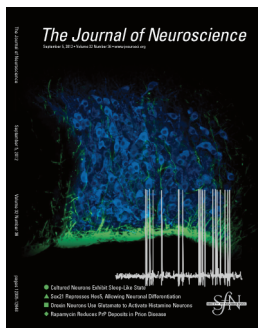


# The Journal of Neuroscience

September 5, 2012 • Volume 32 Number 36 • www.jneurosci.org



**Cover legend:** Astrocytes (green) in the supraoptic nucleus of the rat hypothalamus are oriented vertically, with their somata in the ventral-most layer of the nucleus. Their dense processes make direct contact with vasopressin- or oxytocin-releasing magnocellular neurosecretory cells (blue). The astrocytes regulate the activity of supraoptic neurons (white trace), and thus the release of vasopressin and oxytocin. Cover design by Katrina Choe. For more information, see the article by Choe et al. (pages 12518–12527).

## i This Week in The Journal

### Disease Focus

- 12305 **Narcolepsy: Neural Mechanisms of Sleepiness and Cataplexy**  
Christian R. Burgess and Thomas E. Scammell

### Brief Communications

- 12361 **Occipital Transcranial Magnetic Stimulation Has an Activity-Dependent Suppressive Effect**  
Francesca Perini, Luigi Cattaneo, Marisa Carrasco, and Jens V. Schwarzbach
- 12406 **Ceftriaxone Normalizes Nucleus Accumbens Synaptic Transmission, Glutamate Transport, and Export following Cocaine Self-Administration and Extinction Training**  
Heather Trantham-Davidson, Ryan T. LaLumiere, Kathryn J. Reissner, Peter W. Kalivas, and Lori A. Knackstedt
- 12431 **Alleviation of Neuropathic Pain Hypersensitivity by Inhibiting Neuronal Pentraxin 1 in the Rostral Ventromedial Medulla**  
Agustin Zapata, Silvia Pontis, Raf J. Schepers, Ruizhong Wang, Eric Oh, Alexandra Stein, Cristina M. Bäckman, Paul Worley, Marta Enguita, M. Alba Abad, Ramon Trullas, and Toni S. Shippenberg
- 12437 **Optogenetic Probing of Fast Glutamatergic Transmission from Hypocretin/Orexin to Histamine Neurons *In Situ***  
Cornelia Schöne, Zhen Fang Huang Cao, John Apergis-Schoute, Antoine Adamantidis, Takeshi Sakurai, and Denis Burdakov
- 12641 **Cocaine Evokes Projection-Specific Synaptic Plasticity of Lateral Habenula Neurons**  
Mathieu Maroteaux and Manuel Mameli

### Articles

#### CELLULAR/MOLECULAR

- 12325 **Repeated Stress Dysregulates  $\kappa$ -Opioid Receptor Signaling in the Dorsal Raphe through a p38 $\alpha$  MAPK-Dependent Mechanism**  
Julia C. Lemos, Clarisse A. Roth, Daniel I. Messinger, Harminder K. Gill, Paul E. M. Phillips, and Charles Chavkin
- 12337 **Cholinergic Coordination of Presynaptic and Postsynaptic Activity Induces Timing-Dependent Hippocampal Synaptic Plasticity**  
Zhenglin Gu, Patricia W. Lamb, and Jerrel L. Yakel

- 12421 **Traumatic Noise Activates Rho-Family GTPases through Transient Cellular Energy Depletion**  
Fu-Quan Chen, Hong-Wei Zheng, Kayla Hill, and Su-Hua Sha
- 12506 **Key Electrophysiological, Molecular, and Metabolic Signatures of Sleep and Wakefulness Revealed in Primary Cortical Cultures**  
Valérie Hinard, Cyril Mikhail, Sylvain Pradervand, Thomas Curie, Riekelt H. Houtkooper, Johan Auwerx, Paul Franken, and Mehdi Tafti
- 12518 **Taurine Release by Astrocytes Modulates Osmosensitive Glycine Receptor Tone and Excitability in the Adult Supraoptic Nucleus**  
Katrina Y. Choe, James E. Olson, and Charles W. Bourque
- 12579 **Anoxia-Induced NMDA Receptor Activation Opens Pannexin Channels via Src Family Kinases**  
Nicholas L. Weilinger, Peter L. Tang, and Roger J. Thompson
- 12619 **Brefeldin A-inhibited Guanine Exchange Factor 2 Regulates Filamin A Phosphorylation and Neuronal Migration**  
Jingping Zhang, Jason Neal, Gewei Lian, Bingxing Shi, Russell J. Ferland, and Volney Sheen

#### DEVELOPMENT/PLASTICITY/REPAIR

- 12528 **Myelin Gene Regulatory Factor Is Required for Maintenance of Myelin and Mature Oligodendrocyte Identity in the Adult CNS**  
Matthias Koening, Stacey Jackson, Curtis M. Hay, Clare Faux, Trevor J. Kilpatrick, Melanie Willingham, and Ben Emery
- 12543 **Sox21 Promotes Hippocampal Adult Neurogenesis via the Transcriptional Repression of the *Hes5* Gene**  
Satoru Matsuda, Ken-ichiro Kuwako, Hirotaka James Okano, Shuichi Tsutsumi, Hiroyuki Aburatani, Yumiko Saga, Yumi Matsuzaki, Akinori Akaike, Hachiro Sugimoto, and Hideyuki Okano
- 12589 **Robo2–Slit and Dcc–Netrin1 Coordinate Neuron Axonal Pathfinding within the Embryonic Axon Tracts**  
Changwen Zhang, Jingxia Gao, Hefei Zhang, Liu Sun, and Gang Peng
- 12603 **GluN2B-Containing NMDA Receptors Promote Wiring of Adult-Born Neurons into Olfactory Bulb Circuits**  
Wolfgang Kelsch, Zhijun Li, Marina Eliava, Christina Goengrich, and Hannah Monyer

