VOLUME 24 - ISSUE 3
JUNE 2019
ISSN: 1092-8529



cambridge.org/cns

CNS **SPECTRUMS**

EDITOR-IN-CHIEF: **STEPHEN M. STAHL**

THE JOURNAL OF THE
Neuroscience
Education Institute

CAMBRIDGE
UNIVERSITY PRESS

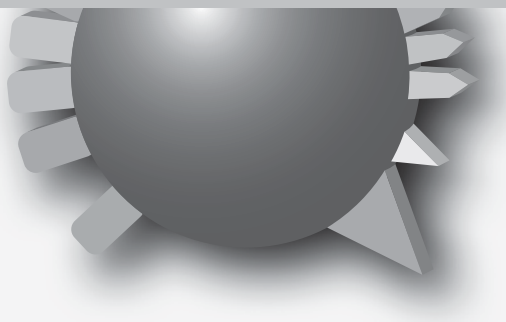
https://doi.org/10.1017/S1092852919001123

CAMBRIDGE Medicine

Want some CME with that?

STAHL

MASTERCLASS



- An online educational program in core areas of psychiatry with interactive readings, short lectures, animations and case studies
- Self-testing and opportunities to claim formal CME credits, all taken at a self-directed speed
- Written and moderated by experts in the field from the Dr. Stahl's Neuroscience Education Institute and the University of Cambridge

For more information, please go to
www.stahlmasterclass.com

CAMBRIDGE UNIVERSITY PRESS

https://doi.org/10.1017/S1092852919001123 Published online by Cambridge University Press

VOLUME 24 ISSUE 3 JUNE 2019

CNS SPECTRUMS

CONTENTS

LETTER TO THE EDITOR

Insulin-growth-factor-1 (IGF-1): just a few steps behind the evidence in treating schizophrenia and/or autism
Rami Bou Khalil 227

EDITORIAL

FDA-approved drugs for multiple sclerosis have no efficacy or disability data in non-Caucasian patients
Jagannadha Avasarala 279

REVIEW ARTICLE

Pharmacotherapy of schizophrenia: toward a metabolomic-based approach
Haythum O. Tayeb, Hussam A. Murad, Misbahuddin M. Rafeeq and Frank I. Tarazi 281

Drug–drug interactions and clinical considerations with co-administration of antiretrovirals and psychotropic drugs
Kellie J. Goodlet, Monika T. Zmarlicka and Alyssa M. Peckham 287

ORIGINAL RESEARCH

Rhythmic low-field magnetic stimulation may improve depression by increasing brain-derived neurotrophic factor
Le Xiao, Christoph U. Correll, Lei Feng, Yu-Tao Xiang, Yuan Feng, Chang-Qing Hu, Rena Li and Gang Wang 313

Categorical improvement in functional impairment in depressed patients treated with desvenlafaxine
Claudio N. Soares, Min Zhang and Matthieu Boucher 322

Peripheral levels of superoxide dismutase and glutathione peroxidase in youths in ultra-high risk for psychosis: a pilot study
Maiara Zeni-Graiff, Adiel C. Rios, Pawan K. Maurya, Lucas B. Rizzo, Sumit Sethi, Ana S. Yamagata, Rodrigo B. Mansur, Pedro M. Pan, Elson Asevedo, Graccielle R. Cunha, André Zugman, Rodrigo A. Bressan, Ary Gadelha and Elisa Brietzke 333

Assessment in Work Productivity and the Relationship with Cognitive Symptoms (AtWoRC): primary analysis from a Canadian open-label study of vortioxetine in patients with major depressive disorder (MDD)
Pratap Chokka, Joanna Bougie, Emmanouil Rampakakis and Jean Proulx 338

https://doi.org/10.1017/S1092852919001123 Published online by Cambridge University Press

Editor-in-Chief

Stephen M. Stahl, Adjunct Professor of Psychiatry at the University of California San Diego, USA;
Honorary Visiting Senior Fellow at the University of Cambridge, UK.

