



SECHENOV  
UNIVERSITY  
LIFE SCIENCES



**SIBS 2021**



# **Vth SECHENOV INTERNATIONAL BIOMEDICAL SUMMIT (SIBS-2021)**

# **PROGRAM**



## ORGANIZING COMMITTEE

### ORGANIZER



Federal State Autonomous Educational Institution of Higher Education I.M. Sechenov First Moscow State Medical University of the Ministry of Health of the Russian Federation (Sechenov University)

### SUPPORTED BY



### ORGANIZING COMMITTEE

#### CO-CHAIRS



Petr V. Glybochko — M.D., Professor, member of the Russian Academy of Sciences, Rector, I.M. Sechenov First Moscow State Medical University (Sechenov University)



Valerian E. Kagan — PhD, DSc, Professor, Senior Researcher, Institute for Regenerative Medicine, I.M. Sechenov First Moscow State Medical University (Sechenov University), Professor, Environmental and Occupational Health Vice Chair of Research, Environmental and Occupational Health, University of Pittsburgh



Stephen F. Badylak — DVM, PhD, MD, Professor, Department of Surgery; Professor, Department of Bioengineering, McGowan Institute for Regenerative Medicine

#### VICE-CHAIRMEN



Andrey A. Svistunov — PhD, Professor, Corresponding Member of RAS, First Vice Rector, I.M. Sechenov First Moscow State Medical University (Sechenov University)



Denis V. Butnaru — MD, PhD, Vice-Rector for Research, I.M. Sechenov First Moscow State Medical University (Sechenov University)

## ORGANIZING COMMITTEE

### MEMBERS



Peter S. Timashev — D.Sc., Head of the Sechenov Biomedical Science & Technology Park, Director of the Institute for Regenerative Medicine, I.M. Sechenov First Moscow State Medical University (Sechenov University)



Marina I. Sekacheva — MD, PhD, Professor, Professor, Head of the Institute for Personalized Medicine, I.M. Sechenov First Moscow State Medical University (Sechenov University)



Filipp Yu. Kopylov — MD, PhD, Professor, Head of the Institute of Personalized Cardiology, I.M. Sechenov First Moscow State Medical University (Sechenov University)



Vadim V. Tarasov — Head of the Department of Pharmacology, Head of the Institute for Pharmaceutical Science and Translational Medicine, I.M. Sechenov First Moscow State Medical University (Sechenov University)



Dmitry V. Telyshev — PhD, Head of the Institute for Bionic Technologies and Engineering, I.M. Sechenov First Moscow State Medical University (Sechenov University)



Tatyana M. Zharikova — Deputy Director of the Institute for Regenerative Medicine of I.M. Sechenov First Moscow State Medical University (Sechenov University)



## PROGRAM COMMITTEE

### CHAIRMAN



Denis V. Butnaru — MD, PhD, Vice-rector for Research, I.M. Sechenov First Moscow State Medical University (Sechenov University)

### VICE-CHAIRMEN



Valerian E. Kagan — PhD, DSc, Professor, Senior Researcher, Institute for Regenerative Medicine, I.M. Sechenov First Moscow State Medical University (Sechenov University), Professor, Environmental and Occupational Health Vice Chair of Research, Environmental and Occupational Health, University of Pittsburgh



Dr. Badylak — DVM, PhD, MD, Professor, Department of Surgery; Professor, Department of Bioengineering, McGowan Institute for Regenerative Medicine

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## GENERAL INFORMATION

### EVENT PARTICIPATION: BROADCASTING, VISITING THE EXHIBITION

All sessions will be live-streamed and available through the Personal Account at the website of the event.

The summit is scheduled in local Moscow time; UTC +3.

For a more convenient transition to broadcasts, we recommend installing the Zoom application on your computer in advance from this link <https://zoom.us/download>.

