



**Cover legend:** This image shows accumulation of polyglutamine-expanded ATXN7 (red) in CALB1-immunostained Purkinje neurons (green) in cerebellum in a mouse model of spinocerebellar ataxia type 7. This abnormal accumulation leads to the progressive downregulation of 83 Purkinje identity genes critical for spontaneous firing activity and synaptic functions. For more information, see the article by Niewiadomska-Cimicka et al. (pages 4910–4936). Cover image: Anna Niewiadomska-Cimicka.

## 4749 This Week in The Journal

### Journal Club

- 4750 **Challenges in Understanding the Role of Reactivation in Modifying Hippocampal Representations**  
Hannah Tarder-Stoll, Camille Gasser, Wangjing Yu, and Halle R. Dimsdale-Zucker

### Research Articles

#### CELLULAR/MOLECULAR

- 4754 **The Integrin Signaling Network Promotes Axon Regeneration via the Src–Ephexin–RhoA GTPase Signaling Axis**  
Yoshiki Sakai, Mayuka Tsunekawa, Kohei Ohta, Tatsuhiro Shimizu, Strahil Iv. Pastuhov, Hiroshi Hanafusa, Naoki Hisamoto, and Kunihiko Matsumoto
- 4768 **Astrocytic IGF-IRs Induce Adenosine-Mediated Inhibitory Downregulation and Improve Sensory Discrimination**  
José Antonio Noriega-Prieto, Laura Eva Maglio, Jonathan A. Zegarra-Valdivia, Jaime Pignatelli, Ana M. Fernandez, Laura Martinez-Rachadell, Jansen Fernandes, Ángel Núñez, Alfonso Araque, Ignacio Torres-Alemán, and David Fernández de Sevilla
- 4782 **UNC-2 CaV2 Channel Localization at Presynaptic Active Zones Depends on UNC-10/RIM and SYD-2/Liprin- $\alpha$  in *Caenorhabditis elegans***  
Kelly H. Oh, Mia D. Krout, Janet E. Richmond, and Hongkyun Kim

#### DEVELOPMENT/PLASTICITY/REPAIR

- 4795 **Mutually Repulsive EphA7–EfnA5 Organize Region-to-Region Corticopontine Projection by Inhibiting Collateral Extension**  
Tokuichi Iguchi, Yuichiro Oka, Misato Yasumura, Minoru Omi, Kazuki Kuroda, Hideshi Yagi, Min-Jue Xie, Manabu Taniguchi, Martin Bastmeyer, and Makoto Sato

#### SYSTEMS/CIRCUITS

- 4809 **Modular Network between Postrhinal Visual Cortex, Amygdala, and Entorhinal Cortex**  
Andrew M. Meier, Quanxin Wang, Weiqing Ji, Jehan Ganachaud, and Andreas Burkhalter
- 4826 **Interactions of Whisking and Touch Signals in the Rat Brainstem**  
Coralie Ebert, Knarik Bagdasarian, Sebastian Haidarliu, Ehud Ahissar, and Avner Wallach

- 4840 Reciprocal Lateral Hypothalamic and Raphe GABAergic Projections Promote Wakefulness**  
Mary Gazea, Szabina Furdan, Péter Sere, Lukas Oesch, Benedek Molnár, Giuseppe Di Giovanni, Lief E. Fenno, Charu Ramakrishnan, Joanna Mattis, Karl Deisseroth, Susan M. Dymecki, Antoine R. Adamantidis, and Magor L. Lórinicz
- 4850 Variable Branching Characteristics of Peripheral Taste Neurons Indicates Differential Convergence**  
Tao Huang, Lisa C. Ohman, Anna V. Clements, Zachary D. Whiddon, and Robin F. Krimm
- 4867 Only the Fastest Corticospinal Fibers Contribute to  $\beta$  Corticomuscular Coherence**  
J. Ibáñez, A. Del Vecchio, J.C. Rothwell, S. N. Baker, and D. Farina

#### BEHAVIORAL/COGNITIVE

- 4880 Memory Destabilization and Reconsolidation Dynamically Regulate the PKM $\zeta$  Maintenance Mechanism**  
Matteo Bernabo, Josue Haubrich, Karine Gamache, and Karim Nader
- 4889 Behavioral and Neuronal Representation of Numerosity Zero in the Crow**  
Maximilian E. Kirschhock, Helen M. Ditz, and Andreas Nieder
- 4897 Brain Coding of Social Network Structure**  
Michael Peer, Mordechai Hayman, Bar Tamir, and Shahar Arzy

#### NEUROBIOLOGY OF DISEASE

- 4910 SCA7 Mouse Cerebellar Pathology Reveals Preferential Downregulation of Key Purkinje Cell-Identity Genes and Shared Disease Signature with SCA1 and SCA2**  
Anna Niewiadomska-Cimicka, Frédéric Doussau, Jean-Baptiste Perot, Michel J. Roux, Celine Keime, Antoine Hache, Françoise Piguet, Ariana Novati, Chantal Weber, Binnaz Yalcin, Hamid Meziane, Marie-France Champy, Erwan Grandgirard, Alice Karam, Nadia Messaddeq, Aurélie Eisenmann, Emmanuel Brouillet, Hoa Huu Phuc Nguyen, Julien Flament, Philippe Isope, and Yvon Trottier
- 4937 VGLUT2 Is a Determinant of Dopamine Neuron Resilience in a Rotenone Model of Dopamine Neurodegeneration**  
Silas A. Buck, Briana R. De Miranda, Ryan W. Logan, Kenneth N. Fish, J. Timothy Greenamyre, and Zachary Freyberg

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