Y. LEE; J. NAM; H. HOE. *DGIST, DGIST, KBRI.*

1:00 L2 **740.05** $A<\beta>_{1-42}$ impairs mGluR5-mediated enhancement of depolarization-induced suppression of inhibition and eCB mobilizations in the hippocampus. J. LEE*; J. KWAG. *Korea Univ., Korea Univ.*

2:00 L3 **740.06** Optogenetic activation of hippocampal SST-positive interneurons recovers impaired theta oscillation in Alzheimer's disease model *in vivo.* H. CHUNG*; J. KWAG. *Korea Univer, Korea Univ.*

3:00 L4 **740.07** ▲ P2X2R overexpression induced by chronic SOAβ treatment, produces changes in the subcellular distribution of fe65 and potentiates the amyloidogenic processing of APP. D. MENNICKENT; T. SILVA-GRECCHI; P. A. GODOY; O. RAMIREZ-MOLINA; A. CASTRO; J. GAVILAN; J. PANES-FERNANDEZ; G. MORAGA-CID; J. FUENTEALBA*. *Univ. de Concepcion, Univ. de Concepcion, Univ. de Concepcion.*

4:00 L5 **740.08** Lack of Lrp4 in astrocyte enhances beta-amyloid deposition in 5XFAD mice. H. ZHANG*; W. CHEN; S. SHU; Z. DONG; W. CUI; K. ZHAO; L. ZHANG; W. XIONG; L. MEI. *Case Western Reserve Univ., Nanchang Univ., Augusta Univ.*

1:00 L6 **740.09** Organotypic hippocampal slice cultures as tools to investigate mechanisms of presynaptic disruption in sporadic and familial Alzheimer's disease models. C. DURRANT*; O. SHEPPARD; M. P. COLEMAN. *Univ. of Cambridge.*

2:00 L7 **740.10** Ca^{2+} dyshomeostasis induced by P2X2R overexpression contributes to altering the activation of CAMKIIa, modifying the neurites formation and arborization pattern of the neuronal hippocampal network. T. B. SILVA-GRECCHI*; P. A. GODOY; D. MENNICKENT; J. PANES; J. GAVILÁN; O. RAMIREZ-MOLINA; L. GUZMÁN; P. A. CASTRO; G. E. YÉVENES; C. MUÑOZ-MONTESINO; J. FUENTEALBA. *Univ. of Concepción.*

3:00 L8 **740.11** Beta-Amyloid effects on synaptic and oscillatory activity in the CA3-CA1 circuit of the hippocampus. C. E. GAUTHIER*; M. O. NAVA; J. M. MUÑOZ; M. A. VALEDERRAMA; F. A. MÚNERA. *Univ. Del Rosario, Univ. Del Rosario, Univ. Nacional, Univ. de los Andes, Univ. Nacional, Univ. Nacional.*

4:00 L9 **740.12** Region- and circuit-specific changes in somatostatin and parvalbumin interneuron networks in novel Alzheimer's disease mouse models: Insights into seizure-induced circuit remodeling. R. WANG; B. HOANG; J. J. LAWRENCE*. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ., Texas Tech. Univ., Texas Tech. Univ. Hlth. Sci. Ctr.*

1:00 L10 **740.13** Is synaptic plasticity in the ventral dentate gyrus more sensitive to Alzheimer's pathology than in the dorsal? A. SCHREURS*; D. BALSCHUN. *KU Leuven.*

2:00 L11 **740.14** Amyloid-beta oligomers inhibit the expression and function of acid-sensing ion channel 1a. T. LENG*; R. ZHOU; Z. XIONG. *Morehouse Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 L12 **740.15** Two protein prenylation pathways differentially affect synaptic plasticity and cognitive function. D. A. HOTTMAN*; W. QU; W. LIU; L. YUAN; L. LI. *Univ. of Minnesota, Univ. of Minnesota, Des Moines Univ.*

4:00 L13 **740.16** Increased PSD-95 may explain why old memories are protected against Alzheimer's disease. K. B. DORE*; R. MALINOW. *UCSD.*

1:00 L14 **740.17** Cyp46A1 overexpression induces sex-specific changes in synaptic functions in aged mice. S. MAIOLI*; P. RODRIGUEZ-RODRIGUEZ; M. LATORRE LEAL; L. FRANCHINI; I. BJÖRKHEM; P. MERINO SERRAIS; A. CEDAZO MINGUEZ. *Karolinska Institutet, Karolinska Institutet, Univ. of Milan.*

2:00 L15 **740.18** Elucidating an Alzheimer's disease role for SORLA-mediated neuroprotection through synaptic enhancement. J. STUPACK*; H. XU; T. HUANG. *Sanford Burnham Prebys Med. Discovery Inst.*

3:00 L16 **740.19** ▲ Changes in microvessels in a murine model (3xTg-AD) for Alzheimer's disease. A. ISLAS*; M. A. DELI; P. CAMPOS-BEDOLLA; P. GARCIA-DELATORRE. *Inst. Mexicano del Seguro Social, Hungarian Acad. of Sci., Inst. Mexicano Del Seguro Social, IMSS-UIM Enfermedades Neurológicas.*

4:00 L17 **740.20** V-ATPase dysfunctions contribute to lysosome-autophagosome mediated proteinopathy and synaptic pathophysiology in early stages of Alzheimer's disease pathogenesis. S. H. MUSTALY*; N. KAPECKI; K. D. BEAMAN; A. GILMAN-SACHS; J. MCDAID; S. SCHRANK; R. A. MARR; G. E. STUTZTMANN. *Rosalind Franklin Univ.*

POSTER

741. Alzheimer's Disease and Other Dementias: Clinical and Pre-Clinical Imaging Studies in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

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

1:00 L18 **741.01** ● Classification among clinical data of normal control subjects, mild cognitive impairment, and Alzheimer's disease patients by applying machine learning methods to the Japanese Alzheimer's disease neuroimaging initiative (J-ADNI) database. T. FUNANE*; M. KIGUCHI; J. ADNI. *Hitachi, Ltd.*

2:00 M1 **741.02** ● [^{18}F]flutemetamol PET predicts the neuropathological phase of amyloid β-protein deposition by SUVR-based thresholds. D. R. THAL*; T. G. BEACH; M. ZANETTE; J. LILJA; K. HEURLING; A. CHAKRABARTY; A. ISMAIL; G. FARRAR; C. BUCKLEY; A. P. L. SMITH. *KU-Leuven, UZ Leuven, Banner Sun Hlth. Res. Inst., 3E Healthcare Life Sci., Hermes Med. Solutions AB, Wallenberg Ctr. for Mol. and Translational Medicine, Dept. of Psychiatry and Neurochemistry, Univ. of Gothenburg, Pathology and Tumour Biology, Leeds Inst. of Mol. Medicine, St. James Hosp., GE-Healthcare Life Sci.*

3:00 M2 **741.03** Local to remote cortical functional connectivity in Alzheimer's disease. H. LI*; Y. ZHANG. *Inst. of Psychology, Chinese Acad. of Scienc, Shanghai Mental Hlth. Ctr.*

4:00 M3 **741.04** Brain pathology and cognitive reserve are associated with executive functioning performance, but not memory, in healthy older adults in an ADNI dataset. C. BAUER*; T. HAMMOND; C. BROWN; B. T. GOLD. *Univ. of Kentucky.*

1:00 M4 **741.05** Differences in scalp - recorded EEG based brain functional connectivity network between Alzheimer`s disease and elderly controls. S. NISHIJIMA*; Y. KUROIWA; T. HIRAI; T. YAMAZAKI. *Kyusyu Inst. of Technol., Ministry of Finance, The Jikei Univ. Sch. of Med., Kyushu Inst. of Technol.*

2:00 M5 **741.06** Functional connectivity of the entorhinal cortex in young adults predicts spatial distribution of tau in cognitively normal older adults. J. N. ADAMS*; A. MAASS; T. M. HARRISON; W. J. JAGUST. *UC Berkeley, German Ctr. for Neurodegenerative Dis., Lawrence Berkeley Natl. Lab.*

3:00 M6 **741.07** ● Vitamin D deficiency and temporal lobe morphology associated to visual memory in healthy young people. K. KUNITOKI*; H. TAKEUCHI; R. KAWASHIMA; Y. TAKI. *Tohoku Univ. IDAC, Tohoku Univ, IDAC, IDAC, Tohoku Univ., Tohoku Univ.*

4:00 M7 **741.08** Low subicular volume as a surrogate marker of beta-amyloid associated low episodic memory performance at high age: A combined PET-7 Tesla MR study. P. G. UNSCHULD*; C. SCHROEDER; J. VAN BERGEN; S. J. SCHREINER; L. VIONNET; V. TREYER; A. BUCK; P. KAUFMANN; R. M. NITSCH; K. P. PRUESSMANN; C. HOCK. *Psychiatrische Uniklinik Zürich, Univ. of Zurich, Univ. of Zürich, Inst. for Biomed. Engineering, Univ. of Zurich and ETH Zurich, Dept. of Nuclear Medicine, Univ. Hosp. Zurich.*

1:00 M8 **741.09** ● Validation of a hyperspectral retinal imaging method to predict cerebral amyloid PET status. J. SOUCY*; C. CHEVREFILS; J. SYLVESTRE; S. BEAULIEU; T. A. PASCOAL; S. M. SHARAFI; J. ARBOUR; M. RHÉAUME; A. ROBILLARD; C. CHAYER; P. ROSA-NETO; S. S. MATHOTAARACHCHI; Z. S. NASREDDINE; S. GAUTHIER; F. LESAGE. *Montreal Neurolog. Inst., Optina Diagnostics, Hôpital Maisoneuve-Rosemont, McGill Univ., École Polytechnique de Montréal, Clinique ophtalmologique 2121, Hôpital Maisoneuve-Rosemont, MoCA Clin. and Inst.*

2:00 M9 **741.10** ● A histologic and quantitative analysis of cortical layer thickness in the human temporal neocortices. K. A. NESTOR; J. C. AUGUSTINACK*; C. MAGNAIN; R. WANG; M. FOGARTY; B. FISCHL. *Massachusetts Gen. Hosp.*

3:00 M10 **741.11** Brainstem structural integrity in the progression of Alzheimer's disease. S. DUTT*; Y. LI; D. A. NATION. *USC.*

4:00 M11 **741.12** Neural basis for preservation of musical memory and effects on functional intra network connectivity in early Alzheimer's disease and mild cognitive impairment. M. H. THAUT*; T. A. SCHWEIZER; M. LEGGIERI; N. CHURCHILL; L. FORNAZZARI; C. FISCHER. *Univ. iof Toronto, Keenan Biomed. Res. Ctr. St. Michael's Hosp., Univ. of Toronto.*

1:00 M12 **741.13** ▲ Development of a user interface software for quantification of microbleeds in rodents. K. SHAH*; J. PRINCE; S. BARNES; M. T. HUUSKONEN; J. RATELADE; R. E. JACOBS; A. JOUTEL; A. MONTAGNE; B. V. ZLOKOVIC. *USC, Loma Linda Univ., Univ. Paris Diderot.*

2:00 M13 **741.14** Can cognitive and neural alterations be detected among healthy participants with a genetic predisposition for Alzheimer's disease? R. PAZ*; E. BERGMANN; T. FALIK-ZACCAI; J. AHARON-PERETZ; I. KAHN. *Technion, Rambam Hlth. Care Campus, Western Galilee Hosp.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 M14 **741.15** The preclinical phase of autosomal dominant genetic form of Alzheimer's disease is characterized by accelerated brain aging that is independent from amyloid pathology. E. VACHON-PRESSEAU*; A. T. BARIA; A. PICHET BINETTE; T. BENZINGER; J. C. MORRIS; R. J. BATEMAN; J. C. BREITNER; J. POIRIER; J. GONNEAUD; S. VILLENEUVE. *Northwestern Univ., Northwestern Univ., McGill Univ., Washington Univ. in St-Louis, Washington Univ. in St. Louis, Washington Univ. Sch. of Med., McGill Univ.*

4:00 M15 **741.16** Medial temporal lobe activation during memory encoding is related to AD pathology in autosomal dominant AD. E. PARDILLA-DELGADO*; F. D'OLEIRE UQUILLAS; E. GUZMAN-VELEZ; J. T. FULLER; A. ARTOLA; A. BAENA; J. GATCHEL; L. RAMIRES-GOMEZ; Y. BOCANEGRA; F. LOPERA; Y. QUIROZ. *MGH/Harvard Med. Sch., Univ. de Antioquia, MGH/Harvard Med. Sch.*

1:00 M16 **741.17** Integrating multimodal data in biomarker identification for Alzheimer's disease with sparse model. K. KWAK*; J. LEE; A. C. EVANS. *Montreal Neurolog. Institute, McGill Univ., Dept. of Biomed. Engineering, Hanyang Univ.*

2:00 M17 **741.18** Component diffusivities within default-mode network white matter that are associated with Alzheimer's disease pathology, but not age, predict longitudinal change in executive function in cognitively normal older adults. C. BROWN*; B. T. GOLD. *Univ. of Kentucky.*

3:00 M18 **741.19** ● ▲ Anatomical and behavioral effects of high sucrose consumption on APOE animals. S. GRANT*. *Northeastern Univ.*

4:00 N1 **741.20** Long term memory consolidation and hippocampal changes in preclinical Alzheimer's disease. A. WEARN*; V. NURDAL; M. J. KNIGHT; R. A. KAUPPINEN; E. J. COULTHARD. *Univ. of Bristol, Southmead Hospital, Bristol.*

1:00 N2 **741.21** ● Pittsburgh Compound-B binding and pyroglutamate amyloid-beta concentration in the precuneus cortex across clinical stages of Alzheimer's disease. V. N. PIVTORAIKO; J. SHIN; E. E. ABRAHAMSON; W. PALJUG; M. DEBNATH; W. KLUNK; E. J. MUFSON; M. D. IKONOMOVIC*. *Univ. of Pittsburgh, Univ. of Pittsburgh, Barrow Neurolog. Inst.*

2:00 N3 **741.22** ▲ Brain aging assessed with longitudinal magnetic resonance imaging (MRI): Effects of changes in scanner types. C. P. BOYLE*; C. R. CHING; S. I. THOMOPOULOS; A. ZAVALIANGOS-PETROPULU; A. MEZHER; P. M. THOMPSON. *Imaging Genet. Ctr. @ Univ. of Southern C, Imaging Genet. Ctr. @ Univ. of Southern California, USC, Imaging Genet. Ctr. @ Univ. of Southern California.*

3:00 N4 **741.23** A significant regional based diagnosis framework of Alzheimer's disease using ^{11}C PIB-PET scans. F. EL-ZAHRAA EL-GAMAL; M. ELMOGY; M. GHAZAL; H. SOLIMAN; A. ATWAN; R. KEYNTON; R. JAGADAPILLAI*; A. EL-BAZ; G. BARNES. *Univ. of Louisville, Mansoura Univ., Univ. of Louisville Sch. of Med., Univ. of Louisville.*

4:00 N5 **741.24** ● ▲ Noninvasive brain stimulation marker for cognitive decline in Alzheimer's disease. S. ZADEY*; S. BUSS; K. MCDONALD; P. J. FRIED; A. PASCUAL-LEONE. *IISER Pune, Beth Israel Deaconess Med. Ctr., Beth Israel Deaconess Med. Ctr.*

1:00 N6 **741.25** Longitudinal structural connectome mapping in supernormals. Q. CHEN*; Z. ZHANG; T. BARAN; F. LIN. *Univ. of Rochester, Univ. or Rochester, Univ. or Rochester, Univ. or Rochester.*

POSTER

742. Alzheimer's Disease and Other Dementias: APP and Metabolites: Function and Processing

Theme C: Neurodegenerative Disorders and Injury

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

1:00 N7 **742.01** Insulin reduces amyloid-b production by regulating the processing of its precursor. O. KWON*; Y. CHO; S. CHUNG. *Sungkyunkwan Univ. Sch. of Med.*

2:00 N8 **742.02** The roles of PEN2 in maintaining the integrity of γ-secretase structure which is essential for intracellular autophagic clearance. H. HEO*; J. KANG; J. CHANG. *Ajou Univ. Grad. Sch. of Med., Ajou Univ. Sch. of Med.*

3:00 N9 **742.03** N-terminal truncated A beta peptides starting at p2 are generated by meprin beta. C. U. PIETRZIK*; A. MAZURA; A. OHLER; S. STORCK; L. MARENGO; S. WEGGEN; U. SCHMITT; C. BECKER-PAULY. *Univ. Med. Ctr. of the Johannes Gutenber, Heinrich-Heine-University, Univ. Med. Ctr. of the Johannes Gutenber, Univ. of Kiel.*

4:00 N10 **742.04** C99 RFP-GFP: FRET biosensor for visualizing Aβ production. M. MAESAKO*; N. SEKULA; L. ANDERSON; M. CALVO RODRIGUEZ; S. DUJARDIN; O. BEREZOVSKA. *Massachusetts Gen. Hosp.*

1:00 N11 **742.05** ● Age-related increases in intracellular amyloid aggregates cleared by gamma-secretase inhibitor/modulator or metabolic/redox boost. C. G. GLABE; R. A. HERRERA; R. E. TANZI; S. L. WAGNER; G. J. BREWER*. *UC Irvine, Massachusetts Gen Hosp, Harvard Med. Sch., UC San Diego, UC Irvine.*

2:00 N12 **742.06** Identification of the genetic regulators for Aβ production by CRISPR/Cas9. Y. CHIU*; I. EBINUMA; Y. HORI; T. TOMITA. *The Univ. of Tokyo.*

3:00 O1 **742.07** Cathepsin D regulates cerebral Aß42/40 ratios via markedly differential degradation of Aß42 versus Aß40. C. N. SUIRE*; S. LANE; M. A. LEISSRING. *UC Irvine, Univ. of California, Irvine.*

4:00 O2 **742.08** Traumatic brain injury induces amyloid precursor protein increase in adult mice. Y. XIE*; S. WANG; K. D. RYNEARSON; P. NGUYEN; B. P. HEAD; C. WU; S. L. WAGNER. *Yunan Univ. of Traditional Chinese Med., VA Healthcare System, UCSD, UCSD Sch. of Med., VA Med. Ctr.*

1:00 O3 **742.09** The amyloid-β precursor protein is a ubiquitous, permanent resident of a specialized tubular endoplasmic reticulum compartment. V. MURESAN*; Z. LADESCU MURESAN. *New Jersey Med. School, Rutgers Univ.*

2:00 O4 **742.10** N-terminal truncated Aβ4-x proteoforms and their relevance for Alzheimer's pathophysiology. J. GHISO*; E. CABRERA; T. NEUBERT; A. ROSTAGNO. *New York Univ. Langone Med. Ctr.*

3:00 O5 **742.11** Identification of a novel cleavage site associated with pathogenesis risk of familial Alzheimer's disease on amyloid precursor protein. Y. CHEN*; X. NIU; X. HOU; Y. GENG. *IRCBC, SIOC, Chinese Acad. of Sci.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 O6 **742.12** Enhanced cleavage of amyloid precursor protein (APP) by overexpression of beta-secretase (Bace1) alters the normal distribution of APP in neurons. T. HUANG*; J. AOW; E. H. KOO. *Natl. Univ. of Singapore, Genome Inst. of Singapore, Agency for Science, Technol. and Res. (A*STAR), Natl. Univ. of Singapore, UCSD, Yong Loo Lin Sch. of Medicine, Natl. Univ. of Singapore.*

1:00 O7 **742.13** The effect of APP mutations on its surface distribution and synaptic membrane cholesterol homeostasis. Q. ZHANG*. *Vanderbilt Univ., Brain Inst. of Florida Atlantic Univ.*

2:00 O8 **742.14** Characterization of amyloid precursor protein-b zebrafish mutants with defects during early development and adulthood. R. BANOTE*; M. EDLING; T. ŞATıR; J. CHEBLI; A. ABRAMSSON; H. ZETTERBERG. *Univ. of Gothenburg, Inst. of Neurosci. and Physiology,, UCL Inst. of Neurol.*

3:00 O9 **742.15** Role of the repressor element 1 silencing transcription factor in Alzheimer's disease. R. WANG*; B. MALONEY; D. LAHIRI. *Indiana Univ.*

4:00 O10 **742.16** Amylin and pramlintide modulate γ-secretase activity and APP processing in lipid rafts by increasing gangliosides synthesis in TgSwDI mice. Y. MOUSA*; A. KADDOUMI. *Auburn Univ., Auburn Univ.*

POSTER

743. Alzheimer's Disease and Other Dementias: Abeta Mechanisms of Toxicity II

Theme C: Neurodegenerative Disorders and Injury

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

1:00 O11 **743.01** Increased miR-21 levels prevented beta-amyloid-induced tau toxicity in cultured hippocampal neurons. A. B. FERREIRA*; C. PARKER. *Northwestern Univ.*

2:00 O12 **743.02** A role for astrocyte-derived amyloid β peptides in the degeneration of neurons in an animal model of Temporal Lobe Epilepsy. S. KAR*; A. KODAM; D. OURDEV; M. MAULIK; J. HARIHARAKRISHNAN; M. BANERJEE; Y. WANG. *Univ. Alberta.*

3:00 O13 **743.03** Novel role of death-associated protein kinase 1 in neuronal cell death and Alzheimer's disease. N. KIM*; T. LEE. *Beth Israel Deaconess Med. Ctr., Harvard Med. Sch.*

4:00 O14 **743.04** Metabolic syndrome exacerbates the recognition memory impairment and oxidative-inflammatory response in rats with an intrahippocampal injection of amyloid beta 1-42. A. D. DIAZ*; S. TREVIÑO; C. MORAN; J. GUEVARA; B. VENEGAS MENESES; M. MUNOZ ARENAS. *Facultad De Ciencias Quimicas, BUAP, BUAP, Benemérita Univ. Autonoma de Puebla, UNAM/ FACULTAD DE MEDICINA, Physiol. Laboratory, UIBR, FES Zaragoza, UNAM, Facultad De Ciencias Químicas, BUAP.*

1:00 O15 **743.05** Modulation of neurotoxic amyloid beta oligomers: A role for hsp60. C. MARINO*; F. CAPPELLO; G. TAGLIALATELA. *Univ. of Texas Med. Br., Univ. of Palermo.*

2:00 O16 **743.06** The gaseous anaesthetic xenon, a weak NMDA receptor antagonist, shows neuroprotective properties on ß-amyloid-mediated synaptotoxic effects. C. KNOLL*; K. HADIAN; K. SCHORPP; M. BÜRGE; G. RAMMES. *Experimentelle Anästhesie, Helmholtz Zentrum München, Klinikum rechts der Isar der TU München, Clin. Rechts der Isar.*

3:00 P1 **743.07** Mitochondrial calcium dysregulation *in vivo* in a mouse model of Alzheimer's disease. M. CALVO RODRIGUEZ*; S. HOU; E. HUDRY; A. SNYDER; Z. FAN; M. GARCIA ALLOZA; A. SERRANO-POZO; B. J. BACSKAI. *Mass. Gen. Hosp. and Harvard Med. Sch., Div. of Physiology, Sch. of Med.*

4:00 P2 **743.08** Comparing salivary AB and oral microbiome in Alzheimer's disease mouse models. A. M. FLODEN*; M. SOHRABI; S. NOOKALA; G. D. MANOCHA; C. K. COMBS. *Univ. of North Dakota.*

1:00 P3 **743.09** Galectin-3 haploinsufficiency reduces amyloid-beta oligomerization and amyloid plaque in APP/PS1 mice. E. H. LEE*; C. TAO; K. CHENG; Y. MA. *Inst. of Biomed. Sciences, Academia Sinica, Inst. of Neuroscience, Natl. Cheng-Chi Univ.*

2:00 P4 **743.10** Oligodendrocyte and myelin alterations in Alzheimer's disease. S. DWYER*; J. Y. K. LEUNG; M. KIRKCALDIE; J. C. VICKERS; A. E. KING. *Univ. of Tasmania.*

3:00 P5 **743.11** Effects of inhibiting glucocorticoid receptor dimerization on beta amyloid in male and female mice. C. M. YUEDE*; C. E. WALLACE; H. M. EDWARDS; H. L. RIDENBARK; T. A. DAVIS; J. R. CIRRITO. *Washington Univ., Washington Univ. in St. Louis.*

4:00 P6 **743.12** BDNF receptor cleavage in Alzheimer's disease: Quantification in human brain samples and molecular consequences. J. FONSECA-GOMES*; A. JERÓNIMO-SANTOS; R. BELO; S. VAZ; P. MAKINEN; M. TAKALO; A. LESNIKOVA; P. CASAROTTO; J. UMEMORI; A. HAAPASALO; M. HILTUNEN; E. CASTREN; A. M. SEBASTIÃO; M. J. DIÓGENES. *Inst. de Medicina Mol., Inst. of Biomedicine, Sch. of Medicine, Univ. of Eastern Finland, Univ. of Helsinki, Univ. of Eastern Finland.*

1:00 P7 **743.13** Presenilin1 and Presenilin1 mutants alter the distribution and activity of BACE1 through acting on transport process. N. LI; Y. QIU; H. QING*. *Beijing Inst. of Technol.*

2:00 P8 **743.14** $A\beta_{42}$ oligomers deregulate AMPA receptor membrane trafficking. C. MONTECINOS OLIVA*; D. CHOQUET; N. C. INESTROSA. *Interdisciplinary Inst. for Neurosci., Ctr. for Aging and Regeneration (CARE),P. Catholic Univ. of Chile, UMR 5297 CNRS Univ. Bordeaux.*

3:00 P9 **743.15** Metallothionein induction prevents cognitive decline caused by Zn^{2+} released from amyloid-β_{1-42} in dentate granule cells. H. SUZUKI*; W. HASHIMOTO; S. KOBUCHI; T. MURAKAMI; M. TEMPAKU; Y. KOIKE; H. TAMANO; A. TAKEDA. *Univ. of Shizuoka.*

4:00 P10 **743.16** Rapid, real-time and sensitive measurement of *in vivo* amyloid-beta levels and half-life using novel micro-immunoelectrode technology. H. EDWARDS*; C. YUEDE; J. CIRRITO. *Washington Univ. Sch. of Med.*

1:00 P11 **743.17** Amyloid β induces oxidative neuronal deaths in mouse cortical cultures in a concentration-dependent manner via NADPH oxidase- and/or mitochondria-dependent ROS production. J. KIM*; S. HWANG. *Chonnam Nat'l Univ. Med. Sch., Chonnam Natl. Univ. Med. Sch.*

2:00 P12 **743.18** Characterization of molecular interaction between exosomal ceramide and beta amyloid, revealing a role of ceramide in Abeta aggregation and toxicity. A. ELSHERBINI*; A. KIROV; M. DINKINS; S. LEANHART; L. ZHONG; G. WANG; S. SPASSIEVA; M. SAUER; A. SCHUBERT-UNKMEIR; E. BIEBERICH. *Univ. of Kentucky, Augusta Univ., Univ. of Würzburg.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 P13 **743.19** ▲ Metabolic syndrome plus injection of amyloid-β 25-35 peptide into hippocampus not impairs spatial memory and decreased microgliosis in cholinergic regions. O. REYES*; A. PATRICIO-MARTÍNEZ; F. LUNA; I. D. LIMÓN. *Benemérita Univ. Autónoma de Puebla, Benemérita Univ. Autónoma de Puebla, Facultad de Ciencias Biológicas, Benemerita Univ. Autonoma De Puebla, Benemérita Univ. Autónoma de Puebla.*

4:00 P14 **743.20** The deleterious effects of soluble amyloid-beta oligomers on memory acquisition and sleep in an animal model of early Alzheimer's disease. D. CASTONGUAY*; L. ST-CYR; A. DEGRAEVE; C. PROVOST; N. LEMMETTI; V. MONGRAIN; J. BROUILLETTE. *Univ. de Montreal, Res. center of Hôpital du Sacré-Coeur de Montreal, Univ. de Sherbrooke, Univ. de Montreal, Ctr. for Advanced Res. in Sleep Med.*

1:00 P15 **743.21** Amyloid-beta promotes Cdk5 activation leading to p53 stabilization and neurotoxicity. A. ALMEIDA*; R. LAPRESA; J. AGULLA; I. SANCHEZ-MORAN; J. P. BOLANOS. *Inst. of Biomed. Res. of Salamanca, Inst. of Functional Biol. and Genomics, Univ. of Salamanca.*

2:00 Q1 **743.22** Activation of the CB1 receptor into hippocampus improves memory and decreases the neurotoxicity induced by amyloid-β 25-35 peptide in rats. A. PATRICIO*; R. SÁNCHEZ-ZAVALETA; I. MARTÍNEZ-GARCÍA; I. D. LIMÓN. *Benemérita Univ. Autónoma de Puebla, Benemérita Univ. Autónoma de Puebla, Cinvestav, Benemérita Univ. Autónoma de Puebla.*

3:00 Q2 **743.23** Function and mechanism of RIN3 in neurodegeneration in Alzheimer's disease. Y. GU*; R. SHEN; X. ZHAO; L. HE; R. A. RISSMAN; J. DING; C. WU. *The Fourth Hosp. of Harbin Med. Univ., Ruijin Hospital, Affiliated to Shanghai Jiaotong Univ. Sch. of Medcine, UCSD, UCSD Sch. Med., UCSD Sch. of Med.*

4:00 Q3 **743.24** DDT exposure increases amyloid precursor protein levels and amyloid-beta pathology: Mechanistic links to Alzheimer's disease risk. J. R. RICHARDSON; A. EID; B. BUCKLEY; C. L. WHITE; D. C. GERMAN*. *Northeast Ohio Med. Univ., Rutgers Univ., U Texas Southwestern Med. Cntr., U Texas Southwestern Med. Cntr.*

1:00 Q4 **743.25** Dysregulation of NSUN2 in Alzheimer's disease. Y. A. KIM*; I. SANTA-MARIA. *Columbia Univ.*

2:00 Q5 **743.26** The role of ATF4 in neuronal death under Alzheimer's disease conditions. G. PETROFF*; S. P. CREGAN. *Western Univ., Robarts Res. Inst.*

3:00 Q6 **743.27** Beta amyloid oligomer internalization via recently discovered nicotinic receptors may contribute to cholinergic cell death in Alzheimer's disease. G. WILLIAMS*; T. A. MURRAY. *Louisiana Tech. Univ., Louisiana Tech. Univ.*

4:00 Q7 **743.28** A novel thiourea possessing anti-inflammatory property rescues Aβ-induced bioenergetic dysfunction in microglia. Y. SUN*; F. SHIE; M. CHAN; Y. HSU. *Natl. Hlth. Res. Inst., Inst. of Neuroscience, Natl. Chengchi Univ., Natl. Hlth. Res. Inst.*

1:00 Q8 **743.29** ▲ Neuroprotective effect of minocycline on mitochondrial mediated toxicity in Abeta-42 induced Alzheimer's disease using *Drosophila melanogaster* as an alternate model. R. KHATOON*. *Jamia Hamdard.*

POSTER

744. Alzheimer's Disease and Other Dementias: APP/Abeta: Animal and Cellular Models III

Theme C: Neurodegenerative Disorders and Injury

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

1:00 Q9 **744.01** Investigating the temporal progression of neurovascular, neuropathological, and cognitive changes in the hAPP-J20 Alzheimer's mouse model. K. E. AMEEN-ALI*; P. S. SHARP; L. W. BOORMAN; J. E. SIMPSON; P. HEATH; S. B. WHARTON; J. BERWICK. *Univ. of Sheffield.*

2:00 Q10 **744.02** ● Potential therapeutic properties of dietary sialic acid in the 5xFAD model of Alzheimer's disease. L. L. SOMERVILLE*; D. F. DELOTTERIE; J. T. KILLMAR; Y. XUE; M. P. MCDONALD. *Univ. of Tennessee Hlth. Sci. Ctr., UTHSC, Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee.*

3:00 Q11 **744.03** High density awake recording of CA1 neurons in APP/PS1 mouse model of Alzheimer's disease. U. CHOCKANATHAN*; E. WARNER; L. TURPIN; M. O'BANION; K. PADMANABHAN. *Univ. of Rochester.*

4:00 Q12 **744.04** Lycopene protects against mitochondrial alteration and synaptic loss, while improving cognition in APPPS1 mice. C. LOZANO-VILLALOBOS; D. CUERVO ZANATTA; A. CRUZ-SANTOYO; B. TRIGUEROS- GARCÍA; A. GÓMEZ-MENDOZA; A. BAUTISTA-AVELINO; B. PEREZ-GRIJALVA; V. SANCHEZ-VALLE; E. MARTINEZ-ROJAS; C. PEREZ-CRUZ*. *CINVESTAV, Neubrandenburg Univ. of Applied Sci.*

1:00 Q13 **744.05** Evaluating the benefits of angiotensin-converting enzyme inhibition in *Drosophila* models of Alzheimer's disease. S. LEE*; S. GOMES; G. BOULIANNE. *The Hosp. for Sick Children, Univ. of Toronto.*

2:00 Q14 **744.06** Hypothalamic-pituitary-adrenal axis hyperactivity precedes cognitive impairments in female mice genetically vulnerable to Alzheimer's disease. E. T. NGUYEN*; N. J. BALMER; A. N. GREENE; R. L. MORANO; A. FRANCO-VILLANUEVA; C. M. ESTRADA; M. B. SOLOMON. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati.*

3:00 R1 **744.07** ΔFosB regulates expression of genes that control neuronal excitability in the dentate gyrus of a transgenic mouse model of Alzheimer's disease. G. S. STEPHENS*; J. PARK; Y. ZHENG; C. FU; Y. LIU; J. CHIN. *Baylor Col. of Med., The Univ. of Texas Med. Sch. at Houston.*

4:00 R2 **744.08** An histological analyses of Alzheimer's disease (AD) markers and immunological response in a primate model of aging and AD. J. J. NEIWORTH*; C. KWON. *Carleton Col.*

1:00 R3 **744.09** The effects of extracellular serum concentration on APP processing in NPC1-deficient APP-overexpressing N2a cells. G. PHUKAN*; M. MAULIK; D. VERGOTE; J. CHUNG; G. THINAKARAN; S. KAR. *Univ. of Alberta, Indian Inst. of Sci. Educ. and Res., Univ. of Alberta, Univ. of Alberta, Univ. Chicago, Univ. Alberta.*

2:00 R4 **744.10** ● Early detection of abnormal sensory-evoked eeg responses in mice over-expressing amyloid beta. B. D. HARVEY; R. KOMOROWSKI*; F. PONTARELLI; A. W. DUNAH; M. HAJOS. *Biogen, Biogen.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 R5 **744.11** Presenilin1 and 2 regulates zinc homeostasis and zinc dysregulation affects lysosomal dysfunction. H. LEE*; Y. YOON*; J. KOH. *ASAN Med.Center, Univ. of Ulsan Col. of Med.*

4:00 R6 **744.12** The effects of insulin receptor substrate-2 deficiency on amyloid β dynamics in a mouse model of Alzheimer's disease. T. SANO*; T. WAKABAYASHI; K. MATSUI; A. MANO; N. KUBOTA; T. KADOWAKI; T. IWATSUBO. *The Univ. of Tokyo, The Univ. of Tokyo.*

1:00 R7 **744.13** Defining the temporal progression of Alzheimer's disease in the brain vs. intestine using APP/PS1 and APP (NL-G-F) mouse models. G. D. MANOCHA*; A. M. FLODEN; N. M. MILLER; A. SMITH; K. NAGAMOTO-COMBS; T. SAITO; T. C. SAIDO; C. K. COMBS. *Univ. of North Dakota, Univ. of North Dakota, Brain Sci. Inst, RIKEN, RIKEN Brain Sci. Inst., Univ. of North Dakota Sch. of Med.*

2:00 R8 **744.14** Learning and memory deficits of two transgenic Alzheimer's disease mouse models in the Barnes maze test. E. AUER*; S. KURAT; R. RABL; I. HERNANDEZ; S. FLUNKERT; V. NIEDERKOFLER; B. HUTTER-PAIER. *QPS Austria GmbH.*

3:00 R9 **744.15** Gene transfer induced hypercholesterolemia in amyloid mice. M. S. GRAMES*; R. D. DAYTON; M. D. WOOLARD; R. L. KLEIN. *LSU Hlth. Sci. Ctr. - Shreveport, LSU Hlth. Sci. Ctr. - Shreveport.*

4:00 R10 **744.16** iSPECS: a proteomic method identifies the secretome of brain cells and novel substrates of the Alzheimer's beta-secretase BACE1. J. TÜSHAUS*; S. A. MÜLLER; S. F. LICHTENTHALER. *DZNE Munich, TUM Munich, DZNE - German Ctr. For Neurodegenerative Dis.*

1:00 R11 **744.17** Dietary Methionine Restriction improves behavior, reduces amyloid and alters gut microbiota in APP/PS1 mice. K. SAMBAMURTI*; N. H. GREIG; M. A. PAPPOLLA; D. K. LAHIRI; N. R. BHAT; C. SABIN; V. CHENTHAMARAKSHAN; V. PADMARAJU. *MUSC, Intramural Res. Program, Natl. Inst. On Aging, NIH, Univ. of Texas, Indiana Univ. Sch. of Med., Med. Univ. South Carolina, MUSC.*

2:00 R12 **744.18** Physiological substrates of BACE1: Safety issues or biomarkers? M. PIGONI; S. A. MÜLLER; A. SCHMIDT; P. H. KUHN; J. M. GUNNERSEN; S. F. LICHTENTHALER*. *DZNE - German Ctr. for Neurodegenerative Dis., Neuroproteomics, Klinikum Rechts der Isar, Technische Univ. München, Inst. for Advanced Study, Technische Univ. München, Inst. for Pathology und Pathological Anatomy, Technische Univ. München, Dept. of Anat. and Neuroscience, Univ. of Melbourne, The Florey Inst. of Neurosci. and Mental Health, Univ. of Melbourne, Munich Cluster for Systems Neurol. (SyNergy).*

3:00 R13 **744.19** Glutamate neurotransmission, cognition, and risk factors in Alzheimer's disease. E. R. HASCUP*; J. BRITZ; M. K. RUSSELL; S. TISCHKAU; H. A. BOGER; K. N. HASCUP. *Southern Illinois Univ. Sch. of Med., Southern Illinois Univ. Sch. of Med., Med. Univ. of South Carolina Dept. of Neurosciences.*

4:00 R14 **744.20** ● Reversion of the Alzheimer's disease phenotype by reducing mitochondrial oxidative stress, restoring mitochondria respiration and decreasing tau accumulation and amyloid-beta fibrillation with polyprenols treatment. G. DELL'ACQUA; T. MC FADDEN; B. BLANC; R. LASSEUR; N. COMPAGNONE*. *Sevda Cell Sci., ICDD.*

1:00 R15 **744.21** Saturated free fatty acids increase amyloid precursor protein levels in exosomes: A novel mechanism for the increased risk of Alzheimer's disease in metabolic syndrome. B. KIM*; F. E. MENDELSON; C. FIGUEROA-ROMERO; E. L. FELDMAN. *Univ. of Michigan.*

2:00 R16 **744.22** Targeting the DK-switch of nSMase2 to suppress tau propagation. T. BILOUSOVA; C. ELIAS; E. E. MIYOSHI; J. CAMPAGNA; K. VADIVEL; B. JAGODZINSKA; C. ZHU; M. ALAM; A. HATAMI; B. SIMMONS; N. GARG; K. GYLYS*; V. JOHN. *UCLA, UCLA, UCLA, UCLA.*

POSTER

745. Alzheimer's Disease and Other Dementias: Abeta as a Therapeutic Target

Theme C: Neurodegenerative Disorders and Injury

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

1:00 R17 **745.01** Aβ aggregation modulator MRZ-99030 reverses synaptotoxic effects of $A\beta_{1-42}$ on LTP even following serial dilution to 1000:1 stoichiometric excess of $A\beta_{1-42}$, suggesting a beneficial prion-like seeding mechanism. G. RAMMES*; H. RUSS; A. PEARLMAN; C. G. PARSONS. *Clin. Rechts der Isar, Univ. of Giessen, Galimedix Therapeutics, Inc, Merz Pharmaceuticals GmbH.*

2:00 R18 **745.02** Investigating the effect of a small molecular compound YS620 in the treatment of Alzheimer's disease. R. LIU*; J. YUE; S. YANG; W. WU. *The Univ. of Hong Kong, City Univ. of Hong Kong, Sichuan Univ., Jinan Univ.*

3:00 S1 **745.03** Total flavonoid extract from dracoephalum moldavicaL. attenuates β-amyloid-induced toxicity through anti-amyloidogenesic and neurotrophic pathways. H. JIANG*; R. LIU; J. XING; Y. WANG; L. WANG; J. ZHANG. *Inst. of Medicinal Biotech. Chinese Acade, Inst. of Medicinal Biotechonology, Xinjiang Inst. of Materia Medic, Univ. of Glasgow, Inst. of Medicinal Biotech.*

4:00 S2 **745.04** ● γ-secretase modulator and BACE1 inhibitor combination therapy for Alzheimer's disease. O. PRIKHODKO*; P. D. NGUYEN; E. M. ROCKENSTEIN; J. B. FLORIO; M. MANTE; T. SEKHON; R. E. TANZI; R. A. RISSMAN; S. L. WAGNER. *UCSD, UCSD, UCSD, Massachusetts Gen Hosp, Harvard Med. Sch., VA San Diego Healthcare Syst.*

1:00 S3 **745.05** Photooxygenation by biocompatible catalyst reduces the Aβ level in the brains of Alzheimer's disease model mice. S. OZAWA*; Y. HORI; Y. SOHMA; M. KANAI; T. TOMITA. *The Univ. of Tokyo, The Univ. of Tokyo.*

2:00 S4 **745.06** A novel antibody against Abeta as a theranostic drug for Alzheimer's disease. F. SHIE*; T. HSU; S. SHEN; Y. HSU; C. LEE; P. HSU; H. TSAY; Y. LEE; C. SHIH; C. CHEN. *Ctr. for Neuropsychiatric Research, Natl. Hlth. Res. Inst., Inst. of Biotech. and Pharmaceut. Research, Natl. Hlth. Res. Inst., Inst. of Physiology, Natl. Yang-Ming Univ., Inst. of Neuroscience, Natl. Yang-Ming Univ.*

3:00 S5 **745.07** Genetic and pharmacological inhibition of calcium-sensing receptor (CaSR) prevents amyloid pathologies and neuronal degeneration and restores cognitive deficits in mouse models of familial Alzheimer's disease. K. KURISU*; Z. CHANG; A. MIZUMA; C. TU; M. YENARI; W. CHANG. *Univ. of California, San Francisco and VA Med., Univ. of California, San Francisco and VA Med.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 S6 **745.08** Structural characterization and *in vitro* effects of amyloid beta variants on citotoxicity, apoptosis and autophagy. A. E. ESTRADA-RODRÍGUEZ; A. CERNA-ORNELAS; I. BUSTOS-JAIMES; D. VALDÉZ-LÓPEZ; J. RUÍZ-GARCÍA; R. VIDALTAMAYO; V. ZOMOSA*. *Univ. Autónoma de Nuevo León, Univ. Nacional Autónoma de México, Inst. Politécnico Nacional, Univ. Autónoma de San Luis Potosí, Univ. of Monterrey.*

1:00 S7 **745.09** Double D-peptide injections interfere with uptake of corresponding D-peptide in Tg AD model mice. T. VAN GROEN*; N. JIANG; I. KADISH; D. WILLBOLD. *Univ. Alabama-Birmingham, Forschungszentrum Julich.*

2:00 S8 **745.10** Probing the structures of beta-amyloid oligomers with antibodies generated against conformationally and structurally defined oligomers. A. KREUTZER*; R. MALONIS; M. DIAB; J. QUIROZ; S. YOO; G. GUAGLIANONE; J. LAI; J. NOWICK. *Univ. of California Irvine, Albert Einstein Col. of Med.*

3:00 S9 **745.11** Anti degenerative effectiveness by blocking multiple steps in the amyloid beta toxicity cascade. L. G. AGUAYO*; C. PETERS; F. BURGOS; D. BASCUÑAN. *Univ. Concepcion, Univ. Concepcion.*

4:00 S10 **745.12** The neuroprotective effects of an active core sequence of amyloid beta on amyloid beta-induced synaptic deficits. K. FOREST*; K. ARORA; R. TAKETA; R. A. NICHOLS. *Univ. of Hawaii, Manoa, John A Burns Sch. of Medicine, Univ. of Hawaii, Univ. of Hawaii.*

1:00 S11 **745.13** Intranasal delivery of human iPSC-derived neural stem cells as a novel strategy for AD therapy. Y. FU*; J. ZHAO; M. DAVIS; Y. CHEN; C. LIU; G. BU. *Mayo Clin.*

2:00 S12 **745.14** The role a small, bi-functional molecule plays in reducing oxidative stress induced by intracellular amyloid-β in neuronal cell cultures. S. HILT*; R. ALTMAN; M. BUDAMAGUNTA; I. MAEZAWA; L. JIN; Q. GONG; J. VOSS. *UC Davis, UC Davis, M.I.N.D. Inst, UC Davis, M.I.N.D. Inst. UC Davis, Univ. California Davis Sch. of Med., UC Davis.*

3:00 S13 **745.15** Molecular characteristics of amyloid-associated vascular dysfunction using single-cell RNAseq. A. WOJTAS*; J. P. SENS; K. E. BAKER; J. D. FRYER. *Mayo Clin. Grad. Sch. of Biomed. Sci., Mayo Clin.*

POSTER

746. Alzheimer's Disease and Other Dementias: ApoE and Associated Pathways

Theme C: Neurodegenerative Disorders and Injury

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

1:00 S14 **746.01** The effect of depressive symptoms on neuronal reward processing in apolipoprotein E4carriers. E. A. KAPOULEA*; C. MURPHY. *UCSD, San Diego State Univ., San Diego State Univ.*

2:00 S15 **746.02** Neuropathological characterization of neuronal Apolipoprotein E in normal aged controls and AD brains. I. KAWAKAMI*; A. S. POZO; E. HUDRY; B. T. HYMAN. *Massachusetts Gen. Hospital/Harvard Med. Sch.*

3:00 S16 **746.03** The apolipoprotein E4 allele renders corpus callosum microcirculation and cognitive function more susceptible to cerebral hypoperfusion. S. AHN*; Y. HATTORI; L. PARK; C. B. SCHAFFER; C. IADECOLA. *Weill Cornell Med., Cornell Univ.*

4:00 S17 **746.04** ● Alzheimer's disease associated APOE4 regulates gene expression in the genomic vicinity of apolipoprotein E. R. URFER*; A. URFER-BUCHWALDER. *Selonterra, Inc.*

1:00 S18 **746.05** Deletion of LRP1 in vascular mural cells causes cognitive impairment depending on apoE isoforms. H. OUE*; Y. YAMAZAKI; I. MOSNEAG; T. AIKAWA; M. HOLM; G. BU; T. KANEKIYO. *Mayo Clin. Jacksonville.*

2:00 T1 **746.06** Effects of diet induced obesity and APOE genotype on Alzheimer-related pathology in female EFAD mice. A. CHRISTENSEN*; C. J. PIKE. *USC, USC.*

3:00 T2 **746.07** Apoe isoform specific effects on amyloid-β induced changes in microglial response. N. F. FITZ*; F. LETRONNE; B. E. PLAYSO; C. WOLFE; K. NAM; I. M. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh.*

4:00 T3 **746.08** ● The mechanism of olfactory dysfunction in APOE-associated dementia: Olfactory study in human APOE4 carriers and APOE mice. M. M. MISIAK*; J. N. O'NEIL; R. RAYHAN; M. HIPOLITO; N. RAI; C. K. MCLEAN; K. F. MANAYE; E. A. NWULIA. *Howard University, Col. of Med., Howard Univ. Hosp.*

1:00 T4 **746.09** ApoE isoform-dependent microglial functions in response to demyelination. C. LIU*; N. WANG; M. WEI; Y. MARTENS; X. LI; J. LI; H. ZHENG; H. XU; X. CHEN; G. BU. *Mayo Clin., Fujian Provincial Key Lab. of Neurodegenerative Dis. and Aging Research, Inst. of Neuroscience, Col. of Medicine, Xiamen Univ., Neurosci. Initiative, Sanford Burnham Prebys Med. Discovery Inst.*

2:00 T5 **746.10** Spatial learning and memory in murine models: Examination of gender, genotype and their interaction in 5xFAD and APOE transgenic mice. J. N. O'NEIL*; R. RAYHAN; M. M. MISIAK; K. F. MANAYE. *Howard University, Col. of Med.*

3:00 T6 **746.11** A clinically tested HDL mimetic peptide mitigates apoE4 associated lipidation and memory deficits. D. S. CHERNICK*; S. ORTIZ-VALLE; A. GRAM; L. LI. *Univ. of Minnesota, Univ. of Minnesota.*

POSTER

747. Alzheimer's Disease and Other Dementias: Other Dementias

Theme C: Neurodegenerative Disorders and Injury

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

1:00 T7 **747.01** ● Pilot study to detect Dementia based on vocal analysis. Y. OMIYA*; T. TAKANO; T. URAGUCHI; M. NAKAMURA; S. SHINOHARA; M. HIGUCHI; S. MITSUYOSHI; S. TOKUNO. *PST Inc., The Univ. of Tokyo Hosp., The Univ. of Tokyo, The Univ. of Tokyo.*

2:00 T8 **747.02** Functional connectivity profile during inter-task resting state in dementia with Lewy bodies. E. CHABRAN*; D. ROQUET; D. GOUNOT; F. BLANC. *Icube Lab. CNRS, ICube Lab. CNRS, Univ. Hosp. of Strasbourg.*

3:00 T9 **747.03** Chronic suppression of monoacylglycerol lipase improves adult neurogenesis in septal but not temporal part of DG in a mouse model of Down syndrome. D. FOZOONMAYEH; J. YU; M. SANKARAN; M. WALSH; M. SAWA; A. TYRTYSHNAIA; M. KHOTIMCHENKO; A. M. KLESCHEVNIKOV*. *Univ. of California San Diego, Far Eastern Federal Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 T10 **747.04** ▲ Increased kynurenic acid in cerebrospinal fluid of patients with hydrocephalus. B. KEPPLINGER*; H. BARAN; C. KRONSTEINER. *Karl Landsteiner Res. Institute, Mauer, Neurolog. Department, Neuropsychiatric Hosp., Neurolog. Department, Gen. Hosp.*

1:00 T11 **747.05** Altered pupil dynamics in patients with neurodegenerative diseases. J. HUANG*; B. C. COE; M. SMORENBURG; D. BRIEN; S. E. BLACK; E. FINGER; M. FREEDMAN; A. E. LANG; M. J. STRONG; R. H. SWARTZ; M. CARMELA TARTAGLIA; L. ZINMAN; ONDRI INVESTIGATORS; D. P. MUNOZ. *Queen's Univ., Queen's Univ., Sunnybrook Hlth. Sci. Cntr, Western Univ., Univ. of Toronto, Univ. of Toronto, London Hlth. Sci. Ctr. - UH, Sunnybrook Res. Inst.*

2:00 T12 **747.06** ▲ Co-registration of mri-defined white matter lesions with *ex vivo* registration. S. MCKEON*; A. RANGARAJAN; M. WU; N. FARHAT; T. SANTINI; S. WOOD; T. IBRAHIM; M. IKONOMOVIC; J. KOFLER; O. LOPEZ; B. KLUNK; H. AIZENSTEIN. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 T13 **747.07** Identification of disease-specific features of electroencephalograms of REM sleep behavior disorder patients with deep neural network. D. YEO*; S. HER; K. CHA; P. SEO; H. KIM; S. CHOI; K. JUNG; K. KIM. *Yonsei Univ., Seoul Natl. Univ. Med. Ctr.*

4:00 T14 **747.08** Sex-dependent effects of prediabetes in mouse models of Alzheimer's disease and mixed dementia. L. S. ROBISON*; O. GANNON; A. E. SALINERO; M. THOMAS; A. TYSON; K. L. ZULOAGA. *Albany Med. Col., Rensselaer Polytechnic Inst.*

1:00 T15 **747.10** ▲ Microglia engulfment of Purkinje cell dendrites precedes neurodegeneration in the NPC1^{nmf164}mutant mouse. L. KAVETSKY; K. GREEN; I. SOTO*. *Rowan Univ., Rowan Univ.*

2:00 T16 **747.11** Identification and characterization of frontotemporal dementia risk factor TMEM106B interacting proteins. R. CHARAN*; T. L. UNGER; D. AMADO; J. MAK; M. P. HERNANDEZ-CON; A. S. CHEN-PLOTKIN. *Univ. of Pensylvania, Univ. of Pensylvania.*

3:00 T17 **747.12** Lead (Pb) exposure causes hypertension and cognitive dysfunction in a mouse model of vascular cognitive impairment and dementia (VCID). K. KOHLER; T. MACHEDA; D. M. NIEDOWICZ; A. M. HELMAN; M. M. HOBBS; L. R. FARRIS; A. RODRIGUEZ; T. L. BECKETT; M. P. MURPHY*. *Univ. of Kentucky, Univ. of Kentucky, Univ. Kentucky.*

4:00 T18 **747.13** Neurovascular coupling in cerebrovascular disease through aging: Impact for functional brain imaging. M. BOUROUROU*; M. KHOUIDER; A. MACHADO; C. LECRUX; E. HAMEL. *Montreal Neurolog. Institute-Mcgill Univ.*

1:00 U1 **747.14** Strain-specific expression and accumulation of human transgenic tdp-43 in a mouse model of frontotemporal lobar degeneration. R. SHAHIDEHPOUR; L. KUKREJA; G. KIM; K. SADLEIR; H. DONG; J. CSERNANSKY; M. MESULAM; R. VASSAR; C. GEULA*. *Northwestern Univ. Med. Sch., Northwestern Univ. Med. Sch., Northwestern Univ. Med. Sch.*

2:00 U2 **747.15** Differentiating amnestic mild cognitive impairment and non-amnestic mild cognitive impairment using machine learning: Resting-state functional MRI analysis. H. KIM*; S. JUN; S. PARK; K. KIM; S. LEE; S. HAN. *Yonsei Univ., Yonsei Univ., Hanyang Univ., Yonsei Univ. Col. of Med.*

POSTER

748. Parkinson's Disease: Mitochondrial Mechanisms and Genetics

Theme C: Neurodegenerative Disorders and Injury

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

1:00 U3 **748.01** The U-Box-dependent E3 ubiquitin ligase STUB1 mediates ubiquitination of PINK1 and subsequent proteasome degradation during neuronal cell death. S. H. LEE; L. YOO; H. RHIM; K. C. CHUNG*. *Yonsei Univ., Korea Inst. Sci. Tech. (KIST).*

2:00 U4 **748.02** Mitochondrial regulations by pyrroloquinoline quinone prevented rotenone-induced neurotoxicity in Parkinson's disease models. Q. ZHANG*; L. WEI; J. LU; F. DING. *Nantong Univ.*

3:00 U5 **748.03** The mitochondrial phosphatase, PTPMT1, regulates immune responses in *Drosophila.* A. M. PAPAKYRIKOS*; X. WANG. *Stanford Univ.*

4:00 U6 **748.04** Miro1 is required for priming mitochondria for mitophagy. D. SAFIULINA*; M. KUUM; V. CHOUBEY; N. GOGICHAISHVILI; J. LIIV; M. A. HICKEY; M. CAGALINEC; M. MANDEL; M. LIIV; A. KAASIK. *Univ. of Tartu.*

1:00 U7 **748.05** ▲ Defect in mitochondrial translation modulator in dopaminergic neurons represent parkinsonian abnormalities. I. RYU; J. HEO*; A. PARK; J. HAN; S. KIM; Y. JANG; M. RYU; M. LEE; K. LIM; J. PARK; S. CHOI; S. PARK; H. RYU; D. KIM; G. KWEON. *Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. Sch. of Med., Chung Nam Natl. Med. Sch., Chung Nam Natl. Univ. Sch. of Med., Korea Advanced Inst. of Sci. and Technol., Chung Nam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. of Sch. of Med., Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. Sch. of Med., Boston Univ. Alzheimer's Dis. Ctr., KAIST.*

2:00 U8 **748.06** Bcl-2 associated athanogene 5 modulates parkin/PINK1 dependent mitochondrial quality control. Y. ZHANG*; M. L. DE SNOO; E. L. FRIESEN; O. PELLERITO; H. CHAU; M. Y. TANG; T. M. DURCAN; L. V. KALIA; E. A. FON; S. K. KALIA. *Krembil Res. Inst., Univ. of Toronto, Montreal Neurolog. Institute, McGill Univ., Toronto Western Hosp., Toronto Western Hosp.*

3:00 U9 **748.07** DJ1 deficiency disrupts mitochondrial inner membrane coupling to cause neuronal dysfunction in familial Parkinson's disease. R. CHEN*; H. PARK; N. MNATSAKANYAN; Y. NIU; P. LICZNERSKI; J. WU; P. MIRANDA; M. GRAHAM; W. J. MANDEMAKERS; V. BONIFATI; K. ALAVIAN; E. A. JONAS. *Yale Univ., Yale Univ., Erasmus MC, Imperial Col.*

4:00 U10 **748.08** Investigating a novel role for parkin in mitochondrial dna maintenance in induced pluripotent stem cell-derived neurons from Parkinson's disease patients. K. WASNER*; A. RAKOVIC; I. BOUSSAAD; N. OUZREN; D. GROSSMANN; J. GHELFI; P. PRAMSTALLER; P. SEIBLER; S. PEREIRA; R. KRÜGER; C. KLEIN; A. GRÜNEWALD. *Luxembourg Ctr. For Systems Biomedicine, Univ. of Luebeck, Inst. of Neurogenetics, Inst. for Biomedicine.*

1:00 U11 **748.09** Alpha-synuclein interplays with Miro to delay mitophagy and contribute to Neurodegeneration in Parkinson's models. C. HSIEH*; M. KIM; A. SHALTOUKI; X. WANG. *Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 U12 **748.10** ERRα is required for the expression of PGC-1α-dependent genes *in vitro* and *in vivo.* K. L. JOYCE; K. PATEL; L. M. JENKINS; D. K. CROSSMAN; L. J. MCMEEKIN; R. M. COWELL*. *Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Southern Res.*

3:00 V1 **748.11** ● High content imaging-based and biochemical screening for small molecule modifiers of mitophagy. C. BURKE*; V. SANS; M. SCALLION; S. PAI; A. DIOS; V. ZARAYSKIY; A. TOMS; A. BUCKMELTER; A. MURAD; S. IOANNIDIS; M. K. AHLIJANIAN. *FORMA Therapeut., FORMA Therapeut., FORMA Therapeut., FORMA Therapeut.*

4:00 V2 **748.12** Pink1 and pka regulates bdnf signaling to stimulate dendrite outgrowth and mitochondrial function. R. K. DAGDA*; M. DAGDA; M. SWAIN; R. DAGDA. *Univ. of Nevada Sch. of Med.*

1:00 V3 **748.13** Familial LRRK2 G2019S Parkinson's disease patient fibroblasts have reduced mitochondrial clearance. R. THOMAS*; J. A. KORECKA; D. P. CHRISTENSEN; M. L. HASTINGS; P. J. HALLETT; O. ISACSON. *McLean Hospital/ Harvard Med. Sch., Rosalind Franklin Univ. of Med. and Sci.*

2:00 V4 **748.14** Exploring the molecular mechanism of mitochondrial dysfunction in idiopathic Parkinson's disease. S. L. CARDOSO PEREIRA*; A. S. MONZEL; K. WASNER; K. BADANJAK; N. OUZREN; J. GHELFI; C. DELBROUCK; R. KRÜGER; N. DIEDERICH; P. SEIBLER; C. KLEIN; J. C. SCHWAMBORN; A. GRÜNEWALD. *Univ. du Luxembourg, Ctr. Hospitalier de Luxembourg (CHL), Univ. of Luebeck, Inst. of Neurogenetics.*

POSTER

749. Parkinson's Disease: Alpha-Synuclein: Models

Theme C: Neurodegenerative Disorders and Injury

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

1:00 V5 **749.01** ▲ Insight into Parkinson's disease from yeasts: Combined impact of covalent modifications & familial mutations on α-synuclein. Y. P. GANEV*; R. THOMAS; C. MWALE; A. BALARAM; J. MOUNTAIN; A. N. ROMAN; M. N. MARSHALL; S. K. DEBBURMAN. *Lake Forest Col., Rosalind Franklin Univ. of Med. and Sci., Lake Forest Col., Lake Forest Col.*

2:00 V6 **749.02** ▲ Impact of several PD-associated genes on the toxicity of α-synuclein in a yeast model. A. H. BALARAM*; P. A. JONES; A. BIEL; E. ONG; C. MWALE; M. TEMBO; S. K. DEBBURMAN. *Lake Forest Col., Lake Forest Col.*

3:00 V7 **749.03** ▲ Understanding Parkinson's disease in yeast models: The nature of α-toxicity linked with a30p, h50q and a53e a-synuclein mutants. C. N. MWALE*; E. N. ONG; P. A. JONES; M. TEMBO; C. ALVARADO; M. BUABENG; S. K. DEBBURMAN. *Lake Forest Col., Lake Forest Col., Lake Forest Col.*

4:00 V8 **749.04** Treatment with GM1 ganglioside is neuroprotective in a progressive Parkinson's disease model in the rat produced by AAV1/2-induced overexpression of A53T-alpha-synuclein. J. S. SCHNEIDER*; C. WILLIAMS; R. ARAS. *Thomas Jefferson Univ.*

1:00 V9 **749.05** Development of *in vitro* and *ex vivo* assays for α-synuclein PET tracer: A disease progression biomarker for synucleinopathies. L. MA*; A. J. ROECKER; K. SCHIRRIPA; J. A. OBRIEN; M. CHRISTINA; Z. ZENG; S. O'MALLEY; P. J. MILLER; R. C. GENTZEL; A. M. PEIER; Q. YANG; Y. HOU; M. MCCOY; W. LI; P. J. COLEMAN; R. E. DROLET; S. M. SMITH. *Merck Res. Laboratories, Merck & Co., Inc., Merck Res. Laboratories, Merck & Co., Inc., Merck Res. Laboratories, Merck & Co., Inc., Merck Res. Laboratories, Merck & Co., Inc., Merck Res. Laboratories, Merck & Co., Inc., Merck Res. Laboratories, Merck & Co., Inc.*

2:00 V10 **749.06** Layer-specific axonal degeneration of serotonergic fibers in the prefrontal cortex of aged α-synuclein expressing mice. J. WIHAN*; J. GROSCH; C. MÜLLER; J. WINKLER; Z. KOHL. *Erlangen Univ. Hosp., Erlangen Univ. Hosp.*

3:00 V11 **749.07** ▲ Assessment of neuroprotective effects of overexpressing TFEB in a mouse model of multiple system atrophy. M. AROTCARENA; M. BOURDENX; S. DOVERO; P. FERNAGUT; W. MEISSNER; E. BEZARD; B. DEHAY*. *Inst. of Neurodegenerative Dis.*

4:00 V12 **749.08** Behavioral and dopaminergic changes in double mutated human α-synuclein mouse model of Parkinson´s disease. U. JULKU*; T. KILPELÄINEN; R. SVARCBAHS; T. T. MYÖHÄNEN. *Univ. of Helsinki.*

1:00 V13 **749.09** Alpha-synuclein transmission from noradrenergic locus coeruleus neurons to the striated muscle of mouse esophagus via the nucleus ambiguus. B. LEE*; F. GEIBL; M. HENRICH; W. CHIU; L. MATSCHKE; N. DECHER; J. WÖRL; C. CULMSEE; G. GANJAM; W. OERTEL. *Philipps-Universität Marburg, Friedrich-Alexander Univ.*

2:00 V14 **749.10** Interrogating the relationship between glycolipids and alpha synuclein pathology in a preformed fibril *in vitro* model. M. COSDEN*; S. JINN; L. YAO; A. D. RAMIREZ; C. GRETZULA; J. SCHACHTER; D. TOOLAN; L. MA; N. HATCHER; J. N. MARCUS; R. DROLET; S. M. SMITH. *Merck and Co Inc West Point, Merck and Co., Inc.*

