## Contents

### ACCELERATED COMMUNICATIONS

175 Novel Amiloride Analog Allosterically Modulates the \(\alpha_2\)-Adrenergic Receptor but Does Not Inhibit Na\(^+\)/H\(^+\) Exchange  
Amy L. Wilson, Scott W. Womble, Chandra Prakash, E. J. Cragoe, Jr., Ian A. Blair, and Lee E. Limbird

180 Human Gene S31 Encodes the Pharmacologically Defined Serotonin 5-Hydroxytryptamine\(_{1B}\) Receptor  
John M. Zgombick, Lee E. Schechter, Mary Macchi, Paul R. Hartig, Theresa A. Branchek, and Richard L. Weinshank

186 Action of Thrombin Receptor Polypeptide in Gastric Smooth Muscle: Identification of a Core Pentapeptide Retaining Full Thrombin-Mimetic Intrinsic Activity  
Morley D. Hollenberg, Song-Gui Yang, Adebayo A. Laniyonu, Graham J. Moore, and Mahmoud Saifeedine

192 Metabotropic Glutamate Receptors Potentiate Ionotropic Glutamate Responses in the Rat Dorsal Horn  
David Bleakman, Konstantin I. Rusin, Paul S. Chard, Steven R. Glaum, and Richard J. Miller

197 Immortalized Hypothalamic GT1-7 Neurons Express Functional \(\gamma\)-Aminobutyric Acid Type A Receptors  
Tim G. Hales, Helen Kim, Biancamaria Longoni, Richard W. Olsen, and Allan J. Tobin

### ARTICLES

203 Biochemical Characterization of Kainate Receptors from Goldfish Brain  
Cynthia J. Ziegra, James M. Willard, and Robert E. Oswald

210 \(N\)-Methyl-\(d\)-aspartate Exposure Blocks Glutamate Toxicity in Cultured Cerebellar Granule Cells  
De-Maw Chuang, Xiao-Ming Gao, and Steven M. Paul

Continued
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>217</td>
<td>Association of Solubilized Angiotensin II Receptors with Phospholipase C-α in Murine Neuroblastoma NIE-115 Cells</td>
<td>Stephanie J. Mah, Anne M. Ades, Rubina Mir, Ivo R. Siemens, John R. Williamson, and Steven J. Fluharty</td>
</tr>
<tr>
<td>227</td>
<td>Histamine Increases Cytosolic Ca²⁺ in Dibutyryl-cAMP-Differentiated HL-60 Cells via H₁ Receptors and Is an Incomplete Secretagogue</td>
<td>Roland Seifert, Ariane Höer, Stefan Offermanns, Armin Buschauer, and Walter Schunack</td>
</tr>
<tr>
<td>235</td>
<td>Histamine Increases Cytosolic Ca²⁺ in HL-60 Promyelocytes Predominantly via H₂ Receptors with an Unique Agonist/Antagonist Profile and Induces Functional Differentiation</td>
<td>Roland Seifert, Ariane Höer, Ingo Schwaner, and Armin Buschauer</td>
</tr>
<tr>
<td>242</td>
<td>A Naturally Occurring Tyrosine to Histidine Replacement at Residue 33 of Human Thymidylate Synthase Confers Resistance to 5-Fluoro-2’-deoxuryridine in Mammalian and Bacterial Cells</td>
<td>Karen W. Barbour, Diana K. Hoganson, Sondra H. Berger, and Franklin G. Berger</td>
</tr>
<tr>
<td>249</td>
<td>Null Phenotype for Cytochrome P450 2B2 in the Rat Results from a Deletion of Its Structural Gene</td>
<td>Curtis J. Omiecinski, Richard Ramsden, Arfaan Rampersaud, and Frederick G. Walz, Jr.</td>
</tr>
<tr>
<td>257</td>
<td>Sequence Analysis, In Vitro Translation, and Expression of the cDNA for Rat Liver Minoxidil Sulfotransferase</td>
<td>Sharon J. Hirshay, Thomas P. Dooley, Ilene M. Reardon, Robert L. Heinrikson, and Charles N. Falany</td>
</tr>
<tr>
<td>273</td>
<td>Transcriptional Regulation of Rat Microsomal Epoxide Hydrolase Gene by Imidazole Antimycotic Agents</td>
<td>Sang Geon Kim</td>
</tr>
<tr>
<td>280</td>
<td>Anti-liver Microsomes Autoantibodies and Dihydralazine-Induced Hepatitis: Specificity of Autoantibodies and Inductive Capacity of the Drug</td>
<td>Mohammed Bourdi, Jean-Charles Gautier, Jasmina Mircheva, Dominique Larrey, Andre Guillouzo, Chantal Andre, Claire Bello, and Philippe H. Beaune</td>
</tr>
<tr>
<td>286</td>
<td>Two Binding Sites on Angiotensin-Converting Enzyme: Evidence from Radioligand Binding Studies</td>
<td>Rose B. Perich, Bruce Jackson, Fraser Rogerson, Frederick A. O. Mendelsohn, Donna Paxton, and Colin I. Johnston</td>
</tr>
<tr>
<td>294</td>
<td>Characterization of Functional Interactions of Imidazoquinoloxine Derivatives with Benzodiazepine-γ-Aminobutyric Acidα Receptors</td>
<td>James D. Petke, Haesook K. Im, Wha Bin Im, David P. Blakeman, Jeff F. Pregenzer, E. Jon Jacobsen, Beverly J. Hamilton, and Donald B. Carter</td>
</tr>
<tr>
<td>302</td>
<td>Role of Ornithine Decarboxylase Suppression and Polyamine Depletion in the Antiproliferative Activity of Polyamine Analogs</td>
<td>Lucy Ghoda, Hirak S. Basu, Carl W. Porter, Laurence J. Marton, and Philip Coffino</td>
</tr>
</tbody>
</table>

