

The Journal of Neuroscience

August 3, 2011 • Volume 31 Number 31 • www.jneurosci.org



Cover legend: Bone marrow chimeric mice that received no irradiation (back), whole-body irradiation (middle), or head-protected irradiation (front). Cover art by Alexander Mildner. For more information, see the article by Mildner et al. in this issue (pages 11159–11171).

i This Week in The Journal

Journal Club

- 11097 **Homeostatic Plasticity of Neurotransmitter Release Probability Is Determined by Presynaptic Calcium Influx**
Jaichandar Subramanian

Brief Communications

- 11126 **Progranulin Deficiency Decreases Gross Neural Connectivity But Enhances Transmission at Individual Synapses**
Lucia Tapia, Austen Milnerwood, Aobo Guo, Fergil Mills, Eileen Yoshida, Cristina Vasuta, Ian R. Mackenzie, Lynn Raymond, Max Cynader, William Jia, and Shernaz X. Bamji
- 11370 **Operant Conditioning of Rat Soleus H-Reflex Oppositely Affects Another H-Reflex and Changes Locomotor Kinematics**
Yi Chen, Lu Chen, Yu Wang, Jonathan R. Wolpaw, and Xiang Yang Chen

Articles

CELLULAR/MOLECULAR

- 11268 **Single-Pixel Optical Fluctuation Analysis of Calcium Channel Function in Active Zones of Motor Nerve Terminals**
Fujun Luo, Markus Dittrich, Joel R. Stiles, and Stephen D. Meriney
- 11295 **Arrangement of Subunits in Functional NMDA Receptors**
Catherine L. Salussolia, Michael L. Prodromou, Priya Borker, and Lonnie P. Wollmuth
- 11387 ***Drosophila* QVR/SSS Modulates the Activation and C-Type Inactivation Kinetics of Shaker K^+ Channels**
Terry Dean, Rong Xu, William Joiner, Amita Sehgal, and Toshinori Hoshi
- 11404 **Role of Drp1, a Key Mitochondrial Fission Protein, in Neuropathic Pain**
Luiz F. Ferrari, Adrienne Chum, Oliver Bogen, David B. Reichling, and Jon D. Levine

DEVELOPMENT/PLASTICITY/REPAIR

- 11118 **Two Transcription Factors Can Direct Three Photoreceptor Outcomes from Rod Precursor Cells in Mouse Retinal Development**
Lily Ng, Ailing Lu, Alok Swaroop, David S. Sharlin, Anand Swaroop, and Douglas Forrest

- 11144 **Pool-Specific Regulation of Motor Neuron Survival by Neurotrophic Support**
Fabienne Lamballe, Matthieu Genestine, Nathalie Caruso, Vilma Arce,
Sylvie Richelme, Françoise Helmbacher, and Flavio Maina
- 11220 **Experience-Dependent Plasticity Acts via GluR1 and a Novel Neuronal Nitric Oxide Synthase-Dependent Synaptic Mechanism in Adult Cortex**
James Dachtler, Neil R. Hardingham, Stanislaw Glazewski, Nicholas F. Wright,
Emma J. Blain, and Kevin Fox

BEHAVIORAL/SYSTEMS/COGNITIVE

- 11110 **Coordination of High Gamma Activity in Anterior Cingulate and Lateral Prefrontal Cortical Areas during Adaptation**
Marie Rothé, René Quilodran, Jérôme Sallet, and Emmanuel Procyk
- 11133 **Visual-Induced Excitation Leads to Firing Pauses in Striatal Cholinergic Interneurons**
Jan M. Schulz, Manfred J. Oswald, and John N. J. Reynolds
- 11172 **Identification of a Dopamine Receptor-Mediated Opiate Reward Memory Switch in the Basolateral Amygdala–Nucleus Accumbens Circuit**
Alessandra Lintas, Ning Chi, Nicole M. Lauzon, Stephanie F. Bishop,
Shervin Gholizadeh, Ninglei Sun, Huibing Tan, and Steven R. Laviolette
- 11184 **CNGA3: A Target of Spinal Nitric Oxide/cGMP Signaling and Modulator of Inflammatory Pain Hypersensitivity**
Sandra Heine, Stylianos Michalakis, Wiebke Kallenborn-Gerhardt, Ruirui Lu,
Hee-Young Lim, Jessica Weiland, Domenico Del Turco, Thomas Deller,
Irmgard Tegeder, Martin Biel, Gerd Geisslinger, and Achim Schmidtke
- 11193 **Effects of Brain Amyloid Deposition and Reduced Glucose Metabolism on the Default Mode of Brain Function in Normal Aging**
Mitsuru Kikuchi, Tetsu Hirosawa, Masamichi Yokokura, Shunsuke Yagi,
Norio Mori, Etsuji Yoshikawa, Yujiro Yoshihara, Genichi Sugihara,
Kiyokazu Takebayashi, Yasuhide Iwata, Katsuaki Suzuki, Kazuhiko Nakamura,
Takatoshi Ueki, Yoshio Minabe, and Yasuomi Ouchi
- 11200 **The Importance of Having Arc: Expression of the Immediate-Early Gene Arc Is Required for Hippocampus-Dependent Fear Conditioning and Blocked by NMDA Receptor Antagonism**
Jennifer Czerniawski, Fredrick Ree, Chester Chia, Kartik Ramamoorthi,
Yayoi Kumata, and Timothy A. Otto
- 11208 **Lack of Evidence for Direct Corticospinal Contributions to Control of the Ipsilateral Forelimb in Monkey**
Demetris S. Soteropoulos, Steve A. Edgley, and Stuart N. Baker
- 11244 **Extracellular Signal-Regulated Kinase Signaling in the Ventral Tegmental Area Mediates Cocaine-Induced Synaptic Plasticity and Rewarding Effects**
Bin Pan, Peng Zhong, Dalong Sun, and Qing-song Liu
- 11256 **Characterizing the Spontaneous Blink Generator: An Animal Model**
Jaime Kaminer, Alice S. Powers, Kyle G. Horn, Channing Hui,
and Craig Evinger
- 11282 **Repeated Amphetamine Exposure Disrupts Dopaminergic Modulation of Amygdala–Prefrontal Circuitry and Cognitive/Emotional Functioning**
Maric T. L. Tse, Anna Cantor, and Stan B. Floresco

