

JNeurosci

THE JOURNAL OF NEUROSCIENCE

EDITOR-IN-CHIEF

Marina Picciotto

SENIOR EDITORS

Greg DeAngelis
Jeffrey Diamond
Jay A. Gottfried
Paul J. Kenny
Dan H. Sanes
Ruth S. Slack
Ivan Toni
Catherine S. Woolley

REVIEWING EDITORS

Jose Manuel Alonso
Bruno Averbeck
Anne Baron-Van Evercooren
James Bisley
Roshan Cools
Jonathan Demb
Ruth Anne Eatock
Paul Frankland
Fabrizio Gabbiani
Miriam B. Goodman
Richard Henson
Jenny Hsieh
Patricia Janak
Artur Kania
Christoph Kayser
Jon D. Levine
Mark P. Mattson
BethAnn McLaughlin
Gavan McNally
Pieter Medendorp
Suzanne M. Moenter
Jonas Obleser
Hans Op de Beeck
Takeshi Sakurai
Daniela Schiller
Kevin J. Staley
Jane M. Sullivan

ASSOCIATE EDITORS

Woo-Young Ahn
Regina Armstrong
Mark Baccei
Bernard Balleine
Tallie Z. Baram
Diana Bautista
Michael Beauchamp
Til Ole Bergmann
H. Tad Blair
Laura Bradfield
Donna Calu
Jianhua Cang
Yu-Qing Cao
Manuel Castro-Alamancos
Joseph F. Cheer
Marlene Cohen
Michael Cohen
Bevil Conway
Floris de Lange
Mauricio R. Delgado
Hanneke den Ouden
Mingzhou Ding
Yan Dong
Joseph El Khoury
Abdeljabbar El Manira
James Fawcett
Marla Feller
Lesley K. Fellows
Alfredo Fontanini
Alex Fornito
Christie D. Fowler
Michael J. Frank
Jack Gallant/Gianluca Gallo
Lindsey Glickfeld

Jonathan Godbout
Shannon Gourley
Christina Gremel
Saskia Haegens
Simon Hanslmayr
Matthew R. Hayes
Biyu He
Mary Heinricher
Mihaela Jordanova
Jens-Max Hopf
Ru-Rong Ji
Sheena A. Josselyn
Bong-Kiun Kaang
Thorsten Kahnt
Bradley Kerr

Baljit Khakh
Hackjin Kim
Marlies Knipper
Conny Kopp-Scheinflug
Rohini Kuner
Mark Laubach
Michael S. Levine
Ifat Levy
Andrew Lieberman
Angelika Lingnau
Mary Kay Lobo
David M. Lovinger
Qiufu Ma
Arianna Maffei
Nathan Marchant
Lori McMahon
Hugo Merchant
Courtney Miller
Marisela Morales
Maria Concetta Morrone
Gabe Murphy
Timothy H. Murphy
John Murray
Vishnu Murty
Nandakumar Narayanan
Maiken Nedergaard
Bernd Nilius
John O'Doherty
Christopher Pack
Luiz Pessoa
Markus Ploner
Gina R. Poe
Gabriela Popescu
Lucas Pozzo-Miller
Theodore Price
Antonio Rangel
Margaret E. Rice
Erin Rich
Erik D. Roberson
Edward S. Ruthazer
Jorg B. Schulz
Hyojung Seo
Barry Setlow
Wayne S. Sossin
William C. Stacey
Thomas A. Stalnaker
Carla Tavecchia
Gregor Thut
Philippe N. Tobler
Kuei Y. Tseng
Matthijs van der Meer
Rufin VanRullen
Timothy J. Vickery
Rufin Vogels
Henrique Von Gersdorff
Kate Wassum
Nicole Wenderoth
Donna M. Wilcock
Catharine Antonia Winstanley
Teresa L. Wood
Lawrence Wrabetz
Geoffrey Woodman
Hanns Ulrich Zeilhofer
Hui Zheng
Ulf Ziemann

FEATURES EDITOR

Teresa Esch

EDITORIAL STAFF

Suzanne Rosenzweig
Kelly Newton
Blythe Alexander
Adam Buck
Zachary Dourafei
Vicente Carmona
Mary Collins
Lesley Hillis
Eric Hoffmaster
Kara O'Leary

The Journal of Neuroscience (ISSN-0270-6474) is an 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 2 issue. The Volume 39 (2019) Institutional subscription rates are available online at <http://jneurosci.org/content/subscriptions/cost>. Single copies for the U.S. are \$120. 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, subscriptions@sfn.org. Claims will be honored if received within four (4) 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 of Neuroscience* at a reduced rate should contact the Society's Membership Department (phone 202-962-4911, membership@sfn.org). Society members should also direct back issue requests to subscriptions@sfn.org.

Advertising inquiries should be addressed to The Society for Neuroscience, 1121 14th St., NW, Suite 1010, Washington, DC 20005, phone 202-962-4000, adsales@sfn.org.

Reprints of a single copy of an individual article are available from Infotrieve at <http://www.infotrieve.com>.

Photocopies: *The Journal of Neuroscience* is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. 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 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, jnpermissions@sfn.org.

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, Chemical Abstracts, Current Contents, EMBASE/Excerpta Medica, Index Medicus/Medline, PubMed, PubMed Central, and PsycINFO. © *The Journal of Neuroscience* is printed on acid-free paper that meets the minimum requirements of ANSI Standard Z39.48-1984 (Permanence of Paper). Copyright © 2019 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*.