

PHARMACOLOGICAL REVIEWS

A Publication of the American Society for Pharmacology and Experimental Therapeutics

Darrell R. Abernethy, *Editor*

ASSOCIATE EDITORS

Stephen P. Alexander
Nottingham, United Kingdom
Arthur J. Atkinson, Jr.
Bethesda, Maryland
Eric P. Brass
Torrance, California
Annette Dolphin
London, United Kingdom
William E. Evans
Memphis, Tennessee
Ross Feldman
London, Canada
David Flockhart
Washington, DC

Bertil Fredholm
Stockholm, Sweden
Glenda E. Gillies
London, United Kingdom
Stephen D. Hall
Indianapolis, Indiana
Perry V. Halushka
Charleston, South Carolina
Paul Insel
La Jolla, California
Ralph E. Kauffman
Kansas City, Missouri
Yoshihisa Kurachi
Kobe, Japan

Dan L. Longo
Baltimore, Maryland
Charles Marsden
Nottingham, United Kingdom
Mark P. Mattson
Baltimore, Maryland
Ove A. Nedergaard
Odense, Denmark
Raymond Ruddon
New Brunswick, New Jersey
Theresa Shapiro
Baltimore, Maryland

Burt Sharp
Memphis, Tennessee
Sang-Goo Shin
Seoul, Korea
Daniel L. Simmons
Provo, Utah
C. Michael Stein
Nashville, Tennessee
Jouko Tuomisto
Kuopio, Finland
Per Margne Ueland
Bergen, Norway
Anton Wellstein
Washington, DC

ASPET BOARD OF PUBLICATIONS TRUSTEES

Brian M. Cox, *Chair*; Darrell R. Abernethy, Lorraine J. Gudas, James R. Halpert, Paul A. Insel, John S. Lazo, Richard R. Neubig, Rick G. Schnellmann, and Darryle D. Schoepp

ASPET EXECUTIVE OFFICER: Christine K. Carrico

JOURNALS DIRECTOR: Richard Dodenhoff

Editorial supervision of *Pharmacological Reviews* is shared jointly with the **British Pharmacological Society** and the **Scandinavian Pharmacological Society**.

Pharmacological Reviews (ISSN 0031-6997) is published quarterly in March, June, September, and December by the American Society for Pharmacology and Experimental Therapeutics, 9650 Rockville Pike, Bethesda, MD 20814-3995; e-mail: info@aspet.org; web site: www.aspet.org. Journal web site: pharmrev.aspetjournals.org. Periodicals postage paid at Bethesda, MD, and at additional mailing offices. POSTMASTER: Send address changes to *Pharmacological Reviews*, 9650 Rockville Pike, Bethesda, MD 20814-3995. Subscription rates: U.S.: \$222.00 for institutions and \$125.00 for non-ASPET members. Outside the U.S.: \$262.00 for institutions and \$165.00 for non-ASPET members. Single copy: \$66.00. GST Tax Number for Canadian subscribers: BN:13489 2330 FT. Institutional and non-ASPET member subscriptions include access to the online version of *Pharmacological Reviews* (pharmrev.aspetjournals.org). **Indexed or abstracted by:** *Biological Abstracts*, *BIOSIS Previews Database*, *Biosciences Information Service*, *Current Contents®/Life Sciences*, *EMBASE/Excerpta Medica*, *Index Medicus*, *Index to Scientific Reviews®*, *Medical Documentation Service®*, *Reference Update®*, *Research Alert®*, *Science Citation Index®*, and *SciSearch®*. **ASPET Office:** 9650 Rockville Pike, Bethesda, MD 20814-3995; telephone: 301-634-7060; fax: 301-634-7061; email: info@aspet.org; web site: www.aspet.org.

Correspondence regarding editorial matters should be addressed to Dr. Darrell Abernethy, Editor, *Pharmacological Reviews*, NIA, Gerontology Research Center, 5600 Nathan Shock Drive, Baltimore, MD 21224; telephone: 410-558-8611; fax: 410-558-8318; e-mail: abernethy@grc.nia.nih.gov.

Official version: The online version of *Pharmacological Reviews* contains all of the information and material contained in the print version plus additional material that may not appear in print such as videos and large data sets. The online version may be more current than the print version. Where noted, the online version has been corrected in departure from the print version. The online version of *Pharmacological Reviews* officially published by the American Society for Pharmacology and Experimental Therapeutics is the definitive version and, to the extent any difference exists, will prevail over the print version.

Instructions to Authors: See <http://pharmrev.aspetjournals.org> for the Instructions to Authors and the ASPET Authorship Responsibility, Financial Disclosure, and Copyright Transfer form.

Correspondence concerning subscriptions: Nonmember individual and institutional subscriptions: ASPET Subscriptions Dept., Rm. L-2310, 9650 Rockville Pike, Bethesda, MD 20814-3998; telephone: 301-634-7029; fax: 301-634-7099; email: staff@dues.faseb.org. ASPET Members: contact the ASPET office. For European site licenses and consortia, contact: David Charles, Institutional Sales & Licensing, 92 avenue du General de Gaulle, 78600 Maisons-Laffitte, France; telephone: +33-1-39-12-29-29; fax: +33-1-39-12-47-45; email: dlcharles@wanadoo.fr.

Change of address: ASPET must be notified 60 days in advance. Journals undeliverable because of incorrect address will be destroyed. Duplicate copies may be obtained, if available, from ASPET at the single copy price. Send address changes to the ASPET office.

Issue Replacement Policy: Domestic Subscribers—Claims for nondelivery of issues must be made within three (3) months of issue mail date. **Foreign Subscribers**—Claims for nondelivery of issues must be made within six (6) months of issue mail date. **Missing Issues (domestic and foreign)**—ASPET will not honor refunds or replacement requests made outside of the claim time period. Up to two (2) issues will be replaced free of charge per subscription year.

Reprints of individual articles are available from the authors and from Infotrieve at www.infotrieve.com; otherwise call 800-422-4633, fax 310-208-5971, or email orders@infotrieve.com. Please send as much citation information as possible such as journal title, volume issue, page number, year, authors, article title, etc.

Reprints in large quantities for commercial or academic use may be purchased from the publisher. For information and prices, call 301-634-7063. **Copyright Information:** *Pharmacological Reviews* is copyrighted by The American Society for Pharmacology and Experimental Therapeutics. For permission to photocopy or use material electronically from *Pharmacological Reviews*, please access www.copyright.com or contact the Copyright Clearance Center (CCC), Inc., 222 Rosewood Dr., Danvers, MA 01923; telephone: 978-750-8400. Photocopying of articles beyond that permitted by Sections 107 and 108 of the U.S. Copyright Law is allowed, provided that the \$20.00-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. Write to the ASPET office at the above address. Requests should include a statement of intended use as well as explicit specifications of the materials to be reproduced.

Disclaimer: The statements and opinions contained in the articles of *The Journal of Pharmacology and Experimental Therapeutics* 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 of safety. The American Society for Pharmacology and Experimental Therapeutics disclaims responsibility for any injury to persons or property resulting from any ideas of products referred to in the articles or advertisement.

Copyright © 2005 by the American Society for Pharmacology and Experimental Therapeutics. All rights reserved. Printed in the U.S.A.