



**International
Scientific and Practical Conference**



**Drug Development -
Traditions and Prospects**

13 – 16 September 2021

Tomsk

Conference Organisation

- *Siberian State Medical University*
- *Goldberg Research Institute of Pharmacology and Regenerative Medicine, Tomsk NRMC*
- *National Research Tomsk Polytechnic University*
- *Tomsk Association of Pharmacy Chains*

Conference General Sponsor



Conference Sponsors



The conference is accredited in the system of Continuing Medical and Pharmaceutical Education with a degree in Clinical Pharmacology.



Dear Colleagues!

2021 is a great year for the Siberian State Medical University. It is marked by several important dates in the history of the development of the higher pharmaceutical education and pharmaceutical science school in Siberia:

- 100th anniversary of the birth of an outstanding pharmacologist, Doctor of medical sciences, Professor Albert S. Saratikov;
- 100th anniversary of the birth of a famous botanist and pharmacognosist, Doctor of biological sciences, Professor Tamara P. Berezovskaya;
- 80th anniversary of Pharmaceutical faculty;
- 75th anniversary of Stepan E. Dmitruk's birth. Stepan Evgenievich, Doctor of Pharmaceutical Sciences, professor, led the Pharmaceutical faculty of Siberian State Medical University for more than 30 years and made an invaluable contribution to the development of higher pharmaceutical education.

In honor of these anniversary dates, the International Scientific and Practical Conference "Drug Development – Traditions and Prospects" will be held on September 13-16, 2021 within the walls of the Siberian State Medical University. The conference is devoted to fundamental and applied research in the field of pharmacy and pharmacology.

*The latest changes in conference program are available on our website <http://conf.ssmu.ru/ddtpeng>



Registration of participants of the conference will take place on September 13, 2021 from 10:00 to 11:00 in the assembly hall of the main building of the Siberian State Medical University (Moskovsky Tract, 2).

The conference will open on September 13, 2021 at 11:30 in the assembly hall of the main building of the Siberian State Medical University (Moskovsky Tract, 2).

Session work - September 13-15 in the following venues:

- Siberian State Medical University, Main building, assembly hall (Moskovsky trakt, 2) – Section 1. «Pharmaceutical Development»
- Siberian State Medical University, Educational-laboratory building, room 211 (Moskovsky trakt, 2, building 7) – Section 2. «Natural Compounds - a Source of Novel Drugs»
- Goldberg Research Institute of Pharmacology and Regenerative Medicine Tomsk NRMC, conference room (Lenin prosp., 3) – Section 3. «Aspects of Current Interest in Experimental and Clinical Pharmacology»

Conference time limits

- Plenary Speech – 20 minutes
- Keynote Speech – 15 minutes
- Reports – 5-7 minutes
- Discussion – 5-7 minutes

For all questions related to the organization of the conference, please contact the academic secretary of the International Scientific and Practical Conference "Drug Development - Traditions and Prospects":

Krivoshchekov V. Sergei

tel.: +7-953-914-41-25, e-mail: ddtp@ssmu.ru

conf.ssmu.ru/ddtp

CONFERENCE PROGRAM COMMITTEE

• **Program** **Committee** **Chairman:**
Mikhail V. Belousov, DSc of Pharmacy, Head of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

• **Program** **Committee** **Deputy** **Chairmen:**
Alexander I. Vengerovsky, Doctor of Medical Sciences, Professor, Head of the Department of Pharmacology of Siberian State Medical University, Tomsk, Russia

• **Program** **Committee** **Executive** **Secretary:**
Sergey V. Krivoschekov, Ph. D. in Chemistry, Assistant Professor of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

«**Pharmaceutical Development**» **Section** **Program** **Committee:**
Elena V. Karakulova, DSc of Pharmacy, professor of the Department of Pharmacy Management and Economics of Siberian State Medical University, Tomsk, Russia
Mariia S. Lar'kina, Ph. D. in Pharmacy, Assistant Professor of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia
Victor V. Zhdankin, Doctor of Sciences in Chemistry, Professor of the Department of Chemistry and Biology of the University of Minnesota Duluth, USA
Praskovia G. Mizina – DSc of Pharmacy, professor, Deputy Director of FSBSI VILAR, Moscow, Russia
Zuriadda B. Sakipova – DSc of Pharmacy, Dean of the Department of Engineering disciplines of Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan
Inna I. Terninko, DSc of Pharmacy, Associate Professor of the Department of Pharmaceutical Chemistry of Saint Petersburg State Chemical Pharmaceutical University, Saint Petersburg, Russia
Vladimir M. Tolmachev, Doctor of Medical Sciences, Professor of Department of Immunology, Genetics and Pathology of Uppsalla University, Uppsalla, Sweden
Galina B. Slepchenko – Doctor of Sciences in Chemistry, Senior Research Scientist of Research School of Chemical and Biomedical Technologies TPU, Tomsk, Russia
Vladimir I. Chernov, Doctor of Medical Sciences, Professor, Head of the Department of Radionuclide Diagnostics of Tomsk National Research Medical Center of the Russian Academy of Sciences, Tomsk, Russia
Igor E. Shohin – DSc of Pharmacy, General Director of the Center for Pharmaceutical Analytics, Editor-in-Chief of the Research and Production Journal «Drug development & registration», Moscow, Russia

«**Natural Compounds – a Source of Novel Drugs**» **Section** **Program** **Committee:**
Elena Yu. Avdeeva, Ph. D. in Pharmacy, Assistant Professor of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia
Artem M. Guryev, DSc of Pharmacy, Head of Technology Implementation Center of Central Research Laboratory of Siberian State Medical University, Tomsk, Russia
Maria V. Zykova, DSc of Pharmacy, Head of the Department of Chemistry of Siberian State Medical University, Tomsk, Russia
Natalia E. Kolomiets, DSc of Pharmacy, professor of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia
Sergazy M. Adekenov – Doctor of Sciences in Chemistry, Professor, academician of the National Academy of Science Republic of Kazakhstan, Karaganda, Kazakhstan
Vladimir A. Kurkin – DSc of Pharmacy, Professor, Head of the Department of Pharmacognosy with Botany and Fundamentals of Phytotherapy, Samara State Medical University, Samara, Russia

«Aspects of Current Interest in Experimental and Clinical Pharmacology» Section Program Committee:
Olga E. Vaizova, Doctor of Medical Sciences, professor of the Department Pharmacology of Siberian State Medical University, Tomsk, Russia

Alexander N. Kornetov, Doctor of Medical Sciences, Professor, Head of the Department of Fundamental Psychology and Behavioral Medicine of Siberian State Medical University, Tomsk, Russia

Tatiana G. Razina, Doctor of Biological Sciences, Senior Researcher of the Laboratory of Oncopharmacology of Tomsk National Research Medical Center of the Russian Academy of Sciences, Tomsk, Russia

Ludmila V. Spirina, Doctor of Medical Sciences, professor of the Department Biochemistry and Molecular Biology with the Course of Clinical Laboratory Diagnostics of Siberian State Medical University, Tomsk, Russia

Dmitriy N. Atochin, M.D., Ph. D. in Biology, Assistant Professor of Massachusetts General Hospital of Harvard Medical School, Boston, USA

Alexander N. Kornetov, Doctor of Medical Sciences, Professor, Head of the Department of Fundamental Psychology and Behavioral Medicine of Siberian State Medical University, Tomsk, Russia

Evgenii Yu. Sherstoboev, Doctor of Medical Sciences, professor, Head of the Department of Immunopharmacology, Tomsk National Research Medical Center of the Russian Academy of Sciences, Tomsk, Russia

Anton N. Shuvaev, Ph. D. in Medical Sciences, Head of the Research Institute of Molecular Medicine and Pathobiochemistry, Krasnoyarsk State Medical University, Krasnoyarsk, Russia

Igor A. Schepetkin – Doctor of Medical Sciences, Senior Research Scientist of the Department of Immunology and Infectious Diseases of Montana State University, Bozeman, USA

CONFERENCE ORGANIZING COMMITTEE

- **Chairman:**

Mikhail V. Belousov, DSc of Pharmacy, Head of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

