

# **German-Russian Forum Biotechnology**

## **Program**

**Novosibirsk  
June 15<sup>th</sup> – 19<sup>th</sup> 2009**

## **PROGRAM COMMITTEE**

**Institute of Cytology and Genetics, RAS**

***Prof. Dr. Nikolay A. Kolchanov***

**A.N. Bakh Institute of Biochemistry, RAS**

**National Contact Point FP7**

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**Scientific Centre "Bioengineering", RAS**

***Prof. Konstantin G. Skryabin***

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**East-West-Science Centre, University of Kassel**

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**Department Bioinformatics, University of Bielefeld**

***Prof. Dr. Ralf Hofestädt***

## **ORGANIZATION**

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**Local Organizing Committee**

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***Dr. Galina Kiseleva***








***Dr. Alexey Kochetov (Chair)***

***Ms. Anna Onchukova***



***Dr. Natalia Sournina***

***Ms. Svetlana Zubova***

## ORGANIZERS

	<p><b>Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences</b></p>
	<p><b>German-Russian Cooperation Network for Biotechnology</b></p>
	<p><b>German/Russian Virtual Network of Bioinformatics "Computational Systems Biology"</b></p>
	<p><b>VBU Association of German Biotech Companies</b></p>
	<p><b>United Scientific Council of SB RAS on Biological Sciences</b></p>
	<p><b>Novosibirsk State University</b></p>
	<p><b>The Vavilov Society of Geneticists and Breeders</b></p>

## FINANCIAL SUPPORT

	<p><b>Federal Ministry of Education and Research, Germany</b></p>
	<p><b>International Science and Technology Center</b></p>
	<p><b>Federal Agency for Science and Innovation, Russian Federation</b></p>
	<p><b>Russian Foundation for Basic Research</b></p>

# German-Russian Forum Biotechnology

**June 15<sup>th</sup>, 2009, Monday**

**Arrival, Registration, Town excursion**

**09:00 – 16:30**

Hotel Zolotaya Dolina

## **Registration**

**16:00 – 17:30**

Institute of Cytology and Genetics Entrance Hall

## **Opening**

**17:30 – 19:00**

Institute of Cytology and Genetics Conference Hall

**Chair: Vladimir Shumny, IC&G**

## **Welcome speech**

*Prof. Dr. Nikolay Kolchanov, IC&G (5 min)*

*Dr. Gabriele Gorzka, OWWZ (5 min)*

*Dr. Uwe Mayer, German Moscow Embassy (15 min)*

*Prof. Dr. Valentin Vlassov, Vice Chairman of SB RAS (15 min)*

*Dr. Christian Patermann, BioEconomy Council of German Government (15 min)*

## **Introduction of the host Institute of Cytology & Genetics**

*Prof. Dr. Nikolay Kolchanov, ICG (30 min)*

## **Get Together (Welcome Party)**

**19:00 – 22:00**

Hotel Zolotaya dolina

**June 16<sup>th</sup> 2009, Tuesday**

**Plenary Session**

**09:00 – 13:30**

Institute of Cytology and Genetics Conference Hall

**German-Russian Forum Biotechnology – Perspectives of Bilateral and European collaboration**

***Chairs: Nikolay Kolchanov, Christian Patermann***

**German-Russian Cooperation Network Biotechnology**

*Dr. Gabriele Gorzka*

East-West-Science Center, University of Kassel

**The Activities of the German-Russian Cooperation Network Biotechnology – Best Practice Examples (15 min)**

*Dr. Annette Wandrowski*

ZukunftsAgentur Brandenburg GmbH, Eberswalde

**National Technology Platforms as Tools for Involvement of Researchers in R&D International Co-operation (15 min)**

*Dr. Irina Sharova*

National Contact Point of Russia (Bio-NCP) A.N. Bakh Institute of Biochemistry, Moscow

