

JNeurosci

THE JOURNAL OF NEUROSCIENCE

January 24, 2018 • Volume 38 Number 4 • www.jneurosci.org



Cover legend: This image shows immature neurons in layer II of sheep cerebral cortex. Neurons labelled in red express the cytoskeletal protein Doublecortin, typically found in immature or newly-generated cells.

The marker of mature neurons HuC/D (green) is present in several nerve cells of the same layer, and shows a faint immunoreactivity only in a subset of Doublecortin-positive cells, thus indicating the existence of different degrees of immaturity. Neurons generated embryonically but remaining immature in adults are particularly abundant in large-brained, long-living mammals such as sheep. For more information see the article by Piumatti et al. (pages 826–842).

i This Week in The Journal

Dual Perspectives

- 767 **How Forces Fold the Cerebral Cortex**
Christopher D. Kroenke and Philip V. Bayly
- 776 **How Cells Fold the Cerebral Cortex**
Víctor Borrell

Journal Club

- 784 **Readiness Potential and Neuronal Determinism: New Insights on Libet Experiment**
Karim Fifel

Research Articles

CELLULAR/MOLECULAR

- 787 **The Protein Tyrosine Phosphatase Shp2 Regulates Oligodendrocyte Differentiation and Early Myelination and Contributes to Timely Remyelination**
Jared T. Ahrends, Danielle E. Harlow, Lisbet T. Finseth, Jennifer N. Bourne, Sean P. Hickey, Elizabeth A. Gould, Cecilia M. Culp, and Wendy B. Macklin
- 843 **ELMOD1 Stimulates ARF6-GTP Hydrolysis to Stabilize Apical Structures in Developing Vestibular Hair Cells**
Jocelyn F. Krey, Rachel A. Dumont, Philip A. Wilmarth, Larry L. David, Kenneth R. Johnson, and Peter G. Barr-Gillespie
- 887 **Orai1 Plays a Crucial Role in Central Sensitization by Modulating Neuronal Excitability**
Yannong Dou, Jingsheng Xia, Ruby Gao, Xinghua Gao, Frances M. Munoz, Dongyu Wei, Yuzhen Tian, James E. Barrett, Seena Ajit, Olimpia Meucci, James W. Putney Jr, Yue Dai, and Huijuan Hu
- 901 **Proteolytic Processing of Neurexins by Presenilins Sustains Synaptic Vesicle Release**
Emilia Servián-Morilla, Estefanía Robles-Lanuza, Ana C. Sánchez-Hidalgo, Rafael J. Camacho-García, Juan A. Paez-Gomez, Fabiola Mavillard, Carlos A. Saura, Amalia Martínez-Mir, and Francisco G. Scholl
- 937 **Neuronal Glutamate Transporters Control Dopaminergic Signaling and Compulsive Behaviors**
Stefania Bellini, Kelsey E. Fleming, Modhurika De, John P. McCauley, Maurice A. Petroccione, Lianna Y. D'Brant, Artem Tkachenko, SoYoung Kwon, Lindsey A. Jones, and Annalisa Scimemi

DEVELOPMENT/PLASTICITY/REPAIR

- 814 **Synaptic Regulator α -Synuclein in Dopaminergic Fibers Is Essentially Required for the Maintenance of Subependymal Neural Stem Cells**
Ana Perez-Villalba, M. Salomé Sirerol-Piquer, Germán Belenguer, Raúl Soriano-Cantón, Ana Belén Muñoz-Manchado, Javier Villadiego, Diana Alarcón-Arís, Federico N. Soria, Benjamin Dehay, Erwan Bezar, Miquel Vila, Analia Bortolozzi, Juan José Toledo-Aral, Francisco Pérez-Sánchez, and Isabel Fariñas
- 826 **Non-Newly Generated, “Immature” Neurons in the Sheep Brain Are Not Restricted to Cerebral Cortex**
Matteo Piumatti, Ottavia Palazzo, Chiara La Rosa, Paola Crociara, Roberta Parolisi, Federico Luzzati, Frederic Lévy, and Luca Bonfanti

