

CURRICULUM VITAE

Igor Antonov, Ph.D

Associate Research Scientist
Center for Neurobiology and Behavior,
Columbia University New York, NY 10032
phone: (212) 543 5463
fax: (212) 543 5474
e-mail: ina4@columbia.edu
website: <http://www.columbia.edu/~ina4/>

Education	M.S. Biology, Kiev State University, Kiev, USSR Ph.D. Neurobiology, Institute of Physiology, Kiev, Ukraine
Postdoctoral Research training	2001- present Associate Research Scientist. Center for Neurobiology and Behavior, Columbia University, New York, NY 1996 - 2001 Postdoctoral Research Scientist. Center for Neurobiology and Behavior, Columbia University. New York, NY 1995 - 1996 Postdoctoral Research Associate Department of Physiology and Biophysics , Chicago, IL 1994 - 1995 Postdoctoral Research Associate Department of Biochemistry , Bath, UK 1980 - 1994 Junior researcher; Postdoctoral researcher, Institute of Physiology, Kiev, Ukraine
Honors and Awards	Pending- Whitehall Foundation, Inc 1988 - Personal fellowship of National Ukrainian Academy of Sciences 1985 - Competition for the Best Fundamental Work in Neurophysiology. First prize, Kiev State University
Major research interests	Mechanisms of synaptic plasticity contributing to learning. Distribution of neurotransmitter secretion in growing axons. DNA transfection
Technical skills and experience	<i>Neurophysiology</i> • Microelectrode recording • Current and voltage clamp • Patch clamp and whole cell recording • Microinjection Cellular and molecular mechanisms of plasticity contributing to simple forms of learning, modulation of synaptic transmission and ionic channels; effects of calcium ions and protein phosphorylation; whole-cell voltage-clamp recording from myocytes to study potentiation and inhibition of the developing <i>Xenopus</i> neuromuscular synapses; neurotransmitter secretion from the nerve terminal at early and later stages of axonal growth; axonal differentiation; localization of the sites of membrane addition to growing neurites and the movement of the plasma membrane components during axonal growth.

Cellular and molecular biology
• Mammalian cell culture

Extraction and purification of cDNA; expression and protein isolation assay; tissue radiolabelling and signal transduction; cell culture; effect of antagonists and agonists on the transient transfection of the subunits ($\alpha 7$) of nicotinic acetylcholine receptors in cultured mammalian cells (HEK-293 and COS-7); toxin-binding and protein determination assay.

Computer skills

PC compatibles, Computer-based data acquisition and analysis (pCLAMP, Clampfit, Clampex, AxoScope, Spike), Microsoft Office (Word, Excel, PowerPoint), SigmaPlot, Photoshop, Illustrator, CorelDraw.

Recent Publications

Antonov I, Antonova I, Kandel ER, Hawkins RD. Activity-dependent presynaptic facilitation and Hebbian LTP are both required and interact during classical conditioning in Aplysia. Neuron, Vol 37, 135-147, January 2003.

Antonov I, Antonova I, Kandel ER, Hawkins RD. The contribution of activity-dependent synaptic plasticity to classical conditioning in Aplysia. J Neurosci 2001 Aug 15;21(16):6413-22

Antonov I, Kandel ER, Hawkins RD. The contribution of facilitation of monosynaptic PSPs to dishabituation and sensitization of the aplysia siphon withdrawal reflex. J Neurosci 1999 Dec 1;19(23):10438-50.

Antonov I, Chang S, Zakharenko S, Popov SV. Distribution of neurotransmitter secretion in growing axons. Neuroscience 1999 Mar;90(3):975-84.

References

Robert Hawkins , Ph.D., Professor Columbia University, Center for Neurobiology and Behavior, 722 W 168 St New York, NY 10032

phone: 212-543-5244, email: rdh1@columbia.edu

Eric Kandel, M.D., University Professor

Columbia University, Center for Neurobiology and Behavior, 1051 Riverside Dr, Annex, New York, NY 10032

phone: 212-543-5202, email: erk5@columbia.edu

Sergey Popov, Ph.D., Assistant Professor Physiology and Biophysics (M/C 901) 835 S. Wolcott Ave. (Room: E-202 MSB) Chicago, IL 60612-7342

phone: 312-413-5682, email: spopov@uic.edu