

Siberian State Medical University

55 years of Central Research Laboratory



CONFERENCE PROGRAMME



International Conference
Molecules and Systems for Diagnostics and Targeted Therapy MSDT 2017

1-3 November 2017 | Tomsk, Russia

Conference Venue

Tomsk, Moscovskii tract, 2, Assembly Hall of the Main building of Siberian State Medical University

Tomsk, Moscovskii tract, 2G bld. 18, Central Research Laboratory, Rooms 9, 17, 19, lobby

Tomsk, Ivana Chernykh str., 96/1 Assembly Hall of the Regional Perinatal Center

Registration of participants:

October 31, 2017 12:00-16:00

November 1, 2017 8:00 - 16:00

Lobby of the main building of Siberian State Medical University, Moscovskii tract, 2



Head of Central Scientific Research Laboratory of
Siberian State Medical University
Doctor of Medical Sciences, Honorary Professor of
Siberian State Medical University

Honored Worker of the Higher Education Institutions of
Russia, Academician of the International Academy of
Sciences

Alexander Nikolayevich Baikov

Dear colleagues!

I am glad to welcome the participants and guests of jubilee International Scientific-Practical Conference "Molecules and systems for diagnosis and targeted therapy" dedicated to the 55th anniversary of Central Research Laboratory of Siberian State Medical University.

For more than half a century of existence and the development of scientific research within the walls of Central Research Laboratory of Siberian State Medical University. Numerous of urgent medical and biological problems have been solved and now the solutions successfully serve medical practice.

Hundreds of candidate and doctoral dissertations have been performed, and candidates and doctors of science have joined faculties of SSMU (TMI), universities, medical profile research institutes, both Russian and foreign.

High interest in discussing the topics of the conference, participation in its work of leading and young scientists, specialists will help determine the prospects for further innovative development and improvement in key areas of medical biology. I am confident that the conference will help to open new opportunities for developments in the field of diagnostics and targeted delivery of medications.

I want to wish you success, bright speeches, interesting discussions and the acquisition of valuable experience!

Organizing Committee

Chair:

Svetlana V. Gusakova, Siberian State Medical University, Tomsk, Russia

Co-Chairs:

Dr. Anastasia P. Zima (Tomsk, Russia)

Dr. Alexandra G. Pershina (Tomsk, Russia)

Committee members:

Olesya O. Vorobyeva, Siberian State Medical University (Tomsk, Russia)

Yulia B. Dorofeeva, Siberian State Medical University (Tomsk, Russia)

Lina V. Efimova, Siberian State Medical University (Tomsk, Russia)

Tatiana M. Zabolotskaya, Siberian State Medical University (Tomsk, Russia)

Maria V. Zykova, Siberian State Medical University (Tomsk, Russia)

Vladimir V. Ivanov, Siberian State Medical University (Tomsk, Russia)

Sergey V. Krivoshekchekov, Siberian State Medical University (Tomsk, Russia)

Sofiya P. Lezhava, Siberian State Medical University (Tomsk, Russia)

Vyacheslav A. Petrov, Siberian State Medical University (Tomsk, Russia)

Ksenia I. Rovkina, Siberian State Medical University (Tomsk, Russia)

Lydia E. Tatarinova, Center for QLD and quality control of Tomsk Oblast OGAU
“Regional Perinatal Center” (Tomsk, Russia)

Olga S. Fedorova, Siberian State Medical University (Tomsk, Russia)

Natalia M. Shevtsova, Siberian State Medical University (Tomsk, Russia)

Maria A. Shevchenko, Siberian State Medical University (Tomsk, Russia)

International Scientific Committee

Chair:

Professor Dr. Alexander N. Baikov (Tomsk, Russia)

Co-Chairs:

Dr. Anastasia P. Zima (Tomsk, Russia)

Dr. Alexandra G. Pershina (Tomsk, Russia)

International Scientific Committee members:

Professor Dr. Gleb B. Sukhorukov (London, UK)

Professor Dr. Viktor P. Krasnov (Ekaterinburg, Russia)

Professor Dr. Dmitry A. Gorin (Moscow, Russia)

Professor Dr. Irina P. Shabalova (Moscow, Russia)

