

## Contents

### ACCELERATED COMMUNICATIONS

- 883 Short-Chain Ceramide-1-phosphates Are Novel Stimulators of DNA Synthesis and Cell Division: Antagonism by Cell-Permeable Ceramides Antonio Gomez-Muñoz, Patricia A. Duffy, Ashley Martin, Lori O'Brien, Hoe-Sup Byun, Robert Bittman, and David N. Brindley

### ARTICLES

- 890 Activation of Metabotropic Glutamate Receptors Protects Cultured Neurons Against Apoptosis Induced by  $\beta$ -Amyloid Peptide A. Copani, V. Bruno, G. Battaglia, G. Leanza, R. Pellitteri, A. Russo, S. Stanzani, and F. Nicoletti
- 898 Altered Topoisomerase I and II Activities in Suramin-Resistant Lung Fibrosarcoma Cells Sophie Lelièvre, Youssef Benchokroun, and Annette Kragh Larsen
- 907 Camptothecin Induction of a Time- and Concentration-Dependent Decrease of Topoisomerase I and Its Implication in Camptothecin Activity David R. Beidler and Yung-Chi Cheng
- 915 Regulation of Rat 5-Hydroxytryptamine Type 2 Receptor Gene Activity: Identification of *Cis* Elements that Mediate Basal and 5-Hydroxytryptamine-Dependent Gene Activation Yun-Long Du, Brian D. Wilcox, and John J. Jeffrey
- 923 Vasoactive Intestinal Peptide Elevates Pinealocyte Intracellular Calcium Concentrations by Enhancing Influx: Evidence for Involvement of a Cyclic GMP-Dependent Mechanism Nicolas C. Schaad, Jiri Vanecek Ignacio R. Rodriguez, David C. Klein, Lynne Holtzclaw, and James T. Russell

*Continued*

MOLECULAR PHARMACOLOGY (MOL/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 E. Preston St., Baltimore, MD 21202-3993. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: Send address changes to MOLECULAR PHARMACOLOGY, 428 E. Preston St., Baltimore, MD 21202-3993. **Subscription Rates: U.S.: Personal \$105; Institutional \$230; Single copy \$19. Outside the U.S., except for Japan: Personal \$135; Institutional \$260; Single copy \$23.** Foreign prices exclude Japan. **See Information for Subscribers for detailed instructions.** The GST Tax Number for Canadian subscribers is 123394371. Country of origin USA. PRICES ARE SUBJECT TO CHANGE. Indexed by *Index Medicus*, *Current Contents (Life Sciences)*, *Excerpta Medica*, *Reference Update/Research Information Systems*, and *Current Awareness in Biological Sciences*. Copyright © 1995 by The American Society for Pharmacology and Experimental Therapeutics.

CONTENTS (cont'd)

- 934 Catalytic Properties of NAD(P)H:Quinone Acceptor Oxidoreductase: Study Involving Mouse, Rat, Human, and Mouse-Rat Chimeric Enzymes  
Shiuan Chen, Richard Knox, Alexander D. Lewis, Frank Friedlos, Paul Workman, Paulis S. K. Deng, Maisie Fung, Donna Ebenstein, Kebin Wu, and Ta-Ming Tsai
- 940 Suppression of the Constitutive Expression of Cytochrome P-450 2C11 by Cytokines and Interferons in Primary Cultures of Rat Hepatocytes: Comparison with Induction of Acute-Phase Genes and Demonstration that *CYP2C11* Promoter Sequences Are Involved in the Suppressive Response to Interleukins 1 and 6  
Jin-Qiang Chen, Anders Ström, Jan-åke Gustafsson, and Edward T. Morgan
- 948 GTP Depletion Induced by IMP Dehydrogenase Inhibitors Blocks RNA-Primed DNA Synthesis  
Carlo V. Catapano, Jennifer S. Dayton, Beverly S. Mitchell, and Daniel J. Fernandes
- 956 Photoaffinity-Labeled Ligand Binding Domains on Dopamine Transporters Identified by Peptide Mapping  
Roxanne A. Vaughan
- 965 Interaction of Dolastatin 10 with Tubulin: Induction of Aggregation and Binding and Dissociation Reactions  
Ruoli Bai, George F. Taylor, Jean M. Schmidt, Michael D. Williams, John A. Kepler, George R. Pettit, and Ernest Hamel
- 977 Cloning of the Human  $\alpha_{1d}$ -Adrenergic Receptor and Inducible Expression of Three Human Subtypes in SK-N-MC Cells  
Timothy A. Esbenshade, Akira Hirasawa, Gozoh Tsujimoto, Teruo Tanaka, Junichi Yano, Kenneth P. Minneman, and T. J. Murphy
- 986 Investigation of the Mechanism of Higher Order Chromatin Fragmentation Observed in Drug-Induced Apoptosis  
Helen M. Beere, Christine M. Chresta, Ali Alejo-Herberg, Andrzej Skladanowski, Caroline Dive, Annette Kragh Larsen, and John A. Hickman
- 997  $G_i$  Is Involved in Ethanol Inhibition of L-Type Calcium Channels in Undifferentiated but Not Differentiated PC-12 Cells  
Debra Mullikin-Kilpatrick, Nitin D. Mehta, John D. Hildebrandt, and Steven N. Treistman
- 1006 Flufenamic and Tolfenamic Acids Inhibit Calcium Influx in Human Polymorphonuclear Leukocytes  
Hannu Kankaanranta and Eeva Moilanen
- 1014 Blockade of Capacitive  $Ca^{2+}$  Influx by  $Cl^-$  Channel Blockers Inhibits Secretion from Rat Mucosal-Type Mast Cells  
M. Reinsprecht, M. H. Rohn, R. J. Spadinger, I. Pecht, H. Schindler, and C. Romanin