**It is important to log into Zoom** using the same e-mail that you registered on the event site.

### BASIC SESSION STRUCTURE

- 15 minutes before the session: The organizer will start the Zoom meeting.
- 5 minutes before the session: The organizer will start the recording.
- 1 minute before the session: The session moderator introduces the session.
- Beginning of the session: The session moderator will introduce the presenters.
- A live Q&A Session will follow each talk, moderated by the session moderator.
- Participants will be muted and they will need submit questions during the presentation in the FAQ section.
- The session moderator will select and ask the questions during the Q&A session.

### SPEAKER INFORMATION FOR ON-SITE OR REMOTE PRESENTATION

All speakers and session moderators will be briefed by the conference organizers regarding the format of their participation, use of the online platform and their role. Speakers that cannot attend their live session can provide a recorded video presentation although live participation is encouraged to facilitate Q&A.

#### Remote Speakers

- Technical testing services are available for the speakers before the event.
- Please refer to the program to make sure that you connect to your session 15 minutes before the beginning (15 minutes before the session at the latest).
- Make sure to start your connection to zoom with your camera OFF and your mic OFF, just in case your session has already begun and you are directly live.
- Remember that you will share your presentation the regular way, using Zoom's sharing options.
- You will be able to see and hear both remote and on-site speakers as the usual way of a zoom meeting.
- The questions received on-site or remotely will be reported to you by the session moderator.

#### On-site speakers

- Upon their arrival to the event venue (Congress Center of the Sechenov University, Trubetskaya, 8), on-site speakers must upload their presentation (PDF or powerpoint) on the Presentation Desk. Please note that the upload of presentation is not possible in the session room directly on your PC and neither via an USB stick. We recommend to the speakers to arrive well in advance of their session to handle the slides to the Presentation Desk.
- On-site presentations will be live recorded and live-streamed.
- Please, stay at the speaker table during your presentation during the video-recording of your presentation.

### EXHIBITION

A virtual exhibition will be organized as a part of the event. The materials of the exhibition can be found in the Personal Account. During the event, at the stands of the companies there will be representatives who can be contacted by writing in a chat or making a video call. Also in the Personal Account there is a quiz MARATHON OF KNOWLEDGE, answers to questions can be obtained after reading the materials of the companies participating in the exhibition. The results will be announced at the closing ceremony. Winners will be selected using a random number generator and prizes from the companies and the Organizing Committee will be sent within two weeks.

### ONLINE POSTER SESSION

Posters are available in the Personal Account at the website of the event.

Poster presentations combine a two-minute pre-recorded oral presentation with a digital poster (PDF format) to facilitate the rapid communication of scientific ideas. During these presentations, viewers visually guide themselves at their own pace through the basics of the study displayed on the digital poster, while the pre-recorded presentation focuses on explanation, clarification, and discussion of key elements of the work.

### VIDEO PRESENTATIONS

Video presentations will be available in participants' Personal Accounts in a month from the dates of the summit.

### CERTIFICATES OF PARTICIPATION

Certificates will be uploaded in participants' Personal Accounts not later than 20 days after the event.

### CONTACTS

**Technical partner of the event — Trialogue Ltd.**

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fax: +7 (499) 137-34-79

e-mail: [sechenov-sibs@confreg.org](mailto:sechenov-sibs@confreg.org)

Event website: <https://sechenov-sibs.confreg.org/>





## SCIENTIFIC PROGRAM

The Vth Sechenov International Biomedical Summit 2021 (SIBS–2021) hosts **3 Plenary Sessions, 10 Oral Sessions** and **Symposium “Theranostics in Oncology”** that includes **4 Oral Sessions**.

### 9-10 November 2021: SIBS–2021

SIBS-2021 is an event of great current relevance and interest. It will provide an inspiring program, covering a wide spectrum of topics in the field of digital and practical developments in biomedicine and applied technologies. About 300 specialists are traditionally expected at the event: geneticists, pharmacologists, personalized medicine doctors, experts in the field of cell and gene therapy, tissue engineering and regenerative medicine.

