## Contents

### ACCELERATED COMMUNICATIONS

1. A Cloned Angiotensin Receptor Isoform from the Turkey Adrenal Gland Is Pharmacologically Distinct from Mammalian Angiotensin Receptors  
   T. J. Murphy, Yasuyuki Nakamura, Kazuisa Takeuchi, and R. Wayne Alexander

8. Molecular Cloning and Functional Expression of a \( \mu \)-Opioid Receptor from Rat Brain  
   Yan Chen, Anton Mestek, Jian Liu, Joyce A. Hurley, and Lei Yu

### ARTICLES

13. Mutations Leading to Antifolate Resistance in Chinese Hamster Ovary Cells after Exposure to the Alkylation Agent Ethylmethanesulfonate  
   Renato Fanin, Debabrata Banerjee, Matthias Volkenandt, Mark Waltham, Wei Wei Li, Adam P. Dicker, Barry I. Schweitzer, and Joseph R. Bertino

22. 5-Fluorouracil Alters Dihydrofolate Reductase Pre-mRNA Splicing as Determined by Quantitative Polymerase Chain Reaction  
   Xi-Pu Wu and Bruce J. Dolnick

30. 5-Amino-4-imidazolecarboxamide Riboside Potentiates the Metabolism and Anti-Human Immunodeficiency Virus Activity of 2',3'-Dideoxyinosine  
   Yi-Fei Gong, Ranga V. Srinivas, and Arnold Fridland

37. Commonly Occurring Plant Flavonoids Have Estrogenic Activity  
   Richard J. Miksicek

44. Altered Cisplatin and Cadmium Resistance and Cell Survival in Chinese Hamster Ovary Cells Expressing Mouse Metallothionein  
   J. Koropatnick and J. Pearson

51. Postnatal Changes in the Expression and Distribution of Pulmonary Cytochrome P450 Monooxygenases during Clara Cell Differentiation in Rabbits  
   C. G. Plopper, A. J. Weir, D. Morin, A. Chang, R. M. Philpot, and A. R. Buckpitt

Continued
CONTENTS (cont’d)

62 Direct Measurements of In Situ Interactions of Rat Brain Opioid Receptors with the Guanine Nucleotide-Binding Protein G$_	ext{o}$
Zafiroula Georgoussi, Craig Carr, and Graeme Milligan

70 Human $\alpha_2$-Adrenergic Receptor Subtype Distribution: Widespread and Subtype-Selective Expression of $\alpha_2$C10, $\alpha_2$C4, and $\alpha_2$C2 mRNA in Multiple Tissues
Margaret G. Eason and Stephen B. Liggett

76 Comparison of $\alpha_1$-Adrenergic Receptor Subtypes and Signal Transduction in SK-N-MC and NB41A3 Neuronal Cell Lines
Timothy A. Esbenshade, Chide Han, T. J. Murphy, and Kenneth P. Minneman

87 Regional $\gamma$-Aminobutyric Acid Sensitivity of $\epsilon$-Butylbicyclophosphoro[3S]-thionate Binding Depends on $\gamma$-Aminobutyric Acid A Receptor $\alpha$ Subunit
Esa R. Korpi and Hartmut Lüddens

93 Expression of the Pore-Forming P$_{2Z}$ Purinoreceptor in *Xenopus* Oocytes Injected with Poly(A)* RNA from Murine Macrophages
Louise C. Nuttle, Chakib El-Moatassim, and George R. Dubyak

102 Functional Role for the M$_2$ Muscarinic Receptor in Smooth Muscle of the Guinea Pig Ileum
Elizabeth A. Thomas, Susan A. Baker, and Frederick J. Ehler

111 Amino Acid Substitutions at Position 312 in the Seventh Hydrophobic Segment of the $\beta_2$-Adrenergic Receptor Modify Ligand-Binding Specificity
Sankuratri Suryanarayana and Brian K. Kobilka

