## MOLECULAR PHARMACOLOGY

## **Contents**

## ACCELERATED COMMUNICATIONS

939	Molecular Cloning and Expression of a Pituitary Somatostatin Receptor with Preferential Affinity for Somatostatin-28	Anne-Marie O'Carroll, Stephen J. Lolait, Monica König, and Lawrence C. Mahan
947	High Affinity Block of Myocardial L-Type Calcium Channels by the Spider Toxin $\omega$ -Agatoxin IIIA: Advantages over 1,4-Dihydropyridines	Charles J. Cohen, Eric A. Ertel, McHardy M. Smith, Virginia J. Venema, Michael E. Adams, and Mark D. Leibowitz
952	Effects of a Benz[ $e$ ]indene on $\gamma$ -Aminobutyric Acid-Gated Chloride Currents in Cultured Postnatal Rat Hippocampal Neurons	Nancy T. Rodgers-Neame, Douglas F. Covey, Yuefei Hu, Keith E. Isenberg, and Charles F. Zorumski
958	Identification of Rabbit Cytochromes P450 2C1 and 2C2 as Arachidonic Acid Epoxygenases	Ronald M. Laethem and Dennis R. Koop
	ARTICLES	
964	Rodent and Human $\beta_3$ -Adrenergic Receptor Genes Contain an Intron within the Protein-Coding Block	James G. Granneman, Kristine N. Lahners, and Donald D. Rao
971	Effects of Chemical and Surgical Sympathectomy on Expression of $\beta$ -Adrenergic Receptors and Guanine Nucleotide-Binding Proteins in Rat Submandibular Glands	Suleiman W. Bahouth
982	Inhibition by HS-142—1, a Novel Nonpeptide Atrial Natriuretic Peptide Antagonist of Microbial Origin, of Atrial Natriuretic Peptide-Induced Relaxation of Isolated Rabbit Aorta through the Blockade of Guanylyl Cyclase-Linked Receptors	Reiko Imura, Tomoyuki Sano, Joji Goto, Koji Yamada, and Yuzuru Matsuda

Continued

MOLECULAR PHARMACOLOGY (ISSN 0026-895x) is an official publication of The American Society for Pharmacology and Experimental Therapeutics and is published monthly, two volumes a year, beginning in January and July, by Williams & Wilkins, 428 East Preston Street, Baltimore, MD 21202-3993. Price per year: USA individual rate \$100; all other countries, surface mail \$130. USA institutional rate \$210, all other countries, surface mail \$240. Single copies \$18 (\$21 foreign). (Prices subject to change.) Indexed by *Index Medicus, Current Contents/Life Sciences, Excerpta Medica*, and *Current Awareness in Biological Sciences*. All subscription orders should be addressed to Molecular Pharmacology, 428 East Preston Street, Baltimore, MD 21202-3993.

Second Class Postage paid at Baltimore, MD, and at additional mailing offices. The GST Tax number for Canadian subscribers is 123394371. POSTMASTER: Send address changes to MOLECULAR PHARMACOLOGY, 428 East Preston Street, Baltimore, MD 21202-3993.

Copyright © 1992 by The American Society for Pharmacology and Experimental Therapeutics.