#### List of Oral Sessions

- Biodesign
- Biophotonic and Microcirculation (SPIE)
- Digital Cardiology: Big Data, Data Processing Algorithms
- Digital Oncology
- Emerging Viral Infections
- Medical Elementology in Cardiology and Oncology
- Molecular Oncology and Targeted Drug Delivery
- Multiomics
- Technological Platforms for Creation of Innovative Gene Therapy Drugs and Vaccines
- Thrombus Formation: Microfluidics and Mathematical Modeling

### 10–11 November 2021: Symposium “Theranostics in Oncology”

Symposium “Theranostics in Oncology” is a forum, where the most significant results in the rapidly growing field of innovative technologies for the diagnosis and treatment of cancer will be presented. The success of modern fundamental and clinical oncology is strongly associated with the development and implementation of innovative materials with controlled properties, promising bioengineering solutions based on biomimetic constructs, the use of molecular analytical methods based on liquid biopsy technology, as well as the development of new molecular structures capable of inhibition of pathological processes. The use of modern methods of physicochemical analysis, including various options of mass spectrometry for the early diagnosis of oncological diseases, is one of the topical areas covered in depth and in breadth within the Symposium framework.

*Supported by the Ministry of Education and Science of the Russian Federation, grant No. 075-15-2019-192*

#### List of Oral Sessions:

- Bioengineering with Application of Photonic and Cellular Technologies
- Controlled Biomaterials
- Liquid Biopsy
- Mass Spectrometry in Oncology



## PROGRAM SCHEDULE

09.11.2021 (Tuesday)			
08:00-09:00	Joining the online conference. Introduction to the technical information		
Hall	Sechenov		
09:00-09:30	Opening and Welcome		
Invitees:	Andrey V. Lisitsa, Institute of Biomedical Chemistry, Moscow, Russia Elena V.Zagaynova, Lobachevsky State University of Nizhny Novgorod — National Research University (UNN), Nizhny Novgorod, Russia Iskander Akhatov, Skoltech Institute of Science and Technology (Skoltech), Moscow, Russia Ramesh Chandra, University of Delhi, Dehli, India		
09:30-11:00	Plenary Session 1		
Moderator:	Denis V. Butnaru, Sechenov University, Moscow, Russia		
09:30-10:00	Key Speaker Xing-Jie Liang National Center for Nanoscience and Technology, Beijing, China Nanomaterials parameters characterized for pharmaceutical development		
10:00-10:30	Key Speaker Jean Paul Thiery National University of Singapore, Singapore How to Deal with the EMT Phenotypes in Carcinoma		
10:30-11:00	Key Speaker Elena V.Zagaynova Lobachevsky State University of Nizhny Novgorod – National Research University (UNN), Nizhny Novgorod, Russia Fluorescence lifetime imaging for translational research in regenerative medicine		
11:00-11:10	Exhibition Opening		
11:10-11:30	Break		
Hall	Sechenov	Hall	Pirogov
11:30-13:00	Biodesign	11:30-13:00	Digital Oncology
Moderators:	Petr S. Timashev, Sechenov University, Moscow, Russia Elena V.Zagaynova, Lobachevsky State University of Nizhny Novgorod — National Research University (UNN), Nizhny Novgorod, Russia <i>Jointly with Nizhny Novgorod (UNN)</i>	Moderators:	Marina I.Sekacheva Sechenov University, Moscow, Russia Natalia R. Polushkina, Biomedial Cluster, Skolkovo Foundation, Moscow, Russia <i>Jointly with Skolkovo (Biomedial Cluster)</i>
13:00-14:00	Break. Poster Session		
Hall	Sechenov	Hall	Pirogov
14:00-15:45	Biodesign	14:00-16:00	Multimomics
Moderators:	Petr S. Timashev Sechenov University, Moscow, Russia Stanislav A. Evlashin, Skoltech, Moscow, Russia <i>Jointly with Skoltech</i>	Moderators:	Marina I.Sekacheva Sechenov University, Moscow, Russia Anton A.Buzdin Sechenov University, Moscow, Russia, MIPT, Dolgoprudny, Russia Denis V. Kuzmin, MIPT, Dolgoprudny, Russia <i>Jointly with MIPT</i>
15:45-16:00	Break		
Hall	Sechenov	Hall	Pirogov
16:00-17:30	Biodesign	16:00-17:30	Medical Elementology in Cardiology and Oncology
Moderators:	Petr S. Timashev Sechenov University, Moscow, Russia Evgeny A. Shirshin Moscow State University, Moscow, Russia <i>Jointly with Moscow State University</i>	Moderators:	Marina I.Sekacheva Sechenov University, Moscow, Russia Anatoly V.Skalny Sechenov University, RUDN University, Moscow, Russia Timur H. Fatkhudinov RUDN University, Moscow, Russia <i>Jointly with RUDN University</i>
17:30-18:00	Break. Poster Session		
Hall	Sechenov		
18.00-19.30	Young Scientists' Session		
Moderators:	Denis V. Butnaru, Petr S. Timashev, Marina I. Sekacheva, Dmitry V. Telyshev, Vadim V.Tarasov Sechenov University, Moscow, Russia		