MD, PhD Dmitry N. Atochin (Boston, USA)

PhD Anna V. Naumova (Seattle, USA)

Dr. Larisa S. Litvinova (Kaliningrad, Russia),

Professor Dr. Igor A. Khlusov (Tomsk, Russia)

MD Dr. Alexey E. Sazonov (Tomsk, Russia)

Professor Dr. Mikhail V. Belousov (Tomsk, Russia)

MD Dr. Sergey V. Vtorushin (Tomsk, Russia)

MD Dr. Svetlana V. Gusakova (Tomsk, Russia)

Professor Dr. Elena A. Stepovaya (Tomsk, Russia)

MD Dr. Olga S. Fedorova (Tomsk, Russia)

Dr. Vladimir V. Ivanov (Tomsk, Russia)

Tuesday, October 31, 2017

Assembly Hall of the Main Building of SSMU	
12:00	Registration of Participants
15:30	Round Table “Personalized Medicine”

Wednesday, November 1, 2017

Assembly Hall of the Main Building of SSMU		Conference Hall (17), CRL
9:00	Registration of Participants	10:00-13:00 Semifinal “UMNIK”
10:00	Opening Ceremony	
10:10	Plenary Session 1	
12:00	Coffee Break	
12:30	Plenary Session 1	
14:00	Lunch	
15:00	Plenary Session 2	
18:00		Poster Session
19:00		Welcome Reception

Thursday, November 2, 2017

	Assembly Hall of the Main Building of SSMU	Conference Hall (17), CRL	Assembly Hall of Regional Perinatal Center
9:00	Symposium 1. Target Molecules for Diagnostics		
11:30	Coffee Break	11:00-14:00 Meeting of Heads of Central Research Laboratories	
12:00	Symposium 2. Imaging Systems, Diagnostic Devices and Biochips		12:00-14:00 School of Medical Laboratory Science
14:00	Lunch		
15:00	Symposium 3. Bioactive Molecules: Synthesis, Structure, Properties and Pharmacological Activity	15:00-17:00 Seminar «Chronic Obstructive Pulmonary Disease: Pathology, Immunopathology, Immunopathogenesis»	14:00-19:00 School of Medical Laboratory Science
17:00	Coffee Break		
17:30	Symposium 3. Bioactive Molecules: Synthesis, Structure, Properties and Pharmacological Activity		

Friday, November 3, 2017

	Assembly Hall of The Main Building of SSMU	Conference Hall (17), CRL	Conference Hall (9), CRL
9:00	Symposium 4. Targeted Delivery Systems		
11:30	Coffee Break	10:00-14:00 School of Epidemiology and Mixed Methods Research for Young Scientists	12:00-14:00 Satellite Symposium 7. Markers of Carbohydrate Metabolism Violation: a Dialogue Between Scientist and Clinical Laboratory Doctor
12:00	Symposium 5. Microbiota as a Theranostic Tool		
14:00	Lunch		
15:00	Symposium 6. Biocompatible and Biodegradable Materials	15:00-18:00 School of Epidemiology and Mixed Methods Research for Young Scientists	
17:30	Best Poster Awarding Summing up the Semifinal "UMNIK"		
18:00	Closing Ceremony		
20:00	Conference Dinner		

Saturday, November 4, 2017

Conference Hall (17), CRL		
	8:30-18:00 School of Epidemiology and Mixed Methods Research for Young Scientists	

Tuesday, October 31

15:00-18:00

Assembly Hall of the Main Building of SSMU

Round table «Personalized medicine»

Moderator: Cand. Biol. Sci. Tatjana V. Rudko

15:00-15:30 Registration of participants

15:30 Corresponding Member of RAS, Dr. Biol. Sci., Professor Vadim A. Stepanov

Modern ethics and personalized medicine

Research Institute of Medical Genetics, Tomsk, Tomsk, Russia

16:15 Dr. Med. Sci., PhD., MD, Anastasiya P. Zima

Promising target molecules for diagnosis

Siberian State Medical University, Tomsk, Russia

17:00 Dr. Med. Sci., PhD. Sergey V. Fedosenko

Severe bronchial asthma: from universal strategies of treatment to targeted immunobiological therapy

