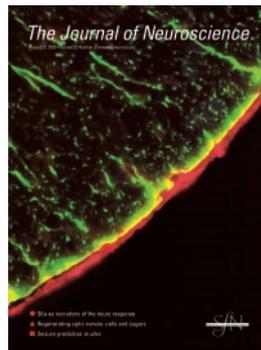


# The Journal of Neuroscience

August 27, 2003 • Volume 23 Number 21 www.jneurosci.org



**Cover picture:** Immunofluorescent staining for ephrin-B2 (green) and fibronectin (red) in the uninjured spinal cord of the adult rat. Ephrin-B2-positive glial end feet of white matter astrocytes contact the fibronectin-positive meningeal fibroblasts on the pial surface of the spinal cord. The fibroblasts also express EphB2, a receptor for ephrin-B2. Cell contact-mediated bidirectional signaling between ephrin-B2 on astrocytes and EphB2 on meningeal fibroblasts may be involved in formation of the glial limitans under normal conditions as well as after spinal cord injury. For details, see the article by Bundesen et al. in this issue (pages 7789–7800).

## i This Week in The Journal

### Brief Communications

- 7737 **Activity-Evoked Capacitative  $Ca^{2+}$  Entry: Implications in Synaptic Plasticity**  
Atsushi Baba, Takuya Yasui, Shigeyoshi Fujisawa, Ryuji X. Yamada, Maki K. Yamada, Nobuyoshi Nishiyama, Norio Matsuki, and Yuji Ikegaya
- 7839 **Cingulate Hypoactivity in Cocaine Users During a GO–NOGO Task as Revealed by Event-Related Functional Magnetic Resonance Imaging**  
Jacqueline N. Kaufman, Thomas J. Ross, Elliot A. Stein, and Hugh Garavan
- 7917 **Secretory Vesicles Membrane Area Is Regulated in Tandem with Quantal Size in Chromaffin Cells**  
Liang-Wei Gong, Ismail Hafez, Guillermo Alvarez de Toledo, and Manfred Lindau

### Articles

#### CELLULAR/MOLECULAR

- 7727 **NMDA-Dependent Proteolysis of Presynaptic Adhesion Molecule L1 in the Hippocampus by Neuropsin**  
Kazumasa Matsumoto-Miyai, Ayako Ninomiya, Hironobu Yamasaki, Hideki Tamura, Yukiko Nakamura, and Sadao Shiosaka
- 7742 **Differentiation of Marrow Stromal Cells into Photoreceptors in the Rat Eye**  
Anthony Kicic, Wei-Yong Shen, Ann S. Wilson, Ian J. Constable, Terry Robertson, and P. Elizabeth Rakoczy
- 7750 **Submillisecond Precision of the Input–Output Transformation Function Mediated by Fast Sodium Dendritic Spikes in Basal Dendrites of CA1 Pyramidal Neurons**  
Gal Ariav, Alon Polsky, and Jackie Schiller
- 7801 **Regulatory Domains in the Intergenic Region of the Oxytocin and Vasopressin Genes that Control their Hypothalamus-Specific Expression *In Vitro***  
Raymond L. Fields, Shirley B. House, and Harold Gainer
- 7810 **Novel Insights into the Regulation of the Timeless Protein**  
Lesley J. Ashmore, Sriram Sathyanarayanan, David W. Silvestre, Mark M. Emerson, Peter Schotland, and Amita Sehgal
- 7820 **Subunit Composition of Functional Nicotinic Receptors in Dopaminergic Neurons Investigated with Knock-Out Mice**  
Nicolas Champtiaux, Cecilia Gotti, Matilde Cordero-Erausquin, Denis J. David, Cédric Przybylski, Clément Léna, Francesco Clementi, Milena Moretti, Francesco M. Rossi, Nicolas Le Novère, J. Michael McIntosh, Alain M. Gardier, and Jean-Pierre Changeux

7881 **Glutamate Decreases Mitochondrial Size and Movement in Primary Forebrain Neurons**  
Gordon L. Rintoul, Anthony J. Filiano, Jacques B. Brocard, Geraldine J. Kress, and Ian J. Reynolds

7922 **Chemokine Expression by Glial Cells Directs Leukocytes to Sites of Axonal Injury in the CNS**  
Alicia A. Babcock, William A. Kuziel, Serge Rivest, and Trevor Owens

#### DEVELOPMENT/PLASTICITY/REPAIR

7759 **Increased Morphological Diversity of Microglia in the Activated Hypothalamic Supraoptic Nucleus**  
Albert E. Ayoub and A. K. Salm

7767 **Palmitoylethanolamide Increases after Focal Cerebral Ischemia and Potentiates Microglial Cell Motility**  
Allyn Franklin, Sophie Parmentier-Batteur, Lisa Walter, David A. Greenberg, and Nephi Stella

7783 **Transplanted Olfactory Ensheathing Cells Promote Regeneration of Cut Adult Rat Optic Nerve Axons**  
Ying Li, Yves Sauvé, Daqing Li, Raymond D. Lund, and Geoffrey Raisman

7789 **Ephrin-B2 and EphB2 Regulation of Astrocyte-Meningeal Fibroblast Interactions in Response to Spinal Cord Lesions in Adult Rats**  
Liza Q. Bundesen, Tracy Aber Scheel, Barbara S. Bregman, and Lawrence F. Kromer

