

The Journal of Neuroscience

June 8, 2011 • Volume 31 Number 23 • www.jneurosci.org



Cover legend: Two cultured mouse cortical astrocytes stained with glial fibrillary acidic protein (GFAP, grayscale) and 4',6-diamidino-2-phenylindole (DAPI, blue). These cells show circadian rhythms in ATP release that depend on a functional clock and on IP_3 -dependent signals. For more information, see the article by Marpegan et al. in this issue (pages 8342–8350).

i This Week in The Journal

Journal Club

- 8327 **Two Modes of GABA_B: Specific Localized Inhibition and Global Network Inhibition**
Martine R. Groen

Brief Communications

- 8450 **The Transcription Factor Sp8 Is Required for the Production of Parvalbumin-Expressing Interneurons in the Olfactory Bulb**
Xiaosu Li, Chifei Sun, Chao Lin, Tong Ma, Mayur C. Madhavan, Kenneth Campbell, and Zhengang Yang
- 8564 **Presynaptic Induction and Expression of Timing-Dependent Long-Term Depression Demonstrated by Compartment-Specific Photorelease of a Use-Dependent NMDA Receptor Antagonist**
Antonio Rodríguez-Moreno, Michael M. Kohl, James E. Reeve, Thomas R. Eaton, Hazel A. Collins, Harry L. Anderson, and Ole Paulsen
- 8654 **Darks Are Processed Faster Than Lights**
Stanley Jose Kombar, Jose-Manuel Alonso, and Qasim Zaidi

Articles

CELLULAR/MOLECULAR

- 8342 **Circadian Regulation of ATP Release in Astrocytes**
Luciano Marpegan, Adrienne E. Swanstrom, Kevin Chung, Tatiana Simon, Philip G. Haydon, Sanjoy K. Khan, Andrew C. Liu, Erik D. Herzog, and Christian Beaulé
- 8395 **Interplay among cGMP, cAMP, and Ca²⁺ in Living Olfactory Sensory Neurons *In Vitro* and *In Vivo***
Mara Pietrobon, Ilaria Zamparo, Micol Maritan, Sira Angela Franchi, Tullio Pozzan, and Claudia Lodovichi
- 8432 **Mitochondrial Calcium Signaling Mediates Rhythmic Extracellular ATP Accumulation in Suprachiasmatic Nucleus Astrocytes**
Jeff F. Burkeen, Alisa D. Womac, David J. Earnest, and Mark J. Zoran
- 8441 **Transsynaptic EphB/Ephrin-B Signaling Regulates Growth of Presynaptic Boutons Required for Classical Conditioning**
Wei Li, Zhaoqing Zheng, and Joyce Keifer

- 8464 Cell-Type-Specific Modulation of Feedback Inhibition by Serotonin in the Hippocampus**
Jochen Winterer, A. Vanessa Stempel, Tamar Dugladze, Csaba Földy, Nino Maziashvili, Aleksandar R. Zivkovic, Josef Priller, Ivan Soltesz, Tengis Gloveli, and Dietmar Schmitz
- 8491 Specific Regulation of NRG1 Isoform Expression by Neuronal Activity**
Xihui Liu, Ryan Bates, Dong-Min Yin, Chengyong Shen, Fay Wang, Nan Su, Sergei A. Kirov, Yuling Luo, Jian-Zhi Wang, Wen-Cheng Xiong, and Lin Mei
- 8512 Endophilin Drives the Fast Mode of Vesicle Retrieval in a Ribbon Synapse**
Artur Llobet, Jennifer L. Gallop, Jemima J. E. Burden, Gamze Çamdere, Priya Chandra, Yvonne Vallis, Colin R. Hopkins, Leon Lagnado, and Harvey T. McMahon
- 8533 IQGAP1 Regulates NR2A Signaling, Spine Density, and Cognitive Processes**
Can Gao, Shanti F. Frausto, Anita L. Guedea, Natalie C. Tronson, Vladimir Jovasevic, Katie Leaderbrand, Kevin A. Corcoran, Yomayra F. Guzmán, Geoffrey T. Swanson, and Jelena Radulovic
- 8585 Functional Dissection of the Oct6 Schwann Cell Enhancer Reveals an Essential Role for Dimeric Sox10 Binding**
Noorjahan B. Jagalur, Mehrnaz Ghazvini, Wim Mandemakers, Siska Driegen, Alex Maas, Erin A. Jones, Martine Jaegle, Frank Grosveld, John Svaren, and Dies Meijer
- 8634 Transient Receptor Potential Channel Type M5 Is Essential for Fat Taste**
Pin Liu, Bhavik P. Shah, Stephanie Croasdell, and Timothy A. Gilbertson
- 8669 mGluR Control of Interneuron Output Regulates Feedforward Tonic GABA_A Inhibition in the Visual Thalamus**
Adam C. Errington, Giuseppe Di Giovanni, Vincenzo Crunelli, and David W. Cope
- 8681 A-Kinase Anchoring Protein 150 Mediates Transient Receptor Potential Family V Type 1 Sensitivity to Phosphatidylinositol-4,5-Bisphosphate**
Nathaniel A. Jeske, Elaine D. Por, Sergei Belugin, Sraboni Chaudhury, Kelly A. Berg, Armen N. Akopian, Michael A. Henry, and Ruben Gomez
- 8689 Single K_{ATP} Channel Opening in Response to Action Potential Firing in Mouse Dentate Granule Neurons**
Geoffrey R. Tanner, Andrew Lutas, Juan Ramón Martínez-François, and Gary Yellen

