# MOLECULAR PHARMACOLOGY

#### **Contents**

#### ACCELERATED COMMUNICATIONS

367	Cloning and Expression of a New Member of the L-2-Amino-4-phosphonobutyric Acid-Sensitive Class of Metabotropic Glutamate Receptors	Julie A. Saugstad, J. Mark Kinzie, Eileen R. Mulvihill, Thomas P. Segerson, and Gary L. Westbrook		
373	Secondary Structure of Amyloid $\beta$ Peptide Correlates with Neurotoxic Activity in Vitro	Linda K. Simmons, Patrick C. May, Kevin J. Tomaselli, Russell E. Rydel, Kimberly S. Fuson, Elizabeth F. Brigham, Sarah Wright, Ivan Lieberburg, Gerald W. Becker, David N. Brems, and Wei Ying Li		
ARTICLES				
380	Sensitization of Adenylate Cyclase by Halothane in Human Myocardium and S49 Lymphoma Wild-type and $cyc^-$ Cells: Evidence for Inactivation of the Inhibitory G Protein $G_{i\alpha}$	Michael Böhm, Ulrich Schmidt, Peter Gierschik, Robert H. G. Schwinger, Susanne Böhm, and Erland Erdmann		
390	Negative Antagonists Promote an Inactive Conformation of the $\beta_2$ -Adrenergic Receptor	Philippe Samama, Gang Pei, Tommaso Costa, Susanna Cotecchia, and Robert J. Lefkowitz		
395	Systemic Dexamethasone Administration Increases Septal Trk Autophosphorylation in Adult Rats via an Induction of Nerve Growth Factor	Michael S. Saporito, Ellen R. Brown, Kristin C. Hartpence, Heide M. Wilcox, Elaine Robbins, Jeffry L. Vaught, and Susan Carswell		

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 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 © 1994 by The American Society for Pharmacology and Experimental Therapeutics.

### CONTENTS (cont'd)

402	Pituitary Cell Line GH <sub>3</sub> Expresses Two Somatostatin Receptor Subtypes that Inhibit Adenylyl Cyclase: Functional Expression of Rat Somatostatin Receptor Subtypes 1 and 2 in Human Embryonic Kidney 293 Cells	Pablo D. Garcia and Richard M. Myers
410	Rat Somatostatin Receptor Type 1 Couples to G Proteins and Inhibition of Cyclic AMP Accumulation	John R. Hadcock, Joann Strnad, and C. Mark Eppler
417	Molecular Cloning, Functional Characterization, and Chromosomal Localization of a Human Somatostatin Receptor (Somatostatin Receptor Type 5) with Preferential Affinity for Somatostatin-28	Rosemarie Panetta, Michael T. Greenwood, Ania Warszynska, Lidia L. Demchyshyn, Robert Day, Hyman B. Niznik, Coimbatore B. Srikant, and Yogesh C. Patel
428	The Aryl Hydrocarbon Receptor and Aryl Hydrocarbon Receptor Nuclear Translocator Protein Show Distinct Subcellular Localizations in HEPA 1c1c7 Cells by Immunofluorescence Microscopy	Richard S. Pollenz, Carol A. Sattler, and Alan Poland
439	Localization of a Pioglitazone Response Element in the Adipocyte Fatty Acid-Binding Protein Gene	Peter K. W. Harris and Rolf F. Kletzien
446	Antimalarial Action of Hydrophilic Drugs: Involvement of Aqueous Access Routes to Intracellular Parasites	Mark Loyevsky and Z. Ioav Cabantchik
453	Human Metallothionein Isoform Gene Expression in Cisplatin-Sensitive and Resistant Cells	Ya-Yun Yang, Elizabeth S. Woo, Celeste E. Reese, Robert R. Bahnson, Nagahiro Saijo, and John S. Lazo
461	Human Histamine N-Methyltransferase Pharmacogenetics: Cloning and Expression of Kidney cDNA	Blanka Girard, Diane M. Otterness, Thomas C. Wood, Ronald Honchel, Eric D. Wieben, and Richard M. Weinshilboum
469	Coordinate Induction of Glutathione S-Transferase $\alpha$ , $\mu$ , and $\pi$ Expression in Murine Liver after a Single Administration of Oltipraz	Margie L. Clapper, Lynette C. Everley, Laura S. Strobel, Alan J. Townsend, and Paul F. Engstrom
475	Formation of Heteromeric $\gamma$ -Aminobutyric Acid Type A Receptors Containing Two Different $\alpha$ Subunits	Todd A. Verdoorn
481	Differential Expression of the $\beta$ -Adrenergic Receptor Modifies Agonist Stimulation of Adenylyl Cyclase: A Quantitative Evaluation	Brenda S. Whaley, Nanyong Yuan, Lutz Birnbaumer, Richard B. Clark, and Roger Barber
490	Inverse Agonist Activity of $\beta$ -Adrenergic Antagonists	Peter Chidiac, Terence E. Hebert, Manon Valiquette, Michael Dennis, and Michel Bouvier

## CONTENTS (cont'd)

500	Evidence for a Common Molecular Mode of Action for Chemically Distinct Nonpeptide Antagonists at the Neurokinin-1 (Substance P) Receptor	Ulrik Gether, Xavier Emonds-Alt, Jean-Claude Brelière, Takashi Fujii, Daijiro Hagiwara, Laurant Pradier, Claude Garret, Teit E. Johansen, and Thue W. Schwartz
509	Estradiol Reduction of the Agonist High Affinity Form of the $\alpha_2$ -Adrenoceptor in the Hypothalamus of Female Rats: Identification as the $\alpha_{2D}$ Subtype	George B. Karkanias and Anne M. Etgen
517	An Arginine Residue Conserved in Most G Protein- Coupled Receptors Is Essential for the Function of the m1 Muscarinic Receptor	Sheng Zu Zhu, Shou Zhen Wang, Jingru Hu, and Esam E. El-Fakahany
524	Determinants of $\alpha_2$ -Adrenergic Receptor Activation of G Proteins: Evidence for a Precoupled Receptor/G State	Wang-Ni Tian, Emir Duzic, Stephen M. Lanier, and Richard C. Deth
532	Two Distinct ATP Signaling Mechanisms in Differentiated Neuroblastoma × Glioma Hybrid NG108-15 Cells	Sheau-Huei Chueh, Li-Sung Hsu, and Shu-Ling Song
540	N-Methyl-D-Aspartate Receptors: Different Subunit Requirements for Binding of Glutamate Antagonists, Glycine Antagonists, and Channel-Blocking Agents	David R. Lynch, Norifusa J. Anegawa, Todd Verdoorn, and Dolan B. Pritchett
546	Human $\alpha$ 7 Acetylcholine Receptor: Cloning of the $\alpha$ 7 Subunit from the SH-SY5Y Cell Line and Determination of Pharmacological Properties of Native Receptors and Functional $\alpha$ 7 Homomers Expressed in <i>Xenopus</i> Oocytes	Xiao Peng, Michael Katz, Volodymyr Gerzanich, René Anand, and Jon Lindstrom
555	Role of Tyrosine 337 in Binding of Huperzine A to the Active Site of Human Acetylcholinesterase	Yacov Ashani, Jacob Grunwald, Chanoch Kronman, Baruch Velan, and Avigdor Shafferman
	CORRECTION	
561	Cloned Murine Bradykinin Receptor Exhibits a Mixed B <sub>1</sub> and B <sub>2</sub> Pharmacological Selectivity	Peter McIntyre, Elsa Phillips, Elizabeth Skidmore, Michael Brown, and Michael Webb