7830 **Axon Regeneration in Goldfish and Rat Retinal Ganglion Cells: Differential Responsiveness to Carbohydrates and cAMP**  
Yiming Li, Nina Irwin, Yuqin Yin, Marc Lanser, and Larry I. Benowitz

7854 **Differential Roles of Engrailed Paralogs in Determining Sensory Axon Guidance and Synaptic Target Recognition**  
Bruno Marie and Jonathan M. Blagburn

7889 **Apolipoprotein E Markedly Facilitates Age-Dependent Cerebral Amyloid Angiopathy and Spontaneous Hemorrhage in Amyloid Precursor Protein Transgenic Mice**  
John D. Fryer, Jennie W. Taylor, Ronald B. DeMattos, Kelly R. Bales, Steven M. Paul, Maia Parsadanian, and David M. Holtzman

7958 **Diadenosine Tetraphosphate Protects against Injuries Induced by Ischemia and 6-Hydroxydopamine in Rat Brain**  
Yun Wang, Chen-Fu Chang, Marisela Morales, Yung-Hsiao Chiang, Brandon K. Harvey, Tsung-Ping Su, Li-I Tsao, Suyu Chen, and Christoph Thiemermann

#### BEHAVIORAL/SYSTEMS/COGNITIVE

7776 **Transient Activation of Superior Prefrontal Cortex during Inhibition of Cognitive Set**  
Seiki Konishi, Koji Jimura, Tomoki Asari, and Yasushi Miyashita

7844 **Activity of Different Classes of Neurons of the Motor Cortex during Postural Corrections**  
Irina N. Beloozerova, Mikhail G. Sirota, Harvey A. Swadlow, Grigori N. Orlovsky, Lioudmila B. Popova, and Tatiana G. Deliagina

7863 **Interaction between  $\alpha$ -Melanocyte-Stimulating Hormone and Corticotropin-Releasing Hormone in the Regulation of Feeding and Hypothalamo-Pituitary-Adrenal Responses**  
Xin-Yun Lu, Gregory S. Barsh, Huda Akil, and Stanley J. Watson

7873 **Transition from Interictal to Ictal Activity in Limbic Networks *In Vitro***  
Volodymyr I. Dzhalala and Kevin J. Staley

- 7897 **Specific and Somatotopic Functional Magnetic Resonance Imaging Activation in the Trigeminal Ganglion by Brush and Noxious Heat**  
David Borsook, Alexandre F. M. DaSilva, Alex Ploghaus, and Lino Becerra
- 7904 **Cerebellar Climbing Fibers Modulate Simple Spikes in Purkinje Cells**  
Neal H. Barmack and Vadim Yakhnitsa
- 7931 **Dissociating Valence of Outcome from Behavioral Control in Human Orbital and Ventral Prefrontal Cortices**  
John O'Doherty, Hugo Critchley, Ralf Deichmann, and Raymond J. Dolan
- 7940 **Binary Spiking in Auditory Cortex**  
Michael R. DeWeese, Michael Wehr, and Anthony M. Zador
- 7950 **Roles of  $\alpha_1$ - and  $\alpha_2$ -Adrenoceptors in the Nucleus Raphe Magnus in Opioid Analgesia and Opioid Abstinence-Induced Hyperalgesia**  
B. Bie, H. L. Fields, J. T. Williams, and Z. Z. Pan

7966 **Correction:** In the article "Acute Induction of Conserved Synaptic Signaling Pathways in *Drosophila melanogaster*," by C. A. Hoeffler, S. Sanyal, and M. Ramaswami, which appeared on pages 6362–6372 of the July 16, 2003 issue, one of the gel images in Figure 7a is shown backward, erroneously depicting the data for DFos expression. The correct version of Figure 7, as well as the legend, is printed in this issue.

**Correction:** In the article "Reappraisal of the Motor Role of Basal Ganglia: A Functional Magnetic Resonance Image Study," by Takayuki Taniwaki, Akira Okayama, Takashi Yoshiura, Yasuhiko Nakamura, Yoshinobu Goto, Jun-ichi Kira, and Shozo Tobimatsu, which appeared on pages 3432–3438 of the April 15, 2003 issue, the preceding work of Turner et al. [Turner RS, Grafton ST, Votaw JR, Delong MR, Hoffman JM (1998) Motor subcircuits mediating the control of movement velocity: a PET study. *J Neurophysiol* 80:2162–2176] was inadvertently overlooked. They reported rate-related activation in the basal ganglia, although their task might reflect movement velocity rather than movement rate. Specifically, the sixth sentence of the second paragraph of the Discussion should read "In SI movement, however, we found a strong positive linear relationship between movement rate and putaminal activation."

Persons interested in becoming members of the Society for Neuroscience should contact the Membership Department, Society for Neuroscience, 11 Dupont Circle, NW, Suite 500, Washington, DC 20036, phone 202-462-6688.

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.sfn.org/content/Publications/TheJournalofNeuroscience/BriefComm/ifa.html>).

Submissions should be sent to the following address: *The Journal of Neuroscience*, Society for Neuroscience, 11 Dupont Circle, NW, Suite 500, Washington, DC 20036, phone 202-462-6688, fax 202-462-1547, e-mail [jn@sfn.org](mailto:jn@sfn.org).