



Nizhny Novgorod  
Neuroscience Center  
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LOBACHEVSKY STATE UNIVERSITY  
of NIZHNY NOVGOROD  
National Research University



## INTERNATIONAL CONFERENCE PROGRAM «FRONTIERS IN BIOMEDICINE 2015»

November 11, 2015

12:00–12:15	Welcome Address, The UNN Research Strategy in Biomedicine <b>Victor Kazantsev</b> <i>PhD DrSc, Head of the Neurotechnologies Department, Vice-Rector for Research and Innovation, Lobachevsky State University of Nizhny Novgorod (Russia)</i> <i>Vice-Chairman of the Organizing Committee</i>
12:15–12:30	Neuroscience Research at UNN Institute of Biology and Biomedicine <b>Alexey Semyanov</b> <i>PhD DrSc, Director of Institute of Biology and Biomedicine, Head of Nizhny Novgorod Neuroscience Center, Professor at the Neurotechnologies Department, Lobachevsky State University of Nizhny Novgorod (Russia)</i> <i>Chairman of the Program Committee</i>
12:30–12:55	On the work of SPF animal facility <b>Andrey Mironov</b> <i>PhD, Assistant Professor at the Neurotechnologies Department, Head of SPF Animal Facility, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
13:00–13:25	Engineering neurology models for drug discovery <b>Irina Mukhina</b> <i>PhD DrSc, Professor at the Neurotechnologies Department, Head of Biotechnologies Development Center, Lobachevsky State University of Nizhny Novgorod (Russia), Head of Central Research Laboratory, Nizhny Novgorod State Medical Academy (Russia)</i>
13:30–14:30	<b>Lunch</b>
14:30–14:55	Molecular mechanisms of cerebral cortex development <b>Victor Tarabykin</b> <i>MD, PhD, Head of the Brain development genetics lab, Nizhny Novgorod Neuroscience Center, Lobachevsky State University of Nizhny Novgorod (Russia), Professor of Cellular Neurobiology, Acting Director, Institute of Cell Biology and Neurobiology Charité – Universitätsmedizin, Berlin (Germany)</i>
15:00–15:25	Mouse models to study inflammatory diseases in the gut <b>Alexei Tumanov</b> <i>MD, PhD, Assistant Member, Trudeau Institute, Saranac Lake, NY (USA)</i>
15:30–15:55	Immune system molecular biomarkers in oncology <b>Victor Novikov</b> <i>PhD DrSc, Prof., Head of Molecular Biology and Biomedicine Center, Institute of Biology and Biomedicine, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
16:00–16:30	<b>Coffee Break</b>
16:30–16:55	Functions of TNF from distinct cellular sources and a novel approach to anti-cytokine therapy <b>Sergei Nedospasov</b> <i>PhD DrSc, Corr. member of Russian Academy of Sciences, Professor and Head, Laboratory of Molecular Immunology, Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow (Russia), Head, AG Entzündungsbiologie, Deutsches Rheuma-Forschungszentrum Berlin (Germany)</i>
17:00–17:25	Regulation of neuronal chloride homeostasis: a new role for extracellular matrix <b>Michael Druzin</b> <i>PhD, Senior Scientist, Section for Physiology, Department of Integrative Medical Biology, Umeå University, Umeå (Sweden)</i>
18:30	<b>Conference Dinner</b> <i>«Proschaty, Tovarisch» cafe</i>



November 12, 2015

9:00–9:25	Subcellular mechanisms of neuron-glia interactions <b>Alexey Semyanov</b> <i>PhD DrSc, Director of Institute of Biology and Biomedicine, Head of Nizhny Novgorod Neuroscience Center, Professor at the Neurodynamics and Neurobiology Department, Lobachevsky State University of Nizhny Novgorod (Russia)</i> <i>Chairman of the Program Committee</i>
9:30–9:55	Serotonergic signaling and Alzheimer's disease <b>Evgeni Ponimaskin</b> <i>Professor, Head of Department Cellular Physiology, Hannover Medical School, Hannover (Germany)</i>
10:00–10:25	The effect of Glial cell line-derived neurotrophic factor (GDNF) on the morpho-functional integrity of neural networks in hypoxia modeling <i>in vitro</i> <b>Maria Vedunova</b> <i>PhD, Senior Research Associate of Institute of Biology and Biomedicine, Lobachevsky State University of Nizhny Novgorod (Russia), Senior Research Associate of Molecular and Cell Technologies group, Central Research Laboratory, Nizhny Novgorod State Medical Academy (Russia)</i>
10:30–11:00	<b>Coffee Break</b>
11:00–11:25	The role of microflora in immune system homeostasis <b>Andrey Kruglov</b> <i>PhD, Senior Research Associate of Department of Molecular Immunology, A.N. Belozersky Research Institute of Physico-Chemical Biology, Lomonosov Moscow State University, Moscow (Russia), German Rheumatism Research Centre, Berlin (Germany)</i>
11:30–11:55	The role of synaptic plasticity in neurotransmission through gap junction channels: Theoretical modeling and comparison with experiments <b>Alexander Pisarchik</b> <i>PhD, Head of Computational Systems Biology Laboratory, Centre for Biomedical Technology, Technical University of Madrid (Spain)</i>
12:00–13:00	<b>Poster session</b>
13:00–14:00	<b>Lunch</b>
<b>«Evolutionary and Biomedical genomics» section</b>	
14:00–14:25	Genetics of dementias <b>Evgeny Rogaev</b> <i>PhD DrSc, Professor in the Lomonosov Moscow State University, Head of the Human Genomic and Genetic Department in Vavilov Institute of General Genetics of the Russian Academy of Sciences (Russia)</i>
14:30–14:55	Contemporary strategies in preclinical modeling of cancer: theory and experimental applications <b>Serguei Kozlov</b> <i>PhD, MBA, PMP, Principal scientist/PM, Team Leader of Preclinical Technology and Optimization team, Center for Advanced Preclinical Research, Frederik National Laboratory for Cancer Research, Center for Cancer Research, National Institutes of Health, Maryland (USA)</i>
15:00–15:25	Researching epigenetic changes of neuronal chromatin in schizophrenic patients <b>Fedor Gusev</b> <i>Research scientist in Vavilov Institute of General Genetics of the Russian Academy of Sciences (Russia)</i>
15:30–15:55	Biodegradable polymers for laser additive manufacturing <b>Peter Timashev</b> <i>PhD, Senior Research Fellow, Institute of Laser and Information Technologies, Russian Academy of Sciences, Troitsk (Russia)</i>
16:00–16:25	The identification of the genetic cause of the cerebellar hypoplasia disorder <b>Maria Protasova</b> <i>Research assistant in Vavilov Institute of General Genetics of the Russian Academy of Sciences (Russia)</i>
16:30–16:55	The biophysics behind tissue engineering <b>Yury Rochev</b> <i>PhD, Lecturer &amp; Principal investigator, National Centre for Biomedical Engineering Science, Network of Excellence for Functional Biomaterials (NFB), National University of Ireland, Galway (Ireland)</i>



