



This Scientific Conference is dedicated to the 70th Birth Anniversary of Professor Alexander I. Archakov in recognition of his outstanding contribution to the fields of Bioinformatics, Proteomics and Nanobiotechnology

PROGRAM

	31 May 2010	Time
	Arrival to Saint-Petersburg and Transportation to River Port	
	Accommodation on the ship "Kronshtadt"	From 16:00
	THE OPENING CEREMONY	19:00
	<i>Welcoming words:</i>	
1.	Genrikh Sofronov , Chairman of Presidium of The North-West Branch of the Russian Academy of Medical Sciences.	
2.	Fidel Castro Diaz-Balart , Scientific Adviser of the President Republic of Cuba.	
3.	Evgeni Panteleyev , Head of the Moscow City Science and Industrial Policy Department.	
4.	Catherine Costello , HUPO President Elect.	
5.	Renad Sagdeev , Deputy Chairman of Siberian Branch of Russian Academy of Sciences.	
6.	Vladimir Shevchenko , Director of the Institute of Silicate Chemistry of the Russian Academy of Sciences.	
7.	Alexander Archakov , Director of the Institute of Biomedical Chemistry of the Russian Academy of Medical Sciences.	
	Departure from Saint-Petersburg	20:30
	Welcome Party	21:00 – 22:00

	1 June 2010	Time
	Breakfast	8:00 – 9:00
	SESSION 1. Synthetic Genomes	9:00 - 10:00
	Chairpersons: Clyde Hutchison III, Vadim Govorun	
1.	Clyde Hutchison III , <i>The J. Craig Venter Institute, USA.</i> BUILDING A SYNTHETIC CELL.	9:00 – 9:30
2.	Vadim Govorun , <i>Institute of Physical-Chemical Medicine of the Federal Agency of Healthcare and Social Development, Moscow, Russia.</i> PROTEOME CORE FOR MINIMAL CELL.	9:30 - 10:00
	Ten minutes' break	10:00 – 10:10
	SESSION 2. Human Proteome Project (Part 1.)	10:10 - 11:40
	Chairpersons: Patrik Kolar, Alexander Archakov	
1.	Alexander Archakov , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> HPP-RUSSIA ON CHROMOSOME 18 – CURRENT STATE.	10:10 - 10:40
2.	Laura Beretta , <i>Fred Hutchinson Cancer Research Center, USA.</i> THE HUMAN PROTEOME PROJECT: THE LIVER PERSPECTIVE.	10:40 - 11:10
3.	Patrik Kolar , <i>European Commission, Directorate General for Research, Belgium.</i> EUROPEAN COLLABORATIVE RESEARCH IN PROTEOMICS: FROM TECHNOLOGIES DEVELOPMENT TO THE UNDERSTANDING OF DISEASE.	11:10 - 11:40
	Coffee Break	11:40 - 12:00
	SESSION 2. Human Proteome Project (Part 2.)	12:00 - 13:30
	Chairpersons: Laura Beretta, Fuchu He	
1.	Fuchu He , <i>Beijing Institute of Radiation Medicine, China.</i> PROTEOME: HEADSTREAM FOR DISCOVERY OF NOVEL MOLECULAR BIOLOGICAL PRINCIPLES.	12:00 - 12:30
2.	Sergey Larin , <i>Institute of Gene Biology Russian Academy of Sciences, Moscow, Russia.</i> EFFICIENT TECHNOLOGY FOR PROTEIN EXPRESSION AND PURIFICATION IN MAMMALIAN CELLS AND ITS APPLICATION FOR PROTEOME PROJECT.	12:30 - 12:50
3.	Andrei Lisitsa , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> KNOWLEDGEBASE FOR 18 TH CHROMOSOME: UTILIZING THE GENE-CENTRIC PARADIGM WITHIN THE NEOSEMANTIC FRAMEWORK.	12:50 - 13:10
4.	Konstantin Yarygin , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> EXPLORING THE ROLE OF HUMAN CHROMOSOME 18-ASSOCIATED GENES AND THEIR PRODUCTS IN CANCER PROGRESSION.	13:10 - 13:30
	Mandrogi – Green Stay, Barbecue	14:30 - 18:00
	Departure from Mandrogi	18:00
	SESSION 3. Visualization, Counting and Manipulation of Single Biomolecules.	18:30 - 20:00
	Chairpersons: Andreas Engel, Viktor Bykov	
1.	Viktor Bykov , <i>Joint-Stock Company "NT-MDT", Moscow, Russia.</i> METHODS OF NANODIAGNOSTICS FOR BIOLOGICAL AND MEDICAL APPLICATIONS BASED ON SCANNING PROBE TECHNOLOGY.	18:30 - 19:00
2.	Andreas Engel , <i>Center for Cellular Imaging and Nanoanalytics, M.E. Muller Institute, Biozentrum, Basel, Switzerland.</i> QUANTITATIVE SCANNING TRANSMISSION ELECTRON MICROSCOPY: A TOOL FOR SINGLE CELL PROTEOMICS.	19:00 - 19:30
3.	Yurii Ivanov , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> AFM VIZUALIZATION AND MEASURING OF ACTIVITY AND ELASTICITY OF SINGLE ENZYME.	19:30 - 19:50
4.	Mariya Samsonova , <i>St.Petersburg State Polytechnical University, St.Petersburg, Russia</i> A SYSTEM FOR DISTRIBUTED PROCESSING AND ANALYSIS OF IMAGES ACQUIRED WITH CONFOCAL MICROSCOPE.	19:50 - 20:10
	Dinner	20:30 - 21:30

