

# The Journal of Neuroscience

November 20, 2013 • Volume 33 Number 47 • www.jneurosci.org



**Cover legend:** Cochlear inner hair cell from an adult mouse, viewed as a three-dimensional reconstruction from a whole mount confocal stack. The inner hair cell is labeled with Myo7a (grey), ribbon synapses and hair cell nuclei are labeled with CtBP2 (red), and glutamate receptors are labeled with Gria2/3 (green). This technique was used to analyze the role of Foxo3 in the adult mouse cochlea. For more information see Gilels et al. (18409–18424).

## i This Week in The Journal

### Journal Club

18353 **Glutamate Excitotoxicity in the Cerebellum Mediated by IL-1 $\beta$**   
Alma Nazlie Mohebiany and Raphael Schneider

18356 **Distinguishing between Types of Errors and Adjustments**  
Hans S. Schroder and Zachary P. Infantolino

### Disease Focus

18358 **The Role of the Trigeminal Sensory Nuclear Complex in the Pathophysiology of Craniocervical Dystonia**  
Lynley Bradnam and Christine Barry

### Brief Communications

18402 **Signaling through ERK1/2 Controls Myelin Thickness during Myelin Repair in the Adult Central Nervous System**  
Sharyl L. Fyffe-Maricich, Alexandra Schott, Molly Karl, Janet Krasno, and Robert H. Miller

### Articles

#### CELLULAR/MOLECULAR

18381  **$\Delta$ FosB Induction in Striatal Medium Spiny Neuron Subtypes in Response to Chronic Pharmacological, Emotional, and Optogenetic Stimuli**  
Mary Kay Lobo, Samir Zaman, Diane M. Damez-Werno, Ja Wook Koo, Rosemary C. Bagot, Jennifer A. DiNieri, Alexandria Nugent, Eric Finkel, Dipesh Chaudhury, Ramesh Chandra, Efrain Riberio, Jacqui Rabkin, Ezekiel Mouzon, Roger Cachope, Joseph F. Cheer, Ming-Hu Han, David M. Dietz, David W. Self, Yasmin L. Hurd, Vincent Vialou, and Eric J. Nestler

18492 **Antagonistic Interaction between Adenosine A<sub>2A</sub> Receptors and Na<sup>+</sup>/K<sup>+</sup>-ATPase- $\alpha_2$  Controlling Glutamate Uptake in Astrocytes**  
Marco Matos, Elisabete Augusto, Paula Agostinho, Rodrigo A. Cunha, and Jiang-Fan Chen

18661 **Functional Cooperation of Metabotropic Adenosine and Glutamate Receptors Regulates Postsynaptic Plasticity in the Cerebellum**  
Yuji Kamikubo, Takeshi Shimomura, Yosuke Fujita, Toshihide Tabata, Taku Kashiyama, Takashi Sakurai, Kenkichi Fukurotani, and Masanobu Kano

- 18686 **Schwann Cells But Not Olfactory Ensheathing Cells Inhibit CNS Myelination via the Secretion of Connective Tissue Growth Factor**  
Rebecca Lamond and Susan C. Barnett

#### DEVELOPMENT/PLASTICITY/REPAIR

- 18448 **Loss of Predominant Shank3 Isoforms Results in Hippocampus-Dependent Impairments in Behavior and Synaptic Transmission**  
Mehreen Kouser, Haley E. Speed, Colleen M. Dewey, Jeremy M. Reimers, Allie J. Widman, Natasha Gupta, Shunan Liu, Thomas C. Jaramillo, Muhammad Bangash, Bo Xiao, Paul F. Worley, and Craig M. Powell
- 18672 **Impaired Spatial Memory in Mice Lacking CD3 $\zeta$  Is Associated with Altered NMDA and AMPA Receptors Signaling Independent of T-Cell Deficiency**  
Antoine Louveau, Julie Angibaud, Fabienne Haspot, Maria Cecilia Opazo, Reynald Thinard, Virginie Thepenier, Stéphane J. Baudouin, Laurent Lescaudron, Philippe Hulin, Claudia Riedel, and Hélène Boudin