DEVELOPMENT/PLASTICITY/REPAIR

- 8351 Notch Signaling Alters Sensory or Neuronal Cell Fate Specification of Inner Ear Stem Cells**
Sang-Jun Jeon, Masato Fujioka, Shi-Chan Kim, and Albert S. B. Edge
- 8381 The Netrin Receptor DCC Is Required in the Pubertal Organization of Mesocortical Dopamine Circuitry**
Colleen Manitt, Andrea Mimee, Conrad Eng, Matthew Pokinko, Thomas Stroh, Helen M. Cooper, Bryan Kolb, and Cecilia Flores

BEHAVIORAL/SYSTEMS/COGNITIVE

- 8359 Cellular and Network Contributions to Vestibular Signal Processing: Impact of Ion Conductances, Synaptic Inhibition, and Noise**
Christian Rössert, Lee E. Moore, Hans Straka, and Stefan Glasauer

- 8406 **Tracking the Temporal Evolution of a Perceptual Judgment Using a Compelled-Response Task**
Swetha Shankar, Dino P. Massoglia, Dantong Zhu, M. Gabriela Costello, Terrence R. Stanford, and Emilio Salinas
- 8422 **Initiation of Locomotion in Adult Zebrafish**
Alexandros Kyriakatos, Riyadh Mahmood, Jessica Ausborn, Christian P. Porres, Ansgar Büschges, and Abdeljabbar El Manira
- 8476 **Mesocorticolimbic Glutamatergic Pathway**
Tsuyoshi Yamaguchi, Hui-Ling Wang, Xueping Li, Tsz H. Ng, and Marisela Morales
- 8502 **Dynamic Updating of Working Memory Resources for Visual Objects**
Nikos Gorgoraptis, Raquel F. G. Catalao, Paul M. Bays, and Masud Husain
- 8520 **A Unifying Framework Underlying Mechanotransduction in the Somatosensory System**
Eran Lottem and Rony Azouz
- 8543 **Neuronal Responses to Texture-Defined Form in Macaque Visual Area V2**
Yasmine El-Shamayleh and J. Anthony Movshon
- 8570 **Synchrony Makes Neurons Fire in Sequence, and Stimulus Properties Determine Who Is Ahead**
Martha N. Havenith, Shan Yu, Julia Biederlack, Nan-Hui Chen, Wolf Singer, and Danko Nikolić
- 8595 **The Projective Field of a Retinal Amacrine Cell**
Saskia E. J. de Vries, Stephen A. Baccus, and Markus Meister
- 8605 **Relationships between Hippocampal Sharp Waves, Ripples, and Fast Gamma Oscillation: Influence of Dentate and Entorhinal Cortical Activity**
David Sullivan, Jozsef Csicsvari, Kenji Mizuseki, Sean Montgomery, Kamran Diba, and György Buzsáki
- 8617 **Resting-State Functional Connectivity Indexes Reading Competence in Children and Adults**
Maki S. Koyama, Adriana Di Martino, Xi-Nian Zuo, Clare Kelly, Maarten Mennes, Devika R. Jugagir, F. Xavier Castellanos, and Michael P. Milham
- 8625 **Dissociable Contributions by Prefrontal D₁ and D₂ Receptors to Risk-Based Decision Making**
Jennifer R. St. Onge, Hamed Abhari, and Stan B. Floresco
- 8643 **Subcortical Mechanisms of Feature-Based Attention**
Keith A. Schneider
- 8659 **Prefrontal Cortex Deactivation in Macaques Alters Activity in the Superior Colliculus and Impairs Voluntary Control of Saccades**
Michael J. Koval, Stephen G. Lomber, and Stefan Everling

NEUROBIOLOGY OF DISEASE

- 8329 **Overexpression of the Dominant-Negative Form of Interferon Regulatory Factor 1 in Oligodendrocytes Protects against Experimental Autoimmune Encephalomyelitis**
Zihua Ren, Yan Wang, Duan Tao, David Liebson, Thomas Liggett, Rajendra Goswami, Robert Clarke, Dusan Stefanoski, and Roumen Balabanov
- 8373 **Role of Central Leptin Signaling in the Starvation-Induced Alteration of B-Cell Development**
Miyako Tanaka, Takayoshi Suganami, Misa Kim-Saijo, Chitoku Toda, Makoto Tsuiji, Kozue Ochi, Yasutomi Kamei, Yasuhiko Minokoshi, and Yoshihiro Ogawa

- 8456 Multiple Preconditioning Paradigms Converge on Interferon Regulatory Factor-Dependent Signaling to Promote Tolerance to Ischemic Brain Injury**
Susan L. Stevens, Philberta Y. Leung, Keri B. Vartanian, Banu Gopalan, Tao Yang, Roger P. Simon, and Mary P. Stenzel-Poore
- 8556 Regulatory B Cells Limit CNS Inflammation and Neurologic Deficits in Murine Experimental Stroke**
Xuefang Ren, Kozaburo Akiyoshi, Suzan Dziennis, Arthur A. Vandenbark, Paco S. Herson, Patricia D. Hurn, and Halina Offner
- 8697 Retraction:** At the request of the authors, the following manuscript has been retracted: “Activated Protein C Reduces the Severity of Compression-Induced Spinal Cord Injury in Rats by Inhibiting Activation of Leukocytes” by Yuji Taoka, Kenji Okajima, Mitsuhiro Uchiba, Kazunori Murakami, Naoaki Harada, Masayoshi Johno, and Masakuni Naruo, which appeared on pages 1393–1398 of the February 15, 1998 issue.
- 8698 Retraction:** At the request of the authors, the following manuscript has been retracted: “Glucagon-Like Peptide 1 Stimulates Hypothalamic Proopiomelanocortin Neurons” by Xiaosong Ma, Jens Bruning, and Frances M. Ashcroft, which appeared on pages 7125–7129 of the July 4, 2007 issue.

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.