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	Breakfast	8:00 - 9:00
	Kizhi Island tour	9:00 – 12:00
	Departure from Kizhi Island	12:00
	SESSION 4. From Sequence to Function	12:20 – 14:00
	Chairpersons: Osamu Gotoh, Andrei Lisitsa	
1.	Osamu Gotoh, Kyoto University, Japan. A METHOD FOR FAST AND SPACE-EFFICIENT WHOLE-GENOME SEQUENCE ALIGNMENT.	12:20 – 12:50
2.	Nikolai Kolchanov, Institute of Cytology and Genetics of Syberian Branch of Rus. Acad. Sci., Novosibirsk, Russia. AUTOMATIC KNOWLEDGE EXTRACTION ON STRUCTURAL AND FUNCTIONAL ORGANIZATION OF MOLECULAR GENETIC SYSTEMS BY ANALYSIS OF SCIENTIFIC TEXTS AND DATABASES.	12:50 – 13:15
3.	Vladimir Poroikov, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. FUNCTIONAL ANNOTATION OF AMINO ACID SEQUENCES BASED ON THE LOCAL SIMILARITY.	13:15 – 13:40
4.	Alexander Veselovskii, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. 3D MODELLING FOR SUBSTRATE SPECIFICITY PREDICTION.	13:40 – 14:00
	Lunch	14:00 - 15:00
	SESSION 5. Workshop: Cytochromes P450: Natural and Laboratory Multiplicity (Part 1)	15:00 – 17:00
	Chairpersons: Tsuneo Omura, Sergey Usanov	
1.	Tsuneo Omura, Kyushu University, Japan. ORIGIN OF MITOCHONDRIAL CYTOCHROME P450	15:00 – 15:30
2.	Rita Bernhardt, University of Saarland, Germany. VERSALITY OF CYTOCHROMES P450.	15:30 – 16:00
3.	Sergey Usanov, Institute of Bioorganic Chemistry of Nat. Acad. Sci. of Belarus, Minsk, Belarus. CYTOCHROME P450 – UNIQUE HEME-THIOLATE BIOCATALYST	16:00 – 16:25
4.	Alexis Ivanov, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. SPR SCREENING OF POTENTIAL LIGANDS FOR HUMAN CYP51.	16:25 – 16:50
	Coffee Break	16:50 – 17:10
	SESSION 5. Workshop: Cytochromes P450 Natural and Laboratory Multiplicity (Part 2)	17:10 – 19:20
	Chairpersons: Merton Sandler, Rita Bernhardt	
1.	Toshiyuki Sakaki, Toyama Prefectural University, Japan. PROTEIN ENGINEERING OF VITAMIN D HYDROXYLASES.	17:10 – 17:40
2.	Michail Alterman, US Food and Drug Administration, Bethesda, USA. CYTOCHROME P450 SUPERFAMILY AS A PARADIGM FOR TARGETED PROTEOMIC ANALYSIS IN PHARMACOPROTEOMICS.	17:40 – 18:05
3.	Larissa Podust, University of California, San Francisco, USA. STRUCTURE-AIDED DESIGN OF CYP51 INHIBITORS FOR TREATMENT OF CHAGAS DISEASE.	18:05 – 18:30
4.	Vladlen Skvortsov, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. MOLECULAR DYNAMICS AND LIGAND SPECIFICITY OF CYTOCHROMES P450.	18:30 – 18:55
5.	Victoria Shumyantseva, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. SENSOR SYSTEMS FOR MEDICAL APPLICATION BASED ON CYTOCHROME P450S.	18:55 – 19:10
	Ten minutes' break	19:10 – 19:20
		19:20 – 19:40
	Dinner	20:00- 21:00