3:00 V15 **749.11** Establishing a rat model to study the progression of sporadic Parkinson's disease. Y. CHEN*; P. CHEN; C. WANG. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ. and Academia Sinica.*

4:00 V16 **749.12** Evaluation of alpha-synuclein pathology and glycolipids in post-mortem Parkinson's disease brain samples. R. KESILMAN (KORN)*; L. YAO; A. RAMIREZ; J. SCHACHTER; N. HATCHER; R. DROLET; S. SMITH. *Merck & Co., Inc.*

1:00 W1 **749.13** The influence of iron on the alpha-synuclein pathology in Parkinson's disease. K. JOPPE*; L. TATENHORST; A. ROSER; E. CARBONI; J. NICOLAS; T. SALDITT; S. BECKER; M. BÄHR; P. LINGOR. *Univ. Med. Ctr. Goettingen, Georg-August-University, Max Planck Inst. for Biophysical Chem.*

2:00 W2 **749.14** Human Plasma Fraction reduces the detrimental effects of alpha-synuclein overexpression in mice. C. TUN*; H. HACKBART; S. REGE; M. K. CAMPBELL; A. LIU; E. CZIRR; S. BRAITHWAITE; S. S. MINAMI. *Alkahest.*

3:00 W3 **749.15** Motor impairment due to alpha-synuclein-mediated dopaminergic neuron dysfunction in *C. elegans.* S. K. KALIA; K. MENEZES; N. TRAN; J. B. RODGERS; H. CHAU; K. FUJISAWA; K. CHEN; A. M. LOZANO; J. G. CULOTTI; S. SUO; W. S. RYU; L. V. KALIA*. *Univ. of Toronto, Saitama Med. Univ.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 W4 **749.16** Biochemical and physical characterization of -synuclein aggregates in Parkinson's disease extracted material used for modeling synucleinopathies in viv. F. LAFERRIERE; B. DEHAY; C. SANDT; E. DOUDNIKOFF; W. MEISSNER*; E. BEZARD. *Inst. des Maladies Neurodégénératives, Inst. of Neurodegenerative Dis., Synchrotron SOLEIL, Inst. Des Maladies Neurodégénératives.*

1:00 W5 **749.17** Neuro-inflammation is associated with T cell infiltration in an alpha-synuclein tg models of Lewy body disease. M. IBA*; C. KIM; A. VERMA; R. A. RISSMAN; R. SEN; J. SEN; E. MASLIAH. *Natl. Inst. on Aging, NIH, Lab. of Clin. Investigation, Immune Cells and Inflammation Section, NIH / NIA, UCSD Sch. Med., Lab. of Mol. Biol. and Immunology, NIH / NIA.*

2:00 W6 **749.18** Modeling prodromal Parkinson's disease in alpha-synuclein transgenic rats: Behavioral and neurobiological insights into Parkinson's disease pathophysiology. A. V. POLISSIDIS*; M. XILOURI; V. KOLLIA; M. KORONAIOU; M. BOYONGO; S. VRETTOU; N. CASADEI; O. RIESS; L. STEFANIS. *Biomed. Res. Fndn., Univ. of Tübingen, Univ. of Athens Med. Sch.*

3:00 W7 **749.19** Deuterated fatty acid supplementation is neuroprotective against a-synuclein induced dopamine toxicity. V. TAPIAS*; J. CHILUWAL; N. CALINGASAN; G. MILNE; M. SHCHEPINOV; M. BEAL. *Weill Cornell Med., Vanderbilt Univ. Med. Ctr., Retrotope, Inc.*

4:00 W8 **749.20** Longitudinal characterization of motor and non-motor deficits in the "Line 61" alpha-synuclein mouse model of Parkinson's disease. A. KHAN*; M. MAILE; C. WITTMER; K. TATSUKAWA; D. PRICE; M. GILL; D. BONHAUS. *Neuropore Therapies Inc.*

1:00 W9 **749.21** ● High content analysis of α-synuclein pools in primary cultures of wild-type mouse cortical neurons challenged with extractive and recombinant assemblies. F. DE GIORGI-ICHAS; F. LAFERRIERE; E. FAGGIANI; B. DEHAY; G. PORRAS*; E. BEZARD; F. ICHAS. *Inst. des Maladies Neurodégénératives, Inst. of Neurodegenerative Dis., Motac.*

2:00 W10 **749.22** ● α-synuclein post-translational modifications are not only markers of pathology but are also key regulators of lewy body formation and maturation; implications for therapies targeting α-syn and pathology spreading. A. MAHUL-MELLIER*; F. ALTAY MELEK; J. COPIN; J. BUTSCHER; N. MAHARJAN; N. AÏT BOUZIAD; S. VINGILL; R. WADE-MARTINS; R. HAMELIN; S. DEGUIRE; R. BURAI; H. LASHUEL. *EPFL, Univ. of Oxford.*

3:00 W11 **749.23** Perivascular macrophages control synucleinopathy spreading and toxicity in mouse models of Parkinson's disease. S. HUNOT*; J. FUENTEALBA; E. C. HIRSCH. *ICM - Brain & Spine Inst.*

4:00 W12 **749.24** Investigating the role of the ubiquitin proteasome system in a rodent model of Parkinson's disease. C. MCKINNON*; E. GONDARD; M. L. DE SNOO; C. NEUDORFER; G. NGANA; J. M. BROTCHIE; J. B. KOPRICH; A. M. LOZANO; L. V. KALIA; S. K. KALIA. *Univ. Hlth. Network, Krembil Res. Inst-Toronto Western Hospital-UHN, Univ. of Toronto, Univ. Hlth. Network, Atuka Inc., Toronto Western Hosp. Rm 4-431 West, Krembil Res. Institute, Univ. of Toronto, Toronto Western Res. Inst.*

1:00 W13 **749.25** Parkinson's disease proteinopathy is exacerbated in the Engrailed1$^{+/-}$-mouse model. D. CHATTERJEE*; D. S. SANCHEZ; E. QUANSAH; N. L. REY; J. A. STEINER; M. L. ESCOBAR GALVIS; Z. MADAJ; J. H. KORDOWER; P. BRUNDIN. *Rush Univ., Univ. of Castilla La Mancha, Van Andel Res. Inst., Univ. Paris-Saclay.*

2:00 W14 **749.26** Optimising a rat model of Parkinson's disease based on AAV vector-mediated alpha synuclein transfer in the nigra. J. MUDANNAYAKE*; T. BJORKLUND; F. P. MANFREDSSON. *Lund Univ., Mol. Neuromodulation, Wallenberg Neurosci., Michigan State Univ.*

POSTER

750. Parkinson's Disease: Alpha-Synuclein: Mechanisms and Transmission

Theme C: Neurodegenerative Disorders and Injury

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

1:00 W15 **750.01** Regulation of a-synuclein levels by Parkinson's disease-associated kinases. P. H. JENSEN; R. H. KOFOED; N. FERREIRA; C. BETZER; L. REIMER; M. R. LARSEN; O. SOROKINA; D. ARMSTRONG; P. JENSEN*. *Univ. of Aarhus, Univ. of Southern Denmark, The Univ. of Edinburgh, Univ. of Edinburgh.*

2:00 W16 **750.02** Andrographolide modulates the overexpression and aggregation of Alpha synuclein in an *in vitro* model of Parkinson's disease. S. BASTÍAS-CANDIA*; N. INESTROSA. *Pontificia Univ. Catolica De Chile.*

3:00 W17 **750.03** Disorganization of the brain extracellular matrix through microglial activation in the Lewy body-injected mouse. E. BEZARD*; F. N. SORIA; B. DEHAY. *Inst. of Neurodegenerative Dis., Inst. Des Maladies Neurodégénératives.*

4:00 W18 **750.04** Extracellular α-synuclein internalizes into cells by modulating flotillin-1-assisted endocytosis of DAT. T. HASEGAWA*; J. KOBAYASHI; N. SUGENO; S. YOSHIDA; M. EZURA; A. KIKUCHI; A. TAKEDA; M. AOKI. *Tohoku Univ., NHO Yonezawa Hosp., Tohoku Univ., NHO Nishitaga Hosp.*

1:00 X1 **750.05** Systematic analysis on the seeding activity of familial mutant forms of α-synuclein. N. XU*; G. ITO; A. TARUTANI; T. TOMITA. *The Univ. of Tokyo, The Univ. of Tokyo.*

2:00 X2 **750.06** Characterization and inactivation of pathogenic α-syn species. A. TARUTANI*; T. ARAI; S. MURAYAMA; S. HISANAGA; T. TOMITA; M. HASEGAWA. *The Univ. of Tokyo, Tokyo Metropolitan Inst. of Med. Sci., Univ. of Tsukuba, Tokyo Metropolitan Geriatric Hosp. and Inst. of Gerontology, Tokyo Metropolitan Univ.*

3:00 X3 **750.07** Proteomics screen in search for regulators of formation and clearance of neuropathological a-synuclein and tau aggregates. M. LUBAS*; M. AMBJØRN; K. THIRSTRUP; J. ANDERSEN; K. FOG. *H. Lundbeck, Univ. of Southern Denmark.*

4:00 X4 **750.08** ● Robust synapse loss in striatal spiny projection neurons from transgenic mice overexpressing human wild-type alpha synuclein. J. SANCHEZ-PADILLA; G. TOMBAUGH; S. GELMAN; K. KRETSCHMANNOVA; H. FERNANDES; A. GHAVAMI; J. BELTRAN; K. CIRILLO; S. RAMBOZ*. *Psychogenics Inc.*

1:00 X5 **750.09** Developing novel FRET-based biosensors that monitor α-synuclein assembly for use in high-throughput screening. M. YOUNG*; A. R. BRAUN; D. THOMAS; J. SACHS. *Univ. of Minnesota Twin Cities, Univ. of Minnesota Twin Cities.*

Wed. PM

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 X6 **750.10** α-Synuclein in neuron- and oligodendroglia-derived blood exosomes distinguishes multiple system atrophy from Parkinson's disease. S. DUTTA*; I. D. ROSARIO; K. PAUL; J. PALMA; S. L. PERLMAN; W. W. POON; H. KAUFMANN; B. FOGEL; J. M. BRONSTEIN; B. RITZ; G. BITAN. *David Geffen Sch. of Medicin At UCLA, UCLA, UCLA, New York Univ. Sch. of Medicine, New York, USA, Univ. of California, Irvine.*

3:00 X7 **750.11** Defining cellular identity and cell-specific expression changes in the pre-formed fibril model of Parkinson's disease. S. FOX*; L. VOLPICELLI-DALEY; R. COWELL. *Univ. of Alabama At Birmingham, Southern Res., Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

4:00 X8 **750.12** Alpha-synuclein and tau abnormalities caused by lipids in neurodegenerative aging. O. R. BREKK*; O. ISACSON; P. J. HALLETT. *McLean Hosp.*

1:00 X9 **750.13** The role of biological membranes in the alpha-synuclein/Nedd4-1 interaction. R. V. STAHELIN*; J. ROCHET. *Purdue Univ.*

2:00 X10 **750.14** VPS35 D620N impairs the endosomal trafficking pathway thus leads to excessive alpha synuclein accumulation. S. LUO*; F. LUO; Y. SUN; F. LIU; Y. LI; C. CHEN; W. WANG; J. WANG. *Inst. of Neurol. Dept. of Neurol. Hua, Interdisciplinary Res. Ctr. on Biol. and Chem., Dept. of Neurology, Huashan Hospital, Fudan Univ.*

3:00 X11 **750.15** Chronic stimulation of adenosine A1 receptor leads to an increase in expression of alpha-synuclein. E. JAKOVA*; J. STOCKWELL; A. AMAH; J. S. LEE; F. S. CAYABYAB. *Univ. of Saskatchewan, Univ. of Saskatchewan.*

4:00 X12 **750.16** Effect of microglial activation on *in vivo* aggregation, propagation, and toxicity induced by alpha-synuclein fibrils. M. SWANBERG*; I. JIMENEZ FERRER CARRILLO; M. JEWETT; A. BOZA-SERRANO; K. C. LUK; V. M. LEE; T. DEIERBORG. *Lund Univ., Univ. Pennsylvania, Univ. Pennsylvania Sch. Med.*

1:00 X13 **750.17** A recombinant probe for visualizing membrane-bound alpha-synuclein at presynaptic terminals in living neurons. G. G. GROSS*; J. VARKEY; R. LANGEN; D. B. ARNOLD. *USC, USC, USC.*

2:00 X14 **750.18** Altered dopamine metabolism leads to a unique impaired aSynuclein proteostasis in Parkinson's disease. A. MASATO*; G. BERTI; N. PLOTEGHER; F. DE LAZZARI; M. BISAGLIA; E. GREGGIO; D. BOASSA; L. BUBACCO. *Univ. of Padova, Univ. of California San Diego.*

3:00 Y1 **750.19** Rab27b modulates alpha-synuclein spread and toxicity. R. N. UNDERWOOD*. *Univ. of Alabama At Birmingham.*

4:00 Y2 **750.20** Alpha-Synuclein toxicity domain identification and as Potential biomarker for Parkinson's disease diagnosis, Prognosis and target for therapy. N. SHEN*; H. YANG; X. LIN; Y. HONG; J. CAI; C. CAO. *Univ. of South Florida, Univ. of South Florida, Col. of Pharm. Univ. of South Florida.*

1:00 Y3 **750.21** Mesenchymal stem cells modulate seeding with vesicle-associated á-synuclein in Parkinson's disease. S. OH; J. PARK*. *Mayo Clin.*

2:00 Y4 **750.22** α-Synuclein on tau aggregation in synucleinopathies. U. SENGUPTA*; J. GERSON; N. PUANGMALAI; A. ELLSWORTH; N. BHATT; S. MCALLEN; M. CARRETERO-MURILLO; D. CASTILLO-CARRANZA; R. KAYED. *Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

3:00 Y5 **750.23** Tau and alpha-synuclein: Equal partners in neurodegeneration? H. J. BROWN*; F. BASSIL; J. Q. TROJANOWSKI; B. ZHANG; D. RIDDLE; V. M. Y. LEE. *Univ. of Pennsylvania.*

4:00 Y6 **750.24** *In vivo* interactions of biogenic aldehydes with aSyn increases expression of neuroinflammatory genes and exacerbates motor deficits in triple transgenic mice. P. A. MARTINEZ*; V. MARTINEZ; E. FERNANDEZ; R. STRONG. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Univ. of Texas Hlth. Sci. Ctr. at San Antonio, South Texas Veterans Hlth. Care Network.*

1:00 Y7 **750.25** Regulation of α-synuclein expression in Parkinson′s disease by locus-specific epigenetic remodeling of SNCA. S. GUHATHAKURTA*; E. ADLER; S. BASU; G. JE; L. ADAMS; Y. KIM. *Univ. of Central Florida.*

2:00 Y8 **750.26** Alpha-synuclein deregulates the expression of COL4A2 and impairs ER-Golgi function. T. F. OUTEIRO*; I. PAIVA. *Univ. Med. Ctr. Goettingen, Univ. Med. Ctr. Goettingen.*

3:00 Y9 **750.27** Alpha-synuclein aggregates induce c-Abl activation by disruption of cell redox state. S. GHOSH*; S. J. WON; J. SANCHEZ; A. HUYNH; C. WONG; J. ZHAO; R. BISHOP; R. A. SWANSON. *Univ. of California, San Francisco, San Francisco Veterans Affairs Med. Ctr.*

4:00 Y10 **750.28** ● Molecular linking of influenza infection to cellular pathology of protein misassembly: The case of alpha-synuclein. R. M. MARREIROS; C. KORTH*. *Dept. of Neuropathology, Heinrich Heine Unive, Heinrich Heine Univ. Dusseldorf.*

POSTER

751. Parkinson's Disease: Circuit Mechanisms

Theme C: Neurodegenerative Disorders and Injury

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

1:00 Y11 **751.01** Prefrontal d1 dopamine-receptor neurons and delta resonance in interval timing. Y. KIM*; N. S. NARAYANAN. *Univ. of Iowa, Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

2:00 Y12 **751.02** Phase-locked adaptive TMS: A novel method to improve motor performance. A. SINGH*; A. ESPINOZA; D. JUNG; N. S. NARAYANAN. *Univ. of Iowa, Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

3:00 Y13 **751.03** Targeting frontostriatal circuits to rescue prefrontal dysfunction during interval timing. E. EMMONS*; B. J. DECORTE; N. S. NARAYANAN. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

4:00 Y14 **751.04** Differential parkinsonian deficits and basal ganglia output in stimulus-guided and memory-guided movements. A. TEKRIWAL*; M. J. LINTZ; J. A. THOMPSON; G. FELSEN. *Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med.*

1:00 Y15 **751.05** The effect of alpha-synuclein overexpression on calcium dynamics and dendritic spines in cortical neurons. G. M. ALDRIDGE*; C. A. WARWICK; S. M. NATHWANI; Y. M. USACHEV; N. S. NARAYANAN. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa Dept. of Pharmacol., Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 Y16 **751.06** Network dynamics in the primary motor cortex of mice with experimental Parkinson's disease. F. AEED; H. BENISTY; R. TALMON; Y. SCHILLER*. *Technion Med. Sch., Technion, Technion Med. Sch.*

3:00 Y17 **751.07** Functional imaging of striatal neurons during Parkinsonism and dyskinesia. M. MALTESE*; J. R. MARCH; N. X. TRITSCH. *NYU Neurosci. Institute, NYU Langone Hlth., Fresco Inst. for Parkinson's and Movement Disorders.*

4:00 Y18 **751.08** Stereotyped basal ganglia output pathophysiology across dopamine depletion models emerges prior to motor deficits. A. M. WILLARD*; T. C. WHALEN; B. R. ISETT; K. J. MASTRO; C. KI; A. H. GITTIS. *Carnegie Mellon Univ., Carnegie Mellon Univ., Harvard Univ., U.C. Berkeley.*

1:00 Z1 **751.09** Responses of the substantia nigra pars reticulata to synaptic inputs from the direct and indirect pathways: A computational modeling study. R. S. PHILLIPS*; A. H. GITTIS; J. RUBIN. *Univ. of Pittsburgh, Carnegie Mellon Univ.*

2:00 Z2 **751.10** Disruption of homeostasis of the Basal Ganglia circuit in Parkinson's disease. J. SCHMALZ; G. KUMAR*. *Univ. of Idaho.*

3:00 Z3 **751.11** Reduced functional connectivity of the dorsolateral prefrontal cortex in Parkinson's disease. T. IKUTA*; T. C. MYERS; M. C. INGE; A. W. COCHRAN. *Univ. of Mississippi.*

4:00 Z4 **751.12** Effects of inhibitory DREADD activation in the parafascicular thalamic nucleus on nigral and cortical high beta oscillations and motor behavior in hemiparkinsonian rats. E. BRAZHNIK*; N. NOVIKOV; M. W. PRESTON, Jr; A. R. WEISS; A. J. MCCOY; J. R. WALTERS. *NIH NINDS.*

1:00 Z5 **751.13** Mechanisms of cross-frequency coupling in network models of Parkinson's disease. G. MATO*; O. VELARDE; E. URDAPILLETA; D. DELLAVALE. *CNEA and CONICET, CONICET, Ctr. Atómico Bariloche and Inst. Balseiro, CONICET, Ctr. Atómico Bariloche and Inst. Balseiro, Lab. de Bajas Temperaturas y Dept. de Fisica Medica.*

2:00 Z6 **751.14** CSF proteins and longitudinal functional connectivity network changes in Parkinson's disease. M. C. CAMPBELL*; J. JACKSON; A. SNYDER; P. KOTZBAUER; J. PERLMUTTER. *Washington Univ. Sch. of Med., Washington Univ. in St. Louis, Washington Univ. Sch. of Med.*

3:00 Z7 **751.15** Origin of rest tremor in Parkinson's disease: Oscillating source in the brain or feedback induced instability in the sensorimotor loop? V. V. SHAH*; S. GOYAL; H. S. PALANTHANDALAM-MADAPUSI. *Indian Inst. of Technol. Gandhinagar, Univ. of California, Indian Inst. of Technol. Gandhinagar.*

4:00 Z8 **751.16** ▲ Blocking GABAergic input to the subthalamic nucleus improves motor deficits and modulates beta burst activity in the motor cortex of the hemiparkinsonian rat. M. W. PRESTON*, JR; H. BERMUDEZ CABRERA; N. NOVIKOV; J. R. WALTERS. *NIH NINDS.*

1:00 Z9 **751.17** The development of synchronized beta activity in the anterior cingulate cortex and its effects on executive function and pain processing in the hemiparkinsonian rat. A. R. WEISS*; Y. YANG; A. YIM; E. BRAZHNIK; N. NOVIKOV; M. W. PRESTON, Jr.; A. J. MCCOY; J. R. WALTERS. *NINDS.*

2:00 Z10 **751.18** The role of the gut microbiota in dopaminergic neuron vulnerability. D. KOUTZOUMIS*; M. V. VERGARA; J. A. PINO; J. G. BUDDENDORFF; R. J. MANDEL; G. E. TORRES. *Univ. of Florida Col. of Med., Univ. of Florida Col. of Med.*

3:00 Z11 **751.19** Automated measures from neuromelain MRI reveal neurodegeneration in REM sleep behaviour disorder. L. GRIFFANTI*; T. R. BARBER; K. M. BRADLEY; D. R. MCGOWAN; M. CRABBE; M. ROLINSKI; C. E. MACKAY; J. C. KLEIN; M. HU. *Univ. of Oxford, Oxford Parkinson's Dis. Ctr., Churchill Hosp., Churchill Hosp., Univesrity of Bristol.*

POSTER

752. Parkinson's Disease: Neuroprotection

Theme C: Neurodegenerative Disorders and Injury

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

1:00 Z12 **752.01** Neuroimaging of the glymphatic system in relation to motor skill in Parkinson's disease. E. M. MULLER-OEHRING*; E. PETERSON; J. Y. HONG; K. L. POSTON; H. M. BRONTE-STEWART; T. SCHULTE. *Stanford Univ. Sch. of Med., SRI Intl., Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med., Palo Alto Univ.*

2:00 Z13 **752.02** Co-administration of melatonin and dopaminergic agonist 7-OH-DPAT the production of BDNF as treatment in motor disorders in Parkinson's disease. M. T. IBARRA-GUTIERREZ*; J. RAMOS; C. CALDERON; M. MARTINEZ; M. AVILA-COSTA; V. ANAYA-MARTINEZ. *Univ. Autonoma de la Ciudad de Mexico, Univ. Nacional Autonoma de Mexico, UNAM, Neuromorphology Lab., UNAM Campus Iztacala.*

3:00 Z14 **752.03** Neuroprotective potential of 1-Methyltryptophan in a mouse model of 6-OHDA induced Parkinson's disease. B. KUMAR*; R. SODHI; R. SINGH; P. SAROJ; Y. BANSAL; R. BHANDARI; A. KUHAD. *Pharmacol. Lab.*

4:00 Z15 **752.04** Cdk5 inhibitory peptide prevents loss of dopaminergic neurons and alleviates behavioral changes in a MPTP induced Parkinson's disease mouse model. Y. HU*; R. HE; W. HU; Y. HUANG; M. XU. *Nanfang Hosp., Nanfang Hospital, The Southern Med. University, Guangzhou, China.*

1:00 Z16 **752.05** ▲ 7,8-Dihydroxyflavone (TrkB agonist) prevented the neuroinflammation and neurodegeneration via acting on sulfiredoxin-peroxiredoxin axis *in vitro* and *in vivo* MPTP model of Parkinson's disease in mice. M. KWATRA*; S. AHMED; B. GAWALI; V. NAIDU. *NIPER Guwahati.*

2:00 Z17 **752.06** Is brain-derived neurotrophic factor signaling critical for mediating the benefits of vagus nerve stimulation in preclinical Parkinson's disease? A. FARRAND*; K. HELKE; R. GREGORY; M. GOOZ; V. HINSON; H. BOGER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

3:00 Z18 **752.07** ▲ Chronic caffeine treatment protects against α-synucleinopathy by reestablishing autophagy activity in the mouse striatum. L. YANAN; R. XIANGPENG*; Z. WU; G. YINGZI; H. ZHIDONG; C. JIANG-FAN. *The Eye Hosp. of Wenzhou Med. Univ., Boston Univ. Sch. of Med.*

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* Indicates abstract's submitting author

4:00 AA1 **752.08** The neuroprotective effects of sumoylation in Parkinson's disease *in vitro* and mouse models. D. WILLIAMS; E. CARTIER; J. VIANA; Y. KIM*. *Delaware State Univ.*

1:00 AA2 **752.09** ● SPG101, a novel compound with spinogenic activity, ameliorates early synaptic loss in a mouse model of Parkinson's disease. B. J. SPENCER*; V. F. SIMMON; S. T. SARRAF; P. W. VANDERKLISH; R. A. RISSMAN. *UCSD, Spinogenix, Inc., The Scripps Res. Inst., UCSD, VA San Diego Healthcare Syst.*

2:00 AA3 **752.10** Altered expression of genes involved in ganglioside biosynthesis in substantia nigra neurons in Parkinson's disease brain and potential role in modulating vulnerability for neurodegeneration. M. VERMA*; J. SCHNEIDER. *Thomas Jefferson Univ.*

3:00 AA4 **752.11** Neuroprotection and immunomodulation of progesterone in the gut in a MPTP mouse model of Parkinson's disease. T. P. DIPAOLO*; H. JARRAS; M. BOURQUE; M. MORISSETTE; A. POIRIER; K. COULOMBE; D. SOULET. *Ctr. de Recherche du CHUQ-CHUL.*

4:00 AA5 **752.12** Preservation of astrocyte elevated gene-1 protects dopaminergic neurons *in vivo.* E. LEEM*; J. Y. KWON; S. Y. KIM; U. J. JUNG; S. R. KIM. *Kyungpook Natl. Univ., Dept. of Food Sci. and Nutrition, Pukyong Natl. Univ., Brain Sci. and Engin. Institute, Kyungpook Natl. Univ.*

1:00 AA6 **752.13** Therapeutic repurposing of dutasteride as an immunomodulatory drug for the treatment of gut inflammation in a mouse model of Parkinson's disease. A. POIRIER*; M. CÔTÉ; N. LITIM; H. JARRAS; S. AL SWEIDI; T. DI PAOLO; D. SOULET. *Ctr. De Recherche Du CHU De Québec (CHUL), Faculté de pharmacie, Univ. Laval.*

2:00 AA7 **752.14** Effect of the anti-depressant nefazodone on dyskinesia and psychosis in the MPTP-lesioned common marmoset. P. HUOT*; S. G. NUARA; D. BÉDARD; I. FROUNI; C. KWAN; J. C. GOURDON; A. HAMADJIDA. *Montreal Neurolog. Inst., McGill Univ., Montreal Neurolog. Inst., Univ. De Montréal, McGill Univ. Hlth. Ctr.*

3:00 AA8 **752.15** Neurorestorative effects of a combination of exercise and DHA intake in a mouse model of Parkinson's disease. O. KERDILES*; K. COULOMBE; C. TREMBLAY; V. ÉMOND; C. ROUXEL; M. SAINT-PIERRE; M. J. ZIGMOND; F. CICCHETTI; F. CALON. *Laval Univ., CHU de Québec-CHUL Res. Ctr., Inst. of Nutr. and Functional Foods, OptiNutriBrain Intl. Associated Lab., Univ. of Pittsburgh, Fac. of Medicine, Laval Univ.*

4:00 AA9 **752.16** Voluntary physical exercise improves subsequent motor impairments in a MitoPark mouse model of Parkinson's disease. Y. CHIANG; J. LAI; S. HSUEH; J. WU; K. CHEN*. *Taipei Med. Univ., Taipei Med. Univ. Hosp., Taipei Med. Univ., Taipei Med. Univ.*

1:00 AA10 **752.17** Progression of Parkinson's disease symptoms halted using dance over 3-years as assessed with MDS-UPDRS. K. A. BEARSS; J. F. DESOUZA*. *York Ctr. for Vision Res., York Ctr. For Vision Res.*

POSTER

753. Parkinson's Disease: Neuroprotective Mechanisms

Theme C: Neurodegenerative Disorders and Injury

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

1:00 AA11 **753.01** Neurodegeneration and locomotor dysfunction in *Drosophila* scarlet mutants. P. C. CUNNINGHAM*; K. WALDECK; B. GANETZKY; D. T. BABCOCK. *Lehigh Univ., Univ. of Wisconsin-Madison, Univ. Wisconsin.*

2:00 BB1 **753.02** Pramipexole induces autophagy through a D3R-dependent D2R-independent mechanism and mTORC1 inhibition without affecting translation. T. GONZÁLEZ-HERNÁNDEZ*; F. FUMAGALLO-READING; D. LUIS-RAVELO; P. BARROSO-CHINEA; J. CASTRO-HERNANDEZ; V. MESA-INFANTE; D. AFONSO-ORAMAS; J. RODRIGUEZ-RUIZ; J. LOPEZ-FERNANDEZ; I. CRUZ-MUROS; P. ABREU-GONZALEZ; A. FEBLES-CASQUERO; J. SALAS-HERNANDEZ. *Univ. de La Laguna, Univ. de La Laguna.*

3:00 BB2 **753.03** A DJ-1, PD related gene, regulates the astrogliosis for repair of injured brain. D. CHOI*; E. JOE. *Pharmacol. Lab. #401 Ajou Uni Med., Chronic Inflammatory Dis. Res. Center, Ajou Univ. Med., Dept. of Brain Sci.*

4:00 BB3 **753.04** Ciliary neurotrophic factor inhibits microglia-derived oxidative stress and protects dopamine neurons from MPP^+ neurotoxicity *in vivo.* J. BAEK*; J. JEONG; K. KIM; Y. CHUNG; B. JIN. *Kyung Hee Univ., Kyung Hee Univ.*

1:00 BB4 **753.05** The adaptive defense mechanism associated with HFE genotype and its response to paraquat-induced toxicity. I. SONG*; A. M. SNYDER; B. NEELY; J. R. CONNOR. *Penn State Col. of Med., Penn State Univ. Coll Med., Penn State Col. of Med., Penn State Col. of Med.*

2:00 BB5 **753.06** Increased ATP-derived extracellular adenosine is responsible for the over-activation of adenosine A_{2A} receptors causing neurodegeneration in 6-OHDA-hemiparkinsonian rats. R. A. CUNHA*; M. CARMO; P. M. CANAS; F. Q. GONÇALVES; J. OSES; F. D. FERNANDES; F. V. DUARTE; C. M. PALMEIRA; A. R. TOMÉ; P. AGOSTINHO; G. M. ANDRADE. *CNC -Center for Neurosci. and Cell Biol., Fac. of Med., Federal Univ. of Ceará.*

3:00 BB6 **753.07** Promoter identification and transcriptional regulation of the anti-inflammation gene cd200r1 in Parkinson's disease. S. LIN*; R. SHEN; L. HE; C. WU; J. DING. *Ruijin Hospital, Shanghai Jiaotong Univ. Scho, Univ. of California San Diego.*

4:00 BB7 **753.08** Small molecule recovery of mitochondrial injury by DOPAL-treated α-synuclein. J. B. WATSON*; A. YACOUB; A. KUNZ; B. ARANKI; G. SEROBYAN; W. COHN; J. P. WHITELEGGE; T. A. SARAFIAN. *David Geffen Sch. Med. UCLA.*

1:00 BB8 **753.09** Rapid influx of extracellular Zn^{2+} into substantia nigra pars compacta via AMPA receptor causes of paraquat-induced Parkinson's disease. H. MORIOKA*; R. NISHIO; A. TAKEUCHI; H. TAMANO; A. TAKEDA. *Univ. of Shizuoka.*

2:00 BB9 **753.10** Brain insulin distribution in rats following intranasal application. Y. PANG*; K. CARTER; L. FAN; A. BHATT. *Univ. of Mississippi Med. Ctr. / Dept of Pediatrics.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 BB10 **753.11** Chemically modified tetracycline (CMT) inhibits alpha-synuclein amyloid fibers formation and neuroinflammation. M. F. GONZALEZ-LIZARRAGA*; S. SOCÍAS; C. ÁVILA; D. PLOPER; L. BARBOSA; R. ITRI; L. PIETRASANTA; R. RAISMAN-VOZARI; R. CHEHÍN. *Inst. Superior de Investigaciones Biológicas, Inst. of Physics, Inst. de Física, Institud du Cerveau et de la Moelle Epinière.*

4:00 BB11 **753.12** A cell-specific iron suppressor exhibits neuroprotection in 6-ohda-induced pd model. M. MU*; K. RONG; X. QU; Z. QIAN; W. YUNG; Y. KE. *The Chinese Univ. of Hong Kong, Gerald Choa Neurosci. Centre, Fac. of Medicine, The Chinese Univ. of Hong Kong, Fudan Univ. Sch. of Pharm.*

1:00 BB12 **753.13** ▲ Tubacin, an HDAC6 inhibitor, induced neuroprotective effects in MPTP mice. Y. PARK*; S. SONG; T. KIM; J. KIM; H. SEO. *Hanyang Univ.*

2:00 BB13 **753.14** Neuroprotective role of the transcription factor Nfe2L1 in PD models. A. CHANDRAN*; P. C. MONTENEGRO LARREA; C. CHANDRASEKARAN; J. A. HENSEL; J. MOON; B. DEHAY; J. CANNON; M. ZHANG; E. BEZARD; J. ROCHET. *Purdue Univ., Purdue Inst. for Integrative Neuroscience, Purdue Univ., Neurosci. Cell Engin. Core, Purdue Univ., Inst. of Neurodegenerative Dis., CNRS, Inst. des Maladies Neurodégénératives, Purdue Univ., Purdue Univ.*

3:00 BB14 **753.15** Neuroprotective effect of the acetyl-L-carnitine (ALC) in a chronic MPTP-induced Parkinson's disease mouse model. S. M. LANTZ*; E. CUEVAS; J. RAYMICK; B. ROBINSON; J. HANIG; S. SARKAR. *NCTR/FDA, Food & Drug Admin. FDA, NCTR-FDA.*

4:00 BB15 **753.16** Effects of the alpha-synuclein-interacting protein endosulfine-alpha on PD-related neuropathology. C. CHANDRASEKARAN*; P. MONTENEGRO; J. HENSEL; A. CHANDRAN; E. FAGGIANI; G. ACOSTA; J. TANG; S. HERR; R. SHI; B. DEHAY; E. BEZARD; J. CANNON; J. ROCHET. *Purdue Univ., Purdue Inst. for Integrative Neuroscience, Purdue Univ., Univ. de Bordeaux, Inst. des Maladies Neurodégénératives, CNRS, Inst. des Maladies Neurodégénératives.*

1:00 BB16 **753.17** Dynamics of development of the synaptic processes in the substantia nigra and spinal cord on rotenon model of Parkinson's disease. V. SARGSYAN*; N. BEHNAM DEHKORDI. *Orbeli Inst. Physiol, Case Western Univ. Hosp.*

2:00 BB17 **753.18** Amelioration of Parkinsonian motor symptoms in rat via stochastic stimulation of the motor cortex. X. YANG*; R. PENG; Y. KE; W. YUNG. *The Chinese Univ. of Hong Kong, Fac. of Med.*

3:00 CC1 **753.19** The effects of growth hormone on motor findings and neuronal morphology in Parkinson model rats. O. KIRAZLI*; A. ARMAN; M. ÖZKAN; R. GULHAN; U. SEHIRLI. *Marmara Univ.*

4:00 CC2 **753.20** Formation of V-1/CP complex is required for the genetic co-regulation of adult nigrostriatal dopaminergic homeostasis via the Rho/MAL/SRF pathway *in vitro* and *in vivo.* I. KAWAHATA*; Y. LAI; J. MORITA; S. KATO; A. TABUCHI; M. TSUDA; C. SUMI-ICHINOSE; K. KONDO; Y. IZUMI; T. KUME; A. AKAIKE; K. OHASHI; K. MIZUNO; K. HASEGAWA; H. ICHINOSE; K. KOBAYASHI; T. YAMAKUNI. *Tohoku Univ., Fukushima Med. Univ., Univ. Toyama, Grad Sch. Med. Pharm Sci., Fujita Hlth. Univ., Kobe Pharmaceut. Univ., Kyoto Univ. Fac Pharmceut Sci., Sagamihara Natl. Hosp., Tokyo Inst. of Technol.*

1:00 CC3 **753.21** Extracellular Zn^{2+} influx into nigral dopaminergic neurons plays a key role for pathogenesis of 6-hydroxydopamine-induced Parkinson's disease in rats. A. TAKEDA*; R. NISHIO; H. MORIOKA; H. TAMANO. *Univ. Shizuoka.*

2:00 CC4 **753.22** Rescuing Parkinsonian motor symptoms by controlling rebound excitability. S. LEE*; S. CHAE; D. KIM. *Korea Advanced Inst. of Sci. and Technol.*

3:00 CC5 **753.23** Modulation of PINK1 and PARK2 gene expression in rotenone induced Parkinson's disease model. Z. A. RAZZAK*; K. RAFI; G. ABBAS; S. SIMJEE. *Intl. Ctr. for Chem. and Biol. S, Intl. Ctr. for Chem. and Biol. Sci., Intl. Ctr. for Chem. and Biol. Sci.*

4:00 CC6 **753.24** ● Quantifying the reproducibility of an *in vivo* assay: Examination of historical amantadine effects in the macaque model of L-DOPA-induced dyskinesia. E. Y. PIOLI*; P. STANLEY; Q. LI; R. KOZAK; M. POPIOLEK; E. BEZARD. *MOTAC, Pfizer Worldwide Res. and Develop., Motac Neurosci., Pfizer Worldwide Res. and Develop., Pfizer Inc, Inst. of Neurodegenerative Dis.*

POSTER

754. Parkinson's Disease: Symptoms and Emerging Therapeutic Avenues

Theme C: Neurodegenerative Disorders and Injury

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

1:00 CC7 **754.01** Resting-state brain small-world network property correlates with fatigue in PD patients. H. RAO*; X. ZHONG; R. BHAVSAR; E. MAMIKONYAN; F. YANG; H. LEI; J. A. DETRE; D. WEINTRAUB. *Univ. of Pennsylvania.*

2:00 CC8 **754.02** The deficits of tactile motion perception in Parkinson's disease. M. XIN*; Y. JIANG; T. SHEN; B. QU; B. ZHANG; H. LAI. *Zhejiang Univ., Zhejiang Univ., Zhejiang Univ.*

3:00 CC9 **754.03** ● The discovery of dopamine D1 positive allosteric modulators for the treatment of neuro-psychiatric disorders. K. A. SVENSSON*; J. P. BECK; J. HAO; J. SCHAUS; B. HEINZ; X. WANG; S. MITCHELL; K. WAFFORD; H. Y. MELTZER; C. R. YANG; R. F. BRUNS. *Eli Lilly and Co., Northwestern Feinberg Sch. of Med., ShangPharma.*

4:00 CC10 **754.04** Exercise improve spatio-temporal impairments of gait in the rat hemi-Parkinson's model via amelioration of deficits in dopamine transmission. Y. CHEN*; B. J. HOFFER; C. WANG; T. KUO. *Tri-Service Gen. Hospital/National Def. Medi, NIDA/NIH, Case Western Reserve Univ. Sch. of Med., Natl. Def. Med. Ctr., Natl. Taipei Univ. of Technol.*

1:00 CC11 **754.05** Biochemical and behavioral evidences for neuromodulatory properties of combination of ellagic acid, curcumin and mucuna pruriens against rotenone induced mice model of Parkinson's disease. D. K. KHATRI*; P. K. RANE; M. B. PANCHWADKAR. *Dr. D. Y. Patil Inst. of Pharmaceut. Scienc, Dr. D. Y. Patil Inst. of Pharmaceut. Scienc, Dr. D. Y. Patil Inst. of Pharmaceut. Sci. & Res.*

2:00 CC12 **754.06** ▲ A new combination therapy of Curcumin and Ginkgo biloba for mitochondrial biogenesis Implications for Parkinson's disease. P. K. RANE*; M. B. PANCHWADKAR; D. K. KHATRI. *Dr. D. Y. Patil Inst. of Pharmaceut. Scienc, Dr. D. Y. Patil Inst. of Pharmaceut. Sci. and Res., Dr. D. Y. Patil Inst. of Pharmaceut. Scienc.*

Wed. PM

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 CC13 **754.07** Paraquat treatment has chronic and progressive inflammatory effects in a murine model of Parkinson's disease. Z. DWYER*; C. RUDYK; J. ABDALI; S. BEAUCHAMP; A. DINESH; K. FARMER; P. SHAIL; A. DERKSEN; T. FORTIN; K. VENTURA; S. P. HAYLEY. *Carleton Univ.*

4:00 CC14 **754.08** ● Antidepressant-like effect of curcumin in a 6-OHDA rat model of Parkinson's disease. M. A. VITAL*; M. M. F. MACHADO; J. C. F. VIEIRA; T. B. BASSANI. *Univ. Federal Do Paraná.*

1:00 CC15 **754.09** Myricetin derivatives ameliorate deficits in 6-OHDA animal model of Parkinson's disease. D. THOMPSON; S. TRUESDELL; M. KOPANITSA; D. MISZCZUK; R. O. PUSSINEN*; W. DURHAM; P. MILIANI DE MARVAL; T. JENSEN; G. FLIK; E. SEWARD; P. CRACKETT; P. BURY; D. SMALL; A. J. NURMI. *GRDG Sci., Charles River Discovery, UK Dementia Res. Institute, Imperial Col., Charles River Discovery, Charles River Discovery, Charles River Discovery, Charles River Labs.*

2:00 CC16 **754.10** Myeloperoxidase exacerbates motor disabilities in the A53T-a-synuclein mouse model of Parkinson's disease and is associated with increased nitration and aggregation of a-synuclein. W. F. REYNOLDS*; R. A. MAKI. *Sanford Burnham Prebys Med. Disc Inst.*

3:00 DD1 **754.11** Physical activity optimizes circuit-specific cellular metabolism in neuroplasticity: A role for hypoxia-inducible factor-1 and its downstream targets. M. W. JAKOWEC*; M. R. HALLIDAY; D. ABEYDEERA; G. M. PETZINGER. *USC.*

4:00 DD2 **754.12** Effects of $5HT_{1A}$ receptor agonist on spontaneous inspiratory motor output in two Parkinson's disease rat models. R. M. WADOLOWSKI; A. BROGAN; J. J. TUCHINSKY; I. C. SOLOMON*. *Stony Brook Univ.*

POSTER

755. Parkinson's Disease: Preclinical Animal Studies: Cellular and Molecular II

Theme C: Neurodegenerative Disorders and Injury

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

1:00 DD3 **755.01** The anti-dyskinetic effect of combined $5\text{-}HT_{2A}$receptor blockade with $mGlu_2$receptor positive allosteric modulator activationin the 6-OHDA lesioned rat model of Parkinson's disease. A. HAMADJIDA*; E. BOURGEOIS-CAYER; S. BELLIVEAU; I. FROUNI; C. KWAN; D. BÉDARD; P. HUOT. *Montreal Neurolog. Inst., McGill Univ., Univ. de Montréal, McGill Univ., McGill Univ. Hlth. Ctr.*

2:00 DD4 **755.02** Pharmacokinetic profile of the highly selective $5\text{-}HT_{2A}$ receptor antagonist EMD-281,014 in the rat and the common marmoset. D. BÉDARD*; A. HAMADJIDA; F. GAUDETTE; S. G. NUARA; J. C. GOURDON; F. BEAUDRY; P. HUOT. *Montreal Neurolog. Inst., McGill Univ., Ctr. de Recherche du Ctr. Hospitalier de l'Université de Montréal, McGill Univ., Faculté de médecine vétérinaire, Univ. de Montréal, McGill Univ. Hlth. Ctr., McGill Univ.*

3:00 DD5 **755.03** High dose of EMD-281,014, a highly selective $5\text{-}HT_{2A}$receptor antagonist, does not lead to further reduction of dyskinesia or psychosis, in the MPTP-lesioned marmoset model of Parkinson's disease. S. G. NUARA*; A. HAMADJIDA; I. FROUNI; C. KWAN; D. BÉDARD; J. C. GOURDON; P. HUOT. *McGill Univ., Montreal Neurolog. Inst., McGill Univ., Univ. de Montréal, McGill Univ., McGill Univ. Hlth. Ctr.*

4:00 DD6 **755.04** The anti-dyskinetic effect of combined $5\text{-}HT_{2A}$ receptor blockade with $mGlu_2$ receptor orthosteric activation in the 6-OHDA lesioned rat model of Parkinson's disease. I. FROUNI*; É. BOURGEOIS-CAYER; S. BELLIVEAU; D. BÉDARD; A. HAMADJIDA; P. HUOT. *Univ. De Montréal, Montreal Neurolog. Inst., McGill Univ., McGill Univ., McGill Univ. Hlth. Ctr.*

1:00 DD7 **755.05** The anti-dyskinetic effect of $5\text{-}HT_3$ receptor blockade with ondansetron and granisetron in the 6-OHDA-lesioned rat model of Parkinson's disease. C. KWAN*; I. FROUNI; D. BÉDARD; A. HAMADJIDA; P. HUOT. *Montreal Neurolog. Inst., Univ. de Montréal, McGill Univ., McGill Univ., McGill Univ. Hlth. Ctr.*

2:00 DD8 **755.06** MHE173 ameliorates motor deficits and dopaminergic neuronal damage induced by a specific pathobiont in mice. J. CHOI*; S. LIM; D. KIM; M. OH. *Kyung Hee Univ.*

3:00 DD9 **755.07** Neuroprotective effects of MHE100 in amyloid beta-induced Alzheimer's disease models. N. KIM*; J. CHOI; S. PARK; J. LEE; M. OH. *Kyung Hee Univ., Naturebio.*

4:00 DD10 **755.08** Virally-mediated expression of the dopamine autoreceptor in the dorsal raphe nucleus blocks levodopa-induced dyskinesia development by inhibiting "false DA neurotransmission" from serotonin neurons. R. C. SELLNOW*; A. R. WEST; K. STEECE-COLLIER; N. E. CHAMBERS; I. M. SANDOVAL; M. J. BENSKEY; C. R. BISHOP; F. P. MANFREDSSON. *Michigan State Univ., Michigan State Univ., Chicago Med. Sch. at RFUMS, Binghamton Univ., Michigan State Univ., Mercy Hlth. St. Mary's.*

1:00 DD11 **755.09** Columnar injector for intracerebral cell therapy. B. SONG*; P. R. LEBLANC; M. FEITOSA; K. KIM; J. S. SCHWEITZER. *McLean Hosp. Harvard Med. Sch., Program in Neurosci. and Harvard Stem Cell Institute, McLean Hospital, Harvard Med. Sch., Massachusetts Gen. Hosp.*

2:00 DD12 **755.10** Preclinical characterization of AN317, a novel subtype selective nicotinic α6 receptor agonist with potential in Parkinson's disease. T. DYHRING; K. S. NIELSEN*; D. AMRUTKAR; P. K. AHRING; J. KLEIN; M. VAN HOUT; D. PETERS; D. F. EMERICH; L. WAHLBERG; P. CHRISTOPHERSEN. *Saniona A/S, Univ. of Copenhagen, DanPET AB, Gloriana Therapeutics, Inc.*

3:00 DD13 **755.11** Neuro-avatar: A reverse translational model of an ongoing cell therapy clinical trial for Parkinson's disease. A. S. WELLEFORD*; N. EL SEBLANI; C. G. VAN HORNE; J. E. QUNITERO; F. POMERLEAU; G. A. GERHARDT. *Univ. of Kentucky.*

4:00 DD14 **755.12** Immunomodulation of mature dendritic cells in Parkinson's disease. A novel role of intracellular toll like receptors. I. PATERNITI*; M. CAMPOLO; M. CORDARO; G. CASILI; M. LANZA; A. FILIPPONE; E. ESPOSITO; S. CUZZOCREA. *Univ. of Messina.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 DD15 **755.13** The effects of stem cell therapy on adult mouse neurogenesis in Parkinson's disease. A. NELKE; S. GARCIA-LOPEZ; A. MARTINEZ-SERRANO; M. P. PEREIRA*. *Ctr. De Biologia Mol. Severo Ochoa.*

2:00 DD16 **755.14** Monitoring dopamine dynamics in a G2019S LRRK2 rat model of Parkinson's disease. Z. SHU*; H. A. LAM; A. B. WEST; N. T. MAIDMENT. *UCLA, UAB.*

3:00 DD17 **755.15**▲Evaluating the effects of sub-anesthetic ketamine on microglia morphology in a pre-clinical model of L-DOPA induced dyskinesia. A. E. POTTENGER*; M. J. BARTLETT; T. FALK; H. W. MORRISON. *Univ. of Arizona, Univ. of Arizona Col. of Med., Univ. of Arizona Col. of Med., Univ. of Arizona Col. of Nursing.*

4:00 DD18 **755.16** ● Superior survival, innervation, and functional recovery by day 17 differentiated dopamine stem cells in a rat model of Parkinson's disease. B. M. HILLER*; D. J. MARMION; C. A. CHAVEZ; C. A. THOMPSON; N. A. ELLIOTT; C. W. MCMAHON; J. H. KORDOWER. *Rush Univ. Med. Ctr., Rush Univ. Med. Ctr., Fujifilm Cell. Dynamics Inc., Rush Univ. Med. Ctr.*

1:00 EE1 **755.17** Controlled neural organoids grafting promotes functional recovery in experimental parkinsonism. E. FAGGIANI; M. FEYEUX; A. R. CROSSMAN*; K. ALESSANDRI; F. NAUDET; A. BENAZZOUZ; P. COHEN; P. NASSOY; E. BEZARD. *Inst. des Maladies Neurodégénératives, Inst. des Maladies Neurodégénératives, The Univ. of Manchester, Inst. Optique d'Aquitaine, Univ. Bordeaux Segalen, Inst. of Neurodegenerative Dis.*

2:00 EE2 **755.18** Effects of acupuncture on the levodoap-induced dykinesia in pitx3-deficient transgenic mice. H. PARK*; Y. KIM; S. AHN; T. HWANG. *Col. of Korean Med., Acupuncture and Meridian Sci. Res. Center, Kyung Hee Univ., Dept. of Korean Med. Science, Grad. Sch. of Korean Medicine, Kyung Hee Univ., Acupuncture and Meridian Sci. Res. Ctr., Acupuncture and Meridian Sci. Res. Ctr.*

3:00 EE3 **755.19** Comparison between brain size and shape in two rat strains commonly used in xenograft studies for more precise targeting in pre-clinical validation of stem cell derived neurons. B. MATTSSON*; D. HOBAN; T. CARDOSO; S. GREALISH; A. ADLER; M. P. PARMAR. *Lund Univ.*

4:00 EE4 **755.20** Chronic treatment of LRRK2 inhibitors in diet produces an effect in the lung: Comparison of the effect in rats vs. mice. R. HODGSON; T. PARKKARI*; T. N. MARTINEZ; M. J. FELL; D. BRYCE; T. HEIKKINEN; J. BAILY; A. BRADLEY; J. RYTKÖNEN; M. TAAVITSAINEN; J. B. KOPRICH; T. LANZ; M. A. BAPTISTA. *Charles River Discovery, The Michael J. Fox Fndn., Merck & Co. Inc., Charles River Discovery, Atuka Inc., Pfizer Inc.*

1:00 EE5 **755.21** Assessment of the anti-parkinsonian effects of the potent and selective LRRK2 kinase inhibitor PF-360 in the AAV-A53T mouse model of Parkinson's disease. R. HODGSON; T. PARKKARI; T. MARTINEZ; M. J. FELL; D. BRYCE; T. HEIKKINEN; T. BRAGGE*; L. TÄHTIVAARA; M. TAAVITSAINEN; J. B. KOPRICH; T. LANZ; M. A. BAPTISTA. *Charles River Discovery, The Michael J. Fox Fndn., Merck & Co. Inc., Atuka Inc., Pfizer Inc.*

2:00 EE6 **755.22** ● PR001 and PR002 modify motor phenotype in a rat model of Parkinson's disease. L. ZOGRAFOS; D. ARMSTRONG; W. DAVIES; M. KOPANITSA; T. BRAGGE; L. TAHTIVAARA; R. HODGSON*. *Parkure Ltd, Brainwave Discovery Ltd, Univ. of Edinburgh, Charles River Discovery, UK Dementia Res. Institute, Imperial Col.*

3:00 EE7 **755.23** ● *Drosophila*-based phenotypic drug discovery for neurodegeneration: A case study in Parkinson's disease. D. ARMSTRONG*; L. ZOGRAFOS; K. STYCZYńSKA-SOCZKA; L. ZECHINI; R. W. DAVIES. *Univ. of Edinburgh, Parkure Ltd, Brainwave-Discovery Ltd.*

POSTER

756. Parkinson's Disease: Preclinical Animal Studies: Stimulation and Physiology

Theme C: Neurodegenerative Disorders and Injury

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

1:00 EE8 **756.01** Optical Ca2+ imaging of astrocyte activity during STN DBS. J. TREVATHAN*; A. J. ASP; E. N. NICOLAI; K. LUDWIG; J. LUJAN. *Mayo Clin. Grad. Sch., Mayo Grad. Sch., Mayo Clin. Grad. Sch., Mayo Clin., Mayo Clin.*

2:00 EE9 **756.02** ● Movement-based classification of striatal ensembles during DBS. A. J. ASP*; J. TREVATHAN; E. N. NICOLAI; K. LUDWIG; J. LUJAN. *Mayo Grad. Sch., Mayo Clin. Grad. Sch., Mayo Clin. Grad. Sch., Mayo Clin.*

3:00 EE10 **756.03** ● Mathematical characterization of dopamine release evoked by electrical stimulation in a 6-hydroxydopamine-lesioned rodent model. S. PAEK*; J. TREVATHAN; J. LUJAN. *Mayo Clin. Grad. Sch. of Biomed. Sci., Mayo Clin. Grad. Sch., Mayo Clin.*

4:00 EE11 **756.04** ● Predictive encoding of motor behavior in the SMA is disrupted in parkinsonism. H. E. BAKER*; C. M. HENDRIX; D. L. BAUER; Y. YU; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota Twin Cities, Univ. of Minnesota.*

1:00 EE12 **756.05** Modulating neural oscillations associated with parkinsonism using phase feedback and deep brain stimulation *in vivo*. D. ESCOBAR SANABRIA*; L. A. JOHNSON; Y. YU; J. ZHANG; S. NEBECK; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 EE13 **756.06** Cue related LFP activity in the bi-lateral SMA and behavioral response is altered in the MPTP NHP model of PD. D. L. BAUER*; C. M. HENDRIX; H. E. BAKER; Y. YU; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota, Univ. of Minnesota.*

3:00 EE14 **756.07** Bayesian adaptive dual control of deep brain stimulation in a computational model of Parkinson's disease. L. GRADO*; M. D. JOHNSON; T. I. NETOFF. *Univ. of Minnesota, Univ. of Minnesota.*

4:00 FF1 **756.08** Network-level differences in fMRI BOLD signaling for orientation-selective deep brain stimulation. J. SLOPSEMA*; L. J. LEHTO; Y. ERYAMAN; N. KOBAYASHI; H. MIN; K. H. LEE; S. MANGIA; S. MICHAELI; M. D. JOHNSON. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Mayo Clin., Mayo Clin.*

1:00 FF2 **756.09** Features of evoked compound action potentials in non-human primate thalamic deep brain stimulation. J. ROSING*; E. M. BELLO; L. WILMERDING; J. KRIEG; A. DOYLE; M. JOHNSON. *Univ. of Minnesota Twin Cities, Univ. of Minnesota Twin Cities, Univ. of Minnesota Twin Cities.*

2:00 FF3 **756.10** Exercise as a treatment for Parkinson's disease: The role of astrocytes in circuit-specific, exercise-induced neuroplasticity. A. LUNDQUIST*; M. R. HALLIDAY; G. M. PETZINGER; M. W. JAKOWEC. *USC.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 FF4 **756.11** The effects of deep brain stimulation of the globus pallidus internus on reach behavior and neuronal activity in the primary motor cortex. M. SCHEITEL*; L. A. JOHNSON; D. ESCOBAR SANABRIA; S. NEBECK; J. ZHANG; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota Med. Sch., Univ. of Minnesota Dept. of Neurol., Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota Dept. of Neurol.*

4:00 FF5 **756.12** ● Intensity and cycle rate impact the effectiveness of subthalamic coordinated reset deep brain stimulation. J. WANG*; S. P. FERGUS; S. D. NEBECK; L. A. JOHNSON; D. E. SANABRIA; J. ZHANG; S. KULKARNI; H. BOKIL; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota, Boston Scientific Neuromodulation, Univ. of Minnesota.*

1:00 FF6 **756.13** The effects of deep brain stimulation and L-dopa on single unit activity in primary motor cortex of an MPTP treated Rhesus macaque during a reach and retrieval task. S. NEBECK*; L. A. JOHNSON; J. ZHANG; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota Twin Cities, Univ. of Minnesota Dept. of Neurol., Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota Dept. of Neurol.*

2:00 FF7 **756.14** Serial polarization-sensitive optical coherence tomography of the thalamus for DBS applications. M. YEATTS*; M. D. JOHNSON; E. M. BELLO; C. LUI; S. R. HEILBRONNER; T. AKKIN. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

3:00 FF8 **756.15** Parkinsonism alters beta burst dynamics across the basal ganglia and motor cortex. Y. YU*; L. A. JOHNSON; S. D. NEBECK; D. E. SANABRIA; J. ZHANG; J. WANG; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota Dept. of Neurol., Univ. of Minnesota Dept. of Neurol.*

4:00 FF9 **756.16** Relative effects of therapeutic subthalamic and pallidal deep brain stimulation on antidromic activation of the primary motor cortex. L. A. JOHNSON*; J. WANG; S. NEBECK; D. ESCOBAR SANABRIA; J. ZHANG; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota, Univ. of Minnesota.*

1:00 FF10 **756.17** Electrical power delivery predicts therapeutic efficacy in a mouse model of subthalamic nucleus deep brain stimulation for Parkinson's disease. J. SCHOR*; A. NELSON. *Univ. of California San Francisco.*

2:00 FF11 **756.18** Exploring the role of non-invasive spinal cord stimulation in a parkinsonian rat model. M. F. ALAMOS*; S. GALLEGOS; A. MARTINEZ; C. JURI; R. A. FUENTES. *PONTIFICIA UNIVERSIDAD Católica DE CHILE, UNIVERSIDAD DE CHILE, Univ. De Chile.*

3:00 FF12 **756.19** Characterization of spontaneous and evoked neural activity in the substantia nigra pars reticulata for the accurate placement of deep brain stimulation electrodes. H. LI*; G. C. MCCONNELL. *Stevens Inst. of Technol.*

4:00 FF13 **756.20** ● Measure of the phase-amplitude coupling in a rat model of Parkinson's disease. J. VOLLE*; A. WOźNIAK-KWAśNIEWSKA; A. EVRARD; C. RUGGIERO; C. ROUCARD; Y. ROCHE; V. DUVEAU. *Synapcell.*

1:00 FF14 **756.21** L-DOPA-induced striatal gamma oscillations split into low- and high-frequency components following ketamine exposure in an animal model of L-DOPA-induced dyskinesia. T. YE*; M. J. BARTLETT; T. FALK; S. L. COWEN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

2:00 FF15 **756.22**▲The relationship between local field potential activity in the basal ganglia and sleep-wake behavior in parkinsonism. E. MARSHALL*; S. DEYO; D. ESCOBAR; A. AMUNDSON; J. ZHANG; M. D. JOHNSON; G. MOLNAR; L. JOHNSON; J. VITEK. *Univ. of Minnesota.*

POSTER

757. Huntington's Disease: Molecular Mechanisms II

Theme C: Neurodegenerative Disorders and Injury

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

1:00 FF16 **757.01** Alterations in Lamin B1, a new pathological mechanism in Huntington's disease. M. GARCIA-FORN; R. ALCALÁ-VIDA; J. CREUS-MUNCUNILL; C. CASTANY-PLADEVALL; K. CRESPÍ-VÁZQUEZ; J. ALBERCH; E. PEREZ-NAVARRO*. *Dept. Biomed. Sciences, Univ. of Barcelona, Inst. d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Inst. de Neurociències, Univ. of Barcelona, Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas.*

2:00 FF17 **757.02** Assessing the effect of ceftriaxone on glutamate dynamics and synaptic plasticity in the Q175FDN mouse model of Huntington disease. C. WILKIE*; C. BENSON; M. P. PARSONS. *Mem. Univ. of Newfoundland, Mem. Univ.*

3:00 GG1 **757.03** A novel assay for sensitive and automated detection of pathological progression-related seeding activities in HD patient cerebrospinal fluids. C. LEE*; N. WANG; K. SHEN; M. STRICOS; P. LANGFELDER; K. H. CHEON; E. P. CORTES; R. DAMOISEAUX; H. V. VINTERS; J. G. VONSATTEL; N. WEXLER; J. FRYDMAN; X. W. YANG. *UCLA, UCLA, Stanford Univ., Columbia Univ. Med. Ctr., UCLA, David Geffen Sch. of Med. at UCLA, Columbia Univ., Hereditary Dis. Fndn., UCLA.*

4:00 GG2 **757.04** Integrative mouse genetics and systems biology to dissect Huntington's disease pathogenesis and aging in mice. N. WANG*; P. LANGFELDER; J. RICHMAN; M. STRICOS; F. GAO; X. GU; C. ZHU; L. RAMANATHAN; C. PARK; L. YANG; T. VOGT; J. AARONSON; J. ROSINSKI; G. COPPOLA; S. HORVATH; X. W. YANG. *UCLA, UCLA, CHDI Foundation/CHDI Mgmt. Inc., UCLA.*

1:00 GG3 **757.05** Using TRiC or TRiC-based reagents to rescue cortico-striatal atrophy in Huntington disease. C. CARMONA*; Z. BABIC; Y. GU; J. RAUS; C. WU; W. C. MOBLEY. *UCSD, UCSD, Univ. of California, San Diego Sch. of Med.*

2:00 GG4 **757.06** Changes in specific PT and IT corticostriatal projections in the Q175 mouse model of Huntington's disease. T. PANCANI*; V. BEAUMONT; J. KONDAPALLI; D. WOKOSIN; D. SURMEIER. *Northwestern Univ. Feinberg Sch. of Medicin, CHDI Mgmt., Northwestern Univ., Northwestern Univ. Dept. of Physiol.*

3:00 GG5 **757.07** Cell type-specific transcriptome profiling of Huntington's disease mouse models. M. THERRIEN*; M. HEIMAN. *Broad Inst., MIT.*

● Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 GG6 **757.08** ● Development of hit validation and deconvolution assays to triage potential small molecule modulators of mutant Huntingtin levels identified in a phenotypic screen in q48 human embryonic stem cells. V. LAZARI; B. NANCOLAS; M. MATEUS; A. MUKONOWESHURO; E. THATCHER; M. IOVINO; A. BARNARD; T. LADDUWAHETTY; P. BRECCIA; D. MACDONALD*; I. MUNOZ-SANJUAN; C. DOMINGUEZ; J. VOIGT; E. DOHERTY; G. MCALLISTER. *Charles River, CHDI Management, Inc.*

1:00 GG7 **757.09** ● Optimization of rho kinase inhibitors towards potent, selective and CNS-penetrant molecules suitable for proof-of-concept studies in HD models. P. MITCHELL; D. TODD; T. LADDUWAHETTY; K. MATTHEWS; L. URBONAS; E. THATCHER; C. LUCKHURST; A. HAUGHAN; M. BARNES; A. CHAUHAN; E. SAVILLE-STONES; A. STOTT; H. PATEL; L. BLOM; G. MCALLISTER; R. CACHOPE; M. MAILLARD; M. ROSE; M. LEE; V. BEAUMONT*; I. MUNOZ-SANJUAN; C. DOMINGUEZ. *Charles River, Mission Therapeut., CHDI Mgmt.*

2:00 GG8 **757.10** Spatial Ca^{2+}sensing of vesicles determine their directionality along microtubules. C. SCARAMUZZINO*; F. SAUDOU. *Grenoble Inst. Des Neurosciences, INSERM Res. Ctr. U1216, CHU Grenoble Alpes.*

