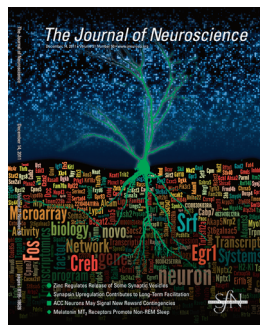


The Journal of Neuroscience

December 14, 2011 • Volume 31 Number 50 • www.jneurosci.org



Cover legend: A representation of the molecular interactions that underlie plasticity processes in hippocampal neurons, as unraveled by transcriptome analysis. The bottom half shows a word cloud (Wordle © 2009 Jonathan Feinberg) of genes downstream of four neuronal activity-regulated transcription factors (CREB, SRF, EGR1, and FOS); the upper half is a scanned microarray image. Both images are superimposed with the dendritic arbor of a cultured hippocampal neuron. For more information, see the article by Benito et al. in this issue (pages 18237–18250).

i This Week in The Journal

Journal Club

- 18195 **Shedding Light on the Role of Ventral Tegmental Area Dopamine in Reward**
Benjamin T. Saunders and Jocelyn M. Richard

Brief Communications

- 18433 **Resolvin D2 Is a Potent Endogenous Inhibitor for Transient Receptor Potential Subtype V1/A1, Inflammatory Pain, and Spinal Cord Synaptic Plasticity in Mice: Distinct Roles of Resolvin D1, D2, and E1**
Chul-Kyu Park, Zhen-Zhong Xu, Tong Liu, Ning Lü, Charles N. Serhan, and Ru-Rong Ji

Articles

CELLULAR/MOLECULAR

- 18211 **Hypoxia-Induced Neonatal Seizures Diminish Silent Synapses and Long-Term Potentiation in Hippocampal CA1 Neurons**
Chengwen Zhou, Jocelyn J. Lippman Bell, Hongyu Sun, and Frances E. Jensen
- 18237 **cAMP Response Element-Binding Protein Is a Primary Hub of Activity-Driven Neuronal Gene Expression**
Eva Benito, Luis M. Valor, Maria Jimenez-Minchan, Wolfgang Huber, and Angel Barco
- 18251 **Vesicular Zinc Regulates the Ca²⁺ Sensitivity of a Subpopulation of Presynaptic Vesicles at Hippocampal Mossy Fiber Terminals**
Nathalie Lavoie, Danny V. Jeyaraju, Modesto R. Peralta III, László Seress, Luca Pellegrini, and Katalin Tóth
- 18275 **Co-compartmentalization of the Astroglial Glutamate Transporter, GLT-1, with Glycolytic Enzymes and Mitochondria**
Elizabeth N. Genda, Joshua G. Jackson, Amanda L. Sheldon, Susannah F. Locke, Todd M. Greco, John C. O'Donnell, Lynn A. Spruce, Rui Xiao, Wensheng Guo, Mary Putt, Steven Seeholzer, Harry Ischiropoulos, and Michael B. Robinson
- 18289 **Active Action Potential Propagation But Not Initiation in Thalamic Interneuron Dendrites**
Amanda E. Casale and David A. McCormick
- 18303 **Essential Role for Phosphatidylinositol 4,5-Bisphosphate in the Expression, Regulation, and Gating of the Slow Afterhyperpolarization Current in the Cerebral Cortex**
Claudio Villalobos, Robert C. Foehring, Jonathan C. Lee, and Rodrigo Andrade