Continued

CONTENTS (cont'd)

- 1021 Metabolism and Cytotoxicity of Propyl Gallate in Isolated Rat Hepatocytes: Effects of a Thiol Reductant and an Esterase Inhibitor  
Yoshio Nakagawa, Kazuo Nakajima, Sumiko Tayama, and Peter Moldéus
- 1028 Free Radical Adducts in the Bile of Rats Treated Chronically with Intra-gastric Alcohol: Inhibition by Destruction of Kupffer Cells  
Kathryn T. Knecht, Yukito Adachi, Blair U. Bradford, Yuji Iimuro, Maria Kadiiska, Xiang Qun-hui, and Ronald G. Thurman
- 1035  $\kappa$ -Opioid Receptor Activates an Inwardly Rectifying  $K^+$  Channel by a G Protein-Linked Mechanism: Coexpression in *Xenopus* Oocytes  
Gloria H. Ma, Richard J. Miller, Andrey Kuznetsov, and Louis H. Philipson
- 1041  $Ca^{2+}$  Channel and Adenylyl Cyclase Modulation by Cloned  $\mu$ -Opioid Receptors in  $GH_3$  Cells  
Elemer T. Piros, Paul L. Prather, Horace H. Loh, Ping Y. Law, Chris J. Evans, and Tim G. Hales
- 1050 [ $^3H$ ]SR 48692, the First Nonpeptide Neurotensin Antagonist Radioligand: Characterization of Binding Properties and Evidence for Distinct Agonist and Antagonist Binding Domains on the Rat Neurotensin Receptor  
Catherine Labbé-Jullié, Jean-Marie Botto, Marie-Véronique Mas, Joëlle Chabry, Jean Mazella, Jean-Pierre Vincent, Danielle Gully, Jean-Pierre Maffrand, and Patrick Kitabgi
- 1057 Metabotropic Glutamate Receptors Negatively Coupled to Adenylate Cyclase Inhibit *N*-Methyl-D-aspartate Receptor Activity and Prevent Neurotoxicity in Mesencephalic Neurons *In Vitro*  
Anna Ambrosini, Laura Bresciani, Sergio Fracchia, Nicoletta Brunello, and Giorgio Racagni
- 1065 Residue 78 in the Second Transmembrane Domain of the Neurokinin-1 Receptor Is Important in Coupling High Affinity Agonist Binding to Multiple Second Messenger Responses  
Robbin M. Brodbeck, Bruce S. Sachais, and James E. Krause
- 1072 Arabinosyl-2-fluoroadenine Augments Cisplatin Cytotoxicity and Inhibits Cisplatin-DNA Cross-link Repair  
Li-Ying Yang, Lan Li, Michael J. Keating, and William Plunkett
- 1080 Tissue-Specific Pharmacology of Testosterone and  $5\alpha$ -Dihydrotestosterone Analogues: Characterization of a Novel Canine Liver Androgen-Binding Protein  
Ann E. Summerfield, Pablo J. Diaz Cruz, Michael P. Dolenga, Howard E. Smith, Catherine D. Strader, and Jeffrey H. Toney