3:00 GG9 **757.11** Mutant Huntingtin proteotoxicty suppression by NAD salvage pathway proteins. A. RUETENIK*; A. BARRIENTOS. *Univ. of Miami Sch. of Med., Univ. of Miami.*

4:00 GG10 **757.12** Palmitoylation and phosphorylation of huntingtin (HTT) regulate each other and promote HTT degradation. F. L. LEMARIE*; D. D. O. MARTIN; S. S. SANDERS; M. R. HAYDEN. *The Univ. of British Columbia, The Univ. of British Columbia, The Univ. of British Columbia.*

1:00 GG11 **757.13** Glial progenitor cells derived from Huntington's disease hESCs exhibit a cell-autonomous defect in the terminal differentiation of glia. A. BENRAISS*; M. OSIPOVITCH; S. DHALIWAL; A. CORNWELL; L. ZOU; D. CHANDLER-MILITELLO; S. WANG; X. LI; S. BENRAISS; R. AGATE; A. C. LAMPP1; A. ASENJO-MARTINEZ; M. S. WINDREM; S. A. GOLDMAN. *Univ. of Rochester Med. Ctr., Univ. of Copenhagen.*

2:00 GG12 **757.14** Intranasal delivery of mutant huntingtin-silencing antisense oligonucleotide nanoparticles for Huntington disease therapy. A. E. ALY*; N. S. CARON; H. FINDLAY-BLACK; M. R. HAYDEN. *Univ. of British Columbia.*

1:00 DP04/GG13 **757.15** (Dynamic Poster) Elucidating the role of DNA repair dynamics in a human neuron model of Huntington's disease. L. BARBÉ*; S. FINKBEINER; J. KAYE. *Gladstone Inst.*

4:00 GG14 **757.16** Extracellularmatrix expression and function in Huntington's disease induced pluripotent stem cell-derived cell models. S. HERNANDEZ*; C. GEATER; R. LIM; L. SALAZAR*; A. REYES-ORTIZ; J. STOCKSDALE; J. WU; M. CASALE; D. KILBURN; L. HEISER; J. GRAY; P. GERSHON; L. M. THOMPSON; E. FRAENKEL; D. HOUSMAN. *Univ. of California, Irvine, Oregon Hlth. and Sci. Univ., MIT.*

1:00 GG15 **757.17** Bioenergetic deficits in Huntington's disease iPSC-derived neurons and rescue with glycolytic metabolites. S. AKIMOV*; A. J. DAIGLE; E. FRAENKEL; R. S. ATWAL; J. F. GUSELLA; M. E. MACDONALD; J. KAYE; S. FINKBEINER; V. B. MATTIS; C. M. TOM; C. SVENDSEN; A. R. KING; Y. CHEN; J. T. STOCKSDALE; R. G. LIM; M. CASALE; P. WANG; L. M. THOMPSON; T. RATOVITSKI; N. ARBEZ; C. A. ROSS. *Johns Hopkins University, Sch. of Med., MIT, Massachusetts Gen. Hosp., Univ. of California, Cedars-Sinai Med. Ctr., Univ. of California, Johns Hopkins Univ. Sch. of Med.*

2:00 GG16 **757.18** Quantification and epigenetic analysis of brain derived neurotrophic factor in Huntington's disease. P. A. DESPLATS*; A. GUTIERREZ; J. BLOOM; E. A. THOMAS. *UCSD, Univ. California San Diego, Univ. of California San Diego, The Scripps Res. Inst.*

3:00 GG17 **757.19** Assessment of a selective histone deacetylase inhibitor as a therapeutic candidate in models of Huntington's disease. K. HECKLAU; F. YILDIRIM*. *Charite Med. Sch.*

4:00 HH1 **757.20** Modulation of corticostriatal networks as a biomarker for onset of prodromal impairments in Huntington's disease and as a potential target for endocannabinoid pharmacological intervention. A. Y. KIM*; N. E. ZLEBNIK; I. GILDISH; D. P. COVEY; J. F. CHEER. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

POSTER

758. Huntington's Disease: Animal Models and Clinical Trials

Theme C: Neurodegenerative Disorders and Injury

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

1:00 HH2 **758.01** BACHD/dnSNARE mice reveal the contribution of gliotransmission to Huntington's disease pathogenesis. A. KING*; T. WOOD; E. RODRIQUEZ; M. GRAY. *Univ. of Alabama At Birmingham, Univ. of Alabama.*

2:00 HH3 **758.02** Primary cortical neurons derived from zQ175 knock-in mice co-cultured with wildtype astrocytes as a model for Huntington's disease therapy. R. VAN DE BOSPOORT; A. STRIJBOSCH; M. DA SILVA; W. GRERNRUM; N. VAN DEN BERG; S. LACHIZE; S. DIJKSTRA*; P. MITCHELL; D. F. FISCHER; G. MCALLISTER; S. JANG; I. MUNOZ-SANJUAN. *Charles River, Charles River, CHDI Fndn., CHDI Fndn.*

3:00 HH4 **758.03** Assessing altered cortico-basal ganglia circuitry in a novel AAV-mediated non-human primate model of Huntington's disease. A. R. WEISS*; D. BUTTON; J. DOMIRE; W. LIGUORE; Z. LIU; C. KROENKE; J. MCBRIDE. *Oregon Natl. Primate Res. Ctr., Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

4:00 HH5 **758.04** Comprehensive characterization of R6/2 transgenic mice: A longitudinal study to correlate progressive behavioral deficit with *in vivo* imaging and histological analysis monitoring the distribution of mutant Huntingtin. H. PARK*; K. PARK; S. PARK; M. LEE; Y. KIM; P. SWEENEY; W. IM; M. KIM. *Naason Sci. Inc., Seoul Natl. Univ. Hosp.*

1:00 HH6 **758.05** ● Astrocyte transduction is required for rescue of behavioral phenotypes in the YAC128 mouse model with AAV-RNAi mediated HTT lowering therapeutics. L. M. STANEK*; B. R. MASTIS; J. BU; A. RICHARDS; L. S. SHIHABUDDIN. *Sanofi.*

Wed. PM

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 HH7 **758.06** Excitatory and inhibitory synaptic signaling is differentially affected in D1 and D2 MSNs in the Q175+/- mouse model of Huntington's disease. J. GOODLIFFE*; A. RUBAKOVIC; M. SUMIOKA; J. I. LUEBKE. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Boston Univ.*

3:00 HH8 **758.07** Neuroprotectve effects of melatonin and RNAi in an experimental model of huntington disease by quinolinic acid model. R. AVILES REYES*; P. PALACIOS; M. VEGA. *Univ. of Wisconsin, Pontifical Catholic Univ., Med. Sevices.*

4:00 HH9 **758.08** Nitric oxide as an exercise induced mitochondrial function modulator in the CAG140KI Huntington's mouse model. C. C. CALDWELL*; E. CADENAS; M. W. JAKOWEC; G. PETZINGER. *USC Sch. of Pharm., USC, USC, USC.*

1:00 HH10 **758.09** Normalizing glucocorticoid levels in R6/2 mice ameliorates metabolic and neuropathological symptoms of Huntington's disease. B. D. DUFOUR*; J. L. MCBRIDE. *Univ. of Washington, Oregon Hlth. & Sci. Univ., Oregon Natl. Primate Res. Ctr.*

2:00 HH11 **758.10** Neurotherapeutic potential of pde 5 inhibitor againsts quinolinic acid evoked neurotoxicity in experimental Huntington's disease. P. SAROJ*; Y. BANSAL; R. SINGH; S. P. SAH; A. KUHAD. *Panjab Univ., Panjab Univ.*

3:00 HH12 **758.11** ● Cortical and striatal neuronal oscillatory activity in the zQ175 knock-in mouse model of Huntington's disease. S. ZHONG*; P. ROBICHAUD; A. GHAVAMI; V. BEAUMONT; R. CACHOPE. *PsychoGenics Inc., CHDI Foundation, Inc.*

4:00 HH13 **758.12** Longitudinal assessment of an AAV delivered allele-specific gene modifier in the YAC128 transgenic mouse model of Huntington's disease. K. FINK*; P. DENG; J. HALMAI; S. DEL CAMPO; I. M. SANDOVAL; F. P. MANFREDSSON; J. NOLTA; D. SEGAL. *UC Davis Med. Ctr., Univ. of California, Davis, Michigan State Univ., Michigan State Univ., Univ. of California, Davis, Univ. of California Davis.*

1:00 HH14 **758.13** ● Comparison of intrinsic membrane and synaptic properties of striatal medium spiny projection neurons from both D1-GFP and D2-GFP x Q175 mouse models of Huntington's disease. H. B. FERNANDES; G. TOMBAUGH; J. SANCHEZ-PADILLA; S. GELMAN; K. KRETSCHMANNOVA; J. PALMA; A. GHAVAMI; V. BEAUMONT; R. CACHOPE*. *PsychoGenics Inc, CHDI Mgmt. / CHDI Fndn.*

2:00 HH15 **758.14**▲Tissue catecholamine content in the PFC, NAS, and STR of the HttQ111/+ mouse model of Huntington's disease at 18 months of age. L. N. HOFFMANN; X. M. DIAS-WAUGHMAN; A. A. ALPERS; R. G. MARX; J. A. O'SELL; J. M. FINLAY*. *Western Washington Univ.*

3:00 HH16 **758.15**▲Curcumin coated with solid lipid particles protect medium spiny neurons in YAC128 mouse model of huntington's disease. S. J. HEILEMAN*; A. AL-GHARAIBEH; R. CULVER; J. ROSSIGNOL; P. MAITI; G. L. DUNBAR. *Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst. Lab., Central Michigan University/St. Mary's of Michigan, Central Michigan Univ.*

4:00 HH17 **758.16** Development and characterization of a novel bac transgenic mouse model of Huntington's disease with elongated pure cag repeats. X. GU*; J. RICHMAN; P. LANGFELDER; N. WANG; L. YANG; X. YANG. *Univ. of California Los Angeles, Univ. of California at Los Angeles.*

1:00 II1 **758.17** Suppression of mutant huntingtin in cortical efferents improves behavioral inflexibility and corticostriatal information flow in Huntington's disease mice. A. M. ESTRADA SANCHEZ*; C. L. BLAKE; A. G. HOWE; S. BARTON; G. V. REBEC. *Gurnick Acad. of Med. Arts, Indiana Univ., UCLA.*

2:00 II2 **758.18** Striatal neuropathology induced by hypothalamic overexpressionof huntingtin fragments using adeno-associated viral vectors in mice. R. N. SOYLU*; N. ADLESIC; M. DAVIDSSON; T. BJORKLUND; M. BJORKQVIST; A. PETERSEN. *TNU, Dept. of Exp. Med. Sci., Lund Univ., Mol. Neuromodulation, Wallenberg Neurosci., Lund Univ.*

3:00 II3 **758.19** Early impairment of thalamocortical circuit activity and coherence in a mouse model of Huntington's disease. E. J. DONZIS*; J. L. SHOBE; M. S. LEVINE; C. CEPEDA; S. C. MASMANIDIS. *UCLA, UCLA.*

4:00 II4 **758.20** Alterations in the intrinsic properties of thalamic somatosensory and motor nuclei neurons in the R6/2 mouse model of Huntington's disease. S. M. HOLLEY*; K. D. OIKONOMOU; J. BARRY; E. J. DONZIS; A. DONG; C. CEPEDA; M. S. LEVINE. *UCLA.*

1:00 II5 **758.21** Mechanisms underlying the upregulation of GABA responses in external globus pallidus neurons in a mouse model of Huntington's disease. J. BARRY*; M. S. LEVINE; C. CEPEDA. *UCLA.*

2:00 II6 **758.22** Targeting elevations of cortical intracellular calcium as a treatment for Huntington's disease. K. D. OIKONOMOU*; X. YU; E. J. DONZIS; B. S. KHAKH; M. S. LEVINE; C. CEPEDA. *UCLA, Univ. of California Los Angeles Dept. of Physiol.*

3:00 II7 **758.23** HNRNPA1-induced spliceopathy in a DM1 mouse model. Y. ZHUANG*; M. LI; W. XIE. *Southeast Univ.*

4:00 II8 **758.24** Characterization of gene expression levels in zq175 knock-in delta neo minus mouse model of Huntington's disease. M. VIHMA; T. HUHTALA*; T. HEIKKINEN; T. PARKKARI; L. C. PARK. *Charles River Discovery, CHDI Management/ CHDI Fndn. Inc.*

1:00 II9 **758.25** Characterization of white matter defects and diffusion changes in zq175dn mouse model of Huntington's disease by diffusion tensor mri and tract-based spatial statistics. K. LEHTIMÄKI; J. KURKIPURO; L. TAHTIVAARA; J. OKSMAN*; L. C. PARK. *Charles River Discovery Services, CHDI Management/ CHDI Fndn. Inc.*

2:00 II10 **758.26** Novel computational approaches for signal extraction from striatal multi-color photometry recordings and evaluating high-throughput approach-avoidance learning applied to Huntington's disease mouse model. A. FRIEDMAN*; E. HUESKE; S. DELCASSO; L. G. GIBB; H. LUTWAK; S. E. TORO ANNA; S. M. DRAMMIS; L. I. RAKOCEVIC; J. D. FAJARDO; J. K. XIONG; C. A. SICILIANO; D. HU; C. W. CARTER; E. D. NELSON; A. M. GRAYBIEL. *MIT.*

3:00 II11 **758.27** Evaluation of approach-avoidance learning in mouse model of Huntington's disease by a novel battery of cost-benefit decision-making tasks compatible with high-throughput imaging. E. A. HUESKE*; A. FRIEDMAN; S. DELCASSO; L. G. GIBB; H. LUTWAK; S. M. DRAMMIS; L. I. RAKOCEVIC; J. D. FAJARDO; J. K. XIONG; C. A. SICILIANO; D. HU; C. W. CARTER; E. D. NELSON; A. M. GRAYBIEL. *MIT, MIT.*

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* Indicates abstract's submitting author

4:00 II12 **758.28** Visuospatial alterations in Huntington's disease: Anatomo-functional magnetic resonance findings. V. GÁLVEZ*, SR; G. RAMÍREZ GARCÍA; J. FERNANDEZ-RUIZ; A. CAMPOS-ROMO. *Univ. Panamericana, Inst. Nacional de Neurología, Univ. Nacional Autónoma de México, Univ. Nacional Autonoma de México, Univ. Nacional Autonoma de México.*

1:00 II13 **758.29** ● Irritability in Huntington's disease: A phase 2 exploratory clinical trial with a novel vasopressin 1a antagonist, SRX246. N. G. SIMON*; S. M. HERSCH; K. E. ANDERSON; S. LU; M. J. BROWNSTEIN. *Lehigh Univ., Azevan Pharmaceuticals, Inc., Massachusetts Gen. Hosp. Dept. of Neurol., Georgetown Univ. Med. Ctr.*

POSTER

759. Gulf War Illness: Mechanisms, Causes, and Interventions

Theme C: Neurodegenerative Disorders and Injury

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

1:00 II14 **759.01** Glutamate at the intersection between stress, pyridostigmine bromide, and immune function in a model of Gulf War illness. V. A. MACHT*; J. L. WOODRUFF; E. S. MAISSY; C. A. GRILLO; M. A. WILSON; J. R. FADEL; L. P. REAGAN. *Univ. of South Carolina Sch. of Med., WJB Dorn VA Med. Ctr.*

2:00 II15 **759.02** The controversy of acetylcholine in Gulf War Illness: Interactions between stress and pyridostigmine bromide from brain neurochemistry to behavior. L. P. REAGAN*; V. A. MACHT; J. L. WOODRUFF; E. S. MAISSY; M. A. WILSON; J. R. FADEL. *Univ. of South Carolina Sch. of Med., Univ. of South Carolina, Univ. of South Carolina Sch. of Med., Univ. South Carolina, Sch. Med., Univ. of South Carolina Sch. of Med.*

3:00 II16 **759.03** Targeting inflammatory and glucocorticoid pathways to treat Gulf War illness in a preclinical mouse model. L. T. MICHALOVICZ*; K. A. KELLY; J. V. MILLER; D. B. MILLER; T. J. A. CRADDOCK; G. BRODERICK; K. SULLIVAN; J. P. O'CALLAGHAN. *CDC-NIOSH, Nova Southeastern Univ., Rochester Gen. Hosp., Boston Univ.*

4:00 II17 **759.04** Spatiotemporal ACh accumulation and phosphoprotein signaling in a mouse model of Gulf War Illness. J. V. MILLER*; K. A. KELLY; L. T. MICHALOVICZ; J. A. MOUCH; N. PRINCE; J. W. BOYD; D. B. MILLER; J. P. O'CALLAGHAN. *CDC-NIOSH, West Virginia Univ.*

1:00 II18 **759.05** Resting state functional magnetic resonance imaging reveals brain mechanisms underlying gulf war illness. K. GOPINATH*; U. SAKOGLU; B. A. CROSSON; R. HALEY. *Emory Univ., Univ. of Houston Clear-Lake, Emory Univ., Univ. of Texas Southwestern Medical-Center.*

2:00 JJ1 **759.06** Cognitive and mood dysfunction in an animal model of chronic Gulf War Illness is linked with altered leukotriene signaling in the brain and elevated systemic inflammation. R. UPADHYA*; S. ATTALURI; D. UPADHYA; M. KODALI; B. SHUAI; A. K. SHETTY. *Inst. For Regen Med, Texas A&M Univ. Coll Med., Olin E. Teague Veterans' Med. Ctr.*

3:00 JJ2 **759.07** Neurodegeneration and astrocyte responses in a pyridostigmine bromide, DEET, and chlorpyrifos Gulf War illness model. B. A. CITRON*; W. A. RATLIFF. *VA New Jersey Hlth. Care Syst., Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med.*

4:00 JJ3 **759.08** Monosodium Luminol improves cognitive and mood function with repression of neuroinflammation and enhancement of neurogenesis in a model of chronic Gulf War Illness. M. KODALI*; S. ATTALURI; B. SHUAI; M. L. NARAYANA; A. BATES; X. RAO; L. MELISSARI; E. MITRA; D. UPADHYA; B. HATTIANGADY; A. K. SHETTY. *Inst. For Regen Med, Texas A&M Univ. Coll Med., Olin E. Teague Veterans' Med. Center, CTVHCS.*

1:00 JJ4 **759.09** Normalizing the dyshomeostasis of glutamatergic system as a potential therapeutic strategy for Gulf War illness. X. WANG*; Z. XU; J. FOSTER; F. ZHAO; N. KUNG; K. LIN; K. HODGETTS; C. LIN. *The Ohio State Univ., Lab. of Drug Discovery in Neurodegeneration, Brigham and Women's Hosp. / Harvard Med. Sch.*

2:00 JJ5 **759.10** Tau pathology as a mechanism underlying microtubule-based deficits in Gulf War illness. P. YATES*; A. PATIL; K. SULLIVAN; P. BAAS; L. QIANG. *Drexel Univ. Col. of Med., Boston Univ. Sch. of Publ. Hlth.*

3:00 JJ6 **759.11** Gulf War Illness is associated with reduced vestibular function that can be restored using a novel imperceptible GVS neuromodulation device based on stochastic resonance. J. M. SERRADOR*; M. C. SCHUBERT; K. BREWER; P. BREEN; S. J. WOOD. *Rutgers, WRIISC, Dept of Veteran Affairs, Johns Hopkins Med. Sch., Western Sydney Univ., Azusa Pacific Univ.*

4:00 JJ7 **759.12** Antidepressant effects of ketamine in an organophosphate rat model of Gulf War Illness. K. PHILLIPS; E. SANTOS; E. HAWKINS; L. S. DESHPANDE*. *Virginia Tech., Virginia Commonwealth Univ., Virginia Commonwealth Univ.*

1:00 JJ8 **759.13** Systemic hyperalgesia in females with gulf war illness and chronic fatigue syndrome. A. SURIAN*; J. N. BARANIUK. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

2:00 KK1 **759.14** Characterizing dynamic functional connectivity changes following a physiological stressor in myalgic encephalomyelitis/ chronic fatigue syndrome and gulf war illness. R. U. RAYHAN*; S. D. WASHINGTON; R. GARNER; K. ZAJUR; F. ADDIEGO; J. W. VANMETER; K. F. MANAYE; J. N. BARANIUK. *Howard Univ. Col. of Med., Georgetown Univ. Med. Ctr., Georgetown Univ., Howard Univ. Col. of Med., Georgetown Univ. Med. Ctr.*

3:00 KK2 **759.15**▲Functional connectivity differences between Gulf War Illness (GWI) phenotypes during a test of attention. F. A. MARTINEZ ADDIEGO*; R. U. RAYHAN; S. D. WASHINGTON; T. CLARKE; J. D. JAMIESON; P. S. MALONE; J. W. VANMETER; J. N. BARANIUK. *Georgetown Univ., Howard Univ. Col. of Med., Georgetown Univ. Med. Ctr.*

4:00 KK3 **759.16** Confirmation that exercise challenge in Gulf War illness reveals two autonomic subgroups with altered brain function. S. D. WASHINGTON*; R. U. RAYHAN; R. GARNER; K. ZAJUR; J. W. VANMETER; J. N. BARANIUK. *Georgetown Univ. Med. Ctr., Howard Univ. Col. of Med., Georgetown Univ., Georgetown Univ. Med. Ctr.*

1:00 KK4 **759.17** Exercise modulates mirna expression in cerebrospinal fluid of control, chronic fatigue syndrome and gulf war illness groups. V. NARAYAN*; R. U. RAYHAN; N. SHIVAPUKAR; J. N. BARANIUK. *Georgetown Univ., Howard Univ. Col. of Med., Georgetown Univ. Med. Ctr.*

2:00 KK5 **759.18** Targeted metabolomic and t-distributed stochastic neighbor embedding (t-sne) analysis of cerebrospinal fluid in chronic fatigue syndrome (cfs) and gulf war illness (gwi). G. B. KERN*; Y. HE; S. VASUDEVAN; J. N. BARANIUK. *Georgetown Univ., Georgetown Univ. Med. Ctr.*

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• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 KK6 **759.19** Epidemiological trends reveal delayed neurological and cognitive onset in gulf war illness veterans. K. ZAJUR*; Y. HE; R. U. RAYHAN; R. GARNER; C. FAPPIANO; S. D. WASHINGTON; F. A. MARTINEZ ADDIEGO; J. BARANIUK. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

4:00 KK7 **759.20** Verification of exercise-induced transient postural tachycardia phenotype in gulf war illness. R. GARNER*; R. U. RAYHAN; Y. HE; K. ZAJUR; S. D. WASHINGTON; J. BARANIUK. *Georgetown Univ., Howard Univ. Col. of Med., Georgetown Univ.*

1:00 KK8 **759.21** Factor analysis of the center for epidemiological studies - depression (cesd) domains in chronic fatigue syndrome and gulf war illness. Y. HE*; R. U. RAYHAN; R. GARNER; J. N. BARANIUK. *Georgetown Univ., Howard Univ. Col. of Med., Georgetown Univ. Med. Ctr.*

2:00 KK9 **759.22** Vagus nerve stimulation reverses the pyridostigmine bromide and permethrin-induced increase in astrocytes in the hippocampus in a model of Gulf War illness. L. A. SHAPIRO*; C. DENG; J. ZARAGOZA; S. MATHUR; S. LOPEZ; V. EVANS; M. RAMIREZ; J. JENKINS; D. NIZAMUTDINOV. *Texas A&M Hlth. Sci. Ctr., Texas A&M Hlth. Sci. Ctr., Univ. of Mary Hardin Baylor, Univ. of Texas, Dallas, Temple Junior Col., Texas A&M Univ.*

3:00 KK10 **759.23** Oleoylethanolamide treatment reduces neurobehavioral deficits and the brain pathology in a mouse model of Gulf War illness. U. JOSHI*; J. EVANS; N. SALTIEL; H. LANGLOIS; S. OBERLIN; J. OJO; B. MOUZON; F. CRAWFORD; M. MULLAN; L. ABDULLAH. *Roskamp Inst., Roskamp Inst.*

4:00 KK11 **759.24** Septotemporal-specific effects of a Gulf War illness sarin surrogate, diisopropylfluorophosphate, on synaptic transmission in the mouse hippocampus. K. A. BROWN*; N. M. FILIPOV; J. J. WAGNER. *Univ. of Georgia.*

1:00 KK12 **759.25** *In vivo* real-time measurements of brain acetylcholinesterase activity through a modified microdialysis procedure following nerve agent exposure in the guinea pig. P. A. RIORDAN, Jr.; C. E. KAROLENKO; D. L. SPRIGGS; J. W. SKOVIRA*. *US Army Med. Res. Inst. of Chem. Def., US Army Med. Res. Inst. of Chem. Def.*

POSTER

760. Neurotoxicity, Inflammation, and Neuroprotection: Mechanisms of Neurotoxicity II

Theme C: Neurodegenerative Disorders and Injury

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

1:00 LL1 **760.01** Ketamine induces adverse effects on the development of monoaminergic neurons in zebrafish. B. ROBINSON*; Q. GU; M. DUMAS; J. KANUNGO. *Natl. Ctr. For Toxicological Res.*

2:00 LL2 **760.02** Early life anesthesia with ketamine, sevoflurane, or isoflurane can decrease motivation in the rhesus monkey as measured by performance on a progressive ratio responding task. J. C. TALPOS*, III; J. CHELONIS; M. LI; J. HANIG; M. G. PAULE. *FDA, Food & Drug Admin. FDA.*

3:00 LL3 **760.03** Clioquinol enhances excitatory synaptic transmission in spinal ventral horn neurons by activating N-type voltage-gated channels. N. IZUMI; W. TANIGUCHI*; N. NISHIO; M. YAMANAKA; M. SONEKATSU; S. TSUTSUI; S. YOSHIDA; T. NAKATSUKA; H. YAMADA. *Wakayama Med. Univ., Kansai Univ. of Hlth. Sci., Kansai Univ. of Hlth. Sci.*

4:00 LL4 **760.04** Intraventricular infusion of quinolinic acid in young rats dysregulates the expression of various signaling and structural proteins involved in learning and memory. A. RAHMAN*; M. S. RAO; K. M. KHAN. *Kuwait Univ., Fac. of Medicine, Kuwait Univ., Kuwait Univ. Fac. of Med.*

1:00 LL5 **760.05** Connexin 43 mediated glutamate excitotoxicity in rat hippocampus upon exposure to chronic hypobaric hypoxia. A. DHEER*; V. JAIN; M. PANT; N. KUSHWAH; R. KUMAR; D. PRASAD; P. SETH; S. B. SINGH. *Defence Inst. of Physiol. and Allied Sci., Natl. brain Res. Ctr., Defence Res. and development organisation (DRDO), headquarters.*

2:00 LL6 **760.06**▲Arsenic exposure promotes the bioenergetic dysfunction in an Alzheimer's disease model. S. A. ESQUIVEL NIÑO*; A. MORALES-MARTÍNEZ; S. DIAZ-CINTRA; F. PEREZ; M. JIMÉNEZ-CAPDEVILLE; S. ZARAZÚA. *Univ. Autonoma De San Luis Potosi-Facultad D, Inst. Nacional De Neurología Y Neurocirugía. D, UNAM Campus Juriquilla, Univ. Autónoma de San Luis Potosí.*

3:00 LL7 **760.07** Effects of early life manganese exposure on synaptic markers in primary motor cortex. C. E. MOYER*; D. R. SMITH; Y. ZUO. *Univ. of California Santa Cruz, Univ. of California Santa Cruz.*

4:00 LL8 **760.08** Developmental deltamethrin exposure alters dopaminergic activity and long-term potentiation in Sprague-Dawley rats. E. M. PITZER*; M. T. WILLAIMS; C. V. VORHEES. *Univ. of Cincinnati, Cincinnati Children's Res. Fndn.*

1:00 LL9 **760.09** The mRNAs involved in neuronal protection were perturbed in primary spinal cord astrocytes during methylmercury exposure. D. WIWATRATANA*; W. D. ATCHISON. *Michigan State Univ., Michigan State Univ. Dept. of Pharmacol. and Toxicology.*

2:00 LL10 **760.10** Testing the ability of hemostatic products and reactive skin decontamination lotion to protect against the chemical warfare agent VX in a hemorrhagic wound. E. D. CLARKSON*, III; R. P. CHILCOTT; C. A. HALL; H. L. LYDON; C. H. DALTON; R. F. RAILER; R. S. STEVENSON; K. H. SMITH; P. CHEN; S. M. SCHULZ; J. E. MORGAN. *US Army Inst. of Chem Def., CBRN and Chem. Toxicology Group, Hlth. Protection Agency, Porton Down.*

3:00 LL11 **760.11** Excitatory and inhibitory imbalance may contribute to the propofol-induced developmental neurotoxicity through NPAS4 signaling. T. ARZUA*; S. LOGAN; C. JIANG; Y. YAN; X. LIU; Q. LIU; X. BAI. *Med. Col. of Wisconsin, Xi'an Jiaotong Univ., Med. Col. of Wisconsin.*

4:00 LL12 **760.12**▲Locomotor alterations and increase in brain kynurenic acid levels after intoxication with lead in mice. D. RAMÍREZ ORTEGA*; D. F. GONZALEZ ESQUIVEL; B. PINEDA; A. DIAZ RUIZ; C. RIOS; V. PEREZ DE LA CRUZ. *Inst. Nacional de Neurología y Neurocirugía Manuel Velasco.*

1:00 LL13 **760.13** IVIG delays onset of mouse Gerstmann-Sträussler-Scheinker disease. Y. DU*; H. GU; J. A. MASTRIANNI; R. C. DODEL; M. R. FARLOW. *Indiana Univ., Indiana Univ., Univ. of Chicago, Univ. Clin.*

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* Indicates abstract's submitting author

2:00 LL14 **760.14** Characterization of a hypothermic coating to target neuroinflammation resulting from intracortical microelectrode implantation. A. M. ZIEMBA*; D. AMATO; M. CROCHIERE; S. A. DONNELLY; E. F. PALERMO; R. J. GILBERT. *Rensselaer Polytechnic Inst.*

3:00 MM1 **760.15** *In vitro* screening for potential developmental neurotoxicity by quantification of developmentally-regulated gene transcripts conserved across mammalian brain development. B. K. PADHI*; M. SINGH; G. PELLETIER. *Hlth. Canada.*

4:00 MM2 **760.16** ▲ Oxidative effect of L-Dopa in nuclei with innervation of the substantia nigra in intact rats. A. MARTÍNEZ ARZATE*; M. AVILA-COSTA; C. CALDERON; M. IBARRA; J. ESPINOZA; V. ANAYA-MARTINEZ. *Univ. Nacional Autónoma de México, UNAM, Neuromorphology Lab., Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México, UNAM Campus Iztacala.*

1:00 MM3 **760.17** Role of PI3K/mTORC2/AKT pathway on docosahexanoic acid (DHA) protection against lipotoxicity in Schwann cells. M. DESCORBETH*; M. DE LEON. *Loma Limda Univ.*

2:00 MM4 **760.18** Evidence for glutamate toxicity at the *Drosophila* neuromuscular junction. C. CHIEN*; P. GOEL; C. HAN; D. K. DICKMAN. *USC, USC, USC, Cornell Univ.*

3:00 MM5 **760.19** Translational control by silica nanoparticles exposure in glial cells. A. G. RODRÍGUEZ*; A. DE VIZCAYA-RUIZ; E. LÓPEZ-BAYGHEN; A. ORTEGA. *Cinvestav-IPN.*

4:00 MM6 **760.20** Gray-matter volume in chronic methamphetamine users: Changes over the course of abstinence. L. NIE*; D. GHAHREMANI; J. LI; E. D. LONDON. *UCLA, Sichuan Univ., David Geffen Sch. of Medicine, Univ. of California at Los Angeles.*

1:00 MM7 **760.21** ▲ Oleic acid induces neuroprotection by the BDNF TrkB signaling pathway in an excitotoxic damage model. J. JIMÉNEZ-GÓMEZ*; P. E. MARTÍNEZ-GOPAR; C. RIOS; F. PÉREZ; A. MORALES. *Univ. Autonoma Metropolitana, Natl. Inst. of Neurol. and Neurosurg., Natl. Inst. Neurology, Neurosurg, The Natl. Inst. of Neurol. and Neurosurg.*

2:00 MM8 **760.22** RIP-1 inhibitor protects hippocampal neurons from excitotoxic cell death in lithium-pilocarpine-induced status epilepticus. J. H. HSIEH; D. G. FUJIKAWA*. *VA Greater Los Angeles, UCLA, VA Greater Los Angeles Hlthcar, UCLA.*

3:00 MM9 **760.23** The effects of multiple doses of cyclophosphamide on circumvallate papillae. B. C. JEWKES*; S. SOCIA; J. G. GIRARDIN; R. J. DELAY; E. R. DELAY. *Univ. of Vermont, Univ. of Vermont, Univ. of Vermont.*

POSTER

761. Neurotoxicity, Inflammation, and Neuroprotection: Neuroprotective Mechanisms: Preclinical

Theme C: Neurodegenerative Disorders and Injury

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

1:00 MM10 **761.01** Role of PACAP/PAC1 signaling in protecting neurons and reducing inflammation in a model of multiple sclerosis and optic neuritis. C. VAN*; M. C. CONDRO; A. Q. HOANG; K. LOV; N. NGUYEN; H. H. KO; R. ZHU; A. DIEP; J. A. WASCHEK. *UCLA, UCLA, Calabasas High Sch.*

2:00 MM11 **761.02** Exercise is neuroprotective following partial motoneuron depletion: Run for your dendrites. C. CHEW*; D. R. SENGELAUB. *Indiana Univ., Indiana Univ. Bloomington.*

3:00 MM12 **761.03** Neuroprotective comparison of Curcumin and Neurobion® treatments on the sciatic nerve crush injury rat model. W. M. RENNO*; H. L. SADEK; J. KUMAR; P. GEORGE. *Kuwait Univ., Kuwait Univ. Fac. of Med.*

4:00 MM13 **761.04** Protection of nigral dopaminergic neurons by AAV1 transduction with Rheb(S16H) against neurotoxic inflammation *in vivo.* S. KIM*; J. M. LEE; D. YOON; U. J. JUNG; S. R. KIM. *Kyungpook Natl. Univ., Pukyong Natl. Univ., Kyungpook Natl. Univ.*

1:00 MM14 **761.05** ● Development of MSC-NTF cell exosomes for the treatment of neurodegenerative diseases. R. KERN*; N. ABRAMOV; H. KASPI; Y. AIZNER; C. LEBOVITS; R. ARICHA. *Brainstorm Cell Therapeut.*

2:00 NN1 **761.06** Control of neuronal ryanodine receptor activity by steroid hormone receptors in the nucleus. P. KOULEN*; A. A. LOPEZ. *Univ. of Missouri Kansas City.*

3:00 NN2 **761.07** The effects of the ethanol extract of brazilian green propolis that contains flavonols against mutant copper-zinc superoxide dismutase-mediated toxicity. M. INDEN*; T. UEDA; S. SEKINE; H. KURITA; S. GO; N. TAKASE; K. ICHIHARA; I. HOZUMI. *Gifu Parmaceutical Univ., Api Co. Limited.*

4:00 NN3 **761.08** Effect of 5-aminolevulic acid against low inorganic phosphate in SH-SY5Y cells. S. SEKINE*; N. TAKASE; H. KURITA; S. GO; T. UEDA; M. INDEN; I. HOZUMI. *Gifu Pharmaceut. Univ.*

1:00 NN4 **761.09** Protective effects of nicotinamide mononucleotide against oxidative stress induced PC12 cell death via mitochondrial enhancement. S. ITO; K. NAGAI*. *Koshien Univ., Senri Kinran Univ.*

2:00 NN5 **761.10** ▲ Quantitatively predicting and grading the clinical efficiency of β-lactams in neuroprotective therapy of fatal encephalitis. V. PAREEK*; P. K. ROY. *Natl. Brain Res. Ctr., Natl. Brain Res. Ctr.*

3:00 NN6 **761.11** Knockdown of Hsp70 heat shock proteins enhances the sensitivity of human neuroblastoma cells to the chemotherapeutic agent cisplatin. C. A. DEANE*; I. R. BROWN. *Univ. of Toronto Scarborough.*

4:00 NN7 **761.12** Neuroprotection induced by zinc-dependent translation of hepatitis C-derived neuroprotective protein NS5A targeting Kv2.1 potassium channels. J. JUSTICE; D. T. MANJOORAN; C. YEH; A. J. SCHULIEN; K. A. HARTNETT-SCOTT; S. MAMMEN; M. J. PALLADINO; E. AIZENMAN*. *Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh Sch. of Med.*

1:00 NN8 **761.13** ● Alcohol binge episodes disrupts proteins conforming the intestinal and blood-brain barriers. Study of the protective effects of oleoylethanolamide. L. ORIO*; M. ANTÓN; A. BALLESTA; F. ALÉN; Y. GARCÍA; J. CASO; B. GARCÍA-BUENO; F. RODRÍGUEZ DE FONSECA; A. RODRÍGUEZ-GONZÁLEZ. *Univ. Complutense De Madrid, UCM, UCM, ucm, UCM.*

2:00 NN9 **761.14** Apolipoprotein D-mediated regulation of lysosomal membrane integrity preserve lysosomal function and promotes cell survival in Niemann-Pick type A disease. M. D. GANFORNINA*; R. PASCUA-MAESTRO; M. LEDESMA; D. SANCHEZ. *Univ. de Valladolid - CSIC, Ctr. de Biología Mol. Severo Ochoa, CSIC.*

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3:00 NN10 **761.15** Neuroprotection by small molecule inhibition of Kv2.1-syntaxin interaction. C. YEH*; Z. YE; S. GAUR; A. MOUTAL; A. M. HENTON; S. KOUVAROS; J. L. SALOMAN; K. A. HARTNETT-SCOTT; K. HE; T. TZOUNOPOULOS; R. KHANNA; C. J. CAMACHO; E. AIZENMAN. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Tsinghua Univ., Univ. of Arizona, Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 NN11 **761.16** Forced resistant exercise preconditioning reduces postoperative cognitive dysfunction in aged mice by enhancing synaptic plasticity in the hippocampus. Y. LIU*; J. C. M. TAK; R. C. CHANG; G. T. WONG. *The Univ. of Hong Kong, Lab. of Neurodegenerative Diseases, LKS Fac. of Medicine, Univ. of Hong Kong, State Key Lab. of Brain and Cognitive Sciences, The Univ. of Hong Kong.*

1:00 NN12 **761.17** Phycoerythrin peptide from pyropia yezoensis alleviates endoplasmic reticulum stress caused by perfluorooctane sulfonate-induced calcium dysregulation. J. OH*; E. KIM; H. PARK; T. NAM. *Pukyong Natl. Univ.*

2:00 NN13 **761.18** Cellular sources and immune regulation of a neuroprotective interleukin-10 signaling pathway in the facial motor nucleus after axotomy. E. M. RUNGE*; D. O. SETTER; A. K. IYER; F. M. KENNEDY; V. M. SANDERS; K. J. JONES. *Indiana Univ. Sch. of Med., Richard L. Roudebush VA Med. Ctr., The Ohio State Univ. Wexner Med. Ctr.*

3:00 NN14 **761.19** A seven amino acid cell permeant peptide derived from the PRC-domain of Kv2 channels effectively declusters Kv2.1 and inhibits injury-induced enhancement of pro-apoptotic K^+ currents. A. J. SCHULIEN; S. GAUR; K. HARTNET-SCOTT; S. MAMMEN; E. AIZENMAN; J. A. JUSTICE*. *Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh.*

4:00 NN15 **761.20** The extracts of Tilia modified the establishment of full kindled of in rats. G. CONTRERAS-MURILLO*; J. C. ESCOTTO-RAMÍREZ; S. ALMAZAN-ALVARADO; E. M. GONZALEZ-TRUJANO; V. M. MAGDALENO-MADRIGAL. *Inst. Nacional De Psiquiatría Ramón De La Fuen, Inst. Nacional de Psiquiatría Ramón de la Fuente Muñiz.*

POSTER

762. Neurotoxicity, Inflammation, and Neuroprotection: Neuroinflammation: Beyond Microglia

Theme C: Neurodegenerative Disorders and Injury

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

1:00 NN16 **762.01** Investigation of the neuroprotective role of N-terminal beta amyloid fragments against beta amyloid-induced toxicity in glia. M. J. LANTZ*; L. COFFINET; R. A. NICHOLS. *Univ. of Hawaii.*

2:00 OO1 **762.02** Impact of traumatic stress on t cell repertoire complexity. L. S. NAIDU*; D. GETNET; A. GAUTAM; R. YANG; S. MILLER; G. DIMITROV; R. HAMMAMIEH; M. JETT. *USACEHR, US Ctr. For Envrn. Hlth. Res., USACEHR, US Army Ctr. for Envrn. Hlth. Res., US Army Ctr. for Environemental Hlth. Res., US Army Med. Res. & MC, CEHR.*

3:00 OO2 **762.03** Identification of immune cells infiltrating nociceptive circuitry in CB2 cannabinoid receptor reporter mice using flow cytometry. L. M. CAREY*, IV; Z. XU; G. RAJIC; J. ROMERO; C. HILLARD; K. MACKIE; A. G. HOHMANN. *Indiana Univ., Indiana Univ., Indiana Univ., Lab. de Apoyo a la Investigación, Hosp. Universitario Fundación Alcorcón, Med. Col. of Wisconsin, Indiana Univ. Bloomington Dept. of Psychological and Brain Sci., Indiana Univ.*

4:00 OO3 **762.04** SAH-induced hippocampal disturbances. G. W. BRITZ*; E. I. BOVSHIK; A. S. REGNIER-GOLANOV; E. V. GOLANOV. *Houston Methodist Hosp.*

1:00 OO4 **762.05** Loss of progranulin (PGRN) dysregulates blood and brain immune cells populations and may contribute to neuroinflammation and neurodegeneration in frontotemporal dementia (FTD). M. G. TANSEY; J. L. BLANCHFIELD; S. R. KUNDINGER; K. P. MACPHERSON; G. T. KANNARKAT; E. M. KLINE; C. HOLLER; G. TAYLOR; D. L. OLIVER; V. L. JOERS; M. A. JOHSNON; T. L. KUKAR*. *Emory Univ. Sch. of Med., Emory Univ., Emory Univ.*

2:00 OO5 **762.06** Anti-depressive effects of ChaiHu ShuGan formula and its possible neuroinflammation modulation mechanism in the reserpine induced ratdepressive-like model. J. ZHAO*; X. S. GAO; A. N. WANG; Y. Z. WANG; Z. Z. WEI; Y. B. ZHANG; L. WEI; N. WU; L. LI. *Beijing Friendship Hospital, Capital Med. Unive, Anesthesiol., Emory Univ. Sch. Med., Biol. Sci., Southeast. Oklahoma State Univ.*

3:00 OO6 **762.07** Loss of huntingtin-associated protein 1 alters glucocorticoid-mediated hypothalamic responses in mice. X. CHEN*; S. LI; X. LI. *Dept. of Human Genetics, Emory Univ. Sch., Wuhan Univ. of Sci. and Technol.*

4:00 OO7 **762.08** Alterations in the density and signaling of the hippocampus histamine H_3 receptors in a rat model of Diabetes Mellitus I. W. MONTEJO-LOPEZ*; J. ARIAS-MONTANO. *Cinvestav, Cinvestav.*

1:00 OO8 **762.09** Mutant FUS inhibits repair of oxidative genome damage in amyotrophic lateral sclerosis. H. WANG*; W. GUO; J. MITRA; P. HEGDE; A. TOMKINSON; L. M. VAN DEN BOSCH; M. HEGDE. *KU Leuven, Houston Methodist Hosp. Res. Inst., Univ. of New Mexico Hlth. Sci. Center, Univ. of New Mexico, VIB, Ctr. For Brain & Dis. Research, Laborato.*

2:00 OO9 **762.10** Hippocampal neurons require high glutathione content to sustain dendrite integrity and cognitive function. J. P. BOLANOS*; S. FERNANDEZ-FERNANDEZ; V. BOBO-JIMENEZ; J. ROS; A. ALMEIDA. *Univ. of Salamanca, Inst. of Biomed. Res. of Salamanca, CIBERFES, Dept. de Ciencies Mediques Basiques, IRBLleida, Univ. de Lleida.*

3:00 OO10 **762.11** ▲ Chronic corticosterone administration without posterior immune challenge induces depressive-like behavior and microglia priming but not proliferation in young adult and middle age rats. D. QUESADA-YAMASAKI*; J. F. FORNAGUERA-TRÍAS; A. MORA-GALLEGOS. *Univ. De Costa Rica, Univ. De Costa Rica, Univ. De Costa Rica.*

4:00 OO11 **762.12** ▲ Comparison of the temporal proinflammatory process of two traditional Parkinsonian models *in vivo.* I. PARRA*; I. MARTÍNEZ GARCÍA; E. HERNÁNDEZ ARRAMBIDE; D. I. LIMÓN; F. LUNA; V. ALATRISTE; L. MENDIETA. *Benemérita Univ. Autónoma De Puebla.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 OO12 **762.13** Kv1.3 as a target to inhibit detrimental M1 microglia functions in ischemic stroke, Alzheimer's and Parkinson's disease. H. WULFF*; H. M. NGUYEN; Y. CHEN; I. MAEZAWA; S. SARKAR; L. JIN; A. G. KANTHASAMY. *Univ. of California Davis, M.I.N.D. Inst, UC Davis, Iowa State Univ.*

2:00 OO13 **762.14** ▲ Andrographolide exerts neuroprotection by inhibiting NF-κB associated NLRP3 inflammasomes in chronic unpredictable mild stress model. S. AHMED*; M. KWATRA; B. GAWALI; A. AHMED; V. NAIDU. *NIPER, Rajarajeshwari Med. Col.*

3:00 OO14 **762.15** The monocytic inflammatory response to head trauma is contained by Apobec1-mediated RNA editing. E. M. O'CINNEIDE*; J. D. GRAY; N. F. PAPAVASILIOU; L. MOLLA; B. S. MCEWEN; K. BULLOCH. *The Rockefeller Univ., German Cancer Res. Ctr.*

1:00 DP05/OO15 **762.16** (Dynamic Poster) Responses of both microglia and monocytes to neurodegeneration *in vivo.* E. MILLER*; P. ZHANG; R. J. ZAWADZKI; E. N. PUGH, Jr; M. E. BURNS. *UC Davis, UC Davis, UC Davis, UC Davis.*

1:00 OO16 **762.17** Epigenome-wide association study on prefrontal cortex tissue from multiple system atrophy patients shows indications of an activated immune system. R. RYDBIRK*; T. BRUDEK; B. PAKKENBERG; J. TOST; S. AZNAR. *Bispebjerg-Frederiksberg Hosp., Res. Lab. for Stereology and Neurosci., Lab. for Epigenetics and Envrn.*

2:00 OO17 **762.18** The efficacy of Toll-like receptor 2 & 4 inhibitors in cultured human monocytes and in a novel rat model of Parkinson's disease. A. KOULI*; W. KUAN; K. M. SCOTT; R. A. BARKER; C. H. WILLIAMS-GRAY. *Univ. of Cambridge.*

3:00 OO18 **762.19** ● Novel TLR2 small molecule antagonists inhibit alpha synuclein-induced pro-inflammatory signaling and cytokine release. A. M. HABAS*; S. NATALA; J. WONG; W. WRASIDLO; M. GILL; D. BONHAUS. *Neuropore Therapies, Inc.*

4:00 PP1 **762.20** CX3CL1 isoforms display differential activity and rescue cognitive deficits in CX3CL1 knock out mice. A. WINTER*; M. S. SUBBARAYAN; B. GRIMMIG; J. A. WEESNER; L. MOSS; M. PETERS; E. J. WEEBER; K. R. NASH; P. C. BICKFORD. *Univ. of South Florida, Univ. of Tennessee Hlth. Sci. Ctr., Univ. of South Florida.*

1:00 PP2 **762.21** ● Pathway analysis of aging rat microglial proteome demonstrates therapeutic effect of polyphenols. A. JALLOH*; C. HUDSON; D. CHAPUT; S. STEVENS, JR; P. C. BICKFORD. *Univ. of South Florida, Univ. of South Florida, USF Morsani Col. of Med.*

2:00 PP3 **762.22** Role of T cells in alpha-synuclein model of Parkinson's disease. M. SUBBARAYAN*; C. HUDSON; N. LITSKY; K. R. NASH; P. C. BICKFORD. *Univ. of South Florida, James A. Haley Veterans Affairs Hosp., Univ. of South Florida.*

3:00 PP4 **762.23** Chitotriosidase modulates gliosis ensuing neurodegeneration in Amyotrophic Lateral Sclerosis. A. M. VARGHESE*; S. BHAGAT; V. K; A. NALINI; P. A. ALLADI; T. N. SATHYAPRABHA; T. R. RAJU. *Natl. Inst. of Mental Hlth. and Neuro Scie, Natl. Inst. of Mental Hlth. and Neuro Sci., Natl. Inst. of Mental Hlth. and Neuro Sci.*

4:00 PP5 **762.24** Biomarkers for astrocyte and microglia activation in als. L. VU*; J. AN; R. P. BOWSER. *Barrow Neurolog. Inst.*

1:00 PP6 **762.25** Innate immune adaptor TRIF confers neuroprotection in ALS mice by eliminating abnormal astrocytes. O. KOMINE*; H. YAMASHITA; N. FUJIMORI-TONOU; M. KOIKE; S. JIN; Y. MORIWAKI; F. ENDO; S. WATANABE; S. UEMATSU; S. AKIRA; Y. UCHIYAMA; R. TAKAHASHI; H. MISAWA; K. YAMANAKA. *Nagoya Univ., Kyoto Univ., RIKEN Brain Sci. Inst., Juntendo Univ. Sch. Med., Res. Inst. of Envrn. Medicine, Nagoya Univ., Keio University, Fac. of Pharm., Univ. of Tokyo, Osaka Univ., Juntendo Univ. Grad Sch. of Med., Dept. of Neurology, Kyoto Univ. Grad. Sch. of Med., Keio Univ. Fac Pharm.*

2:00 PP7 **762.26** Dysregulation of the ubiquitin proteasome system promotes neuro-inflammation and neuronal cell death in CNS injuries. G. KHAYRULLINA*; B. G. BURNETT. *Uniformed Services Univ., Uniformed Services Univ.*

3:00 PP8 **762.27** Curcumin nanoparticle treatment after TBI maintains better cognitive and mood function with enhanced neurogenesis and reduced inflammation in the hippocampus. S. ATTALURI; M. ARORA; M. KODALI; B. HATTIANGADY; D. UPADHYA; A. BATES; B. SHUAI; R. MAJETI; A. K. SHETTY. *Inst. For Regen Med, Texas A&M Univ. Coll Med., Texas A&M Univ., Olin E. Teague Veterans' Med. Center, CTVHCS.*

4:00 PP9 **762.28** Modulating macrophage phenotypes as a therapeutic strategy in neurodegenerative diseases. E. QVALE*; I. B. BATKI; M. SWINTON; A. B. SANCHEZ; B. SOONTORNNIYOMKIJ; J. A. FIELDS; C. L. ACHIM. *Univ. of California San Diego.*

1:00 PP10 **762.29** CCR2-positive immune cells play protective roles in amyotrophic lateral sclerosis. R. YAMASAKI*; W. SHIRAISHI; J. KIRA. *Kyushu Univ., Kyushu Univ., Dept of Neurology, Kyushu Univ.*

POSTER

763. Brain Injury and Trauma: Brain: Pre-Clinical Therapeutic Strategies

Theme C: Neurodegenerative Disorders and Injury

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

1:00 PP11 **763.01** Feasibility of two novel community-based settings for investigating environmental enrichment based rehabilitation model for traumatic brain injury individuals. D. KUMAR*; J. GALLOWAY. *UNIVERSITY OF DELAWARE, UNIVERSITY OF DELAWARE.*

2:00 PP12 **763.02** Wogonin attenuates the deleterious effects of traumatic brain injury in anesthetized Wistar rat. V. C. CHITRAVANSHI*; Y. UMEMOTO; H. N. SAPRU. *Rutgers the State Univ. of New Jersey, Rutgers-NJMS, New Jersey Med. Sch.*

3:00 PP13 **763.03** Non-invasive longitudinal assessment of cerebrovascular reactivity after TBI using functional near infrared spectroscopy. M. A. SANGOBOWALE*; F. AMYOT; H. AYAZ; R. DIAZ-ARRASTIA. *Penn Presbyteriam Med. Ctr., NIH, Drexel Univ., Univ. of Pennsylvania.*

4:00 PP14 **763.04** SIRT1 activation promotes long-term functional recovery in SAH rats. H. SHENG*; D. CHU; X. LI; X. QU; D. DIWAN; G. J. ZIPFEL; D. S. WARNER. *Duke Univ. Med. Ctr., Washington Univ-St. Louis.*

1:00 PP15 **763.05** MicroRNA-122 improves stroke outcomes through Pla2g2a-Nos2 pathway. D. LIU; B. P. ANDER; F. R. SHARP*. *Univ. of California at Davis, Univ. of California at Davis.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 PP16 **763.06** Non-invasive transcranial nano-pulsed laser therapy corrects aberrant hippocampal neurogenesis in a rat model of traumatic brain injury. E. MOCCIARO*; A. GRANT; R. ESENALIEV; I. PETROV; Y. PETROV; E. BISHOP; K. JOHNSON; I. BOLDING; M. PARSLEY; D. PROUGH; M. MICCI. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., The Univ. of Texas Med. Br.*

3:00 PP17 **763.07** Non-invasive nano pulsed laser therapy (NPLT) reduces neurodegeneration after traumatic brain injury. A. C. GRANT*; J. GUPTARAK; M. A. PARSLEY; I. J. BOLDING; K. M. JOHNSON; I. Y. PETROV; Y. PETROV; R. O. ESENALIEV; D. S. PROUGH; M. A. MICCI. *Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

4:00 PP18 **763.08** Progress toward an interneuron cell therapy for traumatic brain injury. B. ZHU; R. F. HUNT*. *Univ. of California, Irvine.*

1:00 PP19 **763.09** Neurotrophic factors in mTBI treatment with rTMS. N. STROSSMAN; M. W. MCNERNEY*; J. TAYLOR; G. SWAMINATH; L. WU; V. DARCY; D. WALTZMAN; M. MADORE; A. NODA; B. HERNANDEZ; A. J. FURST; R. TOLL; M. YUTSIS; B. YOCHIM; D. CLARK; A. ETKIN; O. HARRIS; J. YESAVAGE; M. M. ADAMSON. *VA, VA Palo Alto, VA Palo Alto Hlth. Care Syst., Stanford Univ., VA Palo Alto\Stanford Med. Sch.*

2:00 PP20 **763.10** Cordycepin attenuatesinflammatory responses after traumatic brain injury via modulating microglia/macrophage polarization. P. WEI*; C. LUO; W. MIAO; W. ZHANG; X. HU; J. CHEN; Y. GAO. *Fudan Univ., Univ. of Pittsburgh.*

3:00 PP21 **763.11** Identifying novel compounds to treat brain injury and depression by genomic profiling. S. L. SELL*; D. BOONE; H. A. WEISZ; M. PARSLEY; D. S. DEWITT; D. S. PROUGH; H. L. HELLMICH. *Univ. Texas Med. Br.*

POSTER

764. Touch: Plasticity and Reorganization

Theme D: Sensory Systems

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

1:00 PP22 **764.01** Responses to sensory stimuli and related sensory neuronal plasticity in aged mice. J. M. MECKLENBURG*; Y. ZOU; Z. LAI; A. AKOPIAN. *Univ. of Texas Hlth. Sci. Ctr., Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

2:00 QQ1 **764.02** Alterations in somatosensory receptive fields following early blindness are shaped by the environment. D. L. RAMAMURTHY*; M. ENGLUND; L. A. KRUBITZER. *UC Davis, UC Davis.*

3:00 QQ2 **764.03** Effects of cathodal tDCS on motor area on tactile threshold of the distal pulp of the hallux. D. ISHII*; S. YAMAMOTO; A. YOZU; Y. KOHNO. *Ibaraki Prefectural Univ. of Hlth. Sci., Ibaraki Prefectural Univ. of Hlth. Sci.*

4:00 QQ3 **764.04** The effect of sensory deprivation-induced plasticity on global cortical networks. Z. P. ROSENTHAL*; A. BAUER; J. CULVER; J. LEE. *Washington Univ. In St Louis, Washington Univ. In St Louis.*

1:00 QQ4 **764.05** Reorganization of higher-order somatosensory cortex after sensory loss from the hand in squirrel monkeys. H. X. QI*; C. LIAO; J. L. REED; J. H. KAAS. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

2:00 QQ5 **764.06** Multi-scale imaging of the plasticity of sensory representations in somatosensory cortex. M. LEVY*; C. BURTON; R. I. GRANT; A. Y. SHIH. *MUSC, Seattle Children's Res. Inst.*

3:00 QQ6 **764.07** Longitudinal *in vivo* calcium imaging reveals functional resiliency of disinhibitory vip interneuron circuits following stroke. M. MOTAHARINIA*; K. A. GERROW; E. R. WHITE; C. E. BROWN. *Univ. of Victoria, Univ. of Victoria, Univ. of Victoria, Univ. of Victoria.*

4:00 QQ7 **764.08** Imaging the immediate and long-term effects of focal traumatic brain injury on cortical network activity. Y. BIBINEYSHVILI; N. FLISS; A. SUVARNAKAR; J. FANG; D. J. MARGOLIS*. *Rutgers Univ., Rutgers Univ.*

1:00 QQ8 **764.09** Remapping of hand-to-face representation in primary somatosensory (SI) cortex in rat following unilateral forelimb amputation. A. L. CURRY*; V. PELLICER MORATA; J. W. TSAO; O. V. FAVOROV; R. S. WATERS. *Univ. of Memphis, Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr., Univ. North Carolina, Univ. Tennessee Hlth. Sci. Ctr.*

2:00 QQ9 **764.10** What factors drive the somatotopic organization of the hand representation in human somatosensory cortex? L. R. EDMONDSON*; D. WESSELINK; T. R. MAKIN; H. P. SAAL. *Univ. of Sheffield, Univ. of Oxford, Univ. Col. London.*

3:00 QQ10 **764.11** Effect of auditory feedback on finger force control. M. NISHIMURA*; K. I. KOBAYASI. *Doshisha Univ.*

POSTER

765. Touch: Central Representation of Stimulus Features

Theme D: Sensory Systems

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

1:00 QQ11 **765.01** Noise enables multiplexed coding of the amplitude and frequency of periodic signals in mouse primary somatosensory cortex. M. KAMALEDDIN*; S. PRESCOTT. *Univ. of Toronto, The Hosp. for Sick Children, Univ. of Toronto.*

2:00 QQ12 **765.02** Decoding of object position in L5b of mouse S1 during active behavior. J. A. CHEUNG*; P. S. MAIRE; J. KIM; K. LEE; J. SY; S. A. HIRES. *USC, USC.*

3:00 QQ13 **765.03** Object angle representation in barrel cortex during active touch. J. KIM*; S. A. HIRES. *USC, USC.*

4:00 QQ14 **765.04** *In vivo* two-photon calcium imaging of evoked and spontaneously active excitatory and inhibitory networks in the limb associated somatosensory cortex of mice. M. V. BANDET*; B. DONG; X. LI; I. R. WINSHIP. *Univ. of Alberta.*

1:00 QQ15 **765.05** Secondary somatosensory cortex response properties during whisker mediated object localization. P. S. MAIRE*; J. CHEUNG; S. HIRES. *USC.*

2:00 QQ16 **765.06** Multiplexed coding using differentially synchronized spikes: Theory, simulations and experiments. M. LANKARANY*; D. AL-BASHA; S. RATTE; S. A. PRESCOTT. *The Hosp. For Sick Children, The Hosp. For Sick Children, Hosp. for Sick Children, Hosp. For Sick Children.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 QQ17 **765.07** ● Somatosensory detection and localization across the cardiac cycle. E. AL*; F. ILIOPOULOS; N. FORSCHACK; T. NIERHAUS; V. NIKULIN; P. MOTYKA; M. GRUND; M. GAEBLER; A. VILLRINGER. *Berlin Sch. of Mind and Brain, Max Planck Inst. for Human Cognitive and Brain Sci.*

4:00 QQ18 **765.08** Identifying sensory representation of finger segments in people with tetraplegia. J. E. DOWNEY*; F. LIU; C. MOON; J. L. COLLINGER; S. J. BENSMAIA. *Univ. of Chicago, Univ. of Pittsburgh, Univ. of Pittsburgh Med. Ctr., Univ. of Pittsburgh.*

1:00 QQ19 **765.09** Duration and intensity perception, in parallel, through leaky integration of sensory input. A. TOSO*; L. PAZ; A. FASSIHIZAKERI; F. PULECCHI; M. E. DIAMOND. *SISSA, SISSA, Univ. of California at San Diego, Intl. Sch. for Advanced Studies.*

2:00 QQ20 **765.10** A biomimetic model to restore touch in bionic hands through a nerve interface. Q. HE*; E. V. OKOROKOVA; S. J. BENSMAIA. *Univ. of Chicago.*

3:00 QQ21 **765.11** Contact force inhibits vibrotactile neuronal response: A submodality interaction in primary somatosensory cortex. S. RYUN*; J. KIM; C. CHUNG. *Seoul Natl. Univ., Seoul Natl. Univ.*

4:00 QQ22 **765.12** ● Analysis of tongue features to enhance lingual electrotactile stimulation for sensory substitution applications. L. M. STONE-ROY*; P. TURK; T. S. ALLISON; J. MORITZ, Jr. *Colorado State Univ., Colorado State Univ., Sapien LLC.*

1:00 QQ23 **765.13** Behavioral and neural correlates of laryngeal tactile stimulation in spasmodic dysphonia. S. KHOSRAVANI*; A. MAHNAN; I. YEH; P. J. WATSON; Y. ZHANG; G. GODING; J. KONCZAK. *Univ. of Minnesota.*

2:00 QQ24 **765.14** Dynamic updating of history bias shapes perceptual judgements. S. REINARTZ*; I. HACHEN; R. BRASSELET; M. E. DIAMOND. *Intl. Sch. For Advanced Studies (SISSA).*

POSTER

766. Auditory Processing: Neural Coding, Experiment, and Theory

Theme D: Sensory Systems

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

1:00 QQ25 **766.01** The physiological origin of cortical evoked potentials. H. CHO*; P. BRUNNER; L. MOHEIMANIAN; S. C. JUN; G. SCHALK. *Wadsworth Ctr., New York State Dept. of Hlth., Albany Med. Col., State Univ. of New York, Gwangju Inst. of Sci. and Technol.*

2:00 QQ26 **766.02** Mechanisms of selectivity and invariance in the mouse auditory cortex. M. A. STEADMAN; A. S. KOZLOV*. *Imperial Col. London.*

3:00 RR1 **766.03** Inhibitory inputs to medial geniculate body modulate nonlinear population auditory cortical responses after midbrain stimulation. B. A. IBRAHIM*; A. TAHERI; R. V. KENYON; T. BERGER-WOLF; D. A. LLANO. *Beckman Inst. For Advanced Sci. and Technol., Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Chicago.*

4:00 RR2 **766.04** Neural computational principles of auditory processing revealed by magnetoencephalography and deep neural networks. X. TENG*; D. POEPPEL. *Max Planck Inst. For Empirical Aesthetics, Max-Planck-Institute For Empirical Aesthetics, New York Univ.*

1:00 RR3 **766.05** Persistent activity in auditory cortex during passive listening. J. E. COOKE*; J. LEE; E. L. BARTLETT; X. WANG; D. A. BENDOR. *UCL, Purdue Univ., Johns Hopkins Univ. Sch. Med., Univ. Col. London.*

2:00 RR4 **766.06** Classifying the neural code of concurrently presented vowels. S. S. SMITH*; A. CHINTANPALLI; M. N. WALLACE; A. HOCKLEY; M. G. HEINZ; C. J. SUMNER. *Univ. of Nottingham, Birla Inst. of Technol. & Sci., Purdue Univ.*

