

# The Journal of Neuroscience

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**Cover picture:** Hippocampal neurons growing in culture typically elaborate a single axon and several equivalent minor processes (not yet dendrites). Immunofluorescent staining reveals the dense arrays of microtubules (green) and F-actin (red) that serve as tracks for the movement of mitochondria and other organelles within the processes. Although F-actin is most highly concentrated at the growth cones, it is present and supports mitochondrial movement throughout the processes. For details, see the article by Ruthel and Hollenbeck in this issue (pages 8618–8624).

## i This Week in The Journal

### Brief Communication

#### 8526 Fas/Tumor Necrosis Factor Receptor Death Signaling Is Required for Axotomy-Induced Death of Motoneurons *In Vivo*

Gabriele Ugolini, Cédric Raoul, Anna Ferri, Christine Haenggeli, Yoichi Yamamoto, Danièle Salaün, Christopher E. Henderson, Ann C. Kato, Brigitte Pettmann, and Anne-Odile Hueber

### Articles

#### CELLULAR/MOLECULAR

#### 8445 $\alpha$ -Conotoxin P1A Is Selective for $\alpha 6$ Subunit-Containing Nicotinic Acetylcholine Receptors

Cheryl Dowell, Baldomero M. Olivera, James E. Garrett, Sarah T. Staheli, Maren Watkins, Alexander Kuryatov, Doju Yoshikami, Jon M. Lindstrom, and J. Michael McIntosh

#### 8532 Amyloid- $\beta$ Immunization Effectively Reduces Amyloid Deposition in FcR $\gamma^{-/-}$ Knock-Out Mice

Pritam Das, Victor Howard, Nicole Loosbrock, Dennis Dickson, M. Paul Murphy, and Todd E. Golde

#### 8558 Supralinear Ca<sup>2+</sup> Influx into Dendritic Tufts of Layer 2/3 Neocortical Pyramidal Neurons *In Vitro* and *In Vivo*

Jack Waters, Matthew Larkum, Bert Sakmann, and Fritjof Helmchen

#### 8568 Functional Coupling between Sulfonylurea Receptor Type 1 and a Nonselective Cation Channel in Reactive Astrocytes from Adult Rat Brain

Mingkui Chen, Yafeng Dong, and J. Marc Simard

#### 8586 Reciprocal Inhibition of p53 and Nuclear Factor- $\kappa$ B Transcriptional Activities Determines Cell Survival or Death in Neurons

Carsten Culmsee, Jan Siewe, Vera Junker, Marina Retiounskaia, Stephanie Schwarz, Simonetta Camandola, Shahira El-Metainy, Hagen Behnke, Mark P. Mattson, and Josef Kriegstein

#### 8608 Sedation and Anesthesia Mediated by Distinct GABA<sub>A</sub> Receptor Isoforms

David S. Reynolds, Thomas W. Rosahl, Jennifer Cirone, Gillian F. O'Meara, Alison Haythornthwaite, Richard J. Newman, Janice Myers, Cyrille Sur, Owain Howell, A. Richard Rutter, John Atack, Alison J. Macaulay, Karen L. Hadingham, Peter H. Hutson, Delia Belevi, Jeremy J. Lambert, Gerard R. Dawson, Ruth McKernan, Paul J. Whiting, and Keith A. Wafford

#### 8618 Response of Mitochondrial Traffic to Axon Determination and Differential Branch Growth

Gordon Ruthel and Peter J. Hollenbeck

DEVELOPMENT/PLASTICITY/REPAIR

- 8498 **Presynaptic Remodeling Contributes to Activity-Dependent Synaptogenesis**  
Irina Nikonenko, Pascal Jourdain, and Dominique Muller
- 8513 **Analysis of Neurons Created from Wild-Type and Alzheimer's Mutation Knock-In Embryonic Stem Cells by a Highly Efficient Differentiation Protocol**  
Yoichiro Abe, Keisuke Kouyama, Taisuke Tomita, Yusuke Tomita, Norimitsu Ban, Mikiro Nawa, Masaaki Matsuoka, Takako Niikura, Sadakazu Aiso, Yoshiko Kita, Takeshi Iwatsubo, and Ikuo Nishimoto
- 8596 **A Peptide Inhibitor of c-Jun N-Terminal Kinase Protects against Both Aminoglycoside and Acoustic Trauma-Induced Auditory Hair Cell Death and Hearing Loss**  
J. Wang, T. R. Van De Water, C. Bonny, F. de Ribaupierre, J. L. Puel, and A. Zine