Continued
CONTENTS (cont’d)

307 Evidence for the Stereoselective Inhibition of Chick Embryo Hepatic Ferrochelatase by N-Alkylated Porphyrins. II
S. M. Kimmett, R. A. Whitney, and G. S. Marks

311 Complex Allosteric Modulation of Cardiac Muscarinic Receptors by Protamine: Potential Model for Putative Endogenous Ligands
Jingru Hu, Shou-Zhen Wang, Carlos Forray, and Esam E. El-Fakahany

322 Both Enantiomers of 1-Aminocyclopentyl-1,3-dicarboxylate Are Full Agonists of Metabotropic Glutamate Receptors Coupled to Phospholipase C
Olivier Manzoni, Laurent Prezeau, Francois A. Rassendren, Fritz Sladeczek, Ken Curry, and Joel Bockaert

328 Molecular Pharmacological Differences in the Interaction of Serotonin with 5-Hydroxytryptamine_{1C} and 5-Hydroxytryptamine_{2} Receptors
Sigrun Leonhardt, Elena Gorospe, Beth J. Hoffman, and Milt Teitler

336 Identification of Endothelin Receptor Subtypes in Rat Kidney Cortex using Subtype-Selective Ligands
Ponnal Nambi, Hsiao Ling Wu, Mark Pullen, Nambi Aiyar, Heidemarie Bryan, and John Elliott

340 Cyclic AMP Potentiates Receptor-Stimulated Phosphoinositide Hydrolysis in Human Neuroepithelioma Cells

347 Receptor Occupancy and Adenylate Cyclase Activation in AR 4-2J Rat Pancreatic Acinar Cell Membranes by Analogs of Pituitary Adenylate Cyclase-Activating Peptides Amino-Terminally Shortened or Modified in Position 1, 2, 3, 20, or 21
Patrick Robberecht, Philippe Gourlet, Philippe De Neef, Marie-Claire Woussen-Colle, Marie-Claire Vandermeers-Piret, André Vandermeers, and Jean Christophe

356 Effects of Oxidizing and Reducing Analogs of Acetylcholine on Neuronal Nicotinic Receptors
Yu Xie, Gerald S. Jones, Jr., and Ralph H. Loring

364 Preferential Block of T-type Calcium Channels by Neuroleptics in Neural Crest-Derived Rat and Human C Cell Lines
John J. Enyeart, Bruce A. Biagi, and Boris Mlinar

373 Theoretical Studies on the Histamine H_{2} Receptor: Molecular Mechanism of Action of Antagonists
Jesús Giraldo, Miguel Martín, Mercedes Campillo, and Leonardo Pardo

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.