## MOLECULAR

Volume 77

Number 4

April 2010

## PHARMACOLOGY

ISSN 0026-895X

567

molpharm.aspetjournals.org

ARTICLES Dominant-Negative Regulation of Cell Surface Expression by a Pentapeptide Motif at the Extreme COOH Terminus of an Slo1 Calcium-Activated Potassium Channel Splice Variant Yu-Hsin Chiu, Claudia Alvarez-Baron, Eun Young Kim, and Stuart E. Dryer 497 Human Carboxylesterase 1 Stereoselectively Binds the Nerve Agent Cyclosarin and Spontaneously Hydrolyzes the Nerve Agent Sarin Andrew C. Hemmert, Tamara C. Otto, Monika Wierdl, Carol C. Edwards, Christopher D. Fleming, Mary MacDonald, John R. Cashman, Philip M. Potter, Douglas M. Cerasoli, and Matthew R. Redinbo 508  $\square$  Detergent-Resistant Microdomains Determine the Localization of  $\sigma$ -1 Receptors to the Endoplasmic Reticulum-Mitochondria Junction Teruo Hayashi and Michiko Fujimoto 517 Crystal Structure of a Cytochrome P450 2B6 Genetic Variant in Complex with the Inhibitor 4-(4-Chlorophenyl)imidazole at 2.0-Å Resolution Sean C. Gay, Manish B. Shah, Jyothi C. Talakad, Keiko Maekawa, Arthur G. Roberts, P. Ross Wilderman, Ling Sun, Jane Y. Yang, Stephanie C. Huelga, Wen-Xu Hong, Qinghai Zhang, C. David Stout, and James R. Halpert 529 S Site-Specific Fluorescence Reveals Distinct Structural Changes Induced in the Human ρ1 GABA Receptor by Inhibitory Neurosteroids Ping Li, Alpa Khatri, John Bracamontes, David S. Weiss, Joe Henry Steinbach, and Gustav Akk 539 Identification of Determinants of Glucose-Dependent Insulinotropic Polypeptide Receptor That Interact with N-Terminal Biologically Active Region of the Natural Ligand Tahir Yaqub, Irina G. Tikhonova, Jens Lättig, Remi Magnan, Marie Laval, Chantal Escrieut, Cyril Boulègue, Chandralal Hewage, and Daniel Fourmy 547 S Computer-Aided Discovery, Validation, and Mechanistic Characterization of Novel Neolignan Activators of Peroxisome Proliferator-Activated Receptor γ Nanang Fakhrudin, Angela Ladurner, Atanas G. Atanasov, Elke H. Heiss, Lisa Baumgartner, Patrick Markt, Daniela Schuster, Ernst P. Ellmerer, Gerhard Wolber, Judith M. Rollinger, Hermann Stuppner, and Verena M. Dirsch 559 Pharmacological Analysis of Drosophila melanogaster γ-Secretase with Respect to Differential Proteolysis of Notch and APP

Molecular Pharmacology (ISSN 0026-895X) is published monthly (two volumes per year beginning in January and July) by the American Society for Pharmacology and Experimental Therapeutics, 9650 Rockville Pike, Bethesda, MD 20814-3995; e-mail: subscriptions@ aspet.org; Web site: aspet.org. Periodicals postage paid at Bethesda, MD, and at additional mailing offices. POSTMASTER: Send address changes to Molecular Pharmacology, 9650 Rockville Pike, Bethesda, MD 20814-3995. Subscription rates: U.S.: \$707.00; outside the U.S.: \$799.00. Single copy: \$63.00. GST Tax Number for Canadian sub-

Casper Groth, W. Gregory Alvord, Octavio A. Quiñones, and Mark E. Fortini

scribers: BN:13489 2330 RT. Indexed or abstracted by Biochemistry & Biophysics Citation Index®, Biological Abstracts, Current Awareness in Biological Sciences, Current Contents®/Life Sciences, EMBASE/Excerpta Medica, Index Medicus, Medical Documentation Service®, Reference Update®, Research Alert®, Science Citation Index®, and SciSearch®. Copyright © 2010 by the American Society for Pharmacology and Experimental Therapeutics. All rights reserved. Printed in the U.S.A.

