MOLECULAR PHARMACOLOGY

Contents

ACCELERATED COMMUNICATIONS

681	Structure and Properties of ω -Agatoxin IVB, a New Agonist of P-Type Calcium Channels	Michael E. Adams, Isabelle M. Mintz, Michael D. Reily, Venkataraman Thanabal, and Bruce P. Bean
689	Calcium Entry via L-Type Calcium Channels Acts as a Negative Regulator of Adenylyl Cyclase Activity and Cyclic AMP Levels in Cardiac Myocytes	Hai Jing Yu, Hui Ma, and Richard D. Green
694	Human Immunodeficiency Virus Type 1 Drug- Resistance Patterns with Different 1-[(2- Hydroxyethoxy)methyl]-6-(phenylthio)thymine Derivatives	Jan Balzarini, Anna Karlsson, and Eric De Clercq
702	Anti-Human Immunodeficiency Virus Type 1 Therapy and Peripheral Neuropathy: Prevention of 2',3'-Dideoxycytidine Toxicity in PC12 Cells, a Neuronal Model, by Uridine and Pyruvate	Sue A. Keilbaugh, Gregory A. Hobbs, and Melvin V. Simpson
	ARTICLES	
707	Cytokines Down-regulate Expression of Major Cytochrome P-450 Enzymes in Adult Human Hepatocytes in Primary Culture	Ziad Abdel-Razzak, Pascal Loyer, Alain Fautrel, Jean-Charles Gautier, Laurent Corcos, Bruno Turlin, Philippe Beaune, and André Guillouzo
716	Drosophila Nervous System Muscarinic Acetylcholine Receptor: Transient Functional Expression and Localization by Immunochemistry	A. D. Blake, N. M. Anthony, H. H. Chen, J. B. Harrison, N. M. Nathanson, and D. B. Sattelle
725	5-Hydroxytryptamine _{1C} Receptor Density and mRNA Levels in Choroid Plexus Epithelial Cells after Treatment with Mianserin and (-)-1-(4-Bromo-2,5-dimethoxyphenyl)-2-aminopropane	Eric L. Barker and Elaine Sanders- Bush

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 © 1993 by The American Society for Pharmacology and Experimental Therapeutics.

CONTENTS (cont'd)

731	Modification of G Protein-Coupled Functions by Low-pH Pretreatment of Membranes from NG108- 15 Cells: Increase in Opioid Agonist Efficacy by Decreased Inactivation of G Proteins	Dana E. Selley, Christopher S. Breivogel, and Steven R. Childers
742	Biochemical and Immunochemical Comparison of Saxiphilin and Transferrin, Two Structurally Related Plasma Proteins from Rana catesbeiana	Yi Li, Lyndon Llewellyn, and Edward Moczydlowski
749	β -[³ H]Funaltrexamine-Labeled μ -Opioid Receptors: Species Variation in Molecular Mass and Glycosylation by Complex-Type, N-Linked Oligosaccharides	Lee-Yuan Liu-Chen, Chongguang Chen, and Catherine A. Phillips
757	Spongistatin 1, A Highly Cytotoxic, Sponge-Derived, Marine Natural Product that Inhibits Mitosis, Microtubule Assembly, and the Binding of Vinblastine to Tubulin	Ruoli Bai, Zbigniew A. Cichacz, Cherry L. Herald, George R. Pettit, and Ernest Hamel
767	Dual Topoisomerase I and II Inhibition by Intoplicine (RP-60475), a New Antitumor Agent in Early Clinical Trials	Bruno Poddevin, Jean- François Riou, Francois Lavelle, and Yves Pommier
775	The Phenobarbital-Induced Transcriptional Activation of Cytochrome P-450 Genes Is Blocked by the Glucocorticoid-Progesterone Antagonist RU486	Peter M. Shaw, Milton Adesnik, Mary C. Weiss, and Laurent Corcos
784	Coupling of the Expressed α_{1B} - and α_{1D} -Adrenergic Receptors to Multiple Signalling Pathways Is Both G Protein and Cell-Type Specific	Dianne M. Perez, Mary Beth DeYoung, and Robert M. Graham
796	Antisera Against Peptides Derived from a Purified μ -Opioid Binding Protein Recognize the Protein as Well as μ -Opioid Receptors in Brain Regions and a Cell Line	T. L. Gioannini, Y. H. Yao, J. M. Hiller, L. P. Taylor, and E. J. Simon
802	Selective Coupling of α_2 -Adrenergic Receptor Subtypes to Cyclic AMP-Dependent Reporter Gene Expression in Transiently Transfected JEG-3 Cells	David J. Pepperl and John W. Regan
810	Inositol-1,3,4,5-tetrakisphosphate Induces Calcium Mobilization via the Inositol-1,4,5-trisphosphate Receptor in SH-SY5Y Neuroblastoma Cells	Robert A. Wilcox, R. A. John Challiss, Changsheng Liu, Barry V. L. Potter, and Stefan R. Nahorski
818	Indirect Inhibition by Bradykinin of Cyclic AMP Generation in Isolated Rat Glomeruli and Mesangial Cells	Jean-Loup Bascands, Christiane Pecher, and Jean- Pierre Girolami
827	BW373U86: A Nonpeptidic δ-Opioid Agonist with Novel Receptor-G Protein-Mediated Actions in Rat Brain Membranes and Neuroblastoma Cells	Steven R. Childers, Lynne M. Fleming, Dana E. Selley, Robert W. McNutt, and Kwen- Jen Chang

