



Cover legend: This image shows the differential distributions of endogenous mouse (yellow) and exogenous human tau (blue) in the hippocampal dentate gyrus of a transgenic mouse. Endogenous tau is abundantly expressed in mossy fiber axons, the cell bodies of newborn neurons in the inner granule cell layer, and in oligodendrocytes, but the cell bodies of mature granule cells are void of immunolabeling. In contrast, human tau expressed under an ectopic promoter is abundant in the cell bodies of mature granule neurons, but not in newborn neurons. Human tau mislocalizes to the cell bodies when the expression is maintained in mature neurons. This could explain how tau forms pathological inclusions in cell bodies in neurodegenerative disorders. For more information, see the article by Kubo et al. (pages 6781–6797).

6609 This Week in The Journal

Journal Club

- 6610 **Nucleus Accumbens Dopamine Receptor 1 Expressing Neurons Are Instrumental in Appetitive Aggression**
Martyna Panasiuk, Alexandra Hertz, and Oliver Gale-Grant

Research Articles

CELLULAR/MOLECULAR

- 6613 **Sleep Deprivation by Exposure to Novel Objects Increases Synapse Density and Axon–Spine Interface in the Hippocampal CA1 Region of Adolescent Mice**
Giovanna Maria Spano, Sebastian Weyn Banningh, William Marshall, Luisa de Vivo, Michele Bellesi, Sophia S. Loschky, Giulio Tononi, and Chiara Cirelli
- 6626 **Sensorimotor Coding of Vermal Granule Neurons in the Developing Mammalian Cerebellum**
Kelly H. Markwalter, Yue Yang, Timothy E. Holy, and Azad Bonni

DEVELOPMENT/PLASTICITY/REPAIR

- 6644 **β 1-Integrins in the Developing Orbitofrontal Cortex Are Necessary for Expectancy Updating in Mice**
Lauren M. DePoy, Lauren P. Shapiro, Henry W. Kietzman, Kaitlyn M. Roman, and Shannon L. Gourley
- 6656 **Axonal Growth of Midbrain Dopamine Neurons is Modulated by the Cell Adhesion Molecule ALCAM Through *Trans*-Heterophilic Interactions with L1cam, Chl1, and Semaphorins**
Christopher R. Bye, Valeria Rytova, Walaa F. Alsanie, Clare L. Parish, and Lachlan H. Thompson

SYSTEMS/CIRCUITS

- 6668 **Individual Neurons in the Cingulate Cortex Encode Action Monitoring, Not Selection, during Adaptive Decision-Making**
Yin S. Li, Matthew R. Nassar, Joseph W. Kable, and Joshua I. Gold
- 6684 **The Multiple Representations of Complex Digit Movements in Primary Motor Cortex Form the Building Blocks for Complex Grip Types in Capuchin Monkeys**
Andrei Mayer, Mary K.L. Baldwin, Dylan F. Cooke, Bruss R. Lima, Jeffrey Padberg, Gabriela Lewenfus, João G. Franca, and Leah Krubitzer
- 6696 **Mammillothalamic Disconnection Alters Hippocampocortical Oscillatory Activity and Microstructure: Implications for Diencephalic Amnesia**
Christopher M. Dillingham, Michal M. Milczarek, James C. Perry, Bethany E. Frost, Greg D. Parker, Yaniv Assaf, Frank Sengpiel, Shane M. O'Mara, and Seralynne D. Vann

BEHAVIORAL/COGNITIVE

- 6714 **Predicting Perceptual Decisions Using Visual Cortical Population Responses and Choice History**
Anna Ivic Jasper, Seiji Tanabe, and Adam Kohn
- 6728 **Targeted Memory Reactivation during Sleep Elicits Neural Signals Related to Learning Content**
Boyu Wang, James W. Antony, Sarah Lurie, Paula P. Brooks, Ken A. Paller, and Kenneth A. Norman
- 6737 **Dual Process Coding of Recalled Locations in Human Oscillatory Brain Activity**
Mary H. MacLean, Tom Bullock, and Barry Giesbrecht
- 6751 **Visual Feedback Processing of the Limb Involves Two Distinct Phases**
Kevin P. Cross, Tyler Cluff, Tomohiko Takei, and Stephen H. Scott

NEUROBIOLOGY OF DISEASE

- 6766 **Deficits in Enrichment-Dependent Neurogenesis and Enhanced Anxiety Behaviors Mediated by Expression of Alzheimer's Disease-Linked Ps1 Variants Are Rescued by Microglial Depletion**
Sylvia Ortega-Martinez, Nisha Palla, Xiaoqiong Zhang, Erin Lipman, and Sangram S. Sisodia
- 6781 **Ectopic Expression Induces Abnormal Somatodendritic Distribution of Tau in the Mouse Brain**
Atsuko Kubo, Shouyou Ueda, Ayaka Yamane, Satoko Wada-Kakuda, Mai Narita, Makoto Matsuyama, Akane Nomori, Akihiko Takashima, Taisuke Kato, Osamu Onodera, Motohito Goto, Mamoru Ito, Takami Tomiyama, Hiroshi Mori, Shigeo Murayama, Yasuo Ihara, Hiroaki Misonou, and Tomohiro Miyasaka
- 6798 **Activation of Rod Input in a Model of Retinal Degeneration Reverses Retinal Remodeling and Induces Formation of Functional Synapses and Recovery of Visual Signaling in the Adult Retina**
Tian Wang, Johan Pahlberg, Jon Cafaro, Rikard Frederiksen, A.J. Cooper, Alapakkam P. Sampath, Greg D. Field, and Jeannie Chen
- 6811 **Erratum:** The article "*In Vivo* Submillisecond Two-Photon Optogenetics with Temporally Focused Patterned Light," by I-Wen Chen, Emiliano Ronzitti, Brian R. Lee, Tanya L. Daigle, Deniz Dalkara, Hongkui Zeng, Valentina Emiliani, and Eirini Papagiakoumou, appeared on pages 3484–3497 of the May 1, 2019 issue. An erratum for this article appears on p. 6811.
- 6812 **Erratum:** The article " α 2A-Adrenergic Receptor Activation Decreases Parabrachial Nucleus Excitatory Drive onto BNST CRF Neurons and Reduces Their Activity *In Vivo*," by Tracy L. Fetterly, Aakash Basu, Brett P. Nabit, Elias Awad, Kellie M. Williford, Samuel W. Centanni, Robert T. Matthews, Yuval Silberman, and Danny G. Winder, appeared on pages 472–484 of the January 16, 2019 issue. An erratum for this article appears on p. 6812.

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