**National Technology Platforms as Tools for Involvement of Researchers in R&D International Co-operation (30 min)**

*Dr. Manfred Kircher*

Cluster Industrial Biotechnology CLIB<sup>2021</sup>, Düsseldorf

**Industrial Biotechnology: Options for German / Russian Cooperation (30 min)**

**Coffee break (15 min)**

*Dr. Christian Patermann*

Former Director of the European Commission, Member of the BioEconomy Council of the German Government, Bonn

**The Knowledge-Based BioEconomy en route in Europe, Germany and NorthRhineWestphalia (30 min)**

*Dr. Elisabetta Balzi*

European Commission, DG Research, Biotechnologies, Agriculture and Food Horizontal and Co-ordination Aspects, Brussels

**Next Calls and the Opportunity of European and Russian Cooperation** (30 min)

*Dr. Hendrik Visser*

International Science and Technology Center (ISTC), Senior Project Manager, Moscow

**International Science and Technology Center (ISTC) – Advancing International Cooperation in Biotechnology and Lifesciences**  
(30 min)

**13:30 – 15:00**

**Lunch Break**

**Presentations of SB RAS Institutes (15 min talks)**

**15:00 – 18:30**

SB RAS Exhibition Center

*Prof. Dr. Valentin Vlassov* (Institute of Chemical Biology & Fundamental Medicine, SB RAS, Novosibirsk);

*Prof. Dr. Konstantin Baikov* (Institute of Agrochemistry and Soil sciences, SB RAS, Novosibirsk);

*Dr. Olga Dorogina* (Central Siberian Botanic Garden, SB RAS, Novosibirsk)

*Prof. Dr. Alexander Onuchin* (The Institute of Forest, SB RAS, Krasnoyarsk)

*Prof. Dr. Victor Voinikov* (The Siberian Institute of Plant Physiology and Biochemistry, SB RAS, Irkutsk)

*Prof. Dr. I.A. Graskova* (The Siberian Institute of Plant Physiology and Biochemistry, SB RAS, Irkutsk)

**16:45-17:00 Coffee break**

*Prof. Dr. Eugeny Vaganov* (Siberian Federal University, Krasnoyarsk)

*Prof. Dr. Stanislav Zagrebelny* (Novosibirsk State University)

*Dr. Dmitry Zharkov* (Novosibirsk State University)

*Prof. Dr. Sergei Netesov* (Novosibirsk State University)

*Prof. Dr. Tatyana Valova* (Institute of Biophysics, SB RAS, Krasnoyarsk)

*Prof. Dr. Victor Glupov* (Institute of Systematics and Ecology of Animals, SB RAS, Novosibirsk)

