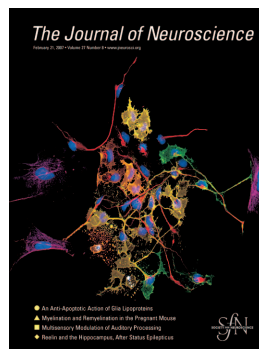


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Cover legend: A representative example of the multiphenotype progeny derived from *in vitro* clonal expansion of a single multipotential neural stem cell isolated from embryonic rat telencephalon. The cells were fluorescently labeled using lineage-selective markers including cholera toxin B subunit (green), anti-9-O-acetylated GD3 (orange), anti-vimentin (red), and anti-GFAP (pink), and the cell nuclei were counterstained using DAPI (blue). The progeny include vimentin⁺ neural stem cells and radial glia, GFAP⁺ astrocytes, cholera toxin⁺ neurons, and 9-O-acetylated GD3⁺ neuroglial neuronal progenitors. For more information, see the article by Maric et al. in this issue (pages 1836–1852).

i This Week in The Journal

Journal Club

- 1799 **Stimulation-Induced Dyskinesias Inform Basal Ganglia Models and the Mechanisms of Deep Brain Stimulation**
Jason T. Moyer and Shabbar F. Danish
- 1801 **Dorsolateral Prefrontal Cortex, Working Memory, and Prospective Coding for Action**
Rogier B. Mars and Meike J. Grol

Brief Communications

- 2145 **GABAergic Neurons Are Less Selective to Stimulus Orientation than Excitatory Neurons in Layer II/III of Visual Cortex, as Revealed by *In Vivo* Functional Ca²⁺ Imaging in Transgenic Mice**
Kazuhiro Sohya, Katsuro Kameyama, Yuchio Yanagawa, Kunihiko Obata, and Tadaharu Tsumoto

Articles

CELLULAR/MOLECULAR

- 1853 **M-Channels (Kv7/KCNQ Channels) That Regulate Synaptic Integration, Excitability, and Spike Pattern of CA1 Pyramidal Cells Are Located in the Perisomatic Region**
Hua Hu, Koen Vervaeke, and Johan F. Storm
- 1892 **Dopamine Gates Action Potential Backpropagation in Midbrain Dopaminergic Neurons**
Luc J. Gentet and Stephen R. Williams
- 1902 **Dominant Role of $\beta\gamma$ Subunits of G-Proteins in Oxytocin-Evoked Burst Firing**
Yu-Feng Wang and Glenn I. Hatton
- 1933 **Apolipoprotein E-Containing Lipoproteins Protect Neurons from Apoptosis via a Signaling Pathway Involving Low-Density Lipoprotein Receptor-Related Protein-1**
Hideki Hayashi, Robert B. Campenot, Dennis E. Vance, and Jean E. Vance
- 1942 **Kv4.3-Mediated A-Type K⁺ Currents Underlie Rhythmic Activity in Hippocampal Interneurons**
Mathieu L. Bourdeau, France Morin, Charles E. Laurent, Mounia Azzi, and Jean-Claude Lacaille
- 1964 **Long-Term Upregulation of Protein Kinase A and Adenylate Cyclase Levels in Human Smokers**
Bruce T. Hope, Deepti Nagarkar, Sherry Leonard, and Roy A. Wise
- 2074 **Long-Term Depression of a Dopamine IPSC**
Michael J. Beckstead and John T. Williams

- 2102 **Estrogen Mobilizes a Subset of Estrogen Receptor- α -Immunoreactive Vesicles in Inhibitory Presynaptic Boutons in Hippocampal CA1**
Sharron A. Hart, Melissa A. Snyder, Tereza Smejkalova, and Catherine S. Woolley
- 2112 **A Developmental Switch to GABAergic Inhibition Dependent on Increases in Kv1-Type K⁺ Currents**
MacKenzie A. Howard, R. Michael Burger, and Edwin W Rubel
- 2124 **Deletion of *Nfl* in Neurons Induces Increased Axon Collateral Branching after Dorsal Root Injury**
Mario I. Romero, Lu Lin, Mark E. Lush, Lei Lei, Luis F. Parada, and Yuan Zhu
- 2135 **Number and Density of AMPA Receptors in Individual Synapses in the Rat Cerebellum as Revealed by SDS-Digested Freeze-Fracture Replica Labeling**
Miwako Masugi-Tokita, Etsuko Tarusawa, Masahiko Watanabe, Elek Molnár, Kazushi Fujimoto, and Ryuichi Shigemoto

DEVELOPMENT/PLASTICITY/REPAIR

- 1812 **White Matter Plasticity and Enhanced Remyelination in the Maternal CNS**
Christopher Gregg, Viktor Shikar, Peter Larsen, Gloria Mak, Andrew Chojnacki, V. Wee Yong, and Samuel Weiss
- 1836 **Self-Renewing and Differentiating Properties of Cortical Neural Stem Cells Are Selectively Regulated by Basic Fibroblast Growth Factor (FGF) Signaling via Specific FGF Receptors**
Dragan Maric, Alessandra Fiorio Pla, Yoong Hee Chang, and Jeffery L. Barker