Siberian State Medical University, Tomsk, Russia

17:45-18:00 Discussion

Wednesday, November 1

10:00-14:00

Assembly Hall of the Main Building of SSMU

PLENARY SESSION 1

Chairs: Dr. Med. Sci. Svetlana V. Gusakova, Professor, Dr. Med. Sci. Alexander N. Baikov

10:00 **Welcome speech** of Olga S. Kobyakova,
rector of Siberian State Medical University

10:10 Professor, Dr. Med. Sci. Alexander N. Baikov
55 years of Central Research Laboratory: results and prospects
Siberian State Medical University, Tomsk, Russia

11:00 Professor, Dr. Med. Sci. Galib S. Garaev
Diagnostic and prognostic significance of heavy metal
Scientific Research Center of Azerbaijan Medical University, Baku, Azerbaijan

11:30 Professor, Dr. Med. Sci. Vladimir I. Chernov
Nuclear medicine as a tool for diagnosis and targeted cancer therapy
Cancer Research Institute Tomsk NRMС, Tomsk, Russia

12:00-12:30 COFFEE BREAK

12:30 Professor, Dr. Chem. Sci., Honored Worker of Science of the Russian
Federation Victor P. Krasnov
Enantio pure pharmaceutical agents
I. Ya. Postovsky Institute of Organic Synthesis of UB RAS, Yekaterinburg, Russia

13:00 PhD Vasily L. Yarnykh
Endogenous tissue contrast in MRI: basic principles and new possibilities
University of Washington, Seattle, USA

13:30 MD, PhD Dmitriy N. Atochin
Targeting stroke – basic studies
Massachusetts General Hospital, Boston, USA

14:00-15:00 LUNCH

Wednesday, November 1

15:00-17:15

Assembly Hall of the Main Building of SSMU

PLENARY SESSION 2

Chairs: Professor, Dr. Chem. Sci. Victor P. Krasnov, Dr. Med. Sci. Alexey E. Sazonov

15:00

Professor, Dr. Chem. Sci. Dmitry A. Gorin

Applications of photonics and plasmonics in theranostics

Skolkovo Institute of Science and Technology, Moscow, Russia

15:30

Professor, Dr. Biol. Sci. Mikhail P. Moshkin

Neurophysiological effects of nanosized aerosol

Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

16:00

Professor, Dr. Chem. Sci. Alexander G. Majouga

Conjugates of therapeutic agents with tissue-specific ligands: preparations for oncological diseases therapy

D. Mendeleev University of Chemical Technology of Russia, Moscow, Russia

16:30

Cand. Chem. Sci. Pavel S. Postnikov

Surface modification of periodical structures as approach to design of ultrasensitive SERS-sensors

National Research Tomsk Polytechnic University, Tomsk, Russia

17:00-17:15

Cand. Chem. Sci. Maksim A. Abakumov

Magnetic iron oxide nanoparticles in tumors diagnosis and therapy

National Research Technological University MISiS, Pirogov Russian National Research Medical University, Moscow, Russia

Wednesday, November 1

10:00-13:00

Conference Hall (17), CRL

SEMIFINAL OF YOUNG SCIENTISTS COMPETITION «UMNIK»

Moderator: Marina I. Maslennikova

Wednesday, November 1

18:00-19:00

Central Research Laboratory

POSTER SESSION

Chair: Professor, Dr. Med. Sci. Alexander N. Baykov

P-1 Irina A. Belyakova

Dynamics of cytokine profile in children with pulmonary tuberculosis local forms in course therapy with a modulated infrared field

Siberian State Medical University, Tomsk, Russia

P-2 Kristina A. Bratishko

The way to obtain the immunotropic plant-based drug on the base of high-molecular humic-nature compounds

Siberian State Medical University, Tomsk, Russia

P-3 Olga Ya. Brikunova

Investigation of targeted delivery of magnetic nanoparticles to experimental tumors

National Research Tomsk Polytechnic University, Tomsk, Russia

P-4 Pavel S. Bushlanov

Investigation of the use of cryodestruction and "nonequilibrium plasma" in chronic liver abscesses surgical treatment in rats

