Article

Supplementary data

The Maxi-K (BK) Channel Antagonist Penitrem A as A Novel Breast Cancer Targeted Therapeutic

Amira A. Goda,¹ Abu Bakar Siddique,¹ Mohamed M. Mohyeldin,^{1,3} Nehad M. Ayoub,² Khalid A. El Sayed¹*

¹Department of Basic Pharmaceutical Sciences, School of Pharmacy, University of Louisiana at Monroe, Monroe, Louisiana, 71201, USA.

- ²Department of Clinical Pharmacy, Faculty of Pharmacy, Jordan University of Science and Technology, Irbid 22110, Jordan.
- ³Department of Pharmacognosy, Faculty of Pharmacy, Alexandria University, Alexandria 21521, Egypt.

*Correspondence: Professor Khalid El Sayed, Department of Basic Pharmaceutical Sciences, School of Pharmacy, University of Louisiana at Monroe, 1800 Bienville Drive, Monroe, Louisiana 71201, USA. Phone: +1-318-342-1725; Fax: +1-318-342-1737; E-mail: <u>elsayed@ulm.edu</u>



Figure S1. The 2D binding mode and interactions of **3** at the calcium bowel of the BK channel PDB crystal structure 3MT5. Its C-15 tertiary hydroxyl group contributed hydrogen bonding donor interaction with GLU521 while its NH-1 showed hydrogen bonding donor interaction with GLN525. (b) The overlay of the 3D structure of **3** at the calcium bowel of the BK channel PDB crystal structure 3MT5.



Figure S2. (a) The 2D binding mode and interactions of **2** at the calcium bowel of the BK channel PDB crystal structure 3NAF. Penitrem E showed only one interaction, its NH-1 contributed hydrogen bonding donor interaction with PHE890. (b) The overlay of 3D structure of **2** at the calcium bowel of the BK channel PDB crystal structure 3NAF.



Figure S3: No interaction of 2 at the calcium bowel of the PDB: 3MT5 crystal structure of the BK channel.