RUSSIAN ACADEMY OF SCIENCES
SIBERIAN BRANCH

INSTITUTE OF CYTOLOGY AND GENETICS

PROGRAM OF THE SEVENTH INTERNATIONAL CONFERENCE ON BIOINFORMATICS OF GENOME REGULATION AND STRUCTURE\SYSTEMS BIOLOGY

BGRS\SB'10
Novosibirsk, Russia
June 20–27, 2010

Novosibirsk
2010

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Igor Rogozin, National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, Bethesda, USA
Alexei Romanyukha, Institute of Numerical Mathematics RAS, Moscow, Russia
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Maria Samsonova, St.Petersburg State Polytechnic University, St.Petersburg, Russia
Dmitry Sherbakov, Limnological Institute SB RAS, Irkutsk, Russia
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Banchob Sripa, Khon Kaen University, Thailand
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Valentin Vlassov, Institute of Chemical Biology and Fundamental Medicine of SB RAS, Novosibirsk, Russia

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Institute of Cytology and Genetics,
Siberian Branch of the Russian Academy of Sciences

Siberian Branch of the Russian Academy of Sciences

The Vavilov Society of Geneticists and Breeders

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THE SEVENTH INTERNATIONAL CONFERENCE ON BIOINFORMATICS OF GENOME REGULATION AND STRUCTURE\SYSTEMS BIOLOGY (BGRS\SB'10)

CONFERENCE PROGRAM

SCHEDULE AT A GLANCE

The Conference Sessions will be held in the Large Conference Hall, in the Small Conference Hall, in Music Salon (room no. 220) of the House of Scientists and in the Conference Hall of the Institute of Cytology and Genetics

June 20, Sunday Foyer of the Small Conference Hall

10:00-14:30 Registration of the conference participants*

*Participants who come later are welcome for registration in the Organizing Committee room (House of Scientists, room no. 200) on any conference day.

House of Scientists, Large Conference Hall

14:30 **Conference Opens:**

Welcome by

Academician of the Russian Academy of Sciences, **Nikolay Kolchanov,**
Academician of the Russian Academy of Sciences **Konstantin Skryabin,**
Professor **Ralf Hofestaedt,** University of Bielefeld, Germany

Greetings of

Academician of the Russian Academy of Sciences **Vladimir Shumny**,
Academician of the Russian Academy of Sciences **Valentin Vlassov**,

15:00-18:00 **PLENARY SESSION**
15:50-16:20 Coffee break
18:30-23:30 Welcome party, Restaurant "Korall"

June 21, Monday House of Scientists, Small Conference Hall

9:20-13:20 ***Morning Session***

HERITABLE AND NON-HERITABLE VARIABILITY IN DEVELOPMENT, DISEASE AND EVOLUTION

11:15-11:35 Coffee break
13:20-14:25 Lunch break

Institute of Cytology and Genetics, Conference Hall

9:30-13:10 ***Morning Session***

PARALLEL SATELLITE MICROSYMPOSIUM "CURRENT CONCEPTS IN LABORATORY ANIMAL SCIENCE: GENETIC COLLECTIONS"

11:15-11:35 Coffee break
13:10-14:20 Lunch break

House of Scientists, Small Conference Hall

14:25-18:15 ***Evening Session***

HERITABLE AND NON-HERITABLE VARIABILITY IN DEVELOPMENT, DISEASE AND EVOLUTION

16:10-16:35 Coffee break

18:15-18:40 **PRESENTATION OF INTEL**

Institute of Cytology and Genetics, Conference Hall

14:20-17:50 ***Evening Session***
PARALLEL SATELLITE MICROSYMPOSIUM "CURRENT CONCEPTS IN LABORATORY ANIMAL SCIENCE: GENETIC COLLECTIONS"

15:50-16:10 Coffee break

June 22, Tuesday House of Scientists**,** Small Conference Hall

9:20-13:40 ***Morning Session***
BIOENGINEERING OF BIOLOGICAL MACROMOLECULES: COMPUTATIONAL AND EXPERIMENTAL APPROACHES

PRESENTATION OF BIORAD

11:25-11:45 Coffee break
13:40 -14:30 Lunch break

14:30 -18:30 ***Evening Session***
INTEGRATION OF *IN SILICO* AND *IN VITRO* TECHNOLOGIES IN DRUG DEVELOPMENT

16:30-16:55 Coffee break

18:30-18:50 **PRESENTATION OF GE HEALTHCARE LIFESCIENCE**

House of Scientists, Music Salon (room no. 220)

9:30-13:20 ***Morning Session***
PARALLEL SATELLITE MICROSYMPOSIUM "INTERNATIONAL SCIENCE AND TECHNOLOGY CENTER"

11:20-11:40 Coffee break
13:20-14:30 Lunch break

House of Scientists, Large Conference Hall

9:00-19:00 **PARALLEL SATELLITE MICROSYMPOSIUM "INTEL DAY OF HIGH PERFORMANCE COMPUTING"**

June 23, Wednesday House of Scientists, Small Conference Hall

9:20-13:25 ***Morning Session***
SYSTEMS BIOLOGY AND MODELING

11:00-11:20 Coffee break

13:25-14:20 Lunch break

Institute of Cytology and Genetics, Conference Hall

11:15-12:45 ***Morning Session***
MEETING OF THE GERMAN/RUSSIAN VIRTUAL NETWORK OF BIOINFORMATICS "COMPUTATIONAL SYSTEMS BIOLOGY"

14:20-17:50 ***Evening Session***
COMPUTATIONAL DEVELOPMENTAL BIOLOGY

16:15-16:35 Coffee break

17:50-18:05 **PRESENTATION OF THE CARL ZEISS**

June 24, Thursday House of Scientists, Small Conference Hall

9:30-13:00 ***Morning Session***
INTELLIGENT DATA ANALYSIS OF REAL BIOLOGICAL DATA

PRESENTATION OF HP

11:20-11:40 Coffee break
13:00-14:20 Lunch break

Institute of Cytology and Genetics, Conference Hall

9:30-14:50 ***Morning Session***
PARALLEL SATELLITE MICROSYMPOSIUM "SYSTEMS BIOLOGY IN PARASITOLOGY"

11:40-12:10 Coffee break and Poster Session

House of Scientists, Foyer of the Large Conference Hall

14:20-16:20 **POSTER SESSION AND COMPUTER DEMONSTRATIONS**

Intel master–class: "How to use Intel SW tools for developing and optimizing your applications"

15:00-15:20 Coffee break

16:20 – 19:30 Social program

June 25, Friday House of Scientists, Small Conference Hall

9:20-13:05 ***Morning Session***
NEXT GENERATION SEQUENCING METHODS FOR HIGH THROUGHPUT BIOLOGY

PRESENTATION OF GENOANALITICA

11:05-11:25 Coffee break
13:05-14:20 Lunch break

14:20-17:25 ***Evening Session***
NEXT GENERATION SEQUENCING METHODS FOR HIGH THROUGHPUT BIOLOGY

PRESENTATIONS OF APPLIED BIOSYSTEMS AND ROCHE DIAGNOSTICS

16:15-16:45 Coffee break

June 26, Saturday House of Scientists, Small Conference Hall

9:30-13:00 ***Morning Session***
SYSTEMS BIOLOGY AND ACTUAL PROBLEMS OF GERONTOLOGY

11:00-11:20 Coffee break
13:00-14:00 Lunch break

House of Scientists, Small Conference Hall

14:00-16:00, ***Closing Ceremony. Summaries from session chairpersons and sponsors***

16:00-21:00 ***Closing Banquet***

CONFERENCE SCHEDULE

June 20, Sunday House of Scientists, Foyer of the Small Conference Hall

10:00-14:30 Registration of the conference participants*

*Participants who come later are welcome for registration in the Organizing Committee room (House of Scientists, room no.200) on any conference day.

June 20	June 21	June 22	June 23	June 24	June 25	June 26
	1	2	3	4	5	6
	9:20 – 13:20 **Heritable and non-heritable variability in development, disease and evolution** House of Scientists, Small Conference Hall	**9:20 – 13:40** **Bioengineering of biological macromolecules: computational and experimental approaches** **Presentation of Biorad** House of Scientists, Small Conference Hall	**9:20 – 13:25** **Systems biology and modeling** House of Scientists, Small Conference Hall	**9:30 – 13:00** **Intelligent Data Analysis of Real Biological Data** **Presentation of HP** House of Scientists, Small Conference Hall	**9:20 – 13:05** **Next generation sequencing methods for high throughput Biology** **Presentation of Genoanalitica** House of Scientists, Small Conference Hall	**9:30 – 13:00** **Systems biology and actual problems of gerontology** House of Scientists, Small Conference Hall
	9:30 – 13:10 **MICROSYMPOSIUM** **“Current concepts in laboratory animal science: genetic collections”** Institute of Cytology and Genetics, Conference Hall	**9:30 – 13:20** **MICROSYMPOSIUM** **“International Science and Technology Center”** House of Scientists, Music Salon (room no. 220) **9:00 – 19:00** **MICROSYMPOSIUM** **“Intel Day of High Performance Computing”** House of Scientists, Large Conference Hall	**11:15 – 12:45** **Meeting of the German/Russian Virtual Network of Bioinformatics "Computational Systems Biology"** Institute of Cytology and Genetics, Conference Hall	**9:30 – 14:50** **MICROSYMPOSIUM** **“Systems biology in parasitology”** **11:40-12:10** **Poster Session** Institute Of Cytology and Genetics, Conference Hall		

	1	2	3	4	5	6
15:00-18:00 **PLENARY SESSION** House of Scientists, Large Conference Hall	**14:20 – 17:50** **MICROSYMPOSIUM** **"Current concepts in laboratory animal science: genetic collections"** Institute of Cytology and Genetics, Conference Hall		**14:20 – 17:50** **Computational Developmental Biology** House of Scientists, Small Conference Hall	**14:20 – 16:20** **Poster session and computer demonstrations** **Intel master–class: "How to use Intel SW tools for developing and optimizing your applications"** House of Scientists, Foyer of the Large Conference Hall	**14:20 – 17:25** **Next generation sequencing methods for high throughput Biology** **Presentations of Applied Biosystems and Roche Diagnostics** House of Scientists, Small Conference Hall	**14:00 – 16:00** ***Closing Ceremony: Summaries from session chairpersons and sponsors*** House of Scientists, Small Conference Hall
	14:25 – 18:15 **Heritable and non-heritable variability in development, disease and evolution** House of Scientists, Small Conference Hall	**14:30 – 18:30** **Integration of *in silico* and *in vitro* technologies in drug development** House of Scientists, Small Conference Hall				
18:30-23:30 **Welcome party**	**18:15 – 18:40** **Presentation of Intel**	**18:30 – 18:50** **Presentation of GE Healthcare Lifescience**	**17:50 – 18:05** **Presentation of Carl Zeiss**	**16:20 – 19:30** **Social program**		**16:00 – 21:00** **Closing Banquet**