CONTENTS	cont a)	
835	A Selective Adenosine Antagonist (8-Cyclopentyl-1,3-dipropylxanthine) Eliminates Both Neuromuscular Depression and the Action of Exogenous Adenosine by an Effect on A ₁ Receptors	R. Sanger Redman and E. M. Silinsky
841	Discovery of a Novel Class of Neuromedin B Receptor Antagonists, Substituted Somatostatin Analogues	Murray Orbuch, John E. Taylor, David H. Coy, John E. Mrozinski, Jr., Samuel A. Mantey, James F. Battey, Jacques-Pierre Moreau, and Robert T. Jensen
851	Ifenprodil Discriminates Subtypes of the N-Methyl- D-aspartate Receptor: Selectivity and Mechanisms at Recombinant Heteromeric Receptors	Keith Williams
860	U-93631 Causes Rapid Decay of γ -Aminobutyric Acid-Induced Chloride Currents in Recombinant Rat γ -Aminobutyric Acid Type A Receptors	Glenn H. Dillon, Haesook K. Im, Beverly J. Hamilton, Donald B. Carter, Ronald B. Gammill, Thomas M. Judge, and Wha Bin Im
866	Potentiation of γ -Aminobutyric Acid-Induced Chloride Currents by Various Benzodiazepine Site Agonists with the $\alpha1\gamma2$, $\beta2\gamma2$ and $\alpha1\beta2\gamma2$ Subtypes of Cloned γ -Aminobutyric Acid Type A Receptors	Haesook K. Im, Wha Bin Im, Beverly J. Hamilton, Donald B. Carter, and Philip F. Vonvoigtlander
871	Ethanol Inhibits a Neuronal ATP-Gated Ion Channel	Chaoying Li, Luis Aguayo, Robert W. Peoples, and Forrest F. Weight
876	Zinc Selectively Inhibits Flux through Benzodiazepine-Insensitive γ -Aminobutyric Acid Chloride Channels in Cortical and Cerebellar Microsacs	M. Frances Davies, Patricia A. Maguire, and Gilda H. Loew
882	Role of Threonine ³⁴² in Helix 7 of the 5- Hydroxytryptamine Type 1D Receptor in Ligand Binding: An Indirect Mechanism for Receptor Selectivity	Alex Smolyar and Roman Osman
886	New Activation Model for the Histamine H ₂ Receptor, Explaining the Activity of the Different Classes of Histamine H ₂ Receptor Agonists	John C. Eriks, Henk van der Goot, and Hendrik Timmerman
895	Selective and Synergistic Inhibition of Human Immunodeficiency Virus Type 1 Reverse Transcriptase by a Non-nucleoside Inhibitor, MKC- 442	Satoshi Yuasa, Yasuyo Sadakata, Hideaki Takashima, Kouichi Sekiya, Naoko Inouye, Masaru Ubasawa, and Masanori Baba
901	Chemical Properties of Carbonic Anhydrase IV, the Membrane-Bound Enzyme	Thomas H. Maren, George C. Wynns, and Per J. Wistrand