MOLECULAR PHARMACOLOGY

March 2007 Volume 71 Number 3 http://molpharm.aspetjournals.org ISSN 0026-895X

PERSPECTIVE
DNA (Cytosine-5) Methyltransferase Inhibitors: A Potential Therapeutic Agent for Schizophrenia

Jonathan M. Levenson

ACCELERATED COMMUNICATION
Native Rat Hippocampal 5-HT1A Receptors Show Constitutive Activity

Jean-Claude Martel, Anne-Marie Ormire, Nathalie Leduc, Marie-Bernadette Assié, Didier Cussac, and Adrian Newman-Tancredi

ARTICLES
DNA Methyltransferase Inhibitors Coordinately Induce Expression of the Human Reelin and Glutamic Acid Decarboxylase 67 Genes

Marija Kundakovic, Ying Chen, Erminio Costa, and Dennis R. Grayson

Inhibition of the c-Jun N-Terminal Kinase-Mediated Mitochondrial Cell Death Pathway Restores Auditory Function in Sound-Exposed Animals

Jing Wang, Jérome Ruel, Sabine Ladrech, Christophe Bonny, Thomas R. van de Water, and Jean-Luc Puel

Tumor Necrosis Factor α and Endothelin-1 Increase P-Glycoprotein Expression and Transport Activity at the Blood-Brain Barrier

Björn Bauer, Anika M. S. Hartz, and David S. Miller

Isolation and Structure-Activity of μ-Conotoxin TIIIA, A Potent Inhibitor of Tetrodotoxin-Sensitive Voltage-Gated Sodium Channels

Richard J. Lewis, Christina I. Schroeder, Jenny Ekberg, Katherine J. Nielsen, Marion Loughnan, Linda Thomas, Denise A. Adams, Roger Drinkwater, David J. Adams, and Paul F. Alewood

Protease-Activated Receptors Differentially Regulate Human Platelet Activation through a Phosphatidic Acid-Dependent Pathway

Michael Holinstat, Bryan Voss, Matthew L. Bilodeau, and Heidi E. Hamm

The symbols in the table of contents identify articles discussed in the Perspective.
The Nucleotide Analog Cidofovir Suppresses Basic Fibroblast Growth Factor (FGF2) Expression and Signaling and Induces Apoptosis in FGF2-Overexpressing Endothelial Cells
Sandra Liekens, Sofie Gijsbers, Els Vansstreels, Dirk Daelemans, Erik De Clercq, and Sigrid Hatse

Amino-Pyrrolidine Tricarboxylic Acids Give New Insight into Group III Metabotropic Glutamate Receptor Activation Mechanism
Mélanie Frauli, Nadia Hubert, Stephan Schann, Nicolas Triballeau, Hugues-Olivier Bertrand, Francine Acher, Pascal Neuville, Jean-Philippe Pin, and Laurent Prézéau

Analysis of Mammalian Carboxylesterase Inhibition by Trifluoromethylketone-Containing Compounds
Randy M. Wadkins, Janice L. Hyatt, Carol C. Edwards, Lyudmila Tsurkan, Matthew R. Redinbo, Craig E. Wheelock, Paul D. Jones, Bruce D. Hammock, and Philip M. Potter

Identification of Leu276 of the S1P1 Receptor and Phe263 of the S1P3 Receptor in Interaction with Receptor Specific Agonists by Molecular Modeling, Site-Directed Mutagenesis, and Affinity Studies
Qiaolin Deng, Joseph A. Clemas, Gary Chrebet, Paul Fischer, Jeffrey J. Hale, Zhen Li, Sander G. Mills, James Bergstrom, Suzanne Mandala, Ralph Mosley, and Stephen A. Parent

Reactive Oxygen Species and p38 Mitogen-Activated Protein Kinase Activate Bax to Induce Mitochondrial Cytochrome c Release and Apoptosis in Response to Malonate

Benzo[a]pyrene-7,8-dihydrodiol Promotes Checkpoint Activation and G2/M Arrest in Human Bronchoalveolar Carcinoma H358 Cells
M. Cecilia Caino, Jose L. Oliva, Hao Jiang, Trevor M. Penning, and Marcelo G. Kazanietz

Modulating the Folding of P-Glycoprotein and Cystic Fibrosis Transmembrane Conductance Regulator Truncation Mutants with Pharmacological Chaperones
Ying Wang, Tip W. Loo, M. Claire Bartlett, and David M. Clarke

Mutational Disruption of a Conserved Disulfide Bond in Muscarinic Acetylcholine Receptors Attenuates Positive Homotropic Cooperativity between Multiple Allosteric Sites and Has Subtype-Dependent Effects on the Affinities of Muscarinic Allosteric Ligands
Xi-Ping Huang and John Ellis

Ca²⁺ Permeability of the (α4)₃(β2)₂ Stoichiometry Greatly Exceeds That of (α4)₂(β2)₃ Human Acetylcholine Receptors
L. Tapia, A. Kuryatov, and J. Lindstrom

Novel G423S Mutation of Human α7 Nicotinic Receptor Promotes Agonist-Induced Desensitization by a Protein Kinase C-Dependent Mechanism
Hiroshi Tsuneki, Soushi Kohbayashi, Kazue Takagi, Syota Kagawa, Masahiko Tsunoda, Masahiko Murata, Tadasu Matsuoka, Tsutomu Wada, Masayoshi Kurachi, Ikuko Kimura, and Toshiyasu Sasaoka

Pioglitazone Inhibits Androgen Production in NCI-H295R Cells by Regulating Gene Expression of CYP17 and HSD3B2
Petra Kempná, Gaby Hofer, Primus E. Mullis, and Christa E. Flück