- 18338 **Role of the Glyoxalase System in Astrocyte-Mediated Neuroprotection**
Mireille Bélanger, Jiangyan Yang, Jean-Marie Petit, Thierry Laroche,
Pierre J. Magistretti, and Igor Allaman
- 18353 **Correlated Variations in the Parameters That Regulate Dendritic Calcium Signaling in Mouse Retinal Ganglion Cells**
Andrew J. Gartland and Peter B. Detwiler
- 18453 **Searching for Presynaptic NMDA Receptors in the Nucleus Accumbens**
Yanhua H. Huang, Masago Ishikawa, Brian R. Lee, Nobuki Nakanishi,
Oliver M. Schlüter, and Yan Dong
- 18464 **Induction of Activity-Dependent LTD Requires Muscarinic Receptor Activation in Medial Prefrontal Cortex**
Douglas A. Caruana, E. Clea Warburton, and Zafar I. Bashir
- 18492 **Constitutive Upregulation of Chaperone-Mediated Autophagy in Huntington's Disease**
Hirosi Koga, Marta Martinez-Vicente, Esperanza Arias, Susmita Kaushik,
David Sulzer, and Ana Maria Cuervo
- 18522 **Periodic Organization of a Major Subtype of Pyramidal Neurons in Neocortical Layer V**
Hisato Maruoka, Kazumasa Kubota, Rumi Kurokawa, Shun Tsuruno,
and Toshihiko Hosoya
- 18618 **RPE65 Is Present in Human Green/Red Cones and Promotes Photopigment Regeneration in an *In Vitro* Cone Cell Model**
Peter H. Tang, Mona C. Buhusi, Jian-Xing Ma, and Rosalie K. Crouch

DEVELOPMENT/PLASTICITY/REPAIR

- 18327 **Activity-dependent Increases in Local Oxygen Consumption Correlate with Postsynaptic Currents in the Mouse Cerebellum *In Vivo***
Claus Mathiesen, Kirsten Caesar, Kirsten Thomsen, Tycho M. Hoogland,
Brent M. Witgen, Alexey Brazhe, and Martin Lauritzen
- 18364 **Bidirectional EphrinB3/EphA4 Signaling Mediates the Segregation of Medial Ganglionic Eminence- and Preoptic Area-Derived Interneurons in the Deep and Superficial Migratory Stream**
Geraldine Zimmer, Judith Rudolph, Julia Landmann, Katrin Gerstmann,
André Steinecke, Christin Gampe, and Jürgen Bolz
- 18391 **The BMP Coreceptor RGMB Promotes While the Endogenous BMP Antagonist Noggin Reduces Neurite Outgrowth and Peripheral Nerve Regeneration by Modulating BMP Signaling**
Chi H. E. Ma, Gary J. Brenner, Takao Omura, Omar A. Samad, Michael Costigan,
Perrine Inquimbert, Vera Niederkofler, Rishard Salie, Chia Chi Sun,
Herbert Y. Lin, Silvia Arber, Giovanni Coppola, Clifford J. Woolf,
and Tarek A. Samad
- 18401 **Serotonin-Mediated Synapsin Expression Is Necessary for Long-Term Facilitation of the *Aplysia* Sensorimotor Synapse**
Anne K. Hart, Diasinou Fioravante, Rong-Yu Liu, Gregg A. Phares,
Leonard J. Cleary, and John H. Byrne
- 18543 **Conduction Failure following Spinal Cord Injury: Functional and Anatomical Changes from Acute to Chronic Stages**
Nicholas D. James, Katalin Bartus, John Grist, David L. H. Bennett,
Stephen B. McMahon, and Elizabeth J. Bradbury

18598 **Adaptations in Glutamate and Glycine Content within the Lumbar Spinal Cord Are Associated with the Generation of Novel Gait Patterns in Rats following Neonatal Spinal Cord Transection**

Mary Jo Cantoria, Pamela Anne See, Harmit Singh, and Ray D. de Leon

18606 **Specific Protein Kinase C Isoforms Are Required for Rod Photoreceptor Differentiation**

Carolina Pinzon-Guzman, Samuel Shao-Min Zhang, and Colin J. Barnstable

BEHAVIORAL/SYSTEMS/COGNITIVE

18198 **Neurosteroidogenesis Is Required for the Physiological Response to Stress: Role of Neurosteroid-Sensitive GABA_A Receptors**

Jhimly Sarkar, Seth Wakefield, Georgina MacKenzie, Stephen J. Moss, and Jamie Maguire

18223 **Local Connections of Excitatory Neurons to Corticothalamic Neurons in the Rat Barrel Cortex**

Yasuhiro R. Tanaka, Yasuyo H. Tanaka, Michiteru Konno, Fumino Fujiyama, Takahiro Sonomura, Keiko Okamoto-Furuta, Hiroshi Kameda, Hiroyuki Hioki, Takahiro Furuta, Kouichi C. Nakamura, and Takeshi Kaneko