- 11305 **Mirror-Image Sensitivity and Invariance in Object and Scene Processing Pathways**
Daniel D. Dilks, Joshua B. Julian, Jonas Kubilius, Elizabeth S. Spelke,
and Nancy Kanwisher
- 11313 **Temporal Precision in the Visual Pathway through the Interplay of Excitation and Stimulus-Driven Suppression**
Daniel A. Butts, Chong Weng, Jianzhong Jin, Jose-Manuel Alonso,
and Liam Paninski
- 11338 **Physical and Perceptual Factors Shape the Neural Mechanisms That Integrate Audiovisual Signals in Speech Comprehension**
HweeLing Lee and Uta Noppeney
- 11351 **The Detection of Visual Contrast in the Behaving Mouse**
Laura Busse, Asli Ayaz, Neel T. Dhruv, Steffen Katzner, Aman B. Saleem,
Marieke L. Schölvink, Andrew D. Zaharia, and Matteo Carandini
- 11362 **The Contribution of NMDA Receptor Signaling in the Corticobasal Ganglia Reward Network to Appetitive Pavlovian Learning**
Jones G. Parker, Lisa R. Beutler, and Richard D. Palmiter
- 11376 **Inflammation-Induced Lethargy Is Mediated by Suppression of Orexin Neuron Activity**
Aaron J. Grossberg, XinXia Zhu, Gina M. Leininger, Peter R. Levasseur,
Theodore P. Braun, Martin G. Myers Jr, and Daniel L. Marks
- 11396 **Augmented Cocaine Seeking in Response to Stress or CRF Delivered into the Ventral Tegmental Area Following Long-Access Self-Administration Is Mediated by CRF Receptor Type 1 But Not CRF Receptor Type 2**
Jordan M. Blacktop, Chad Seubert, David A. Baker, Nathan Ferda, Geng Lee,
Evan N. Graf, and John R. Mantsch

NEUROBIOLOGY OF DISEASE

- 11100 **Suppression of a Neocortical Potassium Channel Activity by Intracellular Amyloid- β and Its Rescue with Homer1a**
Kenji Yamamoto, Yoshifumi Ueta, Li Wang, Ryo Yamamoto, Naoko Inoue,
Kaoru Inokuchi, Atsu Aiba, Hideto Yonekura, and Nobuo Kato
- 11159 **Distinct and Non-Redundant Roles of Microglia and Myeloid Subsets in Mouse Models of Alzheimer's Disease**
Alexander Mildner, Bernhard Schlevogt, Katrin Kierdorf, Chotima Böttcher,
Daniel Erny, Markus P. Kummer, Michael Quinn, Wolfgang Brück,
Ingo Bechmann, Michael T. Heneka, Josef Priller, and Marco Prinz
- 11231 ***In Situ* Visualization of Protein Interactions in Sensory Neurons: Glutamic Acid-Rich Proteins (GARPs) Play Differential Roles for Photoreceptor Outer Segment Scaffolding**
Linda M. Ritter, Nidhi Khattree, Beatrice Tam, Orson L. Moritz, Frank Schmitz,
and Andrew F. X. Goldberg
- 11328 **Opposing Synaptic Regulation of Amyloid- β Metabolism by NMDA Receptors *In Vivo***
Deborah K. Verges, Jessica L. Restivo, Whitney D. Goebel, David M. Holtzman,
and John R. Cirrito
- 11411 **Neuroaxonal Dystrophy in Calcium-Independent Phospholipase A₂ β Deficiency Results from Insufficient Remodeling and Degeneration of Mitochondrial and Presynaptic Membranes**
Goichi Beck, Yuki Sugiura, Koei Shinzawa, Shinsuke Kato, Mitsutoshi Setou,
Yoshihide Tsujimoto, Saburo Sakoda, and Hisae Sumi-Akamaru

11421 **Correction:** The article “Hippocampal Neuronal Nitric Oxide Synthase Mediates the Stress-Related Depressive Behaviors of Glucocorticoids by Downregulating Glucocorticoid Receptor,” by Qi-Gang Zhou, Li-Juan Zhu, Chen Chen, Hai-Yin Wu, Chun-Xia Luo, Lei Chang, and Dong-Ya Zhu, originally appeared on pages 7579–7590 of the May 25, 2011 issue. A correction to that article appears on page 11421.

Persons interested in becoming members of the Society for Neuroscience should contact the Membership Department, Society for Neuroscience, 1121 14th St., NW, Suite 1010, Washington, DC 20005, phone 202-962-4000.

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.jneurosci.org/misc/ifa_bc.shtml).

Submissions should be submitted online using the following url: <http://jneurosci.msubmit.net>. Please contact the Central Office, via phone, fax, or e-mail with any questions. Our contact information is as follows: phone, 202-962-4000; fax, 202-962-4945; e-mail, jn@sfn.org.