3:00 RR5 **766.07** Processing of reverberant sound in the auditory system. A. Z. IVANOV*; B. D. B. WILLMORE; K. M. M. WALKER; A. J. KING; N. S. HARPER. *The Univ. of Oxford.*

4:00 RR6 **766.08** ● ▲ Identifying the acoustic and neural basis of mate recognition in two Xenopus species. J. LAKE*; J. DEROCHOONEE; E. ZORNIK. *Reed Col.*

1:00 RR7 **766.09** Component modeling of electrocorticography (ECoG). S. V. NORMAN-HAIGNERE*; P. BRUNNER; A. RITACCIO; G. SCHALK; N. KANWISHER. *École Normale Supérieure, MIT, HHMI Postdoctoral Fellow of the LSRF, Albany Med. Col., Wadsworth Ctr., State Univ. of New York.*

2:00 RR8 **766.10** Frequency dependent interaction of dual sound representations in monkey inferior colliculus. S. M. WILLETT*; V. C. CARUSO; S. T. TOKDAR; J. M. GROH. *Duke Univ.*

3:00 RR9 **766.11** Parallel processing of sound dynamics across mouse auditory cortex via spatially patterned thalamic inputs and distinct areal intracortical circuits. J. LIU*; M. R. WHITEWAY; A. SHEIKHATTAR; D. A. BUTTS; B. BABADI; P. O. KANOLD. *Univ. of Maryland, Univ. of Maryland, Univ. of Maryland, Univ. of Maryland at Col. Park Dept. of Biol., Univ. of Maryland.*

4:00 RR10 **766.12** Two-talker attention decoding from EEG with nonlinear neural networks and linear methods. C. J. SMALT*; G. A. CICCARELLI; M. NOLAN; J. PERRICONE; P. CALAMIA; J. A. O'SULLIVAN; N. MESGARANI; T. QUATIERI. *MIT Lincoln Lab., Columbia Univ.*

1:00 RR11 **766.13** Dissociation of task engagement and arousal effects in auditory midbrain and cortex. D. SADERI*; Z. P. SCHWARTZ; C. R. HELLER; S. V. DAVID. *Oregon Hlth. & Sci. Univ.*

2:00 RR12 **766.14** I can hear you but Ican not catch you: The neural representations of hierarchical linguistic structures in a complex scene. Y. GAO*. *Zhejiang Univ.*

3:00 RR13 **766.15** Temporal prediction as a principle behind cochlea tuning. F. TRINH*; B. D. B. WILLMORE; A. J. PARKER; N. S. HARPER. *Univ. of Oxford.*

4:00 RR14 **766.16** Investigating the temporal window of sensory representation in the auditory cortex. M. RAHMAN*; C. Y. C. LEUNG; A. J. KING; N. S. HARPER. *Univ. of Oxford.*

1:00 SS1 **766.17** Neural correlates of abnormal sensorimotor integration during speaking in Alzheimer's disease. K. RANASINGHE*; H. KOTHARE; N. KORT; L. B. HINKLEY; A. J. BEAGLE; D. MIZUIRI; S. HONMA; B. L. MILLER; K. A. VOSSEL; J. F. HOUDE; S. S. NAGARAJAN. *Univ. of California San Francisco, Univ. of California, San Francisco, UCSF, UC San Francisco, UCSF, Univ. of Minnesota, UCSF, UCSF.*

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* Indicates abstract's submitting author

2:00 SS2 **766.18** Sparse linear dynamical models for micro-electrocorticography responses in the auditory cortex. M. EMAMI*; P. PANDIT; M. SAHRAEE-ARKADAN; M. TRUMPIS; B. BENT; J. VIVENTI; S. RANGAN; A. FLETCHER. *UCLA, Duke Univ., New York Univ., UCLA.*

3:00 SS3 **766.19** Nominally non-responsive frontal and sensory cortical cells encode task-relevant variables via ensemble consensus-building. M. INSANALLY*; I. CARCEA; R. E. FIELD; C. C. RODGERS; B. DEPASQUALE; K. RAJAN; M. R. DEWEESE; B. F. ALBANNA; R. C. FROEMKE. *New York Univ., Columbia Univ., Princeton Univ., Icahn Sch. of Med. at Mount Sinai, Univ. of California, Berkeley, Fordham Univ., Howard Hughes Med. Inst.*

4:00 SS4 **766.20** From microscale structure to population coding of normal and learned behavior. B. J. FISCHER*; W. M. DEBELLO; M. H. ELLISMAN; E. A. BUSHONG; J. L. PENA. *Seattle Univ., UC Davis, UCSD BSB 1000, Univ. California - San Diego, Albert Einstein Col. of Med.*

1:00 SS5 **766.21** Increased cortical gain facilitates the detection of targets in noise. C. F. ANGELONI*; M. N. GEFFEN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 SS6 **766.22** ● Reconstructing intelligible speech from human auditory cortex. H. AKBARI*; B. KHALIGHINEJAD; J. L. HERRERO; A. D. MEHTA; N. MESGARANI. *Columbia Univ., Feinstein Inst. for Med. Res., Hofstra North Shore LIJ Sch. of Med., Columbia Univ.*

3:00 SS7 **766.23** Predicting the neural responses to speech in human auditory cortex using deep neural network models. M. KESHISHIAN*; H. AKBARI; B. KHALIGHINEJAD; J. L. HERRERO; A. D. MEHTA; N. MESGARANI. *Columbia Univ., Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia Univ., Feinstein Inst. for Med. Res., Hofstra-Northwell Sch. of Med. and Feinstein Inst. for Med. Res.*

4:00 SS8 **766.24** Behavior state-dependence of correlated neural population activity in ferret primary auditory cortex. C. R. HELLER*; D. SADERI; Z. P. SCHWARTZ; S. V. DAVID. *Oregon Hlth. and Sci. Univ.*

1:00 SS9 **766.25** Attention modulates the ensemble activity in mouse auditory cortex. P. YAO*; J. SHEN; A. P. CHEN; S. GE; Q. XIONG. *Stony Brook Univ., State Univ. of New York At Stony Brook, Stony Brook Univ., State Univ. of New York At Stony Brook, State Univ. of New York At Stony Brook.*

2:00 SS10 **766.26** Nonlinear coding of naturalistic sound streams in marmoset auditory cortex. L. A. SHAHEEN; S. V. DAVID*. *Oregon Hlth. & Sci. Univ.*

3:00 SS11 **766.27** Contribution of correlated cortical activity to identity-preserving changes in sounds. F. A. RODRIGUEZ CAMPOS*; B. KARPOWICZ; M. SCHAFF; Y. E. COHEN. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

4:00 SS12 **766.28** Correlations improve accuracy in predicting population codes in macaque auditory cortex. M. B. SCHAFF*; S. SUBRAMANIAN; C. LO; O. CONTRERAS; E. PIASINI; V. BALASUBRAMANIAN; Y. E. COHEN. *Univ. of Pennsylvania Sch. of Med., Univ. of Pennsylvania.*

1:00 DP06/SS13 **766.29** (Dynamic Poster) Multiscale calcium imaging of auditory cortex in awake marmoset monkeys. X. SONG*; Y. GUO; X. WANG. *Johns Hopkins Univ. Dept. of Biomed. Engin., Johns Hopkins Univ., Johns Hopkins Univ. Sch. Med.*

2:00 SS14 **766.30** Auditory texture synthesis from task-optimized convolutional neural networks. J. J. FEATHER*; J. H. MCDERMOTT. *MIT, Harvard Univ.*

POSTER

767. Visual Cognition: Decision Making II

Theme D: Sensory Systems

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

1:00 TT1 **767.01** Letter classification based on nominal vs. physical criteria in a right-hemispherectomy subject with blindsight: A forced-choice paradigm. L. GEORGY*; A. PTITO. *McGill Univ. (Montreal Neurolog. Inst., McGill Univ. (Montreal Neurolog. Institute).*

2:00 TT2 **767.02** Evidence for nonlinear integration of visual motion evidence in motor cortex during a perceptual discrimination task. J. VERHEIN*; D. PEIXOTO; W. T. NEWSOME; K. V. SHENOY. *Stanford Univ., Stanford Univ. Sch. of Med., HHMI/Stanford Univ. Sch. of Med., HHMI/ Stanford Univ.*

3:00 TT3 **767.03** Role of mouse secondary motor cortex in flexible categorization of visual stimuli. T. WANG*; J. LIU; H. YAO. *Inst. of Neuroscience, CAS.*

4:00 TT4 **767.04** Effects of learning an orientation comparison task on mouse visual cortex. S. W. FAILOR*; M. CARANDINI; K. D. HARRIS. *Univ. Col. London, Univ. Col. London.*

1:00 TT5 **767.05** Dopaminergic and frontal signals for reward learning in perceptual decisions. A. LAK*; M. OKUN; M. MOSS; H. GURNANI; M. WELLS; C. BAI REDDY; K. D. HARRIS; M. CARANIDNI. *Univ. Col. London.*

2:00 TT6 **767.06** Re-examining the behavioral evidence for evidence accumulation in perceptual decision-making. G. M. STINE*; A. ZYLBERBERG; J. DITTERICH; M. N. SHADLEN. *Columbia Univ., Columbia Univ., Univ. of California, Howard Hughes Med. Inst. - Columbia Univ.*

3:00 TT7 **767.07** ● Subthreshold decision-making in a visual cue detection task in rats. Y. OSAKO*; Y. SAKURAI; J. HIROKAWA. *Doshisha Univ., Doshisha Univ., Doshisha Univ.*

4:00 TT8 **767.08** The role of posterior parietal cortex in actions discrimination. S. FERRI*; A. PALTONOV; G. A. ORBAN. *Univ. of Parma, Univ. of PArma, Univ. of Parma.*

1:00 TT9 **767.09** The neuroscience of legal evidentiary rules: Using electroencephalography to test whether contemporaneity is a safeguard against deceit. C. SUNDBY*; G. WOODMAN. *Vanderbilt Univ., Vanderbilt Univ.*

2:00 TT10 **767.10** Second guessing in perceptual decision-making. J. DITTERICH*. *Univ. of California.*

3:00 TT11 **767.11** Bidirectional control of orienting behavior by distinct prefrontal circuits. R. HUDA*; G. O. SIPE; E. ADAM; V. BRETON-PROVENCHER; G. PHO; L. GUNTER; I. R. WICKERSHAM; M. SUR. *Picower Inst. for Learning and Memory, MIT, MIT.*

4:00 TT12 **767.12** Rats optimize reward rate and learning speed in a binary choice task. J. A. MASIS*; A. SAXE; D. D. COX. *Harvard Univ., Harvard Univ.*

1:00 TT13 **767.13** Contribution of history-dependent modulation of neuronal activity in visual area MT to the temporal dynamics of visual motion processing in monkeys. H. LEFUMAT*; L. DING; A. DALLSTREAM; J. I. GOLD. *Univ. of Pennsylvania.*

2:00 TT14 **767.14** Choice history biases sensory representations in visual and parietal cortex. A. E. URAI*; T. H. DONNER. *Univ. Med. Ctr. Hamburg-Eppendorf.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 TT15 **767.15** Animal habitat as an evolutionary driving force for the development of planning systems. U. MUGAN*; M. A. MACIVER. *Northwestern Univ., Northwestern Univ.*

4:00 TT16 **767.16** Temporal integration of sensory evidence revealed by wholebrain imaging. E. I. DRAGOMIR*; V. ŠTIH; R. PORTUGUES. *Max Planck Inst. of Neurobio.*

1:00 TT17 **767.17** Examining early sensory activity and motor preparation during rapid value-biased sensorimotor decisions. A. MARTINEZ RODRIGUEZ*; E. A. CORBETT; K. MOHR; S. KELLY. *Univ. Col. Dublin.*

2:00 TT18 **767.18** Leveraging visual search patterns in the trail-making task to understand cognitive errors following a stroke. C. PERRY*; T. SINGH; T. M. HERTER; A. HARRISON. *Univ. of South Carolina, Univ. of Georgia, Univ. of South Carolina, Univ. of South Carolina.*

3:00 TT19 **767.19** Different tasks engage distinct populations in mouse parietal cortex. J. LEE*; M. KRUMIN; K. HARRIS; M. CARANDINI. *UCL.*

4:00 TT20 **767.20** A normative explanation for lapses in perceptual decisions. S. PISUPATI*; L. CHARTARIFSKY; D. M. MAHARJAN; A. K. CHURCHLAND. *Cold Spring Harbor Lab.*

1:00 TT21 **767.21** Model-free decoding of likelihood functions from sensory cortical population reveals trial-to-trial probabilistic computation in visual cortex. E. Y. WALKER*; R. J. COTTON; W. MA; A. S. TOLIAS. *Baylor Col. of Med., Shirley Ryan Ability Lab., New York Univ.*

2:00 TT22 **767.22** Lateralized role of mouse parietal cortex during virtual navigation. M. KRUMIN*; J. REYNOLDS-CLARK; C. REDDY; K. D. HARRIS; M. CARANDINI. *Univ. Col. London.*

POSTER

768. Cerebellum: Human Studies

Theme E: Motor Systems

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

1:00 TT23 **768.01** Short-term follow-up of type 1 metabotropic glutamate receptor availability in patients with spinocerebellar ataxia type 6. K. ISHIBASHI; Y. MIURA; K. WAGATSUMA; J. TOYOHARA; K. ISHII*. *Tokyo Metropolitan Inst. of Gerontology, Tokyo Metropolitan Cancer and Infectious Dis. Ctr. Komagome Hosp., Tokyo Metro Inst. Gerontology.*

2:00 TT24 **768.02** Motor training improves motor performance at the preclinical stage of degenerative cerebellar ataxia. W. ILG*; J. GOEDDEL-SAND; C. SCHATTON; A. JAHN; Z. FLESZAR; M. A. GIESE; L. SCHOELS; M. SYNOFZIK. *Ctr. For Integrative Neurosci., Hertie Inst. for Clin. Brain Res.*

3:00 UU1 **768.03** Effect of active electrode position on brain activation after cerebellar tDCS. L. BLEVINS*; A. M. D'MELLO; S. E. MARTIN; B. C. DRURY; C. G. BARRETT; A. R. LILLIAN; M. E. MARKO; C. J. STOODLEY. *American Univ., MIT, American Univ., American Univ.*

4:00 UU2 **768.04** ● Physiological mechanisms and computational modelling of cerebellar transcranial direct current stimulation in humans. G. BATSIKADZE*; Z. REZAEE HASSAN ABADI; D. CHANG; M. GERWIG; S. HERLITZE; A. DUTTA; M. A. NITSCHE; D. TIMMANN. *Univ. of Duisburg-Essen, Univ. At Buffalo - The State Univ. of Ne, Univ. of Duisburg-Essen, Ruhr-University Bochum, Univ. At Buffalo SUNY, Leibniz Res. Ctr. For Working Envrn. An.*

1:00 UU3 **768.05** Cerebellar inhibition modulates attentional control of irrelevant stimuli. D. ANDREW*; M. S. ADAMS; W. R. STAINES. *Univ. of Waterloo.*

2:00 UU4 **768.06** Common genetic variants influencing human cerebellar grey matter volume - a genome-wide association study of 12578 healthy participants. T. MOBERGET*; D. VAN DER MEER; J. ROKICKI; T. KAUFMANN; A. CORDOVA-PALOMERA; F. BETTELLA; N. T. DOAN; D. ALNAES; O. A. ANDREASSEN; L. T. WESTLYE. *NORMENT Oslo Univ. Hosp. HF, NORMENT.*

3:00 UU5 **768.07** Dissociable effects of cerebellar degeneration on adaptation and online correction across motor domains. B. PARRELL*; H. E. KIM; A. BRESKA; R. IVRY. *Univ. of Wisconsin-Madison, Univ. of California, Berkeley, Univ. of California Berkeley, Univ. California.*

4:00 UU6 **768.08** An activation likelihood estimation (ALE) meta-analysis of sensorimotor feedback manipulations. J. F. JOHNSON*; M. BELYK; M. SCHWARTZE; A. P. PINHEIRO; S. A. KOTZ. *Maastricht Univ., Bloorview Res. Inst., Univ. of Lisbon, UM, Fac. of Psychology and Neurosci.*

1:00 UU7 **768.09** ● Improved motor evoked potentials after craniovertebral decompression in Chiari malformation type II may help avoid duroplasty. S. ROMER*; J. CASTLE; A. TEWARI. *Wright State Univ., Evokes, LLC.*

2:00 UU8 **768.10** ▲ Mapping of cerebellar patterns of activity using EEG. E. TORRES*, JR. *Marquette Univ.*

3:00 UU9 **768.11** Force and time control in SCA6. B. YACOUBI; A. CASAMENTO-MORAN; R. BURCIU; S. SUBRAMONY; D. E. VAILLANCOURT; E. A. CHRISTOU*. *Univ. of Florida.*

POSTER

769. Histologic Responses to Electrode Insertion

Theme E: Motor Systems

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

1:00 UU10 **769.01** Microelectrode implantation induces pericyte reactivity and vascular bed reorganization as revealed by two-photon microscopy. S. WELLMAN*; T. D. Y. KOZAI. *Univ. of Pittsburgh.*

2:00 UU11 **769.02** Development of tools for a 3D reconstructed intracortical volume around microelectrode arrays. A. NAMBIAR*; N. NOLTA; M. HAN. *Univ. of Connecticut.*

3:00 UU12 **769.03** Structural and functional changes of pyramidal neurons in primary motor cortex at the site of an implanted multielectrode array. B. GREGORY*; J. SALATINO; M. RAILING; T. O'MALLEY; J. SEYMOUR; J. BEATTY; C. COX; E. PURCELL. *Michigan State Univ., Michigan State Univ., Univ. of Michigan, Michigan State Univ.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
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* Indicates abstract's submitting author

4:00 UU13 **769.04** Biocompatibility of the SU-8 in the central nervous system. K. TÓTH*; E. Z. TÓTH; L. WITTNER; R. FIÁTH; D. MESZÉNA; I. PÁL; E. L. GYőRI; D. PINKE; Z. BERECZKI; G. ORBÁN; A. PONGRÁCZ; I. ULBERT; G. MÁRTON. *HAS, Res. Ctr. For Natural Sci., Pázmány Péter Catholic Univ., Budapest Univ. of Technol. and Econ., Óbuda Univ. Doctoral Sch. on Materials Sci. and Technologies, HAS, Inst. of Tech. Physics and Materials Sci.*

1:00 UU14 **769.05** Effect of deferoxamine on neuroinflammation, oxidative stress, and blood-brain barrier (BBB) disruption in intracortical silicon microelectrode implants. C. BENNETT*; F. MOHAMMED; A. ALVAREZ-CIARA; M. A. NGUYEN; A. PRASAD. *Univ. of Miami.*

2:00 UU15 **769.06** Long-term neural and vascular structural and functional changes to intracortical microelectrode arrays. K. SOLARANA*; M. YE; Y. GAO; H. RAFI; D. X. HAMMER. *U.S. Food and Drug Admin., Univ. of Rochester Med. Ctr.*

3:00 UU16 **769.07** Do micromotion-induced cyclical stresses induce a physiological response in neurons around chronic brain implants? J. L. DUNCAN*; S. SAMPATH KUMAR; A. SRIDHARAN; J. MUTHUSWAMY. *Arizona State Univ.*

4:00 UU17 **769.08** Differences in the reaction of the electrode-tissue interface to chronically implanted active and inactive deep brain stimulation electrodes. J. EVERS*; J. BRADY; H. JAHNS; D. BRAYDEN; M. M. LOWERY. *Univ. Col. Dublin, CÚRAM Ctr. for Res. in Med. Devices, Univ. Col. Dublin.*

1:00 DP07/UU18 **769.09** (Dynamic Poster) Penetration mechanics in brain tissue. A. M. OBAID*; Y. WU; M. S. HANNA; W. NIX; J. DING; N. MELOSH. *Stanford Univ., Stanford Univ. Dept. of Neurol. and Neurolog. Sci., Stanford Univ.*

2:00 UU19 **769.10** Determining baseline tissue response to tungsten microwire arrays in neural implants. M. A. NGUYEN*; A. ALVAREZ-CIARA; C. BENNETT; A. PRASAD. *Univ. of Miami Miller Sch. of Med.*

3:00 UU20 **769.11** ▲ Investigating changes in glial and neuronal responses to implantable neural interfaces: How the unique regenerative abilities of the African spiny mouse could impact current understanding of the foreign body response in the brain. A. M. BRAKE*; E. ATKINSON; C. SIMMONS; M. MADEN; K. J. OTTO. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

4:00 UU21 **769.12** An engineered *in vitro* model of foreign-body response to chronic neural implants. E. ATHERTON*; A. B. ALLAWALA; M. P. POWELL; D. HOFFMAN-KIM; D. A. BORTON. *Brown Univ., Brown Univ., Brown Univ., Carney Inst. for Brain Sci., Brown Univ., Dept. of Veterans Affairs, Providence Med. Center, Ctr. for Neurorestoration and Neurotechnology.*

POSTER

770. Spinal Prosthetics and Stimulation

Theme E: Motor Systems

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

1:00 UU22 **770.01** Utility and versatility of asynchronous switch neural decoders based on regularized gaussian mixture models for neuroprosthetic applications. S. SUN*; M. G. PERICH; M. SEEBER; D. D'CROZ-BARON; F. RASCHELLA; S. ANIL; Q. BARRAUD; B. BARRA; S. CONTI; I. SEÁÑEZ; S. BORGOGNON; A. HICKEY; G. SCHIAVONE; X. KANG; J. YANG; C. HITZ; Q. LI; W. D. KO; Q. CHUAN; M. CAPOGROSSO; S. P. LACOUR; J. BLOCH; S. MICERA; E. BEZARD; G. COURTINE; T. MILEKOVIC. *Ecole Polytechnique Federale De Lausanne (EPFL), Peking Univ., Univ. of Geneva, Texas Tech. Univ., Ecole Polytechnique Federale de Lausanne (EPFL), Scuola Superiore Sant'Anna, Ecole Polytechnique Federale de Lausanne (EPFL), China Acad. of Med. Sci., Motac Neurosci. Ltd, Lausanne Univ. Hosp., Univ. of Bordeaux, Univ. of Geneva.*

2:00 VV1 **770.02** Nonhuman primate model of subcortical stroke. E. PIRONDINI*; A. BRÄNDLI; S. BORGOGNON; Q. BARRAUD; A. HICKEY; K. GALAN; Q. LI; F. C. HUMMEL; D. VAN DE VILLE; M. CAPOGROSSO; E. BEZARD; G. COURTINE; J. BLOCH. *Ecole Polytechnique Fedearale de Lausanne, EPFL - Ctr. for Neuroprosthetics, Motac Neurosci., Inst. of Neurodegenerative Dis., EPFL, CHUV - Service de Neurochirurgie.*

3:00 VV2 **770.03** ● Personalized brain-spine interfaces in freely-behaving non-human primates. I. SEÁÑEZ*; S. BORGOGNON*; A. HICKEY; C. M. HITZ; S. SUN; M. G. PERICH; E. PIRONDINI; F. FALLEGGER; G. SCHIAVONE; X. KANG; F. RASCHELLÁ; J. B. ZIMMERMANN; Q. BARRAUD; A. WOODTLI; S. MICERA; E. BEZARD; T. MILEKOVIC; M. CAPOGROSSO; S. P. LACOUR; E. M. ROUILLER; J. BLOCH; G. COURTINE. *Swiss Federal Inst. of Technol. (EPFL), Univ. of Fribourg, Univ. of Geneva, Univ. of Geneva, Wyss Ctr. For Bio and Neuroengineering, Inst. of Neurodegenerative Dis., Lausanne Univ. Hosp. (CHUV).*

4:00 VV3 **770.04** A wireless brain-spine interface that alleviates gait deficits of Parkinson's disease. T. MILEKOVIC*; F. RASCHELLÀ; S. SUN; M. G. PERICH; G. SCHIAVONE; Y. JIANZHONG; G. ANDREA; C. HITZ; W. K. D. KO; Q. LI; Q. CHUAN; M. CAPOGROSSO; S. P. LACOUR; S. MICERA; J. BLOCH; E. BEZARD; G. COURTINE. *Univ. of Geneva, Ecole Polytechnique Federale de Lausanne (EPFL), Ecole Polytechnique Federale de Lausanne (EPFL), Peking Univ., Univ. of Geneva, China Acad. of Med. Sci., Motac Neurosci. Ltd, Scuola Superiore Sant'Anna, Lausanne Univ. Hosp., Univ. of Bordeaux, Ecole Polytechnique Federale de Lausanne (EPFL).*

1:00 VV4 **770.05** Online prediction of phases of the gait cycle for control of intraspinal microstimulation. A. DALRYMPLE*; D. G. EVERAERT; R. S. SUTTON; V. K. MUSHAHWAR. *Univ. of Alberta, Univ. Alberta, Univ. of Alberta.*

2:00 VV5 **770.06** Closed-loop stimulation of cervical spinal cord and dorsal roots in upper-limb amputees to enable sensory discrimination. S. CHANDRASEKARAN*; A. C. NANIVADEKAR; D. M. WEIR; E. R. HELM; M. L. BONINGER; J. L. COLLINGER; R. A. GAUNT; L. E. FISHER. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

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* Indicates abstract's submitting author

3:00 VV6 **770.07** Requirements of intraoperative testing of intraspinal microstimulation in humans. A. TOOSSI*; D. G. EVERAERT; R. UWIERA; D. S. HU; J. L. JAREMKO; K. ROBINSON; C. C. KAO; P. E. KONRAD; V. K. MUSHAHWAR. *Neurosci. and Mental Hlth. Institute, Universi, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Belmont Univ., Vanderbilt Univ., Vanderbilt Univ., Univ. Alberta.*

4:00 VV7 **770.08** Safety of intraoperative intraspinal microstimulation - Implications towards functional mapping of the spinal cord. D. S. HU*; D. G. EVERAERT; A. TOOSSI; A. N. DARLYMPLE; R. R. E. UWERIA; T. ROBINSON; R. FOX; P. E. KONRAD; H. SHAH; V. K. MUSHAHWAR. *Univ. of Alberta, Univ. of Alberta, Belmont Univ., Vanderbilt Univ.*

1:00 VV8 **770.09** Discriminating naturally evoked compound action potentials from nerve cuff recordings with convolutional neural networks. R. KOH*; A. I. NACHMAN; J. ZARIFFA. *Univ. of Toronto, Toronto Rehabil. Inst. - UHN.*

2:00 VV9 **770.10** Spinal cord neural interface for neuroprosthetics in a primate model. N. W. PRINS*; S. DEBNATH; M. RAMANAMURTHY; A. PRASAD. *Univ. of Miami, Univ. of Miami, Univ. of Miami, Univ. of Miami.*

3:00 VV10 **770.11** Intraspinal microstimulation for motor rehabilitation modulates neural transmission in pain pathways of the deep dorsal horn. J. G. MCPHERSON*; M. BANDRES; B. TAHAYORI. *Florida Intl. Univ.*

4:00 VV11 **770.12** The impact of BDNF rs6265 mutation on changes in explosive jump performance after direct current spinal stimulation. H. R. BERRY*; R. J. TATE; B. A. CONWAY. *Strathclyde Univ., Strathclyde Univ., Strathclyde Univ.*

POSTER

771. Motor Neurons and Muscle: Activity, Sensory, and Central Control: Exercise, Injury, and Disease II

Theme E: Motor Systems

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

1:00 VV12 **771.01** Muscle spindle Ia afferent firing rate mirrors eccentric muscle fiber force. B. C. HORSLEN*; K. S. CAMPBELL; K. P. BLUM; T. C. COPE; P. NARDELLI; L. H. TING. *Emory Univ., Univ. of Kentucky, Georgia Inst. of Technol., Georgia Inst. of Technol.*

2:00 VV13 **771.02** Relocation of the axonal initial segment in lumbar motoneurons of rats receiving chemotherapy. D. I. CARRASCO*; P. NARDELLI; S. N. HOUSLEY; T. COPE. *Georgia Inst. of Technol.*

3:00 VV14 **771.03** Chronic defects in repetitive of spinal motoneurons from a decrease in persistent inward current after chemotherapy. P. NARDELLI*; S. N. HOUSLEY; D. I. CARRASCO; R. K. POWERS; T. C. COPE. *Georgia Inst. of Technol., Georgia Inst. of Technol., Univ. Washington.*

4:00 VV15 **771.04** Origin of acute chemotherapy induced spontaneous activity. S. N. HOUSLEY*; J. A. VINCENT; P. NARDELLI; D. I. CARRASCO; T. C. COPE. *Georgia Inst. of Technol., Wright State Univ., Georgia Inst. of Technol.*

1:00 VV16 **771.05** Muscle spindle primary afferents transduce intrafusal muscle force differentially in healthy and impaired function. K. P. BLUM*; K. S. CAMPBELL; P. NARDELLI; S. N. HOUSLEY; T. C. COPE; L. H. TING. *Georgia Tech. and Emory Univ., Univ. of Kentucky, Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol., Emory Univ. and Georgia Tech.*

2:00 VV17 **771.06** Human ips cell-derived motor neurons for modeling neurological diseases and drug screening. N. LIN*; D. WU; L. ZHANG. *Ixcells Biotechnologies, iXCells Biotechnologies.*

3:00 VV18 **771.07** The role of microglia in synaptic plasticity around axotomized spinal motoneurons. E. T. AKHTER*; T. M. ROTTERMAN; A. R. LANE; A. W. ENGLISH; F. J. ALVAREZ. *Emory Univ., Emory Univ., Emory Univ. Sch. of Med.*

4:00 VV19 **771.08** Two-photon live imaging of microglia interactions with adult motoneurons axotomized after nerve injury. T. M. ROTTERMAN*; F. J. ALVAREZ. *Emory Univ.*

1:00 VV20 **771.09** Propriospinal and corticospinal postsynaptic potentials in lumbar motoneurons following moderate spinal cord contusion injury and exercise. V. V. TURKIN*; D. O'NEILL; B. T. JONES; T. M. HAMM. *Barrow Neurolog Inst., Midwestern Univ.*

2:00 VV21 **771.10** Analysis of walking gait following moderate spinal cord injury and locomotor exercise. D. O'NEILL; T. SLEEM; V. V. TURKIN; B. T. JONES; T. M. HAMM*. *Barrow Neurolog. Inst., Arizona State Univ., Midwestern Univ.*

3:00 VV22 **771.11** Spinal motoneurones are not hypoexcitable in the G93A SOD1 mouse model of Amyotrophic Lateral Sclerosis. D. B. JENSEN*; C. F. MEEHAN. *Univ. of Copenhagen.*

4:00 WW1 **771.12** Parametric optimization of Vagus Nerve Stimulation for the enhancement of plasticity and recovery of forelimb motor function after peripheral nerve injury. A. D. RUIZ*; M. BILAL; Z. HAIDER; A. SEYEDAHMADI; A. ABUSOMWAN; D. PARMAR; J. TRAN; M. SHETH; M. KHAN; S. HAYS; R. RENNAKER III; M. KILGARD. *Univ. of Texas At Dallas.*

1:00 WW2 **771.13** Spinogenesis and plastic changes in the dendritic spines of spinal cord motoneurons after traumatic injury in rats. I. GONZALEZ-BURGOS*; E. PORTILLA-DE BUEN; H. SALGADO-CEBALLOS; D. GONZÁLEZ-TAPIA; N. I. MARTÍNEZ-TORRES; N. VÁZQUEZ-HERNÁNDEZ. *Inst. Mexicano del Seguro Social, Inst. Mexicano del Seguro Social, Inst. Nacional de Ciencias de la Rehabilitación Integral, A.C., Univ. de Guadalajara.*

2:00 WW3 **771.14** Novel nanoparticles for gene delivery in motor neurons. C. KHODTHONG*; M. L. HENDRICKSON; Z. DU; L. JUCKEM. *Mirus Bio LLC, BrainXell, Inc.*

3:00 WW4 **771.15** Submaximal marker for investigating peak muscle torque using NMES after paralysis. D. J. ARPIN*; G. F. FORREST; S. J. HARKEMA; E. REJC. *Univ. of Louisville, Kessler Fndn., Univ. Louisville, Frazier Rehab Inst, KSCIRC.*

4:00 WW5 **771.16** Is there a triceps response to biceps tendon tap in hemi-spastic stroke survivors. N. L. SURESH*; S. CHANDRA. *Shirley Ryan Ability Lab., Shirley Ryan Abilitylab.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 WW6 **771.17** A molecular switch: Kv2.1 currents maintain or suppress repetitive firing in rat lumbar motorneurons. S. H. ROMER; A. S. DEARDORFF*; R. E. W. FYFFE. *Wright State Univ., Boonshoft Sch. of Med., Wright State Univ.*

2:00 WW7 **771.18** The marine invertebrate ciona robusta as an animal model to study neuromuscular junction and neurodegenerative disorders. M. HOSSAIN*; A. STOLFI; B. VITRINEL; R. WANG; J. MIRKOVIC; L. CHRISTIAEN; M. RUGGIU. *St. John's Univ., Georgia Tech. Univ., New York Univ.*

POSTER

772. Motor Neurons and Muscle: Motor Unit Recordings, Kinematics, and EMG

Theme E: Motor Systems

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

1:00 WW8 **772.01** Muscle activation patterns and balance during a sit-to-stand across symmetric and asymmetric initial foot positions in healthy adults. W. JEON*; C. V. MIHOVA; J. L. JENSEN; L. GRIFFIN. *The Univ. of Texas At Austin.*

2:00 WW9 **772.02** A preliminary analysis of imperceptible vibrotactile noise on motor unit discharge patterns. M. S. TENAN; A. J. TWEEDELL; C. A. HAYNES; A. D. PASSARO; P. J. FRANASZCZUK*. *US Army Res. Lab., North Carolina State Univ. and the Univ. of North Carolina, Johns Hopkins Univ. Sch. of Med.*

3:00 WW10 **772.03** Changes in corticospinal excitability in muscle shortening or lengthening during repetitive passive movements. K. SHIBATA; M. SUZUKI; S. SHIMIZU; T. KAWAGUCHI; H. ISHIBASHI; H. AKITA*; M. FUKUDA; A. MATSUNAGA. *Grad. Sch. of Med. Sciences, Kitasato Univ., Fac. of Hlth. Sciences, Tokyo Kasei Univ., Sch. of Allied Hlth. Sciences, Kitasato Univ., Kitasato Univ., Kitasato Univ, Sch. Allied Hlth. Sci., Dept Physiol Sch. Allied Helth Sci, Kitasato Univ.*

4:00 WW11 **772.04** Motor unit discharge rates during ischemic sustained submaximal isometric contractions. L. GRIFFIN*; R. GREGG; M. S. TENAN. *Univ. Texas Austin, Univ. of Texas at Austin, United States Army Res. Lab.*

1:00 WW12 **772.05** Evaluating the learnability-dimensionality relationship in a tendon-driven finger. B. A. COHN*; A. MARJANINEJAD; F. J. VALERO-CUEVAS. *USC, USC, USC.*

2:00 WW13 **772.06** EMG-based decoding of motor tasks in trans-femoral amputees to control powered knee-ankle prostheses. F. BARBERI*; F. APRIGLIANO; E. GRUPPIONI; A. DAVALLI; R. SACCHETTI; A. MAZZONI; S. MICERA. *Scuola Superiore Sant'Anna, INAIL Prosthesis Ctr. Vigorso di Budrio (BO), École Polytechnique Fédérale de Lausanne (EPFL).*

3:00 WW14 **772.07** Impact of aging on the sexual response of pelvic and perineal muscles in male rats. M. A. LARA GARCIA*; M. MEDEL; O. LARA GARCIA; M. MARTINEZ-GOMEZ; P. PACHECO; D. L. CORONA QUINTANILLA. *Univ. Veracruzana, Univ. Autonoma de Tlaxcala, Univ. Veracruzana, Univ. Nacional Autonoma de Mexico, Univ. Autonoma de Tlaxcala, Univ. Nacional Autonoma de México, Univ. Veracruzana.*

4:00 XX1 **772.08** A clustering approach to identify the locations of intramuscular electromyographic electrodes used for prosthesis control. M. MANSOURI*; C. R. BERINGER; S. YAKOVENKO; V. GRITSENKO; A. SOBINOV; M. BOOTS; M. C. MUNIN; M. L. BONINGER; L. E. FISHER; J. L. COLLINGER; R. A. GAUNT. *Univ. of Pittsburgh, Univ. of Pittsburgh, West Virginia Univ.*

1:00 XX2 **772.09** ● Characterization of distal lower extremity balance measuring neuromuscular effort and amplitude probability distribution function in healthy and unhealthy neuromuscular systems. V. M. HOMER*; M. HARRINGTON; C. MASON; A. KUPERAVAGE; C. MACKO; R. MACKO. *Delaware State Univ., Delaware State Univ., Delaware State Univ., Univ. of Maryland.*

2:00 XX3 **772.10** Association between manual dexterity and motor unit activity. M. JOSHI*; B. HEINTZ; F. NEGRO; K. G. KEENAN. *Univ. of Wisconsin - Milwaukee, Univ. of Wisconsin - Milwaukee, Dept. of Clin. and Exptl. Sci., Univ. of Wisconsin-Milwaukee.*

3:00 XX4 **772.11** Motor unit discharge and nonlinear surface EMG features during isometric contraction in Parkinson's disease. L. M. MCMANUS*; M. W. FLOOD; M. M. LOWERY. *Univ. Col. Dublin.*

4:00 XX5 **772.12** Investigating the efficacy of delta 9-THC in treating spasticity following spinal cord injury. O. A. SHELTON*; D. V. BIRCH; A. C. PURITZ; C. K. FRANZ; V. M. TYSSELING. *Northwestern Univ.*

1:00 XX6 **772.13** Common synaptic input to the motor neuron pool is related to dorsiflexion force steadiness in older adults. J. J. PETERSON*; F. NEGRO; K. G. KEENAN. *Univ. of Wisconsin-Milwaukee, Dept. of Clin. and Exptl. Sci.*

2:00 XX7 **772.14** ● Motor unit measurements during exercise and functional activities. J. C. KLINE*; B. SHIWANI; J. P. CHIODINI; P. CONTESSA; S. H. ROY; G. DE LUCA. *Delsys, Inc.*

3:00 XX8 **772.15** ● Myopathic and neuropathic features of MUAP behavior detected from the sEMG signal. J. LETIZI; A. SHENOY; P. CONTESSA*; G. DE LUCA; S. ROY. *Delsys Inc, Baystate Med. Ctr.*

POSTER

773. Neuroendocrine Processes: The HPG Axis

Theme F: Integrative Physiology and Behavior

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

1:00 XX9 **773.01** Pheromones modulate sexually dimorphic neuropeptide responses in a basal vertebrate. Y. CHUNG-DAVIDSON*; U. BUSSY; S. D. FISSETTE; W. LI. *Michigan State Univ., Michigan State Univ.*

2:00 XX10 **773.02** Localization and quantification of kisspeptin and gonadotropin inhibitory hormone in green anole lizards (anolis carolinensis). S. TALWAR*; R. E. COHEN. *Minnesota State University, Mankato.*

3:00 XX11 **773.03** The relationship between seasonal breeding and deiodinase expression in green anole lizards. H. KANG*; D. S. SHARLIN; R. E. COHEN. *Minnesota State University, Mankato.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 XX12 **773.04** The fine structure of human kisspeptin neurons. S. F. TAKÁCS*; Z. BARDÓCZI; K. SKRAPITS; B. GÖCZ; V. VÁCZI; Z. MAGLÓCZKY; A. KÁDÁR; C. FEKETE; I. KALLÓ; M. WATANABE; W. S. DHILLO; I. SZűCS; G. RÁCZ; A. MATOLCSY; E. HRABOVSZKY. *Hungarian Acad. of Science, Inst. of Experim, Hungarian Acad. of Science, Inst. of Experim, Hungarian Acad. of Science, Inst. of Experim, Hungarian Acad. of Science, Inst. of Experim, Hungarian Acad. of Science, Inst. of Experim, Tupper Res. Institute, Tufts Med. Ctr., Fac. of Information Technology, Pázmány Péter Catholic Univ., Hokkaido Univ. Sch. Med., Hammersmith Hospital, Imperial Col. London, St. Borbála Hosp., Semmelweis Univ.*

1:00 XX13 **773.05** Identification of 200,000 GnRH neurons in basal ganglia of the adult human brain. K. SKRAPITS*; S. TAKÁCS; V. VÁCZI; B. GÖCZ; G. RÁCZ; A. MATOLCSY; E. HRABOVSZKY. *Inst. of Exptl. Medicine, Hungarian Acad, Inst. of Exptl. Medicine, Hungarian Acad, Semmelweis Univ.*

2:00 XX14 **773.06** Estradiol upregulates Kiss1 expression in the medial tuberal nucleus in mice. S. B. STEPHENS*; R. B. LIAW; N. P. DI GIORGIO; V. A. LUX-LANTOS; A. S. KAUFFMAN. *UCSD, Inst. of Biol. and Exptl. Medicine-CONICET.*

3:00 YY1 **773.07** Effects of estradiol on GABA and glutamate neurotransmission to mouse GnRH neurons during the positive estrogen feedback. F. BÁLINT*; I. FARKAS; E. FARKAS; C. VASTAGH; C. FEKETE; Z. LIPOSITS. *Inst. of Exptl. Medicine, Hungarian Acad, Inst. of Exptl. Medicine, Hungarian Acad, Inst. of Exptl. Medicine, Hungarian Acad.*

4:00 YY2 **773.08** Estrogen-responsiveness of female mouse hypothalamic astrocytes: A developmental study. M. A. MOHR*; B. J. LAHAM; B. A. FALCY; P. E. MICEVYCH. *UCLA, UCLA.*

1:00 YY3 **773.09** ▲ Progesterone receptor-Src family kinase interdependent signalig mediates neuroprogesterone induction of the luteinizing hormone surge. C. E. CARLSON*; T. CHUON; S. ONDREJIK; P. E. MICEVYCH; K. SINCHAK. *California State Univ. Long Beach, California State Univ. Long Beach, David Geffen Schl Med. at UCLA.*

2:00 YY4 **773.10** Expression of IL-18 in gonadotropin-releasing hormone neurons was observed in the hypothalamus. H. YAGI*; S. KUWAHARA-OTANI; Y. MINATO; S. MAEDA; H. OKAMURA. *Hyogo Col. of Med., Hyogo Col. of Med., Hyogo Col. of Med.*

3:00 YY5 **773.11** Tet1 regulates Fgf8 expression in the developing hypothalamus during gonadotropin-releasing hormone neuron emergence. M. L. LINSCOTT*; W. C. CHUNG. *Kent State Univ., Kent State Univ.*

4:00 YY6 **773.12** ▲ Classical progesterone receptor and Src family kinase are co-expressed and form complexes in the plasma membrane of RP3V neurons. M. FERI*; T. CHUON; S. ONDREJIK; C. CARLSON; P. E. MICEVYCH; K. SINCHAK. *California State Univ. Long Beach, David Geffen Schl Med. at UCLA, California State University, Long Beach.*

1:00 YY7 **773.13** Acute stress rapidly inhibits *in vivo* LH pulses and alters Rfrp and Kiss1 neuronal activation in male mice. J. A. YANG*; J. HUGHES; R. PARRA; K. VOLK; A. KAUFFMAN. *UCSD.*

2:00 YY8 **773.14** Identifying roles for gonadotropin-releasing hormone and kisspeptin neurons in the development of opioid-induced hypogonadism. K. J. TONSFELDT*; L. J. CUI; P. L. MELLON. *Univ. of California San Diego, Univ. of California San Diego.*

3:00 YY9 **773.15** Restricted feeding disrupts circadian timing in the HPG axis in mice. A. RASTOGI*; T. NIEPOKNY; E. M. MINTZ. *Kent State Univ., Kent State Univ.*

4:00 YY10 **773.16** ▲ Evidence that undernutrition reduces kisspeptin neuron expression in wethers. A. N. RENWICK; A. M. THOMPSON; A. MATTHEWS; M. J. CUMMINGS; J. R. SOMMER; C. M. MERKLEY*; C. C. NESTOR. *North Carolina State Univ., North Carolina State Univ.*

1:00 YY11 **773.17** Transitory inhibition of the suprachiasmatic nucleus´ electric activity by tetrodotoxin microinjection at 14:00 of every stage of the estrous cycle results on a blockade of ovulation in the rat. C. C. SILVA-MENDEZ*; G. D. CORTÉS; C. Y. JAVIER; A. FLORES; R. DOMÍNGUEZ. *Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México.*

2:00 YY12 **773.18** ▲ Activation of central melanocortin signaling stimulates LH secretion in male sheep. A. M. THOMPSON; A. N. RENWICK; A. N. MATTHEWS; M. J. CUMMINGS; J. R. SOMMER; C. C. NESTOR*. *North Carolina State Univ.*

3:00 YY13 **773.19** Morphological evidence for sexual dimorphism of NK3R-containing neurons in the retrochiasmatic area of sheep. J. LOPEZ*; R. MCCOSH; M. BEDENBAUGH; E. BOWDRIDGE; A. LINDO; S. HILEMAN; R. L. GOODMAN. *West Virginia Univ., Univ. of California at San Diego, West Virginia Univ. HSC, West Virginia Univ.*

4:00 YY14 **773.20** Evidence that the LH surge in ewes involves both neurokinin B-dependent and -independent actions of kisspeptin. R. L. GOODMAN*; J. A. LOPEZ; M. N. BEDENBAUGH; J. M. CONNORS; S. L. HARDY; S. M. HILEMAN; L. M. COOLEN; M. N. LEHMAN. *West Virginia Univ., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

1:00 YY15 **773.21** Kisspeptin, neurokinin B, and dynorphin mRNA regulation by ovarian steroids in the arcuate nucleus of the ewe: Simultaneous analysis of all three KNDy mRNAs in individual neurons. D. T. PORTER*; R. L. GOODMAN; D. A. STAURSKY; L. M. COOLEN; M. N. LEHMAN. *Univ. of Mississippi Med. Ctr., West Virginia Univ., Univ. of Mississippi Med. Ctr.*

2:00 YY16 **773.22** Evidence that nitric oxide from somatostatin-containing neurons is critical for the LH surge in sheep evidence that nitric oxide from somatos evidence that nitric oxide from somatostatin-containing neurons is critical for the LH surge in sheep. R. MCCOSH*; J. A. LOPEZ; M. N. BEDENBAUGH; J. M. CONNORS; S. L. HARDY; S. M. HILEMAN; R. L. GOODMAN. *West Virginia Univ. Sch. of Med., West Virginia Univ., West Virginia Univ.*

POSTER

774. Neuroendocrine Processes: Neuroendocrinology, Anatomy, and Physiology

Theme F: Integrative Physiology and Behavior

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

1:00 YY17 **774.01** Thyrotropin-releasing hormone (TRH) in the brain and pituitary of the teleost, Clarias batrachus and its role in regulation of hypophysiotropic dopamine neurons. O. SINGH*; S. KUMAR; D. R. PRADHAN; A. J. SAKHARKAR; R. M. LECHAN; P. S. SINGRU. *NISER, Savitribai Phule Pune Univ., Tupper Res. Institute, Tufts Med. Ctr.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 YY18 **774.02** TRH and TRH-like peptides participate in the interaction of oxytocinergic and serotonergic systems of the male rat hypothalamus and epididymis. A. E. PEKARY*; A. SATTIN. *VA Greater Los Angeles Hlthcare Syst, VA Greater Los Angeles Hlth.*

3:00 YY19 **774.03** Role of prokineticin receptor 2 expressing neurons in adult mice. B. CISNEROS LARIOS*; C. F. ELIAS. *Univ. of Michigan.*

4:00 YY20 **774.04** Periventricular kisspeptin neurons project to the paraventricular nucleus in late-pregnant mice. C. H. BROWN*; M. JACKSON; R. AUGUSTINE. *Univ. Otago.*

1:00 YY21 **774.05** Oxytocin receptor expressing neurons in the perinuclear zone of the supraoptic nucleus in the mouse hypothalamus. A. IQBAL; K. SHARMA; R. TERUYAMA*. *Louisiana State Univ.*

2:00 YY22 **774.06** Distribution of estrogen receptor and progestin receptors relative to estrogen receptor beta-containing neurons in the mouse hypothalamic paraventricular nucleus. N. H. CONTOREGGI*; J. PARK; A. C. OVALLES; E. M. WATERS; M. J. GLASS; T. A. MILNER. *Weill Cornell Med., Rockefeller Univ.*

3:00 YY23 **774.07** Glutamate spillover from Kiss1^{ARH} neurons induces a slow inhibitory postsynaptic potential in NPY/AgRP neurons through mGluR7 in female mice. J. QIU*; M. A. BOSCH; T. L. STINCIC; O. K. RONNEKLEIV; M. J. KELLY. *Oregon Hlth. and Sci. Univ., Oregon Natl. Primate Res. Ctr.*

4:00 YY24 **774.08** Estradiol signals via diverse receptors to inhibit KNDy peptides but increases the excitability of kisspeptin neurons in the arcuate nucleus. M. A. BOSCH*; J. QIU; M. J. KELLY; O. K. RONNEKLEIV. *Oregon Hlth. & Sci. Univ., Oregon Natl. Primate Res. Center, OHSU.*

1:00 ZZ1 **774.09** Estrogenic signaling alters neuronal excitability and neurotransmitter release from hypothalamic POMC neurons. T. L. STINCIC*; M. A. BOSCH; O. K. RONNEKLEIV; M. J. KELLY. *Oregon Hlth. and Sci. Univ., Oregon Natl. Primate Res. Ctr.*

2:00 ZZ2 **774.10** The physiological role of insulin produced by neurons in the paraventricular nucleus of the hypothalamus (PVN). J. LEE*; K. KIM; J. CHO; E. KIM. *DGIST, DGIST.*

3:00 ZZ3 **774.11** Unable to Attend Neurodegenerative pathways in islet neuroendocrine cells in type 1 diabetes. M. CAMPBELL-THOMPSON*; E. A. BUTTERWORTH. *Univ. of Florida.*

4:00 ZZ4 **774.12** Melanin-concentrating hormone receptor 1 (MCHR1) immunoreactivity along the reproductive cycle of the female mouse (Mus musculus). G. B. DINIZ*; D. S. BATTAGELLO; M. O. KLEIN; J. C. G. DUARTE; L. V. SITA; F. PRESSE; J. NAHON; J. C. BITTENCOURT. *Inst. of Biomed. Sci., Univ. of São Paulo, Inst. de Pharmacologie Moléculaire et Cellulaire, Univ. Côte d'Azur, Station de Primatologie UPS846 CNRS, Ctr. for Neurosci. and Behaviour, Inst. of Psychology, Univ. of São Paulo.*

1:00 ZZ5 **774.13** Neuroanatomical characterization of melanin-concentrating hormone [MCH] in the hypothalamus of male Neotomodon alstoni [N. alstoni] volcano mice. D. S. BATTAGELLO*; G. B. DINIZ; J. D. REYES-MENDOZA; E. RAMOS; C. LUNA; M. MIRANDA-ANAYA; T. MORALES; J. C. BITTENCOURT. *Univ. of Sao Paulo,Institute of Biomed. Sci., Univ. Nacional Autónoma de México, Inst. de Neurobiología, Unidad Multidisciplinaria de Docencia e Investigación, Facultad de Ciencias, Univ. Nacional Autónoma de México, Ctr. for Neurosci. and Behavior, Inst. of Psychology, Univ. of Sao Paulo.*

2:00 ZZ6 **774.14** Effect of maternal melatonin deprivation during pregnancy and lactation on the offspring neuroimmune system. L. C. MOTTA-TEIXEIRA*; D. BATAGELLO; S. SILVA JÚNIOR; E. LEITE; P. R. L. GOMES; G. B. DINIZ; J. C. BITTENCOURT; P. LUCASSEN; A. KOROSI; J. CIPOLLA NETO. *Univ. of Sao Paulo, Inst. of Biomed. Sci., Univ. of São Paulo, Inst. of Biomed. Sci., Univ. of São Paulo, Inst. Biomed. Sci. - Univ. of Sao Paulo, Univ. of Amsterdam.*

3:00 ZZ7 **774.15** Incerto-hypothalamic area projections subserves multiple functions. L. V. SITA*; E. O. BARBEIRO; J. B. SILVA; D. S. BATTAGELLO; G. B. DINIZ; J. C. BITTENCOURT. *Inst. Biomed Sci.*

4:00 ZZ8 **774.16** Ultrastructural analysis of melanin-concentrating hormone immunoreactive perivascular projections in the hypothalamus and neuro-hypophysis of female rats in different reproductive periods. J. C. BITTENCOURT*; J. L. M. CAMARGO; J. G. P. FERREIRA; J. C. G. DUARTE; G. B. DINIZ. *Inst. Biomed. Sci. - Univ. of Sao Paulo, Inst. of Psychology.*

1:00 ZZ9 **774.17** Evaluation of long-term administration of melanin-concentrating hormone (MCH) and NEI peptide in lactating rats. M. O. KLEIN*; G. B. DINIZ; D. S. BATTAGELLO; J. C. BITTENCOURT. *Univ. of São Paulo, Inst. of Psychology, Univ. of São Paulo.*

2:00 ZZ10 **774.18** Oral oxytocin alters brain activation and behaviors of developing mice in a dose, age, and sex dependent manner. M. TABBAA*; E. A. D. HAMMOCK. *Florida State Univ., Florida State Univ.*

3:00 ZZ11 **774.19** Oxytocin receptor expression in the periphery of neonatal rats and prairie voles. M. A. GREENWOOD*; E. A. D. HAMMOCK. *Florida State Univ.*

4:00 ZZ12 **774.20** Trigeminal ganglia correlates of hypothalamic oxytocin production in neonatal mice. R. VAIDYANATHAN*; E. A. HAMMOCK. *Florida State Univ., Florida State Univ.*

1:00 ZZ13 **774.21** ▲ Prolactin and testosterone induce migration in LNCaP cells. M. G. JIMENEZ BUENDIA*; J. A. LARA FUENTES; G. ARANDA ABREU; M. E. HERNANDEZ AGUILAR; J. MANZO DENES; J. M. SUAREZ MEDELLIN; M. E. MENDOZA GARRIDO; A. AQUINO GÁLVEZ; F. ROJAS DURAN. *Univ. Veracruzana, Univ. Veracruzana, Univ. Veracruzana, Ctr. De Investigacion de Estudios Avanzados del Politecnico Nacional, Inst. Nacional de Enfermedades Respiratorias.*

2:00 ZZ14 **774.22** Effect of prolactin and estradiol in cell migration in MCF-7 cells. J. LARA REYES*; M. G. JIMENEZ BUENDIA; M. HERNANDEZ; G. E. ARANDA-ABREU; J. MANZO DENES; D. HERRERA-COVARRUBIAS; J. SUAREZ MEDELLIN; C. L. SAMPIERI; A. AQUINO GÁLVEZ; F. ROJAS DURAN. *Ctr. de Investigaciones Cerebrales, Univ. Veracruzana, Univ. Veracruzana/Centro de Investigaciones Cerebrales., Univ. Veracruzana, Univ. Veracruzana, Univ. Veracruzana/Instituto de Salud Publica, Inst. Nacional de Enfermedades Respiratorias y Pulmonares.*

3:00 ZZ15 **774.23** Ontogeny of Kiss1R in the uterus of female Hartley guinea pigs. V. ALATRISTE*; J. DE LA ROSA PRIEGO; I. BARRERA SOLÍS; L. MARTINEZ MENDIETA; D. I. LIMÓN; I. MARTÍNEZ-GARCÍA; F. LUNA. *BUAP, Benemérita Univ. Autónoma De Puebla, Benemérita Univ. Autónoma De Puebla, Benemerita Univ. Autonoma De Puebla.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 ZZ16 **774.24** ▲ Kiss1R modulates of cell development in uterus and the onset of puberty in female Wistar rats. J. DE LA ROSA PRIEGO*; I. BARRERA SOLÍS; L. MARTÍNEZ MENDIETA; I. MARTÍNEZ GARCIA; D. I. LIMÓN; F. LUNA MORALES; V. ALATRISTE BUENO. *Benemérita Univ. Autónoma De Puebla.*

1:00 ZZ17 **774.25** ▲ Expression and localization of Kiss1R receptors in the ovaries of pregnant Wistar rats. I. BARRERA SOLÍS*; J. DE LA ROSA PRIEGO; F. LUNA; L. MARTINEZ MENDIETA; I. MARTÍNEZ GARCÍA; D. I. LIMÓN; V. ALATRISTE. *Benemérita Univ. Autónoma de Puebla, Benemerita Univ. Autonoma de Puebla, BUAP.*

2:00 ZZ18 **774.26** Computational model for energy sensing and plasticity of PMv neuronal circuitry in pregnancy. P. LEE*; C. F. ELIAS. *Univ. of Michigan.*

3:00 ZZ19 **774.27** The neuropeptide oxytocin and embryonic diapause. J. L. MINDER*; M. V. CHAO; R. C. FROEMKE. *New York Univ. Med. Ctr., New York Univ. Med. Ctr., NYU Med.*

POSTER

775. Early-Life Stress: Anxiety, Social Function, and Depression

Theme F: Integrative Physiology and Behavior

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

1:00 ZZ20 **775.01** ● Change in sound features of ultrasonic vocalizations by neonatal rats separated from their mother depending on condition of the neonatal rats. M. NAKAMURA*; M. TANICHI; H. TODA; T. SAITO; S. MITSUYOSHI; S. SHINOHARA; Y. OMIYA; M. HIGUCHI; K. SHIMIZU; A. YOSHINO; S. TOKUNO. *The Univ. of Tokyo, Natl. Def. Med. Col., The Univ. of Tokyo, PST Inc., Natl. Def. Med. Col. Res. Inst.*

2:00 ZZ21 **775.02** Behavioral and physiological consequences of mid-term drug-induced pregnancy termination in an animal model. C. CAMILLERI; R. M. BEITER; L. PUENTES; P. ARACENA; S. SAMMUT*. *Franciscan Univ. of Steubenville, Sch. of Medicine, Univ. San Sebastián.*

3:00 ZZ22 **775.03** Mechanistic validation of a novel relaxin-3 B-chain stapled peptide as a preclinical lead in targeting relaxin-3/RXFP3 networks. S. MARWARI*. *Natl. Univ. of Singapore.*

4:00 ZZ23 **775.04** Social isolation-mediated hyperactivity and reduction of anxiety are not affected by Caps2 deficiency. Y. SHINODA*; M. OKA; N. TANAKA; Y. FUJIWARA; Y. SANO; T. SADAKATA; T. FURUICHI. *Tokyo Univ. of Pharm. and Life Sci., Tokyo Univ. of Sci., Gunma Univ. Grad. Sch. of Med.*

1:00 ZZ24 **775.05** Maternal deprivation alters social investigation and corticosterone reactivity in an age- and sex-dependent fashion in adolescent rats. D. SUCHECKI*; V. C. CESCHIM; P. A. SUMARÁN; A. A. BORGES; C. E. N. GIRARDI. *Univ. Federal de Sao Paulo, Univ. Federal de Sao Paulo.*

2:00 ZZ25 **775.06** ▲ Investigating a sedentary form of environmental enrichment in a prairie vole model of social stress. M. L. COX*; M. C. NORMANN; W. WATANASRIYAKUL; O. I. AKINBO; S. SUJET; S. CIOSEK; N. HOLZAPFEL; A. J. GRIPPO. *Northern Illinois Univ.*

3:00 ZZ26 **775.07** The cost of neglect: How maternal deprivation may influence FGFR1 and brain development. T. L. CAIN*; J. C. COLLETTE; K. M. SMITH. *Univ. of Louisiana At Lafayette.*

4:00 AAA1 **775.08** Immobilization stress enhances the hippocampal mRNA expression of FKBP5 in maternal separation rats. H. TODA*; M. TANICHI; M. KOGA; T. SAITO; S. ENOMOTO; S. TAKESHITA; F. ASAI; Y. MITSUI; M. NAGAMINE; M. FUJITA; K. SHIMIZU; A. YOSHINO. *Natl. Def. Med. Col., Natl. Def. Med. Col., Natl. Def. Med. Col.*

1:00 AAA2 **775.09** Neural activity in the medial prefrontal cortex during social interaction in rats: Effect of isolation rearing. S. ITO*; C. MINAMI; T. SHIMIZU; M. ITO; A. MITANI. *Grad. Sch. of Medicine, Kyoto Univ.*

2:00 AAA3 **775.10** ▲ Establishment of a mouse model of depression induced by social isolation during adolescence. J. LIU*; Z. LI; Q. YOU; Y. CHEN; J. YANG; T. GAO. *Southern Med. Univ., Inst. of Mental Hlth. Southern Med. Univ.*

3:00 AAA4 **775.11** The accumulated stress in early life induces depression-like behaviors and neuroinflammatory response in young adult mice. J. KIM*; E. NAM; Y. SUH; K. CHANG. *Gachon Univ., Col. of Medicine, Gachon Univ., Neurosci. Res. Institute(NRI).*

1:00 DP08/AAA5 **775.12** (Dynamic Poster) Developing predictors of alcohol use disorder in a chronic alcohol taking rat model. Y. SUN*; D. RIGA; A. B. SMIT; S. SPIJKER. *VU Univ. Amsterdam, CNCR, NCA, Vrije Univ., Ctr. for Neurogenomics & Cognitive Research, VU Univ., Ctr. for Neurogenomics & Cognitive Research, VUA.*

1:00 AAA6 **775.13** The role of maternal peripheral serotonin 1A receptor (5-HT1AR) in programming offspring innate anxiety. R. J. CHEN*; E. LAIRD MITCHELL; J. GAL TOTH; F. TAKI; P. BERGIN; M. TOTH. *Weill Cornell Grad. Sch. of Med. Sci., Weill Cornell Med.*

2:00 AAA7 **775.14** Developmental asthma leads to long-term changes in lung function, anxiety-related behavior, and expression of genes in emotion-regulation brain areas. J. I. CAULFIELD*; M. CARUSO; R. BOURNE; N. CHIRICHELLA; L. KLEIN; T. CRAIG; A. AUGUST; S. CAVIGELLI. *The Pennsylvania State Univ., The Pennsylvania State Univ., Cornell Univ.*

3:00 AAA8 **775.15** The children of Superstorm Sandy: The blunting of electrodermal activity by maternal depression. J. BUTHMANN*; G. VENTURA; J. FINIK; W. ZHANG; Y. NOMURA. *Cuny Queens Col., CUNY Queens Col., CUNY Grad. Sch. of Publ. Hlth. and Policy, Queens Col. & Grad. Ctr. CUNY.*

4:00 AAA9 **775.16** ▲ Maternal exercise during offspring postnatal development programs resiliency to acute but not chronic stress. M. ZAHEER; A. THOMPSON; B. ZUPAN*. *Vassar Col., Vassar Col.*

1:00 AAA10 **775.17** Early life adversity: Role for perineuronal nets and inhibitory interneurons during anxiety-related neural oscillations in the hippocampus. S. MURTHY*; G. KANE; N. KATCHUR; P. MEJIA; G. OBIOFUMA; B. S. MCEWEN; E. GOULD. *Princeton Univ., Princeton Univ., Rockefeller Univ.*

2:00 AAA11 **775.18** Altered central and peripheral immune system function following prenatal alcohol exposure and/or early-life adversity: Implications for mental health. C. RAINEKI*; T. S. BODNAR; P. J. HOLMAN; J. WEINBERG. *Univ. of British Columbia.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 AAA12 **775.19** Involvement of the CRF system on behavioral and cellular function following neonatal pain and later-life fear conditioning and sensory function. S. M. DAVIS*; J. ZUKE; M. RICE; V. EATON; A. STEINIS; E. HOLMQVIST; M. BURMAN. *Univ. of New England.*

4:00 AAA13 **775.20** ● ▲ The effects of repeated neonatal pain on subsequent anxiety-like behaviors and corticosterone expression. M. RICE*; T. PAQUIN; J. RUDLONG; M. BURMAN. *Univ. of New England.*

