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).

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 βγ 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
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

A Developmental Switch to GABAergic Inhibition Dependent on Increases in Kv1-Type K⁺ Currents
MacKenzie A. Howard, R. Michael Burger, and Edwin W Rubel

Deletion of Nf1 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

Number and Density of AMPA Receptors in Individual Synapses in the Rat Cerebellum as Revealed by SDS-Digested Freeze-Fracture Replica Labeling
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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

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

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Functional Imaging Reveals Visual Modulation of Specific Fields in Auditory Cortex
Christoph Kayser, Christopher I. Petkov, Mark Augath, and Nikos K. Logothetis

Estriadiol 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

Multisensory Integration in the Ventral Intraparietal Area of the Macaque Monkey
Marie Avillac, Suliann Ben Hamed, and Jean-René Duhamel

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

Integration of Lobula Plate Output Signals by DNOVS1, an Identified Premotor Descending Neuron
Juergen Haag, Adrian Wertz, and Alexander Borst

Target Selection Signals for Arm Reaching in the Posterior Parietal Cortex
Hansjörg Scherberger and Richard A. Andersen

Red 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

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
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Dopaminergic Regulation of Inhibitory and Excitatory Transmission in the Basolateral Amygdala–Prefrontal Cortical Pathway
Stan B.Floresco and Maric T. Tse
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Jaime G. Mancilla, Timothy J. Lewis, David J. Pinto, John Rinzel, and Barry W. Connors

Sparse and Selective Odor Coding by Mitral/Tufted Neurons in the Main Olfactory Bulb
Ian G. Davison and Lawrence C. Katz

NEUROBIOLOGY OF DISEASE

Reelin Regulates Neuronal Progenitor Migration in Intact and Epileptic Hippocampus
Chao Gong, Tsu-Wei Wang, Holly S. Huang, and Jack M. Parent

Parkin Mediates Neuroprotection through Activation of IκB Kinase/Nuclear Factor-κB 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

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

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Neuroprotective Effects of Regulators of the Glycogen Synthase Kinase-3β Signaling Pathway in a Transgenic Model of Alzheimer’s Disease Are Associated with Reduced Amyloid Precursor Protein Phosphorylation
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Interferon-γ-Oligodendrocyte Interactions in the Regulation of Experimental Autoimmune Encephalomyelitis
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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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