18266 **Attention for Learning Signals in Anterior Cingulate Cortex**

Daniel W. Bryden, Emily E. Johnson, Steven C. Tobia, Vadim Kashtelyan, and Matthew R. Roesch

18313 **Intrinsic Reference Frames of Superior Colliculus Visuomotor Receptive Fields during Head-Unrestrained Gaze Shifts**

Joseph F. X. DeSouza, Gerald P. Keith, Xiaogang Yan, Gunnar Blohm, Hongying Wang, and J. Douglas Crawford

18381 **The Chemokine CCL2 Increases Na_v1.8 Sodium Channel Activity in Primary Sensory Neurons through a Gβγ-Dependent Mechanism**

Mounir Belkouch, Marc-André Dansereau, Annabelle Réaux-Le Goazigo, Juliette Van Steenwinckel, Nicolas Beaudet, Ahmed Chraïbi, Stéphane Melik-Parsadaniantz, and Philippe Sarret

18412 **Optimizing the Decoding of Movement Goals from Local Field Potentials in Macaque Cortex**

David A. Markowitz, Yan T. Wong, Charles M. Gray, and Bijan Pesaran

18423 **Saccades during Object Viewing Modulate Oscillatory Phase in the Superior Temporal Sulcus**

Adrian M. Bartlett, Shima Ovaysikia, Nikos K. Logothetis, and Kari L. Hoffman

18479 **MAP Kinases Couple Hindbrain-Derived Catecholamine Signals to Hypothalamic Adrenocortical Control Mechanisms during Glycemia-Related Challenges**

Arshad M. Khan, Kimberly L. Kaminski, Graciela Sanchez-Watts, Todd A. Ponzio, J. Brent Kuzmiski, Jaideep S. Bains, and Alan G. Watts

18506 **Local Diversity and Fine-Scale Organization of Receptive Fields in Mouse Visual Cortex**

Vincent Bonin, Mark H. Histed, Sergey Yurgenson, and R. Clay Reid

18556 **Oscillatory Sensory Selection Mechanisms during Intersensory Attention to Rhythmic Auditory and Visual Inputs: A Human Electroencephalographic Investigation**

Manuel Gomez-Ramirez, Simon P. Kelly, Sophie Molholm, Pejman Sehatpour, Theodore H. Schwartz, and John J. Foxe

18578 **Dynamic Reconfiguration of Structural and Functional Connectivity Across Core Neurocognitive Brain Networks with Development**

Lucina Q. Uddin, Kaustubh S. Supekar, Srikanth Ryali, and Vinod Menon

- 18590 **Interactions between “What” and “When” in the Auditory System: Temporal Predictability Enhances Repetition Suppression**
Jordi Costa-Faidella, Torsten Baldeweg, Sabine Grimm, and Carles Escera

NEUROBIOLOGY OF DISEASE

- 18439 **Promotion of Non-Rapid Eye Movement Sleep and Activation of Reticular Thalamic Neurons by a Novel MT₂ Melatonin Receptor Ligand**
Rafael Ochoa-Sanchez, Stefano Comai, Baptiste Lacoste,
Francis Rodriguez Bambico, Sergio Dominguez-Lopez, Gilberto Spadoni,
Silvia Rivara, Annalida Bedini, Debora Angeloni, Franco Fraschini, Marco Mor,
Giorgio Tarzia, Laurent Descarries, and Gabriella Gobbi
- 18568 **Ceruloplasmin Oxidation, a Feature of Parkinson’s Disease CSF, Inhibits Ferroxidase Activity and Promotes Cellular Iron Retention**
Stefano Olivieri, Antonio Conti, Sandro Iannaccone, Carlo V. Cannistraci,
Alessandro Campanella, Marco Barbariga, Franca Codazzi, Ilaria Pelizzoni,
Giuseppe Magnani, Mariasabina Pesca, Diego Franciotta, Stefano F. Cappa,
and Massimo Alessio
- 18627 **Erratum:** The article “A New Prospero and *microRNA-279* Pathway Restricts CO₂ Receptor Neuron Formation” by Marion Hartl, Laura F. Loschek, Daniel Stephan, K. P. Siju, Christiane Knappmeyer, and Ilona C. Grunwald Kadow originally appeared on pages 15660–15673 of the November 2, 2011 issue. An erratum to that article appears on page 18627.

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.