1:00 AAA14 **775.21** Effects of the exposure to alcohol and stress in the behavioral response of adolescent rats. M. D. VERGEL-MUNGUÍA*; U. TORRES-LÓPEZ; J. E. RAMÍREZ-SÁNCHEZ; P. TORRES-CARRILLO; O. GALICIA-CASTILLO; D. B. PAZ-TREJO; H. SÁNCHEZ-CASTILLO. *UNAM, Facultad De Psicología, Univ. Iberoamericana.*

2:00 AAA15 **775.22** Endocannabinoids prevent behavioral alterations by predator scent stress in rats. M. MIGLIARO*; D. B. PAZ-TREJO; O. GALICIA-CASTILLO; H. SÁNCHEZ-CASTILLO. *Univ. Nacional Autonoma De Mexico, Univ. Iberoamericana.*

3:00 AAA16 **775.23** Effects of PACAP on central amygdala on stress-related behaviors in male and female rats. H. SANCHEZ-CASTILLO*; B. ROJAS-LITE; S. ORTEGA-TINOCO; D. B. PAZ-TREJO; D. VELAZQUEZ-MARTINEZ. *Univ. Nacional Autonoma de Mexico. Fac Psicologia, Facultad de Psicología, UNAM, UNAM, Univ. Nacional Autonoma de Mexico, Univ. Nacional Autonoma de Mexico.*

4:00 AAA17 **775.24** Influence of sex and type stressors in behavioral and neuroendocrine response to stress. P. TORRES-CARRILLO*; M. VARGAS-GOMEZ; J. T. MIRANDA-GUZMÁN; M. D. VERGEL-MUNGUÍA; E. J. RAMÍREZ-SÁNCHEZ; D. B. PAZ-TREJO; L. D. OCHOA-DE LA PAZ; H. SANCHEZ-CASTILLO. *Univ. Nacional Autonoma de Mexico, Univ. Nacional Autonoma de Mexico, UNAM, Facultad de Psicología, Univ. Nacional Autonoma de Mexico, Facultad de Medicina, UNAM, Univ. Nacional Autonoma de Mexico. Fac Psicologia.*

1:00 AAA18 **775.25** ▲ Behavioral effects of stress in different exposure times. K. B. VALENCIA*; U. TORRES-LÓPEZ; O. GALICIA-CASTILLO; D. B. PAZ-TREJO; H. SÁNCHEZ-CASTILLO. *Lab. de Neuropsicofarmacologia, UNAM, UNAM, UNAM, Univ. Nacional Autonoma de Mexico.*

2:00 AAA19 **775.26** Sex differences in neuroinflammatory responses to systemic lipopolysaccharide treatment during puberty. D. KOLMOGOROVA*; T. VAGGAS; N. LEBEL; S. ST-PIERRE; E. HUDSON; J. G. GREGORY; N. ISMAIL. *Univ. of Ottawa, Cardiff Univ., Univ. of Ottawa, Queen's Univ., Brain and Mind Res. Inst.*

3:00 AAA20 **775.27** Probiotic amelioration of LPS-induced glucocorticoid receptor resistance. K. B. SMITH*; N. ISMAIL. *Univ. of Ottawa, Univ. of Ottawa.*

4:00 AAA21 **775.28** Programming effects of pubertal lipopolysaccharide treatment in male and female CD-1 mice. R. SHARMA*; B. THOMAS; N. ISMAIL. *Univ. of Ottawa, Sch. of Psychology, Cardiff Univ.*

POSTER

776. Stress and the Brain: Adolescence

Theme F: Integrative Physiology and Behavior

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

1:00 AAA22 **776.01** Stress during puberty has differential effects on impulsive action and waiting behaviors. L. F. GONZALEZ MARTINEZ*; K. ABSHIRE; W. PADRON; H. J. LEE; Y. DELVILLE. *The Univ. of Texas At Austin.*

2:00 AAA23 **776.02** ▲ The behavioural and pathophysiological effects of early life adversity on pain sensitivity. S. SALBERG; N. BURKE; M. WANG; J. VINALL; M. NOEL; R. M. MYCHASIUK*. *Univ. of Calgary, Hotchkiss Brain Institute, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

3:00 AAA24 **776.03** ● ▲ The implications of early life stress on the endogenous dopamine system. G. ERICKSON*; T. LOVE; A. J. SMITH; J. ZUBIETA. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

4:00 AAA25 **776.04** Ethanol and stress alter fear memory in adolescent rats. R. SIRCAR*. *The City Col. of New York, Albert Einstein Col. of Med.*

1:00 AAA26 **776.05** ● The effect of pubertal probiotic treatment on LPS-induced changes in TLR4 expression in the PVN in male and female CD1 mice. E. L. MURRAY*; K. MARR; N. ISMAIL. *Univ. of Ottawa, Univ. of Ottawa.*

2:00 BBB1 **776.06** Fear enhanced learning after single prolonged stress prevented by previous adolescent stress exposure: Circuitry and neuronal subtype characterization. E. M. COTELLA*; P. LEMEN; S. MARTELLE; R. MOLONEY; M. FITZGERALD; N. BEDEL; J. HERMAN. *Univ. of Cincinnati.*

3:00 BBB2 **776.07** Early-life exposure to antibiotics affects behaviour and expression of dopamine receptors in the mesocorticolimbic system of young rats. J. A. BRAVO*; J. URRUTIA-PIÑONES; J. ILLANES-GONZALEZ; F. ZANELLI-MASSAI; M. ZAMORANO-CATALDO; J. ESCOBAR-LUNA; G. ROSSI-VARGAS; C. BARRERA-BUGUEÑO; C. DIAZ-ZEPEDA; M. GOTTELAND; M. JULIO-PIEPER. *Pontificia Univ. Catolica de Valparaiso, Univ. de Chile.*

4:00 BBB3 **776.08** Colon submucosal neuropathy in malnourished juvenile rats. M. JULIO-PIEPER*; C. DIAZ-ZEPEDA; M. GONZALEZ-GONZALEZ; J. ESCOBAR-LUNA; C. BARRERA-BUGUEÑO; J. EYZAGUIRRE-VELASQUEZ; J. A. BRAVO. *Pontificia Univ. Catolica de Valparaiso.*

1:00 BBB4 **776.09** Maternal care controls the development of fear learning in adolescent nonhuman primates: Relationship with prefrontal 5ht1a receptor binding. E. L. MORIN*; A. G. P. WAKEFORD; B. R. HOWELL; D. B. GUZMAN; E. SIEBERT; A. M. KAZAMA; J. NYE; M. SANCHEZ. *Emory Univ., Emory Univ. Sch. of Med., Emory Univ., Emory Univ., Inst. of Child Develop., Emory Univ., Emory Univ. Sch. of Med.*

2:00 BBB5 **776.10** Early hypothalamic-pituitary-adrenal axis activity predicts anxiety and sensitivity to the reinforcing effects of cocaine in adolescent macaques: Early life stress as a risk factor. S. N. BRAMLETT*; A. WAKEFORD; E. MORIN; D. GUZMAN; E. SIEBERT; B. HOWELL; J. S. MEYER; A. KAZAMA; M. SANCHEZ. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Emory Univ., Inst. of Child Development, Univ. of Minnesota, Univ. of Massachusetts.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

777. Brain Blood Flow, Metabolism, and Homeostasis: Functional Imaging I

Theme F: Integrative Physiology and Behavior

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

1:00 DP10/BBB6 **777.01** ● (Dynamic Poster) Neurofunctional Ultrasound reveals brain-wide vascular patterns during REM sleep in rats. A. BERGEL*; T. DEFFIEUX; C. DEMENÉ; M. TANTER; I. COHEN. *ESPCI - Inst. Langevin, ESPCI Inst. Langevin, INSERM, INSERM U1130 / CNRS UMR8246 / UPMC.*

2:00 BBB7 **777.02** Detectability of ocular dominance and orientation preference features in primary visual cortex using fMRI. M. MENEZES DE OLIVEIRA*; J. PANG; M. M. SCHIRA; P. A. ROBINSON. *Univ. of Sydney, Ctr. for Integrative Brain Function, Univ. of Wollongong.*

3:00 BBB8 **777.03** Novel index to evaluate the effect of the intervention for healthy elderly, preclinical Alzheimer's disease and mild cognitive impairment subjects using the combination of cerebral hemodynamics markers with multi-task based functional near-infrared spectroscopy (fNIRS). S. NAKAMURA*; S. YOMOTA; H. ITO; N. AKINAGA; A. HORI; K. CHINOMI; H. SUZUKI; K. UCHIDA; T. ASADA. *SHIMADZU Corp., MCBI, Inc., Univ. of Tsukuba, Tokyo Med. and Dent. Univ.*

4:00 BBB9 **777.04** Large amplitude cortical cerebral blood volume variations (ΔCBV) revealed by functional ultrasound imaging are typical of neonate active sleep. J. BARANGER*; C. DEMENÉ; A. FRÉROT; V. BIRAN; M. CORREIA; M. BERNAL; C. DELANOE; S. AUVIN; M. ALISON; J. MAIRESSE; E. HARRIBAUD; M. PERNOT; M. TANTER; O. F. BAUD. *Inst. Langevin, INSERM U979, CNRS UMR 7587, ESPCI, PSL Reseach Univ., Sorbonnes Univ., Assistance Publique–Hôpitaux de Paris - Hop. Robert Debre, Assistance Publique–Hôpitaux de Paris - Hop. Robert Debre, INSERM U1141, Fondation PremUp.*

1:00 BBB10 **777.05** Awake mouse imaging: From two-photon microscopy to BOLD-fMRI. M. DESJARDINS*; K. KILIÇ; M. THUNEMANN; C. MATEO; C. G. FERRI; J. CREMONESI; Q. CHENG; K. WELDY; P. SAISAN; D. KLEINFELD; T. T. LIU; R. BUSSELL; E. WONG; M. SCADENG; A. DUNN; D. A. BOAS; S. SAKADZIC; J. MANDEVILLE; R. B. BUXTON; A. M. DALE; A. DEVOR. *Univ. Laval, BU Neurophotonics Ctr., Univ. of California San Diego, UCSD, Univ. of California San Diego, UCSD, Univ. of California at San Diego, UC San Diego, Univ. of Texas at Austin, Boston Univ., Massachusetts Gen. Hosp., Martinos Ctr. for Biomed. Imaging, Univ. of CA-SD, UCSD, UCSD.*

2:00 BBB11 **777.06** ● Neural-vascular uncoupling mediates motor performance decline in multiple sclerosis. K. WEST*; D. SIVAKOLUNDU; M. ZUPPICHINI; L. HIMES; M. TURNER; J. HART, Jr; H. LU; D. OKUDA; B. P. RYPMA. *Univ. of Texas At Dallas, Univ. of Texas At Dallas, Johns Hopkins Univ., Univ. of Texas at Southwestern, Univ. of Texas at Dallas, Univ. of Texas at Southwestern.*

3:00 BBB12 **777.07** Assessing EEG data quality during simultaneous EEG-fMRI recording. J. E. GALLEGO RUDOLF*; M. CORSI CABRERA; E. PASAYE ALCARAZ. *Inst. De Neurobiologia, UNAM, Facultad de Psicología, UNAM.*

1:00 DP09/BBB13 **777.08**(Dynamic Poster) Functional and structural network connectivity explain regional differences in intrinsic activity dynamics measured with resting fMRI. D. J. LURIE*; M. D'ESPOSITO. *Univ. of California, Berkeley, Univ. of California, Berkeley.*

1:00 BBB14 **777.09** MION enhanced resting-state brain networks in the anesthetized rhesus monkey: Hyperalgesia-induced effects. E. BAEG*; B. PARK; C. PARK; H. PARK; C. WOO; S. KIM. *CNIR, Inst. for Basic Sci. (IBS), Dept. of Electronic, Electrical and Computer Engineering, Sungkyunkwan Univ., Dept. of Biomed. Engineering, Sungkyunkwan Univ., Sch. of Electronic and Electrical Engineering, Sungkyunkwan Univ.*

2:00 CCC1 **777.10** Comparisons of dynamic functional connectivity of neuronal and hemodynamic activity in awake mice. D. A. HANDWERKER*; S. H. KIM; Y. MA; M. SHAIK; D. THIBODEAUX; M. MONTGOMERY; T. ZHAO; J. GONZALEZ-CASTILLO; P. A. BANDETTINI; E. M. HILLMAN. *Natl. Inst. of Mental Hlth., Zuckerman Mind Brain Behavior Institute, Columbia Univ.*

3:00 CCC2 **777.11** ● 4D functional ultrasound imaging of the whole brain activity: First evidence in rodents. C. RABUT*; V. FINEL; M. CORREIA; S. PEZET; M. PERNOT; T. DEFFIEUX; M. TANTER. *Inst. Langevin / Inserm U979, CNRS UMR 8249, ESPCI Paris.*

4:00 CCC3 **777.12** ● Demonstration of reproducible pharmacological functional ultrasound (PhfUS) imaging in a non anesthetized preclinical rodent model during scopolamine drug injection and reversal. T. DEFFIEUX*; C. RABUT; J. FERRIER; X. MOUSSET; A. BERTOLO; B. OSMANSKI; Z. LENKEI; M. TANTER. *Inst. Langevin / Inserm U979, Inserm U894, Iconeus.*

1:00 CCC4 **777.13** Studying the spatiotemporal dynamics of spontaneous brain activity with fMRI time delays. R. V. RAUT*; A. MITRA; A. Z. SNYDER; M. E. RAICHLE. *Washington Univ. in St. Louis.*

2:00 CCC5 **777.14** ●▲ Altered brain responses to binaural beats in patients with obstructive sleep apnea. L. EHLERT*; X. SONG; B. ROY; S. SINGH; A. SAHIB; D. KANG; R. AYSOLA; M. WOO; M. LARSON; R. KUMAR. *UCLA, UCLA, UCLA, Univ. of Colorado, UCLA, UCLA, UCLA.*

3:00 CCC6 **777.15** Dual-component model explains non-classical bold fmri contrast. A. TAYLOR*; J. KIM; D. RESS. *Baylor Col. of Med.*

4:00 CCC7 **777.16** Assessing the impacts of pharmacologically mediated neurovascular dysfunction in the awake, behaving mouse using wide field optical mapping (WFOM). D. N. THIBODEAUX*; M. A. SHAIK; Y. MA; S. H. KIM; H. T. ZHAO; M. K. MONTGOMERY; M. M. ERLER; E. M. HILLMAN. *Columbia Univ., Columbia Univ.*

1:00 CCC8 **777.17** Stimulus frequency modulates cardiovagal and brain responses to respiratory-gated auricular vagal afferent nerve stimulation (RAVANS). R. SCLOCCO; N. W. KETTNER*; R. G. GARCIA; H. P. FISHER; J. A. STOWELL; N. MAKRIS; J. GOLDSTEIN; R. BARBIERI; V. NAPADOW. *Massachusetts Gen. Hospital, Harvard Med. Sc, Logan Univ., Politecnico di Milano.*

2:00 CCC9 **777.18** Dissociation between the time course of the non-specific fMRI hemodynamic response and its stimulus feature-specific component. S. PROULX*; R. FARIVAR. *McGill Univ.*

3:00 CCC10 **777.19** Effects of neuronal modulation with light-sensitive silencers on blood flow changes in primary somatosensory cortex. A. H. ALTAMIRANO-ESPINOZA*; M. FUKUDA; A. VAZQUEZ. *Univ. of Pittsburgh.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 CCC11 **777.20** Let the prefrontal cortex decide whether this is good enough: Effects of self-selected music on cerebral oxygenation and exercise performance. L. R. ALTIMARI*; M. BIGLIASSI; V. BARRETO-SILVA; P. CHIEROTTI-SANTOS; C. F. BUZZACHERA. *Londrina State Univ., Group of Study and Res. in Neuromuscular Syst. and Exercise, Brunel Univ. London.*

POSTER

778. Brain Blood Flow, Metabolism, and Homeostasis: Functional Imaging II

Theme F: Integrative Physiology and Behavior

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

1:00 CCC12 **778.01** Dynamics of neurovascular coupling at a single-neuron and single-vessel level during seizure events. H. LIM*; N. YOU; B. KANG; S. BAE; S. KIM; M. SUH. *Ctr. for Neurosci. Imaging Research, IBS, Sungkyunkwan Univ., Sungkyunkwan Univ., Sungkyunkwan Univ.*

2:00 CCC13 **778.02** *In vivo* and *ex vivo* study of impaired neurovascular coupling in chronically stressed mouse. K. HAN*; J. MIN; B. KANG; J. WOO; H. SHIM; W. JUNG; M. LEE; T. PARK; J. YE; J. LEE; H. RYU; J. HANHN; C. J. LEE; S. KIM; M. SUH. *CNIR, Inst. for Basic Sci. (IBS), Samsung Advanced Inst. for Hlth. Sci. & Technol. (SAIHST), Sungkyunkwan Univ., Ctr. for Neuroscience, Korea Inst. of Sci. and Technol. (KIST), Functional Connectomics, Korea Inst. of Sci. and Technol. (KIST), Ctr. for Glia-Neuron Interaction, Korea Inst. of Sci. and Technol. (KIST), KIST school, Korea Univ. of Sci. and Technol.*

3:00 CCC14 **778.03** Investigation of neuronal correlations with hemodynamic fluctuations in resting state using simultaneous wide-field hemodynamic and calcium imaging. H. KIM*; M. CHOI; M. SUH. *CNIR, Inst. for Basic Sci. In Korea(IBS), Sungkyunkwan Univ., Biomed. Inst. for Convergence at SKKU(BICS), Samsung Advanced Inst. of Hlth. Sci. and Technology(SAIHST), Sungkyunkwan Univ.*

4:00 DDD1 **778.04** Real-time *in vivo* two-photon imaging study reveals increased blood-brain barrier permeability in chronically stressed mice. B. KANG*; J. KIM; S. LEE; J. MIN; H. RYU; H. KIM; M. SUH. *Ctr. For Neurosci. Imaging Research, Inst., Sungkyunkwan Univ. (SKKU), Sungkyunkwan Univ. (SKKU), Sungkyunkwan Univ. (SKKU).*

1:00 DDD2 **778.05** BOLD fMRI correlates of intermittent sympathetic vasoconstriction and autonomic EEG arousals during sleep. P. S. OZBAY; C. CHANG; D. PICCHIONI*; H. MANDELKOW; M. G. CHAPPEL-FARLEY; P. VAN GELDEREN; J. A. DE ZWART; J. H. DUYN. *NIH.*

2:00 DDD3 **778.06** Motion during all-night functional magnetic resonance imaging sleep studies. N. L. JOHNSON*; J. A. DE ZWART; H. MANDELKOW; C. CHANG; P. S. ÖZBAY; P. VAN GELDEREN; J. H. DUYN; D. PICCHIONI. *NINDS.*

3:00 DDD4 **778.07** Longitudinal study of neurovascular coupling changes associated with recovery period following soft cranial window installation in mouse. H. PARK*; N. YOU; J. LEE; M. SUH. *Inst. for Basic Sci. (IBS), Sungkyunkwan Univ. (SKKU), Sungkyunkwan Univ. (SKKU), Sungkyunkwan Univ. (SKKU), Sungkyunkwan Univ. (SKKU).*

4:00 DDD5 **778.08** Prolonged cannabinoid intake leads to memory impairment and to changes in brain metabolism and brain connectivity in mice. F. M. MOURO*; J. RIBEIRO; A. SEBASTIÃO; N. DAWSON. *Inst. de Medicina Mol., Faculdade de Medicina da Univ. de Lisboa, Div. of Biomed. and Life Sciences, Lancaster University, Lancaster, United Kingdom.*

1:00 DDD6 **778.09** Multimodal characterisation of methylene blue's effects on rat neurovascularity and metabolism. E. MACNICOL*; D. CASH; C. SIMMONS; T. C. WOOD; E. KIM; F. O. ZELAYA; D. J. LYTHGOE; F. E. TURKHEIMER. *King's Col. London.*

2:00 DDD7 **778.10** What is needed to measure executive function during target stepping tasks using fNIRS? S. M. VAN DER VEEN*; W. S. S. ROYLE; U. HAMMERBECK; R. A. A. BENDALL; K. L. HOLLANDS. *Ohio Univ., Salford Univ., Univ. of Manchester.*

3:00 DDD8 **778.11** Cannabinoid-induced changes in intrinsic connectivity of the rat brain depend on actomyosin contractility as assessed by functional ultrasound imaging. C. MORISSET*; M. SALERNO; J. FERRIER; C. DEMENE; T. DEFFIEUX; M. TANTER; Z. LENKEI. *Inst. Langevin, INSERM U979, CNRS UMR 7587, INSERM U894 CPN.*

4:00 DDD9 **778.12** Age-differential relationships among dopamine d1 binding potential, fusiform bold signal, and face-recognition performance. M. P. TURNER*; H. FISCHER; D. SIVAKOLUNDU; N. HUBBARD; A. RIECKMANN; B. P. RYPMA; L. BÄCKMAN. *Univ. of Texas at Dallas, Stockholm Univ., Univ. of Texas at Dallas, MIT, Umeå Univ., Karolinska Univ.*

1:00 DDD10 **778.13** Electrical current changes brain function: Effects of dose and electrode montage. G. SCHLAUG*; A. B. SHINDE; F. MUNSCH; D. ALSOP. *Harvard Med. Sch. Dept. of Neurol., Harvard Med. Sch. and Beth Israel Deaconess Med. Ctr.*

2:00 DDD11 **778.14** Changes in neurovascular coupling occlude oxygen-based measures of ketamine's dose-dependent effects on long-range correlations in non-human primate cortex. B. T. ACLAND*; L. H. SNYDER. *Washington Univ. in St Louis.*

3:00 DDD12 **778.15** Establishing a dose response for transcranial direct current stimulation. A. B. SHINDE*. *Beth Israel Deaconess Med. Ctr. and Harvard M.*

POSTER

779. Sleep Systems

Theme F: Integrative Physiology and Behavior

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

1:00 DDD13 **779.01** ▲ The contribution of circadian clock cells to the sleep-inducing effects of optogenetic activation of short neuropeptide F (sNPF) neurons in *Drosophila.* J. M. STONEMETZ; B. A. JUNEAU; R. F. TOMA; C. G. VECSEY*. *Skidmore Col.*

2:00 DDD14 **779.02** Understanding neuronal functions of circMbl in *Drosophila melanogaster.* A. KRISHNAMOORTHY*; I. PATOP; N. REDDY PAMUDURTI; J. KONAKONDLA; S. KADENER. *Brandeis Univ., The Hebrew Univ. of Jerusalem.*

3:00 DDD15 **779.03** ▲ Dopaminergic control of sleep is independent of feeding in *Drosophila.* M. DRISCOLL*; V. COLEMAN; D. SITARAMAN. *Univ. of San Diego.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 DP11/DDD16 **779.04** (Dynamic Poster) Brain-wide activity in zebrafish during sleep and wake. A. ANDREEV*; A. NADTOCHIY; M. JONES; K. KEOMANEE-DIZON; P. LUU; S. E. FRASER; T. V. TRUONG. *Translational Imaging Ctr., USC, USC, USC, USC.*

1:00 DDD17 **779.05** ▲ Octopamine regulation of sleep and arousal. A. NGUYEN*; R. MOGHADAM; D. SITARAMAN. *Univ. of San Diego.*

2:00 DDD18 **779.06** Hyperoxia enhances forebrain slow-wave states in urethane anaesthetized and naturally sleeping rats. B. E. HAUER*; B. NEGASH; K. CHAN; W. VUONG; F. COLBOURNE; S. PAGLIARDINI; C. T. DICKSON. *Univ. of Alberta.*

3:00 DDD19 **779.07** Converging on unconsciousness: Using anaesthesia to model sleep-like brain states. R. WARD-FLANAGAN*; A. S. LO; M. SOBEY; C. T. DICKSON. *Univ. of Alberta.*

4:00 DDD20 **779.08** Capturing general-anesthesia-activated neurons in hypothalamus. L. JIANGXIE*; L. YIN*; S. ZHAO; B. HAN; K. DZIRASA; F. WANG. *Duke Univ.*

1:00 DDD21 **779.09** Electroencephalographic analysis of the Sleepy (sik3$^{slp/+}$, sik3$^{slp/slp}$) mutant mice using the envelope characterization space. J. DIAZ*; K. E. VOGT; H. FUNATO; J. LETELIER; M. YANAGISAWA. *WPI-IIIS, Univ. of Tsukuba, Univ. of Chile.*

2:00 DDD22 **779.10** The catecholaminergic innervation of hypoglossal motoneurons originating from medullary A1C1 neurons tends to be impaired in aging mice. I. RUKHADZE*; A. GVRITISHVILI; V. B. FENIK. *VA West Los Angeles Healthcare Ctr., David Geffen Sch. of Medicine, Univ. of California Los Angeles, Websciences Intl.*

3:00 DDD23 **779.11** Neuromodulation through breathing control. J. L. HERRERO*; S. BICKEL; A. D. MEHTA. *The Feinstein Inst. for Med. Res., NorthWell Hlth., NorthWell Hlth.*

4:00 DDD24 **779.12** Is cataplexy a dissociated state of paradoxical (REM) sleep? Role of the glutamatergic neurons of the sublaterodorsal nucleus in a mouse model of narcolepsy type 1. C. PEYRON*; A. ROMAN; M. VILLALBA; P. LIBOUREL. *Ctr. for Res. in Neurosci., CNRS UMR5292, INSERM U1028, CRNL.*

1:00 EEE1 **779.13** Optical interrogation of arousal circuits in aged mice. S. LI*; L. DE LECEA. *Stanford Univ.*

2:00 EEE2 **779.14** GABAergic neurons in the median preoptic area modulate the wake-sleep cycle but not inflammatory fever. N. L. MACHADO*; C. B. SAPER. *Harvard Med. Sch. - Beth Israel Deaconess Med.*

3:00 EEE3 **779.15** Sleep and circadian homeostasis during long duration cephalic fluid shifts. C. A. FULLER; E. L. ROBINSON; T. M. HOBAN-HIGGINS; P. M. FULLER*. *U.C. Davis, Harvard Med. Sch.*

4:00 EEE4 **779.16** A midbrain-medullary pathway for non-rem sleep control. P. ZHONG*; Z. ZHANG; Z. BARGER; D. LIU; S. AN; Y. DAN. *Mr., Univ. of California Berkeley.*

1:00 EEE5 **779.17** A population of midbrain excitatory neurons control NREM sleep. Z. ZHANG*; P. ZHONG; F. HU; S. AN; Y. DAN. *Univ. of California Berkeley, Howard Hughes Med. Inst.*

2:00 EEE6 **779.18** Cortical neuronal communication during natural slow wave sleep in mice. S. MATSUMOTO*; K. OHYAMA; J. DIAZ; K. E. VOGT. *Univ. of Tsukuba, Intl. Inst. of Integrative Sleep Medicine(WPI-IIIS), Univ. of Tsukuba, Japan Society for the Promotion of Sci. (JSPS) Res. Fellow.*

3:00 EEE7 **779.19** Closed-loop inhibition of spiking activity during slow oscillations and effects on spindles. J. K. KIM*; T. GULATI; K. GANGULY. *Univ. of California San Francisco, San Francisco Veterans Affairs Med. Ctr.*

4:00 EEE8 **779.20** Classifying obstructive sleep apnea based on 16 chemicals in eight brain regions: Machine learning applied to 2D spectroscopy. P. M. MACEY*; M. K. SARMA; A. P. AGUILA; A. SAUCEDO; R. AYSOLA; R. M. HARPER; M. A. THOMAS. *Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*

1:00 EEE9 **779.21** Neural characterization of sleep-wake regulatory network via simultaneous multi-site multi-modal measurements in freely-behaving animals. F. BAHARI*; M. W. BILLARD; C. M. CURAY; J. KIMBUGWE; K. D. ALLOWAY; B. J. GLUCKMAN. *Pennsylvania State Univ., Penn State, Millennium Sci. Complex, Penn State Univ., Penn State Univ.*

POSTER

780. Recent Advances in Sleep Systems

Theme F: Integrative Physiology and Behavior

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

1:00 EEE10 **780.01** De/multiplexing waves of open probability in the corpus callosum: Approach to the hard problem of consciousness from our 1984-1986 model. J. F. GOMEZ-MOLINA*. *Intl. Group of Neurosci. (IGN).*

2:00 EEE11 **780.02** Decoding spontaneous memory reprocessing during sleep in humans. M. SCHÖNAUER*; S. ALIZADEH; H. JAMALABADI; A. ABRAHAM; A. PAWLIZKI; S. GAIS. *Princeton Univ., Univ. of Tübingen, Univ. of Tuebingen, LMU Munich, Univ. of Tübingen.*

3:00 EEE12 **780.03** Excitable dynamics: A mechanism for hippocampal/neocortical function during NREM sleep. D. LEVENSTEIN*; G. BUZSAKI; J. M. RINZEL. *NYU, New York University, Sch. of Med., New York Univ. Ctr. for Neural Sci.*

4:00 EEE13 **780.04** The temporal evolution of grid-place cell replay coordination. F. OLAFSDOTTIR*; F. CARPENTER; C. BARRY. *Univ. Col. London, UCL.*

1:00 EEE14 **780.05** Abnormal locus coeruleus activity during sleep alters sleep signatures of memory consolidation and impairs place cell stability and spatial memory. K. SWIFT*; B. A. GROSS; M. A. FRAZER; G. R. POE. *Univ. of Michigan, UCLA, Univ. of California Los Angeles.*

2:00 EEE15 **780.06** Activity-dependent downscaling of subthreshold synaptic inputs during slow-wave-sleep-like activity *in vivo.* A. GONZÁLEZ-RUEDA*; V. PEDROSA; R. FEORD; C. CLOPATH; O. PAULSEN. *Med. Res. Council (MRC) - Lab. of Mol, Univ. of Cambridge, Imperial college London.*

3:00 EEE16 **780.07** Sleep spindle refractoriness segregates periods of memory reactivation. J. W. ANTONY*; L. PILOTO; M. WANG; P. PACHECO; K. A. NORMAN; K. A. PALLER. *Princeton Univ., Northwestern Univ.*

4:00 EEE17 **780.08** Hippocampal contributions to sleep-dependent consolidation of non-hippocampal motor sequence learning. A. C. SCHAPIRO*; A. G. REID; A. MORGAN; D. S. MANOACH; M. VERFAELLIE; R. STICKGOLD. *Beth Israel Deaconess Med. Ctr. / Harvard Med., VA Boston Healthcare Syst. / Boston Univ. Sch. of Med., Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 EEE18 **780.09** Hippocampal sharp-wave ripples in human NREM sleep are associated with cortical high gamma motifs and up-state sequences. X. JIANG*; I. SHAMIE; W. DOYLE; D. FRIEDMAN; P. DUGAN; O. DEVINSKY; E. N. ESKANDAR; S. S. CASH; J. GONZALEZ-MARTINEZ; E. HALGREN. *UCSD, New York Univ. Sch. of Med., Massachusetts Gen. Hosp., Mass Genl Hosp, Cleveland Clin.*

2:00 EEE19 **780.10** Cholinergic and nonadrenal control of memory consolidation across sleep-wake states. J. P. ROACH*; N. OGNJANOVSKI; S. J. ATON; L. M. SANDER; M. R. ZOCHOWSKI. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

3:00 EEE20 **780.11** The sleeping brain tracks informative speech in a multi-talker environment. M. KOROMA*; T. ANDRILLON; G. LEGENDRE; C. LACAUX; S. KOUIDER. *Ecole Normale Supérieure, Ecole Normale Superieure, Ecole Normale Supérieure, Ecole Normale Supérieure.*

4:00 EEE21 **780.12** REM sleep deprivation alters functional brain connectivity related to amygdala and hippocampus. T. IWANO*; K. KAIDA; K. NIKI. *AIST.*

1:00 EEE22 **780.13** Neural substrates of eye movement during REM-sleep. C. G. HERRERA*; F. GIRARD; A. BILELLA; A. BABALIAN; D. M. ROCCARO; A. R. ADAMANTIDIS; M. R. CELIO. *Inselspital Univ. of Bern, Anat. and Program in Neuroscience, Univ. of Fribourg, Anat. and Program in Neuroscience, Univ. of Fribourg.*

POSTER

781. Neuropeptide Regulation of Food Intake and Energy Balance

Theme F: Integrative Physiology and Behavior

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

1:00 EEE23 **781.01** Serotonergic modulation of the central glucagon-like peptide-1 system regulates energy balance and stress. R. M. LEON*; D. J. REINER; L. M. STEIN; B. C. DE JONGHE; M. R. HAYES. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 EEE24 **781.02** Differential contribution of Na^+-K^+ATPase activity on the resting membrane potential of MCH and orexin neurons. L. FANG*; V. LINEHAN; M. HIRASAWA. *Mem. Univ., Mem. Univ.*

3:00 EEE25 **781.03** Genetic disruption of adipose triglycerides lipase (ATGL) in mediobasal hypothalamic neurons induces overweight and metabolic disturbances. R. MANCEAU*; A. MACHUCA-PARRA; K. BOUYAKDAN; D. RODAROS; A. FISETTE; G. MITCHELL; S. FULTON; T. ALQUIER. *CRCHUM, CHUSJ.*

4:00 EEE26 **781.04** Hunger inhibits inflammatory pain through a hypothalamic-hindbrain peptidergic circuit. A. L. ALHADEFF*; E. HERNANDEZ; M. L. KLIMA; S. Z. PHILLIPS; R. A. HOLLAND; C. GUO; A. W. HANTMAN; B. C. DE JONGHE; Z. SU; J. BETLEY. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Janelia Res. Ctr., Univ. of Pennsylvania.*

1:00 FFF1 **781.05** Endocannabinoid control of gut-brain satiation signaling. D. A. ARGUETA*; N. V. DIPATRIZIO. *Univ. of California, Riverside, Univ. of California, Riverside.*

2:00 FFF2 **781.06** Two peas in a pod: Ghrelin requires functional endocannabinoid signalling in the VTA to stimulate food reward. A. W. EDWARDS*; L. M. HYLAND; C. FEKETE; M. N. HILL; M. J. CHEE; A. ABIZAID. *Carleton Univ., Inst. of Exptl. Medicine, Hungarian Acad. of Sci., Univ. of Calgary.*

3:00 FFF3 **781.07** Activation of ventrolateral medullary catecholamine neurons inhibits CCK-induced satiation and c-Fos expression in the dorsomedial medulla. A. LI*; Q. WANG; S. RITTER. *Washington State Univ.*

4:00 FFF4 **781.08** Eating elicited by morphine in the lateral septum: A mu opiate receptor effect? M. CALDERWOOD*; E. KUAN; B. STANLEY. *Univ. of California Riverside.*

1:00 FFF5 **781.09** Kisspeptin regulation of temperature rhythms: Impacts on metabolism. J. T. SMITH*; G. KAVANAGH; S. MALONEY. *The Univ. of Western Australia.*

2:00 FFF6 **781.10** Nesfatin-1 negatively affects reward-related behaviors. R. DORE*; R. KROTENKO; J. P. REISING; A. DI SPIEZIO; H. MÜLLER-FIELITZ; M. SCHWANINGER; L. MURRU; M. PASSAFARO; O. JÖHREN; C. SCHULZ; H. LEHNERT. *Univ. of Lübeck, Natl. Res. Council.*

3:00 FFF7 **781.11** Behavioral, anatomical and molecular investigation of BDNF mRNA knockdown and leptin/PACAP interactions in the rat ventromedial hypothalamus. C. CHEN*; M. M. HURLEY; R. MCCOY; Z. COOPER; T. DABRA; N. PATEL; I. P. GONZALES; W. CONLEY; K. BRUCKNER; M. GRZYBOWSKI; M. WONG-RILEY; E. ANDERSON; M. HEARING; D. A. BAKER; A. GEURTS; S. CHOI. *Marquette Univ., Med. Col. of Wisconsin.*

4:00 FFF8 **781.12** Role of promoter I-derived brain-derived neurotrophic factor in the regulation of food intake. A. S. KARDIAN*; K. R. MAYNARD; L. MCALLAN; J. HAN; K. MARTINOWICH. *Lieber Inst. for Brain Develop., Univ. of Tennessee Hlth. Sci. Ctr.*

1:00 FFF9 **781.13** Different phenotypes of feeding response to exercise in young and mature rats. C. WANG*; J. HOFMEISTER; M. GRACE; C. J. BILLINGTON; C. M. KOTZ. *Minneapolis VA Hlth. Care Syst., Univ. of Minnesota, Minnesota Obesity Ctr., Univ. of Minnesota, Univ. of Minnesota Twin Cities, Univ. of Minnesota.*

2:00 FFF10 **781.14** ▲ Effect of antioxidants on NPY expression in the arcuate nucleus of the hypothalamus in diabetic rats. M. I. BARRAGAN BONILLA; M. RAMIREZ; J. M. MENDOZA BELLO; B. ILLADES AGUIAR; M. ESPINOZA*. *Univ. Autonoma de Guerrero, Monica Espinoza Rojo.*

3:00 FFF11 **781.15** ● Loss of inhibitory input to orexin neurons increases spontaneous physical activity, energy expenditure and food intake in an animal model of Parkinson's disease. M. STANOJLOVIC*; J. P. PALLAIS; M. LITTLE; C. KOTZ. *Univ. of Minnesota Twin Cities, Minneapolis VA Hlth. Care Syst.*

4:00 FFF12 **781.16** Activation of temperature-sensitive TRPV1-like receptors in ARC POMC neurons reduces food intake. J. JEONG*; D. LEE; S. LIU; S. C. CHUA, Jr; G. J. SCHWARTZ; Y. JO. *Albert Einstein Col. of Med., Gyeongsang Natl. Univ.*

1:00 FFF13 **781.17** Accumbal thyrotropin-releasing hormone (TRH) is involved in the effect of emotional stress on hedonic food intake. E. ALVAREZ*; A. GONZALEZ; P. DE GORTARI. *Inst. Nacional de Psiquiatria.*

2:00 FFF14 **781.18** Thyrotropin-releasing hormone (TRH) expression is regulated by serotonin in PVN in a dehydration-induced anorexia (DIA) model. J. CHAVEZ*; I. AMAYA; P. DE GORTARI. *Inst. Nacional De Psiquiatria.*

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* Indicates abstract's submitting author

3:00 FFF15 **781.19** ● Distribution and ultrastructural localization of the glucagon-like peptide-1 (GLP-1) receptor in the brain of rats. E. FARKAS*; C. PYKE; C. FEKETE. *Inst. of Exptl. Med. of the Hungarian Acad. of Sci., Global Research, Novo Nordisk A/S.*

4:00 FFF16 **781.20** TrkB-expressing neurons in the DMH are potent regulators of energy expenditure. J. HOUTZ*; G. LIAO; B. XU. *Scripps Florida.*

1:00 FFF17 **781.21** ● GLP-1 regulates the POMC neurons of the arcuate nucleus both directly and indirectly via presynaptic action. Z. PÉTERFI; E. FARKAS; C. PYKE; C. FEKETE*. *Inst. of Exptl. Medicine, Hungarian Acad. of Sci., Global Research, Novo Nordisk A/S.*

2:00 FFF18 **781.22** Gs-coupled GPCR linkage to ERK activation in neurons and neuroendocrine cells in cellula and *in vivo.* S. Z. JIANG*; A. EMERY; C. GERFEN; M. EIDEN; W. XU; L. EIDEN. *NIMH/NIH.*

3:00 FFF19 **781.23** Modulatory actions of vasopressin 1b receptor on CA2 excitability. N. I. CILZ*; S. K. WILLIAMS AVRAM; A. CYMERBLIT-SABBA; E. SHEPARD; S. YOUNG. *Natl. Inst. of Mental Hlth.*

4:00 FFF20 **781.24** Impact of ligand and receptor variation in anthropoidea vasopressin 1a receptor signaling. M. PIERCE*; T. F. MURRAY. *Creighton Univ.*

1:00 FFF21 **781.25** G protein-coupled CRH receptors signaling in a neuronal hippocampal cellular context. P. A. DOS SANTOS CLARO*; N. G. ARMANDO; C. INDA; V. G. PIAZZA; S. SILBERSTEIN. *Biomedicine Inst. of Buenos Aires (ibioba)- CO, Univ. Nacional de Quilmes, Univ. de Buenos Aires, Facultad de Ciencias Exactas y Naturales, Univ. de Buenos Aires, Facultad de Farmacia y Bioquímica.*

2:00 FFF22 **781.26** Peptide hormone A suppresses food intake via melanocortin signaling in hypothalamus. Y. JANG*; J. HAN; S. KIM; M. LEE; I. RYU; X. JU; B. YOO; Y. LEE; M. RYU; J. HEO; G. KWEON. *Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ. of Sch. of Med., Chungnam Natl. Univ. Sch. of Med.*

3:00 FFF23 **781.27** Obesogenic diet induces an increase in AgRP neuronal excitability that remains persistently elevated even after weight loss and diet intervention. K. GRAHAM*; W. WEI; A. KORGAN; K. O'CONNELL. *The Jackson Lab., The Jackson Lab.*

4:00 FFF24 **781.28** Divergent mechanisms regulate development and maintenance of obesity following short- and long-term high-fat diet exposure: Electrophysiological and transcriptomic evidence. A. KORGAN*; W. WEI; K. GRAHAM; C. C. KACZOROWSKI; K. O'CONNELL. *The Jackson Lab., The Jackson Lab., The Jackson Lab.*

1:00 GGG1 **781.29** Laparoscopic sleeve gastrectomy decreased plasma ghrelin and brain reactivity to food cues. G. LI*; Y. HU; L. LIU; Q. JIN; M. XU; J. ZHAO; G. JI; Y. NIE; G. WANG; Y. ZHANG. *Xidian Univ., Northwest A&F Univ., Fourth Military Med. Univ.*

POSTER

782. Subcortical Mechanisms in Motivated Behaviors and Physiological States

Theme G: Motivation and Emotion

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

1:00 GGG2 **782.01** The ventral hippocampus is necessary for contextual modulation of Pavlovian cue-induced reward-seeking. T. H. KIM*; P. H. JANAK. *Johns Hopkins Univ., Johns Hopkins Sch. of Med.*

2:00 GGG3 **782.02** Disentangling neural correlates of habits and automaticity in the dorsal striatum. Y. VANDAELE*; N. R. MAHAJAN; J. M. RICHARD; H. S. PROVINCE; S. P. MYSORE; P. H. JANAK. *Johns Hopkins Univ., Johns Hopkins Univ., Univ. of Minnesota, Johns Hopkins Univ.*

3:00 GGG4 **782.03** Cue-outcome contingency ambiguity impacts ventral pallidum reward signaling. D. J. OTTENHEIMER*; J. M. RICHARD; P. H. JANAK. *Johns Hopkins Univ., Univ. of Minnesota, Johns Hopkins Univ.*

4:00 GGG5 **782.04** Dissociable contributions of ventral tegmental and substantia nigra dopamine neurons to reinforcement learning. R. KEIFLIN*; H. J. PRIBUT; P. H. JANAK. *Johns Hopkins Univ., Univ. of Maryland, Johns Hopkins Univ.*

1:00 GGG6 **782.05** Dynamic regulation of cue-triggered reward seeking by the basolateral amygdala and orbitofrontal cortex. K. M. FRASER*; E. KONG; F. PAT; P. H. JANAK. *Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 GGG7 **782.06** The prefrontal cortex-ventral tegmental area projection modulates helplessness and locomotor activity, but not reward-seeking behavior. R. J. POST*; V. LEE; K. J. PELLEGRINO; N. W. RINGELBERG; D. A. BULKIN; B. J. SLEEZER; A. K. RECKNAGEL; M. R. WARDEN. *Cornell Univ., Natl. Inst. of Mental Hlth., Cornell Univ.*

3:00 GGG8 **782.07** A corticostriatal circuit for switching between exploration and exploitation. Y. BAUMEL*; B. MONCRIEFFE; A. RECKNAGEL; J. KIM; M. R. WARDEN. *Cornell Univ., Brain and Cognitive Sciences, MIT.*

4:00 GGG9 **782.08** Ramping activity in midbrain dopamine neurons reflects spatial and non-spatial proximity to goals. A. GURU*; J. A. SCHAFFER; D. S. KULLAKANDA; A. K. RECKNAGEL; C. SEO; M. R. WARDEN. *Cornell.*

1:00 GGG10 **782.09** Encoding of reward-related actions across the dorsomedial-dorsolateral striatal axis: Clues from multi-site single unit recordings in the 5-choice serial reaction time task (5-CSRTT) in rats. J. J. HAYES; J. SAUND; D. DAUTAN; G. P. URCELAY; T. V. GERDJIKOV*. *Univ. of Leicester, Univ. of Geneva.*

2:00 GGG11 **782.10** Functional role of projection-specific subpopulations of nucleus accumbens medium spiny neurons in reward behavior. C. E. PEDERSEN*; D. C. CASTRO; E. ZHANG; M. R. BRUCHAS. *Washington Univ. In St. Louis, Washington Univ. in St Louis, Washington Univ. in St. Louis, Washington Univ.*

3:00 GGG12 **782.11** Amygdalonigral salience signals shape instrumental learning. E. E. STEINBERG*; F. GORE; B. D. HEIFETS; K. T. BEIER; M. D. TAYLOR; C. FOLDY; T. N. LERNER; L. LUO; K. DEISSEROTH; R. C. MALENKA. *Stanford Univ., Univ. of Zurich, Northwestern, Howard Hughes Med. Inst. - Stanford Univ., Stanford Univ. Dept. of Psychology, Stanford Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 GGG13 **782.12** Unilateral inactivation of primate amygdala causes contralateral hemineglect in emotional facial expression and defensive behaviors. H. LEE*; K. MAEDA; O. HIKOSAKA. *Natl. Eye Inst.*

1:00 GGG14 **782.13** Overlapping, dissociable functional networks in the primate amygdala. J. MORROW*; K. M. GOTHARD; M. X. COHEN. *Univ. of Arizona, Univ. Arizona, Col. Med., Univ. Amsterdam, Radbound Univ. Med. Ctr., Donders Ctr. for Neurosci.*

2:00 GGG15 **782.14** Local field potentials in the primate amygdala during identity discrimination. R. C. PHILIP*; P. PUTNAM; S. LEE; C. P. MOSHER; K. GOTHARD. *Univ. of Arizona, Univ. of Arizona, Cedars-Sinai Med. Ctr.*

3:00 GGG16 **782.15** Extended amygdala-parabrachial circuits alter threat perception and encode homeostatic and hedonic feeding. A. T. LUSKIN*; D. L. BHATTI; C. E. PEDERSON; K. KIMBELL; H. ODEN-BRUNSON; R. W. GEREAU, IV; M. R. BRUCHAS. *Washington Univ. in St. Louis, The Rockefeller Univ., Washington Univ. Sch. Med., Washington Univ.*

4:00 GGG17 **782.16** Multisensory neurons in the primate amygdala differentiate between tactile, visual, and auditory stimuli by response polarity and response magnitude. K. GARCIA*; P. E. ZIMMERMAN; J. MORROW; C. P. MOSHER; K. M. GOTHARD. *Univ. of Arizona, Cedars-Sinai Med. Ctr.*

1:00 GGG18 **782.17** Amygdala for the saccadic eye movement in emotional contexts. K. MAEDA*; O. HIKOSAKA. *Lab. Sensorimotor Res., Natl. Eye Inst.*

2:00 GGG19 **782.18** Target-specific effects of hypocretin/orexin neuron activation on seeking-taking behavior in the rat. C. G. PERK*; A. YAMANAKA; D. E. MOORMAN. *Univ. of Massachusetts Amherst, Res. Inst. of Envrn. Medicine, Nagoya Univ.*

3:00 GGG20 **782.19** Elucidating the role of the supramammillary nucleus in motivational processes. A. KESNER*; S. IKEMOTO. *Natl. Inst. On Drug Abuse.*

4:00 GGG21 **782.20** Supramammillary neurons projecting to preoptic hypothalamus drive active stress responses and mediate negative valence. A. J. NORRIS*; M. M. VOTOUPAL; J. R. SHAKER; C. E. PEDERSEN; M. R. BRUCHAS. *Washington Univ., Washington Univ., Washington Univ., Washington Univ., Washington Univ.*

1:00 GGG22 **782.21** Lateral habenula neurons signal the decision to stop work. B. J. SLEEZER*; D. A. BULKIN; R. J. POST; V. LEE; A. K. RECKNAGEL; M. R. WARDEN. *Cornell Univ., Cornell Univ.*

2:00 GGG23 **782.22** Tonic and phasic basal forebrain neurons distinctly signal internal and external states associated with salience, surprise, and novelty. K. ZHANG*; C. CHEN; I. E. MONOSOV. *Washington Univ. In St. Louis, Washington Univ. In St. L, Washington Univ. Sch. of Med.*

3:00 GGG24 **782.23** Mu-opioid receptors in nucleus accumbens medial shell mediate stress enhanced motivated behaviors. D. C. CASTRO*; E. T. ZHANG; A. GUGLIN; J. MORON-CONCEPCION; M. R. BRUCHAS. *Washington Univ. in St Louis, Washington Univ. in St Louis, Washington Univ. in St Louis, Washington Univ. In St Louis, Washington Univ.*

4:00 GGG25 **782.24** ▲ A parabrachial to preoptic hypothalamus opioid circuit that regulates body temperature. J. R. SHAKER*; A. J. NORRIS; M. VOTOUPAL; M. R. BRUCHAS. *Washington Univ. in St. Louis, Washington Univ.*

1:00 GGG26 **782.25** Whole-brain mapping of the input-output organization of claustrum implies its functional role as a limbic-motor interface. J. B. SMITH*; R. KIM; J. MALLARI; A. JAUFFRET; J. WU; X. JIN. *Salk Inst. for Biol. Studies.*

POSTER

783. Anxiety Disorders: Preclinical Models

Theme G: Motivation and Emotion

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

1:00 GGG27 **783.01** Role of the serotonin transporter in the amygdala in trait anxiety. S. QUAH*; A. M. SANTANGELO; A. C. ROBERTS. *Univ. of Cambridge, Behavioural and Clin. Neurosci. Institute, Univ. of Cambridge.*

2:00 HHH1 **783.02** A unified peak fearful tolerance score better indicates rodent anxiogenic tendency. W. Z. SUO*; D. W. PENG; P. SINGH. *Kansas City VA Med. Ctr., Univ. of Kansas Med. Sch.*

3:00 HHH2 **783.03** Characterization of mice lacking galanin in noradrenergic neurons. R. PEARCY*; N. SCIOLINO; N. PLUMMER; D. LUSTBERG; P. JENSEN; D. WEINSHENKER. *Emory Univ., NIEHS/NIH.*

4:00 HHH3 **783.04** Effects of chemogenetic inhibition of prefrontal parvalbumin interneurons on emotional and cognitive behaviors following chronic stress exposure. C. PAGE*; P. HAGERDORN; L. COUTELLIER. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

1:00 HHH4 **783.05** Norepinephrine and frustration: Methylphenidate and propranolol affect reward devaluation and ethanol self-administration. M. R. PAPINI*; M. PUDDINGTON; J. THOMPSON; C. TORRES. *Texas Christian Univ., IBYME-CONICET, Texas Christian Univ., Univ. of Jaen.*

2:00 HHH5 **783.06** Intestinal inflammation induced neurobehavioral changes is associated with altered ventral striatal function in mice. A. CHAKRABORTI*; M. SCARDUZIO; C. GRAHAM; A. HERNANDEZ; A. CHEN; R. TELANGE; D. EPSTEIN; M. NUKAYA; S. MUKHTAR; T. VANGROEN; L. MCMAHON; M. GRAY; S. WATTS; G. KENNEDY; J. BIBB. *Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Inst. de Neurobiología, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

3:00 HHH6 **783.07** Investigating the effects of EAAT3 overexpression on OCD-relevant behaviors in mice. J. M. KOPELMAN*; I. D. ZIKE; K. F. TANAKA; J. VEENSTRA-VANDERWEELE; S. E. AHMARI. *Univ. of Pittsburgh, Vanderbilt Univ., Keio Univ. Sch. of Med. Dept. of Neuropsychiatry, Columbia.*

4:00 HHH7 **783.08** Optogenetic LTD induction in the central nucleus of amygdala produces anxiolytic effects. L. BI*. *Wuhan Univ.*

1:00 HHH8 **783.09** Early exposure to methylphenidate does not affect the anxiety-like behavior of normal or dopamine-deficient adult rats. G. J. KAPLAN*; A. HARDIN; A. TERAN; D. SANCHEZ; J. RAZZO; Z. HARMONY; R. HEDINGER; J. FENG; C. CRAWFORD. *Florida State Univ., California State University, San Bernardino.*

2:00 HHH9 **783.10** Genetically targeted circuit mapping of the oval nucleus of the bed nucleus of the stria terminalis. C. A. ITOGA*; C. FATERI; P. A. ECHEVERRY; J. DELGADO; J. M. LAI; S. BADHON; H. CAI; X. XU. *UCI, UCI, Univ. of Arizona, Univ. California, Irvine.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 HHH10 **783.11** Characterization of stress-induced changes in glutamatergic neurotransmission in a rat model of chronic corticosterone treatment (CCT). R. BERGIN; A. MAURER; M. WEILAND; S. DIEHL; B. FERGER*; I. IONESCU; K. ALLERS. *Boehringer Ingelheim Pharma GmbH & Co. KG.*

4:00 HHH11 **783.12** Effects of a rat model of gestational hypothyroidism on state-like anxiety and forebrain gabaergic and dopaminergic ystems. E. MENEZES; P. R. SANTOS; T. COSTA GOES; V. CIBELLE DE CARVALHO; F. TEIXEIRA SILVA; D. BADAUE-PASSOS JUNIOR; H. E. STEVENS*. *Federal Univ. of Sergipe, Univ. of Iowa.*

1:00 HHH12 **783.13** Effects of D1, D2 and CRF1 receptor antagonists on social investigation deficits induced by chronic social defeat stress in mice. C. A. FAVORETTO*; P. ARAUJO; G. C. MACEDO; I. M. H. QUADROS. *Univ. Federal de São Paulo.*

2:00 HHH13 **783.14** Deconstructing infant trauma and pathology: Infant hippocampus targeted by stress but stress paired with mother targets amygdala. C. RAINEKI; M. OPENDAK; E. C. SARRO; B. S. EAST*, JR; D. A. WILSON; R. M. SULLIVAN. *Univ. of British Columbia, New York Univ., Dominican Col., Tulane Univ., New York Univ. Sch. of Med., NKI & NYU Sch. of Med.*

3:00 HHH14 **783.15** ● Mechanisms of methylphenidate-induced enhancement of fear extinction and modulation by the COMTval158met polymorphism. J. DESLAURIERS; S. CALDWELL; X. ZHOU; V. B. RISBROUGH*. *Univ. of California San Diego, Veterans Affairs Ctr. of Excellence for Stress and Mental Hlth.*

4:00 HHH15 **783.16** MEMRI reveals that acute angiotensin II exposure in male WKY rats excites select brain regions and either normalizes or exaggerates regional differences when compared to the naive SHR. L. F. HAYWARD*; J. WATKINS; L. COLON-PEREZ; M. FEBO; J. ZUBCEVIC. *Univ. of Florida, Univ. of Florida.*

1:00 HHH16 **783.17** Fear processing in the SAPAP3 knockout mouse model of OCD. Z. LAPALOMBARA*; S. E. AHMARI. *Univ. of Pittsburgh.*

2:00 HHH17 **783.18** Oxytocin receptors in the dorsolateral bed nucleus of the stria terminalis (BNST) bias fear learning toward temporally predictable cued fear. J. A. DABROWSKA*; D. MARTINON; A. N. ROMAN; P. LIS; P. MACKINNON; S. APPLEBEY; G. BUECHNER. *Chicago Med. Sch. RFUMS, Rosalind Franklin Univ. of Med. and Scien, Rosalind Franklin Univ. of Med. and Sci.*

3:00 HHH18 **783.19** Pharmacological targeting of cyclooxygenase-2 for the treatment and prevention of anxiety disorders. A. J. MORGAN*; A. GAULDEN; M. ALTEMUS; S. PATEL. *Vanderbilt Univ., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr.*

4:00 HHH19 **783.20** Maternal care determines the male sexual performance in high-yawning rats. J. EGUIBAR*; M. DORANTES-NIETO; C. CORTES; A. UGARTE. *Benemerita Univ. Autonoma De Puebla.*

1:00 HHH20 **783.21** A role of asic1b in proprioceptionand its contribution to increased anxiety level. S. CHEN*. *Inst. of Biomed. Sci.*

2:00 HHH21 **783.22** Intra-BNST PACAP produces dose-dependent increases in anxiety-like behavior in female rats. S. B. KING*; M. BROOMER; D. J. TOUFEXIS; V. MAY; S. E. HAMMACK. *Univ. of Vermont, Univ. of Vermont, Univ. of Vermont.*

3:00 HHH22 **783.23** Anxious phenotypes: Prior experience and orexin 2 (Orx_2) receptor activation lead to social stress resilience. J. D. YAEGER*; C. D. STATON; K. T. KRUPP; T. R. SUMMERS; C. H. SUMMERS. *Univ. of South Dakota, Univ. of South Dakota, Univ. of South Dakota.*

4:00 HHH23 **783.24** ▲ Central nervous system effects of soulatrolide, a coumarin isolated from calophyllum brasiliense cambess (calophyllaceae). K. L. ÁLVAREZ-MARTÍNEZ; C. ALBA-BETANCOURT*; S. L. GUZMÁN-GUTIÉRREZ; D. GASCA-MARTÍNEZ; M. C. VILLAFAÑA-LIRA; R. REYES-CHILPA; M. A. DEVEZE-ÁLVAREZ; Á. J. ALONSO-CASTRO. *Univ. De Guanajuato, Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México.*

1:00 HHH24 **783.25** The development and utility of rodent paradigms to assess the activity of the vasopressin V1a receptor antagonists, balovaptan and JNJ-17308616, *in vivo.* D. MISZCZUK*; A. KÄRKKÄINEN; S. ROBJOHNS; R. HODGSON. *Charles River Discovery, Charles River Discovery.*

2:00 HHH25 **783.26** Carbamoylated erythropoietin (cEPo) reduces anxiety during social interaction in the stress-alternatives model. K. KRUPP*; J. D. YAEGER; N. T. JONES; C. D. STATON; T. R. SUMMERS; S. S. NEWTON; C. H. SUMMERS. *Univ. of South Dakota, Univ. of South Dakota, Univ. of South Dakota.*

3:00 HHH26 **783.27** Anxiolytic effect of chronic intake of supplemental magnesium chloride ($MgCl_2$) in rat. M. MACÍAS-CARBALLO*; F. GUTIÉRREZ-MÉNDEZ; L. LÓPEZ-MERAZ; L. BELTRAN-PARRAZAL; C. MORGADO-VALLE. *Univ. Veracruzana.*

4:00 HHH27 **783.28** Oxytocin ameliorates TMT-induced anxiety and gene expression. R. A. REICHARD*; J. HOPKINS; J. SALAA; G. GIANOTTI; J. MCGINTY. *Med. Univ. of South Carolina.*

1:00 HHH28 **783.29** Extended time course of clinical change following neurofeedback. M. RANCE*; C. WALSH; D. G. SUKHODOLSKY; B. PITTMAN; M. QIU; S. KICHUK; P. GRUNER; S. WAZYLINK; W. KOLLER; M. BLOCH; D. SCHEINOST; C. PITTENGER; M. HAMPSON. *Yale Univ. Dept. of Radiology and Biomed, Yale Univ. Sch. of Med., Yale Univ. Child Study Ctr., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ.*

2:00 HHH29 **783.30** SIRT2 contributes to chronic stress resilience by regulating synaptic plasticity. S. WANG*; S. KO; J. SEO; H. JO; H. SON. *Hanyang Biomed. Res. Inst., Grad. Sch. of Biomed. Sci. and Engin., Dept. of Biochem. and Mol. Biology, Col. of Medicine, Hanyang Univ.*

POSTER

784. Drugs of Abuse and Addiction: Alcohol: Intake and Preference

Theme G: Motivation and Emotion

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

1:00 HHH30 **784.01** Increased risk to alcohol relapse induced by inflammatory pain: Studies in non-operant rat models. Y. CAMPOS-JURADO*; J. CUITAVI; J. D. LORENTE; M. IGUAL-LOPEZ; E. TORRES-CAMPOS; J. L. GONZALEZ-ROMERO; L. MARTI-PRATS; L. HIPOLITO. *Univ. of Valencia.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 HHH31 **784.02** Targeting RPTPβ/ζ in preclinical models of alcohol use disorder: Role of ALK. G. HERRADON*; R. FERNÁNDEZ-CALLE; M. VICENTE-RODRÍGUEZ; M. PASTOR; E. GRAMAGE; B. DI GERONIMO; J. M. ZAPICO; C. CODERCH; C. PÉREZ-GARCÍA; A. W. LASEK; B. DE PASCUAL-TERESA; A. RAMOS. *Pharmacy, CEU San Pablo Univ., Univ. of Illinois at Chicago.*

3:00 HHH32 **784.03** Increased voluntary alcohol consumption and preference in female, but not male, oxytocin receptor knockout mice. K. M. RODRIGUEZ*; H. K. CALDWELL. *Kent State Univ., Kent State Univ.*

4:00 HHH33 **784.04** ▲ Within-session and across-session patterns of oral ethanol consumption in alcohol-preferring (P) rats given intermittent access to 20% ethanol. L. VOUTOUR; J. BRETON; N. PINKOWSKI; J. PASCUA; E. PUESCHEL; S. M. BRASSER*. *San Diego State Univ.*

1:00 HHH34 **784.05** Blocking of α6 nicotinic acetylcholine receptors by N,N'-decane-1,10-diyl-bis-3-picolinium diiodide decreases alcohol self-administration in alcohol-preferring rats. J. SRISONTIYAKUL*; H. E. KASTMAN; E. V. KRSTEW; P. GOVITRAPONG; A. J. LAWRENCE. *Inst. of Mol. Biosci., Florey Inst. of Neurosci. and Mental Hlth., Chulabhorn Grad. Inst., Univ. of Melbourne.*

2:00 HHH35 **784.06** Neuroinflammation-induced ethanol intake in BDNF heterozygous and KMO knock-out mice. G. A. PORTER*; J. C. O'CONNOR. *UT Hlth. San Antonio, UTHSCSA.*

3:00 HHH36 **784.07** Extreme ethanol drinking during early post-abstinence phase in rhesus macaques. N. P. NEWMAN; N. A. R. WALTER; V. C. CUZON CARLSON; K. GRANT*. *Oregon Natl. Primate Resaerch Ctr., ONPRC/OHSU, Oregon Natl. Primate Res. Center/OHSU.*

4:00 HHH37 **784.08** Implications of toll-like receptor signaling in the development of ethanol dependence in mice brain. K. MIZUO*; S. WATANABE. *Sapporo Med. Univ.*

1:00 HHH38 **784.09** The long-term effects of adolescent and adult chronic variable stress on operant self-administration of alcohol. D. A. CONNOR*; J. DROGIN; A. MAK; J. A. DANI. *Univ. of Pennsylvania.*

2:00 HHH39 **784.10** Comparing consumption and preference of combined alcohol and nicotine in male and female C57BL/6J mice. J. N. BERRY*; K. BENSON. *Butler Univ.*

3:00 HHH40 **784.11** Witnessing violence during early-mid adolescence increases alcohol intake in late-adolescence in the rat. E. PALOMARES*; M. MENDEZ DIAZ; A. E. RUIZ-CONTRERAS; O. PROSPERO-GARCIA. *Facultad de Medicina, Univ. Nacional Autonoma de Mexico Facultad de Medicina, Lab. Neurogenomica Cognitiva, Fac. Psicologia, UNAM, UNAM.*

4:00 HHH41 **784.12** Adolescent binge-like ethanol vapor has no effect on aversion-resistant or operant ethanol intake in adulthood. T. B. NENTWIG*; E. J. GLOVER; E. M. STARR; A. H. SELCHICK; L. J. CHANDLER. *Med. Univ. of South Carolina, Univ. of Illinois at Chicago.*

1:00 HHH42 **784.13** An abbreviated alcohol deprivation effect model of relapse behavior in male and female Long Evans rats. T. R. BUTLER*; H. J. PETERSON; B. PORTER. *Univ. of Dayton.*

