EMERGING CONCEPTS

Membrane-Mediated Activity of Local Anesthetics

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ARTICLES

Metformin Prevents Hyperglycemia-Associated, Oxidative Stress-Induced Vascular Endothelial Dysfunction: Essential Role for the Orphan Nuclear Receptor Human Nuclear Receptor 4A1 (Nur77)

Vivek Krishna Pulakazhi Venu, Mahmoud Saifeddine, Koichiro Mihara, Muniba Faiza, Evgueni Gorobets, Andrew J. Flewelling, Darren J. Derksen, Simon A. Hirota, Isra Marei, Dana Al-Majid, Majid Motahhary, Hong Ding, Chris R. Triggle, and Morley D. Hollenberg

Tacrine Induces Endoplasmic Reticulum–Stressed Apoptosis via Disrupting the Proper Assembly of Oligomeric Acetylcholinesterase in Cultured Neuronal Cells

Etta Y.L. Liu, Shinghung Mak, Xiangpeng Kong, Yingjie Xia, Kenneth K.L. Kwan, Miranda L. Xu, and Karl W.K. Tsim

Regulation of Adrenergic, Serotonin, and Dopamine Receptors to Inhibit Diabetic Retinopathy: Monotherapies versus Combination Therapies

Timothy S. Kern, Yunpeng Du, Jie Tang, Chieh Allen Lee, Haitao Liu, Alyssa Dreffs, Henri Leinonen, David A. Antonetti, and Krzysztof Palczewski

Construction and Characterization of CRISPR/Cas9 Knockout Rat Model of Carboxylesterase 2a Gene

Jie Liu, Xuyang Shang, Shengbo Huang, Yuan Xu, Jian Lu, Yuanjin Zhang, Zongjun Liu, and Xin Wang

Therapeutic Neuroprotection by an Engineered Neurotrophin that Selectively Activates Tropomyosin Receptor Kinase (Trk) Family Neurotrophin Receptors but Not the p75 Neurotrophin Receptor

Fouad Brahimi, Alba Galan, Sairey Siegel, Stephanie Szobota, Marinko V. Sarunic, Alan C. Foster, and H. Uri Saragovi

Unique Positive Cooperativity Between the \( \beta \)- Arrestin–Biased \( \beta \)-Blocker Carvedilol and a Small Molecule Positive Allosteric Modulator of the \( \beta_2 \)-Adrenergic Receptor

Biswa Ranjan Pani, Seungkirl Ahn, Paula K. Rambarat, Shashank Vege, Alem W. Kapsai, Andrew Liu, Bruno N. Valan, Dean P. Stauss, Tommaso Costa, and Robert J. Lefkowitz

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

About the cover: Cmpd-6 augments carvedilol-stimulated \( \beta_2 \)AR internalization. See the article by Pani et al. (dx.doi.org/10.1124/molpharm.121.000363).