# Vth SECHENOV INTERNATIONAL BIOMEDICAL SUMMIT (SIBS-2021)

10.11.2021 (Wednesday)					
08:00-09:00	Joining the online conference. Introduction to the technical information				
Hall	Sechenov				
09:00-11:00	Plenary Session 2				
Moderator:	Alexander N.Lukashev, Sechenov University, Moscow, Russia				
09:00-09:30	Alexander N.Lukashev Sechenov University, Moscow, Russia COVID aftermath				
09:30-10:00	Roman A.Ivanov, Sirius University of Science and Technology, Sochi, Russia Gene Therapy: Promise vs.Reality				
10:00-10:30	Denis Yu. Logunov, FSBI National Research Center for Epidemiology and Microbiology named after the honorary academician N. F. Gamaleya of the Russian Ministry of Health, Moscow, Russia				
10:30-11:00	Sergey M. Deyev Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow, Russia Institute of Molecular Medicine, Sechenov University, Moscow, Russia Oncotheranostics. Successes, problems, outlook				
11:00-11:30	Break				
Hall	Sechenov	Hall	Pirogov	Hall	Abrikosov
11:30-13:00	Digital Cardiology: Big Data, Data Processing Algorithms	11:30-13:00	Technological Platforms for Creation of Innovative Gene Therapy Drugs and Vaccines	11:30-13:00	Molecular Oncology and Targeted Drug Delivery
Moderators:	Philipp Yu. Kopylov Sechenov University, Moscow, Russia Simon T. Matskeplishvili Faculty of Fundamental Medicine Moscow State University, Moscow, Russia <i>Jointly with Moscow State University</i>	Moderators:	Vadim V. Tarasov, Sechenov University, Moscow, Russia Vladimir M. Trukhan, Sechenov University, Moscow, Russia Roman A.Ivanov, Sirius University of Science and Technology, Sochi, <i>Russia Jointly with Sirius</i>	Moderators:	Andrey A. Zamyatnin Sechenov University, Moscow, Russia Alexander G.Tonevitsky HSE University, Moscow, Russia <i>Jointly with HSE University</i>
13:00-13:30	Break.Poster Session				
Hall	Sechenov	Hall	Pirogov	Hall	Abrikosov
13:30-15:00	Biophotonic and Microcirculation (SPIE)	13:30-15:00	Emerging Viral Infections	13:30-15:30	Bioengineering with Application of Photonic and Cellular Technologies
Moderators:	Dmitry V.Telyshev Sechenov University, Moscow, Russia Marat F. Bulatov Scientific and Technological Center of Unique Instrumentation of RAS, Moscow, Russia	Moderators:	Alexander N.Lukashev Sechenov University, Moscow, Russia <i>Jointly with Jan Felix Drexler, Charité, Berlin, Germany</i>	Moderator:	Roman A. Akasov Institute of Bioorganic Chemistry, RAS, Moscow, Russia
15:00-15:30	Break				
Hall	Sechenov	Hall	Pirogov		
15:30-17:00	Thrombus Formation: Microfluidics and Mathematical Modeling	15:30-17:15	Controlled Biomaterials		
Moderators:	Yuri V. Vassilevski Sechenov University, Moscow, Russia Mikhail A. Panteleev Center for Theoretical Problems of Physicochemical Pharmacology RAS, Moscow, Russia	Moderator:	Olga A. Sindeeva Skolkovo Institute of Science and Technology, Moscow, Russia		
17:00-17:30	Break	17:15-17:30	Break		





