
BIOGRAPHICAL SKETCH

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NAME Vitko, Iuliia	POSITION TITLE Research Associate		
eRA COMMONS USER NAME			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Dnipropetrovsk State University	B.S.	1990-1995	Biology
Dnipropetrovsk State University	M.S.	1995-1997	Physiology
Bogomoletz Institute of Physiology	Ph.D.	1999-2002	Biophysics
Bogomoletz Institute of Physiology		2002-2003	Biophysics

A. Positions and Honors

Positions and Employment

- 2002-2003 Junior Research Associate, Department of General Physiology of the Nervous System, Bogomoletz Institute of Physiology, Kiev, Ukraine.
- 2003-present Research Associate, Department of Pharmacology, University of Virginia, Charlottesville, Virginia.

Honors

M.S. degree conferred with honors

B. Publications

1. Lemonnier, L., Y. Vitko, Y.M. Shuba, F. Vanden Abeele, N. Prevarskaya, and R. Skryma, *Direct modulation of volume-regulated anion channels by Ca²⁺ chelating agents*. FEBS Lett., 2002. 521: p. 152-6.
2. Vitko, Y., N.H. Pogorelaya, N. Prevarskaya, R. Skryma, and Y.M. Shuba, *Proteolytic modification of swelling-activated Cl⁻ current in LNCaP prostate cancer epithelial cells*. J. Bioenerg. Biomembr., 2002. 34: p. 307-15.
3. Vitko, Y., N.H. Pogoriela, N. Prevar'ska, R. Skryma, and Y.M. Shuba, *The influence of extracellular pH on volume-activated chloride current in the prostate cancer epithelial cells*. Fiziol. Zh., 2002. 48: p. 19-27.
4. Arias, J.M., J. Murbartián, I. Vitko, J.H. Lee, and E. Perez-Reyes, *Transfer of α subunit regulation from high to low voltage-gated Ca²⁺ channels*. FEBS Lett., 2005. 579: p. 3907-3912.
5. Shcheglovitov, A., T. Zhelay, Y. Vitko, V. Osipenko, E. Perez-Reyes, P. Kostyuk, and Y. Shuba, *Contrasting the effects of nifedipine on subtypes of endogenous and recombinant T-type Ca²⁺ channels*. Biochem. Pharmacol., 2005. 69: p. 841-54.
6. Vitko, I., Y. Chen, J.M. Arias, Y. Shen, X.R. Wu, and E. Perez-Reyes, *Functional characterization and neuronal modeling of the effects of Childhood Absence Epilepsy variants of CACNA1H, a T-type calcium channel*. J. Neurosci., 2005. 25: p. 4844-55.
7. Nelson, M.T., J. Woo, H.-W. Kang, I. Vitko, P.Q. Barrett, E. Perez-Reyes, J.-H. Lee, H.-S. Shin, and S.M. Todorovic, *Reducing agents sensitize C-type nociceptors by relieving high-affinity zinc inhibition of T-type calcium channels*. J. Neurosci., 2007. 27: p. 8250-8260.

8. Vitko, I., I. Bidaud, J.M. Arias, A. Mezghrani, P. Lory, and E. Perez-Reyes, *The I-II loop controls plasma membrane expression and gating of Ca_v3.2 T-type Ca²⁺ channels: a paradigm for Childhood Absence Epilepsy*. J. Neurosci., 2007. 27: p. 322-330.
9. Xie, X., A.L. Van Deusen, I. Vitko, D.A. Babu, L.A. Davies, N. Huynh, H. Cheng, N. Yang, P.Q. Barrett, and E. Perez-Reyes, *Validation of high throughput screening assays against three subtypes of Ca_v3 T-type channels using molecular and pharmacologic approaches*. Assay Drug Dev Technol, 2007. 5: p. 191-204.

C. Research Support

R01 NS038691, Perez-Reyes (PI) 7/5/99-5/31/08

NIH/NINDS

Molecular Analysis of Neuronal T-type Ca Channels

The specific aims of this project are to: 1) determine how mutations in Childhood Absence Epilepsy patients alter Ca_v3.2 channel activity; 2) since many of these mutations are in the cytoplasmic loop connecting repeat I to II, we plan on studying the structure-function relationships of this loop; 3) to determine if current antiepileptic drugs block recombinant T-currents, 4) to use a fluorescent dye based assay to map the chemical space of T channels using known channel blockers, and 5) to synthesize and test novel antiepileptic compounds.

Role on project: Investigator