MOLECULAR PHARMACOLOGY

Contents

ACCELERATED COMMUNICATIONS

229 Molecular Cloning of a Mammalian Serotonin Receptor that Activates Adenylate Cyclase
Jean-Luc Plassat, Nourdine Amlaiky, and René Hen

237 Selective Enhancement of the Interaction of Curare with the Nicotinic Acetylcholine Receptor
Gregory N. Filatov, Maria L. Aylwin, and Michael M. White

242 Expression of mRNA for the Serotonin 5-Hydroxytryptamine1D Receptor Subtype in Human and Bovine Cerebral Arteries
Edith Hamel, Ermei Fan, Donald Linville, Vincent Ting, Jean-Guy Villemure, and Loo-Sar Chia

ARTICLES

247 Quantitative Relationship between α1-Adrenergic Receptor Density and the Receptor-Mediated Calcium Response in Individual Astroglial Cells
Yanping Shao and Ken D. McCarthy

255 G Protein Amino-Terminal αd/αs Chimeras Reveal Amino Acids Important in Regulating αs Activity
Marijane Russell and Gary L. Johnson

264 Characterization of the Human β3-Adrenergic Receptor Gene
James G. Granneman, Kristine N. Lahners, and Archana Chaudhry

271 Heterogeneity of Insulin Receptors in Rat Tissues as Detected with the Partial Agonist B29,B29'-Suberoyl-Insulin

277 Isolation and Expression of a Novel Angiotensin II Receptor from Xenopus laevis Heart
Derk J. Bergsma, Catherine Ellis, Parvathi R. Nuthulaganti, Ponnal Nambi, Karen Scaife, Chandrika Kumar, and Nambi Aiyar

Continued
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>285</td>
<td>Identification and Characterization of Type A Endothelin Receptors in MMQ Cells</td>
<td>Jinshyun R. Wu-Wong, William Chiou, Scott R. Magnuson, David G. Witte, and Chun Wel Lin</td>
</tr>
<tr>
<td>292</td>
<td>1,25-Dihydroxyvitamin D₃ Enhances the Transcription and Expression of the Inositol Triphosphate Receptor Gene in HL-60 Cells</td>
<td>Peter G. Bradford, Youyu Jin, and Pei Hui</td>
</tr>
<tr>
<td>298</td>
<td>Characterization of Ligand and Substrate Specificity for the Calcium-Dependent and Calcium-Independent Protein Kinase C Isozymes</td>
<td>Marcelo G. Kazanietz, Liliana B. Areces, Afshin Bahador, Harald Mischak, JoAnne Goodnight, J. Frederic Mushinski, and Peter M. Blumberg</td>
</tr>
<tr>
<td>308</td>
<td>Diversity of Glutamate Receptor Subunit mRNA Expression within Live Hippocampal CA1 Neurons</td>
<td>Scott A. Mackler and James H. Eberwine</td>
</tr>
<tr>
<td>324</td>
<td>Antiestrogens Inhibit the Replication of the Retroviral Moloney Murine Leukemia Virus In Vitro</td>
<td>C. Chailleux, F. Mesange, F. Bayard, A-C. Prats, and J.-C. Faye</td>
</tr>
<tr>
<td>328</td>
<td>Metrazole Induces the Sequential Activation of c-fos, Proenkephalin, and Tyrosine Hydroxylase Gene Expression in the Rat Adrenal: Modulation by Glucocorticoid and Adrenocorticotropic Hormone</td>
<td>Yuan-Shan Zhu, Marina Brodsky, Steven O. Franklin, Theresa Huang, and Charles E. Inturrisi</td>
</tr>
<tr>
<td>336</td>
<td>Interactions of Indolo[3,2-b]carbazoles and Related Polycyclic Aromatic Hydrocarbons with Specific Binding Sites for 2,3,7,8-Tetrachlorodibenzo-p-dioxin in Rat Liver</td>
<td>Mikael Gillner, Jan Bergman, Christian Cambillau, Monika Alexandersson, Birgitta Fernström, and Jan-Ake Gustafsson</td>
</tr>
<tr>
<td>346</td>
<td>Cloned Murine Bradykinin Receptor Exhibits a Mixed B₁ and B₂ Pharmacological Selectivity</td>
<td>Peter McIntyre, Elsa Phillips, Elizabeth Skidmore, Michael Brown, and Michael Webb</td>
</tr>
<tr>
<td>364</td>
<td>Differential Effects of Antimycin A on Endocytosis and Exocytosis of Transferrin also Are Observed for Internalization and Externalization of β-Adrenergic Receptors</td>
<td>Jhy-Fei Liao and John P. Perkins</td>
</tr>
<tr>
<td>371</td>
<td>Paradoxical Regulation of Dopamine Receptors in Transfected 293 Cells</td>
<td>Theresa M. Filtz, Roman P. Artymyshyn, Wei Guan, and Perry B. Molinoff</td>
</tr>
</tbody>
</table>