- **Deputy Chairmen:**

Alexander I. Vengerovsky, Doctor of Medical Sciences, Professor, Head of the Department of Pharmacology of Siberian State Medical University, Tomsk, Russia

Sergey V. Krivoschekov, Ph. D. in Chemistry, Assistant Professor of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

- **Organising committee members:**

Ekaterina A. Bezverkhniaia, Senior laboratory assistant of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

Kristina A. Bratishko, Assistant of the Department of Chemistry of Siberian State Medical University, Tomsk, Russia

Evgeny E. Buyko, Assistant in Preclinical Study Center in Siberian State Medical University, Tomsk, Russia

Ekaterina I. Gulina, Assistant of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

Artem M. Guryev, DSc of Pharmacy, Head of Technology Implementation Center of Central Research Laboratory of Siberian State Medical University, Tomsk, Russia

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Nadezhda V. Isaykina, Ph. D. in Pharmacy, Assistant Professor of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

Ilya P. Kaminsky, Ph. D. in Pharmacy, Assistant Professor of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

Natalia E. Kolomiets, DSc of Pharmacy, professor of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

Kamila M. Seytova, Ph. D. Student in Research School of Chemistry & Applied Biomedical Sciences, Tomsk Polytechnic University, Tomsk, Russia

Ol'ga L. Mezentseva, Ph. D. in Chemistry, Senior lecturer of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

Ekaterina K. Tagina, expert of the Center for International Development and Partnerships of Siberian State Medical University, Tomsk, Russia

Elena V. Udut, Doctor of Medical Sciences, Professor, Head of Central Research Laboratory of Siberian State Medical University, Tomsk, Russia

Vladimir S. Chuchalin, DSc of Pharmacy, Professor, Dean of the Pharmaceutical faculty of Siberian State Medical University, Tomsk, Russia

Julia V. Shabanova, Laboratory assistant of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia

CONFERENCE SCHEDULE

13 September 2021, Monday

Arrival of conference participants

10:00 – 11:00 Registration of conference participants (SSMU Main building, assembly hall)

11:00 – 11:30 Welcome coffee (SSMU Main building, assembly hall)

11:30 – 12:00 Opening of the conference (SSMU Main building, assembly hall)

12:00 – 13:00 Plenary session (SSMU Main building, assembly hall)

13:00 – 14:00 Lunch

14:30 – 16:30 Plenary session (SSMU Main building, assembly hall)

16:30 – 18:00 Lectures by conference sponsors (SSMU Main building, assembly hall)

19:00 – 22:00 Welcome party

14 September 2021, Tuesday

09:00 – 12:00 «Pharmaceutical Development», Section 1 «Chemical Technology of Medicines and Technology of Dosage Forms» (SSMU Main building, assembly hall)

12:00 – 12:30 Coffee break

12:30 – 14:30 «Pharmaceutical Development», Section 2 «Regulatory Aspects of Pharmaceutical Development and Pharmaceutical Practice» (SSMU Main building, assembly hall)

14:30 – 15:00 Coffee break

15:00 – 17:30 «Pharmaceutical Development», Section 3 «Drug and Specialized Food Quality Control» (SSMU Main building, assembly hall)

17:30 – 18:00 Coffee break

09:00 – 12:00 «Natural Compounds - a Source of Novel Drugs», Section 5 «High-molecular and Supramolecular Natural Compounds» (SSMU Educational-laboratory building, room 211)

12:00 – 12:30 Coffee break

12:30 – 15:00 «Natural Compounds - a Source of Novel Drugs», Section 6 «Plant Secondary Metabolites as Promising Drug Candidates» (SSMU Educational-laboratory building, room 211)

15:00 – 15:30 Coffee break

15:30 – 17:00 «Natural Compounds - a Source of Novel Drugs», Section 7 «Rational Use of Natural Resources» (SSMU Educational-laboratory building, room 211)

17:00 – 17:30 Coffee break

09:00 – 11:00 «Aspects of Current Interest in Experimental and Clinical Pharmacology», Section 8 «Fundamental and applied aspects of pharmacodynamics and pharmacokinetics of new drug candidates» (Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room)

11:00 – 11:30 Coffee break

11:30 – 12:30 «Aspects of Current Interest in Experimental and Clinical Pharmacology», Section 9 «Oncopharmacology and Chemoprevention of Cancer» (Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room)

12:30 – 13:00 Coffee break

13:30 – 15:30 «Aspects of Current Interest in Experimental and Clinical Pharmacology», Section 10 «Immunopharmacology and Molecular Immunology» (Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room)

15:30 – 16:00 Coffee break

13:00 - 15:00

Scientific school

"Specific study of natural humic substances chemical and pharmacological properties"

Supervisor: Zykova Maria Vladimirovna

Educational-laboratory building, Siberian State Medical University, room 307

15 September 2021, Wednesday

13:00 – 18:30 «Pharmaceutical Development», Section 4 «Drug Delivery Systems for Diagnostics and Therapy» (SSMU Main building, assembly hall)

15:35 – 16:05 Coffee break

10:00 – 12:00 «Aspects of Current Interest in Experimental and Clinical Pharmacology», Section 11 «Regenerative Medicine and Cell Technologies» (Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room)

12:00 – 12:30 Coffee break

13:00 – 16:00 «Aspects of Current Interest in Experimental and Clinical Pharmacology», Section «Neurobiology and Psychopharmacology» (Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room)

16:00 – 16:30 Coffee break

19:00 – 22:00 Champagne - party

16 September 2021, Thursday

10:00 – 11:30

Scientific School

«Introduction to Numerical Structural Pharmacology»

Supervisor: Konstantin S. Brazovsky

SSMU Main building, assembly hall

11:30 – 12:00 Coffee break (SSMU Main building, assembly hall)

12:00 – 13:30 Conference closing ceremony (SSMU Main building, assembly hall)

CONFERENCE EXCURSIONS

September 14th, Tuesday

16:30 –18:00

Tour of the Siberian Botanical Garden, TSU



18:00 – 19:30

Bus-tour of Tomsk



**Excursion to the Museum
"Professor's Apartment"**

September 15th, Wednesday

17:00 –19:00

September 16th, Thursday

14:30 –15:30



PROGRAM

International Scientific and Practical Conference "Drug Development - Traditions and Prospects"

13 September, Monday
SSMU Main building, assembly hall

10:00 - 11:00 Registration of conference participants

11:00 - 11:30 Welcome coffee

11:30 - 12:00 Conference opening

Opening of the conference

Evgeny S. Kulikov - Rector of the Siberian State Medical University, Doctor of Medical Sciences, Professor of the Department of General Medical Practice and Polyclinic Therapy

Mikhail V. Belousov - Chairman of the Program and Organizing Committee, Doctor of Pharmaceutical Sciences, Head of the Department of Pharmaceutical Analysis, Siberian State Medical University

Aleksander I. Vengerovsky - Deputy Chairman of the Program and Organizing Committee, Doctor of Medical Sciences, Professor of the Department of Pharmacology, Siberian State Medical University

12:00 - 13:00 Plenary session

Plenary lectures

1. **"Contribution of Albert S. Saratikov in the development of modern pharmacology"**
Aleksander I. Vengerovsky - Doctor of Medical Sciences, Professor of the Department of Pharmacology, Siberian State Medical University (Tomsk, Russia)
2. **"Professor Tamara P. Berezovskaya is the founder of pharmaceutical botany in Siberia"**
Galina I. Kalinkina – Doctor of Pharmaceutical Sciences, Professor of the Department of Pharmaceutical Analysis, Siberian State Medical University (Tomsk, Russia)
3. **"The role of personality of Stepan Ye. Dmitruk in the history and traditions of pharmaceutical education in Siberia"**
Vladimir S. Chuchalin - Doctor of Pharmaceutical Sciences, Head of the Department of Pharmaceutical Technology and Biotechnology, Siberian State Medical University (Tomsk, Russia)

