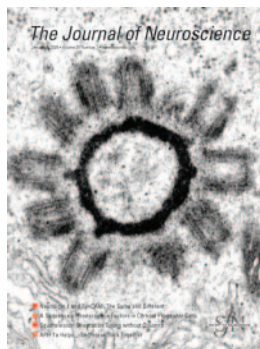


The Journal of Neuroscience

January 5, 2005 • Volume 25 Number 1 www.jneurosci.org



Cover picture: An electron micrograph depicting a deuterosome, a unique structure that appears in a subset of radial glial cells in the mouse brain soon after birth. It is one of the first signs of the differentiation of some radial glia into ependymal cells. These deuterosomes are composed of a core from which centriole-like immature basal bodies radiate. These basal bodies then move to the ventricular surface of the cells and serve as nucleation centers for cilia. For details, see the article by Spassky et al. in this issue (pages 10–18).

i This Week in The Journal

Brief Communications

- 247 **Pax6, Tbr2, and Tbr1 Are Expressed Sequentially by Radial Glia, Intermediate Progenitor Cells, and Postmitotic Neurons in Developing Neocortex**
Chris Englund, Andy Fink, Charmaine Lau, Diane Pham, Ray A. M. Daza, Alessandro Bulfone, Tom Kowalczyk, and Robert F. Hevner

Articles

CELLULAR/MOLECULAR

- 29 **A Role for p38 Mitogen-Activated Protein Kinase in the Regulation of the Serotonin Transporter: Evidence for Distinct Cellular Mechanisms Involved in Transporter Surface Expression**
Devadoss J. Samuvel, Lankupalle D. Jayanthi, Narayan R. Bhat, and Sammanda Ramamoorthy
- 42 **Protons Trap NR1/NR2B NMDA Receptors in a Nonconducting State**
Tue G. Banke, Shashank M. Dravid, and Stephen F. Traynelis
- 62 **Suppression of Vasoactive Intestinal Polypeptide in the Suprachiasmatic Nucleus Leads to Aging-Like Alterations in cAMP Rhythms and Activation of Gonadotropin-Releasing Hormone Neurons**
Lynnette M. Gerhold, Katherine L. Rosewell, and Phyllis M. Wise
- 88 **Pharmacological Properties of GABA_A Receptors in Rat Hypothalamic Neurons Expressing the ϵ -Subunit**
Olga A. Sergeeva, Nadja Andreeva, Maurice Garret, Annette Scherer, and Helmut L. Haas
- 96 **Developmental Changes in Parvalbumin Regulate Presynaptic Ca²⁺ Signaling**
Thibault Collin, Mireille Chat, Marie Gabrielle Lucas, Herman Moreno, Peter Racay, Beat Schwaller, Alain Marty, and Isabel Llano
- 118 **The Rod Photoreceptor-Specific Nuclear Receptor Nr2e3 Represses Transcription of Multiple Cone-Specific Genes**
Jichao Chen, Amir Rattner, and Jeremy Nathans
- 130 **Impaired Channel Targeting and Retinal Degeneration in Mice Lacking the Cyclic Nucleotide-Gated Channel Subunit CNGB1**
Sabine Hüttl, Stylianos Michalakis, Mathias Seeliger, Dong-Gen Luo, Niyazi Acar, Heidi Geiger, Kristiane Hudl, Robert Mader, Silke Haverkamp, Markus Moser, Alexander Pfeifer, Andrea Gerstner, King-Wai Yau, and Martin Biel
- 139 **A Functional Interaction of Sodium and Calcium in the Regulation of NMDA Receptor Activity by Remote NMDA Receptors**
Wen-Kuan Xin, Chun L. Kwan, Xiao-Han Zhao, Jindong Xu, Richard P. Ellen, Christopher A. G. McCulloch, and Xian-Min Yu

- 157 **Disintegration of the Sleep–Wake Cycle and Circadian Timing in Huntington’s Disease**
A. Jennifer Morton, Nigel I. Wood, Michael H. Hastings, Carrie Hurelbrink, Roger A. Barker, and Elizabeth S. Maywood
- 199 **Mechanisms Underlying Developmental Speeding in AMPA-EPSC Decay Time at the Calyx of Held**
Maki Koike-Tani, Naoto Saitoh, and Tomoyuki Takahashi
- 208 **cAMP Acts on Exchange Protein Activated by cAMP/cAMP-Regulated Guanine Nucleotide Exchange Protein to Regulate Transmitter Release at the Crayfish Neuromuscular Junction**
Ning Zhong and Robert S. Zucker
- 223 **Quantal Size Is Independent of the Release Probability at Hippocampal Excitatory Synapses**
Ágota A. Biró, Noémi B. Holderith, and Zoltan Nusser
- 239 **NMDA Receptor Activation Mediates Copper Homeostasis in Hippocampal Neurons**
Michelle L. Schlief, Ann Marie Craig, and Jonathan D. Gitlin
- 252 **Congenital Stationary Night Blindness Type 2 Mutations S229P, G369D, L1068P, and W1440X Alter Channel Gating or Functional Expression of Ca_v1.4 L-type Ca²⁺ Channels**
Jean-Charles Hoda, Francesca Zaghetto, Alexandra Koschak, and Jörg Striessnig
- 260 **Selective Capability of SynCAM and Neuroligin for Functional Synapse Assembly**
Yildirim Sara, Thomas Biederer, Deniz Atasoy, Alexander Chubykin, Marina G. Mozhayeva, Thomas C. Südhof, and Ege T. Kavalali

