

Biological Psychiatry

A Journal of Psychiatric Neuroscience and Therapeutics

Deputy Editors

Anissa Abi-Dargham, MD
Stony Brook, New York

Deanna M. Barch, PhD
St. Louis, Missouri

Edward T. Bullmore, MB, PhD,
FMedSci
Cambridge, United Kingdom

Cameron S. Carter, MD
Sacramento, California

Reviews Editor

Ellen Leibenluft, MD
Bethesda, Maryland

Editorial Board

Nii Addy, PhD
New Haven, CT

Schahram Akbarian, MD, PhD
New York, NY

Kazufumi Akiyama, MD, PhD
Tochigi, Japan

Amy F.T. Arnsten, PhD
New Haven, CT

Mark G. Baxter, PhD
New York, NY

Elisabeth Binder, MD, PhD
Munich, Germany

James Blair, PhD
Omaha, NE

Antonello Bonci, MD
Baltimore, MD

David L. Braff, MD
La Jolla, CA

William A. Carlezon Jr., PhD
Belmont, MA

Edwin H. Cook Jr., MD
Chicago, IL

Kelly P. Cosgrove, PhD
New Haven, CT

Zafiris Jeff Daskalakis, MD, PhD,
FRCP(C)
Ontario, Canada

Karl Deisseroth, MD, PhD
Stanford, CA

Harriet de Wit, PhD
Chicago, IL

Ralph J. DiLeone, PhD
New Haven, CT

Yan Dong, PhD
Pittsburgh, PA

Ronald S. Duman, PhD
New Haven, CT

Klaus P. Ebner, MD
Oxford, United Kingdom

Alex Fornito, PhD
Victoria, Australia

Sophia Frangou, MD, PhD
New York, NY

Karl J. Friston, MBBS, MA, MRCPsych
London, United Kingdom

Joel Gelernter, MD
West Haven, CT

Daniel Geschwind, MD, PhD
Los Angeles, California

Paul J. Harrison, DM, FRCPsych
Oxford, United Kingdom

Eric J. Nestler, MD, PhD
New York, New York

Murray B. Stein, MD, MPH
La Jolla, California

Education Editor

David A. Ross, MD, PhD
New Haven, Connecticut

Anthony A. Grace, PhD
Pittsburgh, PA

Christian Grillon, PhD
Bethesda, MD

Ralitzha Gueorguieva, PhD
New Haven, CT

Ahmad R. Hariri, PhD
Durham, NC

Catherine J. Harmer, DPhil
Oxford, United Kingdom

Markus A. Heilig, MD, PhD
Linköping, Sweden

Noboru Hiroi, PhD
Bronx, NY

Yasmin Hurd, PhD
New York, NY

Paul J. Kenny, PhD
New York, NY

Joel E. Kleinman, MD, PhD
Baltimore, MD

George F. Koob, PhD
Rockville, MD

Andrew D. Krystal, MD, MS
San Francisco, CA

David A. Lewis, MD
Pittsburgh, PA

Mary Kay Lobo, PhD
Baltimore, MD

Lin Lu, MD, PhD
Beijing, China

Joan Luby, MD
St. Louis, MO

Stephen R. Marder, MD
Los Angeles, CA

Graeme F. Mason, PhD
New Haven, CT

Daniel H. Mathalon, MD, PhD
San Francisco, CA

Colleen A. McClung, PhD
Pittsburgh, PA

Christopher J. McDougale, MD
Lexington, MA

Published since 1969

Editor

John H. Krystal, MD
Yale University School of Medicine
VA Connecticut Healthcare System
West Haven, Connecticut