PLENARY SESSION

June 20, Sunday House of Scientists, Large Conference Hall 15:00-18:00

Co-chairpersons:

Prof. Nikolay Kolchanov, Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia

Prof. Konstantin Skryabin, "Bioengineering" Center, Russian Academy of Sciences, Moscow, Russia

Prof. Ralf Hofestaedt, Bielefeld University, AG Bioinformatics, Bielefeld, Germany

No.	Author(s) and Title of Talk	Timeline
1.	**Igor Rogozin** National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, Bethesda, USA SOMATIC DIVERSIFICATION OF ADAPTIVE IMMUNE RECEPTORS IN JAWLESS VERTEBRATES	15:00-15:50
	Coffee/tea break 15:50-16:20	
2.	**Andrey Lisitsa** Institute of Biomedical Chemistry, Moscow, Russia GENE-CENTRIC HUMAN PROTEOME PROJECT	16:20-17:10
3.	**Egor Prokhortchouk** Russian Research Centre "Kurchatov Institute", Bioengineering" Center, Russian Academy of Sciences, Moscow, Russia WHOLE GENOME HUMAN SEQUENCING: GENETICS MEETS EPIGENETICS	17:10-18:00

ORAL PRESENTATIONS

Dear speakers, please, plan your presentation time including 5 minutes for questions.

Only PowerPoint presentations made in Microsoft Office 2003, XP or earlier versions can be accepted. Use embedded pictures and animations only; picture and animation links to the Internet or to other files will not be accessible.

Slide projectors or overhead projectors are NOT available during the BGRS\SB'10 Conference.

Please, take into account that it will not be possible for you to load your presentation during the session by yourselves. Presentations are loaded on the main computer by the technician of the Organizing Committee only.

To ensure that the presentations are well prepared and compatible with the main presentation computer, we strongly advice you to bring your materials as PowerPoint files on USB device or CD disk to the Room no. 200 at the House of Scientists and check the presentation with the technician of the Organizing Committee **not later than 30 min** before the start time of the session where you are presenting. This will prevent any confusion when loading the presentations on the main computer.

You may also bring your laptop for copying your presentation to the main presentation computer. Use of your own laptop during your presentation is not recommended.

If you have any questions, please do not hesitate to contact the Organizing Committee in Room no. 200 at the House of Scientists.

June 21, Monday House of Scientists, Small Conference Hall

Morning Session
9:20-13:20

HERITABLE AND NON-HERITABLE VARIABILITY IN DEVELOPMENT, DISEASE AND EVOLUTION

Chairperson:
Prof. Igor Rogozin, National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, Bethesda, USA

HERITABLE AND NON-HERITABLE VARIABILITY IN DEVELOPMENT, DISEASE AND EVOLUTION		
No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Talk** **Sergey G. Inge-Vechtomov** Dept of Genetics, Institute of General Genetics, St.-Petersburg, Russia ON THE GENERAL THEORY OF VARIABILITY	9:20-10:00
2.	**Youri I. Pavlov,** Rogozin I. B. Eppley Institute for Research in Cancer and Allied Diseases, Nebraska Medical Center, Omaha, USA; National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, Bethesda, MD, USA CONTAINING EDITING DEAMINASES	10:00-10:25
3.	**Alexander Mazin** Drexel University College of Medicine, Philadelphia, USA WHY RECA/RAD51, A KEY PROTEIN OF HOMOLOGOUS RECOMBINATION, HYDROLYZES ATP	10:25-10:50
4.	**Alexander Ishchenko,** Gelin A., Saparbaev M.K., Timofeyeva N.A., Fedorova O.S. Institut Gustave-Roussy, Villejuif Cedex, France; Institute of Chemical Biology and Fundamental Medicine, Novosibirsk, Russia GENETIC DISSECTION OF VARIOUS REPAIR FUNCTIONS OF THE AP ENDONUCLEASES REVEALS THEIR RESPECTIVE BIOLOGICAL ROLES	10:50-11:15
	Coffee/tea break 11:15-11:35	
5.	**Anna Malkova**, Chabes A., Deem A., Keszthelyi A. Department of Biology, School of Science, Indianapolis, USA; Department of Medical Biochemistry and Biophysics Umeå University, Umeå, Sweden MUTAGENESIS DURING BREAK-INDUCED REPLICATION IN YEAST	11:35-12:00
6.	**Dmitry Zharkov** Institute of Chemical Biology and Fundamental Medicine, Novosibirsk, Russia SUBSTRATE SPECIFICITY OF DNA REPAIR ENZYMES AND ITS INFLUENCE ON MUTATION SPECTRA	12:00-12:25
7.	**Dmitri Parkhomchuk**, Amstislavskiy V.S., Soldatov A., Ogryzko V. Max Planck Institute for Molecular Genetics, Berlin, Germany; Institut Gustave Roussy, Villejuif, France GENOME WIDE INDUCED MUTAGENESIS	12:25-12:50
8.	**Olga I. Lavrik,** Khodyreva S.N., Ilina E.S., Sukhanova M.V., Kutuzov M.M. Institute of Chemical Biology and Fundamental Medicine, Novosibirsk, Russia	12:50-13:15

	POLY(ADP-RIBOSE) POLYMERASE 1 IS A KEY REGULATOR OF DAMAGE PROCESSING IN BASE EXCISION REPAIR

13:20-14:25 Lunch break

June 21, Monday House of Scientists, Small Conference Hall

Evening Session
14:25-18:15

HERITABLE AND NON-HERITABLE VARIABILITY IN DEVELOPMENT, DISEASE AND EVOLUTION

Chairperson:
Prof. Youri I. Pavlov, Eppley Institute for Research in Cancer and Allied Diseases, Nebraska Medical Center, Omaha, USA

HERITABLE AND NON-HERITABLE VARIABILITY IN DEVELOPMENT, DISEASE AND EVOLUTION		
No.	Author(s) and Title of Talk	Timeline
1.	**Andrey Kulbachinskiy,** Pupov D., Miropolskaya N., Esyunina D. Institute of Molecular Genetics, Moscow, Russia; Moscow State University, Biological Faculty, Moscow, Russia MOLECULAR MECHANISMS UNDERLYING FIDELITY OF RNA SYNTHESIS BY BACTERIAL RNA POLYMERASE	14:25-14:50
2.	**Anatoliy Ivachshenko,** Berillo O.A., Isabekova A.S., Khailenko V.A. Kazakh National University named al-Farabi, Almaty, Kazakhstan PECULIARITIES OF INTERACTION miRNA WITH mRNA OF SOME ONCOGENES	14:50-15:10
3.	**Valerii Glazko,** Pheophilov A.V. Russian State Agrarian University, Moscow Agricultural Academy named after K.A. Timiryazev, Moscow, Russia POLYMORPHISM OF MICROSATELLITE REPEATS AND THEIR RELATION WITH THE MECHANISMS OF GENE TRANSCRIPTION REGULATION	15:10-15:30
4.	**Alena Makarova**, Kulbachinskiy A.V., Pavlov Y.I. Institute of Molecular Genetics, Moscow, Russia; Eppley Institute for Research in Cancer, University of Nebraska Medical Center, Omaha, NE, USA THE FUNCTIONAL ANALYSIS OF POLYMORPHIC VARIANTS OF HUMAN DNA-POLYMERASE IOTA	15:30-15:50
5.	**Yuriy Orlov,** Goh W.S., Li J., Run J.-Q., Xue X., Huss M., Clarke N.D. Genome Institute of Singapore, Singapore, Singapore GENOME WIDE NUCLEOSOME OCCUPANCY AND TRANSCRIPTION FACTORS BINDING IN YEAST GENOME	15:50-16:10
	Coffee/tea break 16:10-16:35	
6.	**Tatiana Karafet,** Osipova L.P., Kuzmin Y.V. and Hammer M.F. University of Arizona, Tucson, USA; Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia; Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia INSIGHT INTO POPULATION HISTORY, EVOLUTION, AND DEMOGRAPHIC EVENTS IN NORTHWESTERN SIBERIA: IDENTITY AND INTERACTION	16:35-16:55
7.	**Zhanetta Astakhova**, Degtyareva N., Commander R., Wilkinson K.D. Emory University, Atlanta, GA, USA	16:55-17:15

	ROLE OF BRCA1 ASSOCIATED PROTEIN 2 (BRAP2) IN THE REGULATION OF THE UBIQUITIN HOMEOSTASIS DURING OXIDATIVE STRESS	
8.	**Marina Fridman,** Kulakovskiy I.V., Oparina N.J., Makeev V.J. Institute of Genetics and Selection of Industrial Microorganisms, GOSNIIGenetika, Moscow, Russia FREQUENT REPEATS IN MAMMAL GENOMES AND ACTIVE RETROPOSONS	17:15-17:35
9.	**Maria Sharakhova,** Sharakhov I.V.**,** Xia A., Tu Z., Leman S.C., Bailey J.A., Smith C.D. Virginia Polytechnic and State University, Blacksburg, USA; University of Massachusetts Medical School, Worcester, MA, USA; San Francisco State University, San Francisco, CA, USA GENOME LANDSCAPE AND EVOLUTIONARY PLASTICITY OF CHROMOSOMES IN MALARIA MOSQUITOES	17:35-17:55
10.	**Ekaterina Vassina,** Lagarkova M.A., Glazov E.A., Mazur A.M., Prokhorchouk E.B., Kiselev S.L. Vavilov Institute of General Genetics RAS, Moscow, Russia; Diamantina Institute for Cancer, Immunology and Metabolic Medicine, The University of Queensland, QLD, Australia; Centre "Bioengineering," Russian Academy of Sciences, Moscow, Russia WIDESPREAD EPIGENOMIC AND TRANSCRIPTIONAL CHANGES IN HUMAN ENDOTHELIAL CELLS REPROGRAMMED INTO PLURIPOTENT STATE	17:55-18:15