#### BEHAVIORAL/SYSTEMS/COGNITIVE

- 12349 **Flexible Cortical Control of Task-Specific Muscle Synergies**  
Kianoush Nazarpour, Amy Barnard, and Andrew Jackson
- 12366 **Impact of Prefrontal Cortex in Nicotine-Induced Excitation of Ventral Tegmental Area Dopamine Neurons in Anesthetized Rats**  
Die Zhang, Ming Gao, Dan Xu, Wei-Xing Shi, Boris S. Gutkin, Scott C. Steffensen, Ronald J. Lukas, and Jie Wu
- 12376 **Adverse Listening Conditions and Memory Load Drive a Common Alpha Oscillatory Network**  
Jonas Obleser, Malte Wöstmann, Nele Hellbernd, Anna Wilsch, and Burkhard Maess

- 12411 **Gamma-Band Activity in Human Prefrontal Cortex Codes for the Number of Relevant Items Maintained in Working Memory**  
Frédéric Roux, Michael Wibral, Harald M. Mohr, Wolf Singer, and Peter J. Uhlhaas
- 12444 **Reward Cues in Space: Commonalities and Differences in Neural Coding by Hippocampal and Ventral Striatal Ensembles**  
Carlen S. Lansink, Jadin C. Jackson, Jan V. Lankelma, Rutsuko Ito, Trevor W. Robbins, Barry J. Everitt, and Cyriel M.A. Pennartz
- 12460 **Characterization of *Drosophila* Larval Crawling at the Level of Organism, Segment, and Somatic Body Wall Musculature**  
Ellie S. Heckscher, Shawn R. Lockery, and Chris Q. Doe
- 12472 **Anatomical Characterization of a Rabbit Cerebellar Eyeblink Premotor Pathway Using Pseudorabies and Identification of a Local Modulatory Network in Anterior Interpositus**  
Jimena Gonzalez-Joekes and Bernard G. Schreurs
- 12488 **Predicting Perceptual Decision Biases from Early Brain Activity**  
Stefan Bode, David K. Sewell, Simon Lilburn, Jason D. Forte, Philip L. Smith, and Jutta Stahl
- 12499 **A Neural Signature of Affiliative Emotion in the Human Septohypothalamic Area**  
Jorge Moll, Patricia Bado, Ricardo de Oliveira-Souza, Ivanei E. Bramati, Debora O. Lima, Fernando F. Paiva, João R. Sato, Fernanda Tovar-Moll, and Roland Zahn
- 12558 **Dynamics of Local Input Normalization Result from Balanced Short- and Long-Range Intracortical Interactions in Area V1**  
Alexandre Reynaud, Guillaume S. Masson, and Frédéric Chavane
- 12570 **Elimination of Dendritic Spines with Long-Term Memory Is Specific to Active Circuits**  
Jeff Sanders, Kiriana Cowansage, Karsten Baumgärtel, and Mark Mayford
- 12612 **Improved Sensorimotor Performance via Stochastic Resonance**  
Ignacio Mendez-Balbuena, Elias Manjarrez, Jürgen Schulte-Mönting, Frank Huehe, Jesus A. Tapia, Marie-Claude Hepp-Reymond, and Romyana Kristeva

#### NEUROBIOLOGY OF DISEASE

- 12312 **Therapeutic Testosterone Administration Preserves Excitatory Synaptic Transmission in the Hippocampus during Autoimmune Demyelinating Disease**  
Marina O. Ziehn, Andrea A. Avedisian, Shannon M. Dervin, Elizabeth A. Umeda, Thomas J. O'Dell, and Rhonda R. Voskuhl
- 12384 **The Presynaptic Active Zone Protein RIM1 $\alpha$  Controls Epileptogenesis following Status Epilepticus**  
Julika Pitsch, Thoralf Opitz, Verena Borm, Anne Woitecki, Matthäus Staniek, Heinz Beck, Albert J. Becker, and Susanne Schoch
- 12396 **Rapamycin Delays Disease Onset and Prevents PrP<sup>Sc</sup> Plaque Deposition in a Mouse Model of Gerstmann-Sträussler-Scheinker Disease**  
Constanza J. Cortes, Kefeng Qin, Julie Cook, Ani Solanki, and James A. Mastrianni
- 12630 **Integration of  $\beta$ -Catenin, Sirtuin, and FOXO Signaling Protects from Mutant Huntingtin Toxicity**  
J. Alex Parker, Rafael P. Vazquez-Manrique, Cendrine Tourette, Francesca Farina, Nicolas Offner, Arnab Mukhopadhyay, Anne-Marie Orfila, Aurélie Darbois, Sophie Menet, Heidi A. Tissenbaum, and Christian Neri

**12647** *Correction:* The article “Kalirin-7 Is Required for Synaptic Structure and Function” by Xin-Ming Ma, Drew D. Kiraly, Eric D. Gaier, Yanping Wang, Eun-Ji Kim, Eric S. Levine, Betty A. Eipper, and Richard E. Mains appeared on pages 12368–12382 of the November 19, 2008 issue. A correction for that article appears on page 12647.

---

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](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](mailto:jn@sfn.org).