#### SYSTEMS/CIRCUITS

- 18368 **Salivary Peptide Tyrosine–Tyrosine 3–36 Modulates Ingestive Behavior without Inducing Taste Aversion**  
Maria D. Hurtado, Valeriy G. Sergeev, Andres Acosta, Michael Spegele, Michael La Sala, Nickolas J. Waler, Juan Chiriboga-Hurtado, Seth W. Currin, Herbert Herzog, Cedrick D. Dotson, Oleg S. Gorbatyuk, and Sergei Zolotukhin
- 18469 **Differential Spike Timing and Phase Dynamics of Reticular Thalamic and Prefrontal Cortical Neuronal Populations during Sleep Spindles**  
Richard J. Gardner, Stuart W. Hughes, and Matthew W. Jones
- 18503 **Auditory Cortical Local Subnetworks Are Characterized by Sharply Synchronous Activity**  
Craig A. Atencio and Christoph E. Schreiner
- 18515 **A  $\theta$ – $\gamma$  Oscillation Code for Neuronal Coordination during Motor Behavior**  
Jun Igarashi, Yoshikazu Isomura, Kensuke Arai, Rie Harukuni, and Tomoki Fukai
- 18531 **Control of Basal Ganglia Output by Direct and Indirect Pathway Projection Neurons**  
Benjamin S. Freeze, Alexxai V. Kravitz, Nora Hammack, Joshua D. Berke, and Anatol C. Kreitzer
- 18540 **Mu-Opioid Stimulation in Rat Prefrontal Cortex Engages Hypothalamic Orexin/Hypocretin-Containing Neurons, and Reveals Dissociable Roles of Nucleus Accumbens and Hypothalamus in Cortically Driven Feeding**  
Jesus D. Mena, Ryan A. Selleck, and Brian A. Baldo
- 18553 **Functional Subpopulations of V3 Interneurons in the Mature Mouse Spinal Cord**  
Joanna Borowska, Christopher T. Jones, Han Zhang, Jake Blacklaws, Martyn Goulding, and Ying Zhang
- 18574 **Eye-Centered Representation of Optic Flow Tuning in the Ventral Intraparietal Area**  
Xiaodong Chen, Gregory C. DeAngelis, and Dora E. Angelaki
- 18583 **Selective Tuning for Contrast in Macaque Area V4**  
Ilaria Sani, Elisa Santandrea, Ashkan Golzar, Maria Concetta Morrone, and Leonardo Chelazzi

**18608 Astrocytes in the Rat Nucleus Tractus Solitarii Are Critical for Cardiovascular Reflex Control**  
Li-Hsien Lin, Steven A. Moore, Susan Y. Jones, Jacob McGlashon, and William T. Talman

**18631 Remote Optogenetic Activation and Sensitization of Pain Pathways in Freely Moving Mice**  
Ihab Daou, Alexander H. Tuttle, Geraldine Longo, Jeffrey S. Wieskopf, Robert P. Bonin, Ariel R. Ase, John N. Wood, Yves De Koninck, Alfredo Ribeiro-da-Silva, Jeffrey S. Mogil, and Philippe Séguéla

#### BEHAVIORAL/COGNITIVE

**18396 Spatial Position Information Accumulates Steadily over Time**  
Eckart Zimmermann, M. Concetta Morrone, and David C. Burr

**18438 Attention Sharpens the Distinction between Expected and Unexpected Percepts in the Visual Brain**  
Jiefeng Jiang, Christopher Summerfield, and Tobias Egner

**18481 Unexpected Events Induce Motor Slowing via a Brain Mechanism for Action-Stopping with Global Suppressive Effects**  
Jan R. Wessel and Adam R. Aron

**18566 Resting-State Glutamate and GABA Concentrations Predict Task-Induced Deactivation in the Default Mode Network**  
Yuzheng Hu, Xi Chen, Hong Gu, and Yihong Yang

**18597 Similarity of fMRI Activity Patterns in Left Perirhinal Cortex Reflects Semantic Similarity between Words**  
Rose Bruffaerts, Patrick Dupont, Ronald Peeters, Simon De Deyne, Gerrit Storms, and Rik Vandenberghe

**18618 Intracortical Myelin Links with Performance Variability across the Human Lifespan: Results from T1- and T2-Weighted MRI Myelin Mapping and Diffusion Tensor Imaging**  
Håkon Grydeland, Kristine B. Walhovd, Christian K. Tamnes, Lars T. Westlye, and Anders M. Fjell

**18641 Neural Basis of Emotional Decision Making in Trait Anxiety**  
Pengfei Xu, Ruolei Gu, Lucas S. Broster, Runguo Wu, Nicholas T. Van Dam, Yang Jiang, Jin Fan, and Yue-jia Luo

**18654 Disrupting Prefrontal Cortex Prevents Performance Gains from Sensory-Motor Training**  
Hannah L. Filmer, Jason B. Mattingley, René Marois, and Paul E. Dux

#### NEUROBIOLOGY OF DISEASE

**18409 Mutation of Foxo3 Causes Adult Onset Auditory Neuropathy and Alters Cochlear Synapse Architecture in Mice**  
Felicia Gilels, Stephen T. Paquette, Jingyuan Zhang, Irfan Rahman, and Patricia M. White

**18425 Frontotemporal Network Connectivity during Memory Encoding Is Increased with Aging and Disrupted by Beta-Amyloid**  
Hwamee Oh and William J. Jagust

18698 **Deficits in Adult Neurogenesis, Contextual Fear Conditioning and Spatial Learning in a Gfap Mutant Mouse Model of Alexander Disease**  
Tracy L. Hagemann, Richard Paylor, and Albee Messing

---

Persons interested in becoming members of the Society for Neuroscience should contact the Membership Department, Society for Neuroscience, 1121 14th St., NW, Suite 1010, Washington, DC 20005, phone 202-962-4000.

Instructions for Authors are available at <http://www.jneurosci.org/misc/itoa.shtml>. Authors should refer to these Instructions online for recent changes that are made periodically.

*Brief Communications* Instructions for Authors are available via Internet ([http://www.jneurosci.org/misc/ifa\\_bc.shtml](http://www.jneurosci.org/misc/ifa_bc.shtml)).

Submissions should be submitted online using the following url: <http://jneurosci.msubmit.net>. Please contact the Central Office, via phone, fax, or e-mail with any questions. Our contact information is as follows: phone, 202-962-4000; fax, 202-962-4945; e-mail, [jn@sfn.org](mailto:jn@sfn.org).