13:00 - 14:00 Lunch

14:30 - 16:30 Plenary session

Plenary lectures

1. **"Platform solutions in the search and development of medicinal products of natural origin"**
Igor A. Narkevich - Doctor of Pharmaceutical Sciences, Professor, Rector of Saint-Petersburg State Chemical and Pharmaceutical University (Saint-Petersburg, Russia)
2. **"The place and role of pharmacognosy in modern medicine and pharmacy" (online)**
Vladimir A. Kurkin - Doctor of Pharmaceutical Sciences, Professor, Head of the Department of Pharmacognosy with Botany and Fundamentals of Phytotherapy, Samara State Medical University (Samara, Russia)

3. **"International cooperation and prospects for the development of partnership between KazNMU and Siberian State Medical University" (*online*)**
Zuriyadda B. Sakipova - Doctor of Pharmaceutical Sciences, Professor, Dean of the School of Pharmacy, Kazakh National Medical University named after S.D. Asfendiyarov (Almaty, Kazakhstan)
4. **"Development of the direction of training" Industrial Pharmacy. Radiopharmaceuticals"**
Natalia V. Pyatigorskaya - Doctor of Pharmaceutical Sciences, Professor, Head of the Department of Industrial Pharmacy, First Moscow State Medical University named after I.M. Sechenov (Moscow, Russia)
5. **"Prospects for chemical and pharmacological research of plant resources in Kazakhstan and Siberia" (*online*)**
Sergazy M. Adekenov - Doctor of Chemical Sciences, Professor, Honored Worker of the Republic of Kazakhstan, Academician of the National Academy of Sciences of the Republic of Kazakhstan, Laureate of the State Prize of the Republic of Kazakhstan in the field of science and technology (Karaganda, Kazakhstan)

16:30 - 18:00

Lectures by conference sponsors

1. **"Chemical and pharmacological study of humic substances in the composition of food humic products of the company" NovoLand "**
Maria V. Zykova - Doctor of Pharmaceutical Sciences, Head of the Department of Chemistry, Siberian State Medical University (Tomsk, Russia)
2. **"Sartorius laboratory solutions to improve efficiency in science and industry"**
Sergey S. Il'in - specialist of the sales department of laboratory equipment, LLC "Sartorius RUS" (Saint-Petersburg, Russia)
3. **"Development of medicines based on environmentally friendly natural raw materials of Altai"**
Roman S. Boev - General Director of «VISTERRA» LLC (Biisk, Russia)
4. **"Solutions for the development and production of medicines"**
Eldar R. Muslihov - Regional Development Director of «Rusmedtorg» LLC (Moscow, Russia)

19:00 - 22:00 Welcome party

Banquet Hall "Da Vinci" (Kuleva st., 24)

Pharmaceutical Development

Session 1

Chemical Technology of Medicines and Technology of Dosage Forms

14th September, Tuesday
Main building, assembly hall

9:00 – 12:00

Moderator - Praskovia G. Mizina – Doctor of Pharmaceutical Sciences, Professor Deputy Director for Research, All-Russian Research Institute of Medicinal and Aromatic Plants (Moscow, Russia)

Secretary - Vladimir V. Sheykin, Ph. D. in Pharmacy, Associate Professor of the Pharmaceutical Technology and Biotechnology Division, Siberian State Medical University (Tomsk, Russia)

Yusubov Mekhman Suleiman-Ogly, Doctor of Chemical Sciences, Professor, Vice-rector for Science, National Research Tomsk Polytechnic University (Tomsk, Russia)

"The use of iodine compounds in medical chemistry" (***keynote speaker***)

Ferkat A. Khaliullin, Doctor of Pharmaceutical Sciences, Professor, Professor of Pharmaceutical Chemistry with courses of Analytical and Toxicological Chemistry Division, Bashkir State Medical University (Ufa, Russia)

"Synthesis of derivatives of thietane-containing heterocycles affecting the hemostasis system" (***keynote speaker***)

Evgeny G. Tolokonnikov, Doctor of Pharmaceutical Sciences, Director of Karaganda Pharmaceutical Factory (Karaganda, Kazakhstan)

"Technologies of original phytopreparations and the organization of their pilot production" (***keynote speaker, online***)

Ilya A. Khabarov, Ph. D. in Pharmacy, Head of the Laboratory of Phytopreparation Technology, International Research and Production Holding "Phytochemistry" (Karaganda, Kazakhstan)

"Modeling of the processes of production of phytopreparation substances and optimization of their technological modes" (***keynote speaker, online***)

Praskovia G. Mizina, Doctor of Pharmaceutical Sciences, Professor, Deputy Director for Research, All-Russian Research Institute of Medicinal and Aromatic Plants (Moscow, Russia)

"VILAR Scientific Schools" (***keynote speaker***)

Alexander S. Gulenkov, Ph. D. in Pharmacy, Senior Researcher at the Department of Standardization of the Center for Chemistry and pharmaceutical technology, All-Russian Research Institute of Medicinal and Aromatic Plants (Moscow, Russia)

"The method of spherical diagrams as a tool for optimizing pharmaceutical and technological parameters of dry plant extracts" (***keynote speaker***)

Alexander N. Shikov, Doctor of Pharmaceutical Sciences, Head of the Technology of Dosage Forms Division, Saint Petersburg State Chemical Pharmaceutical University (Saint Petersburg, Russia)

"The use of natural deep eutectic solvents for the extraction of hydrophilic and lipophilic substances from plant raw materials" (***keynote speaker, online***)

Vladimir V. Sheykin, Ph. D. in Pharmacy, Associate Professor of the Pharmaceutical Technology and Biotechnology Division, Siberian State Medical University (Tomsk, Russia)

"Development of medical devices with the functions of drug delivery systems" (***keynote speaker***)

Alkhodri Ahmed Imad, Peoples' Friendship University of Russia (Moscow, Russia)

"Preparation of tablets with modified release of Celecoxib" (***online***)

Sergey S. Belokurov, Saint Petersburg State Chemical Pharmaceutical University (Saint Petersburg, Russia)

"Comparative analysis of promising methods of extraction of medicinal plant raw materials" (***online***)

Anna R. Grigorieva, National Research Tomsk Polytechnic University (Tomsk, Russia)

"Catalytic method for the preparation of oxo-derivatives of betulin"

Matvey S. Korovin, Siberian State Medical University (Tomsk, Russia)

"Development and transfer of the technology of the drug trimebutin tablets 100 mg, 200 mg"

Damir K. Salakhedinov, NovaMedica (Moscow, Russia)

"Design of the development of a formulation with a modified release of citicoline and memantine"
(***online***)

12:00 –12:30

Coffee-break

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| Pharmaceutical Development |
| Session 2 |
| Regulatory Aspects of Pharmaceutical Development and Pharmaceutical Practice |

14th September, Tuesday
Main building, assembly hall
12:30 – 14:30

Moderators:

- Elena V. Karakulova, Doctor of Pharmaceutical Sciences Professor of the Department of Management and Economics of Pharmacy, Siberian State Medical University (Tomsk, Russia);
- Igor E. Shokhin, Doctor of Pharmaceutical Sciences, General Director of the Center for Pharmaceutical Analytics, Editor-in-Chief of the Research and Production Journal "Development and Registration of Medicines" (Moscow, Russia).

Secretary – Aleksandra A. Grazhdankina, Resident of the Department of Management and Economics of Pharmacy, Siberian State Medical University (Tomsk, Russia).

