

Biological Psychiatry

A Journal of Psychiatric Neuroscience and Therapeutics

Volume 75, Number 3, February 1, 2014

NEW TREATMENTS FOR DEVELOPMENTAL DISORDERS

IN THIS ISSUE— FEBRUARY 1ST

- 173 **A brief summary of the articles appearing in this issue of *Biological Psychiatry*.**

COMMENTARIES

- 174 **Nicotinic Attention-Deficit/Hyperactivity Disorder Treatment**

Edward D. Levin

» See companion article on page 207

- 175 **(Li+)ghting the Way for a Treatment for Cognitive Impairments in Fragile X Syndrome**

Aditi Bhattacharya and Eric Klann

» See companion article on page 198

- 177 **Portraying Inhibition of Metabotropic Glutamate Receptor 5 in Fragile X Mice**

Mihály Hajós

» See companion article on page 189

PRIORITY COMMUNICATION

- 179 **Formoterol, a Long-Acting β 2 Adrenergic Agonist, Improves Cognitive Function and Promotes Dendritic Complexity in a Mouse Model of Down Syndrome**

Van Dang, Brian Medina, Devsmita Das, Sarah Moghadam, Kara J. Martin, Bill Lin, Priyanka Naik, Devan Patel, Rachel Nosheny, John Wesson Ashford, and Ahmad Salehi

ARCHIVAL REPORTS

- 189 **Chronic Metabotropic Glutamate Receptor 5 Inhibition Corrects Local Alterations of Brain Activity and Improves Cognitive Performance in Fragile X Mice**

Aubin Michalon, Andreas Bruns, Céline Risterucci, Michael Honer, Theresa M. Ballard, Laurence Ozmen, Georg Jaeschke, Joseph G. Wettstein, Markus von Kienlin, Basil Künnecke, and Lothar Lindemann

» See commentary on page 177

- 198 **Glycogen Synthase Kinase-3 Inhibitors Reverse Deficits in Long-term Potentiation and Cognition in Fragile X Mice**

Aimee V. Franklin, Margaret K. King, Valle Palomo, Ana Martinez, Lori L. McMahon, and Richard S. Jope

» See commentary on page 175

- 207 **AZD3480, a Novel Nicotinic Receptor Agonist, for the Treatment of Attention-Deficit/Hyperactivity Disorder in Adults**

Alexandra S. Potter, Geoffrey Dunbar, Emily Mazzulla, David Hosford, and Paul A. Newhouse



» See commentary on page 174

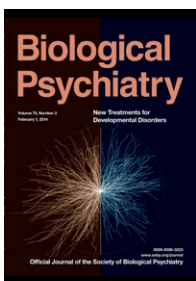
- 215 **Antioxidant Supplementation Ameliorates Molecular Deficits in Smith-Lemli-Opitz Syndrome**

Zeljka Korade, Libin Xu, Fiona E. Harrison, Refayat Ahsen, Sarah E. Hart, Oakleigh M. Folkes, Károly Mirnics, and Ned A. Porter

- 223 Brain Organization Underlying Superior Mathematical Abilities in Children with Autism**
Teresa Iuculano, Miriam Rosenberg-Lee, Kaustubh Supekar, Charles J. Lynch, Amirah Khouzam, Jennifer Phillips, Lucina Q. Uddin, and Vinod Menon
- 231 Speech Disturbs Face Scanning in 6-Month-Old Infants Who Develop Autism Spectrum Disorder**
Frederick Shic, Suzanne Macari, and Katarzyna Chawarska
- 238 Genetic Overlap between Evoked Frontocentral Theta-Band Phase Variability, Reaction Time Variability, and Attention-Deficit/Hyperactivity Disorder Symptoms in a Twin Study**
Gráinne McLoughlin, Jason A. Palmer, Fruhling Rijdsdijk, and Scott Makeig
- 248 Age-Related Differences in White Matter Tract Microstructure Are Associated with Cognitive Performance from Childhood to Adulthood**
Bart D. Peters, Toshikazu Ikuta, Pamela DeRosse, Majnu John, Katherine E. Burdick, Patricia Gruner, Daniel M. Prendergast, Philip R. Szeszko, and Anil K. Malhotra

CORRESPONDENCE

- e1**  **The Geographic Variation in the Prevalence of Attention-Deficit/Hyperactivity Disorder in the United States Is Likely Due to Geographic Variations of Solar Ultraviolet B Doses and Race**
William B. Grant
- e3**  **Reply to: The Geographic Variation in the Prevalence of Attention-Deficit/Hyperactivity Disorder in the United States is Likely Due to Geographical Variations of Solar Ultraviolet B Doses and Race**
Martijn Arns, Kristiaan B. van der Heijden, L. Eugene Arnold, and J. Leon Kenemans



The figure on the cover depicts 3D reconstruction of the dendritic tree in the molecular layer of the dentate gyrus in the hippocampus of Ts65Dn mouse model of Down syndrome and their 2N controls (Dang *et al.*, in this issue, pages 179–188). Each dendritic tree was manually traced in x, y, and z directions and NeuroLucida program was used to reconstruct and superimpose the trees. The dendritic trees in Ts65Dn mice (right side) were shorter and less complex compared with those of 2N controls (the left side of the circle). Image courtesy of Ms. Persia Salehi.

 = content available online only