



Cover legend: This image shows amyloid plaques (blue, methoxy-X04) surrounded by dystrophic, swollen axons that accumulate lysosome precursors (green, anti-Lamp1) in cortex of a mouse model of Alzheimer's disease (PS2APP mouse). Microglia (red, anti-Iba1) also cluster around the plaques and limit axonal damage. Loss of TREM2, a gene linked to Alzheimer's disease risk and expressed by microglia, elevates the level of soluble A β in its toxic forms and exacerbates the axonal damage. For more information, see the article by Meilandt et al. (pages 1956–1974).

1789 This Week in The Journal

Journal Club

1790 **Two Routes to Incidental Memory under Arousal: Dopamine and Norepinephrine**
John Thorp, David Clewett, and Monika Riegel

1793 **Heterosynaptic Plasticity in Cortical Interneurons**
Léa Caya-Bissonnette

Research Articles

CELLULAR/MOLECULAR

1795 **The Origin of Physiological Local mGluR1 Supralinear Ca²⁺ Signals in Cerebellar Purkinje Neurons**
Karima Ait Ouares and Marco Canepari

DEVELOPMENT/PLASTICITY/REPAIR

1810 **Longitudinal Development of Brain Iron Is Linked to Cognition in Youth**
Bart Larsen, Josiane Bourque, Tyler M. Moore, Azeez Adebimpe, Monica E. Calkins, Mark A. Elliott, Ruben C. Gur, Raquel E. Gur, Paul J. Moberg, David R. Roalf, Kosha Ruparel, Bruce I. Turetsky, Simon N. Vandekar, Daniel H. Wolf, Russell T. Shinohara, and Theodore D. Satterthwaite

1819 **Conserved Tao Kinase Activity Regulates Dendritic Arborization, Cytoskeletal Dynamics, and Sensory Function in *Drosophila***
Chun Hu, Alexandros K. Kanellopoulos, Melanie Richter, Meike Petersen, Anja Konietzny, Federico M. Tenedini, Nina Hoyer, Lin Cheng, Carole L.C. Poon, Kieran F. Harvey, Sabine Windhorst, Jay Z. Parrish, Marina Mikhaylova, Claudia Bagni, Froylan Calderon de Anda, and Peter Soba

SYSTEMS/CIRCUITS

1834 **Spatial Arrangement Drastically Changes the Neural Representation of Multiple Visual Stimuli That Compete in More Than One Feature Domain**
Steven Wiesner, Ian W. Baumgart, and Xin Huang

1849 **Repeated Exposure to Multiple Concurrent Stresses Induce Circuit Specific Loss of Inputs to the Posterior Parietal Cortex**
Yaaqov Libovner, Mona Fariborzi, Daim Tabba, Ali Ozgur, Tamara Jafar, and Gyorgy Lur

- 1862 **Unique Spatial Integration in Mouse Primary Visual Cortex and Higher Visual Areas**
Kevin A. Murgas, Ashley M. Wilson, Valerie Michael, and Lindsey L. Glickfeld
- 1874 **Neural Mechanisms Underlying High-Frequency Vestibulocollic Reflexes In Humans And Monkeys**
Patrick A. Forbes, Annie Kwan, Brandon G. Rasman, Diana E. Mitchell, Kathleen E. Cullen, and Jean-Sébastien Blouin
- 1888 **Phase-Specific Motor Efference during a Rhythmic Motor Pattern**
Ignacio Alonso, Agustín Sanchez Merlinsky, and Lidia Szczupak

BEHAVIORAL/COGNITIVE

- 1897 **Vaporized Cannabis Extracts Have Reinforcing Properties and Support Conditioned Drug-Seeking Behavior in Rats**
Timothy G. Freels, Lydia N. Baxter-Potter, Janelle M. Lugo, Nicholas C. Glodosky, Hayden R. Wright, Samantha L. Baglot, Gavin N. Petrie, Zhihao Yu, Brian H. Clowers, Carrie Cuttler, Rita A. Fuchs, Matthew N. Hill, and Ryan J. McLaughlin
- 1909 **Sleep Spindles Promote the Restructuring of Memory Representations in Ventromedial Prefrontal Cortex through Enhanced Hippocampal–Cortical Functional Connectivity**
Emily Cowan, Anli Liu, Simon Henin, Sanjeev Kothare, Orrin Devinsky, and Lila Davachi
- 1920 **Cortical Overlap and Cortical-Hippocampal Interactions Predict Subsequent True and False Memory**
Erik A. Wing, Benjamin R. Geib, Wei-Chun Wang, Zachary Monge, Simon W. Davis, and Roberto Cabeza

NEUROBIOLOGY OF DISEASE

- 1931 **Longitudinal Basal Forebrain Degeneration Interacts with TREM2/C3 Biomarkers of Inflammation in Presymptomatic Alzheimer’s Disease**
Taylor W. Schmitz, Hermona Soreq, Judes Poirier, and R. Nathan Spreng
- 1943 **Elevated TRPV4 Levels Contribute to Endothelial Damage and Scarring in Experimental Spinal Cord Injury**
Hemant Kumar, Chang Su Lim, Hyemin Choi, Hari Prasad Joshi, Kyoung-Tae Kim, Yong Ho Kim, Chul-Kyu Park, Hwan Myung Kim, and In-Bo Han
- 1956 **Trem2 Deletion Reduces Late-Stage Amyloid Plaque Accumulation, Elevates the A β 42:A β 40 Ratio, and Exacerbates Axonal Dystrophy and Dendritic Spine Loss in the PS2APP Alzheimer’s Mouse Model**
William J. Meilandt, Hai Ngu, Alvin Gogineni, Guita Lalehzadeh, Seung-Hye Lee, Karpagam Srinivasan, Jose Imperio, Tiffany Wu, Martin Weber, Agatha J. Kruse, Kimberly L. Stark, Pamela Chan, Mandy Kwong, Zora Modrusan, Brad A. Friedman, Justin Elstrott, Oded Foreman, Amy Easton, Morgan Sheng, and David V. Hansen
- 1975 **Mitochondrial Dysfunction Combined with High Calcium Load Leads to Impaired Antioxidant Defense Underlying the Selective Loss of Nigral Dopaminergic Neurons**
Konrad M. Ricke, Thomas Paß, Sammy Kimoloi, Kai Fahrman, Christian Jüngst, Astrid Schauss, Olivier R. Baris, Marijana Aradjanski, Aleksandra Trifunovic, Therese M. Eriksson Faelker, Matteo Bergami, and Rudolf J. Wiesner

1987 **Erratum:** The article “Moment-to-Moment BOLD Signal Variability Reflects Regional Changes in Neural Flexibility across the Lifespan,” by Jason S. Nomi, Taylor S. Bolt, C.E. Chiemeka Ezie, Lucina Q. Uddin, and Aaron S. Heller, appeared on pages 5539–5548 of the May 31, 2017 issue. An erratum for this article appears on pp. 1975–1980.

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