**Get together (SB RAS representatives and German delegation)**

**19:00-22:00**

Hotel Zolotaya dolina Restaurant

**June 17<sup>th</sup> 2009, Wednesday**

**Parallel Round Tables (15 min talks)**

**09:00 – 12.30**

SB RAS Exhibition Center

**Round Table 1**

**Agriculture and Forestry Biotechnology**

***Chairs: Dr. A. Börner / Dr. E. Salina***

**Bio-Composites with Grain By-Products**

*Dipl.-Ing. Karsten Erdmann*

Institute of Materials Technology, University of Kassel

**Bio-Composites Based on Wood- and other Natural Fibers**

*Dipl.-Ing. Markus Murr*

Institute of Materials Technology, University of Kassel

**Plant germplasm – Resources for future biological research**

*PD Dr. Andreas Börner*

Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung,  
Gatersleben

**Biotechnology application in animal breeding**

*Prof. Dr. Valeri Glazko*

Russian State Agrarian University – MTAA, Moscow, Russia

**Biotechnology for development of resistant wheat genotypes**

*Dr. Elena Salina*

IC&G, Novosibirsk

**10:30-10:45 Coffee break**

**Microsatellite mapping of genes for inflorescence architecture in wheat (*T. aestivum*) and rye (*S. cereale*)**

*Dr. Oxana Dobrovolskaya*

IC&G, Novosibirsk

**Haplotype analysis in multiple crosses of barley (*Hordeum vulgare* L.) to identify a qtl gene**

*Dr. Elena Potokina*

Vavilov Institute of Plant Industry (VIR), St.Petersburg, Russia

**Expression of  $\Delta 9$  desaturase gene from *Cyanobacterium synechocystis sp. pcc 6803***

**resulted in improvement both of cold and *Phytophthora infestans* resistance in transgenic potato plants**

*Dr. Svetlana Kirsanova*

Russian Potato Research Institute by A.G. Lorkh, Moscow Region

**Mapping of QTLs associated with the important agronomic traits using recombinant substitution dihaploid lines Saratovskaya 29 (Janetzki Probat 4d)**

*Dr. Tatyana A. Pshenichnikova*

IC&G, Novosibirsk

**Round Table 2**

**Molecular Biology, Medical Biotechnology, Nutrition and Food Biotechnology (together with ISTC session)**

***Chairs: Dr. H. Visser / Dr. V. Mordvinov***

**Nutrition and Disease Prevention**

*PD Dr. Reinhard Geßner*

Leipzig University Medical School &

Berlin University of Technology

**Supramolecular polymer complex as gel forming artificial vitreous body and drug delivery matrix**

*Prof. Dr. Lothar Heinrich*

Institute of Biochemistry, University of Münster

**Turning science into solution**

*Dr. Peter Holl*

Sartorius Stedim Biotech SA, Göttingen

**Heterogeneous biocatalysts for processing of renewable resources to commercially relevant food sweeteners (starch treacle, syrups)**

