

# 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 \$56, \$76 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](mailto: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*.