

DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

Founded by Kenneth C. Leibman—1973

Jeffrey C. Stevens, Editor

ASSOCIATE EDITORS

Wayne L. Backes, Namandje N. Bumpus, Deepak K. Dalvie, Xinxin Ding, Nina Isoherranen, J. Steven Leeder, R. Scott Obach, Mary Paine, David S. Riddick, John D. Schuetz, Bruno Stieger, and Aiming Yu

SCIENTIFIC ADVISORY BOARD

M.W. Anders, Frederick P. Guengerich, James R. Halpert, Magnus Ingelman-Sundberg, Eric F. Johnson, Anthony Y. Lu, Bettie Sue Masters, Edward T. Morgan, and Paul R. Ortiz De Montellano

REVIEWS EDITORS

Yurong Lai and Xiao-bo Zhong

EDITORIAL BOARD MEMBERS

Lauren Aleksunes	Uwe Christians	Amit S. Kalgutkar	Grover P. Miller	Ikumi Tamai
Shelby Anderson	Raymond Evers	Thomas Kocarek	Swati Nagar	Mitchell E. Taub
Pieter P.J. Annaert	Robert S. Foti	Hiroyuki Kusuha	K. Sandy Pang	Rommel Tirona
Upendra Argikar	Aleksandra Galetin	Lawrence H. Lash	Bhagwat Prasad	Jan Wahlstrom
Thomas Baillie	Bruno Hagenbuch	Lois D. Lehman-McKeeman	Allan Rettie	Joanne Wang
Michael Cameron	Robert Hanzlik	Chuan Li	Melissa Runge-Morris	Ronald E. White
Matthew A. Cerny	Ronald N. Hines	Xingrong Liu	Aarti Sawant-Basak	Wen Xie
Eric Chan	Min Huang	Kazuya Maeda	Emily E. Scott	Shinji Yamazaki
Thomas K.H. Chang	W. Griffith Humphreys	Don Mager	Michael Sinz	Maciej Zamec-Glisczynski
Cuiping Chen	J. Matthew Hutzler	Qingcheng Mao	Raju Subramanian	Su Zeng
Nathan Cherrington	Margaret O. James	Donald Mercante	Craig Svensson	Donglu Zhang
David D. Christ	Hyunyoung Jeong		Yun K. Tam	Michael Zientek

BOARD OF PUBLICATIONS TRUSTEES

Mary Vore, *Chair*; Eric L. Barker, Jack Bergman, Lynette Daws, Beverley Greenwood-Van Meerveld, Michael F. Jarvis, J. Steven Leeder, Kathryn E. Meier, Emily E. Scott, Jeffrey C. Stevens, Kenneth D. Tew, Judith A. Siuciak, *ex officio*; and Joseph Jilek, *ex officio Young Scientist Representative*

ASPET EXECUTIVE OFFICER: Judith A. Siuciak

Journals Director: Richard Dodenhoff *Peer Review Manager:* Jacqueline Perry

Drug Metabolism and Disposition (ISSN 1521-009X) is published monthly (one volume per year) online only by the American Society for Pharmacology and Experimental Therapeutics, 1801 Rockville Pike, Suite 210, Rockville, MD 20852-1633. E-mail: subscriptions@aspet.org. ASPET web site: aspet.org. Journal web site: dmd.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*, *BIOSIS Previews Database*, *Bio-Sciences Information Services*, *Current Awareness in Biological Sciences*, *Current Contents*®/*Life Sciences*, *EMBASE/Excerpta Medica*, *Index Medicus*, *International Pharmaceutical Abstracts*, *Medical Documentation Service*®, *Reference Update*®, *Research Alerts*®, *Science Citation Index*®, *SciSearch*®, and *SIIC Data Bases*.

Journal and ASPET office: 1801 Rockville Pike, Suite 210, Rockville, MD 20852-1633. Telephone: 301-634-7060. Fax: 301-634-7061. E-mail: info@aspet.org. ASPET web site: aspet.org. Journal web site: dmd.aspetjournals.org. **Editorial matters** should be addressed to Dr. Jeffrey C. Stevens, Editor, *Drug Metabolism and Disposition*, at the above address.

Instructions to Authors: See dmd.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., 1801 Rockville Pike, Suite 210, Rockville, MD 20852-1633. 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: *Drug Metabolism and Disposition* is copyrighted by the American Society for Pharmacology and Experimental Therapeutics. For permission to photocopy entire articles from *Drug Metabolism and Disposition*, 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 <https://www.aspet.org/aspetjournals/journals-information/permissions-request>. Photocopying or printing articles beyond that permitted by Sections 107 and 108 of the U.S. Copyright Law is allowed, provided that the \$35.00-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 *Drug Metabolism and Disposition* 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 © 2019 by the American Society for Pharmacology and Experimental Therapeutics. All rights reserved.