

The Journal of Neuroscience

EDITOR-IN-CHIEF

John H.R. Maunsell
Aparna Paul, Assistant

SENIOR EDITORS

Behavioral/Systems/Cognitive

Sabine Kastner
Earl K. Miller
Marina Picciotto

Cellular/Molecular

Marie T. Filbin
Dinorah Santiago, Assistant
Chris McBain

Development/Plasticity/Repair

Mark Bothwell
Moses Chao
Derek Hood, Assistant

Neurobiology of Disease

Valina Dawson
Serge Przedborski

REVIEWING EDITORS

Dora Angelaki
Deanna Benson
Christophe Bernard
Jeffrey Diamond
Ray Dolan
Timothy Ebner
Joel Elmquist
Mark Farrant
Alyson Fournier
Michael Gold
Takao Hensch
Constantino Iadecola
Nancy Ip
James Knierim
Gary E. Landreth
Diane Merry
Robert H. Miller
Farzan Nadim
Jeanne Nerbonne
David Perkel
Sam Pleasure
Rajiv Ratan
Matthew Rushworth
Charles Schroeder
Felix Schweizer
Yavin Shaham
Stephen M. Strittmatter
Jane Taylor
W. Martin Usrey

Behavioral/Systems/Cognitive

Associate Editors
Tracy L. Bale
Michele A. Basso
Kent Berridge
James Bisley
A. B. Bonds
Ed Callaway
Kathy Cullen
Bruce Cumming
Yang Dan
Greg DeAngelis
Jonathan Demb
Asif Ghazanfar
Jacqueline Gottlieb
Patrice Guyenet
Michael Hasselmo
David Heeger
Bruce Hope
Dieter Jaeger
J. David Jentsch
Andrew King
Hidehiko Komatsu
George Koob
Daeyeol Lee
Roger Lemon
Anita Lüthi

Margaret McCarthy

Tirin Moore
Micah Murray
Adrian Owen
Richard Palmiter
Greg Quirk
Frank Porreca
Jerome Sanes
Glenn E. Schafer
Geoffrey Schoenbaum
Tracey Shors
Keiji Tanaka
Doris Tsao
Leslie Vosshall
Marina Wolf
Catherine Woolley
Rachel I. Wilson
Steven Yantis

Cellular/Molecular

Associate Editors
Laszlo ACSADY
Bradley Alger
Larry I. Benowitz
Antonello Bonci
Patrizia Casaccia-Bonneli
Pablo Castillo
Michael Caterina
Sulayman Dib-Hajj
Lu Chen
Graham Collingridge
Cindy Czajkowski
Graeme Davis
Evan Deneris
Michael Friedlander
Vittorio Gallo
Lisa Goodrich
Robert Greene
Yasunori Hayashi
Johannes Hell
Dax Hoffman
John Huguenard
John Isaac
Ege T. Kavalali
Kamran Khodakhah
BethAnn McLaughlin
Lin Mei
Peter Mombaerts
Bernd Nilius
Zoltan Nusser
Linda Overstreet-Wadiche
Jelena Radulovic
William Ross
Bernardo Sabatini
Pankaj Sah
Steven Scherer
Ivan Soltesz
Ben Strowbridge
Ling-Gang Wu
Gerald Zamponi
R. Suzanne Zukin

Development/Plasticity/Repair

Associate Editors
Stewart A. Anderson
Ottavio Arancio
Reggie Edgerton
Laura Feltri
Charles French-Constant
Wilma Friedman
Nicolas Gaiano
Anirvan Ghosh
Magdalena Götz
Elizabeth Gould
Zhigang He
Robert Hevner
Kozo Kaibuchi
Katherine Kalil
Eric Klann
Alex Kolodkin
Joseph Lo Turco
Wendy Macklin

Kim McAllister

Michael A. Nitsche
Denis Pare
Mahendra Rao
Serge Rivest
Todd Sacktor
Helen E. Scharfman
Jorg B. Schulz
Michael Sendtner
Deanna Smith
Michael Sofroniew
Hongjun Song
Seong-Seng Tan
Scott Whittemore