2:00 HHH43 **784.14** Ventral tegmental area dopamine neurons and relapse to alcohol seeking. Y. LIU*; P. JEAN-RICHARD-DIT-BRESSEL; J. YAU; G. GIBSON; C. W. G. CLIFFORD; G. P. MCNALLY. *Univ. of New South Wales.*

3:00 HHH44 **784.15** ▲ Adolescent, but prepubescent stress increases the likelihood that animals will be high alcohol consumers. K. A. RODRIGUEZ*; A. SIMMONS; S. M. THOMPSON; M. S. MCMURRAY. *Miami Univ., Miami Univ., Miami Univ.*

4:00 HHH45 **784.16** Caffeine increases the reinforcing efficacy of a sweetened alcohol solution. S. E. HOLSTEIN*; G. BARKELL; M. MCVEETY. *Lycoming Col.*

1:00 HHH46 **784.17** Pindolol, the FDA approved drug for hypertension ameliorates emotional and neurogenic consequences of long-term binge consumption of ethanol and attenuates consumption in mice. O. L. PATKAR*; A. BELMER; P. M. KLENOWSKI; S. E. BARTLETT. *Queensland Univ. of Technol., QUT-IHBI-TRI, Univ. of Massachusetts.*

2:00 HHH47 **784.18** Interference between Pavlovian and instrumental stimuli is associated with alcohol consumption in young adults. M. N. SMOLKA*; H. CHEN; S. NEBE; M. GARBUSOW; D. J. SCHAD; M. A. RAPP; Q. J. M. HUYS; A. HEINZ. *Technische Univ. Dresden, Charité, Univ. Potsdam, Translational Neuromodeling Unit / UZH & ETHZ.*

3:00 HHH48 **784.19** Individual differences in alcohol intake predict ketamine self-administration behaviors differentially in male and female rats. C. E. STRONG*; K. N. WRIGHT; M. KABBAJ. *Florida State Univ.*

4:00 HHH49 **784.20** Anxiety-like behavior, pain perception and sex may predict alcohol consumption pattern: Role of cannabinoid and dopaminergic receptors. O. AMANCIO-BELMONT*; A. L. BECERRIL-MELÉNDEZ; M. MÉNDEZ-DÍAZ; A. E. RUIZ-CONTRERAS; O. PROSPERO-GARCIA. *UNAM, UNAM, Lab. Neurogenomica Cognitiva, Fac. Psicologia, UNAM, UNAM.*

1:00 HHH50 **784.21** Taurine enhances alcohol intake and anxiolytic-like behaviors in alcoholic rats. R. R. PULCINELLI; N. A. NIETIEDT; L. F. DE PAULA; C. B. GAROFALO; A. W. HANSEN; S. BANDIERA; P. E. R. BITENCOURT; R. GOMEZ*. *Univ. Federal Do Rio Grande Do Sul (UFRGS).*

2:00 HHH51 **784.22** Prefrontal sigma receptors in alcohol use disorder. S. G. QUADIR*; C. F. MOORE; S. M. TANINO; P. COTTONE; V. SABINO. *Boston Univ. Sch. of Med.*

3:00 HHH52 **784.23** L-DOPA decreases operant responding for alcohol in rats. N. HOLTZ*; L. C. KRUSE; I. O. ALLEN; S. J. WEBER; J. J. CLARK; P. E. PHILLIPS. *Univ. of Washington, Univ. of Washington.*

4:00 HHH53 **784.24** Cannabidiol potentiates ethanol consumption in rats exposed to ethanol vapor chamber. S. A. ENGI*; E. E. OLIVEIRA SANTOS; F. E. CRUZ. *UNIFESP - São Paulo Federal Univ., UNIFESP.*

1:00 HHH54 **784.25** ▲ Hedonic taste reactivity to ethanol between differentially reared rats. E. C. BRASE*; T. J. WUKITSCH; T. J. MOSER; M. S. BLOEDEL; J. K. GOMENDOZA; P. M. SMALL; M. E. CAIN. *Kansas State Univ.*

2:00 HHH55 **784.26** The effect of differential rearing on aversive taste reactivity to ethanol. T. MOSER*; T. J. WUKITSCH; M. S. BLOEDEL; E. C. BRASE; C. CUNNINGHAM; R. STEARNS; S. TAYLOR; M. CAIN. *Kansas State Univ.*

3:00 HHH56 **784.27** Epigenetic mechanisms negatively regulates long-term depression and learning in adolescent rat hippocampus after two binges of ethanol by modulating GluN2A and 2GluN2B ratio. I. DRISSI*; R. ALARY; C. DESCHAMPS; G. FOUQUET; I. MARCQ; V. DEBUYSSCHER; M. NAASSILA; C. VILPOUX; O. PIERREFICHE. *INSERM.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 HHH57 **784.28** Exploring sex differences in the prevention of ethanol drinking by naltrexone in dependent rats during abstinence. A. MATZEU*; L. Y. TERENIUS; R. MARTIN-FARDON. *The Scripps Res. Inst., Karolinska Inst., The Scripps Res. institute, The Scripps Res. Intsitute.*

1:00 HHH58 **784.29** Blockade of orexin receptors in the paraventricular nucleus of the thalamus prevents stress-induced food seeking behavior in rats with a history of ethanol dependence. A. MATZEU; R. MARTIN-FARDON*. *Scripps Res. Inst., The Scripps Res. Intsitute.*

POSTER

785. Opioids: Neural Mechanisms of Addiction

Theme G: Motivation and Emotion

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

1:00 HHH59 **785.01** Interruption of continuous morphine administration in mice negatively impacts brain and behavior. E. LEFEVRE*; M. T. PISANSKY; L. BYSTROM; D. W. LEIPOLD; T. KONO; M. PRAVETONI; P. E. ROTHWELL. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 HHH60 **785.02** Adolescent binge drinking enhances sensitization to morphine's anti-nociception. S. L. CHANG*; W. HUANG; H. HAN; I. K. SARIYER. *Seton Hall Univ., Seton Hall Univ., Temple Univ. Sch. of Med.*

3:00 HHH61 **785.03** Biphasic effects of opioids on brain oxygen: Implications for drug overdose. E. A. KIYATKIN*; A. AFZAL; E. SOLIS, JR. *NIDA-IRP, NIH, DHHS, NIDA-IRP, NIH/NIDA-IRP.*

4:00 III1 **785.04** Depletion of the gut microbiome composition alters oxycodone self-administration and withdrawal in rats. S. SIMPSON*; G. DE GUGLIELMO; M. KALLUPI; O. GEORGE. *The Scripps Res. Inst.*

1:00 III2 **785.05** Effect of noradrenergic-derived galanin on opioid addiction-related behaviors in mice. S. FOSTER*; D. WEINSHENKER. *Emory Univ. Sch. of Med.*

2:00 III3 **785.06** Nociceptin/orphanin FQ in the central nucleus of the amygdala selectively reduces oxycodone self-administration in rats with high addiction-like behaviors. G. DE GUGLIELMO*; M. KALLUPI; P. SCHWEITZER; L. SOLBERG WOODS; A. A. PALMER; O. GEORGE. *Scripps Res. Inst., Wake Forest Univ., UCSD.*

3:00 III4 **785.07** Role of hippocampal calcium-gated potassium channel SK2 in drug-paired contextual memory formation. D. BUREK*; S. B. WILLIAMS; W. POST; J. MORON-CONCEPCION. *Washington Univ. Sch. of Med.*

4:00 III5 **785.08** The differential roles of $Ca_v1.2$ and $Ca_v1.3$ within the dorsal hippocampus in aversive responses of drug withdrawal in chronic morphine-dependent rats. F. SHEN*; Y. DUAN; M. ZHANG; S. JIN; N. SUI. *Inst. of Psychology, CAS, Inst. of Psychology, Univ. of Chinese Acad. of Sci., Sch. of Chem. and Materials Science, Guizhou Normal Univ.*

1:00 III6 **785.09** Differential pre- and post-synaptic K+ channel regulation by kappa opioid receptors affect dopamine neuron physiology. K. L. REICHARD*; P. M. SOTERO DE MENEZES; A. D. ABRAHAM; C. I. CHAVKIN. *Univ. of Washington, Univ. of Washington Sch. of Med.*

2:00 III7 **785.10** Oxycodone withdrawal leads to changes in AP1 family of transcription factors in the rat dorsal striatum. C. A. BLACKWOOD*; M. LEARY; R. HOERLE; M. JOB; M. MCCOY; B. LADENHEIM; J. SUBRAMANIAM; J. L. CADET. *NIH/NIDA, NIH.*

3:00 III8 **785.11** Oxycodone self-administration alters the expression of fibroblast growth factor genes in the rat striatum. J. L. CADET*; M. LEARY; M. JOB; S. JAYANTHI; C. BLACKWOOD. *NIH, NIH/NIDA.*

4:00 III9 **785.12** miRNA gene regulation and Argonaut-2 in the development of oxycodone self-administration. F. M. VASSOLER*; C. M. SCHONHOFF; D. N. TECENO; T. D. PATTON; E. M. BYRNES. *Tufts Univ. Cummings Sch. of Vet. Med., Tufts Univ., Tufts Univ. Cummings Sch. Vet Med.*

1:00 III10 **785.13** Chronic opioid treatment and naltrexone-induced withdrawal alter neuropeptide Y protein levels and RNA expression in the locus coeruleus of male and female rats. C. C. THEISEN*; B. A. S. REYES; S. O'SULLIVAN; J. S. SCHWABER; E. J. VAN BOCKSTAELE. *Drexel Univ. Col. of Med., Thomas Jefferson Univ.*

2:00 III11 **785.14** Mu opioid signaling in the anterior cingulate cortex regulates dopamine release in the nucleus accumbens shell. T. A. GEE; E. NAVRATILOVA; N. WEINTRAUB; B. ISAKOV; F. PORRECA; M. L. HEIEN*. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

3:00 III12 **785.15** Chronic morphine- induced changes in the endocannabinoid system in the locus coeruleus and prefrontal cortex of male and female rats. I. HORRILLO*; B. A. S. REYES; K. MACKIE; E. VAN BOCKSTAELE. *Univ. del País Vasco/Euskal Herriko Uniberts, Ctr. de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Col. of Medicine, Drexel Univ., Indiana Univ.*

4:00 III13 **785.16** The role of the neuropeptide receptor system, BigLEN-GPR171, in opioid reward and withdrawal. L. AFROSE; A. RAM; L. WILKES; L. A. DEVI; E. N. BOBECK*. *Utah State Univ., Mount Sinai Sch. of Med.*

1:00 III14 **785.17** Determining the effect of cell type-specific VTA SGK1 manipulation on drug reward. M. A. DOYLE*; V. BALI; S. E. COOPER; A. R. STARK; M. S. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

2:00 III15 **785.18** Rna sequencing of ribotag mRNA from striatal microglia during morphine escalation and naloxone precipitated withdrawal. J. F. NEUMAIER*; K. R. COFFEY; A. J. LESIAK; B. D. DUFOUR; E. K. VO. *Univ. Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

3:00 III16 **785.19** ΔFosB: A major player in the hippocampus of human opioid overdose cases. L. JABBOUR*; A. WOHLGEMUTH; N. CENTOLELLA. *Franklin Pierce Univ.*

1:00 DP12/III17 **785.20** (Dynamic Poster) Effects of chronic prescription opioid use on corticostriatal connectivity and gray matter volume. B. FROELIGER*; P. MCCONNELL; J. ZUBIETA; E. GARLAND. *Med. Univ. of South Carolina, Univ. of Utah, Univ. of Utah.*

1:00 DP13/III18 **785.21** (Dynamic Poster) Corticostriatal connectivity strength predicts dysregulated hedonics in opioid-dependent adults. P. A. MCCONNELL*; E. GARLAND; J. ZUBIETA; B. FROELIGER. *Med. Univ. of South Carolina, Univ. of Utah, Univ. of Utah.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 III19 **785.22** Specific firing patterns of VTA GABA neurons dictate the motivational experience of acute opiate reward. M. A. BERGAMINI*; H. STEENLAND; G. MAAL-BARED; L. EL-FAYOMI; R. CHOY; D. J. VAN DER KOOY. *Univ. of Toronto, Univ. Toronto.*

3:00 III20 **785.23** ● The effects of opioids on dopaminergic neuron activity in a human brain-chip system. D. WEST; S. SANCES; A. LAPERLE; R. HO; A. MEYER; A. WOODBURY; M. WORKMAN; V. DARDOV; V. A. MOSER*; C. SVENDSEN. *Cedars-Sinai.*

POSTER

786. Cortical and Hippocampal Circuit Interactions

Theme H: Cognition

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

1:00 III21 **786.01** Characterization of LFP and unit activities in the primary visual cortex during sleep. Y. SENZAI*; A. FERNÁNDEZ-RUIZ; D. LEVENSTEIN; G. BUZSAKI. *New York Univ., UCSF, NYU, New York University, Sch. of Med.*

2:00 III22 **786.02** Gain control of hippocampal place fields. K. MCCLAIN*; D. TINGLEY; G. BUZSAKI. *NYU Neurosci. Inst., New York University, Sch. of Med.*

3:00 III23 **786.03** Hippocampal circuit connectivity revealed by simultaneous extracellular and intracellular recording in awake-behaving mice. M. VALERO*; D. F. ENGLISH; G. BUZSÁKI. *NYU Neurosci. Inst.*

4:00 III24 **786.04** Optogenetic manipulation of hippocampal ripples during spatial learning. A. FERNÁNDEZ RUIZ*; A. OLIVA; E. FERMINO DE OLIVEIRA; F. ROCHA-ALMEIDA; G. BUZSAKI. *New York Univ. Med. Ctr., Columbia Univ., Univ. Federal do ABC, Univ. Pablo De Olavide, New York University, Sch. of Med.*

1:00 III25 **786.05** Routing of hippocampal sharp wave-ripples to subcortical structures. D. TINGLEY*; G. BUZSAKI. *NYU Neurosci. Inst., New York University, Sch. of Med.*

2:00 III26 **786.06** Improved ripple detection for real-time and closed-loop manipulation of memory in neural systems. E. F. OLIVEIRA*; A. FERNÁNDEZ RUIZ; I. J. D. BERALDO; G. F. BECKER; R. B. D. SILVA; D. C. SORIANO; G. BUZSAKI; C. LOPES-AGUIAR. *CMCC/UFABC, New York Univ., Neurosci. Institute, New York Univ., Univ. Federal de Minas Gerais, Univ. Federal do ABC, New York University, Sch. of Med.*

3:00 III27 **786.07** The role of inhibition in the normal and epileptic hippocampus. S. ROGERS*; J. GELINAS; D. KHODAGHOLY; A. FERNÁNDEZ RUIZ; J. DIMIDSCHSTEIN; G. J. FISHELL; G. BUZSAKI. *NYU Neurosci. Inst., Columbia Univ., Neurosci. Institute, New York Univ., Harvard Univ., Harvard Med. Sch., New York University, Sch. of Med.*

4:00 III28 **786.08** Non-invasive modulation of neural activity by application of an external electric field. O. YAGHMAZADEH*; G. BUZSÁKI. *NYU Langone Med. Sch.*

1:00 III29 **786.09** Large-scale intercortical interactions during sleep. D. KHODAGHOLY*; J. GELINAS; G. BUZSAKI. *Columbia Univ., Columbia Univ., New York University, Sch. of Med.*

2:00 III30 **786.10** Maturation of communication between primary and association cortices across development. J. GELINAS*; D. KHODAGHOLY; C. MAYER; G. POUCHELON; S. DOMINGUEZ; G. J. FISHELL; G. BUZSAKI. *Columbia Univ. Med. Ctr., Columbia Univ., Broad Inst., Harvard Med. Sch., Harvard Med. Sch., New York University, Sch. of Med.*

3:00 III31 **786.11** Investigating hippocampo-cortical dialogue using wide-field calcium imaging and electrophysiology *in vivo.* R. A. SWANSON*; J. BASU; G. BUZSAKI. *New York Univ., Neurosci. Institute, New York Univ. Sch., New York University, Sch. of Med.*

4:00 III32 **786.12** Location-contingent medial septum activation causes the remapping of hippocampal CA1 place fields. V. VARGA*; P. C. PETERSEN; G. BUZSAKI. *Neurosci. Institute, NYU Langone Med. Ctr., Inst. Exp Med. of HAS, New York University, NYU Neurosci. Inst.*

1:00 III33 **786.13** Focal optogenetic activation reveals heterogeneous place field plasticity rules within and between hippocampal subregions. S. A. MCKENZIE*; D. F. ENGLISH; G. BUZSÁKI. *NYUMC, NYU Neurosci. Inst.*

2:00 III34 **786.14** Theta rhythm perturbation by focal cooling of the septal pacemaker in awake rats and its effect on place cells. P. C. PETERSEN*; G. BUZSAKI. *New York Univ., New York University, NYU Neurosci. Inst.*

POSTER

787. Animal Cognition and Behavior: Cortical and Striatal Circuits

Theme H: Cognition

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

1:00 III35 **787.01** A whole brain atlas of the monosynaptic input targeting four different cell-types in the prefrontal cortex of the mouse. S. K. ÄHRLUND-RICHTER*; Y. XUAN; H. KIM; J. VAN LUNTEREN; M. CARLÉN. *Karolinska Institutet.*

2:00 III36 **787.02** Caudate stimulation modulates value coding dynamics in corticostriatal circuits. S. R. SANTACRUZ*; E. L. ZIPPI; J. M. CARMENA. *Univ. of California, Berkeley, Univ. of California, Berkeley.*

3:00 III37 **787.03** Shifting roles of the dorsal striatum in action sequence learning. K. TURNER*; A. SVEGBORN; T. W. ROBBINS. *Univ. of Cambridge, Univ. of New South Wales, Univ. of Cambridge, Univ. Cambridge.*

4:00 III38 **787.04** tDCS alters neuronal activity and LFP synchrony in the primate prefrontal cortex and the frontostriatal network. S. E. SEIDL*; C. RANGANATH; W. M. USREY; E. G. ANTZOULATOS. *Univ. of California Davis, Univ. of California Davis.*

1:00 III39 **787.05** Chronic social defeat stress enhances dorsolateral striatal-dependent response learning. T. M. GADBERRY; E. L. VIEREGG; O. K. SIAL; L. F. PARISE; C. A. BOLANOS-GUZMAN; M. G. PACKARD*. *Texas A&M Univ., Texas A&M Univ., Texas A&M Univ. Dept. of Psychology.*

2:00 III40 **787.06** Subregions of the prefrontal cortex differentially project to the anterior and posterior dorsomedial caudate-putamen. C. L. ROBISON*; T. N. KAZAN; S. CHARNTIKOV. *Univ. of New Hampshire.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 III41 **787.07** ● ▲ *In vitro* and *vivo* characterization pf-8180824a novel α2/α4 subtype-selective positive allosteric modulator of nicotinic acetylcholine receptors. R. KOZAK*; P. TIERNEY; M. D. GRANNAN; M. WEBER; K. DIULGOLENSKI; G. BORA; E. BELOVA; E. GUILMETTE; J. LITCHFIELD; L. STEVENS; Q. YANG; J. T. LAZZARO; L. ZHANG; J. B. TUTTLE. *Biogen Inc., Pfizer Inc., Aquinnah Pharmaceuticals.*

4:00 III42 **787.08** Temporal information processing in the monkey striatum: Dissociable roles of projection neurons and cholinergic interneurons in interval timing performance. A. MARTEL*; P. APICELLA. *CNRS, Inst. de Neurosciences de la Timone.*

1:00 III43 **787.09** Effects of chemogenetic activation of the dorsal striatum on brain wide functional connectivity and behavior. J. ASLEH*; O. RECHNITZ; N. COHEN; D. DERDIKMAN; I. KAHN. *Technion – Israel Inst. of Technol.*

2:00 III44 **787.10** The ventral striatum's role in reinforcement learning. C. TASWELL*; V. D. COSTA; S. HOANG; K. C. SCARIM; E. R. MURRAY; B. B. AVERBECK. *NIH/NIMH, NIH/NIMH.*

3:00 III45 **787.11** How does activity of D1R+ and D2R+ neurons in the dorsomedial striatum influence choice following learning? K. DELEVICH*; B. HOSHAL; Y. ZHANG; S. VEDULA; C. HALL; A. G. COLLINS; L. E. WILBRECHT. *UC Berkeley.*

4:00 III46 **787.12** Neuronal correlates in the orbitofrontal cortex, nucleus accumbens, and dorsolateral striatum during delay discounting task. V. AZÓCAR*; R. FUENTES; J. A. FUENTEALBA. *Pontificia Univ. Católica de Chile, Univ. de Chile.*

1:00 III47 **787.13** Investigating the role of the direct pathway in goal-directed control of action sequences. E. GARR*; A. R. DELAMATER. *The Grad. Center, CUNY, Brooklyn Col. CUNY.*

2:00 III48 **787.14** ● Prefrontal corticotropin-releasing factor (CRF) neurons impair frontostriatal neural function via local receptor signaling. S. HUPALO*; A. J. MARTIN; D. M. DEVILBISS; R. L. JENISON; C. W. BERRIDGE. *Univ. of Wisconsin - Madison, Rowan Univ. - Sch. of Osteo. Med.*

3:00 III49 **787.15** Androgen receptor responsive afferents to the nucleus accumbens. L. B. DOKOVNA*; R. I. WOOD. *USC, Keck Sch. Med. USC.*

4:00 III50 **787.16** Microinjection of histone deacetylase inhibitors into the striatum, but not the frontal cortex, facilitates the acquisition of timed performance. S. A. YOUSEFZADEH; P. V. AGOSTINO; W. H. MECK*. *Duke Univ., Natl. Univ. of Quilmes.*

1:00 III51 **787.17** A novel device to measure effort, vigor, and persistence in rodents. B. A. MATIKAINEN-ANKNEY*; A. V. KRAVITZ. *NIH, NIDDK, Natl. Inst. of Hlth., NIDA, Natl. INstitutes of Hlth.*

2:00 III52 **787.18** Examining the role of 5a-reductase in depression and antidepressant effects of exercise. A. L. GOIN*; S. SCHEGGI; M. FAGAN; P. THOMPSON; M. BORTOLATO. *Univ. of Utah, Univ. of Siena, Texas Tech. Univ., Southwest Brain Bank Mood Disorder.*

3:00 III53 **787.19** Caudate neurons represent a confidence-like signal in a reward-biased perceptual decision-making task. Y. FAN*; T. DOI; J. I. GOLD; L. DING. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

4:00 III54 **787.20** Distinguishing putative interneuron classes in macaque fronto-striatal circuit during goal-directed behavior. K. BANAIE BOROUJENI*; T. WOMELSDORF; S. HASSANI; M. OEMISCH. *Vanderbilt Univ., Yale Univ.*

1:00 III55 **787.21** Direct pathway spiny projection neurons in the posterior dorsomedial striatum are necessary for goal-directed learning. J. PEAK*; G. HART; B. BALLEINE. *Univ. of New South Wales.*

POSTER

788. Human Cognition and Behavior: Perception and Imagery I

Theme H: Cognition

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

1:00 III56 **788.01** Perception and awareness of backward visual masking in a patient with bilateral frontal leucotomy. J. CHANOVAS*; H. RIEIRO; S. MARTINEZ-CONDE; E. GALLEGO; F. VALLE-INCLÁN; S. L. MACKNIK. *SUNY Downstate Med. Ctr., Saccadous, Univ. of A Coruña.*

2:00 III57 **788.02** Neural basis of unconscious visual motion perception in hemianopia. C. A. PEDERSINI; A. LINGNAU; N. CARDOBI; J. SANCHEZ LOPEZ; S. SAVAZZI; C. MARZI*. *Univ. of Verona, Royal Holloway, Physiol. and Psychology Section, Univ. Verona.*

3:00 III58 **788.03** Back projection of visual stimulation onto heart rate during cardio-visual rubber hand illusion. A. YUMOTO*; S. SHIMADA. *Meiji Univ., Meiji Univ.*

4:00 III59 **788.04** Formant frequency discrimination in adults who stutter. A. DALIRI*; L. MAX. *Arizona State Univ. - Tempe Campus, Univ. of Washington.*

1:00 III60 **788.05** EEG differences between perceiving speech versus noise in physically identical sine-wave speech stimuli. M. A. PITTS*; A. R. DYKSTRA; J. GLASS; C. HENDRY; E. CANSECO-GONZALEZ. *Reed Col., Univ. of Western Ontario, Reed Col.*

2:00 III61 **788.06** Rivalry and fusion can coexist in a tristable dynamic state. G. RIESEN*; A. M. NORCIA; J. L. GARDNER. *Stanford Univ. Dept. of Neurol. and Neurolog. Sci., Stanford Univ., Stanford Univ.*

3:00 III62 **788.07** Early identity recognition of familiar faces is not dependent on holistic processing. S. MOHR; A. WANG; A. D. ENGELL*. *Yale Univ., Washington Univ., Kenyon Col.*

4:00 III63 **788.08** Clarifying theta's role in the brightness enhancement of a flickering stimulus. J. K. BERTRAND*; A. A. OUELLETTE ZUK; N. J. WISPINSKI; K. E. MATHEWSON; C. S. CHAPMAN. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

1:00 III64 **788.09** Category-specialized brain regions respond preferentially to both pictures and words. N. A. KHAN*; S. W. GORLICK; W. D. STEVENS; A. MARTIN. *York Univ., NIH.*

2:00 III65 **788.10** Are there different contributions of cortical and subcortical visual pathways to the processing of closure: A tdcs study. W. ZHU*; J. DREWES. *Yunnan Univ., Chemnitz Univ. of Technol.*

3:00 III66 **788.11** Feedback in contour perception: Short and long time courses. J. DREWES*; W. ZHU. *Chemnitz Univ. of Technol., Yunnan Univ.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 III67 **788.12** Automatic and task related encoding of number in the dorsal visual stream. N. K. DEWIND*; I. DAYAN; J. PARK; M. G. WOLDORFF; E. M. BRANNON. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Massachusetts, Duke Univ., Univ. of Pennsylvania.*

1:00 III68 **788.13** Decoding of thermal sensations from human brain activity. Y. JUNG*; D. B. WALTHER. *Univ. of Toronto.*

2:00 JJJ1 **788.14** The speed of light - and darkness - through the human visual system. S. S. DALAL; B. U. WESTNER; M. J. DIETZ; C. J. BAILEY; T. POPOV*. *Aarhus Univ., Univ. Konstanz.*

3:00 JJJ2 **788.15** Recruitment of the motor system during music listening: An ALE meta-analysis. C. GORDON*; P. COBB; R. BALASUBRAMANIAM. *Univ. of California, Merced, Univ. of California, Merced, Univ. of California, Merced.*

4:00 JJJ3 **788.16** Discovering brain representations across multiple feature spaces using brain activity recorded during naturalistic viewing of short films. A. O. NUNEZ-ELIZALDE*; F. DENIZ; J. S. GAO; J. L. GALLANT. *UC Berkeley.*

1:00 JJJ4 **788.17** ▲ Neural activity linked with visual awareness and task-relevance in a novel 2x2 design. A. KYROUDIS*; M. A. COHEN; M. A. PITTS. *Reed Col. Psychology Dept., MIT.*

2:00 JJJ5 **788.18** Neural signatures of perceptual content and memory trace during bistable perception. R. HARDSTONE*; M. W. FLOUNDERS; M. ZHU; B. J. HE. *New York Univ. Med. Ctr.*

3:00 JJJ6 **788.19** ● Neural substrate of visual navigation cue integration. S. LI*; Z. LU; S. PARK. *Johns Hopkins Univ., Univ. of Pennsylvania, Yonsei Univ.*

4:00 JJJ7 **788.20** The precision and stability of imagination: Reconstructing colors from oscillatory neural activity. P. PANDEY*; J. M. VETTEL; A. J. COHEN; A. PAUL; E. B. FALK; J. O. GARCIA. *Univ. of Pennsylvania, U.S. Army Res. Lab.*

1:00 JJJ8 **788.21** Visual network modularity in patients with central vision loss. L. L. FLEMING*; W. K. BURGE; D. DECARLO; K. M. VISSCHER. *Univ. of Alabama at Birmingham Sch. of Med., Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

2:00 JJJ9 **788.22** Specialization of cortical areas for hand and tool motion. P. AVANZINI*; P. CARDELLICCHIO; V. PELLICCIA; F. CARUANA; G. LO RUSSO; G. RIZZOLATTI; G. A. ORBAN. *Consiglio Nazionale Delle Ricerche, Univ. of Parma, ASST Ca'Granda Niguarda, Univ. of Parma, Univ. of Parma.*

3:00 JJJ10 **788.23** The time course of context-induced distortions of the egocentric reference frame for perceptual judgments and saccade guidance. J. M. PETERSON*; P. R. DASSONVILLE. *Univ. of Oregon.*

POSTER

789. Human Cognition and Behavior: Perception and Imagery II

Theme H: Cognition

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

1:00 JJJ11 **789.01** Using closed loop real-time fMRI neurofeedback to induce neural plasticity and influence perceptual similarity. M. IORDAN*; V. J. RITVO; K. A. NORMAN; N. B. TURK-BROWNE; J. D. COHEN. *Princeton Univ., Yale Univ.*

2:00 JJJ12 **789.02** Neural correlates and population receptive field mapping for perception and mental imagery of touch in the human brain. Z. TAL*; S. HOFSTETTER; R. GEVA; W. ZUIDERBAAN; S. O. DUMOULIN; A. AMEDI. *Hebrew Univ., Hebrew Univ., Shaar Menashe Hosp., Spinoza Ctr. for Neuroimaging, Spinoza Ctr. For Neuroimaging, Fac. of Med. Hebrew Univ. of Jerusalem.*

3:00 JJJ13 **789.03** Identifying the shape and texture features underlying the perception of social traits from strangers' faces, such as attractiveness, trustworthiness, and intelligence, using a computational framework. A. J. YU*; J. GUAN; C. K. RYALI. *Univ. of California San Diego, Univ. of California San Diego.*

4:00 JJJ14 **789.04** Domain specificity within human medial parietal cortex during memory recall. E. H. SILSON*; A. D. STEEL; A. KIDDER; C. I. BAKER. *Natl. Inst. of Mental Hlth., NIH, Univ. of Oxford, NIMH, NIH.*

1:00 JJJ15 **789.05** Distinct subdivisions of medial parietal cortex revealed by functional connectivity with category-selective ventral temporal cortex. A. D. STEEL*; E. H. SILSON; C. I. BAKER. *NIH, Natl. Inst. of Mental Hlth., NIH.*

2:00 JJJ16 **789.06** Separating scene perception and scene construction in human medial parietal cortex. A. W. GILMORE*; E. H. SILSON; S. E. KALINOWSKI; A. STEEL; A. KIDDER; C. I. BAKER; A. MARTIN. *Lab. of Brain and Cognition, NIMH/NIH.*

3:00 JJJ17 **789.07** Investigating auditory conscious perception with a threshold task and intracranial EEG. K. L. CHRISTISON-LAGAY*; C. MICEK; S. I. KRONEMER; S. FORMAN; M. AKSEN; A. ABDEL-ATY; F. VAN DUYNE; M. BOLY; E. JUAN; T. BUGNON; E. M. YEAGLE; J. L. HERRERO; S. BICKEL; A. D. MEHTA; L. J. HIRSCH; J. L. GERRARD; D. D. SPENCER; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ., Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Feinstein Inst. For Med. Res., Hofstra Northwell Sch. of Med., Hofstra North Shore LIJ Sch. of Med., Yale Univ. Sch. of Med.*

4:00 JJJ18 **789.08** Intracranial EEG topography of neural networks with transient and sustained shifts in attention. J. LI*; S. KRONEMER; H. KWON; C. MICEK; J. RYU; M. AKSEN; W. HERMAN; Y. WU; J. GERRARD; D. D. SPENCER; H. BLUMENFELD. *Yale Univ., Xi'an Jiaotong Univ., Yale Univ., Yale Univ.*

1:00 JJJ19 **789.09** ▲ Relationship between stimulus opacity and intracranial broadband gamma power in a conscious visual perception task. C. MICEK*; K. L. CHRISTISON-LAGAY; M. WILLIAMS; S. I. KRONEMER; W. X. HERMAN; J. LI; L. J. HIRSCH; J. L. GERRARD; D. D. SPENCER; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 152 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 JJJ20 **789.10** Early and late electrophysiological changes to visual conscious perception. S. I. KRONEMER*; M. AKSEN; H. KWON; C. MICEK; K. L. CHRISTISON-LAGAY; S. FORMAN; J. S. PRINCE; J. DING; J. RYU; M. KHOSLA; E. SABERSKI; U. AYDIN; C. GROVA; J. WU; M. CROWLEY; R. T. CONSTABLE; H. BLUMENFELD. *Yale Univ., Yale Univ., Concordia Univ., Yale Univ., Yale Univ., Yale Univ.*

3:00 JJJ21 **789.11** ▲ Potential novel mechanism for the attentional blink in a conscious perception task. S. FORMAN*; K. L. CHRISTISON-LAGAY; C. MICEK; S. I. KRONEMER; M. AKSEN; M. M. CHUN; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ., Yale Univ. Sch. of Med.*

4:00 JJJ22 **789.12** ▲ Pupil dynamics as a covert measure of conscious perception in a visual no report paradigm. M. AKSEN*; S. I. KRONEMER; J. S. PRINCE; Z. DING; A. AGARWAL; G. WOLF; B. PEARLMUTTER; R. COIFMAN; M. PITTS; H. BLUMENFELD. *Yale Univ., Yale Univ., Yale Univ., Maynooth Univ., Yale Univ., Reed Col., Yale Univ.*

1:00 JJJ23 **789.13** Studying auditory processing in group contexts with low-density wireless eeg. A. K. KHALIL; Y. WU*; J. R. IVERSEN. *UC San Diego, UC San Diego.*

2:00 JJJ24 **789.14** Mapping modality invariance across visual and auditory narratives with between-brain spatial pattern methods. P. S. JOHNSON*; M. REGEV; U. HASSON; J. CHEN. *Johns Hopkins Univ., Princeton Univ., Professor, Johns Hopkins Univ.*

3:00 JJJ25 **789.15** Human insula response to auditory deviants: Evidence from intracranial EEG recordings. A. O. BLENKMANN*; J. LUBELL; A. LLORENS; I. FUNDERUD; S. COLLAVINI; P. G. LARSON; J. IVANOVIC; T. R. MELING; T. BEKINSCHTEIN; S. KOCHEN; T. ENDESTAD; R. T. KNIGHT; A. SOLBAKK. *Univ. of Oslo, Oslo Univ. Hosp. - Rikshospitalet, CONICET, Univ. of Cambridge, Univ. of California Berkeley.*

4:00 JJJ26 **789.16** How are the statistics of object co-occurrence represented in cortex? M. F. BONNER*; R. A. EPSTEIN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 JJJ27 **789.17** The role of local symmetry in the neural representations of scene categories. J. WILDER*; M. REZANEJAD; S. DICKINSON; K. SIDDIQI; A. JEPSON; D. B. WALTHER. *Univ. of Toronto, McGill Univ.*

2:00 JJJ28 **789.18** T. J. PARK*; S. PARK. *Johns Hopkins Univ., Yonsei Univ.*

3:00 JJJ29 **789.19** Uncovering the temporal dynamics of scene understanding using event-related potentials. A. HAREL*. *Wright State Univ.*

4:00 JJJ30 **789.20** Fear in the theatre of the brain: Elucidating the neural mechanisms of fear generalization from imagined to viewed percepts. L. M. BURLEIGH*; J. OWENS-FRENCH; F. CHAISSON; A. MADDEN; L. RAGGIO; S. G. GREENING. *Louisiana State Univ.*

1:00 JJJ31 **789.21** Are neural mechanisms underlying hypnotic susceptibility shared with motor imagery? J. CIRILLO*; A. J. SRZICH; W. D. BYBLOW; J. W. STINEAR; G. ANSON. *Univ. of Auckland, Univ. of Auckland.*

POSTER

790. Human Cognition and Behavior: Perception and Imagery III

Theme H: Cognition

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

1:00 JJJ32 **790.01** Two streams of feedback signals from parietal cortex to visual areas subserve visual awareness. K. YUASA*; H. TAKEMURA; I. MOTOYOSHI; K. AMANO. *NICT, Osaka Univ., JSPS, The Univ. of Tokyo.*

2:00 JJJ33 **790.02** Fertility status in visual processing of men's attractiveness. R. GARZA*; R. R. HEREDIA; A. B. CIESLICKA; J. BYRD-CRAVEN. *Oklahoma State Univ., Texas A&M Intl. Univ.*

3:00 JJJ34 **790.03** Measuring the strength of synesthetic associations using an individualized implicit association test. M. MARTINEZ; S. A. LACEY*; L. C. NYGAARD; K. SATHIAN. *Emory Univ., Penn State Col. of Med., Emory Univ.*

4:00 JJJ35 **790.04** Exploring predictive information in action with psychophysics and machine learning. E. G. MCMAHON*; R. GONZALEZ; K. NAKAYAMA; L. G. UNGERLEIDER; M. VAZIRI-PASHKAM. *Natl. Inst. of Mental Hlth., Harvard Univ.*

1:00 JJJ36 **790.05** ▲ Neural signatures of perceptual reversals of bistable visual and linguistic stimuli. K. M. ORTEGO*, JR; M. PITTS; E. CANSECO-GONZALEZ. *Reed Col.*

2:00 JJJ37 **790.06** Robotics to investigate hallucinations in healthy and early psychosis patients. F. BERNASCONI*; G. ROGNINI; M. SOLCÀ; M. M. MURRAY; K. Q. DO; P. CONOUS; P. PROGIN; O. BLANKE. *Ecole Polytechnique Fédérale De Lausanne (EPFL), Ecole Polytechnique Fédérale de Lausanne (EPFL), Univ. Hosp. Ctr. and Univ. of Lausa, Ctr. for Psychiatric Neurosci., EPFL - SV - CNP - LNCO.*

3:00 JJJ38 **790.07** ▲ How absolute is absolute pitch? H. LI; W. CAI; H. ZHOU; X. WANG; J. HUANG*. *Tsinghua Univ., Central Conservatory of Music, Johns Hopkins Univ., Johns Hopkins Univ.*

4:00 JJJ39 **790.08** Relating the cortical projection of retinal lesions to the projection of preferred retinal locus in participants with macular degeneration. P. DEMIRAYAK*; M. K. DEFENDERFER; M. WINSLETT; P. D. STEWART; D. K. DECARLO; K. M. VISSCHER. *Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

1:00 JJJ40 **790.09** Different patterns of visual processing activity in females and males during visual encoding. D. SPETS*; S. SLOTNICK. *Boston Col. Dept. of Psychology.*

2:00 JJJ41 **790.10** ▲ Synesthesia, visual search and the n2pc. C. A. HENDRY*; A. HOUGH; O. CHESLEY; C. GRAULTY; M. A. PITTS; E. CANSECO-GONZALEZ. *Reed Col.*

3:00 JJJ42 **790.11** How does attention affect perceived finger location and ownership in the grasp illusion? M. E. HEROUX*; L. S. FLETCHER; A. A. BUTLER; A. P. WANG; S. C. GANDEVIA. *Neurosci. Res. Australia, Australian Cathlic Univ.*

4:00 JJJ43 **790.12** Cortical dynamics of tool-extended sensing. L. E. MILLER*; C. FABIO; R. SALEMME; V. HAYWARD; A. FARNÈ. *Lyon Neurosci. Res. Ctr., Univ. Pierre et Marie Curie.*

Wed. PM

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* Indicates abstract's submitting author

1:00 JJJ44 **790.13** ▲ Isolation and characterization of the medial temporal lobe-basal ganglia circuit using diffusion magnetic resonance imaging. C. N. MCKEE*; A. PERUGINI; V. THAKUR; B. J. KNOWLTON; M. IACOBONI; M. A. BASSO; D. W. SHATTUCK. *UCLA, UCLA, UCLA, UCLA, UCLA.*

2:00 JJJ45 **790.14** Combining local visual structures into global objects causes new afterimage illusion. C. JUNG*; W. CHOI; G. KIM; S. PAIK. *Korea Advanced Inst. of Sci. and Technol., Korea Advanced Inst. of Sci. and Technol., Korea Advanced Inst. of Sci. and Technol.*

3:00 JJJ46 **790.15** Preference and intake of salty, sweet and fatty foods and self-reported abnormall smell and taste perception in pregnant women from Ciudad Guzman, Jalisco,Mexico. A. CASTAÑEDA DÍAZ DE LEÓN*; A. G. MARTÍNEZ MORENO; C. M. HUNOT ALEXANDER; M. NAVARRO MEZA. *Univ. de Guadalajara, Univ. de Guadalajara.*

4:00 JJJ47 **790.16** Action comprehension in disorders of consciousness. R. SOKOLIUK*; S. CALZOLARI; D. CRUSE. *Univ. of Birmingham, Univ. of Padova.*

1:00 JJJ48 **790.17** Parietal theta burst TMS does not modulate dominance durations of bistable perception: Evidence from three experiments across multiple stimuli. G. SCHAUER*; A. BARTELS. *Ctr. For Integrative Neurosci., Univ. of Tübingen, Max Planck Inst. for Biol. Cybernetics.*

2:00 JJJ49 **790.18** Active inference and global brain free energy minimization during visual categorization in humans. L. T. TRUJILLO*. *Texas State Univ.*

3:00 JJJ50 **790.19** Neurophysiological responses to glare: An event-related potential study. D. YOSHIOKA*; Y. TAKAGI; T. MIYAGI; K. KANNAGA; S. AKAIKE; K. ONDA; H. HORITA; S. TAKEUCHI; M. MIYAZAKI. *Shizuoka Univ., Shizuoka Univerity, Suzuki Motor Corp., Shizuoka Univerity, Jobu Univerity.*

4:00 JJJ51 **790.20** The influence of semantic relatedness on the subliminal processing of words and pictures. a masked priming paradigm study. J. M. ANDREAU*; N. M. BRUNO; S. TORRES BATÁN; A. A. IORIO; M. N. DÍAZ RIVERA; I. EMBÓN; L. J. JIMENEZ. *Salvador Univ., Inst. de Biología y Medicina Exptl. (IBYME-CONICET), Univ. de Buenos Aires, Univ. de Buenos Aires, Univ. de Buenos Aires.*

POSTER

791. Human Cognition and Behavior: Human Long-Term Memory: Medial Temporal Lobe III

Theme H: Cognition

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

1:00 JJJ52 **791.01** Visually selective single unit activity in the human medial temporal lobe during dissociation of conscious perception and memory. S. MACKAY*; T. P. REBER; M. SOEHLE; J. BOSTRÖM; C. E. ELGER; F. MORMANN. *Univ. of Bonn Med. Ctr., Swiss Distance Learning Univ., Univ. of Bonn Med. Ctr., Univ. of Bonn Med. Ctr.*

2:00 JJJ53 **791.02** Frequency-selective single units in the human primary auditory cortex during different stages of vigilance. M. S. KEHL*; T. P. REBER; J. BOSTRÖM; C. E. ELGER; F. MORMANN. *Univ. of Bonn Med. Ctr., Swiss Distance Learning Univ., Univ. of Bonn Med. Ctr.*

3:00 JJJ54 **791.03** Decision confidence is represented at the single-unit level in the human medial temporal lobe. A. UNRUH-PINHEIRO*; M. R. HILL; B. WEBER; J. BOSTRÖM; C. ELGER; F. MORMANN. *Univ. of Bonn, Univ. of Bonn, Univ. of Bonn.*

4:00 JJJ55 **791.04** Recollection precision enhancement by active retrieval: Testing the role of the hippocampal-cortical network using noninvasive brain stimulation. A. NILAKANTAN*; M. GUNLOGSON; V. MANDOSKE; B. DURR; S. VANHAERENTS; D. BRIDGE; J. VOSS. *Northwestern Univ. - Chicago, Northwestern Univ.*

1:00 JJJ56 **791.05** Effects of noninvasive stimulation targeting the hippocampal-cortical network on forgetting of verbal paired associates differ by age. E. KARP*; A. NILAKANTAN; M. GUNLOGSON; R. PALUMBO; S. VANHAERENTS; J. VOSS. *Northwestern Univ., Northwestern Univ.*

2:00 JJJ57 **791.06** Optimizing hippocampal-cortical network modulation via repetitive transcranial magnetic stimulation: A dose-finding study. M. V. FREEDBERG*; J. A. REEVES; D. HAUBENBERGER; Y. K. CHEUNG; J. L. VOSS; E. M. WASSERMANN. *Henry M. Jackson Fndn., NIH, NIH, Columbia Univ., Northwestern Univ., NIH/NINDS.*

3:00 JJJ58 **791.07** Optimizing simultaneous TMS/fMRI methods to target the hippocampal-cortical network with configurable stimulation trains varying in frequency, pattern, and duration. M. S. HERMILLER*; R. A. YOUNG; Z. DENG; Y. CHEN; T. B. PARRISH; J. L. VOSS. *Northwestern Univ., Natl. Inst. of Mental Hlth., Northwestern Univ.*

4:00 JJJ59 **791.08** State-dependent expression of hippocampal-cortical fMRI connectivity changes due to noninvasive stimulation. K. N. WARREN*; M. S. HERMILLER; S. VANHAERENTS; J. L. VOSS. *Northwestern Univ., Northwestern Univ.*

1:00 JJJ60 **791.09** Relationships between individual electroencephalography and resting state signatures of memory for items and contexts. H. R. DIMSDALE-ZUCKER*; K. KIM; A. J. BARNETT; L. HSIEH; Z. M. REAGH; C. RANGANATH, Ph.D. *UC Davis Ctr. For Neurosci., Univ. of California at Davis, Stanford Univ.*

2:00 JJJ61 **791.10** Scaffolding of event representations in cortico-hippocampal networks. Z. M. REAGH*; R. BUGSCH; J. MACALUSO; C. RANGANATH, Ph.D. *Univ. of California, Davis.*

3:00 JJJ62 **791.11** Consolidation promotes retention of events that form a coherent narrative: Evidence for higher-order structure in episodic memory. B. I. COHN-SHEEHY*; C. RANGANATH. *UC Davis, UC Davis, UC Davis, UC Davis.*

4:00 JJJ63 **791.12** Hippocampal low frequency oscillations in prediction of temporal regularity. K. KIM*; L. HSIEH; J. CRIVELLI-DECKER; J. PARVIZI; C. RANGANATH. *UC Davis, UC Berkeley, Stanford Univ.*

1:00 JJJ64 **791.13** Individual differences in source memory are related to white matter microstructure in healthy young adults. A. J. BARNETT*; H. R. DIMSDALE-ZUCKER; Z. M. REAGH; C. RANGANATH, Ph.D. *UC Davis, UC Davis Ctr. for Neurosci., Univ. of California, Davis.*

2:00 JJJ65 **791.14** Characterizing the neural representation of verbal sequence knowledge. W. B. REILLY*; C. RANGANATH. *UC Davis, UC Davis.*

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* Indicates abstract's submitting author

3:00 JJJ66 **791.15** Representation of abstract semantic knowledge in populations of human single neurons in the medial temporal lobe. T. P. REBER*; M. BAUSCH; S. MACKAY; J. BOSTRÖM; C. E. ELGER; F. MORMANN. *Univ. of Bonn, Swiss Distance Learning Univ., Univ. of Bonn.*

POSTER

792. Human Cognition and Behavior: Attentional Networks I

Theme H: Cognition

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

1:00 JJJ67 **792.01** The human intraparietal sulcus modulates task-evoked functional connectivity for cognitive control. K. HWANG*; J. M. SHINE; M. D'ESPOSITO. *Univ. of California Berkeley, Stanford Univ.*

2:00 JJJ68 **792.02** Dissociative catecholaminergic effects on visual attention: Catechol-O-methyltransferase (COMT) and dopamine beta-hydroxylase (DBH) genes differentially modulate visual attention. M. CHECHLACZ*; N. SHALEV; S. VANGKILDE; M. J. NEVILLE; E. M. TUNBRIDGE; A. NOBRE. *Univ. of Birmingham, Univ. of Oxford, Univ. of Copenhagen, Univ. of Oxford, Univ. of Oxford.*

3:00 JJJ69 **792.03** The fronto-parietal multiple demand system in multimodally parcellated cortex. M. ASSEM*; M. F. GLASSER; D. C. VAN ESSEN; J. DUNCAN. *Univ. of Cambridge, Washington Univ. in St. Louis, St. Luke's Hosp.*

4:00 JJJ70 **792.04** Functional subdivisions of superior parietal lobule revealed by memory, attention, and connectivity. R. W. LEFCO*; S. W. MICHALKA; S. M. TOBYNE; J. A. BRISSENDEN; A. L. NOYCE; D. C. SOMERS. *Boston Univ., Olin Col. of Engin., Boston Univ.*

1:00 LLL1 **792.05** A frontal network controlling feature attention revealed by combining functional connectivity and machine learning. S. MEYYAPPAN*; A. RAJAN; H. WALKER; Y. LIU; G. R. MANGUN; M. DING. *Univ. of Florida, Univ. of California Davis.*

2:00 LLL2 **792.06** 'Silence' following direct electrical stimulation of the human default mode and limbic networks: Linking subjective experience, cortical responsiveness to applied electric currents, and the topographical organization of intrinsic brain networks. K. C. FOX*; L. SHI; S. BAEK; O. RACCAH; B. L. FOSTER; S. SAHA; J. PARVIZI. *Stanford Univ., Stanford Univ., Princeton Univ., Stanford Univ., Baylor Col. of Med., Stanford Univ.*

3:00 LLL3 **792.07** Fixation-related neural dynamics during free viewing of static and dynamic images. M. LESZCZYNSKI*; B. E. RUSS; E. H. SMITH; S. BICKEL; Y. PATHAK; I. TAL; A. D. MEHTA; G. MCKHANN; S. A. SHETH; C. E. SCHROEDER. *Columbia Univ., NIMH/NIH, Hofstra Northwell Sch. of Med., Columbia Univ., Nathan Kline Inst. For Psychiatric Res., Hofstra North Shore LIJ Sch. of Med., Baylor Col. of Med., Columbia Univ. Col. of Physicians and Surgeons.*

4:00 LLL4 **792.08** Posterior-contralateral theta oscillations and N170 amplitudes in attentional bias to fearful faces. R. D. TORRENCE*; L. J. TROUP; D. C. ROJAS; J. M. CARLSON. *Colorado State Univ., Univ. of the West of Scotland, Northern Michigan Univ.*

1:00 LLL5 **792.09** Spatial selectivity and temporal dynamics of alpha-beta oscillations across the human visual system in a spatial attention task: An ECoG study. X. YANG*; A. MARTIN; J. PARVIZI; J. LIN; R. T. KNIGHT; S. KASTNER. *Princeton Univ. Psychology Dept., Princeton Neurosci. Inst., Stanford Univ., Univ. of California, Irvine, Univ. of California Berkeley.*

2:00 LLL6 **792.10** Daily fluctuation of attention in relation to sleepiness. M. MATSUO*. *Shiga Univ. of Med. Sci.*

3:00 LLL7 **792.11** ▲ Gaze variables to food imagen reveal modulation of attention by deprivation conditions while response latencies did not. A. TOSCANO ZAPIEN*; D. N. VELÁZQUEZ MARTÍNEZ. *Univ. Nacional Autónoma de México, UNAM.*

4:00 LLL8 **792.12** Prismatic adaptation modulates visual field coverage and resting state functional connectivity. S. SCHINTU*; M. V. FREEDBERG; E. H. SILSON; S. GOTTS; S. SHOMSTEIN; E. M. WASSERMANN. *Natl. Inst. of Hlth., George Washington Univ., Natl. Inst. of Mental Hlth.*

1:00 LLL9 **792.13** Decoding orientation selectivity during rapid serial visual presentation reveals the neural dynamics of the attentional blink. M. TANG*; L. FORD; E. ARABZADEH; T. A. W. VISSER; J. B. MATTINGLEY. *The Univ. of Queensland, Australian Natl. Univ., The Univ. of Western Australia.*

2:00 LLL10 **792.14** Structural integrity and intrinsic connectivity of the salience network reflect executive dysfunction in alcohol use disorders. C. GALANDRA*; G. BASSO; M. MANERA; C. CRESPI; I. GIORGI; G. VITTADINI; P. POGGI; N. CANESSA. *Sch. for Advanced Study Iuss-Pavia, Cognitive Neurosci. Lab. - ICS Maugeri, LabNIT - ICS Maugeri, Univ. of Milano-Bicocca, Clin. Psychology Unit - ICS Maugeri, Functional Rehabil. Unit - ICS Maugeri, Radiology Unit - ICS Maugeri.*

3:00 LLL11 **792.15** Connectome-based predictions of attentional performance reduce to simply network interactions. S. LAGANIERE*; W. CHEONG; M. ESTERMAN; M. A. HALKO. *Beth Israel Deaconess Med. Ctr., Boston Univ., Harvard Med. Sch. / Beth Israel Deaconess Med.*

4:00 LLL12 **792.16** Task and feature influences on numerosity representation across the human dorsal visual stream. E. CASTALDI*; M. PIAZZA; S. DEHAENE; A. VIGNAUD; E. EGER. *INSERM, Ctr. for Mind/Brain Sciences, Univ. of Trento, INSERM Cognitive Neuroimaging Unit CEA/NEUROSPIN.*

1:00 LLL13 **792.17** Frontoparietal phase synchronization of the p300 ERP component in an oddball task. M. KIM*; J. PARK; S. KIM. *UNIST.*

2:00 LLL14 **792.18** Effects of incompatible action outcomes on cortico-spinal excitability. B. RANGEL*; J. R. WESSEL; M. JANCZYK. *Univ. of Iowa, Univ. of Iowa, Eberhard Karls Univ. of Tübingen.*

3:00 LLL15 **792.19** Closed-loop, digital, meditation training program improves sustained attention. D. A. ZIEGLER*; A. SIMON; C. ROLLE; S. N. SKINNER; C. L. GALLEN; A. GAZZALEY. *UCSF, UCSF, Stanford Univ., Univ. of California, San Francisco, Adam Gazzaley.*

4:00 LLL16 **792.20** Math cognition across space and time. G. UMBACH*; B. C. LEGA. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

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* Indicates abstract's submitting author

1:00 LLL17 **792.21** Convergent functional network connectivity changes in attention capture and awareness. H. SUN; J. SY; D. GODWIN; H. EATON; P. RAGHAVAN; R. MAROIS*. *Vanderbilt Univ.*

2:00 LLL18 **792.22** Volitional attention modulates memory encoding and retrieval. K. ZIMAN*; J. R. MANNING. *Dartmouth Col.*

3:00 LLL19 **792.23** Claustrum activation from cognitive load is modulated by pain. S. KRIMMEL*; B. N. MATHUR; D. A. SEMINOWICZ. *Univ. of Maryland Baltimore, Univ. of Maryland Sch. of Med., Univ. of Maryland, Baltimore.*

4:00 LLL20 **792.24** ● Attention and engagement with marketing videos are modulated by shot duration. J. A. SOLYST*. *Homeaway.*

1:00 DP14/LLL21 **792.25** (Dynamic Poster) Frontoparietal reorganization during symbolic and nonsymbolic number processing. B. N. CONRAD*; E. D. WILKEY; G. R. PRICE. *Vanderbilt Univ.*

2:00 LLL22 **792.26** ● Does virtual reality improve student learning of brain anatomy? Investigation of learning gains and sustained attention with simultaneous EEG. P. PAVLOV; H. BHUGRA; N. LIBERTY; M. SCHIFFMAN; R. GOEBEL; G. GREENBERG; P. SIMONE; J. A. SCOTT*. *Santa Clara Univ., Fac. of Psychology and Neurosci., Arbor Scientia Group, Santa Clara Univ.*

3:00 LLL23 **792.27** Parameter characterization of neural activity in the locus coeruleus to non-invasive trigeminal nerve stimulation. J. C. TANNER*; S. I. HELMS TILLERY. *Arizona State Univ.*

4:00 LLL24 **792.28** The underlying neural mechanism of dynamic attentional bias: A voxel-based morphometry analysis. L. FANG*; J. M. CARLSON. *Northern Michigan Univ.*

1:00 LLL25 **792.29** Connectome-based predictive models account for individual differences in the attentional blink. C. L. ASPLUND*; E. X. W. WU; G. J. LIAW; A. M. J. CHEE; T. T. Y. CHIA; B. YEO. *Yale-NUS Col., A*STAR-NUS Clin. Imaging Res. Ctr., Singapore Inst. of Neurotechnology, Natl. Univ. of Singapore.*

POSTER

793. Human Cognition and Behavior: Attentional Networks II

Theme H: Cognition

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

1:00 LLL26 **793.01** Fiber cluster topography analysis of frontostriatal connectivity in healthy subjects: A diffusion mri tractography study. J. J. LEVITT*; F. ZHANG; M. KUBICKI; M. SHENTON; L. ODONNELL@BWH.HARVARD.EDU. *VA Boston Healthcare System,Harvard Med. Sch., Brighams & Women's Hosptial, Harvard Med. Sch., Brigham & Women's Hospital, Harvard Med. Sch.*

2:00 LLL27 **793.02** Mesoscopic functional interactions in the human cortex. J. WANG*; W. S. ANDERSON; J. R. MADSEN; G. KREIMAN. *Harvard Med. Sch., Johns Hopkins Med. Sch., Boston Children's Hosp.*

3:00 LLL28 **793.03** Electrophysiological evidence for spontaneous and task-related anticorrelated activity between human anterior insula and posteromedial cortex. A. KUCYI*; O. RACCAH; J. PARVIZI. *Aaron Kucyi, Stanford Univ.*

4:00 LLL29 **793.04** Developmental pathways to distinct neural systems and generalizable representations of children's attention networks. L. HAO*; L. ZHUANG; X. CHEN; Y. ZHOU; J. QIU; J. GAO; S. TAN; Y. HE; Q. DONG; S. TAO; S. QIN. *Beijing Normal Univ., Beijing Normal Univ., Ministry of Educ., Southwest Univ., Peking Univ., Peking Univ., Hui-Long-Guan Hosp., Peking Univ. Huilongguan Clin. Sch.*

1:00 LLL30 **793.05** A dorso-ventral endogenous attention network in the human brain. I. SANI*; H. STEMMANN; D. BULLOCK; F. PESTILLI; W. FREIWALD. *Rockefeller Univ., Univ. Bremen, Indiana Univ. - Bloomington, Indiana Univ.*

2:00 LLL31 **793.06** A novel neuroimaging measure of the allocation of neural resource for quantifying attentional behavior. J. CHUNG; Y. LEE; P. LEE; K. R. YOO; Y. JEONG*. *KAIST, KAIST, Inst. for Basic Sci., Yale Univ.*

3:00 LLL32 **793.07** ● Dynamic cognitive remediation for traumatic brain injuries significantly improves attention, working memory, processing speed, and reading fluency. T. A. LAWTON*; M. HUANG. *Perception Dynamics Inst., UCSD.*

4:00 LLL33 **793.08** Attentional processes in typically developing children as revealed with brain event-related potentials and their source localization. P. SANTHANAGOPALAN*; O. LOBERG; J. HÄMÄLÄINEN; P. H. T. LEPPÄNEN. *Univ. of Jyväskylä.*

1:00 LLL34 **793.09** Role of superior longitudinal fasciculus in visuospatial attention. L. ZHENG*; A. RAJAN; M. DING. *Univ. of Florida.*

2:00 LLL35 **793.10** ● Intra-individual consistency in brain responses to video clips predicts population preferences. A. HOSHI*; F. SAITO; Y. HIRAYAMA; T. ISHIGURO; H. SUETANI; K. KITAJO. *Kirin Co., Ltd, RIKEN Ctr. for Brain Sci., Oita Univ.*

POSTER

794. Human Cognition and Behavior: Social Cognition: Neural Processes and Disorders I

Theme H: Cognition

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

1:00 LLL36 **794.01** ▲ Neural processing of social interaction: A neuroimaging coordinate-based meta-analysis. M. ARIOLI; N. CANESSA*. *Sch. For Advanced Studies IUSS-Pavia.*

2:00 LLL37 **794.02** Dark chocolate increases brain EEG gamma frequency 25-40 Hz: Associated with neuroplasticity, enhanced cognitive processing, memory and recall for brain health benefits. L. S. BERK*; K. DEVORE; N. MEHTA; O. OGUNYE; H. YEO; E. LOHMAN; G. BAINS. *Loma Linda Univ., Loma Linda University, Sch. of Med., Loma Linda University, Sch. of allied Hlth. Professions, Loma Linda University, Sch. of allied Hlth. Professions, Loma Linda University, Sch. of allied Hlth. Professions, Loma Linda University, Sch. of allied Hlth. Professions.*

3:00 LLL38 **794.03** Functional brain network architecture supporting the learning of social versus non-social networks. S. H. TOMPSON*; A. E. KAHN; E. B. FALK; J. M. VETTEL; D. S. BASSETT. *U.S. Army Res. Lab., Univ. of Pennsylvania, Univ. of Pennsylvania, Army Res. Lab., Univ. of Pennsylvania.*

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* Indicates abstract's submitting author

4:00 LLL39 **794.04** ● The behavior of drinking alcohol may be associated with severe alcohol use disorder (AUD) patients may have strong and prolonged responses when they see someone drinking alcohol: A functional MRI study in Japan. S. FUKUSHIMA*; H. KUGA; N. ORIBE; T. MUTOU; T. YUZURIHA; H. OZAWA; T. UENO. *Kouseikai Michinoo Hosp., Natl. Hosp. Organization Hizen Psychiatric Ctr., Dept. of Neuropsychiatry, Nagasaki Univ., Johns Hopkins Univ. Sch. of Publ. Hlth.*

1:00 LLL40 **794.05** Unraveling genetic predisposition to familial prosopagnosia using whole-exome sequencing. L. ARNING*; B. SUCHAN. *Ruhr-University Bochum, Ruhr-University Bochum.*

2:00 LLL41 **794.06** Developmental changes in neural activation during facial and vocal emotion recognition are disrupted in temporal lobe epilepsy. M. MORNINGSTAR*; W. I. MATTSON; S. SINGER, Jr.; J. VENTICINQUE; B. A. FULLER; S. GEDELA; E. E. NELSON. *Res. Institute, Nationwide Children's Hosp., The Ohio State Univ., Nationwide Children's Hosp.*

3:00 LLL42 **794.07** ▲ Relationship between pre-pulse inhibition (PPI), habituation, and medication in patients with schizophrenia and bipolar disorder. D. NGUYEN*. *Univ. of California, Irvine.*

4:00 LLL43 **794.08** Comparison of fMRI activity between dog experts and non-experts observing dog training scenes. R. OUCHI; T. KUBO*; E. NAKAHARA; K. SAMEJIMA; M. NAGASAWA; T. KIKUSUI; K. IKEDA. *Nara Inst. of Sci. and Technol., Tamagawa Univ. Brain Sci. Inst., Azabu Univ.*

1:00 LLL44 **794.09** An electrophysiological exploration of metacognitive errors in recognition memory. A. A. MULLER; L. SIRIANNI; C. GONZALEZ; R. DEKOCK; R. J. ADDANTE*. *CSUSB, Univ. of California, Davis.*

2:00 LLL45 **794.10** Intra and inter-subject brain activity during musical improvisation using dual-MEG. J. BOASEN*; H. WATANABE; H. ONISHI; A. SHIMOJO; H. SHIRAISHI; T. SAITO; K. YOKOSAWA. *Hokkaido Univ.*

3:00 LLL46 **794.11** Neural mechanisms underlying anti-conformity in social behavior. J. FUJIWARA*; P. N. TOBLER; K. TSUTSUI; M. TAIRA; Y. UGAWA; S. EIFUKU. *Dept Sys Neurosci, Fukushima Med. Univ., Univ. of Zurich, Tohoku Univ. Grad Schl Life Sci., Tokyo Med. and Dent. Univ., Dept Neurol, Fukushima Med. Univ.*