Elena I. Sakanyan, Doctor of Pharmaceutical Sciences, Professor, Director of the Center for Pharmacopoeia and International Cooperation, SCEEMP (Moscow, Russia)

"Pharmaceutical development as a stage in the life cycle of a medicinal product: standardization and quality control" (**keynote speaker**)

Zuriyadda B. Sakipova, Doctor of Pharmaceutical Sciences, Professor, Dean of the School of Pharmacy, Kazakh National Medical University named after S.D. Asfendiyarov (Almaty, Kazakhstan)

"Modern Aspects of the Development of Innovative Medicines: Trends and Limiting Factors" (**keynote speaker, online**)

Igor E. Shokhin, Doctor of Pharmaceutical Sciences, General Director of the Center for Pharmaceutical Analytics, Editor-in-Chief of the Journal of Development and Registration of Medicines (Moscow, Russia)

"Comparative studies of biosimilar drugs: what we know and can do in 2021" (**keynote speaker**)

Evgeniya A. Malashenko, Ph. D. in Pharmacy, Senior Lecturer, Department of Pharmaceutical and Toxicological Chemistry. A.P. Arzamastsev, I.M. Sechenov First Moscow State Medical University (Moscow, Russia)

"Dissolution test and the biopharmaceutical classification system (BCS) in the life cycle of medicines" (**keynote speaker**)

Yuri A. Muzyra, Ph. D. in Pharmacy, Associate Professor, Associate Professor of the Department of Management and Economics of Pharmacy, Siberian State Medical University (Tomsk, Russia)

"Assessing the involvement of pharmacy employees in the market paradigms" (**keynote speaker**)

Nikolay I. Suslov, Doctor of Medical Sciences, Professor, Head of the Laboratory of Phytopharmacology and Special Nutrition, Research Institute of Pharmacology and Regenerative Medicine named after E.D. Goldberg (Tomsk, Russia)

"Marketing aspects in innovative developments in pharmacology" (**keynote speaker**)

Elena V. Karakulova, Doctor of Pharmaceutical Sciences Professor of the Department of Management and Economics of Pharmacy, Siberian State Medical University (Tomsk, Russia)

"Management of drug care: a concept and tools for increasing the effectiveness and safety of pharmacotherapy" (**keynote speaker**)

Timofey N. Komarov, Ph. D. in Pharmacy, Head of the Laboratory of Bioanalytical Research No. 2, LLC "Center for Pharmaceutical Analytics" (Moscow, Russia)

Olga A. Archakova, Senior Analytical Chemist, Laboratory of Bioanalytical Research No. 2, Center for Pharmaceutical Analytics (Moscow, Russia)

"Good and bad practice in bioequivalence studies" (*keynote speaker, online*)

14:30 –15:00

Coffee-break

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|---|
| Pharmaceutical Development |
| Session 3 |
| Quality control of medicines and specialized food products |

14th September, Tuesday

Main building, assembly hall

15:00 – 17:30

Moderators:

- Galina B. Slepchenko, Doctor of Chemical Sciences, Senior Research Scientist of Research School of Chemical and Biomedical Technologies TPU (Tomsk, Russia);
- Inna I. Terninko, Doctor of Pharmaceutical Sciences, Associate Professor of the Department of Pharmaceutical Chemistry of Saint Petersburg State Chemical Pharmaceutical University (Saint Petersburg, Russia).

Secretary - Ol'ga L. Mezentseva, Ph. D. in Chemistry, Senior Lecturer of the Department of Pharmaceutical Analysis of Siberian State Medical University (Tomsk, Russia).

Galina B. Slepchenko, Doctor of Chemical Sciences, Senior Research Scientist of Research School of Chemical and Biomedical Technologies TPU (Tomsk, Russia)

"The Possibilities of Electrochemical Methods in the Analysis of Drugs and Biologically Active Additives" (*keynote speaker*)

Sergey S. Ilyin, Specialist of the Laboratory Equipment Sales Department, LLC «Sartorius RUS» (Saint Petersburg, Russia)

"Sartorius Laboratory Solutions Used in Drug Quality Control Studies"

Inna I. Terninko, Doctor of Pharmaceutical Sciences, Associate Professor of the Department of Pharmaceutical Chemistry of Saint Petersburg State Chemical Pharmaceutical University (Saint Petersburg, Russia)

"Standard Samples of the Pharmaceutical Industry as an Element of the Reliability of the Results of Analytical Research: Realities and Prospects" (*keynote speaker*)

Evgeny S. Melnikov, Ph. D. in Pharmacy, I.M. Sechenov First Moscow State Medical University (Sechenov University); I. V. Davydovsky City Clinical Hospital (Moscow, Russia)

"Equipment Management (HPLC and HPLC-MS) During Analytical Studies" (*keynote speaker*)

Tatyana A. Rodina, Ph. D. in Chemistry, FSBI «Scientific Centre for Expert Evaluation of Medicinal Products» of the Ministry of Health of the Russian Federation (Moscow, Russia)

"Features of the Development and Validation of HPLC-MS Methods" (*keynote speaker*)

Evgeniya S. Moiseeva, Ph. D. in Chemistry, Head of the Center for Collective Use "Physical and Chemical Methods of Analysis" of the TPU (Tomsk, Russia)
"Metrological Support in Pharmaceutical Control" (**keynote speaker**)

Vladimir M. Bogoslovsky, National Research Tomsk Polytechnic University (Tomsk, Russia)
"Voltammetric Determination of Water-soluble B Vitamins on New Modified Electrochemical Sensors"

Evgeniya Y. Zherebtsova, Novosibirsk State Medical University (r. Novosibirsk, Russia)
"Development of a Voltammetric Method for the Quantitative Determination of Ethylmethylhydroxypyridine Succinate" (**online**)

Alyona V. Lezina, Saint Petersburg State Chemical Pharmaceutical University (Saint Petersburg, Russia)
"Preparation and Preliminary Analysis of Individual Fractions of Raw Materials of *Rhodiola quadrifida*" (**online**)

Mamedova Valeriya Elkhankyzy, Siberian State Medical University (Tomsk, Russia)
"Solid-phase Concentration of Sesquiterpene Lactones (Grossheimin and Cynaropicrin) From Extracts of Plant Raw Materials of *Centaurea scabiosa D.*"

Enlik Nurpeyis, National Research Tomsk Polytechnic University (Tomsk, Russia)
"The Possibility of Using the Voltammetric Method of Analysis for the Determination of Betulin in Biological Active Additives"

Marina V. Sandryukhina, Saint-Petersburg State Chemical Pharmaceutical University (Saint Petersburg, Russia)
"Determination of the Content of Quinolizidine Alkaloids in the Seeds of Wild Lupine and Thermopsis lanceolata by Capillary Electrophoresis and HPLC" (**online**)

Elizaveta S. Surbeeva, Saint Petersburg State Chemical Pharmaceutical University (Saint Petersburg, Russia)
"Comparative Quantitative Analysis of the Amount of Hydroxycinnamic Acids in Different Types and Grades of Raw Materials *Apium graveolens L.*" (**online**)

Evgeny V. Upyrenko, Tomsk State University (Tomsk, Russia)
"The Method of Simple and Express HPLC-determination of Aromatic Substances in the Composition of Complex Lipophilic Matrix Using Transfer-charge Interactions"

Vitaly N. Tsarev, Institute of Chemistry and Chemical and Pharmaceutical Technologies, Altai State University (Barnaul, Russia)
"Features of Analytical and Preparative Racemic Separation of Mixtures of β_2 -adrenomimetics by the SFX Method"

Tatyana G. Shinko, Novosibirsk State Medical University (r. Novosibirsk, Russia)
"Development of a Method for the Quantitative Determination of bis-[3-(3,5-di-tert-Butyl-4-hydroxyphenyl)propyl]sulfide and dodecyl(3,5-dimethyl-4-hydroxybenzyl)sulfide"

Mikhail M. Zhilyakov, Saint Petersburg State Chemical Pharmaceutical University (Saint Petersburg, Russia)
"Investigation of the Effect of an Organic Modifier – Acetonitrile on the Separation of Aromatic Amino Acids by Capillary Zone Electrophoresis" (**online**)

17:30 –18:00
Coffee-break

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|--|
| Pharmaceutical Development |
| Session 4 |
| Drug Delivery Systems for Diagnostics and Therapy |

15th September, Wednesday

Main building, assembly hall

13:00 - 18:30

Moderators:

- Vladimir I. Chernov, Doctor of Medical Sciences, Professor, Deputy Director for Scientific and Innovative Work of the Tomsk NIMC, Head of the Department of Radionuclide Diagnostics of the Research Institute of Oncology, Tomsk NIMC, Tomsk, Russia;
- Maria S. Larkina, Ph. D. in Pharmacy, Associate Professor of the Department of Pharmaceutical Analysis, Siberian State Medical University, Tomsk, Russia.

