

MOLECULAR PHARMACOLOGY

A Publication of the American Society for Pharmacology and Experimental Therapeutics

Founded by Avram Goldstein—1965

Stephen F. Traynelis, Editor

ASSOCIATE EDITORS

Srikumar Chellappan, Arthur Christopoulos, Stuart Cull-Candy, Haian Fu,
Peter Houghton, John R. Hepler, Jeanne Nerbonne, John Tesmer, and Kenneth E. Thummel
Graeme Milligan, *Minireview Editor*

EDITORIAL AND ADVISORY BOARD

Radu Aricescu	Ronald S. Duman	Hidenori Ichijo	Peter MacKenzie	Jean-Philippe Pin
Giuseppe Battaglia	Frederick J. Ehler	Kenneth A. Jacobson	Ken Mackie	John J. Reiners, Jr.
Jeffrey L. Benovic	Raymond Evers	Andrew Jenkins	Sridhar Mani	Des Richardson
Nigel J. M. Birdsall	Michael Freissmuth	Eric F. Johnson	Jeffrey Martens	Michael Robinson
Julie Blendy	Liwu Fu	Mathew Jones	Donald H. Maurice	Michael A.
Kendall J. Blumer	Yoshiaki Fujii-	Marcelo Kazanietz	Andrew McCammon	Rogawski
Michel Bouvier	Kuriyama	Terry Kenakin	Nael McCarty	Bryan L. Roth
Cecilia Bouzat	Hiroyasu Furukawa	Brian K. Kobilka	Dan McGehee	Arnold E. Ruoho
Nigel Bunnett	Aurelio Galli	Herman Koepsell	James O. McNamara	Jill Siegfried
Thomas P. Burris	Ulrik Gether	Richard Kolesnick	Kathryn E. Meier	Shivendra V.
Meritxell Canals	David Gewirtz	Evi Kostenis	Martin Michel	Singh
William A. Catterall	Alasdair Gibb	Costas Koumenis	Laurence Miller	Alan Smrcka
Hong-Zhuan Chen	Catherine Godson	Rakesh Kukreja	Peter Mohler	Bruno Stieger
Xiaodong Cheng	Frank J. Gonzalez	Nevin Lambert	Rita Nahta	Andrew Thorburn
Richard B. Clark	Michael M. Gottesman	Ping-Yee Law	Richard R. Neubig	Andrew Tobin
Susan P. C. Cole	Patrick Griffin	Amy Lee	Kim A. Neve	JoAnn Trejo
Adrienne Cox	Grace Guo	L. M. Fredrik Leeb-Lundberg	Robert A. Nicholas	David J. Waxman
Niels Decher	Masatoshi Hagiwara	Henry Lester	Eric Ortlund	David Weinschenker
Mark Dell'Acqua	Randy Hall	Robin Lester	Robert E. Oswald	Jurgen Wess
Phillip A. Dennis	R. Adron Harris	Lian Li	Jason Papin	Keith Williams
Jerod Denton	Johannes Hell	Zijian Li	Gavril W. Pasternak	Danny Winder
Jian Ding	Ellen Hess	Sophie Lotersztajn	Tarun Patel	Richard D. Ye
George Dubyak	Donald Hilgemann	Tim Lovenberg	Dianne Perez	Lixia Yue
				Michael Zhu

BOARD OF PUBLICATIONS TRUSTEES

Mary Vore, *Chair*; Randy A. Hall, Michael F. Jarvis, Kathryn E. Meier, Edward T. Morgan,
Kim A. Neve, David R. Sibley, Stephen F. Traynelis, Jeffrey M. Witkin, and Judith A. Siuciak, *ex officio*

ASPET EXECUTIVE OFFICER: Judith A. Siuciak

Journals Director: Richard Dodenhoff *Peer Review Manager:* Dianne King-McGavin *Senior Peer Review Coordinator:* Mary Blackwood

Molecular Pharmacology (ISSN 1521-0111) is published monthly online only (two volumes per year beginning in January and July) by the American Society for Pharmacology and Experimental Therapeutics, 9650 Rockville Pike, Bethesda, MD 20814-3995. E-mail: subscriptions@aspet.org. ASPET web site: aspet.org. Journal web site: molpharm.aspetjournals.org. Subscription rates at aspetjournals.org/site/subscriptions/index.xhtml. GST Tax Number for Canadian subscribers: BN: 13489 2330 RT.

Indexed or abstracted by: *Biochemistry & Biophysics Citation Index*®, *Biological Abstracts*, *Current Awareness in Biological Sciences*, *Current Contents*®/*Life Sciences*, *EMBASE/Excerpta Medica*, *Index Medicus*, *Medical Documentation Service*®, *Reference Update*®, *Research Alerts*®, *Science Citation Index*®, and *SciSearch*®.

Journal and ASPET office: 9650 Rockville Pike, Bethesda, MD 20814-3995. Telephone: 301-634-7060. Fax: 301-634-7061. E-mail: info@aspet.org. ASPET web site: aspet.org. Journal web site: molpharm.aspetjournals.org.

Editorial matters should be addressed to Dr. Stephen F. Traynelis, Editor, *Molecular Pharmacology*, at the above address.

Instructions to Authors: See molpharm.aspetjournals.org for the Instructions to Authors and the ASPET Authorship Responsibility, Financial Disclosure, and Chemical Structure Statement forms.

Subscriptions: Contact the ASPET Subscriptions Dept., 9650 Rockville Pike, Bethesda, MD 20814-3995. Telephone: 301-634-7782. Fax: 301-634-7061. E-mail: subscriptions@aspet.org. See aspetjournals.org/site/subscriptions/index.xhtml for rates.

Change of IP addresses: ASPET will help institutional subscription administrators update IP address ranges as requested. Subscription administrators can make these changes at the journal site using their account user name and password.

Reprints of individual articles are available from the journal web site using the pay-per-view option for nonsubscribers.

Reprints in large quantities for commercial or academic use may be purchased from ASPET. For information and prices, call 301-634-7063.

Copyright information: *Molecular Pharmacology* is copyrighted by the American Society for Pharmacology and Experimental Therapeutics. For permission to photocopy entire articles from *Molecular Pharmacology*, see www.copyright.com or contact the Copyright Clearance Center (CCC), Inc., 222 Rosewood Dr., Danvers, MA 01923. Telephone: 978-750-8400. For permission to reprint portions of articles such as figures and tables or to reprint entire articles in a thesis or dissertation, see www.aspet.org/webforms.aspx?ekfrm=84. Photocopying or printing articles beyond that permitted by Sections 107 and 108 of the U.S. Copyright Law is allowed, provided that the \$25.00-per-copy fee is paid through the CCC. Classroom photocopying is permitted at no fee, provided that students are not charged more than the cost of duplication. This consent does not extend to other kinds of copying. Reproduction of any portion of an article for subsequent republication requires permission of ASPET.

Disclaimer: The statements and opinions contained in the articles of *Molecular Pharmacology* are solely those of the individual authors and contributors and not of the American Society for Pharmacology and Experimental Therapeutics. The appearance of advertisements in the journal is not a warranty, endorsement, or approval of the products or their safety. The American Society for Pharmacology and Experimental Therapeutics disclaims responsibility for any injury to persons or property resulting from any ideas or products referred to in any article or advertisement.

Copyright © 2015 by the American Society for Pharmacology and Experimental Therapeutics. All rights reserved.