4:00 LLL47 **794.12** The neural correlates of the influence of social cues on food preferences. A. MADIPAKKAM*; G. BELLUCCI; M. ROTHKIRCH; F. MOLTER; S. PARK. *Inst. For Psychology 1, Dept. of Psychiatry and Psychotherapy, Sch. of Business & Economics, Freie Univ. Berlin.*

1:00 LLL48 **794.13** Gender differences in resting-state markers of antisociality. I. SIMARD*; M. S. SHANE. *Univ. of Ontario Inst. of Technol., Univ. of Ontario Inst. of Technol., The Mind Res. Network.*

2:00 LLL49 **794.14** Individual difference in action understanding and perspective-taking: A functional MRI study. Y. LEE*; D. YI. *Yonsei Univ.*

3:00 LLL50 **794.15** Neural responses to outcomes are modulated by others' trustworthiness. G. BELLUCCI*; F. MOLTER; S. Q. PARK. *Inst. for Psychology I, Freie Univ. Berlin, Univ. of Luebeck.*

4:00 LLL51 **794.16** Beyond unpleasantness. Social exclusion affects the experience of pain, but not of comparably-unpleasant disgust. L. ANTICO*; C. REGUIDIERE; A. BARANDA; E. CATALDO; C. CORRADI-DELL'ACQUA. *Univ. of Geneva.*

1:00 LLL52 **794.17** Perception of laughter related to different laughables in spontaneous conversation: A fNIRS study. C. MAZZOCCONI*; Q. CAI; G. JIN; J. GINZBURG; S. K. SCOTT. *Univ. Paris Diderot, Univ. Col. London.*

2:00 LLL53 **794.18** Inter-individual EEG coherence during cooperative/ competitive task performance. S. IWAKI*. *Natl. Inst. Adv Indust Sci. & Tech.*

3:00 LLL54 **794.19** Neurodynamics of team member interactions during healthcare teamwork. R. STEVENS*; T. GALLOWAY; A. WILLEMSEN-DUNALP. *IMMEX/UCLA, The Learning Chameleon, JUMP Simulation and Educ. Ctr.*

4:00 LLL55 **794.20** The "seductive allure" of neuroscience is not sufficient to influence social categorization. C. MUSTIN; P. R. NICKLAS; K. ZIMMER; M. T. STEWART; M. L. GROFT; N. J. PISTORY; P. J. MCLAUGHLIN*. *Edinboro Univ. of Pennsylvania.*

1:00 LLL56 **794.21** The processing of non-verbal emotional vocalisation (laughter) in people with autism. Q. CAI*; S. CHEN; S. WHITE; S. SCOTT. *UCL Inst. of Cognitive Neurosci.*

2:00 LLL57 **794.22** Heart rate changes in response to people living or dying show evidence of cognitive biases. J. CUTLER*; J. J. MILES-WILSON; D. CAMPBELL-MEIKLEJOHN. *Univ. of Sussex, Univ. of Sussex.*

3:00 LLL58 **794.23** Eyebrow furrowing: Beyond confusion. A. E. OTI; R. L. CROFT; J. K. ZHANG; P. D. MCGEOCH*; V. S. RAMACHANDRAN. *UCSD, UCSD.*

POSTER

795. Human Cognition and Behavior: Social Cognition: Neural Processes and Disorders II

Theme H: Cognition

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

1:00 LLL59 **795.01** Chandelier cells contribute to altered gabaergic system in the human cerebral cortex in autism. S. AMINA*; T. HONG; V. MARTÍNEZ-CERDEÑO. *Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis.*

2:00 LLL60 **795.02** Chandelier cells and an altered GABAergic synaptic system in the human prefrontal cortex in autism. T. HONG*; S. AMINA; J. REGALADO; V. MARTINEZ-CERDENO. *UC Davis, Univ. of California, Davis, Univ. of California, Berkeley.*

3:00 LLL61 **795.03** Social problem solving in youth with fetal alcohol spectrum disorder and the role of autobiographical memory. S. AGNIHOTRI*; J. ROVET; S. SUBRAMANIAPILLAI; C. RASMUSSEN; D. CAMERON; J. RYAN; M. KEIGHTLEY. *Univ. of Toronto, Hosp. for Sick Children, McGill Univ., Univ. of Alberta, Univ. of Toronto, Rotman Res. Institute, Baycrest Hosp.*

4:00 MMM1 **795.04** Dynamic cross-brain neural coupling of face processes reflects the transfer of shared face information. J. HIRSCH*; J. NOAH; X. ZHANG; S. DRAVIDA; A. NAPLES; Y. ONO; J. MCPARTLAND. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med., Univ. Col. London, Yale Sch. of Med., Yale Sch. of Med., Sch. of Sci. and Technology, Meiji Univ.*

Wed. PM

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1:00 MMM2 **795.05** Brain models of empathy and compassion in a randomized trial of compassion meditation. J. ASHAR*; J. R. ANDREWS-HANNA; S. DIMIDJIAN; T. D. WAGER. *Wager Lab., Univ. of Arizona, Univ. of Colorado Boulder, Univ. of Colorado Boulder Dept. of Psychology and Neurosci.*

2:00 MMM3 **795.06** Neural substrates and economic costs of social avoidance. J. W. SCHULTZ*; T. WILLEMS; M. GÄDECKE; G. CHAKKOUR; A. FRANKE; B. WEBER; R. HURLEMANN. *Univ. of Bonn, Univ. of Bonn.*

3:00 MMM4 **795.07** Using brain imaging techniques to develop and validate a cognitive-architecture model, capable of producing human-like socially-emotional behavior in virtual environments. A. V. SAMSONOVICH*; V. L. USHAKOV. *George Mason Univ., NRC Kurchatov Inst.*

4:00 MMM5 **795.08** ▲ Brain electrical activity during joint action. Effects of feedback. A. Q. ANGULO-CHAVIRA*; J. RAMOS-LOYO; M. MÜELLER; A. A. GONZÁLEZ-GARRIDO. *Univ. de Guadalajara, Univ. Autónoma del Estado de Morelos, Univ. de Guadalajara.*

1:00 MMM6 **795.09** Depression and the mirror neuron system: A correlative study on mirror neuron functioning and the social impairments observed in depression. M. WIDDOWSON*; C. KIM; Y. TONG; C. INACAY; J. PINEDA; F. SINGH. *Univ. of California San Diego, UCSD.*

2:00 MMM7 **795.10** Neural activity during episodic counterfactual thinking in anxious and non-anxious individuals. N. PARIKH; K. S. LABAR; M. Z. ROSENTHAL; J. DEROSA; G. W. STEWART; F. DE BRIGARD*. *Duke Univ., Duke Univ., Duke Univ., Duke Univ., Duke Univ., Duke Univ.*

3:00 MMM8 **795.11** Feeling comfortable: Amygdala and orbitofrontal cortex contributions to regulating interpersonal distance - an intracranial EEG study. S. M. GRIFFIN*; A. STOLK; J. LIN; E. BEN-SIMON; M. P. WALKER; R. T. KNIGHT; A. PERRY. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Irvine, The Hebrew Univ. of Jerusalem.*

4:00 MMM9 **795.12** Insights from the social virtual brain: Right hemisphere lateralization of EEG power spectra may indicate stability of social coordination. J. A. S. KELSO; R. A. STEFANESCU; E. TOGNOLI*. *Ctr. for Complex Systems & Brai, Ulster Univ.*

1:00 MMM10 **795.13** A dissociable, distributed network estimated within individuals linked to theory-of-mind. L. DINICOLA*; R. M. BRAGA; R. L. BUCKNER. *Harvard Univ., Imperial Col. London, Massachusetts Gen. Hosp., Harvard Med. Sch.*

2:00 MMM11 **795.14** Transaction of agency between self and other: An fMRI study of social coordination. R. A. STEFANESCU*; M. ZHANG; A. FUCHS; F. L. STEINBERG; E. TOGNOLI; J. A. S. KELSO. *Florida Atlantic Univ., Florida Atlantic Univ., Florida Atlantic Univ., Univ. MRI Diagnos. and Imaging Ctr., Ulster Univ.*

3:00 MMM12 **795.15** Cerebral responses to self-agency during social inclusion and exclusion in a cyberball game. W. WANG*; C. R. LI. *Yale Univ.*

4:00 MMM13 **795.16** Theory of mind and its structural neural correlate. M. GIORDANO*; F. LIZCANO-CORTÉS; G. L. LICEA-HAQUET; M. MONTALÀ-FLAQUER; J. GUÀRDIA-OLMOS. *Univ. Nacional Autónoma de México, Univ. de Barcelona.*

1:00 MMM14 **795.17** Occupational abilities and functional networks estimated through resting state fMRI. Y. SUNG*; Y. KAWACHI; Y. OTOMO; S. OGAWA. *Kansei Fukushi Inst, Tohoku Fukushi Univ., Tohoku Fukushi Univ.*

2:00 MMM15 **795.18** Increased learning from self-negative information underlies biased social inference in individuals with high fear of negative evaluation. A. HOPKINS*; R. J. DOLAN; K. BUTTON; M. MOUTOUSSIS. *UCL, Max Planck UCL Ctr., Wellcome Ctr. for Human Neuroimaging, Bath Univ.*

POSTER

796. Physiological Methods: Optical Methodology: Application

Theme I: Techniques

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

1:00 MMM16 **796.01** Optically controlled multiscale neuromodulation tools based on silicon material. X. LI*; B. LIU; Y. JIANG; G. M. SHEPHERD; B. TIAN. *Northwestern Univ., Univ. of Chicago, Univ. of Chicago.*

2:00 MMM17 **796.02** Evidence of a preferred direction of light propagation along apical dendrites in mouse cortex. T. V. NESS*; M. THUNEMANN; K. KıLıÇ; N. PERKINS; C. G. FERRI; S. SAKADZIC; A. M. DALE; Y. FAINMAN; D. A. BOAS; G. T. EINEVOLL; A. DEVOR. *Norwegian Univ. of Life Sci., UCSD, UCSD, Boston Univ., Harvard Med. Sch., UCSD, Univ. of Oslo.*

3:00 MMM18 **796.03** *In vivo* 3-photon imaging in intact adult zebrafish. D. M. CHOW; D. SINEFELD; K. E. KOLKMAN*; D. G. OUZOUNOV; C. XU; J. R. FETCHO. *Cornell Univ., Cornell Univ.*

4:00 MMM19 **796.04** Measurement of partial pressure of oxygen in retinal capillary in mice using two-photon microscopy. I. SENCAN*; T. ESIPOVA; M. A. YASEEN; B. FU; D. BOAS; S. VINOGRADOV; M. SHAHIDI; S. SAKADZIC. *Mass Gen. Hospital, Harvard Med. Sch., Univ. of Pennsylvania, Boston Univ., USC.*

1:00 MMM20 **796.05** Novel fluoropolymer PEO-CYTOP nanosheets advancing open skull method for *in vivo* two-photon imaging of living mouse brain. T. TAKAHASHI*; K. YARINOME; H. ZHANG; R. KAWAKAMI; Y. OKAMURA; T. NEMOTO. *Hokkaido Univ., Hokkaido Univ., Tokai university, Tokai university, Ehime Univ.*

2:00 MMM21 **796.06** Two-photon imaging of neuronal activity in motor cortex of common marmosets during upper-limb behavioral tasks. T. EBINA*; Y. MASAMIZU; M. MATSUZAKI. *The Univ. of Tokyo, The Univ. Tokyo Inst. for Advanced Study.*

3:00 MMM22 **796.07** Automated region of interest detection method for calcium imaging with stimulation related task. K. KIM*; S. KANG; Y. HAN; J. RAH; J. CHOI. *DGIST, KBRI.*

4:00 MMM23 **796.08** Visualizing neural activities at the regions of the GCaMP6 expressed mouse brain in the neural circuit related to feeding behavior, including lateral hypothalamus, under freely moving using an implantable micro imaging device. M. S. GUINTO*; Y. OHTA; M. KAWAHARA; M. HARUTA; T. NODA; K. SASAGAWA; T. TOKUDA; J. OHTA. *Nara Inst. of Sci. and Technol.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 MMM24 **796.09** *In vivo* three-photon excited fluorescence imaging in the spinal cord of awake, locomoting mice. Y. CHENG*; S. L. DENOTTA; J. S. JONES; D. A. RIVERA; S. HU; J. RAIKIN; D. G. OUZOUNOV; T. WANG; X. LI; J. C. CRUZ HERNANDEZ; I. M. BASTILLE; N. NISHIMURA; J. R. FETCHO; C. XU; C. B. SCHAFFER. *Cornell Univ., Cornell Univ., Cornell Univ., Cornell Univ.*

2:00 MMM25 **796.10** Considerations for applying information theoretic approaches to calcium imaging datasets. J. R. CLIMER*; D. A. DOMBECK. *Northwestern Univ.*

1:00 DP15/MMM26 **796.11** (Dynamic Poster) Imaging neuronal responses through all cortical layers and subplate of visual cortex in awake mice with optimized three photon microscopy. M. YILDIRIM*; H. SUGIHARA; P. SO; M. SUR. *MIT, MIT, MIT, MIT.*

4:00 MMM27 **796.12** Two-photon microscopy imaging of capillary red blood cell flux in mouse brain reveals vulnerability of white matter to hypoperfusion. B. LI*; R. OHTOMO; M. THUNEMANN; J. YANG; B. FU; C. RAN; J. POLIMENI; D. A. BOAS; A. DEVOR; E. LO; K. ARAI; S. SAKADZIC. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Univ. of California San Diego, Boston Univ., UCSD.*

1:00 MMM28 **796.13** Optical deep brain stimulation of the central auditory pathway. B. S. COVENTRY*; E. L. BARTLETT. *Purdue Univ., Purdue Univ., Purdue Univ., Purdue Univ.*

2:00 MMM29 **796.14** Mapping auditory activity throughout the central brain of *Drosophila* males and females. D. A. PACHECO PINEDO*; S. THIBERGE; E. PNEVMATIKAKIS; M. MURTHY. *Princeton Univ., Simons Fndn.*

3:00 MMM30 **796.15** Development of a virtual reality paradigm for *in vivo* hippocampal imaging during drug-induced contextual learning. S. B. WILLIAMS*; M. W. ARRIAGA; W. POST; E. B. HAN; J. MORON-CONCEPCION. *Washington Univ., Washington Univ. In St. Louis Sch. of Med., Washington Univ. In St Louis.*

4:00 MMM31 **796.16** GCaMP and GFP imaging in VTA by an implantable imaging device. Y. SUNAGA*; Y. OHTA; M. HARUTA; T. NODA; K. SASAGAWA; T. TOKUDA; Y. AKAY; M. AKAY; J. OHTA. *Nara Inst. of Sci. and Technol., Univ. of Houston.*

1:00 MMM32 **796.17** Analysis of real-time 3D vascular network dynamics in the cortex during whisker stimulus using SCAPE microscopy. Y. CHEN*; M. A. SHAIK; K. B. PATEL; C. KIM; S. E. BENEZRA; V. VOLETI; E. M. C. HILLMAN. *Columbia Univ.*

2:00 MMM33 **796.18** Improvements in simultaneous sodium and calcium imaging from dendrites and spines. K. MIYAZAKI; W. N. ROSS*. *New York Med. Col.*

3:00 MMM34 **796.19** Removable cranial window for chronic multi-scale and multi-modal optical imaging in marmosets. Y. GUO*; X. SONG; X. WANG. *Johns Hopkins Univ., Johns Hopkins Univ. Dept. of Biomed. Engin., Johns Hopkins Univ. Sch. Med.*

4:00 MMM35 **796.20** Separation of hemodynamic signals from GCaMP fluorescence measured with widefield imaging. M. VALLEY*; M. G. MOORE; J. ZHUANG; N. MESA; M. REIMERS; J. WATERS. *Allen Inst. for Brain Sci., Michigan State Univ., Univ. of Washington.*

1:00 MMM36 **796.21** Calcium imaging of neural activity in the periphery. M. MCPHEETERS*; J. ZHUO; G. COFFEE; A. M. ROLLINS; S. J. LEWIS; M. W. JENKINS. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

2:00 MMM37 **796.22** Long-term hydrogel immobilization for light sheet imaging of optogenetically-stimulated organisms. K. BURNETT*; E. EDSINGER; D. R. ALBRECHT. *WPI, Marine Biol. Lab.*

3:00 MMM38 **796.23** Fast sampling of calcium transients by 3d-random-adress scanningof neurons in V1 cortex across multiple layers in awake mice. W. AKEMANN*; J. LÉGER; V. VILLETTE; B. MATHIEU; C. VENTALON; S. DIEUDONNÉ; L. BOURDIEU. *École Normale Supérieure, École Normale Supérieure.*

4:00 MMM39 **796.24** Ultrasound neuromodulation via spatially confined miniaturized fiber-optoacoustic converter. Y. JIANG*; H. TSENG; L. LAN; S. S. CHA; H. MAN; C. YANG; X. HAN; J. CHENG. *Boston Univ., Boston Univ., Boston Univ., Boston Univ.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 152 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.

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618.05	**R. Laprairie:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CanniMed Therapeutics, Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CanniMed Therapeutics, Inc.
618.06	**T. Doyle:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioIntervene, Inc. (D. Salvemini co-author).
624.14	**Y. Kam:** A. Employment/Salary (full or part-time); Agilent Technologies. **E. Szabo:** A. Employment/Salary (full or part-time); McMaster University. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Agilent Technologies.
625.03	**S.A. Weiss:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Fastwave LLC. **Z.J. Waldman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Fastwave LLC. **R. Staba:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Fastwave LLC.
625.04	**L. Hirsch:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Dr. Hirsch's institution received funding from Eisai and Upsher-Smith (research support for investigator-initiated studies). D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Consultation fees for advising from Ceribell, Eisai, Monteris, Sun Pharma, and Engage Therapeutics, Neuropace (speaking honoraria). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); UptoDate (royalties), Medlink (royalties), and Wiley (royalties). **D.D. Spencer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; The principal investigator of the FLARE study, which is funded by Monteris Medical. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US patents for the wireless transmission of intracranial electroencephalograms (8165684, 8738139, and 9326726 B2) and focal brain cooling (9849025). F. Consulting Fees (e.g., advisory boards); A member of the scientific advisory board for Monteris Medical, a company which provides laser ablation for clinical purposes. **H.P. Zaveri:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US patents for the wireless transmission of intracranial electroencephalograms (8165684, 8738139, and 9326726 B2) and focal brain cooling (9849025). F. Consulting Fees (e.g., advisory boards); A member of the scientific advisory board and is a cofounder of Alva Health, which uses wearable devices to monitor patients with neurological disorders other than epilepsy.
626.04	**T. Rosahl:** A. Employment/Salary (full or part-time); Merck & Co. **M.E. Kennedy:** A. Employment/Salary (full or part-time); Merck & Co.
626.05	**M.W. Albers:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Merck Research Laboratories. **M.E. Kennedy:** A. Employment/Salary (full or part-time); Merck Research Labs.
626.09	**B. Hrupka:** A. Employment/Salary (full or part-time); Employed by Janssen Pharmaceutica. **H. Gijsen:** A. Employment/Salary (full or part-time); Employed by Janssen Pharmaceutica.
627.06	**K. Atchison:** A. Employment/Salary (full or part-time); Merck. **F. Elwood:** A. Employment/Salary (full or part-time); Merck. **M.E. Kennedy:** A. Employment/Salary (full or part-time); Merck.
628.04	**B. Hardage:** A. Employment/Salary (full or part-time); NeuroInitiative. **J.W. Ryan:** A. Employment/Salary (full or part-time); NeuroInitiative. **A.D. Lee:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroInitiative. **B. Behrouz:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroInitiative.
628.06	**Z. Hanss:** A. Employment/Salary (full or part-time); University of Luxembourg.
629.02	**C.J. Wheeler:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property rights/patent holder.
629.07	**S.W. Barger:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Royalties from Millipore-Sigma.
629.09	**J. Johansson:** A. Employment/Salary (full or part-time); Artery Therapeutics.
631.03	**A.A. Grace:** F. Consulting Fees (e.g., advisory boards); Dr. Grace received consultant fees from Lundbeck, Pfizer, Otsuka, Asubio, Autofony, and Janssen, and is on the advisory board for Alkermes, Newron and Takeda.
631.06	**W.K. Simmons:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC., Johnson & Johnson. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-inventor on a patent regarding appetite change in depression.
632.12	**J.H. Harkness:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Washington State University. **B.A. Sorg:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Washington State University.
632.13	**J.H. Harkness:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Washington State University. **R. Todd:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Washington State University. **B.A. Sorg:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Washington State University.
633.06	**K.L. Stachenfeld:** A. Employment/Salary (full or part-time); DeepMind, Google. **M.M. Botvinick:** A. Employment/Salary (full or part-time); DeepMind, Google.
634.04	**L. Clark:** A. Employment/Salary (full or part-time); Province of British Columbia and the British Columbia Lottery Corporation. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g.,

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	speakers' bureaus); Svenska Spel. F. Consulting Fees (e.g., advisory boards); Cambridge Cognition Ltd. **C.A. Winstanley:** F. Consulting Fees (e.g., advisory boards); Shire, Hogan Lovells LLP.
634.07	**K.R. Van Dijk:** Other; currently employed by Pfizer Inc.
638.02	**I.O. Nasonkin:** A. Employment/Salary (full or part-time); BioTime, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioTime, Inc. **R.K. Singh:** A. Employment/Salary (full or part-time); BioTime, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioTime, Inc. **O. Cuzzani:** A. Employment/Salary (full or part-time); BioTime, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioTime, Inc. **F. Binette:** A. Employment/Salary (full or part-time); BioTime, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioTime, Inc. **G.S. Hogge:** A. Employment/Salary (full or part-time); BioTime, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioTime, Inc. **S. Petersen-Jones:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; BioTime, Inc.
639.11	**M. Benekareddy:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche. **C. Grundschober:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche. **F. Knoflach:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche.
642.09	**J.L. Rubenstein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurona.
642.18	**S. Van Bijnen:** A. Employment/Salary (full or part-time); University of Jyväskylä. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; ChildBrain, Horizon2020 Marie Skłodowska-Curie Action (MSCA) Innovative Training Network (ITN) – European Training Network (ETN). Grant agreement no. 641652. **T. Parviainen:** A. Employment/Salary (full or part-time); University of Jyväskylä.
645.02	**L.K. Nieman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Received grant support from HRA Pharma for the development of metyrapone.
645.03	**C.A. Flores:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); National Institute of Drug Abuse.
645.06	**A. Torres Berrio:** Other; Present address: Friedman Brain Institute, Icahn School of Medicine at Mount Sinai, New York, USA.
646.20	**R.V. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Suven Life Sciences Ltd. **G. Bhyrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. S. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **S. Daripelli:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **T. Bandyala:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **P. Achanta:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **S. Keshari Saraf:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd.
647.05	**Y. Yan:** A. Employment/Salary (full or part-time); Northwestern University. **C. Peng:** A. Employment/Salary (full or part-time); Northwestern University. **X. Jin:** A. Employment/Salary (full or part-time); Northwestern University. **V.J. Kim:** A. Employment/Salary (full or part-time); Northwestern University. **M.D. Ramsey:** A. Employment/Salary (full or part-time); Northwestern University. **R.M. Drenan:** A. Employment/Salary (full or part-time); Northwestern University.
647.29	**D.M. Lovinger:** F. Consulting Fees (e.g., advisory boards); Elsevier journal editor.
648.01	**N.M. Boulis:** F. Consulting Fees (e.g., advisory boards); Agilis, MRI Interventions, Voyager, Oxford Biomedica, Q Therapeutics, Neuralstem Inc, Switch Bio Holdings.
648.10	**V. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. Kamuju:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **S. Gandipudi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **G. Bhayrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **P. Jayarajan:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **K. Bojja:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **K. Kandukuri:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **S. Manchineella:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd.
648.22	**B.J. Black:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); BrainXell. **J.J. Pancrazio:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); BrainXell.
648.23	**J.A. Hardaway:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Blackthorn Therapeutics. **K. Boyt:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Blackthorn Therapeutics. **W.J. Martin:** A. Employment/Salary (full or part-time); Blackthorn Therapeutics. **T.L. Wallace:** A. Employment/Salary (full or part-time); Blackthorn Therapeutics. **T. Kash:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Blackthorn Therapeutics.
648.24	**J.R. Driscoll:** A. Employment/Salary (full or part-time); BlackThorn Therapeutics. **E.B. Margolis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; BlackThorn Therapeutics. **T.L. Wallace:** A. Employment/Salary (full or part-time); BlackThorn Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BlackThorn Therapeutics. **W.J. Martin:** A. Employment/Salary (full or part-time); BlackThorn Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BlackThorn Therapeutics.
649.12	**B. Powers:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ionis Pharmaceuticals. **C. Mazur:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ionis Pharmaceuticals. **F. Rigo:** A. Employment/Salary (full

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	or part-time); Ionis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ionis Pharmaceuticals. **E. Swayze:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ionis Pharmaceuticals.
652.10	**N.M. Taylor:** A. Employment/Salary (full or part-time); Janssen Research & Development LLC.
652.21	**K.D. Micheva:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aratome LLC. **S.J. Smith:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aratome LLC.
653.10	**R. Reynolds:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; MedImmune PLC. **C. Glover:** A. Employment/Salary (full or part-time); MedImmune PLC.
654.03	**C.R. Butson:** F. Consulting Fees (e.g., advisory boards); NeuroPace, Advanced Bionics, Boston Scientific, IntelectMedical, Abbott (St Jude Medical), Functional Neuromodulation.
654.04	**F. Roy:** A. Employment/Salary (full or part-time); Alberta Health Services.
654.06	**C.R. Butson:** F. Consulting Fees (e.g., advisory boards); NeuroPace, Advanced Bionics, Boston Scientific, IntelectMedical, Abbott (St Jude Medical), Functional Neuromodulation.
654.11	**P.A. Starr:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic. F. Consulting Fees (e.g., advisory boards); Boston Scientific.
654.13	**R. Patriat:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Surgical Information Sciences. F. Consulting Fees (e.g., advisory boards); Cardionomic, Inc. **N. Harel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Surgical Information Sciences.
655.09	**P.S. Deshpande:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application submitted. **D. Flinkman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application submitted. **L. Lauren:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application submitted. **Y. Hong:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application submitted. **V. Kaasinen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application submitted. **S. Peltonen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application submitted. **P. James:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application submitted. **E. Coffey:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent application submitted.
655.23	**J.C. Chaufty:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **I.D. Majumdar:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **K. Ha:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **V. Swaminathan:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **L. Shanahan:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **S. Akella:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **J. Ranjan:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **R. Roessler:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG,LLC. **M. Kiebish:** A. Employment/Salary (full or part-time); BERG, LLC. **S. Gesta:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **B. Schuele:** F. Consulting Fees (e.g., advisory boards); BERG, LLC. **V.K. Vishnudas:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **N.R. Narain:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. Other; Co-founder, President & CEO of BERG, LLC. **R. Sarangarajan:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. Other; Co-founder of BERG, LLC. **P.P. Narain:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC.
655.24	**R. Roessler:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **I.D. Majumdar:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **K. Ha:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **A. Kitayev:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **J. Ranjan:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **C. Hill:** A. Employment/Salary (full or part-time); BERG, LLC. **J. Chaufty:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **S. Gesta:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt

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	of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **B. Schuele:** F. Consulting Fees (e.g., advisory boards); BERG, LLC. **V.K. Vishnudas:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **P.P. Narain:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **R. Sarangarajan:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. Other; Co-founder of BERG, LLC. **M. Kiebish:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. **N.R. Narain:** A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. Other; Co-founder, President & CEO of BERG, LLC.
656.04	**M. Mihara:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; the Health and Labor Sciences Research Grants for Comprehensive Research on Persons with Disabilities (JP15652696) from the Japan Agency for Medical Research and Development (AMED), Grant in aid for S. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending: PCT2015065270/W2016189701.
656.06	**A. Oliviero:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurek SL. **G. Foffani:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurek SL.
656.07	**A.L. Ridgel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ridgel, Loparo, Discenzo, Abdar, "Bike System for Use in Rehabilitation of a Patient", US 9,802,081, 10/31/17.
656.08	**E.L. Hargreaves:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 St.Jude/Abott PROGRESS study. **S.F. Danish:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Consultant for Medtronic Laser induced Thermal Terapy.
656.12	**M. Case:** A. Employment/Salary (full or part-time); Medtronic. **S. Stanslaski:** A. Employment/Salary (full or part-time); Medtronic. **V. Vasoli:** A. Employment/Salary (full or part-time); Medtronic. **J. Xiao:** A. Employment/Salary (full or part-time); Medtronic. **S. Goetz:** A. Employment/Salary (full or part-time); Medtronic. **T. Denison:** A. Employment/Salary (full or part-time); Medtronic. **R.S. Raike:** A. Employment/Salary (full or part-time); Medtronic.
657.13	**J. Long:** F. Consulting Fees (e.g., advisory boards); Dr. Long has a consulting agreement with NeuroPhage, is a paid consultant for Roche Pharma and Azevan Pharmaceuticals, and receives funding from CHDI, Michael J. Fox Foundation, and NIH.
657.17	**L. Zhang:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Teva Pharmaceutical Industries, Ltd. **M. Geva:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries, Ltd. **M.R. Hayden:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries, Ltd. **L.A. Raymond:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Teva Pharmaceutical Industries, Ltd. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Teva Pharmaceutical Industries, Ltd.
658.02	**M. Schroeter:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); MS receved honoraria (speaker's bureaus) from Alexion, Bayer, Baxalta/Shire, Biogen, CSL Behring, Genzyme, Grifols, Merck, Miltenyi Biotec, Novartis, Roche, Teva.
658.13	**J.T. Shoemaker:** A. Employment/Salary (full or part-time); Lena Biosciences, Inc. **J. Vukasinovic:** A. Employment/Salary (full or part-time); Lena Biosciences, Inc.
660.03	**S. Rege:** A. Employment/Salary (full or part-time); Alkahest, Inc. **H. Hackbart:** A. Employment/Salary (full or part-time); Alkahest, Inc. **E. Czirr:** A. Employment/Salary (full or part-time); Alkahest, Inc. **S.P. Braithwaite:** A. Employment/Salary (full or part-time); Alkahest, Inc. **S.S. Minami:** A. Employment/Salary (full or part-time); Alkahest, Inc.
661.08	**R. Maung:** A. Employment/Salary (full or part-time); University of California, Riverside. **D. Ojeda-Juárez:** A. Employment/Salary (full or part-time); University of California. **N. Yuan:** A. Employment/Salary (full or part-time); University of California, Riverside. **R. Shah:** A. Employment/Salary (full or part-time); University of California. **M. Kaul:** A. Employment/Salary (full or part-time); University of California.
661.12	**H. Singh:** A. Employment/Salary (full or part-time); University of California, Riverside. **R. Maung:** A. Employment/Salary (full or part-time); University of California, Riverside. **D. Ojeda-Juárez:** A. Employment/Salary (full or part-time); University of California, Riverside. **R. Shah:** A. Employment/Salary (full or part-time); University of California, Riverside. **M. Kaul:** A. Employment/Salary (full or part-time); University of California, Riverside.
662.03	**J. Ahlfors:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); New World Laboratories, Fortuna Fix.
662.12	**R. Rennaker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vulintus, Inc.
663.04	**Y. Zhang:** A. Employment/Salary (full or part-time); Yanlu Zhang,Ye Xiong,Mei Lu, Talan Zhang and Hank Wu had some salary supported by EVER Neuro Pharma GmbH. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Yanlu Zhang, Ye Xiong, Dr. Michael Chopp received travel support from EVER Neuro Pharma GmbH for presenting data at scientific meetings. **M. Chopp:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); travel support for presenting data at scientific meetings. **M. Lu:** A. Employment/Salary (full or part-time); some salary support. **T. Zhang:** A. Employment/Salary (full or part-time); some salary support. **H. Wu:** A. Employment/Salary (full or part-time); some salary support. **S. Winter:** A. Employment/Salary (full or part-time); Salary. **E. Doppler:** A. Employment/Salary (full or part-time); Salary. **Y. Xiong:** A. Employment/Salary (full or part-time); some salary. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); travel to scientific meetings.
663.06	**H. Cheng:** A. Employment/Salary (full or part-time); Novartis. **J. Fathman:** A. Employment/Salary (full or part-time); Novartis. **A. Schumacher:** A. Employment/Salary (full or part-time); Novartis. **J. Walker:** A. Employment/Salary (full or part-time); Novartis.

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663.14	**L. Pham:** A. Employment/Salary (full or part-time); La Trobe University. **H.A. Kim:** A. Employment/Salary (full or part-time); La Trobe University. **R.C. Wortman:** A. Employment/Salary (full or part-time); Monash University. **R.D. Brady:** A. Employment/Salary (full or part-time); Monash University. **B.R. Christie:** A. Employment/Salary (full or part-time); University of Victoria. **G.R. Drummond:** A. Employment/Salary (full or part-time); La Trobe University. **S.R. Shultz:** A. Employment/Salary (full or part-time); Monash University. **C.G. Sobey:** A. Employment/Salary (full or part-time); La Trobe University. **S.J. McDonald:** A. Employment/Salary (full or part-time); La Trobe University.
663.29	**H. Battapady:** A. Employment/Salary (full or part-time); Renovo Neural, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Renovo Neural, Inc. **L. Loose:** A. Employment/Salary (full or part-time); Renovo Neural, Inc. **S. Johnson:** A. Employment/Salary (full or part-time); Renovo Neural Inc. **D. Lose:** A. Employment/Salary (full or part-time); Renovo Neural Inc. **P. Harris:** A. Employment/Salary (full or part-time); Renovo Neural Inc. **S. Lunn:** A. Employment/Salary (full or part-time); Renovo Neural Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Renovo Neural Inc. **B.D. Trapp:** A. Employment/Salary (full or part-time); Cleveland Clinic. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Renovo Neural Inc.
664.05	**D. Wilson:** A. Employment/Salary (full or part-time); Quanterix Corporation.
664.11	**P. Mukherjee:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; GE Healthcare. Other; GE-NFL Medical Advisory Board.
664.21	**A. Chenna:** A. Employment/Salary (full or part-time); Monogram Biosciences. **C.J. Petropoulos:** A. Employment/Salary (full or part-time); Monogram Biosciences/Laboratory Corporation of America. **J.W. Winslow:** A. Employment/Salary (full or part-time); Monogram Bioscience.
666.16	**I. Tochitsky:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Carica Health.
666.24	**M.I. Nemenov:** A. Employment/Salary (full or part-time); LasMed LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); LasMed LLC.
668.05	**M. Sonekatsu:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; DE018661, DE023090. **J.G. Gu:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 DE018661, NIH grant DE023090.
670.16	**R. Patriat:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Surgical Information Sciences, Inc. F. Consulting Fees (e.g., advisory boards); Cardionomic, Inc. **M.C. Park:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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, Inc., Boston Scientific, Advanced Neuromodulation Systems, Inc. - St. Jude Medical, St. Jude Medical. F. Consulting Fees (e.g., advisory boards); Zimmer Biomet, SmartImplantSystems, Inc. **N. Harel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Surgical Information Sciences, Inc.
672.09	**J. Nakahara:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Paul Allen Family Foundation. **V. Ranganathan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Washington Research Foundation.
672.17	**J.M. Carmena:** A. Employment/Salary (full or part-time); iota Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); iota Biosciences. **M.M. Maharbiz:** A. Employment/Salary (full or part-time); iota Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); iota Biosciences.
672.20	**J. Kim:** A. Employment/Salary (full or part-time); Korea Institute of Science and Technology.
673.06	**P. Gad:** Other; he holds shareholder interest in NeuroRecovery Technologies and holds certain inventorship rights on intellectual property licensed by The Regents of the University of California to NeuroRecovery Tech. **V. Edgerton:** Other; he holds shareholder interest in NeuroRecovery Technologies and holds certain inventorship rights on intellectual property licensed by The Regents of the University of California to NeuroRecovery Tech.
674.07	**E. Vazquez-Cintron:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Cytodel, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cytodel, Inc. **K. Ichtchenko:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cytodel, Inc. F. Consulting Fees (e.g., advisory boards); Cytodel, Inc.
674.13	**S. Pagliardini:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); MERCK.
675.15	**J. Luo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A patent has been filed on specific immunosuppressive therapy of MG with AChR cytoplasmic domains.
675.20	**B.F. Freitas:** A. Employment/Salary (full or part-time); CDI. **L.K. Fong:** A. Employment/Salary (full or part-time); Genea Biocells US Inc. **J. Liu:** A. Employment/Salary (full or part-time); FUJIFILM Cellular Dynamics, Inc. **B. Meline:** A. Employment/Salary (full or part-time); FUJIFILM Cellular Dyanmics Inc. **C. Chavez:** A. Employment/Salary (full or part-time); FUJIFILM Cellular Dynamics, Inc. **T. Feaster:** A. Employment/Salary (full or part-time); FUJIFILM Cellular Dynamics, Inc. **C. McMahon:** A. Employment/Salary (full or part-time); FUJIFILM Cellular Dynamics, Inc. **D. Mann:** A. Employment/Salary (full or part-time); FUJIFILM Cellular Dynamics, Inc. **W. Wang:** A. Employment/Salary (full or part-time); FUJIFILM Cellular Dynamics, Inc. **J. Arjomand:** A. Employment/Salary (full or part-time); Genea Biocells US Inc. **U. Schmidt:** A. Employment/Salary (full or part-time); Genea Biocells Us Inc. **E. Jones:** A. Employment/Salary (full or part-time); FUJIFILM Cellular Dynamics, Inc.
676.06	**F. Issa:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); the East Carolina University Division of Research fund and an interdisciplinary research award (IRA 591211).

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676.07	**M. Privat:** A. Employment/Salary (full or part-time); Université Pierre et Marie Curie.
676.09	**C.K. Jung:** A. Employment/Salary (full or part-time); C Jung is employed at PhenoSys. **O. Janke:** A. Employment/Salary (full or part-time); O Janke is employed at Preclinics. **J. Füner:** A. Employment/Salary (full or part-time); J Füner is CEO of Preclinics. **Y. Winter:** A. Employment/Salary (full or part-time); Y Winter is CEO of PhenoSys.
677.11	**J.R. Connor:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sidero Bioscience.
679.23	**S. Daripelli:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **G. Bhayrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **C. Tirumalasetty:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Subramanian:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **S. Petlu:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **N. Praveena:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **P. Jayarajan:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **A. Shinde:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Badange:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. Bhatta:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd.
679.24	**B.F. O'Hara:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions, LLC. **K.D. Donohue:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions, LLC. **S. Sunderam:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Signal Solutions, LLC.
679.26	**P. Libourel:** F. Consulting Fees (e.g., advisory boards); Viewpoint SA.
680.03	**J.N. Flak:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Novo Nordisk.
683.01	**T.E. Salt:** A. Employment/Salary (full or part-time); Neurexpert Ltd.
683.13	**L. Asatryan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Liana Asatryan is an inventor on a patent for the use of ivermectin for treatment of alcohol use disorders. **D.L. Davies:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Daryl L. Davies is an inventor on a patent for the use of ivermectin for treatment of alcohol use disorders.
683.27	**M.S. Keshavan:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Sunovion, GlaxoSmithKline. **C.A. Tamminga:** F. Consulting Fees (e.g., advisory boards); Intra-Cellular Therapies, Inc. Other; Eli Lilly, Sunovion, Astellas, Pfizer, Merck, National Alliance on Mental Illness, American Psychiatric Association, Autifony, The Brain and Behavior Foundation, National Academy of Medicine.
684.06	**C.E. Beyer:** A. Employment/Salary (full or part-time); Employee of Promentis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock/stock option holder of Promentis Pharmaceuticals. **M. Neary:** A. Employment/Salary (full or part-time); Employee of Promentis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock/stock option holder of Promentis Pharmaceuticals. **D.G. Lawton:** A. Employment/Salary (full or part-time); Employee of Promentis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock/stock option holder of Promentis Pharmaceuticals. **P.P. Cotter:** A. Employment/Salary (full or part-time); Employee of Promentis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock/stock option holder of Promentis Pharmaceuticals. **T. Beck:** A. Employment/Salary (full or part-time); Employee of Promentis Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock/stock option holder of Promentis Pharmaceuticals.
690.07	**K.L. McHugh:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alkermes, Inc.,, Science Foundation Ireland. **P. Calcagno:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alkermes, Inc.,, Science Foundation Ireland. **M. Clarke:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alkermes, Inc.,, Science Foundation Ireland. **D. Eyerman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alkermes, Inc.,, Science Foundation Ireland. **C. Sanchez:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alkermes, Inc.,, Science Foundation Ireland. **M. Roche:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alkermes, Inc.,, Science Foundation Ireland. **D.P. Finn:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alkermes, Inc.,, Science Foundation Ireland. **J. Kelly:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alkermes, Inc.,, Science Foundation Ireland.
692.02	**E.M. Colechio:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **T.K. Bhattacharya:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **J. Aguado:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **J. Gajda:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **A. Barth:** A. Employment/Salary (full or part-time);

PRESENTATION NUMBER	STATEMENT
	APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **E. Rodriguez:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **P. Kansara:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **E. Pollard:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **M.A. Khan:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **P.K. Stanton:** F. Consulting Fees (e.g., advisory boards); APTINYX, INC. **X.L. Zhang:** F. Consulting Fees (e.g., advisory boards); APTINYX, INC. **M.S. Bowers:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **J.R. Moskal:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC. **C.N. Cearley:** A. Employment/Salary (full or part-time); APTINYX, INC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); APTINYX, INC.
692.03	**A.L. Barth:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **J.D. Aguado:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **P.K. Stanton:** F. Consulting Fees (e.g., advisory boards); Aptinyx Inc. **M.A. Khan:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **C. Cearley:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc.
692.06	**Y. Ano:** A. Employment/Salary (full or part-time); Kirin Company, Limited. **A. Hoshi:** A. Employment/Salary (full or part-time); Kirin Company, Limited. **S. Uchida:** A. Employment/Salary (full or part-time); Kyowa Hakko Kirin Co., Ltd. **K. Yamada:** A. Employment/Salary (full or part-time); Kyowa Hakko Kirin Co., Ltd. **K. Kondo:** A. Employment/Salary (full or part-time); Kirin Company Ltd.
692.10	**T. Maurice:** F. Consulting Fees (e.g., advisory boards); Zogenix Inc. **A. Gammaitoni:** A. Employment/Salary (full or part-time); Zogenix Inc, Emeryville, CA, USA. **B.S. Galer:** A. Employment/Salary (full or part-time); Zogenix Inc, Emeryville, CA, USA. **P. Martin:** A. Employment/Salary (full or part-time); Zogenix Inc, Emeryville, CA, USA.
692.24	**R.G. Gogliotti:** A. Employment/Salary (full or part-time); Vanderbilt Center for Neuroscience Drug Discovery. **C.M. Niswender:** A. Employment/Salary (full or part-time); Vanderbilt Center for Neuroscience Drug Discovery, Vanderbilt Kennedy Center.
692.26	**S. Correia:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **J.E. Jones:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **C. Rex:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Afraxis. **G. Liu:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **A. Carvalho:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood pharmaceuticals. **P. Germano:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **R.R. Iyengar:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **C.J. Winrow:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **M.G. Currie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **J.R. Hadcock:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals.
692.27	**J.E. Jones:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **C.J. Winrow:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **S.S. Correia:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **S. Jacobson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **A. Carvalhoa:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **P. Germano:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **J.V. Tobin:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **K. Tang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **R.R. Iyengara:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **M.G. Currie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **J.R. Hadcock:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals.
692.29	**C.J. Winrow:** A. Employment/Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **J.E. Jones:** A. Employment/ Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **P. Germano:** A. Employment/Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds);

PRESENTATION NUMBER	STATEMENT
	Ironwood Pharmaceuticals. **S. Jacobson:** A. Employment/Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **S.S. Correia:** A. Employment/Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **K.W. Tang:** A. Employment/Salary (full or part-time); Axial Biotherapeutics. **J. Tobin:** A. Employment/Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **R.R. Iyengar:** A. Employment/Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **C.F. Ferris:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research. F. Consulting Fees (e.g., advisory boards); Ironwood Pharmaceuticals. **M. Currie:** A. Employment/Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals. **J.R. Hadcock:** A. Employment/Salary (full or part-time); Ironwood Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ironwood Pharmaceuticals.
694.16	**A. Bakker:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; AGENEBIO.
694.17	**M. Gallagher:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Agenebio. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Agenebio. **A. Bakker:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Agenebio. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Agenebio.
695.14	**B.E. White:** A. Employment/Salary (full or part-time); Gallaudet 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.; Gallaudet University. **C. Langdon:** A. Employment/Salary (full or part-time); Gallaudet University.
695.20	**J.G. Makin:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; funding was provided by a research contract under Facebook's Sponsored Academic Research Agreement. **E.F. Chang:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; funding was provided by a research contract under Facebook's Sponsored Academic Research Agreement.
695.25	**K. Kitajo:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Toyota Motor Corporation Grant.
695.27	**P. Hecht:** A. Employment/Salary (full or part-time); Avanir Pharmaceuticals Inc., Aliso Viejo, California, USA.
697.10	**J. Kim:** A. Employment/Salary (full or part-time); University of Zurich. **P.N. Tobler:** A. Employment/Salary (full or part-time); University of Zurich.
697.30	**J.M. Henderson:** F. Consulting Fees (e.g., advisory boards); serves on Medical / Scientific Advisory Boards of Circuit Therapeutics, Enspire DBS, and Neuropace. These entities did not support this work. **K.V. Shenoy:** F. Consulting Fees (e.g., advisory boards); consultant to Neuralink Corp. and on the Scientific Advisory Boards of CTRL-Labs Inc., MIND-X Inc., Inscopix Inc. and Heal Inc. These entities did not support this work.
698.07	**J.A. Vekich:** A. Employment/Salary (full or part-time); Takeda California, Inc. **K. Bobkov:** A. Employment/Salary (full or part-time); Takeda California, Inc. **C.S. Holub:** A. Employment/Salary (full or part-time); Takeda California, Inc. **D. Das:** A. Employment/Salary (full or part-time); Takeda California, Inc. **R. Yamashita:** A. Employment/Salary (full or part-time); Takeda California, Inc. **M. Ekstrand:** A. Employment/Salary (full or part-time); Takeda California, Inc. **A. Amador:** A. Employment/Salary (full or part-time); Takeda California, Inc. **E. Boshoff:** A. Employment/Salary (full or part-time); Takeda California, Inc. **P. Taskar:** A. Employment/Salary (full or part-time); Takeda California, Inc. **H. Schiffer:** A. Employment/Salary (full or part-time); Takeda California, Inc. **J. Atienza:** A. Employment/Salary (full or part-time); Takeda California, Inc. **J. Serrats:** A. Employment/Salary (full or part-time); Takeda California, Inc. **N. Chen:** A. Employment/Salary (full or part-time); Takeda California, Inc. **E. Yoo:** A. Employment/Salary (full or part-time); taked. **G. Corbett:** A. Employment/Salary (full or part-time); Takeda Cambridge. **J. Powell:** A. Employment/Salary (full or part-time); Takeda Cambridge. **N. Brice:** A. Employment/Salary (full or part-time); Takeda Cambridge. **N. Kaushal:** A. Employment/Salary (full or part-time); Takeda California, Inc. **W.J. Ray:** A. Employment/Salary (full or part-time); Takeda California, Inc. **J.P. Doyle:** A. Employment/Salary (full or part-time); Takeda California, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property rights/patent holder.
698.09	**C.A. Shankula:** A. Employment/Salary (full or part-time); Afraxis, Inc. **J.K. Alexander:** A. Employment/Salary (full or part-time); Alexander Scientific Analysis and Programming, L.L.C. **K. Korjenic:** A. Employment/Salary (full or part-time); Afraxis, Inc. **C.S. Rex:** A. Employment/Salary (full or part-time); Afraxis, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Afraxis, Inc.
698.16	**C.R. Butson:** F. Consulting Fees (e.g., advisory boards); NeuroPace, Advanced Bionics, Boston Scientific, Intelect Medical, Abbott (St. Jude Medical), Functional Neuromodulation.
699.01	**S. Kim:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research supported in part by the BK21 Plus Project, Department of Electrical and Computer Engineering, SNU, in 2018; and in part by a grant to CABMC (Control of Animal Brain using MEMS Chip) project.

PRESENTATION NUMBER	STATEMENT
700.01	**M. Fiscella:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MaxWell Biosystems AG.
700.02	**Y. Ishibashi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **A. Odawara:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **A. Okamura:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **K. Kinoshita:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **T. Shirakawa:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **I. Suzuki:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc.
700.04	**N. Matsuda:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **A. Odawara:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **A. Okamura:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **K. Kinoshita:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **T. Shirakawa:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc. **I. Suzuki:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astellas Pharma Inc.
700.07	**A. Ojima:** A. Employment/Salary (full or part-time); Techno Pro R&D company, Techno Pro Inc. **S. Inaba:** A. Employment/Salary (full or part-time); Techno Pro R&D company, Techno Pro Inc. **T. Yoshinaga:** A. Employment/Salary (full or part-time); Eisai Co., Ltd.
700.26	**N.N. Tirko:** A. Employment/Salary (full or part-time); Actuated Medical, Inc. **J.K. Greaser:** A. Employment/Salary (full or part-time); Actuated Medical, Inc. **C.A. Scruggs:** A. Employment/Salary (full or part-time); Actuated Medical, Inc. **T.J. Higgins:** A. Employment/Salary (full or part-time); Actuated Medical, Inc. **R.B. Bagwell:** A. Employment/Salary (full or part-time); Actuated Medical, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Actuated Medical, Inc.
700.27	**A. Paul:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Starkey Hearing Technologies Grant. **D. Tourtelotte:** A. Employment/Salary (full or part-time); Starkey Employee.
700.28	**N. Belkaya:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); receipt of intellectual property rights/patent holder. **A. Ramakrishnan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); receipt of intellectual property rights/patent holder. **M.L. Platt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); receipt of intellectual property rights/patent holder.
701.07	**R. Lagoy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property rights/patent holder. **D. Albrecht:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property rights/patent holder.
701.08	**B.J. Hansen:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **S.J. Tye:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **A. Manohar:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **M.J. Marino:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **J.M. Uslaner:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **D.A. Henze:** A. Employment/Salary (full or part-time); Merck & Co., Inc.
701.13	**Y. Liu:** A. Employment/Salary (full or part-time); Blackthorn Therapeutics. **M.S. Mellem:** A. Employment/Salary (full or part-time); Blackthorn Therapeutics. **H. Gonzalez:** A. Employment/Salary (full or part-time); Blackthorn Therapeutics. **W.J. Martin:** A. Employment/Salary (full or part-time); Blackthorn Therapeutics. **P. Ahammad:** A. Employment/Salary (full or part-time); Blackthorn Therapeutics.
701.14	**R. Baba:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Takeda Pharmaceutical Company Limited. **H. Kimura:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited.
701.15	**S. Matsuda:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Takeda Pharmaceutical Company Limited. **H. Kimura:** A. Employment/Salary (full or part-time); cTakeda Pharmaceutical Company Limited.
703.21	**A.E. Bandrowski:** A. Employment/Salary (full or part-time); SciCrunch Inc. **M.E. Martone:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SciCrunch Inc. **J.S. Grethe:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SciCrunch Inc.
703.23	**A.E. Bandrowski:** A. Employment/Salary (full or part-time); SciCrunch Inc. **B. Ozyurt:** A. Employment/Salary (full or part-time); SciCrunch Inc.
706.05	**R.W. Gereau:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurolux Inc.

PRESENTATION NUMBER	STATEMENT
712.01	**R.J. Bateman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); C2N Diagnostics.
712.03	**T.W. Schmitz:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pfizer Scientific Services Evaluation Agreement. **R.N. Spreng:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pfizer Scientific Services Evaluation Agreement.
712.06	**T. Ikezu:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Abbvie, Eisai, Ono Pharma. F. Consulting Fees (e.g., advisory boards); Takeda.
715.08	**D. Elmaleh:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Chairman and CEO AZTherapies Inc. **R. Tanzi:** F. Consulting Fees (e.g., advisory boards); aid consultant and shareholder in AZ Therapies.
716.12	**S. Jitsuki:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Toyama Chemical Co., Ltd.
718.03	**J.O. Phillips:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U of Washington. **L. Ling:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U of Washington. **K. Nie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U of Washington. **J. Rubinstein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); U of Washington. F. Consulting Fees (e.g., advisory boards); Cochlear Ltd.
720.03	**K.V. Shenoy:** F. Consulting Fees (e.g., advisory boards); Neuralink Corp., CTRL-Labs, Inc. MIND-X Inc., Inscopix Inc., Heal, Inc. These entities did not support this work. **J.M. Henderson:** F. Consulting Fees (e.g., advisory boards); J.M.H. serves on Medical / Scientific Advisory Boards of Circuit Therapeutics, Enspire DBS, and Neuropace. These entities did not support this work.
721.02	**P. Zanos:** Other; P.Z. is listed as co-author in patent applications related to the pharmacology and use of (2S,6S)- and (2R,6R)-hydroxynorketamine in the treatment of mood disorders. **C.A. Zarate:** Other; C.A.Z. is listed as a co-inventor on a patent for the use of ketamine in major depression and suicidal ideation., C.A.Z. is also listed as co-author in a patent applications related to the pharmacology and use of (2S,6S)- and (2R,6R)-hydroxynorketamine in the treatment of mood disorders. **T.D. Gould:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); T.D.G. has received research funding from Janssen Pharmaceuticals and Roche Pharmaceuticals during the preceding three years. F. Consulting Fees (e.g., advisory boards); T.D.G. has received consulting fees from Janssen Pharmaceuticals. Other; T.D.G. is listed as co-author in a patent applications related to the pharmacology and use of (2S,6S)- and (2R,6R)-hydroxynorketamine in the treatment of mood disorders.
721.07	**C.A. Zarate:** A. Employment/Salary (full or part-time); National Institute of Health. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr Zarate is listed a co-inventor on a patent for the use of ketamine and its metabolites in the treatment of depression, anxiety, anhedonia, suicidal ideation and post-traumatic stress disorders., Dr. Zarate has assigned his patent rights to the U.S. government but will share a percentage of any royalties that may be received by the government.
722.07	**A. Bobadilla:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Fyssen Foundation; NIDA. **P. Kalivas:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 DA 003906 and DA12513.
723.01	**X. Nicol:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CNRS. **O. Ros:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sorbonne Université.
727.13	**C. Ng:** A. Employment/Salary (full or part-time); full time, Fulcrum Therapeutics Inc. **V. Villegas:** A. Employment/Salary (full or part-time); full time, Fulcrum Therapeutics Inc.
728.10	**M. Tommerdahl:** Other; Cortical Metrics, LLC.
728.16	**L.A. Gabel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Provisional Patent.
732.10	**B. Rahsepar:** A. Employment/Salary (full or part-time); Boston University. **J. Noueihed:** A. Employment/Salary (full or part-time); Boston University. **F.R. Fernandez:** A. Employment/Salary (full or part-time); Boston University. **J.A. White:** A. Employment/Salary (full or part-time); Boston University.
734.01	**F. Frohlich:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Elsevier (royalty), Pulvinar Neuro (ownership, management, consulting). F. Consulting Fees (e.g., advisory boards); Tal Medical (consulting).
734.02	**F. Frohlich:** A. Employment/Salary (full or part-time); University of North Carolina, Chapel Hill. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Elsevier, Pulvinar Neuro LLC. F. Consulting Fees (e.g., advisory boards); Tal Medical, Pulvinar Neuro LLC.
734.03	**F. Frohlich:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pulvinar Neuro Inc., Elsevier. F. Consulting Fees (e.g., advisory boards); Tal Medical Inc.
734.04	**F. Frohlich:** A. Employment/Salary (full or part-time); University of North Carolina at Chapel Hill. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); founder, CSO, and majority owner of Pulvinar Neuro LLC. F. Consulting Fees (e.g., advisory boards); Tal Medical.
734.05	**M. Alexander:** A. Employment/Salary (full or part-time); UNC- Chapel Hill. **F. Frohlich:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pulvinar Neuro LLC, Elsevier. F. Consulting Fees (e.g., advisory boards); Tal Medical, Pulvinar Neuro LLC.
734.06	**D. Berger:** A. Employment/Salary (full or part-time); University of North Carolina. **S. Alagapan:** A. Employment/Salary (full or part-time); University of North Carolina. **F. Frohlich:** A. Employment/Salary (full or part-time); University of North Carolina. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/

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	patent holder, excluding diversified mutual funds); Elsevier, Pulvinar Neuro LLC. F. Consulting Fees (e.g., advisory boards); Tal Medical, Pulvinar Neuro LLC.
734.07	**L.F. Jarskog:** A. Employment/Salary (full or part-time); Auspex/Teva, Boehringer Ingelheim, and Otsuka. F. Consulting Fees (e.g., advisory boards); to Roche and Clintara/Bracket. **F. Frohlich:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; the National Institute of Health, the Brain Behavior Foundation, the Foundation of Hope, the Human Frontier Science Program. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pulvinar Neuro LLC. F. Consulting Fees (e.g., advisory boards); Tal Medical. Other; Elsevier.
734.08	**M.L. Alexander:** A. Employment/Salary (full or part-time); University of North Carolina. **S. Alagapan:** A. Employment/Salary (full or part-time); University of North Carolina. **C.E. Lugo:** A. Employment/Salary (full or part-time); University of North Carolina. **J.M. Mellin:** A. Employment/Salary (full or part-time); University of North Carolina. **C.M. Lustenberger:** A. Employment/Salary (full or part-time); University of North Carolina. **D.R. Rubinow:** A. Employment/Salary (full or part-time); University of North Carolina. **F. Frohlich:** A. Employment/Salary (full or part-time); University of North Carolina. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pulvinar Neuro, LLC, Elsevier. F. Consulting Fees (e.g., advisory boards); Pulvinar Neuro, LLC, Tal Medical.
734.09	**W.A. Huang:** A. Employment/Salary (full or part-time); University of North Carolina. **S. Radtke-Schuller:** A. Employment/Salary (full or part-time); University of North Carolina. **Z.C. Zhou:** A. Employment/Salary (full or part-time); University of North Carolina. **F. Frohlich:** A. Employment/Salary (full or part-time); University of North Carolina. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Elsevier, Pulvinar Neuro LLC. F. Consulting Fees (e.g., advisory boards); Tal Medical, Pulvinar Neuro LLC.
734.10	**J. Parikh:** A. Employment/Salary (full or part-time); University of North Carolina. **S. Ahn:** A. Employment/Salary (full or part-time); University of North Carolina. **M.L. Alexander:** A. Employment/Salary (full or part-time); University of North Carolina. **S. Alagapan:** A. Employment/Salary (full or part-time); University of North Carolina. **F. Frohlich:** A. Employment/Salary (full or part-time); University of North Carolina. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pulvinar Neuro LLC, Elsevier. F. Consulting Fees (e.g., advisory boards); Pulvinar Neuro LLC, Tal Medical.
734.11	**F. Frohlich:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PulvinarNeuro, Elsevier. F. Consulting Fees (e.g., advisory boards); PulvinarNeuro, Tal Medical.
735.21	**M. Copelli:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boehringer-Ingelheim.
737.06	**B. Wolozin:** A. Employment/Salary (full or part-time); Co-founder and C.S.O. of Aquinnah Pharmaceuticals Inc.
737.09	**J.A. Prenderville:** A. Employment/Salary (full or part-time); Transpharmation Ireland Ltd. **T. Burke:** A. Employment/Salary (full or part-time); Transpharmation Ireland Ltd. **C.W. McDonnell:** A. Employment/Salary (full or part-time); Transpharmation Ireland Ltd. **M. Bianchi:** A. Employment/Salary (full or part-time); Transpharmation Ireland Ltd. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Transpharmation Ireland Ltd.
737.16	**J.B. Leverenz:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Avid, Biogen, Sanofi/Genzyme, GE Healthcare,. F. Consulting Fees (e.g., advisory boards); Axovant, GE Healthcare.
737.17	**T. Schwabe:** A. Employment/Salary (full or part-time); Alector, LLC. **A. Rosenthal:** A. Employment/Salary (full or part-time); Alector, LLC. **D.M. Wilcock:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Alector, LLC.
737.21	**K.R. Miller:** A. Employment/Salary (full or part-time); NanoString Technologies. **S. Prokop:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NanoString Technologies.
738.11	**A. Pascual-Leone:** F. Consulting Fees (e.g., advisory boards); Neosync, Constant Therapy, Starlab Neuroscience, Neuroelectrics, Cognito. Other; inventor on several issued and pending patents on the real-time integration of transcranial magnetic stimulation with electroencephalography and magnetic resonance imaging.
738.15	**I. Bezprozvanny:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; TEVA.
738.17	**E.D. Roberson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Roberson owns intellectual property related to tau.
741.01	**T. Funane:** A. Employment/Salary (full or part-time); Hitachi, Ltd. **M. Kiguchi:** A. Employment/Salary (full or part-time); Hitachi, Ltd.
741.02	**D.R. Thal:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Collaboration with Janssen Pharmaceutical Companies. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Collaborations with Novartis Pharma and Probiodrug. F. Consulting Fees (e.g., advisory boards); GE-Healthcare, Covance Laboratories. **T.G. Beach:** F. Consulting Fees (e.g., advisory boards); GE-Healthcare. **M. Zanette:** A. Employment/Salary (full or part-time); GE-Healthcare. **J. Lilja:** A. Employment/Salary (full or part-time); GE-Healthcare. **K. Heurling:** A. Employment/Salary (full or part-time); GE-Healthcare. **A. Chakrabarty:** F. Consulting Fees (e.g., advisory boards); GE-Healtcare via University of Leeds. **A. Ismail:** F. Consulting Fees (e.g., advisory boards); GE-Healthcare via Univerity of Leeds. **G. Farrar:** A. Employment/Salary (full or part-time); GE-Healthcare. **C. Buckley:** A. Employment/Salary (full or part-time); GE-Healthcare. **A.P.L. Smith:** A. Employment/Salary (full or part-time); GE-Healthcare.
741.07	**K. Kunitoki:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Nisshin Oillio Group, Danone. **Y. Taki:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Nisshin Oilio group.
741.09	**C. Chevrefils:** A. Employment/Salary (full or part-time); Optina Diagnostics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/

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	patent holder, excluding diversified mutual funds); Optina Diagnostics. **J. Sylvestre:** A. Employment/Salary (full or part-time); Optina Diagnostics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Optina Diagnostics. **J. Arbour:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Optina Diagnostics.
741.10	**J.C. Augustinack:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CorticoMetrics (Bruce Fischl). **B. Fischl:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Corticometrics (Bruce Fischl).
741.19	**S. Grant:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Horizon Discovery.
741.21	**M.D. Ikonomovic:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; GE Healthcare.
741.24	**S. Buss:** A. Employment/Salary (full or part-time); Beth Isreal Deaconess Medical Center. **K. McDonald:** A. Employment/Salary (full or part-time); Beth Isreal Deaconess Medical Center. **P.J. Fried:** A. Employment/Salary (full or part-time); Beth Isreal Deaconess Medical Center. **A. Pascual-Leone:** A. Employment/Salary (full or part-time); Beth Isreal Deaconess Medical Center. F. Consulting Fees (e.g., advisory boards); Nexstim, Neuronix, Starlab Neuroscience, Neuroelectrics, Cognito, Constant Therapy, and Neosync.
742.05	**C.G. Glabe:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; R56AG056507-01. **R.E. Tanzi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Cure Alzheimers Fund. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity in Neurogenetic Pharmaceuticals.
744.02	**D.F. Delotterie:** A. Employment/Salary (full or part-time); UTHSC. **J.T. Killmar:** A. Employment/Salary (full or part-time); UTHSC. **Y. Xue:** A. Employment/Salary (full or part-time); UTHSC. **M.P. McDonald:** A. Employment/Salary (full or part-time); UTHSC.
744.10	**B.D. Harvey:** A. Employment/Salary (full or part-time); Biogen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biogen. **R. Komorowski:** A. Employment/Salary (full or part-time); Biogen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biogen. **F. Pontarelli:** A. Employment/Salary (full or part-time); Biogen. **A.W. Dunah:** A. Employment/Salary (full or part-time); Biogen. **M. Hajos:** A. Employment/Salary (full or part-time); Biogen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biogen.
744.20	**G. Dell'Acqua:** A. Employment/Salary (full or part-time); Sevda Cell Science. **T. Mc Fadden:** A. Employment/Salary (full or part-time); Sevda Cell Science. **B. Blanc:** A. Employment/Salary (full or part-time); ICDD. **N. Compagnone:** A. Employment/Salary (full or part-time); ICDD.
745.04	**R.E. Tanzi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); R.E.T. holds equity in Neurogenetic Pharmaceuticals. **S.L. Wagner:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); S.L.W. holds equity in Neurogenetic Pharmaceuticals.
746.04	**R. Urfer:** A. Employment/Salary (full or part-time); Selonterra, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Selonterra, Inc. **A. Urfer-Buchwalder:** A. Employment/Salary (full or part-time); Selonterra, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Selonterra, Inc.
746.08	**J.N. O'Neil:** A. Employment/Salary (full or part-time); Howard University, College of Medicine.
747.01	**M. Nakamura:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PST Inc. **M. Higuchi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PST Inc. **S. Tokuno:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PST Inc.
748.11	**C. Burke:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **V. Sans:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **M. Scallion:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **S. Pai:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **A. Dios:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **V. Zarayskiy:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **A. Toms:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **A. Buckmelter:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **A. Murad:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **S. Ioannidis:** A. Employment/Salary (full or part-time); FORMA Therapeutics. **M.K. Ahlijanian:** A. Employment/Salary (full or part-time); FORMA Therapeutics.
749.21	**G. Porras:** A. Employment/Salary (full or part-time); Motac neuroscience. **E. Bezard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac Holding. F. Consulting Fees (e.g., advisory boards); Motac neuroscience.
749.22	**F. Altay Melek:** A. Employment/Salary (full or part-time); EPFL. **J. Copin:** A. Employment/Salary (full or part-time); EPFL. **J. Butscher:** A. Employment/Salary (full or part-time); EPFL. **N. Maharjan:** A. Employment/Salary (full or part-time); EPFL. **N. Aït Bouziad:** A. Employment/Salary (full or part-time); EPFL. **S. Vingill:** A. Employment/Salary (full or part-time); University of Oxford. **R. Wade-Martins:** A. Employment/Salary (full or part-time); University of Oxford. **R. Hamelin:** A. Employment/Salary (full or part-time); EPFL. **S. Deguire:** A. Employment/Salary (full or part-time); EPFL. **R. Burai:** A. Employment/Salary (full or part-time); EPFL. **H. Lashuel:** A. Employment/Salary (full or part-time); EPFL.
750.08	**J. Sanchez-Padilla:** A. Employment/Salary (full or part-time); PsychoGenics. **G. Tombaugh:** A. Employment/Salary (full or part-time); PsychoGenics. **S. Gelman:** A. Employment/Salary (full or part-time); PsychoGenics. **K. Kretschmannova:** A. Employment/Salary (full or part-time); PsychoGenics. **H. Fernandes:** A. Employment/Salary (full or part-time); PsychoGenics. **A. Ghavami:** A. Employment/Salary (full or part-time); PsychoGenics. **J. Beltran:** A.