Siberian State Medical University, Tomsk, Russia

P-5 Vlasov Sergey Sergeevich

Development of a new antihypertensive drug based on 1-o-hexadecyl-2-o-methylcarbamoylglycerol and a study of its antihypertensive activity

Siberian State Medical University, Tomsk, Russia

P-6 Alexandra A. Zakharova

Investigation of nanosystems based on magnetic nanoparticles conjugated with pHLIP *in vitro*

National Research Tomsk Polytechnic University, Tomsk, Russia

P-7 Ilyas M. Kabdesh

Recombinant pH-low insertion peptide synthesis

National Research Tomsk Polytechnic University, Tomsk, Russia

P-8 Valeria L. Kudryavtseva

Plasma modification of biodegradable polymer scaffolds

National Research Tomsk Polytechnic University, Tomsk, Russia

P-9 Sofiya P. Lezhava

Neutrophil-based delivery system

Siberian State Medical University, Tomsk, Russia

P-10 Lyudmila A. Logvinova
Method of obtaining a cardiotropic herbal remedy based on high-molecular compounds of humic nature
Siberian State Medical University, Tomsk, Russia

P-11 Lina V. Efimova
Preparation of recombinant peptide UBI18-35 for the differential diagnosis of septic inflammation
Siberian State Medical University, Tomsk, Russia

P-12 Ekaterina A. Perina
Morpho-functional changes in the hepatobiliary system of golden hamsters during *Opisthorchis felineus* invasion
Siberian State Medical University, Tomsk, Russia

P-13 Ekaterina V. Podrezova
Cyclic ketones as precursors for the creation of chelating centers for technetium-99m / rhenium-188
National Research Tomsk Polytechnic University, Tomsk, Russia

P-14 Ksenia I. Rovkina
Structure of *Betula pendula* polysaccharides
Siberian State Medical University, Tomsk, Russia

P-15 Ksenia S. Stankevich
Innovative *in vitro* test system for assessing the patient's immune response to biomaterials
National Research Tomsk Polytechnic University, Tomsk, Russia

P-16 Anna S. Shvyrkova
Multimodal system for the therapy of malignant neoplasms of the liver: development of the technology of preparation and study of *in vitro* release
National Research Tomsk Polytechnic University, Tomsk, Russia

Thursday, November 2

9:00-11:30

Assembly Hall of the Main Building of SSMU

Symposium 1. TARGET MOLECULES FOR DIAGNOSTIC

Chairs: Professor, Dr. Med. Sci. Irina P. Shabalova I.P., Dr. Med. Sci. Anastasia P. Zima

9:00 Plenary lecture

Professor, Dr. Med. Sci. Irina P. Shabalova

Clinical cytology and molecular targets: reality and perspectives

Russian Medical Academy of Continuing Professional Education, Moscow, Russia

9:30 Cand. Med. Sci. Gelena V. Kakurina

Molecular features of the development of squamous cell carcinoma of the head and neck

Cancer Research Institute Tomsk NRMС, Tomsk, Russia

9:45 Elena S. Kolegova

Intracellular proteolytic systems as markers of progression of non-small cell lung cancer

Cancer Research Institute Tomsk NRMС, Tomsk, Russia

10:00 Dr. Med. Sci. Larisa S. Litvinova

Effect of synthetic glucocorticoids on the generation of terminal-differentiated autoreactive T-lymphocytes in normal and in rheumatoid arthritis in an *in vitro* system

Immanuel Kant Baltic Federal University, Kaliningrad, Russia

10:15 Cand. Med. Sci. Elena E. Shashova

Role of proteasome system in prognosys of breast cancer progression

Cancer Research Institute Tomsk NRMС, Tomsk, Russia

10:30 Cand. Med. Sci. Olga D. Bragina

Creation and preclinical studies of a highly specific radiochemical compound for radionuclide diagnostics of oncological diseases with Her-2/neu overexpression: the first results of the study

Cancer Research Institute, Tomsk, Russia

10:45 Dr. Med. Sci. Lyudmila V. Spirina

Expression of molecular markers in prostate cancer tissue: association with morphological and clinical parameters