Field Editors

Jagannadha Avasarala, University of South Carolina School of Medicine, USA
Joseph F. Goldberg, Icahn School of Medicine at Mount Sinai, USA
Stefano Pallanti, University of Florence, Italy
Donatella Marazziti, University of Pisa, Italy
Thomas E. Schlaepfer, University Hospital Bonn, Germany
Frank I. Tarazi, Harvard Medical School, USA
Carlos A. Zarate, National Institute of Mental Health, USA

Deputy Editor

Thomas L. Schwartz, SUNY Upstate Medical University at Syracuse, USA

Editorial Board

Leslie Citrome, New York Medical College, USA
Christoph U. Correll, Hofstra Northwell School of Medicine, USA
Maria Conceição do Rosario, University of São Paulo Medical School, Brazil
Jeffrey L. Cummings, Cleveland Clinic, USA
Thilo Deckersbach, Harvard Medical School, USA
Bernardo Dell'Osso, University of Milan, Italy
Koen Demyttenaere, University Psychiatric Center KuLeuven, Belgium
Karen D. Ersche, University of Cambridge, UK
Nesrin Dilbaz, Üsküdar University NP Brain Hospital, İstanbul
Gianni Faedda, The Mood Disorders Center of New York, USA
Robert L. Findling, The Johns Hopkins Hospital, USA
Patrick R. Finley, University of California, San Francisco, USA
Kostas N. Fountoulakis, Aristotle University of Thessaloniki, Greece
Mark S. George, Medical University of South Carolina, USA
Ira D. Glick, Stanford University, USA
Joseph F. Goldberg, Icahn School of Medicine at Mount Sinai, USA
Jon Grant, University of Chicago, USA
Gregor Hasler, University of Berne, Switzerland
Eric Hollander, Albert Einstein College of Medicine and Montefiore Medical Center, USA
Daphne Holt, Harvard Medical School, USA
Oliver Howes, King's College, London, UK
Peter B. Jones, University of Cambridge, UK
Andres M. Kanner, University of Miami, USA
Antony D. Loebel, New York University School of Medicine, USA
Donatella Marazziti, University of Pisa, Italy
Roger McIntyre, University of Toronto, Canada
Herbert Y. Meltzer, Northwestern University, USA
Philip Mitchell, University of New South Wales, Australia
Mary Moller, Pacific Lutheran University and Northwest Integrated Health, USA
Mark Muse, Muse Psychological Associates, USA
Humberto Nicolini, National Institutes of Health, Minister of Health, México
Andrew A. Nierenberg, Harvard Medical School, USA
Stefano Pallanti, University of Florence, Italy
Katharine A. Phillips, Weill Cornell Medical College, USA
Diego A. Pizzagalli, Harvard Medical School, USA
Mark H. Pollack, Rush University Medical Center, USA
Mark H. Rapaport, Emory University, USA
Irismar Reis de Oliveira, Universidade Federal da Bahia, Brazil
Trevor W. Robbins, University of Cambridge, UK
Peter P. Roy-Byrne, University of Washington School of Medicine, USA
Barbara J. Sahakian, University of Cambridge, UK
Gerard Sanacora, Yale University School of Medicine, USA
Alan F. Schatzberg, Stanford University School of Medicine, USA
Thomas E. Schlaepfer, University of Bonn, Germany
Thomas L. Schwartz, SUNY Upstate Medical University in Syracuse, USA
Erich Seifritz, University of Zürich, Switzerland
Jordan W. Smoller, Harvard Medical School, USA
Dan J. Stein, University of Cape Town (UCT), South Africa
Stephen Strakowski, University of Texas at Austin, USA
T. Scott Stroup, Columbia University, USA
Frank I. Tarazi, Harvard Medical School, USA
Michael E. Thase, University of Pennsylvania, USA
Michael Trimble, National Hospital for Neurology, Queen Square, London
Madhukar H. Trivedi, University of Texas Southwestern Medical Center, USA
Hiroyuki Uchida, Keio University School of Medicine, Japan
Susan Velasquez, California Department of State Hospitals, USA
Karen Dineen Wagner, The University of Texas Medical Branch, USA
Katherine D. Warburton, California Department of State Hospitals, USA
Stephen R. Wisniewski, University of Pittsburgh, USA
Carlos A. Zarate, Jr., National Institute of Mental Health, USA
Joseph Zohar, Tel Aviv University, Israel