10.11.2021 (Wednesday)	
Hall	Sechenov
17:30-19:00	Plenary Session 3
Moderator:	Dmitry V. Telyshev Sechenov University, Moscow, Russia
17:30-18:00	Massoud Vosough Royan Institute for Stem Cell Biology, Tehran, Iran COVID19 and Innovative Cell-based therapies
18:00-18:30	Dmitry Malin, Department of Medicine, University of Wisconsin Carbone Cancer Center, University of Wisconsin-Madison, Madison, USA Developing cell-based models for fundamental and translation cancer research
18:30-19:00	Igor R. Efimov, Washington University, Washington, USA Wireless networks of transient, implantable, and wearable cardiac bioelectronics
19:00-19:15	Final Remarks. Closing Ceremony
11.11.2021 (Thursday)	
08:00-09:00	Joining the online conference. Introduction to the technical information
Hall	Abrikosov
09:00-11:30	Mass Spectrometry in Oncology
Moderator:	Vladimir E. Frankevich FSBI «National Medical Research Center for Obstetrics, Gynecology and Perinatology named after V.I.Kulakov», Ministry of Health of the Russian Federation, Moscow, Russia
11:30-12:00	Break
12:00-13:30	Liquid Biopsy
Moderator:	Anna V.Maslennikova Privolzhsky Research Medical University, Nizhny Novgorod, Russia
13:30-14:00	Final Remarks. Closing of the Symposium “Theranostics in Oncology”