Cancer Research Institute Tomsk NRMС, Tomsk, Russia

11:00 Yuliya V. Belevich

Combined treatment of cancer of the larynx and hypopharynx with the use of anticancer chemotherapy

Cancer Research Institute Tomsk NRMС Russia, Tomsk, Russia

11:15 Cand. Med. Sci. Olga L. Nosareva

Protein ubiquitination as a molecular mechanism of apoptosis dysregulation in tumor progression

Siberian State Medical University, Tomsk, Russia

11:30-12:00 COFFEE BREAK

Thursday, November 2

12:00-14:00

Assembly Hall of the Main Building of SSMU

Symposium 2. IMAGING SYSTEMS, DIAGNOSTIC DEVICES AND BIOCHIPS

Chairs: Professor, Dr. Chem. Sci. Dmitry A. Gorin D.A., PhD Anna V. Naumova

12:00 Plenary lecture

PhD Anna V. Naumova

Genetically encoded iron-associated proteins as MRI reporters for molecular and cellular imaging

University of Washington, Seattle, USA

12:30 Plenary lecture

Professor Dr. Ir. Greetje Vande Velde

The versatile use of micro-computed tomography for preclinical research applications

Catholic University of Leuven, Leuven, Belgium

13:00 Dr. Med. Sci. Vladimir Yu. Usov

Mn(II)-dimercaptosuccinate (Mn-DMSA) *in vivo* studies as possible tumor-imaging paramagnetic agent

Cardiology research institute Tomsk NRMC, Tomsk, Russia

13:15 Alena A. Kisel

Correlations between quantitative MRI parameters in the rat model of focal cerebral ischemia

RES BB Tomsk State University, Tomsk, Russia

13:30 Dr. Biol. Sci. Tatyana N. Zamay

Spray for intraoperative contrast glioblastoma based on aptamers

Krasnoyarsk State Medical University named after prof. V.F. Voyno-Yasenetsky, Krasnoyarsk, Russia

13:45 Vladimir D. Udodov

Diagnostic possibilities of software-combined SPECT/MRI in the evaluation of osteomyelitis in patients with diabetic foot syndrome

Siberian State Medical University, Tomsk, Russia

14:00-15:00 LUNCH

Thursday, November 2

15:00-19:15

Assembly Hall of the Main Building of SSMU

Symposium 3. BIOACTIVE MOLECULES: SYNTHESIS, STRUCTURE, PROPERTIES AND PHARMACOLOGICAL ACTIVITY

Chairs: Dr. Pharm. Sci. Mikhail V. Belousov, Dr. Pharm. Sci. Tatyana L. Kiseleva

15:00 Plenary lecture

PhD Igor A. Shchepetkin

Basic approaches for screening of bioactive small molecules with potential pharmacological activities

Montana State University, Bozeman, USA

15:30 Plenary lecture

Dr. Med. Sci. Svetlana V. Gusakova

Volume-dependent mechanisms of regulation of contractile activity of smooth muscle cells of small blood vessels

Siberian State Medical University, Tomsk, Russia

16:00 Dr. Pharm. Sci. Valery A. Kataev

Synthesis, properties and biological activity of heterocyclic systems containing the thietane cycle

Bashkir State Medical University, Ufa, Russia

16:15 Cand. Pharm. Sci. Zoya S. Shprah

An analogue of the hypothalamic hormone of digitetrinol - from synthesis to clinical studies

N.N. Blokhin Russian Cancer Research Center, Moscow, Russia

16:30 Dr. Biol. Sci. Tatyana V. Lasukova

Effects of humic acids of the peat on the coronary perfusion and the contractive activity of isolated heart of rats

Tomsk State Pedagogical University, Tomsk, Russia

16:45 Cand. Med. Sci. Irina V. Saltykova

Investigation of immunomodulating potential of *Opisthorchis felineus* hemozoin

Siberian State Medical University, Tomsk, Russia

17:00-17:30 COFFEE BREAK

17:30 Dr. Biol. Sci. Mariya Yu. Pakharukova

Combinatorial therapy of experimental opisthorchiasis: impact on the helminthic metabolic system