18:15 – 18:40 **Presentation of Intel**:
Intel architecture and technologies for High Performance solutions in bio-informatics
Andrey Semin, Intel, Moscow, Russia

June 21, Monday Institute of Cytology and Genetics, Conference Hall

Morning Session
9:30-13:10

SATELLITE MICROSYMPOSIUM "CURRENT CONCEPTS IN LABORATORY ANIMAL SCIENCE: GENETIC COLLECTIONS"

Chairperson:
Prof. Mikhail P. Moshkin, Institute of Cytology and Genetics, Novosibirsk, Russia

Co-Chairpersons:
Prof. Yoichiro Iwakura, Center for Experimental Medicine and Systems Biology, Institute of Medical Science, University of Tokyo, Tokyo, Japan
Prof. Timo Nevalainen, University of Eastern Finland, Kuopio, Finland

GENETIC COLLECTIONS OF LABORATORY ANIMALS: MODERN APPROACHES TO LABORATORY ANIMALS BIODIVERSITY AND EXPERIMENTAL DESIGN		
No.	Author(s) and Title of Talk	Timeline
1.	**Mikhail Moshkin** Institute of Cytology and Genetics, Novosibirsk, Russia INTRODUCTION. WHY DO WE NEED 300000 MOUSE STRAINS?	9:30-9:45
2.	**Plenary Talk** **Timo Nevalainen** University of Eastern Finland, Kuopio, Finland LABORATORY ANIMAL SCIENCE - FROM PHILOSOPHY TO EXPERIMENTAL DESIGN	9:45-10:25
3.	**Landel Carlisle** USA ARCHIVING MOUSE STRAINS BY CRYOPRESERVATION	10:25-10:50
4.	**Sergei Amstislavsky** Institute of Cytology and Genetics, Novosibirsk, Russia CRYOBANKING AND REPRODUCTIVE TECHNOLOGIES FOR MAMMALIAN SPECIES CONSERVATION	10:50-11:15
	Coffee/tea break 11:15-11:35	
5.	**Ilya Trukshin** Roman Moskalyuk, Cryogentech Ltd, St.-Peterb., Russia OPTIMIZATION OF CRYOBANK CONFIGURATION: RUSSIAN EXPERIENCE	11:35-12:00
6.	**Dmitry Ivolgin**, Pokrovskii Bank of Stem Cells, St-Petesrburg, Russia CRYOPRESERVATION OF HUMAN UMBILICAL CORD BLOOD HSC AT STEM CELLS BANK POKROVSKI	12:00-12:25
7.	**Vasily Naprimerov** Institute of Cytology and Genetics, Novosibirsk, Russia VETERINARY WELL-BEING OF LABORATORY ANIMALS	12:25-12:50
	FINAL DISCUSSION	12:50-13:10

13:10-14:20 Lunch break

June 21, Monday Institute of Cytology and Genetics, Conference Hall

Evening Session
14:20-17:50

SATELLITE MICROSYMPOSIUM "CURRENT CONCEPTS IN LABORATORY ANIMAL SCIENCE: GENETIC COLLECTIONS"

Chairperson
Prof. Mikhail P. Moshkin, Institute of Cytology and Genetics, Novosibirsk, Russia

Co-Chairpersons:
Prof. Yoichiro Iwakura, Center for Experimental Medicine and Systems Biology, Institute of Medical Science, University of Tokyo, Tokyo, Japan
Prof. Timo Nevalainen, University of Eastern Finland, Kuopio, Finland

BIODIVERSITY OF ANIMALS IN USE		
No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Talk** **Timo Nevalainen** University of Eastern Finland, Kuopio, Finland DIVERSITY OF SPECIES AVAILABLE FOR BIOMEDICAL RESEARCH	14:20-15:00
2.	**Arkady Markel** Institute of Cytology and Genetics, Novosibirsk, Russia RAT MODELS OF HUMAN HYPERTENSION	15:00-15:25
3.	**Elena Kizilova**, Golubitsa A.N., Zhelezova A.I., Kruglova A.A., Matveeva N.M., Povarnitcyna P.Yu., Belokrylova D.O., Nazarko N.S., Khodeneva N.N., Serov O.L. Institute of Cytology and Genetics, Novosibirsk, Russia MOUSE CHIMERAS AS A RESEARCH MODEL	15:25-15:50
	Coffee/tea break 15:50-16:10	
4.	**Alexander Kulikov**, Bazovkina D., Osipova D., Tikhonova M., Kondaurova E., Popova N. Institute of Cytology and Genetics, Novosibirsk, Russia NEW MOUSE STRAINS FOR BEHAVIOURAL AND PSYCHOPHARMACOLOGICAL GENETICS	16:10-16:30
5.	**Evgeniy Solenov**, Ershov A.P., Medvedev D.A., Karpov D.I., Ilyaskin A.V., Baturina G.S. Institute of Cytology and Genetics, Novosibirsk, Russia FUNCTIONAL APPROACH FOR MODELING OF CELL VOLUME REGULATION IN HYPOTONIC MEDIUM (RVD)	16:30-16:50
6.	**Alexander Ilyaskin**, Medvedev D.A., Ershov A.P., Solenov E.I. Institute of Cytology and Genetics, Novosibirsk, Russia MATHEMATICAL MODEL OF CELL VOLUME REGULATION IN RESPONSE TO HYPOTONIC SHOCK	16:50-17:10
7.	**Oleg Trapezov**, Trapezova L.I. Institute of Cytology and Genetics, Novosibirsk, Russia TAME MINK AS A RESEARCH MODEL	17:10-17:30

FINAL DISCUSSION	17:30-17:50

June 22, Tuesday House of Scientists, Small Conference Hall

Morning Session
9:20-13:40

BIOENGINEERING OF BIOLOGICAL MACROMOLECULES: COMPUTATIONAL AND EXPERIMENTAL APPROACHES

Co-Chairpersons:

Prof. Roman Efremov, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry RAS, Moscow, Russia

Prof. Sergey Deyev, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry RAS, Moscow, Russia

BIOENGINEERING OF BIOLOGICAL MACROMOLECULES: COMPUTATIONAL AND EXPERIMENTAL APPROACHES		
No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Talk** **Sergey Deyev** Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, RAS, Moscow, Russia BARNASE-BARSTAR MODULE AS A MOLECULAR NANOCONSTRUCTOR	9:20-10:00
2.	**Vadim Govorun** Research Institute for Physico-Chemical Medicine, Federal Medico-Biological Agency, Moscow, Russia COMPARATIVE PROTEOMICS OF MYCOPLASMS	10:00-10:25
3.	**Michael Dubina** St. Petersburg Academic University - Nanotechnology Scientific and Education Centre RAS, St.-Petersburg, Russia NANOBIOTECHNOLOGIES AND CANCER: A WAR OR NEGOTIATIONS?	10:25-10:50
4.	**Evgeni Ponimaskin,** Masha N., Noga K., Ute R. Cellular Neurophysiology, Medical School Hannover, Germany; Hebrew University of Jerusalem, Israel; DFG Research Centre Molecular Physiology of Brain, Goettingen, Germany OLIGOMERIZATION OF THE SEROTONIN RECEPTORS: BIOLOGICAL PROOF OF COMPUTATIONAL MODELS	10:50-11:10
5.	**Presentation of BioRad:** **Gyula Csanádi** Bio-Rad Life Science Group, Hungary SYSTEMATIC APPROACH TO EXPERIMENTAL STUDIES OF BIOENGINEERED MACROMOLECULES: FROM NA TO PROTEIN	11:10-11:25
	Coffee/tea break 11:25-11:45	
6.	**Plenary Talk** **Roman Efremov** Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, RAS, Moscow, Russia COMPUTATIONAL MOLECULAR BIOENGINEERING OF PROTEINS: MODERN POTENTIALITIES	11:45-12:25
7.	**Michael Petukhov,** Surzhik M.A., Schmidt A.E., Shvetsov A.V., Yakimov A.P., Kozhina T.N., Firsov D.L., Glazunov E.A.	12:25-12:50

	St. Petersburg Institute of Nuclear Physics, RAS, St.-Petersburg, Russia SEQUENCE OPTIMIZATION OF PROTEIN ALPHA-HELICES - A NEW METHOD FOR BIOENGINEERING OF THERMOSTABLE ENZYMES	
8.	**Galina Riznichenko,** Kovalenko I., Ustinin D., Rubin A.B. M.V. Lomonosov Moscow State University, Biology Department, Moscow, Russia DYNAMIC PROTEIN INTERACTIONS IN CELL. DIRECT MODELING APPROACH	12:50-13:15
9.	**Anton Polyansky,** Volynsky P.E**.**, Efremov R.G. Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, RAS, Moscow, Russia DE-NOVO PREDICTION OF TRANSMEMBRANE HELICAL DIMERS FOR BITOPIC PROTEINS	13:15-13:40

13:40-14:30 Lunch break

June 22, Tuesday House of Scientists, Small Conference Hall

Evening Session
14:30-18:30

INTEGRATION OF *IN SILICO* AND *IN VITRO* TECHNOLOGIES IN DRUG DEVELOPMENT

Co-Chairpersons:
Prof. Alexis Ivanov, Russian State Medical University, Moscow, Russia
Prof. Vladimir Poroikov, Institute of Biomedical Chemistry of RAMS, Moscow, Russia

INTEGRATION OF *IN SILICO* AND *IN VITRO* TECHNOLOGIES IN DRUG DEVELOPMENT		
No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Talk** **Samir K. Brahmachari,** General Director of the Council of Scientific and Industrial Research (CSIR), Delhi, India	14:30-15:10
2.	**Plenary Talk** **Vladimir Poroikov** Institute of Biomedical Chemistry of RAMS, Moscow, Russia COMPUTER-AIDED APPROACHES TO VIRTUAL SCREENING AND RATIONAL DESIGN OF MULTITARGETED DRUGS	15:10-15:50
3.	**Adel Golovin** EMBL-EBI/PDBe, Hinxton, UK INTEGRATION OF CHEMICAL INFORMATION WITH PROTEIN SEQUENCES AND 3D STRUCTURES IN SQL	15:50-16:10
4.	**Yuri Vorobjev,** Popov A.V. Institute of Chemical Biology and Fundamental Medicine, SB RAS, Novosibirsk, Russia NEW METHODS AND PROGRAM TOOLS FOR IN SILICO DOCKING AND VALIDATION OF LIGAND BINDING WITH PROTEIN TARGETS	16:10-16:30
	Coffee/tea break 16:30-16:55	
5.	**Alexis Ivanov,** Gnedenko O.V., Molnar A.A., Veselovsky A.V., Adrianov N.V., Usanov S.A., Archakov A.I.	16:55-17:20