Managing Editor

Lisa Arrington, Cambridge University Press (larrington@cambridge.org)

https://doi.org/10.1017/S1092852919001123 Published online by Cambridge University Press

Aims and Scope

CNS Spectrums covers all aspects of the clinical neurosciences, neurotherapeutics and neuropsychopharmacology, particularly those pertinent to the clinician and clinical investigator. The journal features focused, in-depth reviews, perspectives and original research articles. New therapeutics of all types in psychiatry, mental health, and neurology are emphasized, especially first in man studies, proof of concept studies and translational basic neuroscience studies. Subject coverage spans the full spectrum of neuropsychiatry, focusing on those crossing traditional boundaries between neurology and psychiatry.

Submitting Manuscripts to CNS Spectrums

All submissions to *CNS Spectrums* should be prepared in accordance with the instructions for authors and in the style of the Journal. Manuscripts should be submitted through the dedicated *CNS Spectrums* ScholarOne Manuscripts website: http://mc.manuscriptcentral.com/cnsspectr

CNS Spectrums will consider and encourage the following types of articles for publication: ***Reviews***—The review article is a comprehensive article summarizing and synthesizing the literature on various topics presented in a scholarly and clinically relevant fashion; ***Perspectives***—The perspective article is a type of review that is a short, focused summary of a single recent advance, a sort of spotlight on the topic, which could be for example, a single point hypothesis or a novel model. It can stimulate debate and new research. ***Meta-guidelines***—A meta-guideline is a "guideline of guidelines" put together by several leading figures in a field in which there are multiple competing guidelines that require synthesis and updating; ***Original Research***—Reports the results of a clinical study and contains original research; the journal will also include ***Brainstorms*** and ***Editorials*** that shall be commissioned or written by the Editor-in-Chief.

Instructions for Contributors

The Instructions for Contributors are available on the Cambridge Journals Online web site at:
http://journals.cambridge.org/CNSifc

Indexing

CNS Spectrums is indexed by *Index Medicus*/MEDLINE and Web of Science (Thomson Reuters) as well as appearing in the annual Journal Citation Report. Introduced in 1996, the journal was acquired in whole by Cambridge University Press in November of 2011.

Subscriptions

Institutional print and electronic: £546/$866; Institutional electronic only: £415/$663.

© Cambridge University Press 2019. All rights reserved.

No part of this publication may be reproduced, in any form or by any means, electronic, photocopying, or otherwise, without permission in writing from Cambridge University Press. Policies, request forms, and contacts are available at: http://www.cambridge.org/rights/permissions/permission.htm. Permission to copy (for users in the U.S.A.) is available from Copyright Clearance Center http://www.copyright.com, email: info@copyright.com.

Rights & permissions requests can be applied for online within each article by clicking "Request Permissions" within the table of contents or in the fulltext version of a specific article. Requests will be processed via the CCC Rightslink system and processed immediately.

CNS Spectrums (ISSN: Print 1092-8529; eISSN: 2165-6509) is published bimonthly by Cambridge University Press.

Postmaster

Send address changes in the U.S.A., Canada, and Mexico to *CNS Spectrums*, Cambridge University Press, Journals Dept., One Liberty Plaza, 20th Floor, New York, NY 10006, U.S.A. Send address changes elsewhere to *CNS Spectrums*, Cambridge University Press, University Printing House, Shaftesbury Road, Cambridge CB2 8BS, England.

Online availability

CNS Spectrums is hosted on the Cambridge Core service at cambridge.org/cns

Institutional subscribers: Access to full-text articles online is only granted to subscription options offering an online component. Subscriptions must be activated by the purchasing institution using the instructions provided at the time of purchase; see information for subscribers at: http://journals.cambridge.org/

Reprint and Advertising Sales

Inquiries for bulk reprint sales should be sent to USReprints@cambridge.org. Advertising inquiries should be sent to M. J. Mrvica Associates, Inc., 2 West Taunton Avenue, Berlin, NJ 08009; Phone: 856-768-9360; Fax: 856-753-0064; Email: mjmrvica@mrvica.com.

https://doi.org/10.1017/S1092852919001123 Published online by Cambridge University Press