Institute of Cytology and Genetics, SB RAS, Novosibirsk, Russia

17:45 Dr. Pharm. Sci. Tatyana L. Kiseleva

Sources of phytonutrients for specialized food products of antidiabetic action

Scientific research institute of nutrition and biotechnology, Moscow, Russia

18:00 Professor, Dr. Chem. Sci. Mekhman S. Yusubov

Chemical properties of L-thyroxine *in vitro* investigation

National Research Tomsk Polytechnic University, Russia

18:15 Cand. Pharm. Sci. Maria V. Zyкова

Complex pharmaceutical study of high-molecular compounds of humic nature

Siberian State Medical University, Tomsk, Russia

18:30

Cand. Chem. Sci. Alexey V. Yancevich

Post-translational modifications: "fast" mechanism for regulation of cytochrome P450-dependent monooxygenases

Institute of Bioorganic Chemistry of NASB , Minsk, Belarus

18:45-19:15

Plenary lecture

Professor, Dr. Chem. Sci., Member of the National Academy of Sciences of Kazakhstan,
Sergazy M. Adekenov

Clinical trials of the new lipid-lowering drug "Atherolid"

International Scientific and Production Holding "Phytochemistry",
Karaganda, Kazakhstan

Thursday, November 2

11:00-14:00

Conference Hall (17), CRL

MEETING OF HEADS OF CENTRAL RESEARCH LABORATORIES

Moderator: Professor, Dr. Med. Sci. Alexander N. Baikov

Participants:

Alexander N. Baikov, Dr. Med. Sci., Professor, Head of Central Research Laboratory of
Siberian State Medical University

Dmitry G. Novikov, Cand. Med. Sci., Head of Central Research Laboratory of Omsk
State Medical University,

Grigory V. Vavin, Cand. Med. Sci., Head of Central Research Institute of Kemerovo
State Medical University

Galib S. Garaev, Dr. Med. Sci., Professor, Head of the Scientific Research Center of
Azerbaijan Medical University

Thursday, November 2

15:00-17:00

Conference Hall (17), CRL

**SEMINAR: "CHRONIC OBSTRUCTIVE PULMONARY DISEASE: PATHOLOGY,
IMMUNOPATHOLOGY, IMMUNOPATHOGENESIS"**

Moderators: MD, PhD, ScD Vasilii V. Polosukhin, Vyacheslav A. Petrov

Thursday, November 2

14:00-19:00

Assembly Hall of Regional Perinatal center

SCHOOL OF MEDICAL LABORATORY SCIENCE

Moderators:

Lidia E. Tatarinova, Head of Center for Quality Control of Clinical Laboratory
Investigations, Tomsk

Anastasia P. Zima, Doctor of Medical Sciences, Head of the SEC "Molecular Medicine",
Professor of Pathophysiology Department of Siberian State Medical University, Tomsk

The official language of the School is Russian

The school is aimed to cover modern directions in a development of clinical laboratory medicine, new laboratory technologies, education, advanced training in the field of clinical laboratory diagnosis and for specialists working in clinical diagnostic laboratories, and for physicians of clinical units who interpret laboratory analysis results constantly in their practical activities.

Within the framework of the School, the issues of organization of the laboratory service, as well as laboratory diagnostics of the most common nosological forms will be discussed.

The educational goal of SCHOOL OF MEDICAL LABORATORY SCIENCE is an obtaining topical knowledge on the specialty of clinical laboratory diagnostic, acquaintance with the latest trends in the organization of laboratory services, carrying out the stages of laboratory investigations and diagnosing socially significant diseases.

Educational results of SCHOOL OF MEDICAL LABORATORY SCIENCE will be an increasing doctor of clinical laboratory diagnostics professional competences in the field of laboratory medicine organization, conducting the stages of laboratory studies, diagnosing socially meaningful diseases.

