Editorial

1 Welcome from the New Editor-in-Chief
Sabine Kastner

Research Articles

CELLULAR/MOLECULAR

2 Trapping of Nicotinic Acetylcholine Receptor Ligands Assayed by In Vitro Cellular Studies and In Vivo PET Imaging
Hannah J. Zhang, Matthew Zammit, Chien-Min Kao, Anitha P. Govind, Samuel Mitchell, Nathaniel Holderman, Mohammed Bhuiyan, Richard Freifelder, Anna Kucharski, Xiaoxi Zhuang, Jogeshwar Mukherjee, Chin-Tu Chen, and William N. Green

14 Pharmacological Signature and Target Specificity of Inhibitory Circuits Formed by Martinotti Cells in the Mouse Barrel Cortex
Cristina Donato, Daniella Balduino Victorino, Carolina Cabezas, Andrea Aguirre, Joana Lourenço, Marie-Claude Potier, Javier Zorrilla de San Martin, and Alberto Bacci

DEVELOPMENT/PLASTICITY/REPAIR

28 Synaptic Development in Diverse Olfactory Neuron Classes Uses Distinct Temporal and Activity-Related Programs
Michael A. Aimino, Alison T. DePew, Lucas Restrepo, and Timothy J. Mosca

SYSTEMS/CIRCUITS

56 Preferential Modulatory Action of 5-HT2A Receptors on the Dynamic Regulation of Basal Ganglia Circuits
Lise Guilhemang, Amaia Gutierrez-Ceballos, Mario Antonazzo, Nicolas P. Mallet, Luisa Ugedo, and Teresa Morera-Herreras

68 Parallel Pathways Provide Hippocampal Spatial Information to Prefrontal Cortex
Kokoe Fany Messanvi, Kathleen Berkun, Aster Perkins, and Yogita Chudasama

82 Creation of Neuronal Ensembles and Cell-Specific Homeostatic Plasticity through Chronic Sparse Optogenetic Stimulation
Benjamin Liu, Michael J. Seay, and Dean V. Buonomano

93 A Redundant Cortical Code for Speech Envelope
Kristina B. Penikis and Dan H. Sanes

Cover legend: This image shows Projection Neurons in the DA1 and VA1d glomeruli of the Drosophila antennal lobes in the brain of a male fly that has just emerged from its pupal casing (0 days old). Synaptic puncta were identified throughout the glomeruli (red) through expression of a tagged variant of the presynaptic active zone protein Bruchpilot. The neurites and cell bodies of these neurons were visualized with a membrane-bound GFP tag (green) and the antennal lobe itself was labelled using N-Cadherin (blue). For more information, see the article by Aimino et al. (pages 28–55). Cover image: Mike Aimino.
BEHAVIORAL/COGNITIVE

113 Activity Patterns of Individual Neurons and Ensembles Correlated with Retrieval of a Contextual Memory in the Dorsal CA1 of Mouse Hippocampus
Han-Sol Lee and Jin-Hee Han

125 Action Observation Network Activity Related to Object-Directed and Socially-Directed Actions in Adolescents
Mathieu Lesourd, Alia Afyouni, Franziska Geringswald, Fabien Cignetti, Lisa Raoul, Julien Sein, Bruno Nazarian, Jean-Luc Anton, and Marie-Hélène Grosbras

142 Rapid Interactions of Widespread Brain Networks Characterize Semantic Cognition
Katherine S. Aboud, Tin Q. Nguyen, Stephanie N. Del Tufo, Catie Chang, David H. Zald, Alexandra P. Key, Gavin R. Price, Bennett A. Landman, and Laurie E. Cutting

155 Selective TLR4 Antagonism Prevents and Reverses Morphine-Induced Persistent Postoperative Cognitive Dysfunction, Dysregulation of Synaptic Elements, and Impaired BDNF Signaling in Aged Male Rats
Stephanie M. Muscat, Nicholas P. Deems, Michael J. Butler, Emmanuel A. Scaria, Menaz N. Bettes, Sean P. Cleary, Ross H. Bockbrader, Steven F. Maier, and Ruth M. Barrientos

NEUROBIOLOGY OF DISEASE

173 The Neural Signature of Impaired Inhibitory Control in Individuals with Heroin Use Disorder
Ahmet O. Ceceli, Sarah G. King, Natalie McClain, Nelly Alia-Klein, and Rita Z. Goldstein

Persons interested in becoming members of the Society for Neuroscience should contact the Membership Department at membership@sfn.org or 202-962-4911. For current submission policies and manuscript preparation guidelines, authors should refer to our Information for Authors at https://www.jneurosci.org/content/information-authors. Manuscripts should be submitted online at https://jneurosci.msubmit.net. Please contact the Central Office with any questions at jn@sfn.org or 202-962-4000.