	Russian State Medical University, Moscow, Russia; Institute of Bioorganic Chemistry NAS, Belarus; Institute of Biomedical Chemistry RAMS, Moscow, Russia SCREENING OF NOVEL LIGANDS FOR HUMAN CYTOCHROME P450(51): INTEGRATION OF VIRTUAL AND SPR TECHNOLOGIES	
6.	**Alexander Kel,** Gluch A., Poroikov V., Koborova O., Zakharov A. and Selivanova G. BIOBASE GmbH, Wolfenbuettel, Germany; Institute of Chemical Biology and Fundamental Medicine Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia; Institute of Biomedical Chemistry of Russian Academy of Medical Sciences, Moscow, Russia; Microbiology and Tumor Biology Center (MTC), Karolinska Institutet, Sweden FROM OMICS TO DRUGS. COMBINATORIAL TARGETING KEY NODES IN APOPTOSIS NETWORK	17:20-17:40
7.	**Anton Chugunov,** Rooman M., Langer I., Efremov R.G. Institute of Bioorganic Chemistry RAS, Moscow, Russia; Université Libre de Bruxelles, Brussels, Belgium MOLECULAR DESIGN OF VIP RECEPTOR (GPCR B) — A PATHWAY TO NOVEL ANTI-INFLAMMATORY THERAPIES	17:40-18:00
8.	**Nikita Prakhov,** Chernorudskiy A.L., Gainullin M.R. Faculty of Biology, Nizhny Novgorod State University, Nizhny Novgorod, Russia; Institute of Applied and Fundamental Medicine, Nizhny Novgorod, Russia; University of Coimbra, Azinhaga de Sta Comba, Coimbra, Portugal VSDOCKER TOOL: USING AUTODOCK 4 ON WINDOWS-BASED COMPUTER CLUSTERS FOR VIRTUAL SCREENING	18:00-18:15
9.	**Tatyana Bednaya,** Isaeva G.A., Isaev P.P. Taganrog Pedagogical Institute, Taganrog, Russia ADAMANTANE DERIVATIVE: THE SEARCH OF THE DRUGS INCREASING ABILITY	18:15-18:30

18:30 – 18:50 **Presentation of GE Healthcare Lifescience**:
Studying protein interactions using SPR
Tamara Malygina, GE Healthcare Lifescience, Novosibirsk, Russia

June 22, Tuesday House of Scientists, Music Salon (room no. 220)

Morning Session
9:30-13:20

SATELLITE MICROSYMPOSIUM "INTERNATIONAL SCIENCE AND TECHNOLOGY CENTER"

Chairperson:
Dr. Tatiana A. Gremyakova, Chief Scientific Coordinator, Department of Global Security, Biotechnology & Medicine, International Science & Technology Centre

INTERNATIONAL SCIENCE AND TECHNOLOGY CENTER		
No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Lecture** **Tatiana Gremyakova** Department of Global Security, Biotechnology & Medicine, International Science & Technology Centre POSTGENOMIC TECHNOLOGIES FOR MEDICINE - ISTC LANDSCAPE	9:30-10:00
2.	**Elena Uvarova**, Deineko E.V., Shchelkunov S.N. Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia DEVELOPMENT OF NOVEL CARROT PLANT-BASED ORAL VACCINE AGAINST HEPATITIS B	10:00-10:20
3.	**Sergei Bazhan,** Karpenko L., Ilyicheva T. Belavin P., Antonets D., Ilyichev A. State Research Center of Virology and Biotechnology "Vector", Novosibirsk, Russia RATIONAL-DESIGN OF SYNTHETIC POLYEPITOPE DNA VACCINE FOR ELICITING HIV-SPECIFIC CD8+ T CELL RESPONSES	10:20-10:40
4.	**Sergei Shchelkunov** State Research Center of Virology and Biotechnology "Vector" and Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia STRATEGIES FOR THE IDENTIFICATION OF ANTIVIRALS AGAINST VARIOLA WHICH TARGET THE VIRAL RNA POLYMERASE (ISTC PROJECT # 3516P)	10:40-11:00
5.	**Nina Tikunova**, Zhirakovskaya E.V., Tikunov A.Y., Sokolov S.N., Netesov S.V. Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of Russian Academy of Sciences; Novosibirsk State University, Novosibirsk, Russia RARE GASTROVIRUS ISOLATES IN WESTERN SIBERIA: ISOLATION OF UNUSUAL GROUP A ROTAVIRUS STRAINS P6[G4], P9[G3] AND P8[G9]; IDENTIFICATION OF NOROVIRUS GII.6 GENOTYPE; ANALYSIS OF HASTV-3 AND HASTV-6 GENOMIC RNAS	11:00-11:20
	Coffee/tea break 11:20-11:40	
6.	**Valery Loktev**., Protopopova E., Ternovoi V., Chausov E., Konovalova S., Kononova Y., Pershikova N., Leonova G., Moskvitina N. State Research Center of Virology and Biotechnology Vector, Novosibirsk, Russia; Institute of Epidemiology and Microbiology, Vladivostok, Russia; Research Institute of Applied Mathematics and Mechanics of Tomsk State University, Tomsk, Russia	11:40-12:00

	GENETIC DIVERSITY OF FLAVIVIRUSES IN THE ASIAN PART OF RUSSIA	
7.	**Michail Voevoda**, Yudin N. S., Kulikov I.V., Potapova T.A., Kobzev V.F., Vasilieva L.A., Belyavskaya V.A., Romaschenko A.G. Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia; Institute of Internal Medicine SB RAMS, Novosibirsk, Russia; State Research Center of Virology and Biotechnology Vector, Novosibirsk, Russia ISTC PROJECTS RELATED TO HUMAN AND ANIMAL MOLECULAR EPIDEMIOLOGY: MAIN RESULTS AND PERSPECTIVES	12:00-12:20
8.	**Sergey Tat'kov** Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia BURDEN OF DRUG-RESISTANT TUBERCULOSIS IN WEST SIBERIA AND ITS DIAGNOSTICS	12:20-12:40
9.	**Alexander Sinyakov**, Ryabinin V.A., Kostina E.V., Maksakova G.A. Institute of Chemical Biology and Fundamental Medicine, Novosibirsk, Russia DEVELOPMENT OF AN OLIGONUCLEOTIDE MICROCHIP FOR TYPING VARIOUS SUBTYPES OF INFLUENZA VIRUS A	12:40-13:00
10.	**Round Table**	13:00-13:20

13:20-14:30 Lunch break

June 22, Tuesday House of Scientists, Large Conference Hall

9:00-19:00

SATELLITE MICROSYMPOSIUM "INTEL DAY OF HIGH PERFORMANCE COMPUTING"

June 23, Wednesday House of Scientists, Small Conference Hall

Morning Session
9:20-13:25

SYSTEMS BIOLOGY AND MODELING

Chairperson:
Prof. Ralf Hofestaedt, University of Bielefeld, Germany

SYSTEMS BIOLOGY AND MODELING		
No.	Author(s) and Title of Talk	Timeline
1.	**Ralf Hofestaedt** AG Bioinformatics and Medical Informatics, University Bielefeld, Bielefeld, Germany MODELING AND SIMULATION OF CELL-CELL COMMUNICATION WITH PETRI NETS	9:20-9:45
2.	**Hans Binder,** Hopp L., Wirth H., Galle J. Interdisciplinary Centre for Bioinformatics of Leipzig University, Leipzig, Germany; University Greifswald, Germany; Helmholtz-Zentrum für Umweltforschung, Leipzig, Germany MODELING GENOMIC REGULATION: TRANSCRIPTIONAL MODES AND EPIGENETIC SWITCHES IN ARTIFICIAL GENOMES	9:45-10:10
3.	**Vadim Efimov**, Novikov A.S., Tikhonov A.A., Akberdin I.R, Likhoshvai V.A. Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia REDUCTION OF GENE NET DYNAMIC MODELS USING PROPER ORTHOGONAL DECOMPOSITION	10:10-10:35
4.	**Alexey Kolodkin,** Plant N., Bruggeman F.J., Wiedemann E., Siebers B., Olivier B.J., Swat M., Snoep L.J., Goldfarb P., Mone M.J., Westerhoff H.V. Molecular Cell Physiology, VU University, Amsterdam, The Netherlands; Centre for Toxicology, University of Surrey, Guildford, UK; NISB, The Netherlands; Molecular Enzyme Technology and Biochemistry, University of Duisburg-Essen, Germany; Department of Biochemistry, Stellenbosch University, South Africa; Manchester Centre for Integrative Systems Biology, the University of Manchester, UK "BLUEPRINT" MODELING OF THE NUCLEAR RECEPTOR NETWORK	10:35-11:00
	Coffee/tea break 11:00-11:20	
5.	**Elena Kutumova**, Sharipov R.N., Lavrik I.N., Kolpakov F.A. Institute of Systems Biology, Design Technological Institute of Digital Techniques SB RAS, Novosibirsk, Russia; Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia; German Cancer Research Center, Heidelberg, Germany MODULAR MODELING OF THE APOPTOSIS MACHINERY	11:20-11:45
6.	**Anton Bryksin**, Matsumura I. Emory University School of Medicine, Department of Biochemistry, Atlanta, GA, USA COMPUTATION OF THE STRUCTURE OF A NATURAL METABOLIC NETWORK WITH AN ORF COLLECTION	11:45-12:10
7.	**Oleg Igoshin,** Narula J., Smith A.M., Gottgens B. Department of Bioengineering, Rice University, Houston, USA; Cambridge Institute for Medical Research, University of Cambridge, Cambridge, UK	12:10-12:35