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	Breakfast	8:00 – 9:00
	SESSION 6. Genomics (SCI-MIX)	9:00 - 10:00
	Chairpersons: Wilhelm Ansorge, Valentin Vlassov	
1.	Wilhelm Ansorge, Ecole Polytechnique Federal Lausanne, EPFL, Switzerland. NEXT GENERATION DNA SEQUENCING TECHNIQUES.	9:00 – 9:30
2.	Valentin Vlassov, Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of Rus. Acad. Sci., Novosibirsk, Russia. METAGENOMICS OF TICK-BORNE TRANSMITTED PATHOGEN.	9:30 – 10:00
	Ten minutes' break	10:00 – 10:10
	SESSION 7. Proteomics Part 1. (SCI-MIX)	10:10 – 12:20
	Chairpersons: Catherine Costello, Sergei Moshkovskii	
1.	Ralph Bradshaw, University of California, USA. SIGNAL TRANSDUCTION AND THE IDENTIFICATION OF POST-TRANSLATIONAL MODIFICATIONS OR THE STATE OF PROTEOMIC ANALYSES IN STEM CELLS.	10:10 – 10:40
2.	Catherine Costello, Cardiovascular Proteomic Center Boston University School of Medicine, USA. INVESTIGATIONS OF PROTEIN ASSOCIATIONS AND POST-TRANSLATIONAL MODIFICATIONS IN CARDIOVASCULAR DISEASE AND PROTEIN MISFOLDING DISORDERS.	10:40 - 11:10
3.	Sergei Moshkovskii, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. PROTEOME BAR-CODE FOR CANCER DIAGNOSTIC: THE STATE-OF-THE-ART AND PROSPECTS.	11:10 - 11:30
4.	Valery Shevchenko, Russian N.N.Blokhin Cancer Research Centre, Moscow, Russia IDENTIFICATION OF PROTEINS IN PLASMA OF LUNG CANCER PATIENTS AND CONTROL GROUPS USING THE COMBINED LC-ESI-MS/MS AND LC-MALDI-MS/MS APPROACH.	11:30 - 11:50
5.	Eugene Nikolaev, Institute of Chemical Physics of Rus. Acad. Sci., Moscow, Russia. INFLUENCE OF SMOKING ON THE PROTEOME OF PHYSIOLOGICAL LIQUIDS IN HUMAN.	11:50 - 12:10
	Coffee Break	12:10 - 12:30
	SESSION 7. Proteomics Part 2. (SCI-MIX)	12:30 - 13:30
	Chairpersons: Rudolf Grimm, Victor Zgoda	
1.	Jiri Petrak, Institute of Hematology and Blood Transfusion, Czech Republic. AIMING SHOT-GUN AT THE HEART. PROTEOMICS OF FAILING PUMP.	12:30 - 12:50
2.	James McKerrow, University of California, San Francisco, USA. DRUG TARGETS FOR NEGLECTED DISEASES IDENTIFIED BY PROTEOMICS	12:50 - 13:10
3.	Victor Zgoda, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. MULTIDIMENSIONAL SYSTEM BIOLOGY OF LEUKEMIA HL60 CELL DIFFERENTIATION.	13:10 - 13:30
	Lunch	13:30 - 14:30
	SESSION 7. Proteomics Part 3. (SCI-MIX)	14:30 – 15:30
7	Chairpersons: Ralph Bradshaw, Nikolay Gnuchev	
1.	Rudolf Grimm, Agilent Technologies Inc., Santa Clara and La Jolla, California, USA. NEW DIAGNOSTIC SYSTEM FOR RAPID AND SENSITIVE DIFFERENTIAL DETECTION OF PATHOGENS.	14:30 – 14:50
2.	Stanislav Melnik, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. 2DE-BASED COMPARATIVE PROTEOME STUDY OF UMBILICAL AND MATERNAL BLOOD PLASMA.	14:50 – 15:00
3.	Svetlana Rakhmetova, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. PHOTOAPTAMER HETERODIMERIC CONSTRUCTS AS A NEW APPROACH TO ENHANCE THE EFFICIENCY OF FORMATION OF PHOTOCROSSLINKING WITH A TARGET PROTEIN.	15:00 – 15:10
4.	Arthur Kopylov, Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia. BRAIN ISATIN BINDING PROTEINS: PROTEOMIC IDENTIFICATION AND OPTICAL BIOSENSOR VALIDATION.	15:10 – 15:20