Friday, November 3

9:00-11:30

Assembly Hall of the Main Building of SSMU

Symposium 4. TARGETED DELIVERY SYSTEMS

Chairs: MD PhD Dmitry N. Atochin, Cand. Biol. Sci. Alexandra G. Pershina

9:00 Plenary lecture

Professor Gleb B. Sukhorukov

Remote controlling of micro - and nanosized delivery systems

Queen Mary University of London, London, UK

9:30 Plenary lecture

Dr. Biol. Sci. Anna S. Kichkailo

Digital controlled medications: diagnostics and therapy using aptamers

Krasnoyarsk State Medical University. prof. V.F. Voino-Yasenetsky, Krasnoyarsk, Russia

10:00 Cand. Chem. Sci. Alexander M. Demin

Functionalization of magnetic Fe_3O_4 nanoparticles by targeting peptides

I. Ya. Postovsky Institute of Organic Synthesis of UB RAS, Yekaterinburg, Russia

10:15 Cand. Biol. Sci. Alexandra G. Pershina

Target delivery systems based on iron oxide nanoparticles conjugated to a peptide pHLIP

Siberian State Medical University, Tomsk, Russia

10:30 Cand. Pharm. Sci. Mariya S. Larkina

New approaches for development of target radiopharmaceuticals

Siberian State Medical University, Tomsk, Russia

10:45 Antonio Di Martino

Ultrasound triggered release of anticancer agents from alginate-chitosan hydrogels

Tomas Bata University in Zlín, Zlín, Czech Republic

11:00 Dr. Med. Sci. Igor Yu. Malyshev

Reprogramming the immune response in vitro to suppress tumor growth *in vivo*

Moscow State University of Medicine and Dentistry, Moscow, Russia

11:15 Artem S. Minin

Metal-carbon nanocomposites, their interaction with cells and applications in biomedicine

M.N. Mikheev Institute of Metal Physics of UB RAS, Yekaterinburg, Russia

11:30-12:00 COFFEE BREAK

Friday, November 3

12:00-14:00

Assembly Hall of the Main Building of SSMU

Symposium 5. MICROBIOTA AS A THERANOSTIC TOOL

Chairs: Cand. Biol. Sci. Alexander V. Tyakht , Cand. Biol. Sci. Irina V. Saltykova

12:00 Plenary lecture

Cand. Biol. Sci. Alexander V. Tyakht

Personalized approach to gut microbiota based on big data analysis

“Knomiks”, Moscow, Russia

12:30 Plenary lecture

MD, PhD, ScD Vasily V. Polosukhin

Airway bacteria drive progressive small airways pathology in constrictive bronchiolitis

Vanderbilt University School of Medicine, Nashville, USA

13:00 Dr. Med. Sci. Alexey E. Sazonov

Microbiota of bile of patients with cholelithiasis in opisthorchiasis

Dmitry Mendeleev University of Chemical Technology of Russia, Moscow, Russia

13:15 Alexey V. Shklyar

Application of visual analysis methods for the study of multidimensional biomedical data

National Research Tomsk Polytechnic University, Tomsk, Russia

13:30 Dr. Med. Sci. Sergey V. Fedosenko

IFeatures of oropharyngeal microbiota in chronic obstructive pulmonary disease

Siberian State Medical University, Tomsk, Russia

13:40 Yuliya B. Dorofeeva

Sputum microbiota in chronic obstructive pulmonary disease

Siberian State Medical University, Tomsk, Russia

13:50 Vyacheslav A. Petrov

Microbiota in Parkinson's Disease

Siberian State Medical University, Tomsk, Russia

14:00-15:00 LUNCH

Friday, November 3

15:00-17:30

Assembly Hall of the Main Building of SSMU

Symposium 6. BIOCOMPATIBLE AND BIODEGRADABLE MATERIALS

Chairs: Professor, Dr. Med. Sci. Igor A. Khlusov, Professor,

Dr. Phys.-Math. Sci. Vladimir F. Pichugin

15:00 Plenary lecture

Professor, Dr. Med. Sci. Igor A. Khlusov

Morphofunctional reaction of eu - and procaryotic cells on calcium phosphate coatings with antimicrobial properties

Siberian State Medical University, Tomsk, Russia

15:30 Valentina V. Chebodaeva

Influence of the nanosized boehmite impregnation on microarc calcium-phosphate coatings properties

National Research Tomsk Polytechnic University, Tomsk, Russia

15:45 Dr. Tech. Sci. Svetlana P. Buyakova

Oxide bioceramics and problems of bone apparatus endoprosthetics

Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia

16:00 Ekaterina G. Komarova

Bioresorbable zinc- and copper-containing calcium-phosphate coatings on titanium implants

Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia

16:15 Ksenia S. Stankevich

Innovative *in vitro* test system for assessing the patient's immune response to biomaterials

National Research Tomsk Polytechnic University, Tomsk, Russia

16:30 Valeria L. Kudryavtseva

Plasma modification of biodegradable polymer scaffolds

National Research Tomsk Polytechnic University, Tomsk, Russia

16:45 Semyon I. Goreninsky

Matrixes for regenerative medicine

National Research Tomsk Polytechnic University, Tomsk, Russia

17:00 Cand. Tech. Sci. Ekaterina O. Filippova

Isolating track membrane based on polyethylene terephthalate for the treatment of bullous keratopathy

National Research Tomsk Polytechnic University, Tomsk, Russia

17:15 Professor, Dr. Phys.-Math. Sc. Vladimir F. Pichugin

Electrokinetic characteristics and biocompatibility of nitrogen-containing titanium oxide films precipitated by reactive magnetron sputtering

National Research Tomsk Polytechnic University, Tomsk, Russia

17:30 Summing up the semifinal "UMNIK"

18:00 CLOSING OF THE CONFERENCE

20:00-22:00 CONFERENCE DINNER

Friday, November 3

12:00-14:00

Conference Hall (9), CRL

**Satellite Symposium 7. MARKERS OF CARBOHYDRATE
EXCHANGE VIOLATION: DIALOGUE OF THE SCIENTIST AND THE DOCTOR
OF THE LABORATORY**

Chairs: Dr. Med. Sci. Anastasia P. Zima, Dr. Med. Sci. Tatiana V. Saprina

12:00 Dr. Med. Sci. Anastasia P. Zima

**Markers of differential diagnosis of anemic syndrome in pregnant women
with metabolic disorders**

Siberian State Medical University, Tomsk, Russia

12:30 Anastasia V. Baraboshkina

Modern methods of diagnosis and monitoring of diabetes mellitus

“Vector-Best”, Novosibirsk, Russia

12:45 Dozent, Cand. Biol. Sci. Vladimir V. Ivanov

**Insulin resistance in experimental type I diabetes mellitus: mechanisms
of development**

Siberian State Medical University, Tomsk, Russia

13:00 Irina S. Berezkina

Study of galectin-3, Ki-67, ubiquitin, HMGA-2 by RT-PCR in the puncture material

Siberian State Medical University, Tomsk, Russia

13:15 Svetlana V. Budeeva

**Glucagon-like peptide, glucose-dependent insulintropic polypeptide in
the mechanisms of gestational disorders of carbohydrate metabolism**

Regional Perinatal Center, Tomsk, Russia

13:30-14:00 Discussion



Friday, November 3

10:00-18:00

Conference Hall (17), CRL

**SCHOOL OF EPIDEMIOLOGY AND
MIXED METHODS RESEARCH FOR
YOUNG SCIENTISTS**

Saturday, November 4

8:30-18:00

Conference hall (17), CRL

**SCHOOL OF EPIDEMIOLOGY AND
MIXED METHODS RESEARCH
FOR YOUNG SCIENTISTS**

Moderators:

Jan Hattendorf, PhD, Senior Scientific
Collaborator, Epidemiology and Public
Health department, Swiss Tropical and Public
Health Institute, Basel, Switzerland

Olga Zvonareva, PhD, Assistant professor,
Department of Health, Ethics and Society,
Maastricht University, Netherlands

Olga Fedorova, Dr Med Sci Professor of Faculty
pediatrics department, Siberian State Medical
University, Tomsk, Russia

The official language of the School is English.

Within the framework of School the key principles of
epidemiology and its application in health research will be
presented. The School program covers the questions of
epidemiological research tasks formulation, study types and
designs, measuring of disease frequency and burden.

An emphasis will be paid to the principles of the interdisciplinary
approach, and use of qualitative methodologies and health research.
The target audience - young scientists, postgraduate students, residents.

General sponsor of the conference:

KDSI_Malvern

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The event is held with the financial support of the
Russian Foundation for Basic Research, Project N 17-04-20574

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