Cover legend: Three-dimensional model of the brain showing regions of increased volume in the insula, cerebellar vermis, and substantia nigra in individuals with genetic predisposition for bipolar disorder. The image has been reformatted in a style inspired by Vincent van Gogh, the most famous painter with bipolar disorder. For more information, see the article by Kempton et al. in this issue (see pages 10863–10868).

This Week in The Journal

Journal Club

10785 A Balancing Act: D4 Receptor Activation and the Neurobiological Basis of Emotional Learning
Susannah J. Tye, Dan P. Covey, and Christoph J. Griessenauer

Brief Communications

10974 Presynaptically Expressed Long-Term Potentiation Increases Multivesicular Release at Parallel Fiber Synapses
Vanessa A. Bender, Jason R. Pugh, and Craig E. Jahr

11038 Rapid Endocytosis Does Not Recycle Vesicles within the Readily Releasable Pool
Xin-Sheng Wu and Ling-Gang Wu

Articles

CELLULAR/MOLECULAR

10869 NMDA Receptor GluN2B (GluRζ2/NR2B) Subunit Is Crucial for Channel Function, Postsynaptic Macromolecular Organization, and Actin Cytoskeleton at Hippocampal CA3 Synapses
Kaori Akashi, Toshikazu Kakizaki, Haruyuki Kamiya, Masahiro Fukaya, Miwako Yamasaki, Manabu Abe, Rie Natsume, Masahiko Watanabe, and Kenji Sakimura

10920 An Isoform-Specific Mutant Reveals a Role of PDP1ζ in the Circadian Oscillator
Xiangzhong Zheng, Kyunghee Koh, Mallory Sowick, Corinne J. Smith, Dechun Chen, Mark N. Wu, and Amita Sehgal

11043 Neurofilaments Bind Tubulin and Modulate Its Polymerization
Arnaud Bocquet, Raphael Berges, Ronald Frank, Patrick Robert, Alan C. Peterson, and Joel Eyer

DEVELOPMENT/PLASTICITY/REPAIR

10809 Setting the Pace for Retinal Development: Environmental Enrichment Acts Through Insulin-Like Growth Factor 1 and Brain-Derived Neurotrophic Factor
Silvia Landi, Francesca Ciucci, Lamberto Maffei, Nicoletta Berardi, and Maria Cristina Cenni

10883 NGF Is Essential for Hippocampal Plasticity and Learning
James M. Conner, Kevin M. Franks, Andrea K. Titterness, Kyle Russell, David A. Merrill, Brian R. Christie, Terrence J. Sejnowski, and Mark H. Tuszyński
10995 Doublecortin Associates with Microtubules Preferentially in Regions of the Axon Displaying Actin-Rich Protrusive Structures
Irina Tint, Daphney Jean, Peter W. Baas, and Mark M. Black

BEHAVIORAL/SYSTEMS/COGNITIVE

10802 Fear Extinction across Development: The Involvement of the Medial Prefrontal Cortex as Assessed by Temporary Inactivation and Immunohistochemistry
Jee Hyun Kim, Adam S. Hamlin, and Rick Richardson

10820 Motor Unit Recruitment Strategies Are Altered during Deep-Tissue Pain
Kylie Tucker, Jane Butler, Thomas Graven-Nielsen, Stephan Riek, and Paul Hodges

10827 Adapting to Dynamic Stimulus-Response Values: Differential Contributions of Inferior Frontal, Dorsomedial, and Dorsolateral Regions of Prefrontal Cortex to Decision Making
Derek G. V. Mitchell, Qian Luo, Shelley B. Avny, Tomasz Kasprzycki, Karanvir Gupta, Gang Chen, Elizabeth C. Finger, and R. James R. Blair

10835 Overexpression of Type I Adenylyl Cyclase in the Forebrain Impairs Spatial Memory in Aged But Not Young Mice
Michael G. Garelick, Guy C. K. Chan, Derek P. DiRocco, and Daniel R. Storm

10855 The Functional Val158Met Polymorphism of COMT Predicts Interindividual Differences in Brain Oscillations in Young Men
Sereina Bodenmann, Thomas Rusterholz, Roland Dürr, Claudia Stoll, Valérie Bachmann, Eva Geissler, Karin Jaggi-Schwarz, and Hans-Peter Landolt

