

MOLECULAR PHARMACOLOGY

November 2021

Volume 100

Number 5

molpharm.aspetjournals.org

ISSN 1521-0111

EMERGING CONCEPTS

Membrane-Mediated Activity of Local Anesthetics

Stephan L. Grage, Anke Culetto, Anne S. Ulrich, and Stefan Weinschenk,

502

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 428
- ☐ 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 456
- ☐ 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, 470
- ☐ 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, 480
- 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 491
- ☐ Unique Positive Cooperativity Between the β -Arrestin–Biased β -Blocker Carvedilol and a Small Molecule Positive Allosteric Modulator of the β_2 -Adrenergic Receptor
Biswaranjan Pani, Seungkirl Ahn, Paula K. Rambarat, Shashank Vege, Alem W. Kahsai, Andrew Liu, Bruno N. Valan, Dean P. Staus, Tommaso Costa, and Robert J. Lefkowitz 513

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

About the cover: Cmpd-6 augments carvedilol-stimulated β_2 AR internalization. See the article by Pani et al. ([dx.doi.org/10.1124/molpharm.121.000363](https://doi.org/10.1124/molpharm.121.000363)).