	BISTABILITY AND LOW-PASS FILTERING IN THE NETWORK MODULE DETERMINING BLOOD STEM CELL FATE	
8.	**Olga Krebs**, Wolstencroft K., Owen S., Bacall F., Snoep J., Mueller W. and Goble C. Heidelberg Institute for Theoretical Studies, Germany; School of Computer Science and Manchester Centre for Integrative Systems Biology; University of Manchester, UK SYSMO-DB: DATA MANAGEMENT FOR SYSTEMS BIOLOGY PROJECTS	12:35-13:00
9.	**Andrei Zinovyev**, Morozova N., Nonne N., Barillot E., Harel-Bellan A., Gorban A.N. Institut Curie, Paris, France; INSERM, Paris, France; Mines ParisTech, Fontainebleau, France; CNRS, Villejuif, France; University of Leicester, Center for Mathematical Modeling, Leicester, UK; Institute of Computational Modeling SB RAS, Krasnoyarsk, Russia DYNAMICAL MODELING OF MICRO RNA MECHANISMS	13:00-13:25

13:25-14:20 Lunch break

June 23, Wednesday House of Scientists, Small Conference Hall

Evening Session
14:20-17:50

COMPUTATIONAL DEVELOPMENT BIOLOGY

Co-Chairpersons:
Prof. Lev Beloussov, Moscow State University, Moscow, Russia
Prof. Maria Samsonova, St.-Petersburg State Polytechnic University, St.-Petersburg, Russia

COMPUTATIONAL DEVELOPMENT BIOLOGY		
No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Talk** **Henrik Jönsson** Lund University, Lund, Sweden MODELING AND *IN VIVO* IMAGING OF MOLECULAR AND MECHANICAL REGULATIONS OF PLANT DEVELOPMENT	14:20-15:00
2.	**Victoria Mironova,** Omelyanchuk N.A., Novoselova E.A., Likhoshvai V.A. Institute of Cytology and Genetics, Novosibirsk, Russia *IN SILICO* ANALYSIS OF AUXIN-REGULATED ROOT APICAL MERISTEM PATTERNING	15:00-15:25
3.	**Sergey Nikolaev,** Zubairova U.S., Mjolsness E.D., Shapiro B.E., Smal P.A. and Kolchanov N.A. Institute of Cytology and Genetics, Novosibirsk, Russia; Computer Science Department, Center for Computational Morphodynamics, University of California, Irvine, USA; Biological Network Modeling Center, Division of Biology, California Institute of Technology, Pasadena, USA A MODEL OF SHOOT APICAL MERISTEM COMPARTMENTALIZATION BASED ON CLV/WUS INTERPLAY	15:25-15:50
4.	**Vladimir Choob** Moscow State University, Biological Faculty, Moscow, Russia	15:50-16:15

	THE MODEL OF SPATIAL PATTERN FORMATION IN TRIMERIC FIVE-WHORLED FLOWER	
	Coffee/tea break 16:15-16:35	
5.	**Lev Beloussov** Moscow State University, Moscow, Russia FURTHER ELABORATION OF A STRESS HYPER-RESTORATION (HR) MORPHOGENETIC MODEL	16:35-17:00
6.	**Vladimir Cherdantsev**, Scobeyeva V.A., Grigorieva O.V. Moscow State University, Biological Faculty, Moscow, Russia MORPHOGENETIC GUIDANCE OF THE EVOLUTION OF HAIRS (TRICHOMES) IN PLANTS OF THE DRABA GENUS	17:00-17:25
7.	**Maria Samsonova** St.-Petersburg State Polytechnic University, St.-Petersburg, Russia STABLE BORDERS OF GAP GENE EXPRESSION ARE FORMED BY CANALIZATION OF THE BICOID MORPHOGEN VARIABILITY IN THE DROSOPHILA BLASTODERM	17:25-17:50

17:50 – 18:05 **Presentation of Carl Zeiss**:
Carl Zeiss: New Technologies of Fluorescence Microscopy
Andrey Lapin, OOO «OPTEC», Novosibirsk, Russia

June 23, Wednesday Institute of Cytology and Genetics**,** Conference Hall

Morning Session
11:15-12:45

Meeting of the German/Russian Virtual Network of Bioinformatics "Computational Systems Biology"

Co-Chairpersons:
Prof. Ralf Hofestaedt, University of Bielefeld, Germany
Prof. Nikolay Kolchanov, Institute of Cytology and Genetics, Russian Academy of Sciences, Novosibirsk, Russia

June 24, Thursday House of Scientists, Small Conference Hall

Morning Session
9:20-13:00

INTELLIGENT DATA ANALYSIS OF REAL BIOLOGICAL DATA

Co-Chairpersons:
Prof. A. Fazel Famili, University of Ottawa, IIT/ITI - National Research Council Canada, Ottawa, Canada
Dr. Evgenii Vityaev, Sobolev Institute of Mathematics, Novosibirsk, Russia

No.	Author(s) and Title of Talk	Timeline
	INTELLIGENT DATA ANALYSIS OF REAL BIOLOGICAL DATA	
1.	**Plenary Talk** **A. Fazel Famili** University of Ottawa, IIT/ITI - National Research Council Canada, Ottawa, Canada INTEGRATED KNOWLEDGE DISCOVERY IN BIOLOGICAL DATA	9:20-10:00
2.	**Mary Jo Ondrechen** Department of Chemistry and Chemical Biology, Northeastern University, Boston, USA PROTEIN FUNCTION INFORMATION FROM FUNCTIONAL SITE PREDICTION	10:00-10:20
3.	**Victor Levitsky** Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia APPLICATION OF MOTIF DISCOVERY TOOL FOR FOXA BINDING SITES ANALYSIS	10:20-10:40
4.	**Igor Ponomarev**, Wang S., Zhang L., Harris A., Mayfield D. University of Texas at Austin, Austin, Texas, USA TRANSCRIPTIONAL NETWORKS IN BRAINS OF ALCOHOLIC AND NONALCOHOLIC INDIVIDUALS	10:40-11:00
5.	**Mikhail Fursov**, Varlamov A. Novosibirsk Center of Information Technologies 'UniPro', Novosibirsk, Russia A NOVEL APPROACH FOR CREATION OF COMPLEX COMPUTATIONAL EXPERIMENTS IN BIOINFORMATICS	11:00-11:20
	Coffee/tea break 11:20-11:40	
6.	**Stepan Kochemazov,** Evdokimov A.A., Semenov A.A. Institute for System Dynamics and Control Theory SB RAS, Irkutsk, Russia; Sobolev Institute of Mathematics SB RAS, Novosibirsk, Russia; SYMBOLIC ALGORITHMS IN RESEARCH OF GENE NETWORKS FROM ONE CLAS	11:40-12:00
7.	**Konstantin Gorbunov**, Lyubetsky V.A. Institute for Information Transmission Problems RAS, Moscow, Russia A FAST ALGORITHM OF BUILDING A SPECIES TREE WITH A SET OF GENE TREES	12:00-12:20
8.	**Fedor Kolpakov,** Tolstyh N., Kutumova E.O., Kiselev I.N., Shadrin A.A., Valeev T.F., Ryabova A., Sharipov R.N., Kel A. Design Technological Institute of Digital Techniques SB RAS, Institute of System Biology, Novosibirsk, Russia	12:20-12:40

	BIOUML – INTEGRATED PLATFORM FOR BUILDING VIRTUAL CELL AND VIRTUAL PHYSIOLOGICAL HUMAN	
9.	**Nikolay Podkolodnyy**, Yudin A.V., Kolchanov N.A. Institute of Cytology and Genetics SB RAS, Institute of Computational Mathematics and Mathematical Geophysics SB RAS, HP company, Novosibirsk, Russia HIGH PERFORMANCE COMPUTING COMPLEX OF "BIOINFORMATICS" COLLECTIVE CENTER OF SB RAS	12:40-13:00

13:00-14:20 Lunch break

June 24, Thursday Institute of Cytology and Genetics, Conference Hall

Morning Session
9:30-14:50

SATELLITE MICROSYMPOSIUM "SYSTEMS BIOLOGY IN PARASITOLOGY"

Co-chairpersons:
Prof. Banchob Sripa, Khon Kaen University, Thailand
Prof. Ludmila Ogorodova, SibNMU of Russian Health Deparment, Tomsk, Russia
Prof. Viatcheslav Mordvinov, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

SYSTEMS BIOLOGY IN PARASITOLOGY		
No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Talk** **Banchob Sripa** Khon Kaen University, Thailand *OPISTHORCHIS VIVERRINI*: CELLULAR AND MOLECULAR BIOLOGY AND ITS PATHOGENESIS	9:30-10:00
2.	**Alexey Katokhin** Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia ADVANCES IN GENOMIC AND TRANSCRIPTOMIC STUDIES OF PARASITIC PLATYHELMINTHS	10:10-10:40
3.	**Ludmila Ogorodova**, Puzirev V.P., Saltikova I.V. SibNMU of Russian Health Deparment, Tomsk, Russia OPISTHORCHIASIS IN A MODEL OF GENE-ENVIRONMENT INTERACTIONS IN PATIENTS WITH BRONCHIAL ASTHMA	10:40-11:10
4.	**Nikolay Rubtsov**, Zadesenets K.S. Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia CHROMOSOME ORGANIZATION IN THE OPISTHORCHIIDAE (TREMATODA)	11:10-11:40
	Coffee/tea break and Poster Session 11:40-12:10	
5.	**Plenary Talk** **Konstantin Skryabin**, **Viatcheslav Mordvinov** Russian Research Centre "Kurchatov Institute", "Bioengineering" Center, Russian Academy of Sciences Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia PROJECT: FULL GENOME SEQUENCING OF *OPISTORCHIS FELINEUS*	12:10-12:40

6.	**Jaco J. Verweij** Department of Parasitology, Department of Medical Microbiology, Leiden University Medical Center, Leiden, The Netherlands MOLECULAR DIAGNOSIS OF INTESTINAL PARASITIC INFECTIONS	12:40-13:05
7.	**Elena Kiseleva**, Zhukova M.V. Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia WOLBACHIA, OPISTHORCHIIDAE AND SUPERPARASITISM	13:05-13:30
8.	**Olga Fedorova**, Ogorodova L.M., Deev I.A., Petrov I.V., Sazonov A.E. SibNMU of Russian Health Deparment, Tomsk, Russia PREVALENCE OF *OPISTHORCHIS FELINEUS* INFESTATION IN THE TOMSK REGION (THE RESULTS OF VALIDATION OF PCR-DIAGNOSTICS)	13:30-13:55
9.	**Natalia Yurlova** Institute of Systematics and Ecology of Animals SB RAS, Novosibirsk, Russia HOST-PARASITE SYSTEMS INCLUDING THE OPISTHORCHIIDAE (TREMATODA)	13:55-14:20
10.	**Maria Lvova** Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia COMPARATIVE ANALYSIS OF TREMATODA PROTEINS OF SCP DOMAIN FAMILY	14:20-14:35
11.	**Valerij Ozhereljev** Scientific and Research Institute of Local Infectional Pathology, Tjumen', Russia EPIDEMIOLOGY AND ECOLOGY CHARACTERISTICS OF OPISTHORCHIASIS FOCI IN TJUMEN' AREA	14:35-14:50

June 24, Thursday House of Scientists, Large Conference Hall Foyer

14-20 - 16-20

POSTER SESSION AND COMPUTER DEMONSTRATIONS

Intel master – class: "How to use Intel SW tools for developing and optimizing your applications".

