

## Contents

### ARTICLES

- |    |  |   |
|----|--|---|
| 1  | Regulation of Adenylyl Cyclase Type VI Activity During Desensitization of the A <sub>2a</sub> Adenosine Receptor-Mediated Cyclic AMP Response: Role for Protein Phosphatase 2A | Yijuang Chern, Jin-Yi Chiou, Hsing-Lin Lai, and Ming-Hsien Tsai   |
| 9  | Studies on Neuropeptide Y Receptors in a Mouse Adrenocortical Cell Line  | Gezhi Weng, Frances Yee, Patrick Michl, Donald Reis, and Claes Wahlestedt   |
| 15 | Inhibition of Human Immunodeficiency Virus Type 1 Replication by 7-Methyl-6,8-bis(methylthio)pyrrolo[1,2- <i>a</i> ]pyrazine, an <i>In Vivo</i> Metabolite of Oltipraz         | Hans J. Prochaska, William G. Bornmann, Penny Baron, and Bruce Polsky   |
| 21 | B9209-005, an Azido Derivative of the Chemosensitizer Dexniguldipine-HCl, Photolabels P-Glycoprotein   | Christoph Borchers, Wolf-Rüdiger Ulrich, Kurt Klemm, Wolfgang Ise, Volker Gekeler, Sabine Haas, Angelika Schödl, Jürgen Conrad, Michael Przybylski, and Rainer Boer                             |
| 30 | Topoisomerase II DNA Cleavage Stimulation, DNA Binding Activity, Cytotoxicity, and Physicochemical Properties of 2-Aza- and 2-Aza-oxide-anthracenedione Derivatives            | Paola De Isabella, Manlio Palumbo, Claudia Sissi, Giovanni Capranico, Nives Carenini, Ernesto Menta, Ambrogio Oliva, Silvano Spinelli, A. Paul Krapcho, Fernando C. Giuliani, and Franco Zunino |
| 39 | Role of Protein Kinase C Subtypes $\alpha$ and $\delta$ in the Regulation of Bradykinin-Stimulated Phosphoinositide Breakdown in Astrocytes                                    | Ching-Chow Chen, Jacque Chang, and Wei-Chyuan Chen  |

*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, 351 W. Camden Street, Baltimore, MD 21201-2436. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: Send address changes to MOLECULAR PHARMACOLOGY, 351 W. Camden Street, Baltimore, MD 21201-2436. **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)

- 48 Targeted Inactivation of the Gene Encoding the Mouse  $\alpha_{2C}$ -Adrenoceptor Homolog  
Richard E. Link, Mary S. Stevens, Maya Kulatunga, Mika Scheinin, Gregory S. Barsh, and Brian K. Kobilka
- 56 Differentiation Induces Pituitary Adenylate Cyclase-Activating Polypeptide Receptor Expression in PC-12 Cells  
Sebastiano Cavallaro, Velia D'Agata, Vincenzo Guardabasso, Salvatore Travali, Franca Stivala, and Pier Luigi Canonico
- 63 Pituitary Adenylate Cyclase-Activating Polypeptide Type I Receptors Mediate Cyclic AMP-Dependent Enhancement of Neuronal Acetylcholine Sensitivity  
Joseph F. Margiotta and Desiree Pardi
- 64 Biphasic Binding of 5-Fluoro-2'-deoxyuridylate to Human Thymidylate Synthase  
R. Todd Reilly, Karen W. Barbour, R. Bruce Dunlap, and Franklin G. Berger
- 80 Relationship of the Metabolism of Vitamins C and E in Cultured Hepatocytes Treated with *tert*-Butyl Hydroperoxide  
Peter A. Glascott, Jr., Ellen Gilfor, and John L. Farber
- 89 Voltage- and Frequency-Dependent Pentobarbital Suppression of Brain and Muscle Sodium Channels Expressed in a Mammalian Cell Line  
Benno Rehberg, Eric Bennett, Yong-hong Xiao, Simon R. Levinson, and Daniel S. Duch
- 98 WIN 17317-3: Novel Nonpeptide Antagonist of Voltage-Activated  $K^+$  Channels in Human T Lymphocytes  
Roger J. Hill, Alison M. Grant, Walt Volberg, Lottie Rapp, Connie Faltynek, Deborah Miller, Karen Pagani, Eugene Baizman, Su Wang, Joseph W. Guiles, and Douglas S. Krafte
- 105  $\alpha$ -Conotoxins Selectively Inhibit One of the Two Acetylcholine Binding Sites of Nicotinic Receptors  
Duncan R. Groebe, Judith M. Dumm, Edwin S. Levitan, and Stewart N. Abramson
- 112 Phenytoin-Initiated DNA Oxidation in Murine Embryo Culture, and Embryo Protection by the Antioxidative Enzymes Superoxide Dismutase and Catalase: Evidence for Reactive Oxygen Species-Mediated DNA Oxidation in the Molecular Mechanism of Phenytoin Teratogenicity  
Louise M. Winn and Peter G. Wells
- 121 *Erythro*-9-(2-Hydroxy-3-nonyl)adenine Inhibits Cyclic GMP-Stimulated Phosphodiesterase in Isolated Cardiac Myocytes  
Pierre-François Méry, Catherine Pavoine, Françoise Pecker, and Rodolphe Fischmeister
- 131  $\omega$ -Grammotoxin SIA Blocks Multiple, Voltage-Gated,  $Ca^{2+}$  Channel Subtypes in Cultured Rat Hippocampal Neurons  
Timothy M. Piser, Richard A. Lampe, Richard A. Keith, and Stanley A. Thayer

Continued

**CONTENTS (cont'd)**

- 140      **Type 4a Metabotropic Glutamate Receptor: Identification of New Potent Agonists and Differentiation from the L-(+)-2-Amino-4-phosphonobutanoic Acid-Sensitive Receptor in the Lateral Perforant Pathway in Rats**
- 150      **Serotonergic Antagonists Differentially Inhibit Spontaneous Activity and Decrease Ligand Binding Capacity of the Rat 5-Hydroxytryptamine Type 2C Receptor in Sf9 Cells**
- 160      **Effects of *n*-Dodecylguanidine on A-Type Potassium Channels: Role of External Surface Charges in Channel Gating**
- Patricia A. Johansen,  
Leah A. Chase, Amy D. Sinor,  
James F. Koerner,  
Rodney L. Johnson, and  
Michael B. Robinson
- Jean Labrecque, Annick Fargin,  
Michel Bouvier, Peter Chidiac,  
and Michael Dennis
- Jian-An Yao, Nina C. Saxena,  
M. Reza Ziai, Shiun Ling, and  
Gea-Ny Tseng