5.	Elena Alexandrova , <i>HVD Biotech, Moscow, Russia</i> ; Alexis Ivanov , <i>IBMC, Moscow</i> . HVD BIOTECH AND IBMC RAMS COOPERATION: EXPERIENCE OF APPLICATION OF BIACORE BIOSENSORS IN PROTEOMICS RESEARCHES.	15:20 – 15:30
	Coffee Break	15:30 -15:45
	SESSION 8. Bioinformatics Part 1. (SCI-MIX)	15:45 – 17:20
	Chairpersons: Marc Nicklaus, Nikolai Kolchanov	
1.	Alexander Kel , <i>BIOBASE GmbH, Germany</i> . IDENTIFICATION OF ENHANCER ELEMENTS IN GENOME CONTROLLING BALANCE BETWEEN APOPTOSIS AND SURVIVAL IN TUMOR CELLS.	15:45 -16:10
2.	Marc Nicklaus , <i>National Cancer Institute, NIH, Frederick, MD, USA</i> . LIGAND ENERGIES CALCULATED QUANTUM-CHEMICALLY IN VACUUM AND SOLVENT MODEL.	16:10 – 16:35
3.	Herbert Thiele , <i>Bruker Daltonik GmbH, Germany</i> . MOLECULAR HISTOLOGY: MATHEMATICAL APPROACHES FOR ANALYZING MALDI IMAGING DATA.	16:35 – 17:00
4.	Tatyana Gremyakova , <i>International Science and Technology Center (ISTC), Moscow, Russia</i> . POSTGENOMICS TECHNOLOGIES IN ISTC PROJECTS.	17:00 – 17:20
	Konevets Island tour	17:30 – 21:00
	Departure from Konevets Island	21:00
	Gala Dinner	21:30 - 23:00