BEHAVIORAL/SYSTEMS/COGNITIVE

- 8453 **Age-Dependent Cerebrovascular Abnormalities and Blood Flow Disturbances in APP23 Mice Modeling Alzheimer's Disease**  
Nicolau Beckmann, Alexandra Schuler, Thomas Mueggler, Eric P. Meyer, Karl-Heinz Wiederhold, Matthias Staufenberg, and Thomas Krucker
- 8460 **Functional-Anatomic Correlates of Sustained and Transient Processing Components Engaged during Controlled Retrieval**  
Katerina Velanova, Larry L. Jacoby, Mark E. Wheeler, Mark P. McAvoy, Steve E. Petersen, and Randy L. Buckner
- 8471 **Reduced Inhibition and Increased Output of Layer II Neurons in the Medial Entorhinal Cortex in a Model of Temporal Lobe Epilepsy**  
Masayuki Kobayashi, Xiling Wen, and Paul S. Buckmaster
- 8480 **Mitogen-Activated Protein Kinase Regulates Dopamine Transporter Surface Expression and Dopamine Transport Capacity**  
José A. Morón, Irina Zakharova, Jasmine V. Ferrer, Gerald A. Merrill, Bruce Hope, Eileen M. Lafer, Zhi Cheng Lin, Jia Bei Wang, Jonathan A. Javitch, Aurelio Galli, and Toni S. Shippenberg
- 8489 **Responses of Tonically Active Neurons in the Monkey Striatum Discriminate between Motivationally Opposing Stimuli**  
Sabrina Ravel, Eric Legallet, and Paul Apicella
- 8506 **Distinct Roles of D<sub>1</sub> and D<sub>5</sub> Dopamine Receptors in Motor Activity and Striatal Synaptic Plasticity**  
Diego Centonze, Cristina Grande, Emilia Saulle, Ana B. Martín, Paolo Gubellini, Nancy Pavón, Antonio Pisani, Giorgio Bernardi, Rosario Moratalla, and Paolo Calabresi
- 8539 **Identification of Individual Neurons Reflecting Short- and Long-Term Visual Memory in an Arthropod**  
Daniel Tomsic, Martín Berón de Astrada, and Julieta Sztarker
- 8547 **Efficacy of Retinal Spikes in Driving Cortical Responses**  
Prakash Kara and R. Clay Reid
- 8578 **Metabolic Regulation of Fertility through Presynaptic and Postsynaptic Signaling to Gonadotropin-Releasing Hormone Neurons**  
Shannon D. Sullivan, R. Anthony DeFazio, and Suzanne M. Moenter

**Erratum:** In the article “Vibrissa Resonance as a Transduction Mechanism for Tactile Encoding,” by Maria A. Neimark, Mark L. Andermann, John J. Hopfield, and Christopher I. Moore, which appeared on pages 6499–6509 of the July 23, 2003 issue, a printer’s error removed a statement indicating that the first two authors contributed equally to the study. In addition, “vibrissa” was erroneously changed to “vibrisse” in two instances in the third paragraph of the Introduction, on the first and seventh lines of that paragraph.

**Correction:** In the article “N- and C-Terminal Domains of  $\beta$ -Catenin, Respectively, Are Required to Initiate and Shape Axon Arbors of Retinal Ganglion Cells *In Vivo*,” by Tamira M. Elul, Nikole E. Kimes, Minoree Kohwi, and Louis F. Reichardt, which appeared on pages 6567–6575 of the July 23, 2003 issue, two references were omitted from the article. In Materials and Methods, in the section entitled *DNA plasmid construction*, the following reference was omitted for the construct called  $\Delta$ ARM: Giannini AL, Vivanco MM, Kypta RM (2002) Analysis of  $\beta$ -catenin aggregation and localization using GFP fusion proteins: nuclear import of  $\alpha$ -catenin by the  $\beta$ -catenin/Tcf complex. *Exp Cell Res* 255:207–220. In the Discussion, the following sentence and reference were omitted from the last paragraph: “Tyrosine phosphorylation of  $\beta$ -catenin has also been implicated in regulation of synaptic size and function in hippocampal neurons (Murase et al., 2002).” This sentence should be the second to last sentence of that paragraph. The reference applicable to that sentence is as follows: Murase S, Moser E, Schuman EM (2002) Depolarization drives  $\beta$ -catenin into neuronal spines promoting changes in synaptic structure and function. *Neuron* 35:91–105.

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