Secretary - Vitalina V. Bodenko, Resident of the Department of Pharmaceutical Analysis, Siberian State Medical University, Tomsk, Russia.

Vladimir M. Tolmachev, Doctor of Medical Sciences, Professor of the Department of Immunology, Genetics and Pathology, Uppsala University (Uppsala, Sweden)

"Targeting malignant tumors using scaffold proteins" (***keynote speaker, online***)

Vladimir I. Chernov, Doctor of Medical Sciences, Professor, Deputy Director for Scientific and Innovative Work of the Tomsk NIMC, Head of the Department of Radionuclide Diagnostics of the Research Institute of Oncology of the Tomsk NIMC (Tomsk, Russia)

"Visualization of sentinel nodes using the ^{99m}Tc-Alotech nanocolloid preparation" (***keynote speaker***)

Anna M. Orlova, Ph. D. in Medicine, Professor of the Department of medicinal chemistry, Uppsala University (Uppsala, Sweden)

"Targeting malignant tumors with overexpression of GRPR" (***keynote speaker, online***)

Vladimir Y. Usov, Doctor of Medical Sciences, Professor, Head of the Department of X-ray and Tomographic Diagnostic Methods of the Research Institute of Cardiology, TNIMTs (Tomsk, Russia)

"Trans-1,2-diaminocyclohexane-n, n, n', n'-tetraacetic acid (DCTA) as a universal chelator for mri- and off-imaging, in the form of complexes with Mn (cyclomang) and ^{99m}Tc (cyclotech)" (***keynote speaker***)

Anzhelika G. Vorobyova, Ph. D. in Chemistry, Researcher of the Department of Immunology, Genetics and Pathology, Uppsala University (Uppsala, Sweden)

"Preclinical development of targeting agent using darpin scaffold" (***keynote speaker, online***)

Olga D. Bragina, Ph. D. in Medicine, Senior Researcher, Oncologist of the first qualification category of the Department of Radionuclide Diagnostics of the Research Institute of Oncology of the Tomsk National Research Medical Center (Tomsk, Russia)

"Visualization of HER2 / neu expression in malignant tumors using ^{99m}Tc tagged scaffold proteins" (***keynote speaker***)

Oleg Y. Borodin, Ph. D. in Medicine, Senior Researcher, Department of X-ray and Tomographic Diagnostic Methods, Research Institute of Cardiology, TNIMTs, Head of the Department of Radiation Diagnostics, Tomsk Regional Oncological Dispensary (Tomsk, Russia)

"Comparative pharmacokinetics of paramagnetic and radioisotope hepatotropic contrast agents based on GDOP-DTPA and phytate complexes" (***keynote speaker***)

15:35 –16:05

Coffee-break

Sergey M. Deev, Doctor of Biological Sciences, Professor, Academician, Head of the Laboratory of Molecular Immunology of the Institute of Bioorganic Chemistry named after M.M. Shemyakin and Yu.A. Ovchinnikov RAS (Moscow, Russia)

"Hybrid nanostructures for oncotheranostics" (***keynote speaker***)

Roman V. Zelchan, Ph. D. Medicine, Senior Researcher, Department of Radionuclide Diagnostics, Research Institute of Oncology, Tomsk Scientific Research Center (Tomsk, Russia)

"Visualization of malignant brain tumors using the ^{99m}Tc -thio-1-thio-D-glucose preparation" (***keynote speaker***)

Anastasia N. Rybina, Ph. D. in Medicine, Radiologist, Department of Radionuclide Diagnostics, Research Institute of Oncology, Tomsk National Research Medical Center (Tomsk, Russia)

"Clinical Evaluation of ^{99m}Tc -RM2 for the Imaging of Malignant Tumors with Overexpression of GRPR" (***keynote speaker***)

Anastasia V. Ozerskaya, Head of the Quality Control Department, Expert Chemist of the Federal Siberian Scientific and Clinical Center (Krasnoyarsk, Russia)

"Development of new methods for the synthesis of radiopharmaceutical drugs (RFLP) at the Nuclear Medicine Center of the FSBI FSNCTs FMBA of Russia" (***keynote speaker, online***)

Ekaterina A. Dudnikova, Junior Researcher, Department of Chemotherapy, Research Institute of Oncology, Tomsk National Research Medical Center (Tomsk, Russia)

"Diagnosis of lymphoma using ^{99m}Tc -thio-1-thio-D-glucose" (***keynote speaker***)

Vladimir D. Udodov, Ph. D. in Medicine, Assistant of the Department of Radiation Diagnostics and Radiation Therapy, Siberian State Medical University (Tomsk, Russia)

"Possibilities of antimicrobial peptides in the differential diagnosis of osteomyelitis" (***keynote speaker***)

Natural Compounds as a Source of New Drugs

Section 5

High Molecular and Supramolecular Natural Compounds

September 14, Tuesday

Educational-laboratory building, room 211

9:00 - 12:00

Moderators:

- Zykova Maria Vladimirovna, Doctor of Pharmaceutical Sciences, Head of the Chemistry Division, Siberian State Medical University, Tomsk, Russia;
- Guryev Artem Mikhailovich, Doctor of Pharmaceutical Sciences, Associate Professor of the Pharmaceutical Analysis Division, Siberian State Medical University, Tomsk, Russia.

Secretary - Bratishko Kristina Aleksandrovna, Assistant of the Chemistry Division, Siberian State Medical University, Tomsk, Russia.

Perminova Irina Vasilievna, Doctor of Chemical Sciences, Head of the Laboratory of Natural Humic Systems at the Medicinal Chemistry and Fine Organic Synthesis Department, Chemistry Division, Moscow State University named after Lomonosov, President of the International Humic Substances Society (IHSS) (Moscow, Russia)

"Prospects for obtaining pharmaceutical substances based on humic substances with a biological activity" (*keynote speaker*)

Zykova Maria Vladimirovna, Doctor of Pharmaceutical Sciences, Head of the Chemistry Division, Siberian State Medical University (Tomsk, Russia)

"Methodology for the Comprehensive Pharmaceutical Research of Humic Substances" (*keynote speaker*)

Buzlama Anna Vitalievna, Doctor of Medical Sciences, Head of the Pharmacology and Clinical Pharmacology Division, Voronezh State University (Voronezh, Russia)

"Humic substances - problems and prospects of use in medicine and pharmacy" (*keynote speaker, online*)

Miroshnichenko Alexander Gennadievich, Doctor of Medical Sciences, Vice-Rector for Academic Affairs, Siberian State Medical University (Tomsk, Russia)

"Influence of Ag-containing complexes of humic substances on multidrug-resistant strains of *Klebsiella pneumoniae*" (*keynote speaker*)

Zhernov Yuri Vladimirovich, Doctor of Medical Sciences, Professor of the General Hygiene Department of the Federal State Autonomous Educational Institution of Higher Education of the First Moscow State Medical University named after Sechenov, Ministry of Health of Russia (Moscow, Russia)

"Microbicides based on humic substances for the HIV infection prevention" (*keynote speaker, online*)

Zherebker Alexander Yakovlevich, Institute of Science and Technology, Skolkovo (Moscow, Russia)

"Study of tissue distribution and target of action prediction of a hepatoprotective polyphenolic agent using mass spectrometry, isotope labeling, structure generation and chemical similarity network analysis" (*keynote speaker*)

Orlov Alexey Alexandrovich, Institute of Science and Technology, Skolkovo (Moscow, Russia)

"Use of chemoinformatics for prediction of the molecular targets of action of complex natural mixtures: the example of a hepatoprotective polyphenolic agent" (*keynote speaker, online*)

Belym Yulia Ruslanovna, Siberian State Medical University (Tomsk, Russia)

"Correction of acute iron deficiency with Fe (III) hydroxocomplexes stabilized by humic ligands"

Zhirkova Anastasia Mikhailovna, Siberian State Medical University (Tomsk, Russia)
"Synthesis of iron (III) complexes with humic and polysaccharide macroligands and assessment of their bioavailability and cytotoxicity"