## CONTENTS (cont'd)

991	Antidepressant Drug Action in a Transgenic Mouse Model of the Endocrine Changes Seen in Depression	MC. Pepin, F. Pothier, and N. Barden
996	Stable Expression of Type 1 $\gamma$ -Aminobutyric Acid <sub>A</sub> /Benzodiazepine Receptors in a Transfected Cell Line	Garry Wong, Yoshitatsu Sei, and Phil Skolnick
1004	Role of Protein Kinase C in the Modulation of Multidrug Resistance: Expression of the Atypical $\gamma$ Isoform of Protein Kinase C Does not Confer Increased Resistance to Doxorubicin	Shakeel Ahmad, Jane B. Trepel, Shigeo Ohno, Koichi Suzuki, Takashi Tsuruo, and Robert I. Glazer
1010	Photoaffinity Labeling of the Partially Purified Mitochondrial Phenylalkylamine Calcium Antagonist Receptor	Gerald Zernig
1014	Cross-Species Comparison of 5-Lipoxygenase- Activating Protein	Philip J. Vickers, Gary P. O'Neill, Joseph A. Mancini, Stella Charleson, and Mark Abramovitz
1020	Immunochemical Identity of the 2,3,7,8- Tetrachlorodibenzo- $p$ -dioxin- and $\beta$ - Naphthoflavone-Induced Cytochrome P-450 Arachidonic Acid Epoxygenases in Chick Embryo Liver: Distinction from the $\omega$ -Hydroxylase and the Phenobarbital-Induced Epoxygenase	Akio Kanetoshi, A. Michele Ward, Brian K. May, and Arleen B. Rifkind
1027	Cytochromes P450 NMa, NMb (2G1), and LM4 (1A2) Are Differentially Expressed during Development in Rabbit Olfactory Mucosa and Liver	Xinxin Ding, Hwei-Ming Peng, and Minor J. Coon
1033	Pre-Steady State Study of β-Adrenergic and Purinergic Receptor Interaction in C6 Cell Membranes: Undelayed Balance between Positive and Negative Coupling to Adenylyl Cyclase	Henri Valeins, Michel Merle, and Julie Labouesse
1042	Rapid Desensitization of Muscarinic m3 Receptor- Stimulated Polyphosphoinositide Responses	Andrew B. Tobin, David G. Lambert, and Stefan R. Nahorski
1049	Ryanodine Induces Persistent Inactivation of the Ca <sup>2+</sup> Release Channel from Skeletal Muscle Sarcoplasmic Reticulum	Ildikó Zimányi, Edmond Buck, Jonathan J. Abramson, Matthew M. Mack, and Isaac N. Pessah
1058	Neuromedin B Receptors Retain Functional Expression when Transfected into BALB 3T3 Fibroblasts: Analysis of Binding, Kinetics, Stoichiometry, Modulation by Guanine Nucleotide- Binding Proteins, and Signal Transduction and Comparison with Natively Expressed Receptors	R. V. Benya, E. Wada, J. F. Battey, Z. Fathi, LH. Wang, S. A. Mantey, D. H. Coy, and R. T. Jensen
1069	Binding Kinetics of $\gamma$ -Aminobutyric Acid <sub>A</sub> Receptor Noncompetitive Antagonists: Trioxabicyclooctane, Dithiane, and Cyclodiene Insecticide-Induced Slow Transition to Blocked Chloride Channel Conformation	Jon E. Hawkinson and John E. Casida

1077	Characterization of the Binding of [ <sup>3</sup> H]L-158,809: A New Potent and Selective Nonpeptide Angiotensin II Receptor (AT <sub>1</sub> ) Antagonist Radioligand	Tsing B. Chen, Victor J. Lotti, and Raymond S. L. Chang
1083	Dual Excitatory and Inhibitory Effects of Opioids on Intracellular Calcium in Neuroblastoma × Glioma Hybrid NG108-15 Cells	Wenzhen Jin, Nancy M. Lee, Horace H. Loh, and Stanley A. Thayer
1090	Coexistence of Contractile and Relaxant 5- Hydroxytryptamine Receptors Coupled to Distinct Signaling Pathways in Intestinal Muscle Cells: Convergence of the Pathways on Ca <sup>2+</sup> Mobilization	John F. Kuemmerle, Daniel C. Martin, Karnam S. Murthy, John M. Kellum, John R. Grider, and Gabriel M. Makhlouf
1097	[ <sup>3</sup> H]Phenytoin Identifies a Novel Anticonvulsant- Binding Domain on Voltage-Dependent Sodium Channels	Joseph Francis and W. McIntyre Burnham
1104	Interaction of Pumiliotoxin B with an "Alkaloid-Binding Domain" in the Voltage-Dependent Sodium Channel	Fabian Gusovsky, William L. Padgett, Cyrus R. Creveling, and John W. Daly
1109	Mechanism of Anti-Human Immunodeficiency Virus Action of Polyoxometalates, a Class of Broad- Spectrum Antiviral Agents	Naohiko Yamamoto, Dominique Schols, Erik de Clercq, Zeger Debyser, Rudi Pauwels, Jan Balzarini, Hideki Nakashima, Masanori Baba, Mitsuaki Hosoya, Robert Snoeck, Johan Neyts, Graciela Andrei, Barry A. Murrer, Brian Theobald, Gerry Bossard, Geoffrey Henson, Michael Abrams, and Donald Picker
1118	Cell-Specific Metabolism in Mouse Bone Marrow Stroma: Studies of Activation and Detoxification of Benzene Metabolites	Louis G. Ganousis, Daniel Goon, Teresa Zyglewska, Kenneth K. Wu, and David Ross
1126	Author Index for Volume 42	
1134	Subject Index for Volume 42	

Copyright © 1992 by The American Society for Pharmacology and Experimental Therapeutics
All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of this article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (21 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1986 articles are the same as those shown for current articles.