

# The Journal of Neuroscience

November 29, 2006 • Volume 26 Number 48 www.jneurosci.org

**Cover legend:** Confocal immunofluorescence image of a whole-mount of bullfrog sacculus, depicting the localization of myosin IIIa at the tips of the stereocilia.

The image reveals the thimble-like pattern of the protein (yellow), surrounding the actin core (blue). For more information, see the article by Schneider et al. in the October 4, 2006 issue (pages 10243–10252).

## i This Week in The Journal

### Journal Club

- 12385 **Rat Whisker Psychophysics**  
Vivek Khatri and Raddy Ramos

### Brief Communications

- 12466 **Disruption of Primary Motor Cortex before Learning Impairs Memory of Movement Dynamics**  
Andrew G. Richardson, Simon A. Overduin, Antoni Valero-Cabré, Camillo Padoa-Schioppa, Alvaro Pascual-Leone, Emilio Bizzi, and Daniel Z. Press

### Articles

#### CELLULAR/MOLECULAR

- 12397 **CD47 Promotes Neuronal Development through Src- and FRG/Vav2-Mediated Activation of Rac and Cdc42**  
Takaaki Murata, Hiroshi Ohnishi, Hideki Okazawa, Yoji Murata, Shinya Kusakari, Yuriko Hayashi, Motoaki Miyashita, Hiroshi Itoh, Per-Arne Oldenborg, Nobuhiko Furuya, and Takashi Matozaki
- 12427 **p38 Mitogen-Activated Protein Kinase Contributes to Adenosine A<sub>1</sub> Receptor-Mediated Synaptic Depression in Area CA1 of the Rat Hippocampus**  
Tyson B. Brust, Francisco S. Cayabyab, Ning Zhou, and Brian A. MacVicar
- 12487 **Release Probability-Dependent Scaling of the Postsynaptic Responses at Single Hippocampal GABAergic Synapses**  
Ágota A. Biró, Noémi B. Holderith, and Zoltan Nusser
- 12526 **Steady-State Adaptation of Mechanotransduction Modulates the Resting Potential of Auditory Hair Cells, Providing an Assay for Endolymph [Ca<sup>2+</sup>]**  
Hamilton E. Farris, Gregg B. Wells, and Anthony J. Ricci
- 12556 **A Gain-of-Function Mutation in Synaptotagmin-1 Reveals a Critical Role of Ca<sup>2+</sup>-Dependent Soluble N-Ethylmaleimide-Sensitive Factor Attachment Protein Receptor Complex Binding in Synaptic Exocytosis**  
Zhiping P. Pang, Ok-Ho Shin, Alexander C. Meyer, Christian Rosenmund, and Thomas C. Südhof
- 12566 **Na<sub>v</sub>1.7 Mutant A863P in Erythromelalgia: Effects of Altered Activation and Steady-State Inactivation on Excitability of Nociceptive Dorsal Root Ganglion Neurons**  
T. Patrick Harty, Sulayman D. Dib-Hajj, Lynda Tyrrell, Rachael Blackman, Fuki M. Hisama, John B. Rose, and Stephen G. Waxman

- 12602 **Rapid Activation of Inwardly Rectifying Potassium Channels by Immobile G-Protein-Coupled Receptors**  
Robert M. Lober, Miguel A. Pereira, and Nevin A. Lambert

#### DEVELOPMENT/PLASTICITY/REPAIR

- 12497 **Transplantation of Human Neural Stem Cells Exerts Neuroprotection in a Rat Model of Parkinson's Disease**  
Takao Yasuhara, Noriyuki Matsukawa, Koichi Hara, Guolong Yu, Lin Xu, Mina Maki, Seung U. Kim, and Cesario V. Borlongan
- 12537 **Operant Conditioning of H-Reflex Can Correct a Locomotor Abnormality after Spinal Cord Injury in Rats**  
Yi Chen, Xiang Yang Chen, Lyn B. Jakeman, Lu Chen, Bradford T. Stokes, and Jonathan R. Wolpaw
- 12620 **Cell-Autonomous  $\beta$ -Catenin Signaling Regulates Cortical Precursor Proliferation**  
Gregory J. Woodhead, Christopher A. Mutch, Eric C. Olson, and Anjen Chenn