Neurobiology of Disease

Associate Editors
Josef Anrather
Karen Ashe
Douglas Bayliss
Paolo Calabresi
Alain Chedotal
Jun Chen
Mark Cookson
Douglas Coulter
Karen Duff
Steven Estus
Mel Feany
Bonnie Lynne Firestein
Robert Friedlander
Markus Heilig
Uwe Heinemann
Robert Kalb
Michael K. Lee
David Lynch
Ralph Nixon
Harry Orr
Elior Peles
Leonard Petrucelli
Jochen Prehn
Louis Ptacek
Ruth Slack
Kevin Staley
Leonidas Stefanis
Miquel Vila

FEATURES EDITOR

Teresa Esch

EDITORIAL STAFF

Alexander Coltery
Samuel M. Culver
Alina Foo
Sarah Lake
Keith Layson
Jacqueline Perry
Suzanne Rosenzweig
Sola Yu

The Journal of Neuroscience (ISSN-0270-6474) is the official journal of the Society for Neuroscience, 1121 14th Street, NW, Suite 1010, Washington, DC 20005. It is published weekly by the Society, fifty weeks a year, one volume a year.

Subscriptions are on a volume basis beginning with the January 5 issue. The Volume 31 (2011) Institutional rate information is available on the website: <http://www.jneurosci.org/subscriptions/cost.dtl>. Single copies for the U.S. are \$59, \$79 elsewhere. Institutional subscribers should direct subscription orders, back issue requests, claims, and changes of address to *The Journal of Neuroscience*, Subscription Services, 1121 14th St., NW, Suite 1010, Washington, DC 20005, phone 202-962-4000, fax 202-962-4945. Claims will be honored if received within three (3) months of the month of issue. A maximum of three (3) single-issue claims will be honored per volume per subscriber. Society for Neuroscience members interested in subscribing to the *Journal* at a reduced rate should contact the Society's Membership Department (phone 202-962-4000). Society members should also direct back issue requests and changes of address to the Society.

Advertising inquiries should be addressed to Marcia Leach (mleach@sfn.org) Sales and Marketing Manager, Society for Neuroscience, 1121 14th St., NW, Suite 1010, Washington, DC 20005, phone 202-962-4000, fax 202-962-4945.

Reprints of a single copy of an individual article are available only from the authors.

Photocopies: The *Journal* is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, fax 978-750-4470. Authorization to photocopy items for the internal or personal use of specific clients is granted by the Society for Neuroscience provided that the copier pay to the Center the \$15.00 copy fee stated in the code on the first page of each article. Special requests, such as for general distribution, resale, advertising, and promotional purposes or for creating new works, should be directed to Journal Permissions, Society for Neuroscience, 1121 14th St., NW, Suite 1010, Washington, DC 20005, fax 202-962-4945.

Postmaster: Send address changes to *The Journal of Neuroscience*, Society for Neuroscience Membership Department, 1121 14th St., NW, Suite 1010, Washington, DC 20005. Periodicals postage paid at Washington, DC, and additional mailing offices. Canada Post International Publications Mail (Canadian Distribution) Sales Agreement No. 0895369. *The Journal of Neuroscience* is indexed by BIOSIS, Brain Information Service, Chemical Abstracts, Current Contents EMBASE/Excerpta Medica, FISHLIJ; Index Medicus, Index to Scientific Reviews, Psychological Abstracts, PsycINFO, and PsycLIT. © The *Journal* is printed on acid-free paper that meets the minimum requirements of ANSI Standard Z39.48-1984 (Permanence of Paper). Copyright © 2009 Society for Neuroscience. All rights reserved.

The ideas and opinions expressed in *The Journal of Neuroscience* do not necessarily reflect those of the Society for Neuroscience or the Editors of *The Journal of Neuroscience*. Publication of an advertisement or other product mention in *The Journal of Neuroscience* should not be construed as an endorsement of the manufacturer's claims. The Society for Neuroscience does not assume any responsibility for any injury and/or damage to persons or property arising from or related to any use of any material contained in *The Journal of Neuroscience*.