115 Measurement of Guanine Nucleotide-Binding Protein Activation by A$_1$ Adenosine Receptor Agonists in Bovine Brain Membranes: Stimulation of Guanosine-5'-O-(3-[35S]thio)triphosphate Binding
Anna Lorenzen, Martin Fuss, Heidrun Vogt, and Ulrich Schwabe

124 Regulation of Nitric Oxide Synthase by Nitric Oxide
Appavoo Rengasamy and Roger A. Johns

129 Interaction of Tricyclic Drug Analogs with Synaptic Plasma Membranes: Structure-Mechanism Relationships in Inhibition of Neuronal Na$^+$/K$^+$-ATPase Activity
Mark A. Carfagna and Barry B. Muhoberac

142 Reconstitution of Glutamate Receptor Proteins Purified from *Xenopus* Central Nervous System into Artificial Bilayers
Cathryn J. Kerry, Hira L. Sudan, Ketevan Abutidze, Ian R. Mellor, Eric A. Barnard, and Peter N. R. Usherwood

153 Novel Endothelin Receptors in the Follicular Membranes of *Xenopus laevis* Oocytes Mediate Calcium Responses by Signal Transduction through Gap Junctions
Chandrika S. Kumar, Parvathi Nuthulaganti, Mark Pullen, and Ponnal Nambi

158 Endothelin- and ATP-Induced Inhibition of Adenylyl Cyclase Activity in C$_6$ Glioma Cells: Role of G$_i$ and Calcium
Wan-Wan Lin and De-Maw Chuang

166 Agonist-Induced State of the $\delta$-Opioid Receptor That Discriminates between Opioid Peptides and Opiate Alkaloids
Mark Von Zastrow, Duane E. Keith, Jr., and Christopher J. Evans

Continued
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>173</td>
<td>Differential Down- and Up-regulation of Rat Brain Opioid Receptor Types and Subtypes by Buprenorphine</td>
<td>Mariana M. Belcheva, Jacob Barg, Robert J. McHale, Samuel Dawn, Matthew T. Ho, Elena Ignatova, and Carmine J. Coscia</td>
</tr>
<tr>
<td>180</td>
<td>Barium Blockade of a Clonal Potassium Channel and Its Regulation by a Critical Pore Residue</td>
<td>Maurizio Taglialatela, John A. Drewe, and Arthur M. Brown</td>
</tr>
<tr>
<td>191</td>
<td>γ-Aminobutyric Acid Receptor Regulation: Chronic Treatment with Pregnanolone Uncouples Allosteric Interactions between Steroid and Benzodiazepine Recognition Sites</td>
<td>Linda Friedman, Terrell T. Gibbs, and David H. Farb</td>
</tr>
<tr>
<td>198</td>
<td>The Extracellular Disulfide Loop Motif of the Inhibitory Glycine Receptor Does Not Form the Agonist Binding Site</td>
<td>Robert J. Vandenberg, Sundran Rajendra, Chris R. French, Peter H. Barry, and Peter R. Schofield</td>
</tr>
<tr>
<td>204</td>
<td>Transport of (2-Chloroethyl)-3-sarcosinamide-1-nitrosourea in the Human Glioma Cell Line SKMG-1 Is Mediated by an Epinephrine-Sensitive Carrier System</td>
<td>Adrian J. Noé, Areti Malapetsa, and Lawrence C. Panasci</td>
</tr>
<tr>
<td>210</td>
<td>Role of NAD(P)H: (Quinone Acceptor) Oxidoreductase (DT-Diaphorase) in Activation of Mitomycin C under Acidic Conditions</td>
<td>Asher Begleiter and Marsha K. Leith</td>
</tr>
<tr>
<td>216</td>
<td>Characterization of Human Liver Microsomal Cytochrome P450 Involved in the Reductive Metabolism of Zonisamide</td>
<td>Hiromitsu Nakasa, Moriyoshi Komiya, Shigeru Ohmori, Tadaaki Rikihisa, Masahiro Kiuchi, and Mitsukazu Kitada</td>
</tr>
</tbody>
</table>