

Curriculum Vitae

Stanislav Khirug

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DATE OF BIRTH: September 19, 1975

NATIONALITY: Russian / Finnish

LANGUAGES: Russian (native speaker); English (fluent); Finnish (fluent);
Italian (good).

QUALIFICATIONS: **Ph.D.** (2011, University of Helsinki, Helsinki, Finland)
M.Sc. (1997, Kazan State University, Kazan, Russia).
B.Sc. (1995, Kazan State University, Kazan, Russia)

EDUCATION and OCCUPATION:

2011 – present, COO at Neurotar Ltd. Helsinki, Finland and Researcher at University of Helsinki

2003 – 2011. Ph.D. student at the Department of Biosciences, University of Helsinki, supervisor: professor Kai Kaila.

2003. Experimental work and graduate courses in neuroscience.

2001. Summer course on computer modeling of ecosystems, Environmental Center, Helsinki.

1998 – 1999. International Center for Theoretical Physics (ICTP), Trieste Italy.

1992 - 1997. Kazan State University, a 5 year course in Biology with specialization in Zoology of Invertebrates. The degree was awarded in this subject with the highest marks

upon presentation of an xperimental thesis entitled "Effects of Amaranth food supplements on histology of hen digestion system" (Supervisor: Prof. Ezhkova M.S.).

1990 - 1992. Lyceum of Kazan State University.

1982 - 1990. High School in Kazan, studying English as a foreign language.

RESEARCH PROJECTS:

- electrophysiological and optical studies of intracellular Cl⁻ regulation by KCC2 in brain slices and primary neuronal cultures;
- hands-on experience with electron microscopy studying the ultrastructure of Plathelminthes nervous system;
- histological study of invertebrates and hens digestion systems;
- computer analysis of taxonomical variety of Planaria of Euro-Asian continent (Turbellaria, Tricladida, Poludicola). Results of this work were published in proceedings of II Russian Symposium "Factors of taxonomical and biochronological variety" (Dyganova and Khirug, 1995).
- ecological monitoring (Mihkeev et al., 1999).

EXPERIENCE:

Research experience in: whole cell and gramicidin patch clamp recordings in slices and cultures; brain slice preparation.

Ultrastructural study of nervous systems of Invertebrates, Plathelminthes, Turbellaria; construction of original computer-based taxonomical system of Turbellaria, Tricladida; computer modeling based on experimental data (using Pascal version 6.0).

Summer practical training during research expeditions on White Sea (1993), including specimen collection, ecological monitoring and tissue microtomy.

RESEARCH INTERESTS:

electrophysiology, microscopy and imaging, physiology, taxonomy, computer modeling, experimental marine and general biology.

GRANTS:

Two-year scholarship 2007 – 2008 from FGSN (Finnish graduate school of Neuroscience).

Three-year research grant 2004 - 2006 on “Neuronal inhibition during development, plasticity and after injury” from Finnish Cultural Foundation.

Five-year Undergraduate Fellowship 1992, Kazan State University, Russia

PROFESSIONAL MEMBERSHIP:

Society for Neuroscience. 2005 – present

Finnish Neuroscience Society. 2003 – present

PUBLICATIONS BY STANISLAV KHIRUG:

1. Khirug, Stanislav, Ahmad, Faraz, Puskarjov, Martin, Afzalov, Ramil, Kaila, Kai, Blaesse, Peter (2010) A single seizure episode leads to rapid functional activation of KCC2 in the neonatal rat hippocampus. *Journal of Neuroscience*, **30**(36):12028-12035
2. Stanislav Khirug, Junko Yamada, Ramil Afzalov, Juha Voipio, Leonard Khiroug & Kai Kaila. (2008) GABAergic depolarization of the axon initial segment in cortical principal neurons is caused by the Na-K-2Cl cotransporter NKCC1. *Journal of Neuroscience*, **28**(18):4635-4639.
3. Hong Li, Stanislav Khirug, Chunlin Cai, Anastasia Ludwig, Peter Blaesse, Julia Kolikova, Ramil Afzalov, Sarah K. Coleman, Sari Lauri, Matti S. Airaksinen, Kari Keinänen, Leonard Khiroug, Mart Saarma, Kai Kaila and Claudio Rivera (2007) KCC2 Interacts with the Dendritic Cytoskeleton to Promote Spine Development. *Neuron*, **56**(6):1019-33.
4. Khirug, Stanislav, Huttu, Kristiina, Ludwig, Anastasia, Smirnov, Sergei, Voipio, Juha, Rivera, Claudio, Kaila, Kai & Khiroug, Leonard (2005) Distinct properties of functional KCC2 expression in immature mouse hippocampal neurons in culture and in acute slices. *European Journal of Neuroscience*, **21**(4):899-904.