16-20 - 19-30
Social program

June 25, Friday House of Scientists, Small Conference Hall

Morning Session
9:20-13:05

NEXT GENERATION SEQUENCING METHODS FOR HIGH THROUGHPUT BIOLOGY

Co-chairpersons:
Prof. G. St.Laurent III, St. Laurent Institute, Providence, USA
Prof. Egor Prokhortchouk, Center "Bioengineering" of the Russian Academy of Sciences, Moscow, Russia

9-20 - 10-00
Plenary Talk
Boris M. Velichkovsky
Institute of Psychology, Faculty of Mathematics and Natural Sciences, Dresden University of Technology, Germany
COGNITIVE RESEARCH AT THE INTERSECTION OF INFO, BIO AND NANO

NEXT GENERATION SEQUENCING METHODS FOR HIGH THROUGHPUT BIOLOGY		
No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Talk** **Philipp Kapranov** Helicos BioSciences Corporation, Cambridge, MA, USA UNRAVELING THE COMPLEXITY OF PRIMARY AND METASTATIC EWING'S SARCOMA USING HELICOS SINGLE MOLECULE SEQUENCING	10:00-10:40
2.	**Egor Prokhortchouk** Center "Bioengineering" of the Russian Academy of Sciences, Moscow, Russia OPERATIONAL EXPERIENCE IN USAGE OF DIFFERENT NEXT GEN SEQ PLATFORMS IN GENOMIC PROJECTS OF KURCHATOV RESEARCH CENTER	10:40-11:05
	Coffee/tea break 11:05-11:25	
3.	**Eugene Berezikov,** Simanov D., van Zon P., de Bruijn E., Linsen S., de Mulder K., Cuppen E., Canela A., Hannon G.J., Vizoso D.B., Schärer L., Ladurner P. Hubrecht Institute and University Medical Center Utrecht, Utrecht, The Netherlands; Cold Spring Harbor Laboratory, Watson School of Biological Sciences and Howard Hughes Medical Institute, Cold Spring Harbor, NY; University of Basel, Zoological Institute, Basel, Switzerland; University of Innsbruck, Innsbruck, Austria GENOME SEQUENCING AND MIRNA DISCOVERY IN THE REGENERATING FLATWORM *MACROSTOMUM LIGNANO*	11:25-11:50
4.	**Anton Teslyuk,** Prokhortchouk E.B., Mazur A.M., Chekanov N.N., Boulygina E.S., Tsygankova S.V., Khrameeva E.E., Gubina M.A., Konovalova O.S., Khusnutdinova E.K., Stepanov V.A., Skryabin K.G. RRC Kuchatov Institute, Moscow, Russia; Center "Bioengineering" of the Russian Academy of Sciences, Moscow, Russia; ZAO "Genoanalitika", Moscow, Russia; Institute of Cytology and Genetics SB RAS, Novosibirsk,	11:50-12:15

	Russia; Institute of Biochemistry and Genetics, Ufa Research Center, Russian Academy of Sciences, Ufa, Russia; Institute of Medical Genetics, Tomsk Research Center, Russian Academy of Medical Sciences, Tomsk, Russia MATHEMATICAL METHODS FOR FULL GENOME DATA ANALYSIS OF RUSSIAN ETHNIC GROUPS	
5.	**Svetlana Zhenilo** ZAO "Genoanalytica", Moscow, Russia NOVEL SEQUENCING METHODS IN EPIGENETICS: DATA GENERATION AND BIOINFORMATICS	12:15-12:40
6.	**Vladimir Ivanisenko,** Demenkov P.S., Pintus S.S., Ivanisenko T.V., Goncharova N.I., Kostrjukova E.S., Levitskii S.A., Selezneva O.V., Chukin M.M., Larin A.K., Kondratov I.G., Lazarev V.N., Peltek S.E., Govorun V.M., Kolchanov N.A. Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia; Research Institute for Physico-Chemical Medicine, Federal Medico-Biological Agency, Moscow, Russia MICROBIAL METAGENOME ANNOTATION WITH BIOINFORMATICS AND COMPUTATIONAL SYSTEMS BIOLOGY METHODS	12:40-13:05

13:05-14:20 Lunch break

June 25, Friday House of Scientists, Small Conference Hall

Evening Session
14:20-17:25

NEXT GENERATION SEQUENCING METHODS FOR HIGH THROUGHPUT BIOLOGY

Co-chairpersons:
Prof. G. St.Laurent III, St. Laurent Institute, Providence, USA
Prof. Egor Prokhortchouk, Center "Bioengineering" of the Russian Academy of Sciences, Moscow, Russia

NEXT GENERATION SEQUENCING METHODS FOR HIGH THROUGHPUT BIOLOGY

No.	Author(s) and Title of Talk	Timeline
1.	**Plenary Talk** **Georges St. Laurent III** St. Laurent Institute, Providence, USA ADAPTING HELICOS SINGLE MOLECULE TRANSCRIPTOME SEQUENCING AND BIOINFORMATIC ALGORITHMS TO THE DISCOVERY OF RNA EDITING SITES IN DROSOPHILA	14:20-15:00
2.	**Nicola Cirenei** Applied Biosystems International, Inc., Milan, Italy THE SOLID SYSTEM FOR VARIATION DETECTION IN DISEASE GENOMES	15:00-15:25
3.	**Rene te Boekhorst**, Abnizova I., Sabir I., Brar S. and Beka S. School of Computer Science, University of Hertfordshire; Wellcome Trust Sanger Institute, Hinxton, United Kingdom IDENTIFICATION OF SOURCES OF ERROR AFFECTING BASE CALLING IN NEXT GENERATION ILLUMINA/SOLEXA SEQUENCING	15:25-15:50

4.	**Dmitry Shtokalo,** Vyatkin Y.V., Nechkin S.S., Eremina T.Y., Khayrulin S.S., St.Laurent G. III Novel Software Systems, Novosibirsk, Russia; Ershov Institute of Informatics Systems SB RAS, Novosibirsk, Russia; Brown University, Providence, USA HELICOS SINGLE MOLECULE TRANSCRIPTOME SEQUENCING AND BIOINFORMATIC ALGORITHMS FOR DISEASE STUDY IN MOUSE	15:50-16:15
	Coffee/tea break 16:15-16:45	
5.	**Pavel Natalin** Applied Biosystems International, Inc., Moscow, Russia THE FUTURE OF NEXT GENERATION SEQUENCING: THE SOLID SYSTEM AND BEYOND	16:45-17:00
6.	**Maria Gracheva** Roche Diagnostics Rus LLC, Moscow, Russia 454/ROCHE SEQUENCING BREAKTHROUGHS: OVERALL NEXT GENERATION SEQUENCING FOR BROADEST VARIETY OF APPLICATIONS	17:00-17:25

June 26, Saturday House of Scientists, Small Conference Hall

Morning Session
9:30-13:00

SYSTEMS BIOLOGY AND ACTUAL PROBLEMS OF GERONTOLOGY

Chairperson:
Prof. Alexey Romanyukha, Institute of Numerical Mathematics RAS, Moscow, Russia

SYSTEMS BIOLOGY AND ACTUAL PROBLEMS OF GERONTOLOGY		
No.	Author(s) and Title of Talk	Timeline
1.	**Vasily Novoseltsev**, Novoseltseva J.A. Institute of Control Sciences Russian Academy of Science, Moscow, Russia LIMITED COMPONENTS IN DIET INCREASE LIFE SPAN IN FRUIT FLIES: SYSTEM ANALYSIS	9:30-10:00
2.	**Arseny Karkach,** Yashin A.I. Institute of Numerical Mathematics RAS, Moscow, Russia; Duke University, Durham, USA ADAPTIVE TRADE-OFF BETWEEN REPRODUCTION AND SURVIVAL IN MEDITERRANEAN FRUIT FLIES INDUCED BY CHANGING DIETARY CONDITIONS	10:00-10:30
3.	**Sergey Rudnev,** Yashin A.I. Institute of Numerical Mathematics RAS, Moscow, Russia; Duke University, Durham, USA IMMUNE SYSTEM DEVELOPMENT AND BODY GROWTH: WHAT IS THE RELATIONSHIP?	10:30-11:00
	Coffee/tea break 11:00-11:20	
4.	**Alexey Romanyukha** Institute of Numerical Mathematics RAS, Moscow, Russia HOMEOSTASIS MAINTENANCE, TISSUE TURNOVER AND AGING	11:20-11:50
5.	**Alexander Khokhlov** Evolutionary Cytogerontology Sector, School of Biology, Moscow State University, Biological faculty, Moscow, Russia EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT CELL AGING BUT WERE AFRAID TO ASK	11:50-12:20
6.	**Anton Markovets**, Kozhevnikova O.S., Efimov V.M., Kolosova N.G. Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia THE TRANSCRIPTIONAL PROFILE OF RETINAL PIGMENT EPITHELIUM/CHOROID OF OXYS RAT AS A BACKGROUND FOR THE RETINOPATHY DEVELOPMENT	12:20-12:50

13:00-14:00 Lunch break

House of Scientists**,** Small Conference Hall

14:00-16:00 Closing Ceremony. Summaries from session chairpersons

Official:
Academician of the Russian Academy of Sciences, **Nikolay Kolchanov**
Academician of the Russian Academy of Sciences **Konstantin Skryabin,**
Professor **Ralf Hofestaedt,** University of Bielefeld, Germany
Academician of the Russian Academy of Sciences **Vladimir Shumny**
Academician of the Russian Academy of Sciences **Valentin Vlassov**

Persons representing sponsor organizations: ISTC, SOLiD, Khimexpert, Roche Diagnostics, Intel, HP, Genoanalitica, GE Healthcare Lifescience, Carl Zeiss, Bio-rad, Leica Microsystems

16:00-21:00 Closing Banquet

June 24, Thursday
House of Scientists, Large Conference Hall Foyer
14:20-16:20

POSTER SESSION AND COMPUTER DEMONSTRATIONS

Poster Size: The maximum size allowed for each poster is
0.7m wide ∗ 0.9m high
Please note that this is a portrait (vertical) poster

Authors must bring their posters printed and ready, as no facilities to produce posters at the Conference are available. Organizers will provide boards and push pins to display your posters. Posters should be readable from a distance of about two to three feet—for easy reading by several people at one time.
Presentations may be posted after evening session **on June 23** in the Large Conference Hall Foyer.
A scheduled Poster Session, only one for all Conference sections, will be held on **June 24 from 14:20 to 16:20** in the Large Conference Hall Foyer.