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	Employment/Salary (full or part-time); PsychoGenics. **K. Cirillo:** A. Employment/Salary (full or part-time); PsychoGenics. **S. Ramboz:** A. Employment/Salary (full or part-time); PsychoGenics.
750.28	**C. Korth:** A. Employment/Salary (full or part-time); co-authors from the company Prosetta.
752.09	**B.J. Spencer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Spinogenix, Inc. **V.F. Simmon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Spinogenix, Inc. **S.T. Sarraf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Spinogenix, Inc. **P.W. Vanderklish:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Spinogenix, Inc.
753.24	**P. Stanley:** A. Employment/Salary (full or part-time); Pfizer. **Q. Li:** A. Employment/Salary (full or part-time); Motac neuroscience. **R. Kozak:** A. Employment/Salary (full or part-time); Pfizer. **M. Popiolek:** A. Employment/Salary (full or part-time); Pfizer. **E. Bezard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac Holding. F. Consulting Fees (e.g., advisory boards); Motac neuroscience.
754.03	**K.A. Svensson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **H.Y. Meltzer:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Eli Lilly and Company.
754.08	**M.A. Vital:** A. Employment/Salary (full or part-time); Maria A. B. F. Vital, Universidade Federal do Paraná.
755.16	**B.M. Hiller:** F. Consulting Fees (e.g., advisory boards); FCDI. **D.J. Marmion:** F. Consulting Fees (e.g., advisory boards); FCDI. **C.A. Chavez:** A. Employment/Salary (full or part-time); FCDI. **C.A. Thompson:** A. Employment/Salary (full or part-time); FCDI. **N.A. Elliott:** A. Employment/Salary (full or part-time); FCDI. **C.W. McMahon:** A. Employment/Salary (full or part-time); FCDI. **J.H. Kordower:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; FCDI. F. Consulting Fees (e.g., advisory boards); FCDI.
755.22	**L. Zografos:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Competing financial interests as a shareholders in businesses that exploit Drosophila for drug discovery. **D. Armstrong:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Competing financial interests as a shareholders in businesses that exploit Drosophila for drug discovery. **W. Davies:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Competing financial interests as a shareholders in businesses that exploit Drosophila for drug discovery.
755.23	**D. Armstrong:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Parkure Ltd. **L. Zografos:** A. Employment/Salary (full or part-time); Parkure Ltd. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Parkure Ltd. **K. Styczyńska-Soczka:** A. Employment/Salary (full or part-time); Parkure Ltd. **L. Zechini:** A. Employment/Salary (full or part-time); Parkure Ltd. **R.W. Davies:** A. Employment/Salary (full or part-time); Brainwave-Discovery ltd. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Parkure Ltd.
756.02	**J. Lujan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Boston Scientific.
756.03	**J. Lujan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Boston Scientific.
756.04	**G.F. Molnar:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 R01NS07765705.
756.12	**J. Wang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Equipment from Boston Scientific. **S. Kulkarni:** A. Employment/Salary (full or part-time); Boston Sientific. **H. Bokil:** A. Employment/Salary (full or part-time); Boston Sientific.
756.20	**J. Volle:** A. Employment/Salary (full or part-time); SynapCell SAS. **A. Woźniak-Kwaśniewska:** A. Employment/Salary (full or part-time); SynapCell SAS. **A. Evrard:** A. Employment/Salary (full or part-time); SynapCell SAS. **C. Ruggiero:** A. Employment/Salary (full or part-time); SynapCell SAS. **C. Roucard:** A. Employment/Salary (full or part-time); SynapCell SAS. **Y. Roche:** A. Employment/Salary (full or part-time); SynapCell SAS. **V. Duveau:** A. Employment/Salary (full or part-time); SynapCell SAS.
757.08	**V. Lazari:** A. Employment/Salary (full or part-time); Charles River. **B. Nancolas:** A. Employment/Salary (full or part-time); Charles River. **M. Mateus:** A. Employment/Salary (full or part-time); Charles River. **A. Mukonoweshuro:** A. Employment/Salary (full or part-time); Charles River. **E. Thatcher:** A. Employment/Salary (full or part-time); Charles River. **M. Iovino:** A. Employment/Salary (full or part-time); Charles River. **A. Barnard:** A. Employment/Salary (full or part-time); Charles River. **T. Ladduwahetty:** A. Employment/Salary (full or part-time); Charles River. **P. Breccia:** A. Employment/Salary (full or part-time); Charles River. **D. Macdonald:** A. Employment/Salary (full or part-time); CHDI. **I. Munoz-Sanjuan:** A. Employment/Salary (full or part-time); CHDI. **C. Dominguez:** A. Employment/Salary (full or part-time); CHDI. **J. Voigt:** A. Employment/Salary (full or part-time); CHDI. **E. Doherty:** A. Employment/Salary (full or part-time); CHDI. **G. McAllister:** A. Employment/Salary (full or part-time); CHDI.
757.09	**P. Mitchell:** A. Employment/Salary (full or part-time); Charles River. **D. Todd:** A. Employment/Salary (full or part-time); Charles River. **T. Ladduwahetty:** A. Employment/Salary (full or part-time); Charles River. **K. Matthews:** A. Employment/Salary (full or part-time); Charles River. **L. Urbonas:** A. Employment/Salary (full or part-time); Charles River. **E. Thatcher:** A. Employment/Salary (full or part-time); Charles River. **C. Luckhurst:** A. Employment/Salary (full or part-time); Mission Therapeutics. **A. Haughan:** A. Employment/Salary (full or part-time); Charles River. **M. Barnes:** A. Employment/Salary (full or part-time); Charles River. **A. Chauhan:** A. Employment/Salary (full or part-time); Charles River. **E. Saville-Stones:** A. Employment/Salary (full or part-time); Charles River. **A. Stott:** A. Employment/Salary (full or part-time); Charles River. **H. Patel:** A. Employment/Salary (full or part-time); Charles River. **L. Blom:** A. Employment/Salary (full or part-time); Charles River. **G. McAllister:** A. Employment/Salary (full or part-time); CHDI. **R. Cachope:** A. Employment/Salary (full or part-time); CHDI. **M. Maillard:** A. Employment/Salary (full or part-time); CHDI. **M. Rose:** A. Employment/Salary (full or part-time); CHDI. **M. Lee:** A. Employment/Salary (full or part-time); CHDI. **V. Beaumont:** A. Employment/Salary (full or part-time); Charles River. **I. Munoz-Sanjuan:** A. Employment/Salary (full or part-time); CHDI. **C. Dominguez:** A. Employment/Salary (full or part-time); CHDI.

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758.05	**L.M. Stanek:** A. Employment/Salary (full or part-time); Sanofi. **B.R. Mastis:** A. Employment/Salary (full or part-time); Sanofi. **J. Bu:** A. Employment/Salary (full or part-time); Sanofi. **A. Richards:** A. Employment/Salary (full or part-time); Sanofi. **L.S. Shihabuddin:** A. Employment/Salary (full or part-time); Sanofi.
758.11	**S. Zhong:** A. Employment/Salary (full or part-time); Psychogenics. **P. Robichaud:** A. Employment/Salary (full or part-time); Psychogenics. **A. Ghavami:** A. Employment/Salary (full or part-time); Psychogenics. **V. Beaumont:** A. Employment/Salary (full or part-time); CHDI Foundation Inc. **R. Cachope:** A. Employment/Salary (full or part-time); CHDI Foundation Inc.
758.13	**H.B. Fernandes:** A. Employment/Salary (full or part-time); Psychogenics Inc. **G. Tombaugh:** A. Employment/Salary (full or part-time); Psychogenics Inc. **J. Sanchez-Padilla:** A. Employment/Salary (full or part-time); Psychogenics Inc. **S. Gelman:** A. Employment/Salary (full or part-time); Psychogenics Inc. **K. Kretschmannova:** A. Employment/Salary (full or part-time); Psychogenics Inc. **J. Palma:** A. Employment/Salary (full or part-time); Psychogenics Inc. **A. Ghavami:** A. Employment/Salary (full or part-time); Psychogenics Inc.
758.29	**N.G. Simon:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Azevan Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Azevan Pharmaceuticals, Inc. F. Consulting Fees (e.g., advisory boards); Azevan Pharmaceuticals, Inc. **K.E. Anderson:** F. Consulting Fees (e.g., advisory boards); Azevan Pharmaceuticals, Inc. **S. Lu:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Azevan Pharmaceuticals, Inc. **M.J. Brownstein:** A. Employment/Salary (full or part-time); Azevan Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Azevan Pharmaceuticals, Inc.
761.05	**R. Kern:** A. Employment/Salary (full or part-time); rainStorm Cell Therapeutics full time employee. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock ownership BrainStorm Cell Therapeutics. **N. Abramov:** A. Employment/Salary (full or part-time); rainStorm Cell Therapeutics full time employee. **H. Kaspi:** A. Employment/Salary (full or part-time); rainStorm Cell Therapeutics full time employee. **Y. Aizner:** A. Employment/Salary (full or part-time); rainStorm Cell Therapeutics full time employee. **C. Lebovits:** A. Employment/Salary (full or part-time); rainStorm Cell Therapeutics full time employees. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Brainstorm Cell Therapeutics. **R. Aricha:** A. Employment/Salary (full or part-time); rainStorm Cell Therapeutics full time employee.
761.13	**L. Orio:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent holder. **M. Antón:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent holder. **F. Rodríguez de Fonseca:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent holder.
762.19	**A.M. Habas:** A. Employment/Salary (full or part-time); Neuropore Therapies Inc. **S. Natala:** A. Employment/Salary (full or part-time); Neuropore Therapies Inc. **J. Wong:** A. Employment/Salary (full or part-time); Neuropore Therapies Inc. **W. Wrasidlo:** A. Employment/Salary (full or part-time); Neuropore Therapies, Inc. **M. Gill:** A. Employment/Salary (full or part-time); Neuropore Therapies, Inc. **D. Bonhaus:** A. Employment/Salary (full or part-time); Neuropore Therapies, Inc.
762.21	**P.C. Bickford:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; The James A. Haley Veterans Hospital. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NaturaTherapeutics.
765.07	**E. Al:** A. Employment/Salary (full or part-time); Berlin School of Mind and Brain - Humboldt Universitaet zu Berlin, Max Planck Institute for Human Cognitive and Brain Sciences. **F. Iliopoulos:** A. Employment/Salary (full or part-time); max planck institute for cognitive and brain sciences. **N. Forschack:** A. Employment/Salary (full or part-time); Max Planck Institute for Human Cognitive and Brain Sciences. **T. Nierhaus:** A. Employment/Salary (full or part-time); max planck institute for cognitive and brain sciences. **V. Nikulin:** A. Employment/Salary (full or part-time); max planck institute for cognitive and brain sciences. **P. Motyka:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); max planck institute for cognitive and brain sciences. **M. Grund:** A. Employment/Salary (full or part-time); max planck institute for cognitive and brain sciences. **M. Gaebler:** A. Employment/Salary (full or part-time); max planck institute for cognitive and brain sciences. **A. Villringer:** A. Employment/Salary (full or part-time); max planck institute for cognitive and brain sciences. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Berlin School of Mind and Brain, Humboldt Universitaet zu Berlin.
765.12	**L.M. Stone-Roy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder. **J. Moritz:** A. Employment/Salary (full or part-time); President, Sapien LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder.
766.08	**E. Zornik:** A. Employment/Salary (full or part-time); Reed College.
766.22	**H. Akbari:** A. Employment/Salary (full or part-time); Department of Electrical Engineering, Columbia University, New York, NY 10027, USA.
767.07	**Y. Osako:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; JSTS. **Y. Sakurai:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; JSTS. **J. Hirokawa:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; JSTS.
768.04	**G. Batsikadze:** A. Employment/Salary (full or part-time); University of Duisburg-Essen.
768.09	**S. Romer:** A. Employment/Salary (full or part-time); Evokes, LLC.
770.03	**G. Courtine:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); GTX Medical.
772.09	**V.M. Homer:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Mat Market.
772.14	**J.C. Kline:** A. Employment/Salary (full or part-time); Delsys, Inc. **B. Shiwani:** A. Employment/Salary (full or part-time); Delsys, Inc. **J.P. Chiodini:** A. Employment/Salary (full or part-time); Delsys, Inc. **P. Contessa:** A. Employment/Salary

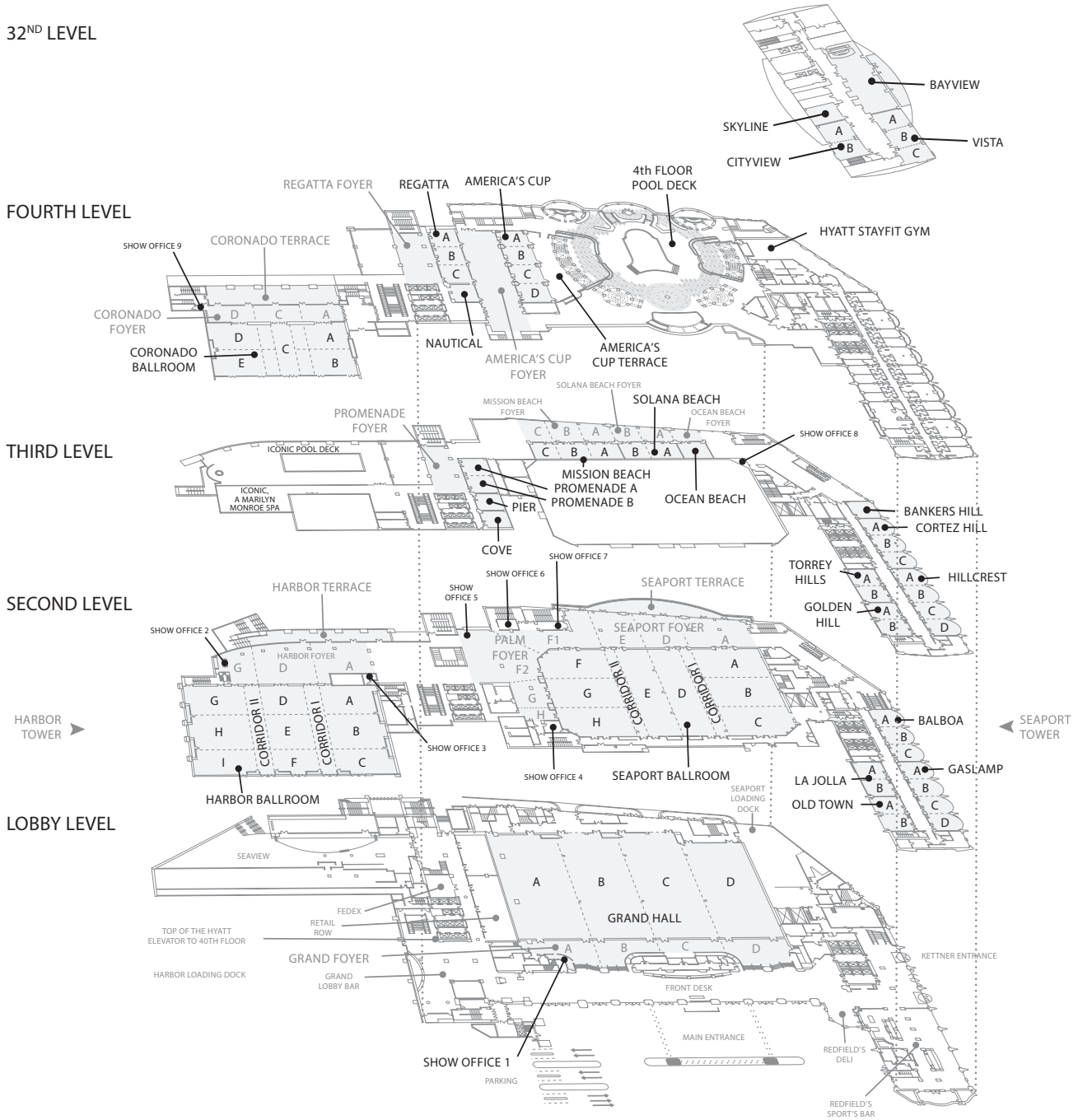
PRESENTATION NUMBER	STATEMENT
	(full or part-time); Delsys, inc. **S.H. Roy:** A. Employment/Salary (full or part-time); Delsys, Inc. **G. De Luca:** A. Employment/Salary (full or part-time); Delsys, Inc.
772.15	**J. Letizi:** A. Employment/Salary (full or part-time); Delsys Inc. **P. Contessa:** A. Employment/Salary (full or part-time); Delsys Inc. **G. De Luca:** A. Employment/Salary (full or part-time); Delsys Inc. **S. Roy:** A. Employment/Salary (full or part-time); Delsys Inc.
775.01	**M. Nakamura:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PST inc. **M. Higuchi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PST Inc. **S. Tokuno:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PST Inc.
775.20	**M. Burman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Glia LLC.
776.03	**T. Love:** A. Employment/Salary (full or part-time); Full Time. **A.J. Smith:** A. Employment/Salary (full or part-time); Post-Doctoral Fellow. **J. Zubieta:** A. Employment/Salary (full or part-time); Department Chair.
776.05	**E.L. Murray:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lyo-San Inc - commercial supplier of Kefir probiotic.
777.01	**T. Deffieux:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ICONEUS Company. **M. Tanter:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ICONEUS Company.
777.06	**D. Okuda:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen. F. Consulting Fees (e.g., advisory boards); EMD Serono, Genentech, Genzyme, Novartis and TEVA Neuroscience. Other; Lecture fees: Acorda, Genzyme, and TEVA Neuroscience.
777.11	**M. Pernot:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iconeus. **T. Deffieux:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iconeus. **M. Tanter:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iconeus.
777.12	**X. Mousset:** A. Employment/Salary (full or part-time); Iconeus. **A. Bertolo:** A. Employment/Salary (full or part-time); Iconeus. **B. Osmanski:** A. Employment/Salary (full or part-time); Iconeus. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iconeus. **Z. Lenkei:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iconeus. **M. Tanter:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iconeus.
777.14	**M. Larson:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Provided sleep shepherd blue. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Is a part of Sleep Shepherd Blue company we are using his device in the research.
781.15	**M. Stanojlovic:** A. Employment/Salary (full or part-time); University of Minnesota.
781.19	**C. Pyke:** A. Employment/Salary (full or part-time); Novo Nordisk. **C. Fekete:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Novo Nordisk.
781.21	**C. Pyke:** A. Employment/Salary (full or part-time); Global Research, Novo Nordisk A/S. **C. Fekete:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Global Research, Novo Nordisk A/S, Malov, Denmark.
783.15	**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.; NIH, DoD.
785.23	**S. Sances:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder. **A. Laperle:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder. **C. Svendsen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder.
787.07	**R. Kozak:** A. Employment/Salary (full or part-time); Biogen Inc. **P. Tierney:** A. Employment/Salary (full or part-time); Pfizer Inc. **M.D. Grannan:** A. Employment/Salary (full or part-time); Aquinnah Pharmaceutical. **M. Weber:** A. Employment/Salary (full or part-time); Pfizer Inc. **K. Diulgolenski:** A. Employment/Salary (full or part-time); Pfizer Inc. **G. Bora:** A. Employment/Salary (full or part-time); Pfizer Inc. **E. Belova:** A. Employment/Salary (full or part-time); Pfizer Inc. **E. Guilmette:** A. Employment/Salary (full or part-time); Biogen. **J. Litchfield:** A. Employment/Salary (full or part-time); Pfizer Inc. **L. Stevens:** A. Employment/Salary (full or part-time); Pfizer Inc. **Q. Yang:** A. Employment/Salary (full or part-time); Pfizer Inc. **J.T. Iazzaro:** A. Employment/Salary (full or part-time); Pfizer Inc. **L. Zhang:** A. Employment/Salary (full or part-time); Pfizer Inc. **J.B. Tuttle:** A. Employment/Salary (full or part-time); Pfizer Inc.
787.14	**D.M. Devilbiss:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NexStep Biomarkers, LLC., Cerora, Inc.
788.19	**S. Park:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 Eye Institute (NEI R01EY026042 to SP).
792.24	**J.A. Solyst:** A. Employment/Salary (full or part-time); HomeAway.
792.26	**R. Goebel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Brain Innovation.
793.07	**T.A. Lawton:** A. Employment/Salary (full or part-time); The first author TL has a potential conflict of interest, since she is the developer of PATH to Insight (PATH), and was employed by Perception Dynamics Institute.
793.10	**A. Hoshi:** A. Employment/Salary (full or part-time); Kirin Co., Ltd. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Kirin Co., Ltd. **T.**

PRESENTATION NUMBER	STATEMENT
	Ishiguro: A. Employment/Salary (full or part-time); Kirin Co., Ltd. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Kirin Co., Ltd. **H. Suetani:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Kirin Co., Ltd. **K. Kitajo:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Kirin Co., Ltd.
794.04	**S. Fukushima:** A. Employment/Salary (full or part-time); Michinoo hospital.

PRESENTATION NUMBER	STATEMENT

Hotel Floor Plans

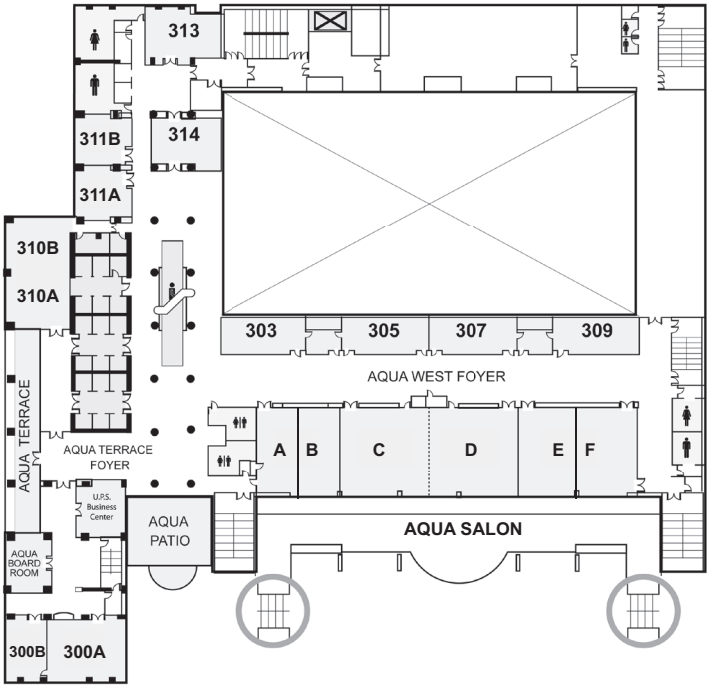
MANCHESTER GRAND HYATT
1 Market Pl
San Diego, CA 92101



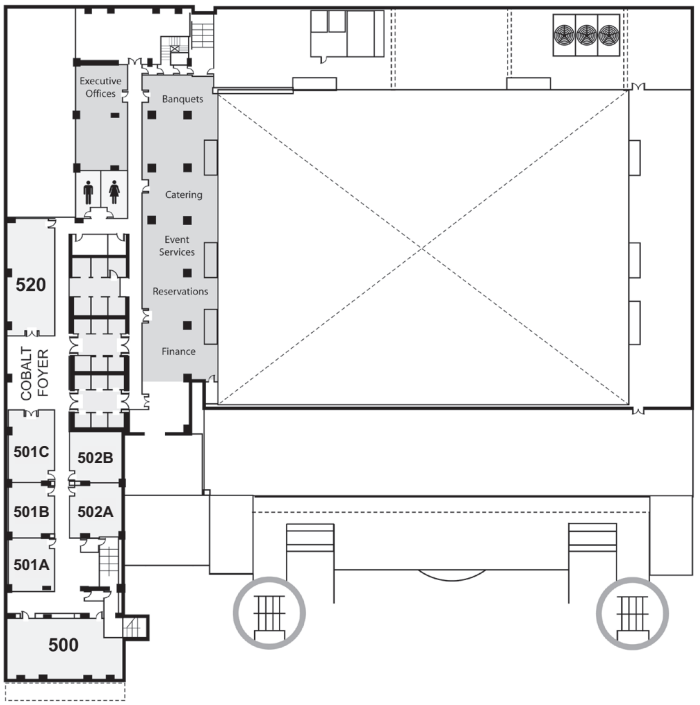
HILTON SAN DIEGO BAYFRONT

1 Park Blvd
San Diego, CA 92101

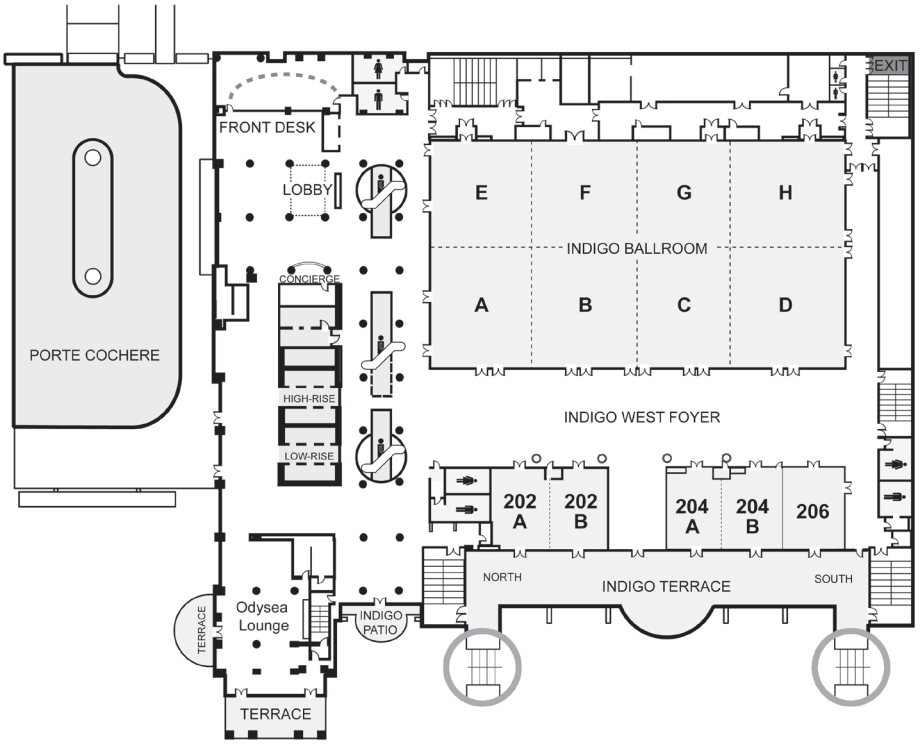
AQUA LEVEL



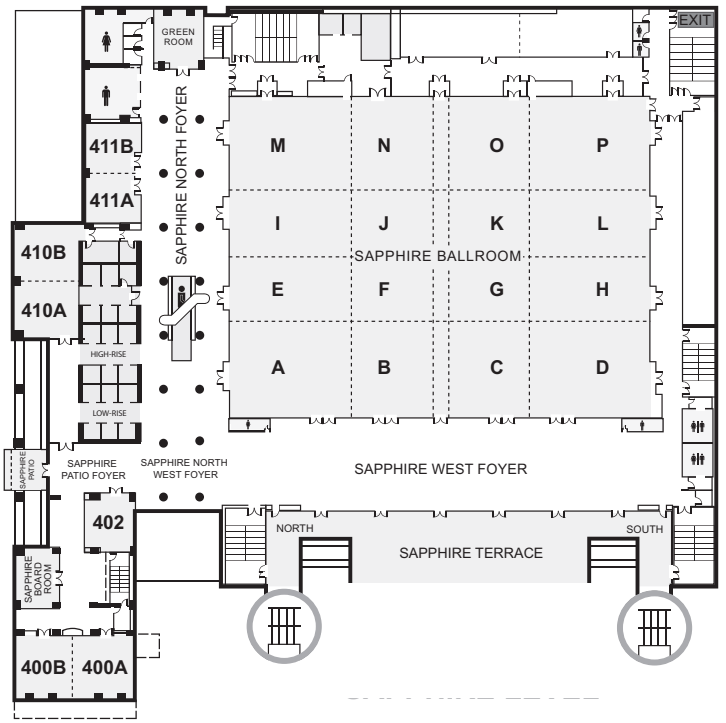
COBALT LEVEL



INDIGO LEVEL



SAPPHIRE LEVEL



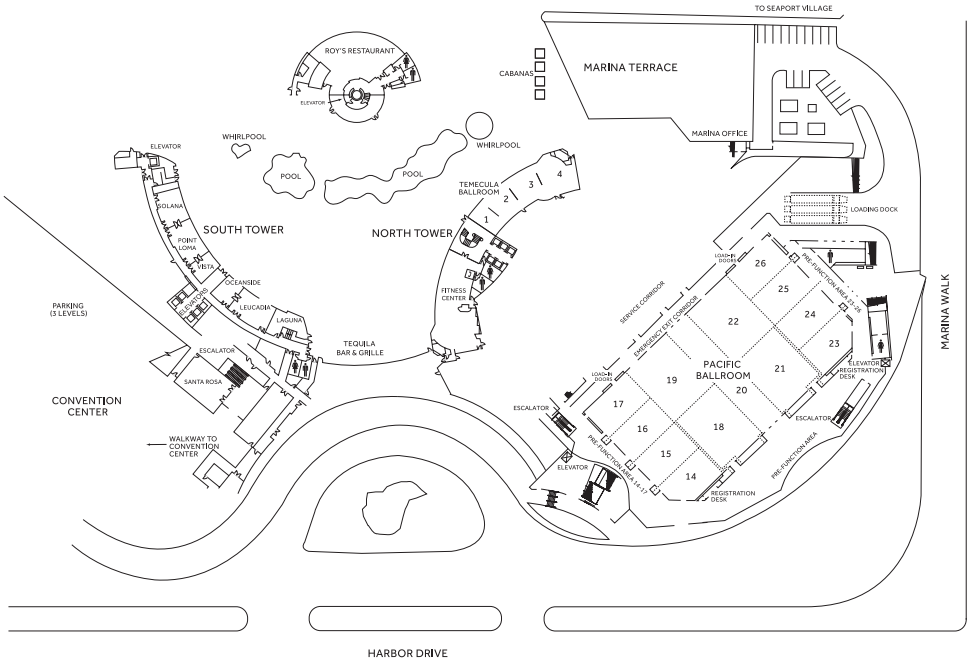
MARRIOTT MARQUIS SAN DIEGO MARINA

333 W Harbor Dr

San Diego, CA 92101

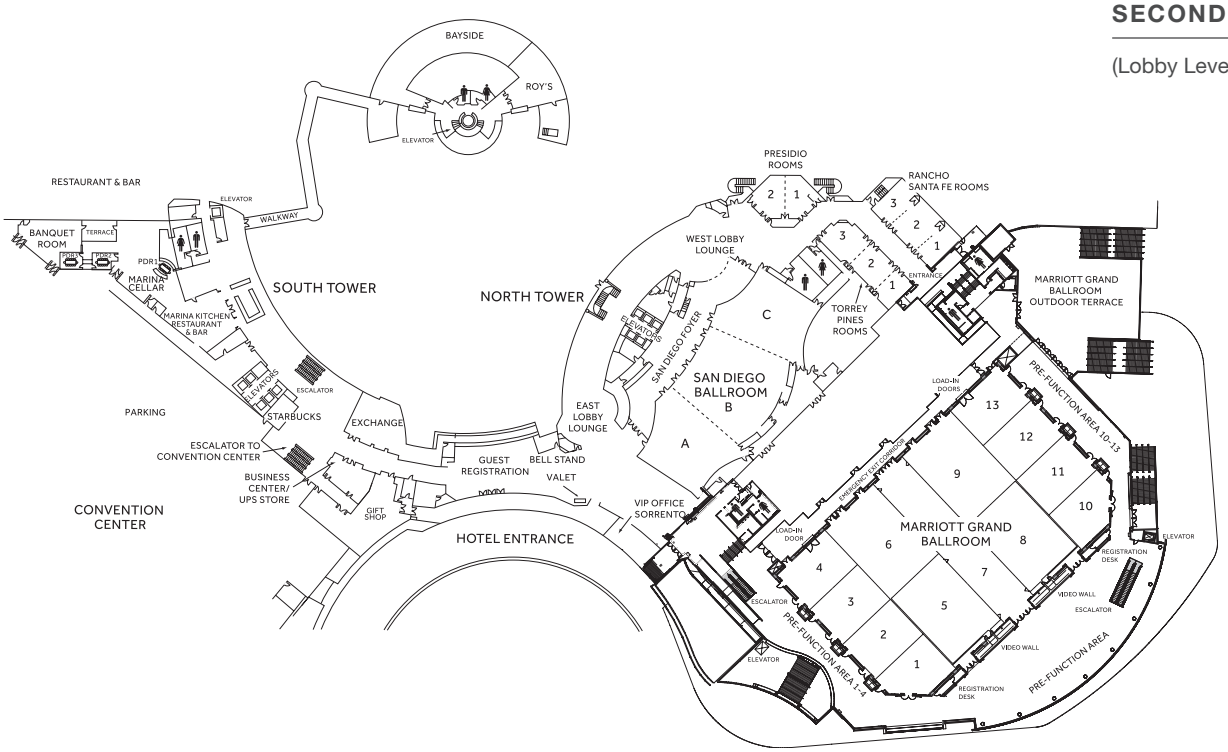
FIRST FLOOR

(Ground Level)



SECOND FLOOR

(Lobby Level)



SOUTH TOWER

Second Floor

Bayside

1st Floor

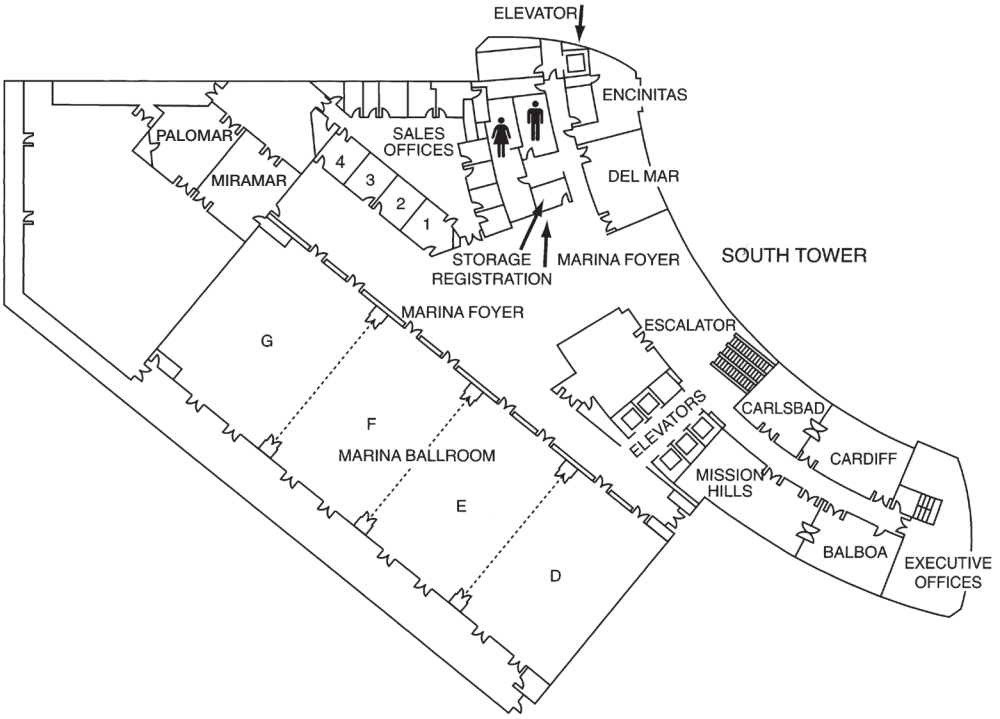
Laguna
Leucadia
Oceanside
Point Loma
Santa Rosa
Solana
Vista

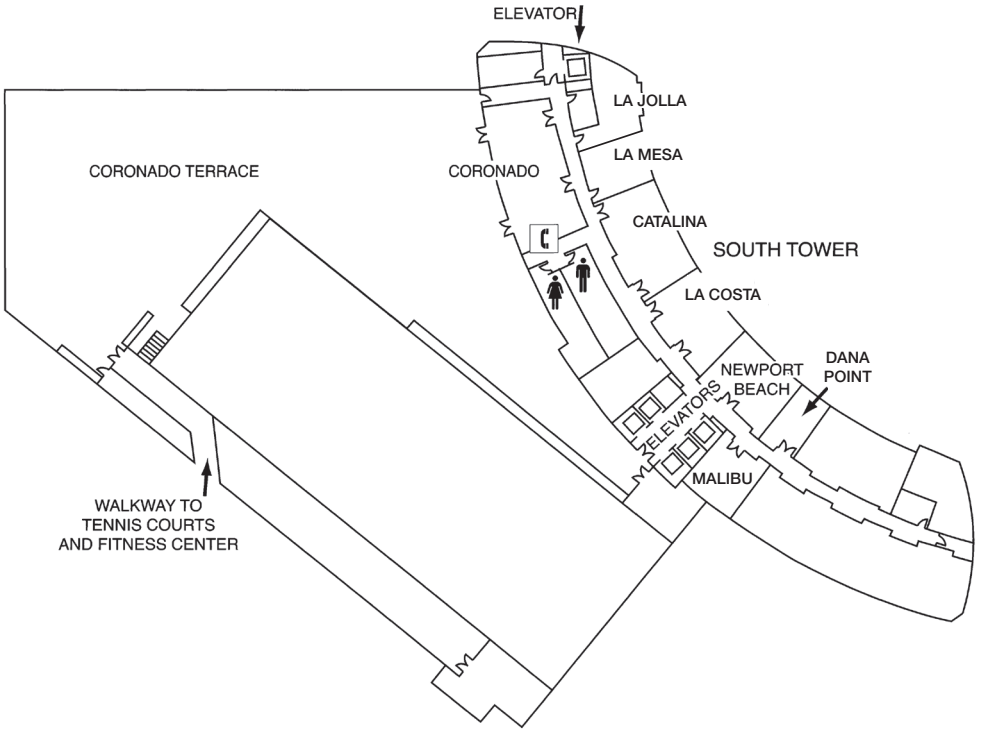
3rd Floor

Balboa
Cardiff
Carlsbad
Del Mar
Encinitas
Marina Ballroom D–G
Miramar
Mission Hills
Palomar

4th Floor

Catalina
Coronado
Dana Point
La Costa
La Jolla
La Mesa
Malibu
Newport Beach





NORTH TOWER

Lobby Level

Marriott Grand Ballroom 1–13
Presidio 1–2
Rancho Santa Fe 1–3
San Diego Ballrooms A–C
Torrey Pines 1–3

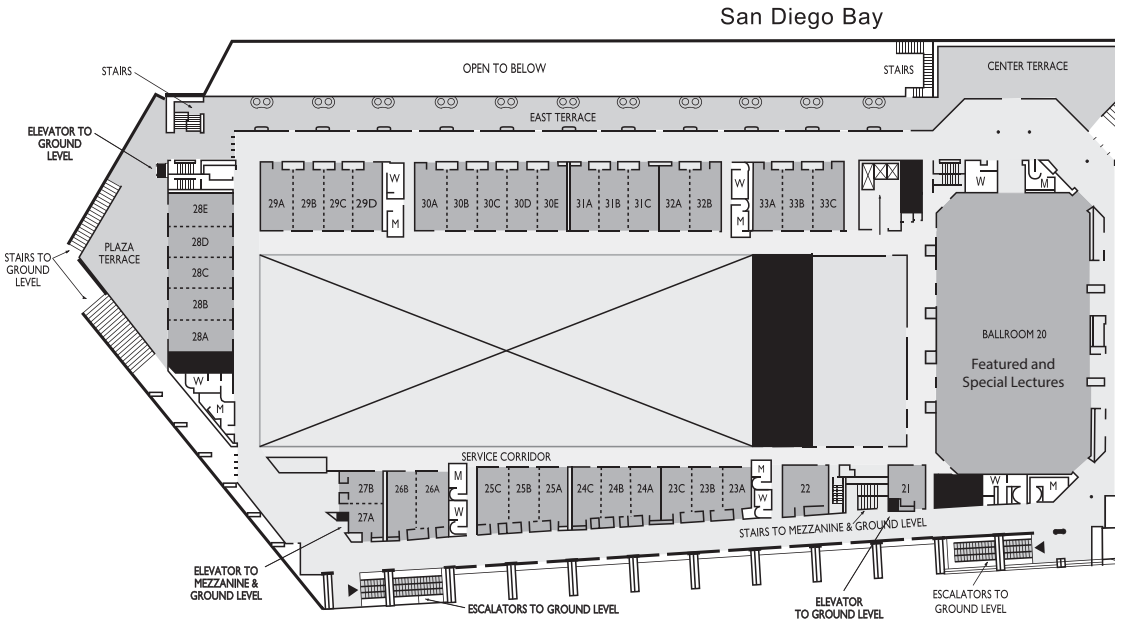
1st Floor

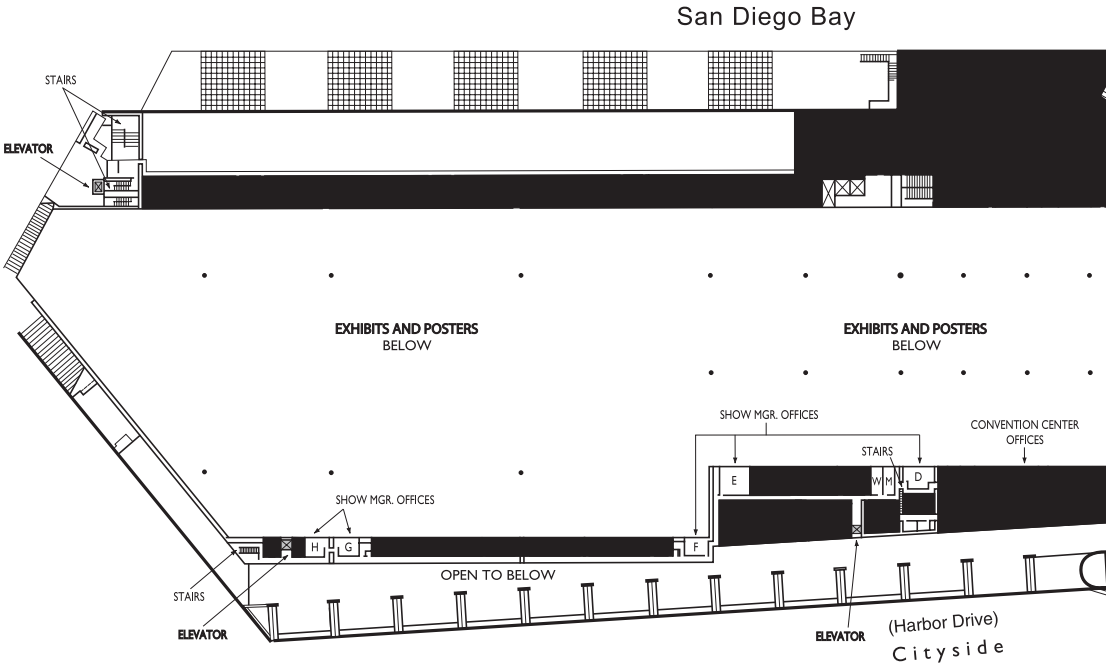
Pacific Ballroom 17–26
Temecula

SAN DIEGO CONVENTION CENTER

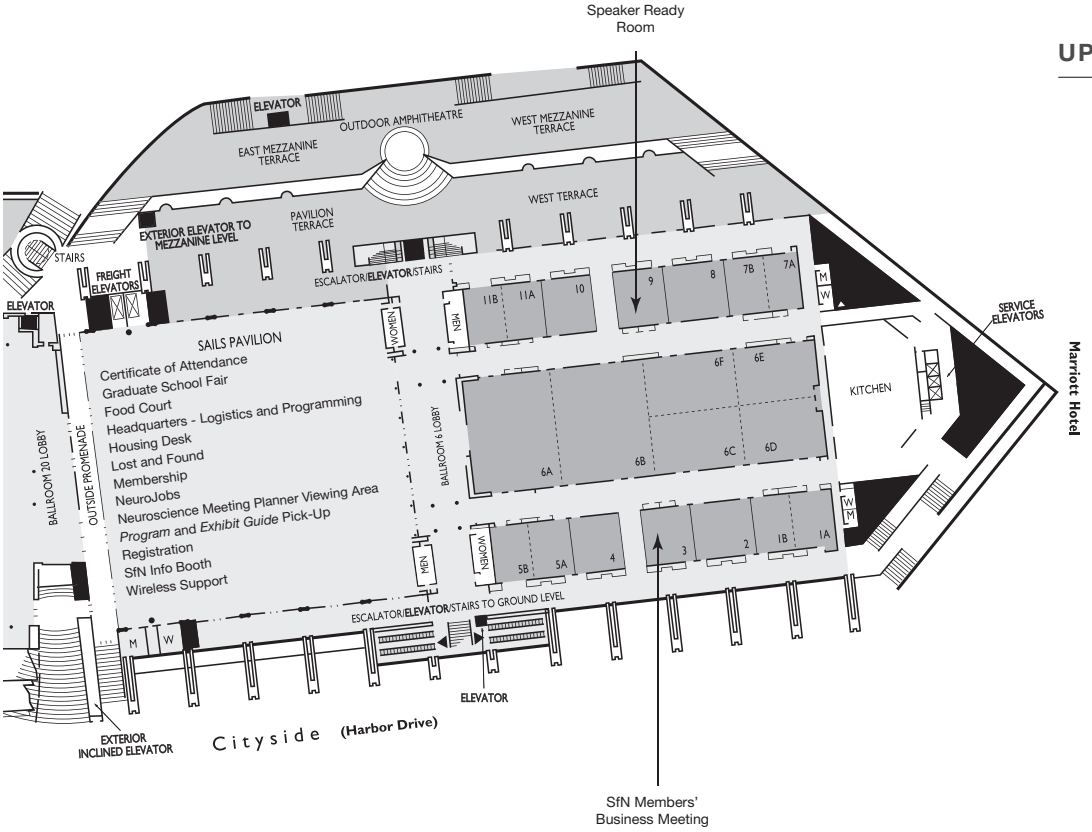
111 W Harbor Dr

San Diego, CA 92101

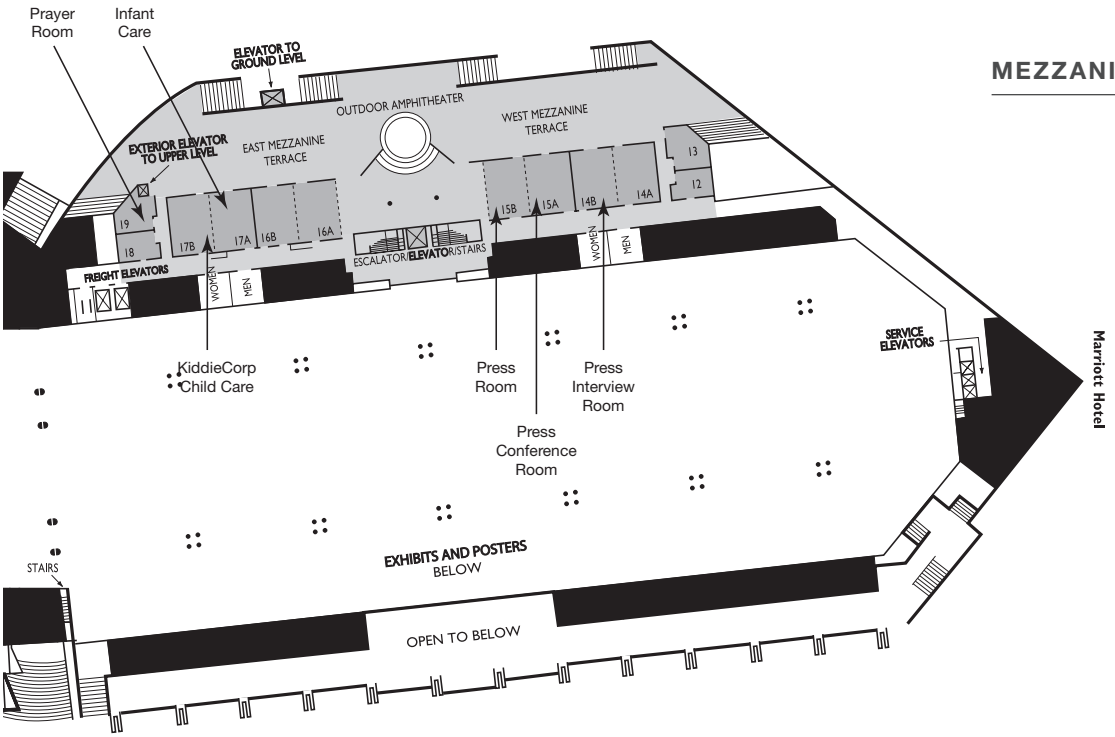




UPPER LEVEL



MEZZANINE LEVEL



Exhibits and Poster Sessions

Meeting Dates: November 3–7 | Exhibit Dates: November 4–7

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.

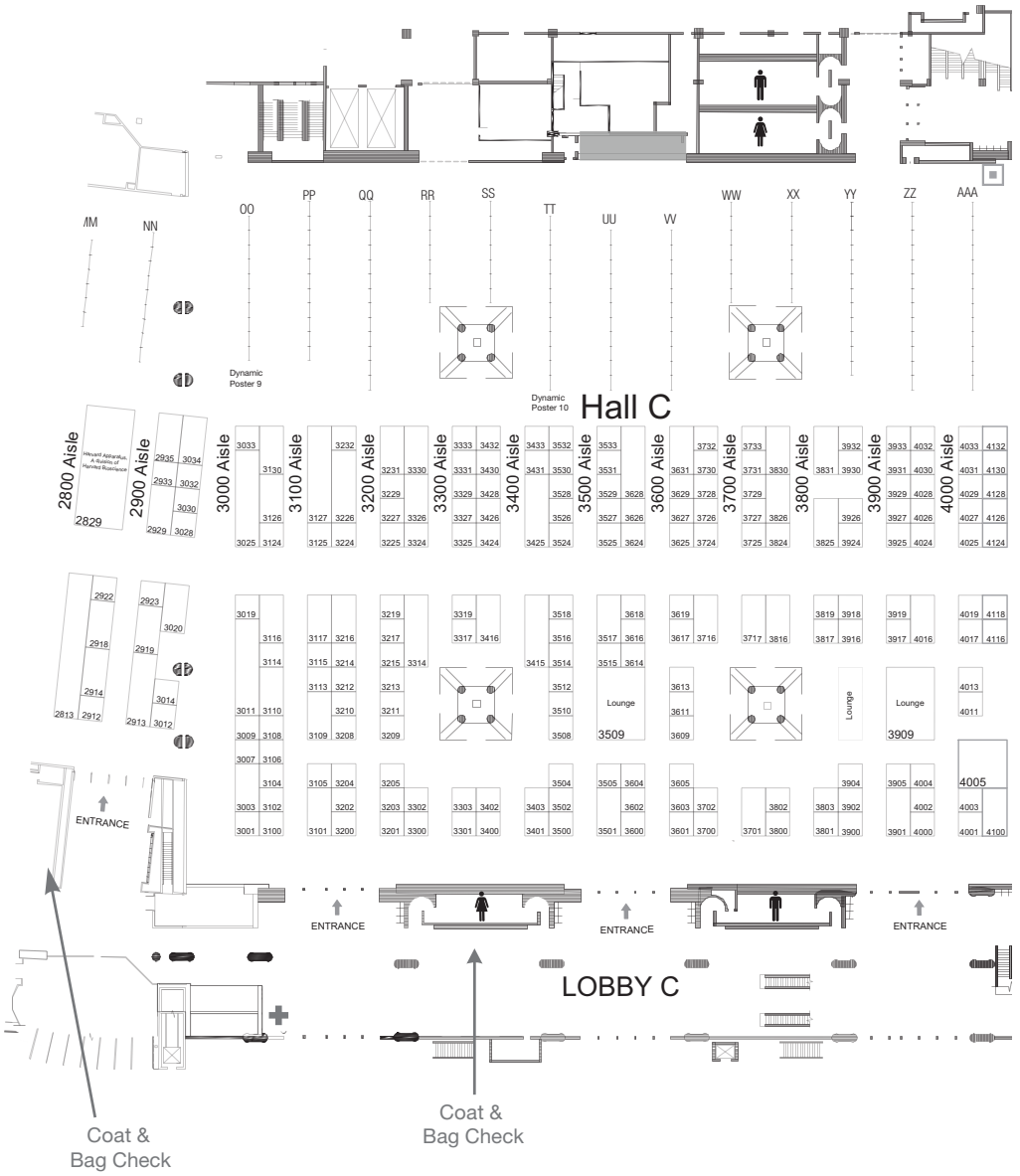
Floor plans subject to change. For current floor plan, visit SfN.org/exhibits.

Hilton Bayfront

Publishers Row | SfN Booth | Nonprofits/ U.S. Government Agencies | Abstract Locator | Sustaining Associate Members

Concession Area | Entrance | Women's Restroom | Men's Restroom | First Aid

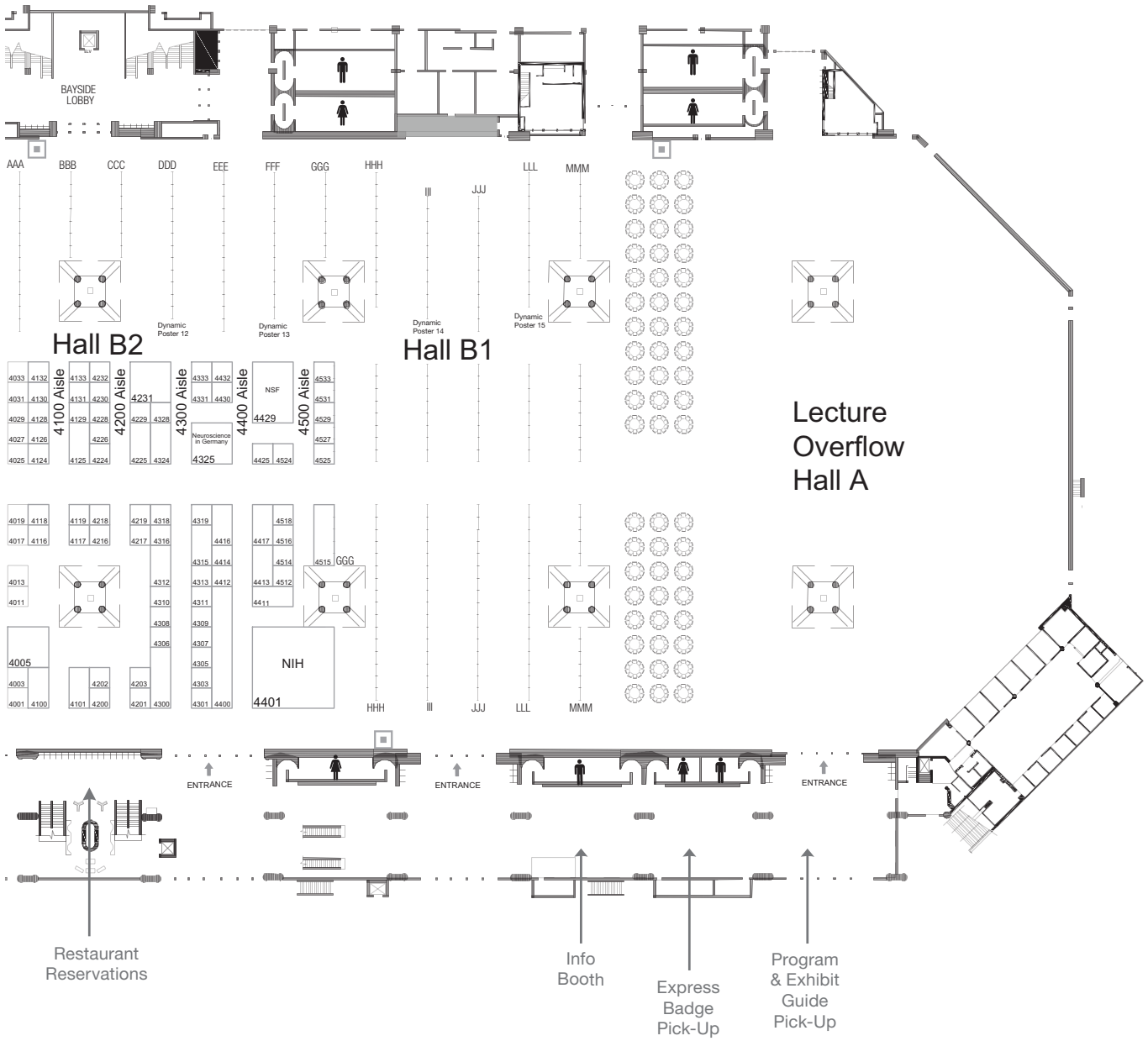
SAN DIEGO CONVENTION CENTER



Gaslamp District

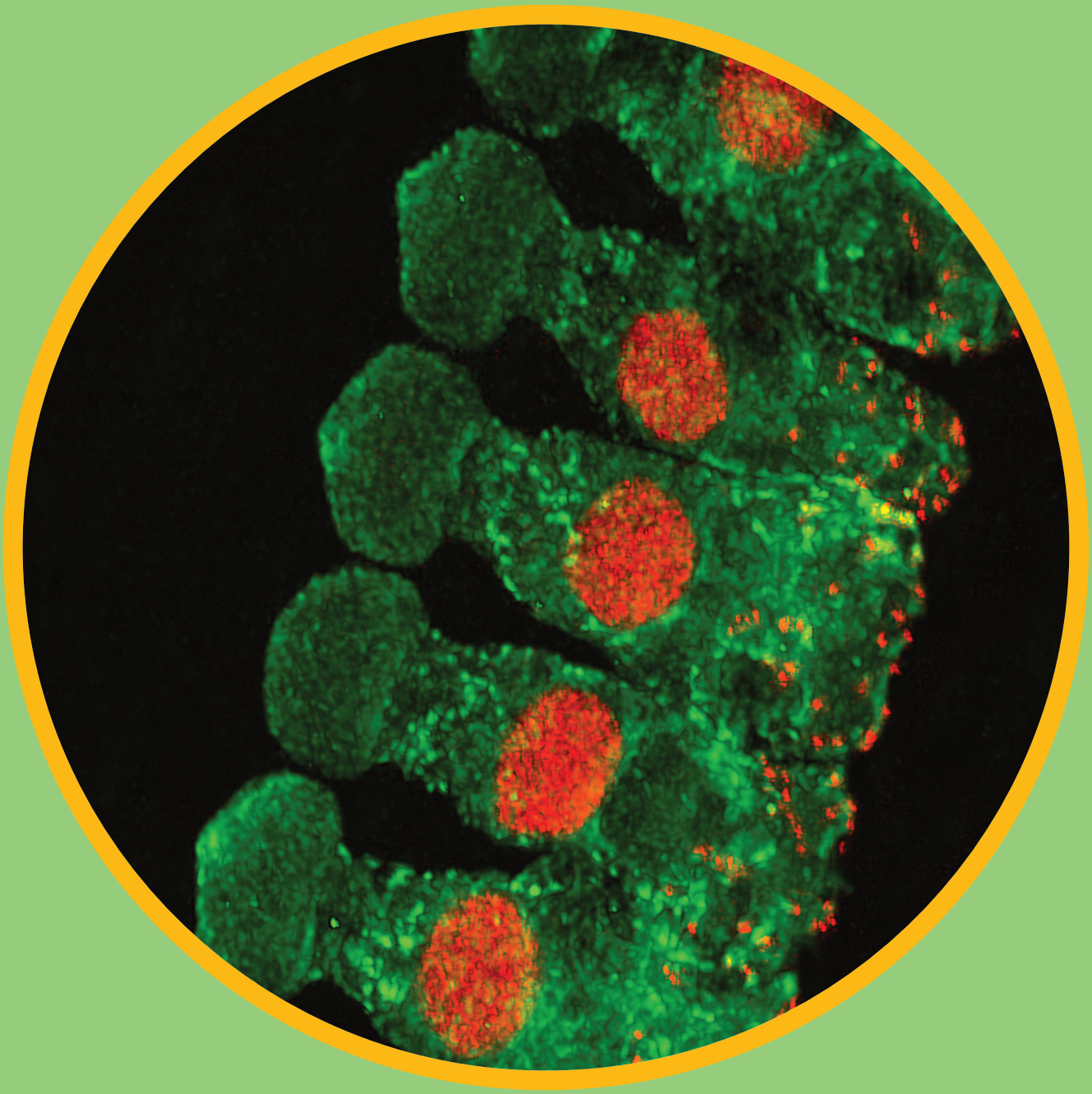
Publishers Row | SfN Booth | Nonprofits/ U.S. Government Agencies | Abstract Locator | Sustaining Associate Members

Concession Area | Entrance | Women's Restroom | Men's Restroom | First Aid



Marriott Marquis San Diego Marina

NEUROSCIENCE
2019
SEE YOU IN
CHICAGO
OCTOBER 19–23
1969–2019
SfN
SOCIETY for
NEUROSCIENCE
50
CELEBRATING
50 YEARS

SOCIETY *for* NEUROSCIENCE

1121 14th Street NW, Suite 1010
Washington, DC 20005