Continued
Mutation of an Aspartate at Residue 89 in Somatostatin Receptor Subtype 2 Prevents Na⁺ Regulation of Agonist Binding but Does not Alter Receptor-G Protein Association

Characterization of Cloned Somatostatin Receptors SSTR4 and SSTR5

Inhibition of NA-K-C Cotransport by Amiloride Analouges Is Associated with Stimulation of Cyclic AMP-Dependent Protein Kinase

Irreversible Modification of Red Cell Ca²⁺ Transport by Phenylglyoxal

Differential Effects of Chronic Ethanol Exposure on ATP- and Bradykinin-Induced Increases in Intracellular Calcium Levels in PC-12 Cells

Differential Activating and Deactivating Effects of Natural Ryanodine Congeners on the Calcium Release Channel of Sarcoplasmic Reticulum: Evidence for Separation of Effects at Functionally Distinct Sites

Phosphoramidon Modulates the Number of Endothelin Receptors in Cultured Swiss 3T3 Fibroblasts

Tityustoxin-Kα, a Structurally Novel and Highly Potent K⁺ Channel Peptide Toxin, Interacts with the α-Dendrotoxin Binding Site on the Cloned Kv1.2 K⁺ Channel

Functional Comparison of the Role of γ Subunits in Recombinant Human γ-Aminobutyric AcidA/Benzodiazepine Receptors

The Dihydropyridine Nitrendipine Modulates N-Methyl-D-Aspartate Receptor Channel Function in Mammalian Neurons

Isolation and Pharmacological Characterization of ω-Grammotoxin SIA, a Novel Peptide Inhibitor of Neuronal Voltage-Sensitive Calcium Channel Responses

Selective and Interactive Down-regulation of μ- and δ-Opioid Receptors in Human Neuroblastoma SK-N-SH Cells
CONTENTS (cont’d)

468 Substituted Pyrazinones, a New Class of Allosteric Modulators for γ-Aminobutyric AcidA Receptors  
Haesook K. Im, Wha Bin Im,  
Thomas M. Judge,  
Ronald B. Gammill,  
Beverly J. Hamilton,  
Donald B. Carter, and  
Jeff F. Pregenzer

473 Long-Lasting Modification of the N-Methyl-d-Aspartate Receptor Channel by a Voltage-Dependent Sulfhydryl Redox Process  
Lian-Hong Tang and  
Elias Aizenman

479 Inhibition of 5-Phosphoribosyl-1-pyrophosphate Synthetase by the Monophosphate Metabolite of 4-Amino-8-(β-d-ribofuranosylamino)pyrimido-[5,4-d] pyrimidine: A Novel Mechanism for Antitumor Activity  
David W. Fry, Theodore J. Boritzki,  
Robert C. Jackson, P. Dan Cook, and  
Wilbur R. Leopold

486 Development of Lipoprotein-like Lipid Particles for Drug Targeting: Neo-High Density Lipoproteins  
Donald Schouten,  
Maaike van der Kooij, Judith Muller,  
Moniek N. Pieters,  
Martin K. Bijsterbosch, and  
Theo J. C. van Berkel