During the allotted time, presenters are expected to remain at their individual displays to be available for questions and informal discussion of the poster content.

Material should be removed no later than **10:00 on June 25.**
In the case the author(s) does not take away the presentation, it will be removed and destroyed by the BGRS\SB'10 Organizing Committee.

Computer demonstrations will be held on **June 24 from 14:20 to 16:20** in the Large Conference Hall Foyer.

If you have any questions, please do not hesitate to contact the Organizing Committee in Room no. 200 at the House of Scientists.

POSTER PRESENTATIONS (BY CORRESPONDING AUTHOR*)

A-1
I. Abnizova*, S. Leonard, T. Skelly and T. Cox
Wellcome Trust Sanger Institute, Hinxton, Cambridge, UK
REDUCING OF FALSE POSITIVES FOR VARIANT CALLING: SECOND ILLUMINA BASE CALL ESTIMATION

A-2
A.A. Adzhubei*, A.V. Vlasova, P.V. Mazin
Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow, Russia
QASMOD: PROTEIN MODEL QUALITY ASSESSMENT SUITE

A-3
D.G. Alexeev*, N.A.Bazaleev, V.M.Govorun
Research Institute for Physico-Chemical Medicine, Federal Medico-Biological Agency, Moscow, Russia
SEMANTIC RELATIONSHIPS DERIVED FROM EXPERIMENTAL ANALYSIS EXPERIENCE HELP TO PROCESS AND VISUALIZE EXPERIMENTAL DATA

A-4
V. Amstislavskiy*, T. Borodina, D. Parkhomchuk, H. Lehrach, A. Soldatov
Max Planck Institute for Molecular Genetics, Berlin, Germany
HIGH-THROUGHPUT GENOTYPING USING SECOND GENERATION SEQUENCING TECHNOLOGIES

A-5
L.L. Zavalova, N.V. Antipova*[,1],M.S. Pavljukov[2], I.I. Artamonova[1], I.P. Baskova
Institute of Bioorganic Chemistry RAS, Moscow, Russia
[1]Biological faculty of Moscow State university, Moscow, Russia
[2]Vavilov Institute of General Genetics RAS, Moscow, Russia
BIFUNCTIONAL ENZYME DESTABILASE – LYSOZYME. MUTANT FORMS OF RECOMBINANT PROTEIN.

A-6
D.V. Antonets*, A.Z. Maksyutov, S.I. Bazhan
State Research Center of Virology and Biotechnology "Vector", Koltsovo, Russia
PolyCTLDesigner – SOFTWARE FOR CONSTRUCTING POLYEPITOPE CYTOTOXIC T-CELL IMMUNOGENS.

A-7
D.V. Antonets*, T.S. Nepomnyashchikh, I.P. Gileva, S.N. Shchelkunov
State Research Center of Virology and Biotechnology "Vector", Koltsovo, Russia
MODELLING LIGAND-RECEPTOR COMPLEXES OF VARIOLA AND COWPOX VIRUS CrmB PROTEINS WITH MOUSE AND HUMAN TNFs.

A-8
K.S. Antonez*[,1], A.F. Saifitdinova[1,2]
[1]Dept. of Genetics, St-Petersburg State University, St-Petersburg, Russia
[2]St-Petersburg Branch of Vavilov Institute of General Genetics, St-Petersburg, Russia
EVOLUTION OF EUKARYOTIC mRNA NON-CODING REGIONS.

A-9
A.S.Asheulov*
Kazakh National University named after al-Farabi, Almaty, Kazakhstan
EXON-INTRON STRUCTURE OF FIRST CHROMOSOME MONODELPHIS DOMESTICA

B-1
F. Goncharov, V. Babenko*
Institute of chemical biology and Fundamental Medicine SB RAS, Novosibirsk, Russia
PECULARITIES OF U2 snRNA AND INTRON INTERACTION IN SPLICING

B-2

I.V. Babkin[*,1], I.N. Babkina[2]
[1]Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
[2]SRC VB "Vector", Koltsovo, Novosibirsk reg, Russia
MOLECULAR DATING IN THE EVOLUTION OF VERTEBRATE POXVIRUSES

B-3
N.V. Baginskaya*, S.I. Ilnitskaya, V.I. Kaledin
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
INVESTIGATION OF SEX DIFFERENCE IN SUSCEPTIBILITY TO HEPATOCARCINOGENESIS IN MICE

B-4
K. Bakhshi*
Department of chemistry, Miyaneh Branch, Islamic Azad University, Miyaneh, Iran
SIMULATION AND COMPUTATIONAL STUDIES OF CARVEDILOL AND OTHER HEART DRUGS: DENSITY FUNCTIONAL CALCULATION

B-5
M. Batukov*, G. Isaeva, P. Isaev
Taganrog Pedagogical Institute, Taganrog, Russia
ION CHANNELS: COMPUTER SIMULATION OF QUANTUM EFFECTS

B-6
G.S. Baturina*, L.E. Katkova, A.V. Ilyaskin, E.I. Solenov
Institute of Cytology and Genetics SB RAS, Novosibirsk State University, Novosibirsk, Russia
REGULATORY VOLUME DECREASE. ROLE OF WATER CHANNELS

B-7
A.A. Belostotsky*, I.V. Kulakovskiy, V.J. Makeev
State Research Institute for Genetics and Selection of Industrial Microorganims, GosNIIgenetika, Russia
IDENTIFICATION OF EUKARYOTIC TRANSCRIPTION REGULATORY REGIONS USING PROTEIN-PROTEIN INTERACTION DATA

B-8
B.S. Bhau*
Plant Genomics Laboratory, MAEP Division, North-East Institute of Science & Technology (CSIR), Council of Scientific & Industrial Research (CSIR), Jorhat 785 006, Assam, India
PLANT RETRO-TRANSPOSON SEQUENCE MINING FROM THE NCBI DATA BASE & SEQUENCE DIVERSITY ANALYSIS

B-9
A. R. Kayumov[1], M. I. Bogachev[2,*], E. O. Mikhailova[3]
[1]Kazan State University, 2St. Petersburg State Electrotechnical University, 3Kazan State Technological University
QUANTIFICATION OF LONG-RANGE MEMORY EFFECTS IN PROTEINS BY RETURN INTERVAL STATISTICS

B-10
A.G. Bogomolov[1,*], N.L. Podkolodnyy[1,2], N.B. Rubtsov[1]
[1] Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
[2] Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia
COMPUTER SUPPORT SYSTEM DEVELOPMENT FOR BIOLOGICAL OBJECTS RESEARCH IN MICROSCOPY

B-11
A.O. Bragin*, P.S. Demenkov, V.A. Ivanisenko
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
Novosibirsk State University, Novosibirsk, Russia
COMPUTER ANALYSIS OF CONFORMATIONAL PEPTIDES IN PROTEIN FAMILIES

B-12
A.G. Bugrov[1,2,*], Yu.Yu. Ilinsky[3]
[1]Institute of Systematics and Ecology of Animals, SB RAS, Novosibirsk, Russia
[2]Novosibirsk State University, Novosibirsk, Russia
[3]Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

ENDOSYMBIONT WOLBACHIA IN HOKKAIDO POPULATIONS OF GRASSHOPPER PODISMA SAPPORENSIS SHIR

B-13

T.A. Bukharina[1,2,*], D.P. Furman[2]
[1]Institute of Cytology and Genetics SB RAS, Novosibirsk, RUSSIA
[2]Novosibirsk State University, Novosibirsk, Russia
MORPHOGENESIS OF *Drosophila melanogaster* MACROCHAETES: A GENE NETWORK DESCRIBING THE ESTABLISHMENT OF BRISTLE PREPATTERN

B-14

K.V. Gunbin, T.A. Bukharina*
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
THE RELATION BETWEEN BIOLOGICAL COMPLEXITY OF EUKARYOTES AND EVOLUTIONARY CHANGES OF NOTCH CASCADE PROTEIN FEATURES

C-1

M.B. Chaley[1,*], V.A. Kutyrkin[2]
[1]Institute of Mathematical Problems of Biology RAS, Pushchino, Russia
[2]Moscow State Technical University n.a. N.E. Bauman, Moscow, Russia
REVEALING REGULAR ORGANIZATION IN THE CODING REGIONS OF GENES AND STRUCTURE OF THE PROTEINS

C-2

A.A. Osypov[1,2,3], K. Billiau[4], L. Sterck[4], S. Dittami[1,2], T. Tonon[1,2], Y. Van de Peer[4], M. Cock*[,1,2]
[1]UPMC Univ. Paris 06, The Marine Plants and Biomolecules Laboratory, UMR 7139, Station Biologique de Roscoff, Place Georges Teissier, BP74, 29682 Roscoff Cedex, France.
[2]CNRS, UMR 7139, Laboratoire International Associe Dispersal and Adaptation in Marine Species, Station Biologique de Roscoff, Place Georges Teissier, BP74, 29682 Roscoff Cedex, France.
[3]Laboratory of Cell Genome Functioning, Institute of Cell Biophysics of RAS, 142290, Pushchino MR, Russia
[4]Bioinformatics & Systems Biology division, Department of Plant Systems Biology (VIB), Ghent University, Technologiepark 927, 9052 Gent, Belgium
ECTOCARPUS PORTAL: INTEGRATION OF GENOMICS, TRANSCRIPTOMICS AND DNA PHYSICAL PROPERTIES DATA

D-1

P.S. Demenkov*, O.A. Korepanova, T.V. Ivanisenko, V.A. Ivanisenko
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
Sobolev Institute of Mathematics SB RAS, Novosibirsk, Russia
Novosibirsk State University, Novosibirsk, Russia
ANALISYS OF HUMAN PROTEOME BASED ON PROTEIN STABILITY TO MUTATIONS

D-2

A.N. Diakonova*, I.B. Kovalenko, A.M. Abaturova, G.Yu. Riznichenko
Biophysical Department, Biological Faculty, Lomonosov Moscow State University, Moscow, Russia
COMPUTER SIMULATION OF FERREDOXIN-FNR INTERACTION IN SOLUTION

D-3

A.V. Doroshkov*[,1], M.A. Genaev[1], T.A. Pshenichnikova[1], D.A. Afonnikov[1,2]
[1]Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
[2]Novosibirsk State University, Novosibirsk, Russia
USING THE COMPUTER-BASED IMAGE PROCESSING TECHNIQUE IN GENETIC ANALYSIS OF LEAF HAIRINESS IN WHEAT TRITICUM AESTIVUM L.