10890 Internally Mediated Developmental Desynchronization of Neocortical Network Activity
Peyman Golshani, J. Tiago Gonçalves, Sattar Khoshkhoo, Ricardo Mostany, Stelios Smirnakis, and Carlos Portera-Cailliau

10900 Impaired Category Fluency in Medial Temporal Lobe Amnesia: The Role of Episodic Memory
Daniel L. Greenberg, Margaret M. Keane, Lee Ryan, and Mieke Verfaellie

10939 Sleep Homeostasis Modulates Hypocretin-Mediated Sleep-to-Wake Transitions
Matthew E. Carter, Antoine Adamantidis, Hiroshi Ohtsu, Karl Deisseroth, and Luis de Lecea

10950 Multisensory Integration of Sounds and Vibrotactile Stimuli in Processing Streams for “What” and “Where”
Laurent A. Renier, Irina Anurova, Anne G. De Volder, Synnöve Carlson, John VanMeter, and Josef P. Rauschecker

10989 GABAergic Excitation of Spider Mechanoreceptors Increases Information Capacity by Increasing Entropy Rather than Decreasing Jitter
Keram Pfeiffer and Andrew S. French

11020 Right Ventromedial and Dorsolateral Prefrontal Cortices Mediate Adaptive Decisions under Ambiguity by Integrating Choice Utility and Outcome Evaluation
Anastasia Christakou, Mick Brammer, Vincent Giampietro, and Katya Rubia

11029 The Effects of Caffeine on Sleep in Drosophila Require PKA Activity, But Not the Adenosine Receptor
Mark N. Wu, Karen Ho, Amanda Crocker, Zhifeng Yue, Kyunghoo Koh, and Amita Sehgal

11055 Mislocalization of Flashed and Stationary Visual Stimuli after Adaptation of Reactive and Scanning Saccades
Eckart Zimmermann and Markus Lappe
Presynaptic and Postsynaptic Interaction of the Amyloid Precursor Protein Promotes Peripheral and Central Synaptogenesis
Zilai Wang, Baiping Wang, Li Yang, Qinx Guo, Nadia Aithmitti, Zhou Songyang, and Hui Zheng

A Neurroligin-4 Missense Mutation Associated with Autism Impairs Neurroligin-4 Folding and Endoplasmic Reticulum Export
Chen Zhang, Jeff M. Milunsky, Stephanie Newton, Jaewon Ko, Geping Zhao, Tom A. Maher, Helen Tager-Flusberg, Marc F. Bolliger, Alice S. Carter, Antony A. Boucard, Craig M. Powell, and Thomas C. Südhof

Dissociable Brain Structural Changes Associated with Predisposition, Resilience, and Disease Expression in Bipolar Disorder
Matthew J. Kempton, Morgan Haldane, Jigar Jogia, Paul M. Grasby, David Collier, and Sophia Frangou

The Proteasome-Associated Deubiquitinating Enzyme Usp14 Is Essential for the Maintenance of Synaptic Ubiquitin Levels and the Development of Neuromuscular Junctions
Ping-Chung Chen, Lu-Ning Qin, Xiao-Ming Li, Brandon J. Walters, Julie A. Wilson, Lin Mei, and Scott M. Wilson

Interaction of Postsynaptic Density Protein-95 with NMDA Receptors Influences Excitotoxicity in the Yeast Artificial Chromosome Mouse Model of Huntington’s Disease
Jing Fan, Catherine M. Cowan, Lily Y. J. Zhang, Michael R. Hayden, and Lynn A. Raymond

Dissociating β-Amyloid from α7 Nicotinic Acetylcholine Receptor by a Novel Therapeutic Agent, S 24795, Normalizes α7 Nicotinic Acetylcholine and NMDA Receptor Function in Alzheimer’s Disease Brain
Hoau-Yan Wang, Andres Stucky, Jingjing Liu, Changpeng Shen, Caryn Trocme-Thibierge, and Philippe Morain

Loss of Dendritic HCN1 Subunits Enhances Cortical Excitability and Epileptogenesis
Zhao Huang, Matthew C. Walker, and Mala M. Shah

Robust Pacemaking in Substantia Nigra Dopaminergic Neurons
Jaime N. Guzman, Javier Sánchez-Padilla, C. Savio Chan, and D. James Surmeier