Editorial Committee

Carrie E. Bearden, PhD
Los Angeles, CA

Dennis S. Charney, MD
New York, New York

David Goldman, MD
Rockville, Maryland

Raquel E. Gur, MD, PhD
Philadelphia, Pennsylvania

Ex Officio

Karen F. Berman, MD

Mary L. Phillips, MD

Scott L. Rauch, MD

Andrew Mark McIntosh, MD,
MRCPsych
Edinburgh, United Kingdom

Katie A. McLaughlin, PhD
Cambridge, MA

Francis J. McMahon, MD
Bethesda, MD

Károly Mirics, MD, PhD
Omaha, NE

Lisa M. Monteggia, PhD
Nashville, TN

Rajesh Narendran, MD
Pittsburgh, PA

Michael C. O'Donovan, PhD
Cardiff, United Kingdom

Carmine M. Pariante, MD, PhD,
MRCPsych
London, United Kingdom

Martin P. Paulus, MD
Tulsa, OK

Godfrey Pearlson, MD
Hartford, CT

Mary L. Phillips, MD
Pittsburgh, PA

Daniel S. Pine, MD
Bethesda, MD

Diego A. Pizzagalli, PhD
Belmont, MA

Mikhail Pletnikov, MD, PhD
Baltimore, MD

J. Daniel Ragland, PhD
Sacramento, CA

Kerry Ressler, MD, PhD
Belmont, MA

Trevor W. Robbins, PhD
Cambridge, United Kingdom

Peter Roy-Byrne, MD
Seattle, WA

Katya Rubia, PhD
London, United Kingdom

David R. Rubinow, MD
Chapel Hill, NC

Scott J. Russo, PhD
New York, NY

Gerard Sanacora, MD, PhD
New Haven, CT

Aims and Scope

Biological Psychiatry is an official journal of the Society of Biological Psychiatry, whose purpose is to promote excellence in research investigating the nature, causes, mechanisms, and treatments of disorders of thought, emotion, and behavior. In accord with this mission, this peer-reviewed, rapid-publication, international journal publishes both basic and clinical contributions from all disciplines and research areas relevant to the pathophysiology and treatment of major psychiatric disorders.

Biological Psychiatry publishes novel results of original research that represent an important new lead or significant impact on the field, particularly those addressing genetic and environmental risk factors, neural circuitry and neurochemistry, and important new therapeutic approaches. Reviews and commentaries that focus on topics of current research and interest are also published.

Carmen Sandi, PhD
Lausanne, Switzerland

Akira Sawa, MD, PhD
Baltimore, MD

Alan F. Schatzberg, MD
Stanford, CA

Geoffrey Schoenbaum, MD, PhD
Baltimore, MD

Yavin Shaham, PhD
Baltimore, MD

Simone Shamay-Tsoory, PhD
Haifa, Israel

Dana Small, PhD
New Haven, CT

Matthew W. State, MD, PhD
San Francisco, CA

Stephen M. Strakowski, MD
Austin, TX

Trey Sunderland, MD
Chevy Chase, MD

Stephan F. Taylor, MD
Ann Arbor, MI

Gustavo Turecki, MD, PhD
Quebec, Canada

Bruce I. Turetsky, MD
Philadelphia, PA

Myrna M. Weissman, PhD
New York, NY

Catharine Winstanley, PhD
British Columbia, Canada

Rachel Yehuda, PhD
Bronx, NY

Takeo Yoshikawa, MD, PhD
Saitama, Japan

Venetia Zachariou, PhD
New York, NY

Carlos A. Zarate Jr., MD
Bethesda, MD

Jon-Kar Zubieta, MD, PhD
Salt Lake City, UT

Editorial Office

Phone: (214) 648-0880
Biol.Psych@sobp.org
www.sobp.org/journal

Administrative Editor Carol A. Tamminga, MD

Managing Editor Rhiannon M. Bugno

Sr. Publication Coordinator Rosa Garcés

Editorial Coordinator Glenda Stroud

Editorial Coordinator Kelly Schappert

Editorial Assistant Elisha Cadena-Bowles

Founding Editor

Joseph Wortis, MD, 1969-1992

Editor Emeriti

Wagner H. Bridger, MD, 1992-1997

Richard C. Josiassen, PhD, 1997

Dennis S. Charney, MD, 1998-2006