Evidence for Direct Regulation of Myocardial Na⁺/H⁺ Exchanger Isoform 1 Phosphorylation and Activity by 90-kDa Ribosomal S6 Kinase (RSK): Effects of the Novel and Specific RSK Inhibitor fmk on Responses to α₁-Adrenergic Stimulation
Friederike Cuello, Andrew K. Snabaitis, Michael S. Cohen, Jack Taunton, and Metin Avkiran

Transcriptional Regulation of Human CYP2A13 Expression in the Respiratory Tract by CCAAT/Enhancer Binding Protein and Epigenetic Modulation
Guoyu Ling, Yuan Wei, and Xinxin Ding
Hepatic Ischemia-Reperfusion Induces Renal Heme Oxygenase-1 via NF-E2-Related Factor 2 in Rats and Mice  
Yuji Tanaka, Jonathan M. Maher, Chuan Chen, and Curtis D. Klaassen  

Characterization and Comparison of Nicotine and Cotinine Metabolism in Vitro and in Vivo in DBA/2 and C57BL/6 Mice  
Eric C. K. Siu and Rachel F. Tyndale  

Dopamine Transporter Activity Mediates Amphetamine-Induced Inhibition of Akt through a Ca\textsuperscript{2+}/Calmodulin-Dependent Kinase II-Dependent Mechanism  
Y. Wei, J. M. Williams, C. Dipace, U. Sung, J. A. Javitch, A. Galli, and C. Saunders  

The Antiestrogen Tamoxifen Activates BK Channels and Stimulates Proliferation of MCF-7 Breast Cancer Cells  
Guyllaume Coiret, Anne-Sophie Borowiec, Pascal Mariot, Halima Ouaadid-Ahidouch, and Fabrice Mattifat  

Identification of a Molecular Target Mediating the General Anesthetic Actions of Pentobarbital  
Anja Zeller, Margarete Arras, Rachel Jurd, and Uwe Rudolph  

Up-Regulation of 150-kDa Oxygen-Regulated Protein by Celecoxib in Human Gastric Carcinoma Cells  
Takushi Namba, Tatsuya Hoshino, Ken-ichiro Tanaka, Shinji Tsutsumi, Tomoaki Ishihara, Shinji Mima, Keitarou Suzuki, Satoshi Ogawa, and Tohru Mizushima  

4-Hydroxy-2-nonenal Adduction of Extracellular Signal-Regulated Kinase (Erk) and the Inhibition of Hepatocyte Erk-Est–Like Protein-1-Activating Protein-1 Signal Transduction  
Brante P. Sampey, David L. Carbone, Jonathan A. Doorn, Derek A. Drechsel, and Dennis R. Petersen  

The Effects of Central Nervous System-Active Valproic Acid Constitutional Isomers, Cyclopropyl Analogs, and Amide Derivatives on Neuronal Growth Cone Behavior  
J. A. Shimshoni, E. C. Dalton, A. Jenkins, S. Eyal, K. Ewan, R. S. B. Williams, N. Pessah, B. Yagen, A. J. Harwood, and M. Bialer  

Probing HIV-1 Integrase Inhibitor Binding Sites with Position-Specific Integrase-DNA Cross-Linking Assays  
Allison A. Johnson, Christophe Marchand, Sachindra S. Patil, Roberta Costi, Roberto Di Santo, Terrence R. Burke, Jr., and Yves Pommier  

Neurokinin-3 Receptor-Specific Antagonists Talnetant and Osanetant Show Distinct Mode of Action in Cellular Ca\textsuperscript{2+} Mobilization but Display Similar Binding Kinetics and Identical Mechanism of Binding in Ligand Cross-Competition  
Gaochao Tian, Dee Wilkins, and Clay W. Scott  

Essential Role for Class II Phosphoinositide 3-kinase \(\alpha\)-Isoform in Ca\textsuperscript{2+}-Induced, Rho- and Rho Kinase-Dependent Regulation of Myosin Phosphatase and Contraction in Isolated Vascular Smooth Muscle Cells  
Kazuaki Yoshioka, Naotoshi Sugimoto, Noriko Takuwa, and Yoh Takuwa  

Molecular Interactions Underlying the Unusually High Adenosine Affinity of a Novel Trypanosoma brucei Nucleoside Transporter  

Activation of the CXCR3 Chemokine Receptor through Anchoring of a Small Molecule Chelator Ligand between TM-III, -IV, and -VI  
Mette M. Rosenkilde, Michael B. Andersen, Rie Nygaard, Thomas M. Frimurer, and Thue W. Schwartz
ATP6V0C Competes with Von Hippel-Lindau Protein in Hypoxia-Inducible Factor 1α (HIF-1α) Binding and Mediates HIF-1α Expression by Bafilomycin A1

Ji-Hong Lim, Jong-Wan Park, Sung Joon Kim, Myung-Suk Kim, Sang-Ki Park, Randall S. Johnson, and Yang-Sook Chun

Role of Nuclear Factor-κB and Protein Kinase C Signaling in the Expression of the Kinin B₁ Receptor in Human Vascular Smooth Muscle Cells

Marie Eve Moreau, Marie-Thérèse Bawolak, Guillaume Morissette, Albert Adam, and François Marceau

[8] Supplemental material is available online at http://molpharm.aspetjournals.org.

About the cover: Release of cytochrome c, translocation of Bax, and cleavage of α-fodrin in damaged sensory hair cells. See the article by Wang et al. on page 654 of this issue.