

The Journal of Neuroscience

September 17, 2014 • Volume 34 Number 38 • www.jneurosci.org



Cover legend: Confocal image of a hippocampal neuron grown on a glial cell microisland. The neuron was labeled with anti-MAP2 antibody (red). Blue staining (DAPI) identifies cell nuclei. Autaptic cultures of single hippocampal neurons were used to investigate the effects of intracellular accumulation of amyloid- β protein on glutamatergic synaptic transmission. For more details, see the article by Ripoli et al. (12893–12903).

i This Week in The Journal

Journal Club

- 12617 **BDNF Signaling Potentiates Transmission of Information from the Basolateral Amygdala to Infralimbic Prefrontal Cortex during Conditioned Taste Aversion Extinction**
Adam Kimbrough and Lindsey M. Biggs
- 12619 **Investigating the Rhythm of Attention on a Fine-Grained Scale: Evidence from Reaction Times**
Benedikt Zoefel and Rodika Sokoliuk

Articles

CELLULAR/MOLECULAR

- 12622 **An Alien Divalent Ion Reveals a Major Role for Ca^{2+} Buffering in Controlling Slow Transmitter Release**
Norbert Babai, Olexiy Kochubey, Daniel Keller, and Ralf Schneggenburger
- 12678 **Regulation of Synaptic Extracellular Matrix Composition Is Critical for Proper Synapse Morphology**
Peri T. Kurshan, Allan Q. Phan, George J. Wang, Matthew M. Crane, Hang Lu, and Kang Shen
- 12738 **Structural and Functional Plasticity of Astrocyte Processes and Dendritic Spine Interactions**
Alberto Perez-Alvarez, Marta Navarrete, Ana Covelo, Eduardo D. Martin, and Alfonso Araque
- 12850 **Interactive HIV-1 Tat and Morphine-Induced Synaptodendritic Injury Is Triggered through Focal Disruptions in Na^+ Influx, Mitochondrial Instability, and Ca^{2+} Overload**
Sylvia Fitting, Pamela E. Knapp, Shiping Zou, William D. Marks, M. Scott Bowers, Hamid I. Akbarali, and Kurt F. Hauser
- 12919 **The Recurrent Case for the Renshaw Cell**
Gardave S. Bhumbra, B. Anne Bannatyne, Masahiko Watanabe, Andrew J. Todd, David J. Maxwell, and Marco Beato

DEVELOPMENT/PLASTICITY/REPAIR

- 12745 **Dlg5 Regulates Dendritic Spine Formation and Synaptogenesis by Controlling Subcellular N-Cadherin Localization**
Shih-Hsiu J. Wang, Ivana Celic, Se-Young Choi, Martin Riccomagno, Qiang Wang, Lu O. Sun, Sarah P. Mitchell, Valera Vasioukhin, Richard L. Huganir, and Alex L. Kolodkin

- 12762 **Perineurial Glia Are Essential for Motor Axon Regrowth following Nerve Injury**
Gwendolyn M. Lewis and Sarah Kucenas
- 12778 **LTP and LTD in the Visual Cortex Require the Activation of NOX2**
Roberto De Pasquale, Thiago F. Beckhauser, Marina Sorrentino Hernandez, and Luiz R. Giorgetti Britto
- 12788 **Survival of Neural Stem Cell Grafts in the Lesioned Spinal Cord Is Enhanced by a Combination of Treadmill Locomotor Training via Insulin-Like Growth Factor-1 Signaling**
Dong Hoon Hwang, Hae Young Shin, Min Jung Kwon, Jun Young Choi, Buom-Yong Ryu, and Byung Gon Kim
- 12865 **Hey1 and Hey2 Control the Spatial and Temporal Pattern of Mammalian Auditory Hair Cell Differentiation Downstream of Hedgehog Signaling**
Ana Benito-Gonzalez and Angelika Doetzlhofer
- 12904 **Loss of Glial Neurofascin155 Delays Developmental Synapse Elimination at the Neuromuscular Junction**
Sarah L. Roche, Diane L. Sherman, Kosala Dissanayake, Geneviève Soucy, Anne Desmazieres, Douglas J. Lamont, Elier Peles, Jean-Pierre Julien, Thomas M. Wishart, Richard R. Ribchester, Peter J. Brophy, and Thomas H. Gillingwater