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17:00–17:15

Prenatal development study on phenomenon of delayed implantation

**Andrey Manakhov**

*Student in Lomonosov Moscow State University, research assistant in Vavilov Institute of General Genetics of the Russian Academy of Sciences (Russia)*

17:20–17:35

Reconstruction of mitochondrial genome of immortal animal *Turritopsis dohrnii*

**Alexandra Lisenkova**

*PhD student, research assistant in Vavilov Institute of General Genetics of the Russian Academy of Sciences (Russia)*



## November 13, 2015

9:00–9:25	New uses for local field potentials <b>Valeri Makarov</b> <i>PhD, Prof., Departamento de Matemática Aplicada, Complutense University of Madrid, Madrid (Spain)</i>
9:30–9:55	Spiking Neurons in Control of Robotic Devices <b>Sergey Lobov</b> <i>PhD, Research Associate of Intellectual Biomechatronic Technologies Development lab, Institute of Biology and Biomedicine, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
10:00–10:25	Molecular mechanisms of memory stability and plasticity <b>Pavel Balaban</b> <i>PhD DrSc, Prof., Corr. member of Russian Academy of Sciences, Director of Institute of Higher Nervous Activity and Neurophysiology of the Russian Academy of Sciences, Moscow (Russia)</i>
10:30–11:00	<b>Coffee Break</b>
11:00–11:25	Pavlov's program today: recombination of experience through DNA recombination in transgenic mice <b>Konstantin Anokhin</b> <i>PhD DrSc, Prof., Corr. member of Russian Academy of Sciences, Corr. member of Russian Academy of Medical Sciences, Head of Neurosciences Department, National Research Centre «Kurchatov Institute», Moscow (Russia)</i>
11:30–11:55	The role of cannabinoid receptors (type 1 and type 2) in implementation of neuroprotective and antihypoxic effects of N-arachidonoyldopamine in acute hypoxia <i>in vitro</i> <b>Elena Mitroshina</b> <i>PhD, Research Associate of Neuroprotection Methods Development lab, Institute of Biology and Biomedicine, Lobachevsky State University of Nizhny Novgorod (Russia), Research Associate of Molecular and Cell Technologies group, Central Research Laboratory, Nizhny Novgorod State Medical Academy (Russia)</i>
12:00–12:25	Current view of the process of non-quantal neurotransmitter release in synaptic contact <b>Evgeny Nikolsky</b> <i>PhD DrSc, Prof., Member of Russian Academy of Sciences, Deputy Chairman for Research of Kazan Scientific Center of Russian Academy of Sciences (Russia)</i>
12:30–12:55	Recent Progress in the Understanding of Arterial Hypertension: Ping-Pong between Science and Clinic <b>Kerim Mutig</b> <i>PhD Dr.med, Institute fuer Vegetative Anatomie, Charité – Universitätsmedizin, Berlin (Germany)</i>
13:00–14:00	<b>Lunch</b>
14:00–14:25	Intelligent decision making in synthetic gene circuits <b>Mikhail Ivanchenko</b> <i>PhD DrSc, Head of Department for Applied Mathematics, Institute for Information Technologies, Mathematics and Mechanics, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
14:30–14:45	Analysis, modification and development of the state-of-the-art two-photon laser microscope in view of the features of its use in neuroscience <b>Maxim Doronin</b> <i>PhD student, Junior Research Associate of Institute of Biology and Biomedicine, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
14:45–15:10	Microfluidics applications in fundamental and medical studies in Neuroscience <b>Alexey Pimashkin</b> <i>PhD, Teaching Assistant of Neurotechnologies Department, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
15:15–16:45	<b>Round Table</b> <i>Development trends of biomedical research in Russian Federation using SPF animals</i>