#### BEHAVIORAL/SYSTEMS/COGNITIVE

- 12387 **Rethinking the Fear Circuit: The Central Nucleus of the Amygdala Is Required for the Acquisition, Consolidation, and Expression of Pavlovian Fear Conditioning**  
Ann E. Wilensky, Glenn E. Schafe, Morten P. Kristensen, and Joseph E. LeDoux
- 12415 **Hippocampal Sharp Waves and Reactivation during Awake States Depend on Repeated Sequential Experience**  
Jadin C. Jackson, Adam Johnson, and A. David Redish
- 12456 **Insufficient Sleep Reversibly Alters Bidirectional Synaptic Plasticity and NMDA Receptor Function**  
Caroline Kopp, Fabio Longordo, Janet R. Nicholson, and Anita Lüthi
- 12471 **Monkey Dorsolateral Prefrontal Cortex Sends Task-Selective Signals Directly to the Superior Colliculus**  
Kevin Johnston and Stefan Everling
- 12479 **Directional Cuing of Target Choice in Human Smooth Pursuit Eye Movements**  
Siobhan Garbutt and Stephen G. Lisberger
- 12512 **Contribution of TRPM8 Channels to Cold Transduction in Primary Sensory Neurons and Peripheral Nerve Terminals**  
Rodolfo Madrid, Tansy Donovan-Rodríguez, Victor Meseguer, Mari Carmen Acosta, Carlos Belmonte, and Félix Viana
- 12587 **Distinct Patterns of Striatal Medium Spiny Neuron Activity during the Natural Sleep-Wake Cycle**  
Séverine Mahon, Nicolas Vautrelle, Laurent Pezard, Seán J. Slaght, Jean-Michel Deniau, Guy Chouvet, and Stéphane Charpier
- 12596 **Neural Coding of Tactile Decisions in the Human Prefrontal Cortex**  
Burkhard Pleger, Christian C. Ruff, Felix Blankenburg, Sven Bestmann, Katja Wiech, Klaas E. Stephan, Almudena Capilla, Karl J. Friston, and Raymond J. Dolan

#### NEUROBIOLOGY OF DISEASE

- 12408 **Accelerated Accumulation of Misfolded Prion Protein and Spongiform Degeneration in a *Drosophila* Model of Gerstmann-Sträussler-Scheinker Syndrome**  
Brendan A. Gavin, Maria J. Dolph, Nathan R. Deleault, James C. Geoghegan, Vikram Khurana, Mel B. Feany, Patrick J. Dolph, and Surachai Supattapone

- 12439 **Human Vascular Endothelial Growth Factor Protects Axotomized Retinal Ganglion Cells *In Vivo* by Activating ERK-1/2 and Akt Pathways**  
Ülkan Kilic, Ertugrul Kilic, Anne Järve, Zeyun Guo, Annett Spudich, Katja Bieber, Uxue Barzena, Claudio L. Bassetti, Hugo H. Marti, and Dirk M. Hermann
- 12447 **Modular Propagation of Epileptiform Activity: Evidence for an Inhibitory Veto in Neocortex**  
Andrew J. Trevelyan, David Sussillo, Brendon O. Watson, and Rafael Yuste
- 12544 **Neurocytoma Is a Tumor of Adult Neuronal Progenitor Cells**  
Fraser J. Sim, H. Michael Keyoung, James E. Goldman, Dong Kyu Kim, Hee-Won Jung, Neeta S. Roy, and Steven A. Goldman
- 12576 **The ducky<sup>2J</sup> Mutation in *Cacna2d2* Results in Reduced Spontaneous Purkinje Cell Activity and Altered Gene Expression**  
Roberta Donato, Karen M. Page, Dietlind Koch, Manuela Nieto-Rostro, Isabelle Foucault, Anthony Davies, Tonia Wilkinson, Michele Rees, Frances A. Edwards, and Annette C. Dolphin
- 12609 **A Sex-Specific Role of Type VII Adenylyl Cyclase in Depression**  
Lisa M. Hines, Paula L. Hoffman, Sanjiv Bhawe, Laura Saba, Alan Kaiser, Larry Snell, Igor Goncharov, Lucie LeGault, Maurice Dongier, Bridget Grant, Sergey Pronko, Larry Martinez, Masami Yoshimura, and Boris Tabakoff; World Health Organization/International Society for Biomedical Research on Alcoholism Study on State and Trait Markers of Alcohol Use and Dependence Investigators

**Corrections:** The order of the two equations appearing in the article “Sparse Representation in the Human Medial Temporal Lobe” by Stephen Waydo, Alexander Kraskov, Rodrigo Quian Quiroga, Itzhak Fried, and Christof Koch, which appears on pages 10232–10234 of the October 4, 2006 issue, were switched. The first equation should have appeared where the second is, and the second where the first is.

The bars of the bar graph in Figure 2C in the article “Genetic and Physiological Evidence That Oligodendrocyte Gap Junctions Contribute to Spatial Buffering of Potassium Released during Neuronal Activity” by Daniela M. Menichella, Marta Majdan, Rajeshwar Awatramani, Daniel A. Goodenough, Erich Sirkowski, Steven S. Scherer, and David L. Paul, which appears on pages 10984–10991 of the October 25, 2006 issue, were switched. The “mean vacuolated area” bar contains the “# myelinated axons” data and vice versa.

The second address for Wendy B. Macklin, co-author of the article “Rescuing qk<sup>V</sup> Dysmyelination by a Single Isoform of the Selective RNA-Binding Protein QKI” by Lixia Zhao, Donghua Tian, Mingjing Xia, Wendy B. Macklin, and Yue Feng, which appears on pages 11278–11286 of the November 1, 2006 issue, was incorrect. The correct address is Department of Neurosciences, Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, Ohio 44195.

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://sfn.manuscriptcentral.com>. 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).