D-4

I.A. Drachkova*, P.M. Ponomarenko, T.V. Arshinova, M.P. Ponomarenko, L.K. Savinkova and N.A. Kolchanov
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
EXPERIMENTAL VERIFICATION OF THE PROGNOSIS HUMAN TBP/TATA AFFINITY CHANGE AS A RESULT OF POLYMORPHISMS, ASSOCIATED WITH HEREDITARY PATHOLOGIES

D-5

S.E. Dromashko*, Ya.I. Sheiko, A.Yu. Koneva

Institute of Genetics and Cytology NASB, Minsk, Belarus
REFERENCE-INFORMATION SYSTEM FOR MOLECULAR GENETIC CERTIFICATION OF CARP (*CYPRINUS CARPIO* L.)

D-6
M. D. Dyer[1,*], T. M. Murali[2] and B. W. Sobral[1]
[1]Virginia Bioinformatics Institute
[2]Department of Computer Science, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061, USA
SUPERVISED LEARNING AND PREDICTION OF PHYSICAL INTERACTIONS BETWEEN HUMAN AND HIV PROTEINS

D-7
N.N. Dygalo*, S.A. Lashin
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
COMPUTER SIMULATION OF ORIGIN AND EVOLUTION OF SIGNALLING SYSTEMS

E-1
Ferdinand von Eggeling*, Günther Ernst, Christian Melle
Core Unit Chip Application (CUCA), Institute of Human Genetics, Jena University Hospital, Jena, Germany
SPATIAL RESOLVED PROTEOMICS IN CANCER RESEARCH

E-2
N.P. Eltsov*
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
mtPhyl AS A TOOL FOR mtDNA ANALYSIS

E-3
I.L. Erokhin*
National Biotechnological Company, LLC, Moscow, Russia
A MODEL OF GENOME STRUCTURE

E-4
G. Eslami *, F. Frikha, R. Salehi
[1]The Department of Parasitology and Mycology, Shahid Sadoughi University of Yazd Medical Sciences, Yazd, 8916188/35, Iran
[2]Laboratoire de Biochimie et de Génie Enzymatique des Lipases, École Nationale d'Ingénieurs de Sfax, Route Soukra Km 3.5 B.P W 1173 Sfax, Tunisia
[3]The Department of Genetics and Molecular Biology, Faculty of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran
STRUCTURAL AND DYNAMIC CHARACTERIZATION OF TRYP6 FROM LEISHMANIA MAJOR (MRHO/IR/75/ER)

F-1
V. Fazalova*[,1,2], B. Nevado[3,4], T. Peretolchina[1], Z. Kuzmenkova[1], D. Sherbakov[1,5]
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[5]Faculty of Biology and Soil Science, Irkutsk State University, Sukhe-Batora 5, 664003 Irkutsk, Russia
WHEN ENVIRONMENTAL CHANGES DO NOT CAUSE GEOGRAPHIC SEPARATION OF FAUNA: DIFFERENT DEMOGRAPHIC RESPONSES OF BAIKALIAN INVERTEBRATES

F-2
S. Franck*, W. von Bloh, C. Bounama
Potsdam Institute for Climate Impact Research, Potsdam, Germany
MODELLING LONG-TERM EVOLUTION OF THE GEOBIOSPHERE

F-3
L.L. Frolova, S.S. Firsova*
Kazan State University, Kazan, Russia
THE APPROACH OF BIOINFORMATICS FOR A DEFINITION OF PHYTOPLANKTON INDICATOR SPECIES

G-1

N.I.Gafarov*, V.V.Zaharenkov, N.I.Panyov, T.K.Jadykina, A.S.Kazitskaja, V.P.Puzyryov[1], A.A.Frejdin[1]
Establishment of the Russian academy of medical sciences a scientific research institute of complex problems of hygiene and occupational diseases of the Siberian branch of the Russian academy of medical sciences
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[1]Establishment of the Russian academy of medical sciences, a scientific research institute of medical genetics of the Siberian branch of the Russian academy of medical sciences, Tomsk

POLYMORPHISM OF GENES GLUTATIONETRANSFERASES AT MINERS OF KUZBASS, ILL A CHRONIC DUST BRONCHITIS

G-2

I.R. Akberdin[1,], F.V. Kazantsev[1], V.A. Likhoshvai[1,3], S.I.Fadeev[2,3], I.A.Gainova[3,*], V.K. Korolev[3], A.E. Medvedev[4]
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[3]Novosibirsk State University, Novosibirsk, Russia
[4]Khristianovich Institute of Theoretical and Applied Mechanics, SB RAS, Novosibirsk, Russia

AUTOMATIC GENERATION AND NUMERICAL ANALYSIS OF MATHEMATICAL MODELS FOR MOLECULAR-GENETIC OBJECTS IN AN INTEGRATED SYSTEM OF MGS-GENERATOR AND STEP+ MODULES

G-3

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Institute of Biology of the Ufa Research Centre of the RAS, Ufa, Russia

POSSIBLE STRUCTURE OF MOLECULAR-GENETIC SYSTEM ACTIVATING THE TRUNCATED TISSUE RECOVERY

G-4

N.V. Dovidchenko, O.V. Galzitskaya*
Institute of Protein Research RAS, Pushchino, Russia

MODELING OF AMYLOID FIBRIL FORMATION

G-5

L.B. Pereyaslavets, M.V. Baranov, E.I. Leonova, O.V. Galzitskaya*
Institute of Protein Research, RAS, Pushchino, Russia

RNA FOLDING NUCLEI PREDICTION

G-6

M.A. Genaev[1,*], A.V. Doroshkov[1], D.A. Afonnikov[1,2]
[1]Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
[2]Novosibirsk State University, Novosibirsk, Russia

WheatPGE — SYSTEM FOR ANALYSIS OF THE RELATIONSHIPS BETWEEN PHENOTYPE, GENOTYPE AND ENVIRONMENT IN WHEAT

G-7

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BioinfoWF — WEB SERVICES AND WORKFLOW MANAGEMENT FOR BIOINFORMATICS ANALYSIS

G-8

T.V. Godovykh*
Northeastern State University, Magadan, Russia

CHARACTERISTICS OF CARBOHYDRATE METABOLISM IN CHILDREN DURING CHUKOTKA ONTOGENETIC DEVELOPMENT

G-9

P.K. Golovatenko-Abramov*,[1,2], A.P. Nesterova[1], E.S. Platonov[1]
[1]Vavilov Institute of General Genetics RAS, Moscow, Russia
[2]Ariadne Genomics Inc., Rockville, USA

BMP AND WNT GENE NETWORKS IN MURINE HAIR FOLLICLE HAVE CYCLIC ACTIVITY PATTERNS AFFECTED BY MUTANT GENES

G-10

K.A. Golovnina*, A.G. Blinov, N.P. Goncharov
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia
REGULATORY ELEMENTS ANALYSIS INSIDE VRN1 (VERNALIZATION GENE1) PROMOTER REGION.

G-11

A. Golubev*
Research Institute for Experimental Medicine, Saint-Petersburg, Russia
AN APPROACH TO THE STREHLER-MILDVAN CORRELATION FROM THE PARAMETABOLIC THEORY OF AGEING

G-12

Yu.A.Gaidov[1], V.P. Golubyatnikov[2,*], A.G.Kleshchev[3]
[1]Novosibirsk State Pedagogical University, Novosibirsk, Russia
[2]Sobolev Institute of Mathematics SB RAS, Novosibirsk, Russia
[3]Ugra Scientific Research Institute of Informatics Technology, Hanty-Mansiisk, Russia
MODELING OF GENE NETWORKS REGULATED BY NEGATIVE AND POSITIVE FEEDBACKS

G-13

Golubyatnikov V.P.[1,*], Golubyatnikov I.V.[2], Kleshchev A.G.
[1]Sobolev Institute of Mathematics SB RAS, Novosibirsk, Russia
[2]Ugra Scientific Research Institute of Informatic Technology, Hanty-Mansiisk, Russia
STABILITY OF CYCLES IN MODELS OF GENE NETWORKS REGULATED BY NEGATIVE FEEDBACKS

G-14

S. González[1,*], J. Veiga[1], V. Robles[1], J.M. Peña[1] and F. Famili[2]
[1]Department of Computer Architecture and Technology, Universidad Politécnica de Madrid, Spain
[2]NRC Institute for Information Technology, Ottawa, Canad
MECHANISM OF OBTAINING UNSUPERVISED KNOWLEDGE TO ENRICH CliDaPa APPROACH

G-15

T.M. Grishaeva*, S.Ya. Dadashev, Yu.F. Bogdanov
N.I. Vavilov Institute of General Genetics RAS, Moscow, Russia
THE POSSIBLE ORGANIZATION OF THE SYNAPTONEMAL COMPLEX CENTRAL SPACE IN NEMATODE *CAENORHABDITIS ELEGANS*

G-16

N.E. Gruntenko[1,*], S. Li[2], E.K. Karpova[1], N.V. Adonyeva[1], I.Yu. Rauschenbach[1]
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