Lysenko Ilya Vladimirovich, Siberian State Medical University (Tomsk, Russia)
"Antimicrobial activity of bionanomaterials based on humic substances against opportunistic microorganisms"

Mikhalev Dmitry Alexandrovich, Siberian State Medical University (Tomsk, Russia)
"Cytotoxicity study of bionanomaterials and compositions with antimicrobial and wound-healing properties based on humic substances *in vitro*"

Ufandeev Alexander Anatolievich, Siberian State Medical University (Tomsk, Russia)
"Investigation of the antibacterial properties of bionanomaterials based on humic substances *in vivo* on the model of soft tissues micronial-inflammatory wounds"

Tsupko Andrey Vladislavovich, Siberian State Medical University (Tomsk, Russia)
"Development of a non-alcoholic beverage based on plant extracts and humic substances"

Logvinova Lyudmila Anatolyevna, Siberian State Medical University (Tomsk, Russia)
"Physicochemical and cardiotropic properties of humic acids from peat"

Bratishko Kristina Alexandrovna, Siberian State Medical University (Tomsk, Russia)
"Comparative analysis of the antioxidant properties of humic acids from peat"

Buyko Evgeny Evgenievich, Siberian State Medical University (Tomsk, Russia)
"Study of the prooxidant and antiradical activity of bionanomaterials and compositions with antimicrobial and wound healing properties based on humic substances *in vitro* in the presence of prooxidants"

12:00 - 12:30
Coffee-break

13:00 - 15:00

Scientific school

"Specific study of natural humic substances chemical and pharmacological properties"

Supervisor: Zykova Maria Vladimirovna

Educational-laboratory building, Siberian State Medical University, room 307

It is planned to discuss problematic issues in the field of humic substances study:

- Correct interpretation of data obtained in physical and chemical analysis in case of description of the structure and properties of humic substances;
- Standardization of humic substances;
- Correct experimental design for the study of pharmacological activity of humic substances;
- Ethical and regulatory issues in the use of products based on humic substances.

Natural Compounds as a Source of New Drugs

Section 6

Secondary Plant Metabolites as Promising Drug Candidates

September 14, Tuesday

Educational-laboratory building, room 211

12:30 - 15:00

Moderators:

- Kurkin Vladimir Aleksandrovich, Doctor of Pharmaceutical Sciences, Professor, Head of the Pharmacognosy, Botany and Fundamentals of Phytotherapy Division, Samara State Medical University, Samara, Russia;
- Avdeeva Elena Yurievna, Ph. D. in Pharmacy, Associate Professor of the Pharmaceutical Analysis Division, Siberian State Medical University, Tomsk, Russia.

Secretary - Gulina Ekaterina Igorevna, Assistant of the Department of Pharmaceutical Analysis of Siberian State Medical University, Tomsk, Russia.

Luzhanin Vladimir Gennadievich, Ph. D. in Biology, Associate Professor, Acting Rector of the Perm State Pharmaceutical Academy (Perm, Russia)

"Investigation of the potential drug candidates based on individual substances of natural origin" (**keynote speaker**)

Belonogova Valentina Dmitrievna, Doctor of Pharmaceutical Sciences, Associate Professor, Head of the Pharmacognosy Division with the Course of Botany, Perm State Pharmaceutical Academy (Perm, Russia)

"Towards a phytochemical study of raw materials from forest species of the Urals" (**keynote speaker, online**)

Kurkin Vladimir Alexandrovich, Doctor of Pharmaceutical Sciences, Professor, Head of the Pharmacognosy, Botany and Fundamentals of Phytotherapy Division, Samara State Medical University, Samara State Medical University (Samara, Russia)

"Actual aspects of the creation and standardization of herbal medicinal preparations based on raw materials containing phenolic compounds" (**keynote speaker**)

Khanina Minisa Abdullaevna, Doctor of Pharmaceutical Sciences, Professor, Head of the Chemistry Division, State Humanitarian and Technological University (Orekhovo-Zuevo, Russia)

"Dynamics of biologically active substances and elements in medicinal plants" (**keynote speaker**)

Kaminsky Ilya Petrovich, Ph. D. in Pharmacy, Associate Professor of the Pharmaceutical Analysis Division, Siberian State Medical University (Tomsk, Russia)

"Pharmaceutical development of an anti-opisthorchiasis agent based on sesquiterpene lactones of natural origin" (**keynote speaker**)

Bogoutdinova Alina Maratovna, St. Petersburg State University of Chemistry and Pharmacy (St. Petersburg, Russia)

"Effect of 8-c-, 4'-o-diglucoside apigenin on the functional activity of platelets"

Botirov Erkin Khozhiakbarovich, Institute of Plant Substances Chemistry, Academy of Sciences of the Republic of Uzbekistan (Tashkent)

"Biologically active derivatives of 5,8-dihydroxyflavones from the aerial part of *Scutellaria comosa*" (**online**)

Dutova Svetlana Vyacheslavovna, Khakass State University named after Katanov (Abakan, Russia)
"Phenolic compounds of coluria gravillate (*Coluria geoides* (Pall.) Ledeb., *Rosaceae*) as promising immunocorrectors"

Zimenkina Natalia Igorevna, Samara State Medical University (Samara, Russia)
"Quantitative assessment of the content of flavonoids in the bark of black walnut (*Juglans nigra* L.)"
(*online*)

Kitaeva Maria Petrovna, FGBNU VILAR (Moscow, Russia)
"Cytotoxic activity of complex extracts of phenolic compounds obtained from callus cell cultures of *Podophyllum peltatum* in human leukemic cells" (*online*)

Mikhailova Svetlana Ivanovna, Tomsk State University (Tomsk, Russia)
"Allelopathic properties of the *Melilotus officinalis*"

Savelyeva Elena Evgenievna, Krasnoyarsk State Medical University named after Voino-Yasenetsky (Krasnoyarsk, Russia)
"Wound healing activity of alcoholic extract of goose cinquefoil"

Sokolov Nikita Sergeevich, Samara State Medical University (Samara, Russia)
"Study of the biologically active substances accumulation in the meadowsweet fruits"

Turdalieva Parizod Kadirovna, Fergana State University (Fergana, Uzbekistan)
"Study of the pharmacological activity of the herbal collection used in the prevention and treatment of iron deficiency anemia"

15:00 –15: 30
Coffee-break

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| Natural Compounds as a Source of New Drugs |
| Section 7 |
| Rational Use of Natural Resources |

September 14, Tuesday

Educational-laboratory building, room 211

15:30 - 17:00

Moderator - Kolomiets Natalya Eduardovna, Doctor of Pharmaceutical Sciences, Professor of the Pharmaceutical Analysis Division, Siberian State Medical University, Tomsk, Russia.

Secretary - Isaikina Nadezhda Valentinovna, Ph. D. in Pharmacy, Associate Professor of the Pharmaceutical Analysis Division, Siberian State Medical University, Tomsk, Russia.

