



Cover legend: Reconstruction of a cluster of seven simultaneously recorded neurons in the subthalamic nucleus. Dendrites and somata of each cell are a different color, but axons of all cells are red. New work shows that subthalamic nucleus neurons operate as independent and parallel processing units. For more information, see the article by Steiner et al. (pages 2470–2481).

2365 This Week in The Journal

Journal Club

- 2366 **Intricate Interplay between Innate Immune Cells and TRPM2 in a Mouse Model of Multiple Sclerosis**
Céline Caravagna

Research Articles

CELLULAR/MOLECULAR

- 2369 **Lactate Mediates the Effects of Exercise on Learning and Memory through SIRT1-Dependent Activation of Hippocampal Brain-Derived Neurotrophic Factor (BDNF)**
Lauretta El Hayek, Mohamad Khalifeh, Victor Zibara, Rawad Abi Assaad, Nancy Emmanuel, Nabil Karnib, Rim El-Ghandour, Patrick Nasrallah, Maria Bilen, Pascale Ibrahim, Joe Younes, Edwina Abou Haidar, Nour Barmo, Vanessa Jabre, Joseph S. Stephan, and Sama F. Sleiman
- 2383 **Hyperexcitability and Hyperplasticity Disrupt Cerebellar Signal Transfer in the *IB2* KO Mouse Model of Autism**
Teresa Soda, Lisa Mapelli, Francesca Locatelli, Laura Botta, Mitchell Goldfarb, Francesca Prestori, and Egidio D'Angelo

DEVELOPMENT/PLASTICITY/REPAIR

- 2398 **The Ciliopathy Gene *Ftm/Rpgrip11* Controls Mouse Forebrain Patterning via Region-Specific Modulation of Hedgehog/Gli Signaling**
Abraham Andreu-Cervera, Isabelle Anselme, Alice Karam, Christine Laclef, Martin Catala, and Sylvie Schneider-Maunoury
- 2416 **Endogenous Tagging Reveals Differential Regulation of Ca²⁺ Channels at Single Active Zones during Presynaptic Homeostatic Potentiation and Depression**
Scott J. Gratz, Pragma Goel, Joseph J. Bruckner, Roberto X. Hernandez, Karam Khateeb, Gregory T. Macleod, Dion Dickman, and Kate M. O'Connor-Giles
- 2430 **Deep Brain Stimulation Rescues Memory and Synaptic Activity in a Rat Model of Global Ischemia**
Elise Gondard, Lucy Teves, Lihua Wang, Chris McKinnon, Clement Hamani, Suneil K. Kalia, Peter L. Carlen, Michael Tymianski, and Andres M. Lozano
- 2441 **Conditional BDNF Delivery from Astrocytes Rescues Memory Deficits, Spine Density, and Synaptic Properties in the 5xFAD Mouse Model of Alzheimer Disease**
Benoit de Pins, Carmen Cifuentes-Díaz, Amel Thamila Farah, Laura López-Molina, Enrica Montalban, Anna Sancho-Balsells, Ana López, Silvia Ginés, José María Delgado-García, Jordi Alberch, Agnès Gruart, Jean-Antoine Girault, and Albert Giralt

SYSTEMS/CIRCUITS

- 2459 **Ethanol Experience Enhances Glutamatergic Ventral Hippocampal Inputs to D1 Receptor-Expressing Medium Spiny Neurons in the Nucleus Accumbens Shell**
Daniel M. Kircher, Heather C. Aziz, Regina A. Mangieri,
and Richard A. Morrisett
- 2470 **Connectivity and Dynamics Underlying Synaptic Control of the Subthalamic Nucleus**
Leon Amadeus Steiner, Federico J. Barreda Tomás, Henrike Planert, Henrik Alle,
Imre Vida, and Jörg R.P. Geiger

BEHAVIORAL/COGNITIVE

- 2482 **Nucleus Accumbens Drd1-Expressing Neurons Control Aggression Self-Administration and Aggression Seeking in Mice**
Sam A. Golden, Michelle Jin, Conor Heins, Marco Venniro, Michael Michaelides,
and Yavin Shaham
- 2497 **Cognitive Control of Saccadic Selection and Inhibition from within the Core Cortical Saccadic Network**
Andreas Jarvstad and Iain D. Gilchrist
- 2509 **An Essential Role of the Intraparietal Sulcus in Response Inhibition Predicted by Parcellation-Based Network**
Takahiro Osada, Shinri Ohta, Akitoshi Ogawa, Masaki Tanaka, Akimitsu Suda,
Koji Kamagata, Masaaki Hori, Shigeki Aoki, Yasushi Shimo, Nobutaka Hattori,
Takahiro Shimizu, Hiroyuki Enomoto, Ritsuko Hanajima, Yoshikazu Ugawa,
and Seiki Konishi
- 2522 **Insensitivity of Place Cells to the Value of Spatial Goals in a Two-Choice Flexible Navigation Task**
Éléonore Duvelle, Roddy M. Grieves, Vincent Hok, Bruno Poucet, Angelo Arleo,
Kate J. Jeffery, and Etienne Save

NEUROBIOLOGY OF DISEASE

- 2542 **P2X7 Receptors Drive Poly(I:C) Induced Autism-like Behavior in Mice**
Gergely Horváth, Lilla Otrókocsi, Katinka Beko, Mária Baranyi, Ágnes Kittel,
Pablo Antonio Fritz-Ruenes, and Beáta Sperlág
- 2562 **Genome-Wide Association Studies of Impulsive Personality Traits (BIS-11 and UPPS-P) and Drug Experimentation in up to 22,861 Adult Research Participants Identify Loci in the *CACNA1I* and *CADM2* genes**
Sandra Sanchez-Roige, Pierre Fontanillas, Sarah L. Elson, Joshua C. Gray,
Harriet de Wit, James MacKillop, and Abraham A. Palmer

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