DEVELOPMENT/PLASTICITY/REPAIR

- 1 **Activity Dependence of Cortical Axon Branch Formation: A Morphological and Electrophysiological Study Using Organotypic Slice Cultures**
Naofumi Uesaka, Satoshi Hirai, Takuro Maruyama, Edward S. Ruthazer, and Nobuhiko Yamamoto
- 10 **Adult Ependymal Cells Are Postmitotic and Are Derived from Radial Glial Cells during Embryogenesis**
Nathalie Spassky, Florian T. Merkle, Nuria Flames, Anthony D. Tramontin, José Manuel García-Verdugo, and Arturo Alvarez-Buylla
- 78 **The Influence of Pioneer Neurons on a Growing Motor Nerve in *Drosophila* Requires the Neural Cell Adhesion Molecule Homolog FasciclinII**
Natalia Sánchez-Soriano and Andreas Prokop

BEHAVIORAL/SYSTEMS/COGNITIVE

- 19 **Orientation Selectivity without Orientation Maps in Visual Cortex of a Highly Visual Mammal**
Stephen D. Van Hooser, J. Alexander F. Heimel, Sooyoung Chung, Sacha B. Nelson, and Louis J. Toth
- 52 **Transient Inactivation of Perirhinal Cortex Disrupts Encoding, Retrieval, and Consolidation of Object Recognition Memory**
Boyer D. Winters and Timothy J. Bussey
- 149 **Pup Suckling Is More Rewarding Than Cocaine: Evidence from Functional Magnetic Resonance Imaging and Three-Dimensional Computational Analysis**
Craig F. Ferris, Praveen Kulkarni, John M. Sullivan Jr, Josie A. Harder, Tara L. Messenger, and Marcelo Febo
- 173 **Direct and Indirect Inhibition by Catecholamines of Hypocretin/Orexin Neurons**
Ying Li and Anthony N. van den Pol
- 215 **A Circadian Clock and Light/Dark Adaptation Differentially Regulate Adenosine in the Mammalian Retina**
Christophe Ribelayga and Stuart C. Mangel

- 233 **Posterior Parietal Cortex Automatically Encodes the Location of Salient Stimuli**
Christos Constantinidis and Michael A. Steinmetz

NEUROLOGY OF DISEASE

- 68 **Temporal Dependence in Uncoupling of Blood Volume and Oxygenation during Interictal Epileptiform Events in Rat Neocortex**
Minah Suh, Sonya Bahar, Ashesh D. Mehta, and Theodore H. Schwartz
- 108 **Impaired Extracellular Secretion of Mutant Superoxide Dismutase 1 Associates with Neurotoxicity in Familial Amyotrophic Lateral Sclerosis**
Bradley J. Turner, Julie D. Atkin, Manal A. Farg, Da Wei Zang, Alan Rembach, Elizabeth C. Lopes, Justin D. Patch, Andrew F. Hill, and Surindar S. Cheema
- 164 **Cytochrome *c* Association with the Inner Mitochondrial Membrane Is Impaired in the CNS of G93A-SOD1 Mice**
Ilias G. Kirkinezos, Sandra R. Bacman, Dayami Hernandez, Jose Oca-Cossio, Laura J. Arias, Miguel A. Perez-Pinzon, Walter G. Bradley, and Carlos T. Moraes
- 184 **Uncoupling Protein-2 Is Critical for Nigral Dopamine Cell Survival in a Mouse Model of Parkinson's Disease**
Zane B. Andrews, Balazs Horvath, Colin J. Barnstable, John Elseworth, Lichuan Yang, M. Flynt Beal, Robert H. Roth, Russell T. Matthews, and Tamas L. Horvath
- 192 **APH-1a Is the Principal Mammalian APH-1 Isoform Present in γ -Secretase Complexes during Embryonic Development**
Guojun Ma, Tong Li, Donald L. Price, and Philip C. Wong

Correction: For the article "Multiple Time Scales of Adaptation in Auditory Cortex Neurons," by Nachum Ulanovsky, Liora Las, Dina Farkas, and Israel Nelken, which appeared on pages 10440–10453 of the November 17, 2004 issue, the formula for $\text{Response}_{\text{normalized}}$ on page 10442 (Materials and Methods) is incorrect. The denominator inside the parentheses should contain the variable f_i rather than f_1 . The correct formula is as follows:

$\text{Response}_{\text{normalized}} =$

$$\log_{10} \left(1 + \frac{(\text{response} + 0.5) - \text{mean response}(p = 50\%, f_i)}{(\text{response} + 0.5) + \text{mean response}(p = 50\%, f_i)} \right).$$

Erratum: In the article "Spontaneous Opening of T-Type Ca^{2+} Channels Contributes to the Irregular Firing of Dopamine Neurons in Neonatal Rats," by Guohong Cui, Takashi Okamoto, and Hitoshi Morikawa, which appeared on pages 11079–11087 of the December 8, 2004 issue, a sentence on page 11085 was modified incorrectly by the printer. In the fifth paragraph of the Discussion, the sixth sentence should read as follows: "The activation threshold for T-type channels is -70 to -60 mV, whereas they become fully inactivated at -40 to -30 mV (Randall and Tsien, 1997; Perez-Reyes, 2003)."

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 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, 202-462-6688; fax, 202-462-1547; e-mail, jn@sfn.org.