Turyshv Alexey Yurievich, Ph. D. in Pharmacy, Rector of the Perm State Pharmaceutical Academy (Perm, Russia)

"Geographic information systems in the resource study of wild medicinal plants" (**keynote speaker**)

Kirpotin Sergey Nikolaevich, Doctor of Biological Sciences, Professor, Institute of Biology, Ecology, Soil Science, Agriculture and Forestry, Tomsk State University (Tomsk, Russia)

"Deep ecology as the basis of the worldview and ethics of the third millennium" (**keynote speaker**)

Zinner Nadezhda Sergeeva, Ph. D. in Biology, Associate Professor of the Institute of Biology, Ecology, Soil Science, Agriculture and Forestry, Tomsk State University (Tomsk, Russia)

"Study of the effect of natural biostimulants on the agrobiological parameters of medicinal plants" (**keynote speaker**)

Vikhareva Elena Vladimirovna, Doctor of Pharmaceutical Sciences, Professor, Head of the Analytical Chemistry Division, Perm State Pharmaceutical Academy "(Perm, Russia)

"Phytostimulating properties of products of bacterial destruction of drugs" (**keynote speaker, online**)

Kurashev Danil Georgievich, Tomsk State University (Tomsk, Russia)

"The influence of growth stimulants on the growth processes of *Hedysarum alpinum*"

Pivovarova Nadezhda Sergeevna, St. Petersburg State University of Chemistry and Pharmacy (St. Petersburg, Russia)

"Obtaining a callus culture of medicinal sage (*Salvia officinalis L.*) and its characteristics" (**online**)

Tabyldieva Cholpon Tabyldievna, Kyrgyz State Medical Academy named after Akhunbaev (Bishkek, Kyrgyzstan)

"Raw material reserves of green wormwood grass (*Artemisia viridis willd.*) in some regions of Kyrgyzstan" (**online**)

17:00 –17: 30

Coffee-break

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| Aspects of Current Interest in Experimental and Clinical Pharmacology |
| Session 8 |
| Fundamental and applied aspects of pharmacodynamics and pharmacokinetics of new drug candidates |

14th September, Tuesday

Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room

09:00 – 11:00

Moderators:

- Dmitriy N. Atochin, M. D., Ph. D., Assistant Professor, Department of Medicine, Cardiology Division, Cardiovascular Research Center, Massachusetts General Hospital, Harvard Medical School (Boston, MA, USA)
- Olga E. Vaizova, M. D., Ph. D., Doctor of Medical Sciences, Professor of Department of Pharmacology in Siberian State Medical University (Tomsk, Russia)

Secretary – Elena L. Golovina, Ph. D. in Medicine, Assistant Professor of Department of Pharmacology in Siberian State Medical University (Tomsk, Russia)

Elena G. Kondurina, Ph. D., M. D., Doctor of Medical Sciences, Professor, Head of Department of Pediatrics, Vice Rector of Postgraduate Education in Novosibirsk State Medical University (Novosibirsk, Russia)

"Electoral tactics of antiviral therapy in case of acute respiratory viral infection" (***keynote speaker***)

Andrey I. Khlebnikov, Doctor of Chemical Sciences, Professor, Professor of Scientific & Educational Center Named Nikolai Matveyevich Kizhner (Tomsk, Russia)

"Use of methods of molecular simulation in searching for new pharmaceutical preformulations" (***keynote speaker***)

Irina A. Lupanova, Ph. D. in Biology, Head of Preclinical Study Center in All-Russian Scientific Research Institute of Medicinal and Aromatic Plants (Moscow, Russia)

"Biotesting in Experimental Pharmacology: Use of specific enzymatic biotest - systems *in vitro*" (***keynote speaker, online***)

Svetlana G. Krylova, Doctor of Biological Sciences, Senior Researcher in Laboratory of Oncopharmacology in Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Derivatives of hexaazaisowurtzitane as potential sources of new pharmaceutical agents" (***keynote speaker***)

Vladimir V. Bykov, LLC «Innovative Pharmacology Research», Pharmaceutical Research Department (Tomsk, Russia)

"Antihypertensive activity of new guanilate cyclase stimulator" (***keynote speaker***)

Klim A. Leonov, LLC «Innovative Pharmacology Research», Pharmaceutical Research Department (Tomsk, Russia)

"Pharmacokinetics and metabolism of innovative pharmaceutical product - antiaggregant" (***keynote speaker***)

Anna M. Anischenko, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Neuroprotective and hemorheologic activity of Dibornol-HEC in mice after total transient ischemic attack"

German I. Baikalov, Novosibirsk State Medical University (Novosibirsk, Russia)

"Influence of immobilized subtilisins on vasomotor activity of rat's portal vein"

Olga I. Dunaeva, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Research of pharmaceutical agents inhibiting hypertension among indol-3 acetic acid compounds"

Ekaterina M. Moiseeva, Immanuel Kant Baltic Federal University (Kaliningrad, Russia)

"Possibility of application ¹H NMR spectroscopy in detection of treatment compliance by acetylsalicylic acid in patients with coronary vascular diseases"

Anastasia B. Sidehmenova, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Influence of hemorheologic pharmaceutical agents on microcirculation in cortex in rats with arterial hypertension"

Angelina M. Smakhtina, Kursk State Medical University (Kursk, Russia)

"Antioxidative and reparative effects of new thymogen's alternative drug in case of skin experimental trauma" (*online*)

11:00 –11:30

Coffee-break

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| Aspects of Current Interest in Experimental and Clinical Pharmacology |
| Session 9 |
| Oncopharmacology and Chemoprevention of Cancer |

14th September, Tuesday

Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room

11:30 – 12:30

Moderators:

- Liudmila V. Spirina, M. D., Doctor of Medical Sciences, Professor in the Department of Biochemistry and Molecular Biology with a course in Clinical Laboratory diagnostics, SSMU (Tomsk, Russia);
- Tatyana G. Razina, Doctor of Biological Sciences, Senior Researcher in Laboratory of Oncopharmacology in Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

Secretaries:

- Kamila M. Seytova, Postgraduate Student in Research School of Chemistry & Applied Biomedical Sciences (Tomsk, Russia)

Tatyana G. Razina, Doctor of Biological Sciences, Senior Researcher in Laboratory of Oncopharmacology in Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Perspectives in applying herbal products in combination therapy of oncologic patients" (**keynote speaker**)

Alexandra V. Avgustinovich, Cancer Research Institute (Tomsk, Russia)

"Immunotherapy in combination therapy of gastric cancer amenable to operative treatment: institute practical experience"

Valeriya A. Grigoreva, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Pharmacological correction of male replicating function violation caused by cytoreductive treatment"

Marina K. Ibragimova, Cancer Research Institute (Tomsk, Russia)

"Full transcriptomic analysis of breast cancer in process of neoadjuvant therapy: correlation with hematogenous metastasis"

Oxana V. Neupokoeva, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Pharmacological prevention of cytostatic influence on genetic structures of bone marrow and blood system"

Olga Ju. Rybalkina, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Correction of doxorubicin's toxic influence on erythropoiesis of animals with Lewis lung carcinoma with the help of anthocyan containing complex made of *Sorbus aucuparia* L."

Maria S. Tretjakova, National Research Tomsk Polytechnic University (Tomsk, Russia)

"Research of radio modulating properties of lithium on tumor culture models"

12:30 – 13:00

Coffee-break

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| Aspects of Current Interest in Experimental and Clinical Pharmacology |
| Session 10 |
| Immunopharmacology and Molecular Immunology |

14th September

Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room

13:30 – 15:30

Moderator – Evgeniy Yu. Sherstoboev, Doctor of Medical Sciences, professor, Chief Scientific Researcher, Head of the Department of Immunopharmacology of Goldberg Research Institute of Pharmacology and Regenerative Medicine of Tomsk National Research Medical Center.

Secretary – Yulia V. Shabanova, Department Assistant of Pharmaceutical Analysis Division, Siberian State Medical University.

Shinya Yokomizo, M. S., Ph. D. student, Department of Radiology, Massachusetts General Hospital, Harvard Medical School (Charlestown, MA, USA)

"Immunomodulatory property of near-infrared laser" (*keynote speaker, online*)

Satoshi Kashiwagi, M. D., Ph. D., Assistant Professor, Department of Radiology, Massachusetts General Hospital, Harvard Medical School (Charlestown, MA, USA)

"Near-Infrared laser adjuvant to enhance the efficacy of cancer immunotherapy" (*keynote speaker, online*)

Vasiliy V. Polosukhin, M. D., Ph. D. in Medicine, Research Associate Professor of Center of Lung Research of Vanderbilt University (Nashville, TN, USA)

"Targeting Immune Pathways for Therapy in Chronic Obstructive Pulmonary Disease" (*keynote speaker, online*)

Igor A. Schepetkin, M. D., Doctor of Medical Sciences, Senior Research Scientist in the Immunology and Infectious Diseases Division at the Montana State University (Bozeman, MT, USA)

"Immunomodulatory activity of terpenoids" (*keynote speaker, online*)

Sergei A. Kusmartsev, M. D., Ph. D. in Biology, Assistant Professor of Department of Urology in the University of Florida (Gainesville, FL, USA)