SYSTEMS/CIRCUITS

- 12636 **Central Vagal Afferent Endings Mediate Reduction of Food Intake by Melanocortin-3/4 Receptor Agonist**
Carlos A. Campos, Hiroko Shiina, and Robert C. Ritter
- 12662 **Control of Spoken Vowel Acoustics and the Influence of Phonetic Context in Human Speech Sensorimotor Cortex**
Kristofer E. Bouchard and Edward F. Chang
- 12690 **Serotonin Affects Movement Gain Control in the Spinal Cord**
Kunlin Wei, Joshua I. Glaser, Linna Deng, Christopher K. Thompson, Ian H. Stevenson, Qining Wang, Thomas George Hornby, Charles J. Heckman, and Konrad P. Kording
- 12884 **Spatial and Temporal Eye-Hand Coordination Relies on the Parietal Reach Region**
Eun Jung Hwang, Markus Hauschild, Melanie Wilke, and Richard A. Andersen
- 12933 **The Frequency Preference of Neurons and Synapses in a Recurrent Oscillatory Network**
Hua-an Tseng, Diana Martinez, and Farzan Nadim (فرزان نديم)

BEHAVIORAL/COGNITIVE

- 12646 **Emergent Exploration via Novelty Management**
Goren Gordon, Ehud Fonio, and Ehud Ahissar
- 12701 **The Visual Input to the Retina during Natural Head-Free Fixation**
Murat Aytakin, Jonathan D. Victor, and Michele Rucci
- 12801 **Neurons in Macaque Inferior Temporal Cortex Show No Surprise Response to Deviants in Visual Oddball Sequences**
Dzmitry A. Kaliukhovich and Rufin Vogels
- 12828 **Electrical Stimulation of the Left and Right Human Fusiform Gyrus Causes Different Effects in Conscious Face Perception**
Vinitha Rangarajan, Dora Hermes, Brett L. Foster, Kevin S. Weiner, Corentin Jacques, Kalanit Grill-Spector, and Josef Parvizi

- 12837 **Two Distinct Interneuron Circuits in Human Motor Cortex Are Linked to Different Subsets of Physiological and Behavioral Plasticity**
Masashi Hamada, Joseph M. Galea, Vincenzo Di Lazzaro, Paolo Mazzone, Ulf Ziemann, and John C. Rothwell

NEUROBIOLOGY OF DISEASE

- 12716 **Enhanced Endocannabinoid-Mediated Modulation of Rostromedial Tegmental Nucleus Drive onto Dopamine Neurons in Sardinian Alcohol-Preferring Rats**
Miriam Melis, Claudia Sgheddu, Marta De Felice, Alberto Casti, Camilla Madeddu, Saturnino Spiga, Anna Lisa Muntoni, Kenneth Mackie, Giovanni Marsicano, Giancarlo Colombo, Maria Paola Castelli, and Marco Pistis
- 12725 **MicroRNA-7 Protects against 1-Methyl-4-Phenylpyridinium-Induced Cell Death by Targeting RelA**
Doo Chul Choi, Yoon-Jee Chae, Savan Kabaria, Amrita Datta Chaudhuri, Mohit Raja Jain, Hong Li, M. Maral Mouradian, and Eunsung Junn
- 12816 **Beta-Coupled High-Frequency Activity and Beta-Locked Neuronal Spiking in the Subthalamic Nucleus of Parkinson's Disease**
Andrew I. Yang, Nora Vanegas, Codrin Lungu, and Kareem A. Zaghoul
- 12877 **Cell-Type-Specific Repression by Methyl-CpG-Binding Protein 2 Is Biased toward Long Genes**
Ken Sugino, Chris M. Hempel, Benjamin W. Okaty, Hannah A. Arnson, Saori Kato, Vardhan S. Dani, and Sacha B. Nelson
- 12893 **Intracellular Accumulation of Amyloid- β ($A\beta$) Protein Plays a Major Role in $A\beta$ -Induced Alterations of Glutamatergic Synaptic Transmission and Plasticity**
Cristian Ripoli, Sara Cocco, Domenica D. Li Puma, Roberto Piacentini, Alessia Mastrodonato, Federico Scala, Daniela Puzzo, Marcello D'Ascenzo, and Claudio Grassi

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.