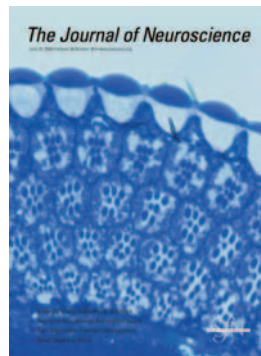


# The Journal of Neuroscience

June 25, 2008 • Volume 28 Number 26 www.jneurosci.org



**Cover legend:** Light microscope image of a *Drosophila* eye stained with toluidine blue. Tangential section of the compound eye reveals regularly spaced ommatidia with seven darkly stained rhabdomeres in each. The *Drosophila* homolog of a human Niemann-Pick disease gene (*dnpca1*) is required for survival of photoreceptors and other neurons. For more information, see the article by Phillips et al. in this issue (pages 6569–6582).

## i This Week in The Journal

### Journal Club

- 6537 **The Utility of a New *In Vitro* Model of the Stroke Penumbra**  
Trisha A. Dwyer, Damien E. Earl, and Liping Wang

### Brief Communications

- 6627 **Bulk Synaptic Vesicle Endocytosis Is Rapidly Triggered during Strong Stimulation**  
Emma L. Clayton, Gareth J. O. Evans, and Michael A. Cousin
- 6659 **Two Forms of Astrocyte Calcium Excitability Have Distinct Effects on NMDA Receptor-Mediated Slow Inward Currents in Pyramidal Neurons**  
Eiji Shigetomi, David N. Bowser, Michael V. Sofroniew, and Baljit S. Khakh
- 6664 **Olfactory Learning-Induced Long-Lasting Enhancement of Descending and Ascending Synaptic Transmission to the Piriform Cortex**  
Yaniv Cohen, Iris Reuveni, Edi Barkai, and Mouna Maroun
- 6714  **$\alpha 6\beta 4$  Integrin and Dystroglycan Cooperate to Stabilize the Myelin Sheath**  
Alessandro Nodari, Stefano C. Previtali, Gabriele Dati, Simona Occhi, Felipe A. Court, Cristina Colombelli, Desirée Zambroni, Giorgia Dina, Ubaldo Del Carro, Kevin P. Campbell, Angelo Quattrini, Lawrence Wrabetz, and M. Laura Feltri

### Articles

#### CELLULAR/MOLECULAR

- 6539 **Aging Impairs the Unfolded Protein Response to Sleep Deprivation and Leads to Proapoptotic Signaling**  
Nirinjini Naidoo, Megan Ferber, Monali Master, Yan Zhu, and Allan I. Pack
- 6616 **Functional Remodeling of Gap Junction-Mediated Electrical Communication between Adrenal Chromaffin Cells in Stressed Rats**  
Claude Colomer, Luis A. Olivos Ore, Nathalie Coutry, Marie-Noëlle Mathieu, Sébastien Arthaud, Pierre Fontanaud, Irena Iankova, Françoise Macari, Erwan Thouënnon, Laurent Yon, Youssef Anouar, and Nathalie C. Guérineau
- 6720 **The Chemokine Stromal Cell-Derived Factor-1 Regulates GABAergic Inputs to Neural Progenitors in the Postnatal Dentate Gyrus**  
Bula J. Bhattacharyya, Ghazal Banisadr, Hosung Jung, Dongjun Ren, Darran G. Cronshaw, Yongrui Zou, and Richard J. Miller
- 6742 **Calcium Control of Endocytic Capacity at a CNS Synapse**  
J. Balaji, Moritz Armbruster, and Timothy A. Ryan