"Hyaluronidase 2 (Hyal2): new advanced target for cancer immunotherapy" (*keynote speaker, online*)

Sergei A. Tarasov, Ph. D. in Medicine, Head of Department of Scientific Research and Development in Research and Production Company Materia Medica Holding (Moscow, Russia)

"Experience of drug development based on the technology of antibody modification" (*keynote speaker*)

Liudmila V. Spirina, Doctor of Medical Sciences, Professor in the Department of Biochemistry and Molecular Biology with a course in Clinical Laboratory diagnostics, SSMU (Tomsk, Russia)

"Expression of PD-1, PD-L1, PD-L2 in case of malignant diseases in relation with effectiveness of anticancer therapy" (*keynote speaker*)

Evgenia S. Trophimova, Ph. D. in Medicine, Senior Researcher, Laboratory of Immunopharmacology, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Participation of IKK-2/NF-KB cascade in activation of antigenpresentating cells by sod humic acids" (*keynote speaker*)

Svetlana V. Dutova, Khakass State University named after N.F. Katanov (Abakam, Russia)

"Pharmaceutical substance made of Coluria geoides (Rosaceae) particles and its influence on phagocytic rate of granular leukocytes" (***online***)

Yulia V. Shabanova, National Research Tomsk Polytechnic University (Tomsk, Russia)

"Influence of extraction method of soluble polysaccharides of plants of the genus Saussurea on NO-synthase of mice peritoneal macrophages"

15:30 –16:00

Coffee-break

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| Aspects of Current Interest in Experimental and Clinical Pharmacology |
| Session 11 |
| Regenerative Medicine and Cell Technologies |

15th September, Wednesday

Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room

10:00 – 12:00

Moderator:

Igor A. Khlusov, M. D., Ph. D., Doctor of Medical Science, Professor, Professor of Department of Morphology and General Pathology in Siberian State Medical University (Tomsk, Russia)

Secretary – Evgeniy E. Buyko, Assistant in Preclinical Study Center in Siberian State Medical University (Tomsk, Russia)

Igor A. Khlusov, M. D., Ph. D., Doctor of Medical Science, Professor, Professor of Department of Morphology and General Pathology in Siberian State Medical University (Tomsk, Russia)

"Niche theory of stem cells as an instrument of sensitive regenerative medicine" (**keynote speaker**)

Alexandr S. Grenaderov, Institute of High Current Electronics SB RAS (Tomsk, Russia)

"Research of cytotoxicity and pro-inflammatory response of mononuclear leukocyte to silicon-carbide coating" (**keynote speaker**)

Igor K. Norkin, Immunology and Cell Biotechnology Center (Kaliningrad, Russia)

"Role of heparin in regulation of osteogenetic potential of multipotent mesenchymal stromal cells *in vitro*" (**keynote speaker, online**)

Igor O. Akimchenko, National Research Tomsk Polytechnic University (Tomsk, Russia)

"Calcium phosphate coatings to improve biocompatibility of polyetheretherketone with bone tissue"

Xenia N. Verzunova, National Research Tomsk Polytechnic University (Tomsk, Russia)

"Hybrid composite coating of osteostimulative implants in case of osteoporosis"

Pavel V. Mar'in, National Research Tomsk Polytechnic University (Tomsk, Russia)

"Scaffolds on the base of polymer of polylactic acid with thin nitrogen containing titanium coating"

Gauhar M. Medetova, National Research Tomsk Polytechnic University (Tomsk, Russia)

"Research of composite coating features with drug depot function"

Alexandr Ju. Fedotkin, National Research Tomsk Polytechnic University (Tomsk, Russia)

"Properties of calcium-phosphate coatings formed by method of reactive high-frequency magnetron sputtering in nitrogen containing gas mixtures"

12:00 – 12:30

Coffee-break

Aspects of Current Interest in Experimental and Clinical Pharmacology

Session 12

Neurobiology and Psychopharmacology

15th September, Wednesday

Goldberg Research Institute of Pharmacology and Regenerative Medicine, conference room

13:00 – 16:00

Moderators:

- Alexandr N. Kornetov, M. D., Doctor of Medical Sciences, Professor, Head of Department of Fundamental Psychology and Behavioral Medicine in Siberian State Medical University (Tomsk, Russia);
- Anton N. Shuvaev, Ph. D. in Medicine, Head of National Research Institute of Molecular Medicine and pathobiochemistry in Krasnoyarsk State Medical University (Krasnoyarsk, Russia).

Secretary – Ekaterina A. Bezverkhniia, Senior Assistant of Pharmaceutical Analysis Division, Siberian State Medical University (Tomsk, Russia)

Dmitriy N. Atochin, M. D., Ph. D., Assistant Professor, Department of Medicine, Cardiology Division, Cardiovascular Research Center, Massachusetts General Hospital, Harvard Medical School (Boston, MA, USA)

"Translational research of targets and compounds for neurovascular therapy" (***keynote speaker***)

Alla B. Salmina, M. D., Ph. D., Doctor of Medical Sciences, Head of Department of Experimental Neurocytology in Neurology Research Center (Moscow, Russia)

"Modern approach for neurogenesis control" (***keynote speaker, online***)

Anton N. Shuvaev, Ph. D. in Medicine, Head of National Research Institute of Molecular Medicine and pathobiochemistry in Krasnoyarsk State Medical University (Krasnoyarsk, Russia)

"Coffeine influence on short-term cerebellum neuronal plasticity in case of spinocerebellar ataxia type 1 (SCA1)" (***keynote speaker***)

Alexandr N. Kornetov, M. D., Doctor of Medical Sciences, Professor, Head of Department of Fundamental Psychology and Behavioral Medicine in Siberian State Medical University (Tomsk, Russia)

"Influence of antipsychotic therapy on fat component of body composition and biochemical values in patients with schizophrenia" (***keynote speaker***)

Mark B. Plotnikov, Doctor of Biological Sciences, Professor, Head of Department of Pharmacology in Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Neuroprotective effects and mode of action p-thyrozol in case of cerebral ischemia" (***keynote speaker***)

Yulia V. Nesterova, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Psychopharmacological effects of diterpene alkaloid zongorin"

Pavel V. Kulpin, Goldberg Research Institute of Pharmacology and Regenerative Medicine (Tomsk, Russia)

"Influence of *Garcinia mangostana* L. husk extraction in experimental models of anxiety-depressive disorder"

Anastasia A. Goncharova, Mental Health Research Institute (Tomsk, Russia)

"Role of long acting form of antipsychotic drugs in the development of akathisia in patients with schizophrenia"

Irina A. Mednova, Mental Health Research Institute (Tomsk, Russia)

"Relation between level of catechol-O-methyl transferase (COMT) and hopelessness and suicidal risk in patients with schizophrenia receiving antipsychotic therapy"

Vlaimir V. Tiguntsev, Mental Health Research Institute (Tomsk, Russia)

"Thyroid hormones level in patients with schizophrenia receiving typical and atypical antipsychotics"

Angelina I. Mosyagina, Krasnoyarsk State Medical University (Krasnoyarsk, Russia)

"Role of CD147 и RAGE in the development of cerebral amyloid abgiopathy in vitro"

16:00 –16:30

Coffee-break

16th September, Thursday

10:00 –11:30

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Scientific School

«Introduction to Numerical Structural Pharmacology»

Supervisor: Konstantin S. Brazovsky

Within the framework of the School, **the foundations of modern digital technologies focused on the creation of new medicines** will be considered.

The goal of the School is to form students' understanding of the possibilities and limitations of the latest computer-aided methods for designing and modeling medicines.

Audience: senior students, undergraduates, graduate students and young scientists.

Areas of science: pharmacology, pharmaceuticals, biomedical directions.

Content:

1. Basic definitions and terminological dissonances.
2. Stages of the life cycle of medicines created using computer modeling and numerical experiments.
3. Review of software platforms used in numerical structural pharmacology.
4. Analysis of practical cases.

11:30 - 12:00

Coffee-break

12:00 –13: 30

Closing ceremony of the conference

Main building of Siberian State Medical University, assembly hall