BEHAVIORAL/SYSTEMS/COGNITIVE

- 1824 **Functional Imaging Reveals Visual Modulation of Specific Fields in Auditory Cortex**
Christoph Kayser, Christopher I. Petkov, Mark Augath, and Nikos K. Logothetis
- 1913 **Estradiol Induces Diurnal Shifts in GABA Transmission to Gonadotropin-Releasing Hormone Neurons to Provide a Neural Signal for Ovulation**
Catherine A. Christian and Suzanne M. Moenter
- 1922 **Multisensory Integration in the Ventral Intraparietal Area of the Macaque Monkey**
Marie Avillac, Suliann Ben Hamed, and Jean-René Duhamel
- 1954 **Contribution of NMDA and AMPA Receptors to Temporal Patterning of Auditory Responses in the Inferior Colliculus**
Jason Tait Sanchez, Donald Gans, and Jeffrey J. Wenstrup
- 1992 **Integration of Lobula Plate Output Signals by DNOVS1, an Identified Premotor Descending Neuron**
Juergen Haag, Adrian Wertz, and Alexander Borst
- 2001 **Target Selection Signals for Arm Reaching in the Posterior Parietal Cortex**
Hansjörg Scherberger and Richard A. Andersen
- 2025 **Bed Nucleus of the Stria Terminalis Subregions Differentially Regulate Hypothalamic–Pituitary–Adrenal Axis Activity: Implications for the Integration of Limbic Inputs**
Dennis C. Choi, Amy R. Furay, Nathan K. Evanson, Michelle M. Ostrander, Yvonne M. Ulrich-Lai, and James P. Herman
- 2035 **Upregulation of Substance P in Low-Threshold Myelinated Afferents Is Not Required for Tactile Allodynia in the Chronic Constriction Injury and Spinal Nerve Ligation Models**
David I. Hughes, Dugald T. Scott, John S. Riddell, and Andrew J. Todd
- 2045 **Dopaminergic Regulation of Inhibitory and Excitatory Transmission in the Basolateral Amygdala–Prefrontal Cortical Pathway**
Stan B. Floresco and Maric T. Tse

- 2058 **Synchronization of Electrically Coupled Pairs of Inhibitory Interneurons in Neocortex**
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- 2091 **Sparse and Selective Odor Coding by Mitral/Tufted Neurons in the Main Olfactory Bulb**
Ian G. Davison and Lawrence C. Katz

NEUROBIOLOGY OF DISEASE

- 1803 **Reelin Regulates Neuronal Progenitor Migration in Intact and Epileptic Hippocampus**
Chao Gong, Tsu-Wei Wang, Holly S. Huang, and Jack M. Parent
- 1868 **Parkin Mediates Neuroprotection through Activation of I κ B Kinase/Nuclear Factor- κ B Signaling**
Iris H. Henn, Lena Bouman, Julia S. Schlehe, Anita Schlierf, Julia E. Schramm, Elmar Wegener, Kazuhiro Nakaso, Carsten Culmsee, Benedikt Berninger, Daniel Krappmann, Jörg Tatzelt, and Konstanze F. Winklhofer
- 1879 **Endosomal Accumulation of Toll-Like Receptor 4 Causes Constitutive Secretion of Cytokines and Activation of Signal Transducers and Activators of Transcription in Niemann–Pick Disease Type C (NPC) Fibroblasts: A Potential Basis for Glial Cell Activation in the NPC Brain**
Michitaka Suzuki, Yuko Sugimoto, Yuki Ohsaki, Makoto Ueno, Shinsuke Kato, Yukisato Kitamura, Hiroshi Hosokawa, Joanna P. Davies, Yiannis A. Ioannou, Marie T. Vanier, Kousaku Ohno, and Haruaki Ninomiya
- 1973 **Antibody-Mediated Clearance of Amyloid- β Peptide from Cerebral Amyloid Angiopathy Revealed by Quantitative *In Vivo* Imaging**
Claudia M. Prada, Monica Garcia-Alloza, Rebecca A. Betensky, Sandy X. Zhang-Nunes, Steven M. Greenberg, Brian J. Bacskai, and Matthew P. Frosch
- 1981 **Neuroprotective Effects of Regulators of the Glycogen Synthase Kinase-3 β Signaling Pathway in a Transgenic Model of Alzheimer's Disease Are Associated with Reduced Amyloid Precursor Protein Phosphorylation**
Edward Rockenstein, Magdalena Torrance, Anthony Adame, Michael Mante, Pazit Bar-on, John B. Rose, Leslie Crews, and Eliezer Masliah
- 2013 **Interferon- γ -Oligodendrocyte Interactions in the Regulation of Experimental Autoimmune Encephalomyelitis**
Roumen Balabanov, Krystle Strand, Rajendra Goswami, Eileen McMahon, Wendy Begolka, Stephen D. Miller, and Brian Popko
- 2081 **Cathepsin D Deficiency Induces Persistent Neurodegeneration in the Absence of Bax-Dependent Apoptosis**
John J. Shacka, Barbara J. Klocke, Chainllie Young, Masahiro Shibata, John W. Olney, Yasuo Uchiyama, Paul Saftig, and Kevin A. Roth

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