SPECIAL SECTION ON THE MANY FACETS OF OPIOID RECEPTOR PHOSPHORYLATION

The Complex Roles of μ-Opioid Receptor Phosphorylation: A Key Determinant in Receptor Signaling and Regulation

Meritxell Canals

Agonist Binding and Desensitization of the μ-Opioid Receptor Is Modulated by Phosphorylation of the C-Terminal Tail Domain

William T. Birdsong, Seksiri Arttamangkul, James R. Bunzow, and John T. Williams

Role of Phosphorylation Sites in Desensitization of μ-Opioid Receptor

Arsalan Yousuf, Elke Miess, Setareh Sianati, Yan-Ping Du, Stefan Schulz, and MacDonald J. Christie

MINIREVIEW

PDZ Protein Regulation of G Protein–Coupled Receptor Trafficking and Signaling Pathways

Henry A. Dunn and Stephen S. G. Ferguson

ARTICLES

AT-1001 Is a Partial Agonist with High Affinity and Selectivity at Human and Rat α3β4 Nicotinic Cholinergic Receptors

Edward W. Tuan, Andrew G. Horti, Thao T. Olson, Yongiun Gao, Craig A. Stockmeier, Nour Al-Muhtasib, Carrie Bowman Dalley, Amanda E. Lewin, Barry B. Wolfe, Niaz Sahibzada, Yingxian Xiao, and Kenneth J. Kellar

Bidirectional Effect of Pregnenolone Sulfate on GluN1/GluN2A N-Methyl-D-Aspartate Receptor Gating Depending on Extracellular Calcium and Intracellular Milieu

Divyan A. Chopra, Daniel T. Monaghan, and Shashank M. Dravid

Intracellular Dynamics and Fate of a Humanized Anti–Interleukin-6 Receptor Monoclonal Antibody, Tocilizumab

Keiko Fujimoto, Hiroaki Ida, Yuko Hirota, Masaki Ishigai, Jun Amano, and Yoshitaka Tanaka

Substrate and Inhibitor–Specific Conformational Changes in the Human Serotonin Transporter Revealed by Voltage-Clamp Fluorometry

Pella C. Söderhielm, Jacob Andersen, Lachlan Munro, Anne T. Nielsen, and Anders S. Kristensen

Benzopyrimido-pyrrolo-oxazine-dione (R)-BPO-27 Inhibits CFTR Chloride Channel Gating by Competition with ATP

Yonjung Kim, Marc O. Anderson, Jinhong Park, Min Goo Lee, Wan Namkung, and A. S. Verkman

Acetylcholine-Binding Protein Engineered to Mimic the α4-α4 Binding Pocket in α4β2 Nicotinic Acetylcholine Receptors Reveals Interface Specific Interactions Important for Binding and Activity

Aspirin Targets SIRT1 and AMPK to Induce Senescence of Colorectal Carcinoma Cells
Yu Ri Jung, Eun Ju Kim, Hyeong Jwa Choi, Jung-Jin Park, Hak-Su Kim, Yoon-Jin Lee, Myung-Jin Park, and Minyoung Lee

Suppression of Cytosolic NADPH Pool by Thionicotinamide Increases Oxidative Stress and Synergizes with Chemotherapy
Philip M. Tedeschi, HongXia Lin, Murugesan Gounder, John E. Kerrigan, Emine Ercikan Abali, Kathleen Scotto, and Joseph R. Bertino

Protein Kinase C (PKC)ζ Pseudosubstrate Inhibitor Peptide Promiscuously Binds PKC Family Isoforms and Disrupts Conventional PKC Targeting and Translocation
Amy S. Bogard and Steven J. Tavalin

Mutational Analysis of the Putative High-Affinity Propofol Binding Site in Human β3 Homomeric GABA_A Receptors
Megan M. Eaton, Lily Q. Cao, Ziwei Chen, Nicholas P. Franks, Alex S. Evers, and Gustav Akk

Pregnane X Receptor Represses HNF4α Gene to Induce Insulin-Like Growth Factor–Binding Protein IGFBP1 that Alters Morphology of and Migrates HepG2 Cells
Susumu Kodama, Yuichi Yamazaki, and Masahiko Negishi

Adenylyl Cyclase 5 Regulation by Gβγ Involves Isoform-Specific Use of Multiple Interaction Sites
Cameron S. Brand, Rachna Sadana, Sundeep Malik, Alan V. Smrcka, and Carmen W. Dessauer

Preclinical Evaluation of DMA, a Bisbenzimidazole, as Radioprotector: Toxicity, Pharmacokinetics, and Biodistribution Studies in Balb/c Mice
Hemlata Nimesh, Vinod Tiwari, Chunhua Yang, Sushma R. Gundala, Krishna Chuttani, Puja P. Hazari, Anil K. Mishra, Abhisheak Sharma, Jawahar Lal, Anju Katyal, Ritu Aneja, and Vibha Tandon

Label-Free Kinetics: Exploiting Functional Hemi-Equilibrium to Derive Rate Constants for Muscarinic Receptor Antagonists
Darren M. Riddy, Celine Valant, Patricia Rueda, William N. Charman, Patrick M. Sexton, Roger J. Summers, Arthur Christopoulos, and Christopher J. Langmead

Potentiators of Defective ∆F508–CFTR Gating that Do Not Interfere with Corrector Action
Puay-Wah Phuan, Guido Veit, Joseph A. Tan, Walter E. Finkbeiner, Gergely L. Lukacs, and A. S. Verkman

Suppression of Cytochrome P450 3A4 Function by UDP-Glucuronosyltransferase 2B7 through a Protein-Protein Interaction: Cooperative Roles of the Cytosolic Carboxyl-Terminal Domain and the Luminal Anchoring Region
Yuu Miyauchi, Kiyoshi Nagata, Yasushi Yamazoe, Peter I. Mackenzie, Hideyuki Yamada, and Yuji Ishii

ERRATUM
Correction to: “Preclinical Evaluation of DMA, a Bisbenzimidazole, as Radioprotector: Toxicity, Pharmacokinetics, and Biodistribution Studies in Balb/c Mice”

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

About the cover: Molecular dynamics computations of ligand binding to the canonical ATP binding site in human CFTR. See the article by Kim et al. (dx.doi.org/10.1124/mol.115.098368).