#### DEVELOPMENT/PLASTICITY/REPAIR

- 6557 **Myocyte Enhancer Factor 2C as a Neurogenic and Antiapoptotic Transcription Factor in Murine Embryonic Stem Cells**  
Zhen Li, Scott R. McKercher, Jiankun Cui, Zhiguo Nie, Walid Soussou, Amanda J. Roberts, Tina Sallmen, Jeffrey H. Lipton, Maria Talantova, Shu-ichi Okamoto, and Stuart A. Lipton
- 6583 **Activity-Induced Polo-Like Kinase 2 Is Required for Homeostatic Plasticity of Hippocampal Neurons during Epileptiform Activity**  
Daniel P. Seeburg and Morgan Sheng
- 6592 ***In Vivo* Calcium Imaging Reveals Functional Rewiring of Single Somatosensory Neurons after Stroke**  
Ian R. Winship and Timothy H. Murphy
- 6703 **DREAM Mediates cAMP-Dependent, Ca<sup>2+</sup>-Induced Stimulation of GFAP Gene Expression and Regulates Cortical Astroglialogenesis**  
Beatriz Cebolla, Antonio Fernández-Pérez, Gertrudis Perea, Alfonso Araque, and Mario Vallejo

#### BEHAVIORAL/SYSTEMS/COGNITIVE

- 6549 **Anticipatory Suppression of Nonattended Locations in Visual Cortex Marks Target Location and Predicts Perception**  
Chad M. Sylvester, Anthony I. Jack, Maurizio Corbetta, and Gordon L. Shulman
- 6607 **Oxytocin Attenuates Affective Evaluations of Conditioned Faces and Amygdala Activity**  
Predrag Petrovic, Raffael Kalisch, Tania Singer, and Raymond J. Dolan
- 6642 **Corticotropin-Releasing Factor in the Basolateral Amygdala Enhances Memory Consolidation via an Interaction with the  $\beta$ -Adrenoceptor-cAMP Pathway: Dependence on Glucocorticoid Receptor Activation**  
Benno Roozendaal, Gustav Schelling, and James L. McGaugh
- 6679 **Coding of Shape and Position in Macaque Lateral Intraparietal Area**  
Peter Janssen, Siddharth Srivastava, Sien Ombelet, and Guy A. Orban
- 6731 **Theta and Gamma Coordination of Hippocampal Networks during Waking and Rapid Eye Movement Sleep**  
Sean M. Montgomery, Anton Sirota, and György Buzsáki
- 6750 **Calculating Consequences: Brain Systems That Encode the Causal Effects of Actions**  
Saori C. Tanaka, Bernard W. Balleine, and John P. O'Doherty

#### NEUROBIOLOGY OF DISEASE

- 6569 **Neuronal Loss of *Drosophila* NPC1a Causes Cholesterol Aggregation and Age-Progressive Neurodegeneration**  
Scott E. Phillips, E. A. Woodruff III, Ping Liang, Meaghan Patten, and Kendal Broadie
- 6633 ***Jxc1/Sobp*, Encoding a Nuclear Zinc Finger Protein, Is Critical for Cochlear Growth, Cell Fate, and Patterning of the Organ of Corti**  
Zheng Chen, Mireille Montcouquiol, Rene Calderon, Nancy A. Jenkins, Neal G. Copeland, Matthew W. Kelley, and Konrad Noben-Trauth
- 6652 **Continuous  $\delta$ -Opioid Receptor Activation Reduces Neuronal Voltage-Gated Sodium Channel (Na<sub>v</sub>1.7) Levels through Activation of Protein Kinase C in Painful Diabetic Neuropathy**  
Munmun Chattopadhyay, Marina Mata, and David J. Fink

**6670 NMDA Receptor Blockade with Memantine Attenuates White Matter Injury in a Rat Model of Periventricular Leukomalacia**

Simon M. Manning, Delia M. Talos, Chengwen Zhou, Debra B. Selip, Hyun-Kyung Park, Chang-Joo Park, Joseph J. Volpe, and Frances E. Jensen

**6691 Endocytosis of Prion Protein Is Required for ERK1/2 Signaling Induced by Stress-Inducible Protein 1**

Fabiana A. Caetano, Marilene H. Lopes, Glaucia N. M. Hajj, Cleiton F. Machado, Camila Pinto Arantes, Ana C. Magalhães, Mônica De Paoli B. Vieira, Tatiana A. Américo, Andre R. Massensini, Suzette A. Priola, Ina Vorberg, Marcus V. Gomez, Rafael Linden, Vania F. Prado, Vilma R. Martins, and Marco A. M. Prado

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).