	Hepatic Heme-Regulated Inhibitor (HRI) Eukaryotic Initiation Factor 2α Kinase: A Protagonist of Heme-Mediated Translational Control of CYP2B Enzymes and a Modulator of Basal Endoplasmic Reticulum Stress Tone  Poulomi Acharya, Jane-Jane Chen, and Maria Almira Correia	575
	A Thermally Stable Form of Bacterial Cocaine Esterase: A Potential Therapeutic Agent for Treatment of Cocaine Abuse  Remy L. Brim, Mark R. Nance, Daniel W. Youngstrom, Diwahar Narasimhan, Chang-Guo Zhan, John J. G. Tesmer, Roger K. Sunahara, and James H. Woods	593
S	15-Deoxy- $\Delta^{12,14}$ -Prostaglandin J $_2$ Biphasically Regulates the Proliferation of Mouse Hippocampal Neural Progenitor Cells by Modulating the Redox State Takashi Katura, Takahiro Moriya, and Norimichi Nakahata	601
S	A Dietary Agonist of Transient Receptor Potential Cation Channel V3 Elicits Endothelium-Dependent Vasodilation Scott Earley, Albert L. Gonzales, and Zarine I. Garcia	612
	Environmental Neurotoxic Pesticide Increases Histone Acetylation to Promote Apoptosis in Dopaminergic Neuronal Cells: Relevance to Epigenetic Mechanisms of Neurodegeneration C. Song, A. Kanthasamy, V. Anantharam, F. Sun, and A. G. Kanthasamy	621
	Role of Rad51 Down-Regulation and Extracellular Signal-Regulated Kinases 1 and 2 Inactivation in Emodin and Mitomycin C-Induced Synergistic Cytotoxicity in Human Non–Small-Cell Lung Cancer Cells Ying-Jhen Su, Min-Shao Tsai, Ya-Hsun Kuo, Yu-Fan Chiu, Chao-Min Cheng, Szu-Ting Lin, and Yun-Wei Lin	633
	Regulation of Multidrug Resistance Protein 1 by Tumor Necrosis Factor $\alpha$ in Cultured Glial Cells: Involvement of Nuclear Factor- $\kappa$ B and c-Jun N-Terminal Kinase Signaling Pathways Patrick T. Ronaldson, Tamima Ashraf, and Reina Bendayan	644
	Carbon Monoxide Releasing Molecule-2 Inhibits Pancreatic Stellate Cell Proliferation by Activating p38 Mitogen-Activated Protein Kinase/Heme Oxygenase-1 Signaling Christian I. Schwer, Manuel Mutschler, Patrick Stoll, Ulrich Goebel, Matjaz Humar, Alexander Hoetzel, and Rene Schmidt	660
S	Multiple Affinity States of cGMP-Specific Phosphodiesterase for Sildenafil Inhibition Defined by cGMP-Dependent and cGMP-Independent Mechanisms  Irina G. Rybalkina, Xiao-Bo Tang, and Sergei D. Rybalkin	670
	Antagonist Selective Modulation of Adenosine $A_1$ and $A_3$ Receptor Pharmacology by the Food Dye Brilliant Black BN: Evidence for Allosteric Interactions $L.\ T.\ May,\ S.\ J.\ Briddon,\ and\ S.\ J.\ Hill$	678
	Hepatic Clearance of Reactive Glucuronide Metabolites of Diclofenac in the Mouse Is Dependent on Multiple ATP-Binding Cassette Efflux Transporters  Jurjen S. Lagas, Rolf W. Sparidans, Els Wagenaar, Jos H. Beijnen, and Alfred H. Schinkel	687
	$\sigma_1$ Receptor Modulation of G-Protein-Coupled Receptor Signaling: Potentiation of Opioid Transduction Independent from Receptor Binding Felix J. Kim, Ivanka Kovalyshyn, Maxim Burgman, Claire Neilan, Chih-Cheng Chien, and Gavril W. Pasternak	695
S	Sphingosine 1-Phosphate (S1P) Regulates Vascular Contraction via S1P <sub>3</sub> Receptor: Investigation Based on a New S1P <sub>3</sub> Receptor Antagonist  Akira Murakami, Hiroshi Takasugi, Shinya Ohnuma, Yuuki Koide, Atsuko Sakurai, Satoshi Takeda,  Takeshi Hasegawa, Jun Sasamori, Takashi Konno, Kenji Hayashi, Yoshiaki Watanabe, Koji Mori,  Yoshimichi Sato, Atsuo Takahashi, Naoki Mochizuki, and Nobuyuki Takakura	704

About the cover: Ribbon-and-stick diagram depicting the G and H helices region in the 2B4 bifonazole, 1-(4-phenyl)benzylimidazole (1-PBI), and 4-CPI structures. See the article by Gay et al. on page 529 of this issue.

S Supplemental material is available online at http://molpharm.aspetjournals.org.