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	Breakfast	7:30 – 8:30
	Valaam Islands tour I	9:00 - 13:00
	Lunch	13:30 - 14:30
	SESSION 8. Bioinformatics Part 2. (SCI-MIX)	15:00 – 16:00
	Chairpersons: Herbert Thiele, Alexander Kel	
1.	Ekaterina Kolesanova , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> IDENTIFICATION OF TAXON-SPECIFIC MOTIFS IN HEPATITIS C VIRUS ENVELOPE PROTEINS.	15:00 – 15:20
2.	Alexey Lagunin , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> COMPUTER-AIDED SELECTION OF NEW TARGETS AND THEIR LOGANDS FOR CANCER TREATMENT.	15:20 – 15:30
3.	Olga Filz , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> IN SILICO APPROACH TO FRAGMENT-BASED DRUG DESIGN.	15:30 – 15:40
4.	Alexey Zakharov , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> QSAR MODELLING OF RODENT ACUTE TOXICITY (ISTC PROJECT № 3777).	15:40 – 15:50
5.	Alexey Chernobrovkin , <i>Institute of Biomedical Chemistry of RAMS, Moscow, Russia</i> UNRAVELLING SINGLE AMINO ACID POLYMORPHISMS IN MS/MS DATA DEPOSITED IN PRIDE	15:50 – 16:00
	Ten minutes' break	16:00 – 16:20
	SESSION 9. Nanobiotechnologies (Part 1.) (SCI-MIX)	16:20 – 18:30
	Chairpersons: Fidel Castro Diaz- Balart, Vsevolod Tkachuk	
1.	Christopher Lowe , <i>Institute of Biotechnology, University of Cambridge, UK.</i> NANODIAGNOSTICS FOR MEDICINE.	16:20 – 16:50
2.	Fidel Castro Diaz-Balart , <i>Scientific Adviser of the President Republic of Cuba.</i> THE NBIC CONVERGENT TECHNOLOGIES IN CUBA.	16:50 – 17:20
3.	Vsevolod Tkachuk , <i>The M.V. Lomonosov Moscow State University, Moscow, Russia.</i> NANOTECHNOLOGIES IN GENE THERAPY.	17:20 – 17:50
4.	Olga Ipatova , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia</i> PHOSPHOLIPID NANOPARTICLES AS DRUGS AND DRUG DELIVERY SYSTEMS.	17:50 - 18:20
	Ten minutes' break	18:20 – 18:30
	SESSION 9. Nanobiotechnologies (Part 2.) (SCI-MIX)	18:30 – 19:45
	Chairpersons: Christopher Lowe, Levon Piotrovsky	
1.	Levon Piotrovsky , <i>Institute of Experimental Medicine of North-West Branch of Rus. Acad. Med. Sci., St.-Petersburg, Russia.</i> FULLERENES AS BIOLOGICALLY ACTIVE AGENTS.	18:30 – 18:55
2.	Ingolf Bernhardt , <i>Saarland University, Saarbruecken, Germany.</i> APPLICATION OF DIFFERENT METHODS TO INVESTIGATE NANO-STRUCTURES IN BIOLOGICAL MEMBRANES.	18:55 – 19:15
3.	Elena Suprun , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> ELECTROCHEMICAL DETECTION OF CARDIAC MYOGLOBIN IN HUMAN PLASMA.	19:15 – 19:25
4.	Oksana Strekalova , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> PHOSPHOLIPID NANOPARTICLES AS A DRUG DELIVERY SYSTEM.	19:25 – 19:35
5.	Alexander Shironin , <i>Institute of Biomedical Chemistry of Rus. Acad. Med. Sci., Moscow, Russia.</i> NEW INDOMETACIN NANODRUG BASED ON PLANT PHOSPHOLIPIDS.	19:35 – 19:45
	CONCLUDING REMARKS, CLOSING CEREMONY	20:00
	Departure from Valaam Islands	21:30
	Dinner	21:30 – 22:30

5 June 2010		
	Breakfast	7:00 – 8:00
	Arrival to Saint-Petersburg	8:00
	Transportation to the Hotels and Airport	