SYSTEMS/CIRCUITS

- 878 **Early Procedural Pain Is Associated with Regionally-Specific Alterations in Thalamic Development in Preterm Neonates**
Emma G. Duerden, Ruth E. Grunau, Ting Guo, Justin Foong, Alexander Pearson, Stephanie Au-Young, Raphael Lavoie, M. Mallar Chakravarty, Vann Chau, Anne Synnes, and Steven P. Miller
- 989 **A Unifying Motif for Spatial and Directional Surround Suppression**
Liu D. Liu, Kenneth D. Miller, and Christopher C. Pack

BEHAVIORAL/COGNITIVE

- 962 **Causal Evidence for Learning-Dependent Frontal Lobe Contributions to Cognitive Control**
Paul S. Muhle-Karbe, Jiefeng Jiang, and Tobias Egner
- 974 **A Computational Account of Optimizing Social Predictions Reveals That Adolescents Are Conservative Learners in Social Contexts**
Gabriela Rosenblau, Christoph W. Korn, and Kevin A. Pelphrey

NEUROBIOLOGY OF DISEASE

- 803 **Overexpression of the Histone Dimethyltransferase G9a in Nucleus Accumbens Shell Increases Cocaine Self-Administration, Stress-Induced Reinstatement, and Anxiety**
Ethan M. Anderson, Erin B. Larson, Daniel Guzman, Anne Marie Wissman, Rachael L. Neve, Eric J. Nestler, and David W. Self
- 858 **Miz1 Controls Schwann Cell Proliferation via H3K36^{me2} Demethylase Kdm8 to Prevent Peripheral Nerve Demyelination**
David Fuhrmann, Marco Mernberger, Andrea Nist, Thorsten Stiewe, and Hans-Peter Elsässer
- 918 **Common Pathophysiology in Multiple Mouse Models of Pitt-Hopkins Syndrome**
Courtney Thaxton, Alexander D. Kloth, Ellen P. Clark, Sheryl S. Moy, Raymond A. Chitwood, and Benjamin D. Philpot
- 1000 **Combined Active Humoral and Cellular Immunization Approaches for the Treatment of Synucleinopathies**
Edward Rockenstein, Gary Ostroff, Fusun Dikengil, Florentina Rus, Michael Mante, Jazmin Florio, Anthony Adame, Ivy Trinh, Changyou Kim, Cassia Overk, Eliezer Masliah, and Robert A. Rissman
- 1015 **Insulin-Like Growth Factor II Targets the mTOR Pathway to Reverse Autism-Like Phenotypes in Mice**
Adam B. Steinmetz, Sarah A. Stern, Amy S. Kohtz, Giannina Descalzi, and Cristina M. Alberini

- 1030** **FK506-Binding Protein 12.6/1b, a Negative Regulator of [Ca²⁺], Rescues Memory and Restores Genomic Regulation in the Hippocampus of Aging Rats**
John C. Gant, Eric M. Blalock, Kuey-Chu Chen, Inga Kadish, Olivier Thibault, Nada M. Porter, and Philip W. Landfield
- 1042** **Lack of Parkin Anticipates the Phenotype and Affects Mitochondrial Morphology and mtDNA Levels in a Mouse Model of Parkinson's Disease**
Milena Pinto, Nadee Nissanka, and Carlos T. Moraes
- 1054** **Erratum:** The article "Cold-Induced Thermogenesis and Inflammation-Associated Cold-Seeking Behavior are Represented by Different Dorsomedial Hypothalamic Sites: A Three-Dimensional Functional Topography Study in Conscious Rats" by Samuel P. Wanner, M. Camila Almeida, Yury P. Shimansky, Daniela L. Oliveira, Justin R. Eales, Cândido C. Coimbra, and Andrej A. Romanovsky, appeared on pages 6956–6971 of the July 19, 2017 issue. An erratum for this article appears on p. 1054.
- 1054** **Erratum:** The article "Conditional Deletion of *Ric-8b* in Olfactory Sensory Neurons Leads to Olfactory Impairment" by Cleiton F. Machado, Maira H. Nagai, Cassandra S. Lyra, Thiago M. Reis-Silva, André M. Machado, Isaias Glezer, Luciano F. Felício, and Bettina Malnic, appeared on pages 12202–12213 of the December 13, 2017 issue. An erratum for this article appears on p. 1054.

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/content/information-authors>. Authors should refer to these Instructions online for recent changes that are made periodically.

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; e-mail, jn@sfn.org.