

# The Journal of Pharmacology and Experimental Therapeutics

A Publication of the American Society for Pharmacology and Experimental Therapeutics

Founded by John J. Abel - 1908

## Kenneth D. Tew *Editor*

Joe Blumer, *Minireviews Editor*

### ASSOCIATE EDITORS

Darrell R. Abernethy	Beverley Greenwood-Van Meerveld	Lawrence H. Lash	Richard A. Morrisett	Robert A. Roth
Shripad Bhagwat	Yuichi Hattori	Robert Levi	James M. O'Donnell	Jeffrey C. Stevens
Salvatore Cuzzocrea	Raouf A. Khalil	Donald E. Mager	Gary O. Rankin	Raymond J. Winquist
David A. Gewirtz		Gerard Marek		

### EDITORIAL ADVISORY BOARD

Geoffrey W. Abbott	Ann Daly	Paul Heerdt	S. Jamal Mustafa	Patricia K. Sonsalla
Thomas J. Abbruscato	M. Imad Damaj	Edwin K. Jackson	Michael Nader	Roger D. Spealman
Edson X. Albuquerque	William C. deGroat	Douglas Johns	S. Stevens Negus III	Francis G. Spinale
Bradley Andresen	Annarita Di Lorenzo	Kenneth M. Johnson	Nazareno Paolucci	David A. Taylor
Thomas M. Argentieri	Grant Drummond	Mark R. Kelley	Andreas Papapetropoulos	Milt Teitler
John Auchampach	Frederick J. Ehler	Lewis B. Kinter	Achilles J. Pappano	Robin Thurmond
Bjoern Bauer	Alessandro Fatatis	George F. Koob	Russell O. Pieper	Myron L. Toews
Jack Bergman	Steven J. Feinmark	Joseph J. Lynch	Russell A. Prough	Sandra P. Welch
Jean-Marie Boeynaems	Stephen F. Flaim	Giorgio Minotti	Raymond M. Quock	Jack Yalowich
Andrea Cignarella	Hiroyuki Fukui	Harvey J. Motulsky	Patrick Sexton	Bryan K. Yamamoto
Brian M. Cox	Lisa A. Hazelwood	Hasan Mukhtar	Philip C. Smith	Xiao-Feng Yang

### BOARD OF PUBLICATIONS TRUSTEES

Mary Vore, *Chair*; Darrell R. Abernethy, Eric L. Barker, Jack Bergman, Lynette Daws, J. Steven Leeder, Edward T. Morgan, Emily E. Scott, Jeffrey C. Stevens, Kenneth D. Tew, 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*: Cassie Wood

*The Journal of Pharmacology and Experimental Therapeutics* (ISSN 1521-0103) is published monthly online only by the American Society for Pharmacology and Experimental Therapeutics, 9650 Rockville Pike, Bethesda, MD 20814-3995. E-mail: [subscriptions@aspet.org](mailto:subscriptions@aspet.org). ASPET web site: [aspet.org](http://aspet.org). Journal web site: [jpet.aspetjournals.org](http://jpet.aspetjournals.org). Subscription rates at [aspetjournals.org/site/subscriptions/index.xhtml](http://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*, *BIOSIS Previews Database*, *Bio-Sciences Information Services*, *Current Awareness in Biological Sciences*, *Current Contents*®/*Life Sciences*, *EMBASE/Excerpta Medica*, *Index Medicus*, *Medical Documentation Service*®, *PsycINFO*, *Reference Update*®, *Research Alerts*®, *Science Citation Index*®, *SciSearch*®, and *SIIC Data Bases*.

**Journal and ASPET office:** 9650 Rockville Pike, Bethesda, MD 20814-3995. Telephone: 301-634-7060. Fax: 301-634-7061. E-mail: [info@aspet.org](mailto:info@aspet.org). ASPET web site: [aspet.org](http://aspet.org). Journal web site: [jpet.aspetjournals.org](http://jpet.aspetjournals.org).

**Editorial matters** should be addressed to Dr. Kenneth Tew, Editor, *The Journal of Pharmacology and Experimental Therapeutics*, at the above address. **Instructions to Authors:** See [jpet.aspetjournals.org](http://jpet.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](mailto:subscriptions@aspet.org). See [aspetjournals.org/site/subscriptions/index.xhtml](http://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:** *The Journal of Pharmacology and Experimental Therapeutics* is copyrighted by the American Society for Pharmacology and Experimental Therapeutics. For permission to photocopy entire articles from *The Journal of Pharmacology and Experimental Therapeutics*, see [www.copyright.com](http://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](http://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 *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 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** © 2017 by the American Society for Pharmacology and Experimental Therapeutics. All rights reserved.