*Dr. Galina Kovalenko*

Institute of Catalysis, SD RAS, Novosibirsk

## **MRI: from chemistry to biology and medicine**

*Dr. Igor Koptug*

International Tomography Center SB RAS, Novosibirsk, Russia

### **10:30-10:45 Coffee break**

## **The effects of allelic variation of bovine cytokine genes on susceptibility to infectious diseases**

*Dr. Nikolay Yudin*

IC&G, SD RAS Novosibirsk

## **Development of novel carrot plant-based oral vaccine against hepatitis B**

*Dr. Elena Deineko*

IC&G, SD RAS Novosibirsk

## **Development of whole-cell biosensors for an evaluation of mutagenic potential of bioavailable compounds**

*Dr. I. Lavrinenko*

Institute of Biochemistry, SB RAMS

## **Opportunities to control ions and metabolites in Bioreactors**

Dr. H. Zimmermann and Mr. J. Cottam

Abacus Analytical Systems GmbH, Berlin

## **Micro 24, ...24 mini Bioreactors in one run**

Mr. S. Sukarev and Dr. H. Zimmermann

Abacus Analytical Systems GmbH, Berlin

## **Bioreaction engineering as prerequisite of efficient bioprocesses**

Dipl.-Ing. Paul Bubenheim

Institute of Technical Biocatalysis, Hamburg University of Technology

## **Round Table 3**

### **Bioinformatics and Systems Biology**

**Chairs:** Dr. R. Hofestädt / Dr. D. Afonnikov

## **The Semi-automatic Construction of Large Scale Biological Networks**

Prof. Dr. Ralf Hofestädt

Bioinformatics and Medical Informatics, Bielefeld University

## **Data management for systems biology**

*Dr. Olga Krebs*

EML Research gGmbH, Stuttgart

## **Energy Metabolism of Yeast: A Systems Biology View**

*Dr. Maksim Zakhartsev*

Institute of Biochemical Engineering, University of Stuttgart

## **Molecular modeling technologies in drug discovery**

*Dr. Germes Chilov*

Moltech, Moscow

## **Complex computational analysis in UGENE bioinformatics suite**

*Dr. Mikhail Fursov*

UniPro, Novosibirsk

## **10:30-10:45 Coffee break**

## **Auxin regulated root patterning: the mathematical model and key genetic mechanisms**

*Dr. Vika Mironova*

IC&G, SD RAS Novosibirsk

## **Mathematical model of the auxin metabolism in shoots of *Arabidopsis thaliana* L**

*Dr. Ilya Akberdin*

IC&G, SD RAS Novosibirsk

## **Using the computer-based image processing technique in analysis of leaf hairiness in wheat**

*Dr. Dmitry Afonnikov*

IC&G, SD RAS Novosibirsk

## **ANDCell and ANDNanobiotech: associative network discovery systems in systems biology and nanobiotechnology**

*Dr. Vladimir Ivanisenko*

IC&G, SD RAS Novosibirsk

## **Cooperation in applied systems biology**

*Mr. Alexander Kel*

BIOBASE GmbH, Wolfenbuettel

## **Poster Session**

**12:30 – 13:20**

SB RAS Exhibition Center

**13:20 – 14:30**

**Lunch Break**

## **SB RAS Exhibition presentation**

**14:30 – 15:00**

SB RAS Exhibition Center

## **Visit of the German delegation to Koltsovo Technopark and presentations of biotech innovation companies**

**15:30 – 17:30**

Koltsovo

## **Institute of Cytology and Genetic SB RAS (host Institute) party for German delegation**

**19:00-22:00**

Ob Lake shore

**June 18<sup>th</sup> 2009, Thursday**

## **Individual match-making meetings**

**10:00 – 13:00**

Institute of Cytology and Genetics

*Consulting:* Dr. Gorzka – project funding, project management

# **German-Russian School for young researchers**

## **“Biotechnology and Bioinformatics”**

**June 18<sup>th</sup> 2009, Thursday**

**10:00 – 17:45**

Institute of Cytology and Genetics Conference Hall

**10:00 – 10:55**

**Preservation and utilization of plant genetic resources in the biotechnology era**

*PD Dr. Andreas Börner*

Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung,  
Gatersleben

**10:55 – 11:50**

**Unraveling the physiological and pathologic function of LI-cadherin with methods in biochemistry, molecular and cellular biology**

*PD Dr. Reinhard Geßner*

Laboratory of Molecular & Cellular Surgery,  
Department of Abdominal, Thoracic, Vascular and Transplant Surgery,  
Leipzig University Hospital

**11:50-12:05**

**Coffee break**

**12:05-13:00**

**Systems biology of microorganisms in examples**

*Dr. Maksim Zakhartsev*

Institute of Biochemical Engineering, University of Stuttgart

**13:00-15:00**

**Lunch break**

**15:00-15:55**

**DAAD fellowships for scientists**

*Dr. Anna Hess,*

Deutscher Akademischer Austauschdienst (DAAD)

DAAD-Informationszentrum (IC) an der Technischen Universität  
Novosibirsk

**15:55-16:50**

**Metabolic network analysis**

*Prof. Dr. Ralf Hofestädt*

Bioinformatics and Medical Informatics, Bielefeld University

**16:50-17:05**  
**Coffee break**

**17:05 – 17:50**

**Managing systems biology data: the SysMO-DB approach**

*Dr. Olga Krebs*

EML Research gGmbH, Stuttgart

**June 19<sup>th</sup> 2009, Friday**

**10:00 – 15:55**

Institute of Cytology and Genetics Conference Hall

**10:00 – 10:55**

**Influence of the physico-chemical conditions on the substrate specificity of the enzymes**

*Prof. Dr. Stanislav Zagrebelny*

Novosibirsk State University

**10:55 – 11:50**

**Molecular-genetic mapping of the Gramineae chromosomes: basic and applied research**

*Dr. Elena Salina*

IC&G, Novosibirsk

**11:50-12:05**  
**Coffee break**

**12:05-13:00**

**DNA reparation: from basic research to biotechnology and medicine**

*Dr. Dmitry Zharkov*

Novosibirsk State University, Institute of Chemical Biology and Fundamental Medicine SB RAS, Novosibirsk

**13:00-15:00**  
**Lunch break**

**15:00-15:55**

**Bioinformatics of Network Biology**

*Dr. Igor Titov*

IC&G, Novosibirsk