## PROGRAM

09.11.2021 (Tuesday)			
08:00-09:00	Joining the online conference. Introduction to the technical information		
Hall	Sechenov		
09:00-09:30	Opening and Welcome		
Invitees:	<p>Andrey V. Lisitsa, Institute of Biomedical Chemistry, Moscow, Russia  Elena V. Zagaynova, Lobachevsky State University of Nizhny Novgorod — National Research University (UNN), Nizhny Novgorod, Russia  Iskander Akhatov, Skoltech Institute of Science and Technology (Skoltech), Moscow, Russia  Ramesh Chandra, University of Delhi, Delhi, India</p>		
09:30-11:00	Plenary Session 1		
Moderator:	Denis V. Butnaru, Sechenov University, Moscow, Russia		
09:30-10:00	<p>Key Speaker  Xing-Jie Liang  National Center for Nanoscience and Technology, Beijing, China  Nanomaterials parameters characterized for pharmaceutical development</p>		
10:00-10:30	<p>Key Speaker  Jean Paul Thiery  National University of Singapore, Singapore  How to Deal with the EMT Phenotypes in Carcinoma</p>		
10:30-11:00	<p>Key Speaker  Elena V. Zagaynova  Lobachevsky State University of Nizhny Novgorod — National Research University (UNN), Nizhny Novgorod, Russia  Fluorescence lifetime imaging for translational research in regenerative medicine</p>		
11:00-11:10	Exhibition Opening		
11:10-11:30	Break		
Hall	Sechenov	Hall	Pirogov
11:30-13:00	Biodesign	11:30-13:00	Digital Oncology
Moderators:	<p>Petr S. Timashev, Sechenov University, Moscow, Russia  Elena V. Zagaynova, Lobachevsky State University of Nizhny Novgorod — National Research University (UNN), Nizhny Novgorod, Russia  <i>Jointly with Nizhny Novgorod (UNN)</i></p>	Moderators:	<p>Marina I. Sekacheva, Sechenov University, Moscow, Russia  Natalia R. Polushkina, Biomedical Cluster, Skolkovo Foundation, Moscow, Russia  <i>Jointly with Skolkovo (Biomedical Cluster)</i></p>
11:30-11:45	<p>Sehyun Shin  Korea University, Seoul, South Korea  Microfluidic technologies for assessment blood rheology and thrombosis</p>	11:30-11:45	<p>Giuseppe Scuderi  Scientific and Technology Park of Sicily, Italy  Experience of State technical park of Sicily, Smart medicine and Medical IT in oncology</p>
11:45-12:00	<p>Daria S. Kuznetsova  Institute of Experimental Oncology and Biomedical Technologies, Privolzhsky Research Medical University, Nizhny Novgorod, Russia  FLIM imaging and heterogeneous scaffolds in bone tissue engineering</p>	11:45-12:00	<p>Vladimir Lazar V., WIN Consortium, Paris, France  Digital Precision Predictor:  New Model in Oncology</p>
12:00-12:15	<p>Boris W. Kramer  Maastricht University, Maastricht, Netherlands  Stem cell therapy — why have we not made more clinical progress?</p>	12:00-12:15	<p>Marina I. Sekacheva, Sechenov University, Moscow, Russia  Digital Models Based on Real-World Clinical Registries</p>
12:15-12:30	<p>Yury A. Rochev  National University of Ireland Galway, Ireland  Sechenov University, Moscow, Russia  Hyaluronan as a multifunctional therapeutic system</p>	12:15-12:30	<p>Filip Držák, Thermo Fisher Scientific  Genexus : revolution in precision Oncology because cancer don't wait and neither should you</p>
12:30-12:45	<p>Artem A. Antoshin  Sechenov University, Moscow, Russia  Investigating the behavior of 3D-cultivated stem cells in a capillary bioreactor under space flight conditions</p>	12:30-12:45	<p>Alexander A. Rozhkov  Sechenov University, Moscow, Russia  Possibilities of the Clinical Decision Support Program in Oncology</p>



09.11.2021 (Tuesday)			
12:45-13:00	Summig Up, Q&A	12:45-13:00	<b>Yuri I. Komarov</b> <b>N.N. Petrov National Medicine</b> <b>Research Center of oncology,</b> <b>Saint-Petersburg, Russia</b> Efficient ETL pipeline for oncology service assessment
13:00-14:00	Break.Poster Session		
Hall	Sechenov	Hall	Pirogov
14:00-15:45	Biodesign	14:00-16:00	Multimomics
Moderators:	<b>Petr S. Timashev</b> Sechenov University, Moscow, Russia <b>Stanislav A. Evlashin</b> Skoltech, Moscow, Russia <i>Jointly with Skoltech</i>	Moderators:	<b>Marina I. Sekacheva</b> Sechenov University, Moscow, Russia <b>Anton A.Buzdin</b> Sechenov University, Moscow, Russia, MIPT, Dolgoprudny, Russia <b>Denis V. Kuzmin</b> MIPT, Dolgoprudny, Russia <i>Jointly with MIPT</i>
14:00-14:30	<b>Invited talk</b> <b>Laichang Zhang</b> Edith Cowan University, Perth, Australia Mechanical behavior of 3D printed biomedical titanium alloy porous scaffolds	14:00-14:15	<b>Anton Buzdin</b> Sechenov University, Moscow, Russia MIPT, Dolgoprudny, Russia Integration of Genomic, Transcriptomic and Proteomic Data in Oncology
		14:15-14:30	<b>Ira-Ida Skvortsova</b> <b>Chair of EORTC PathoBiology Group,</b> <b>Belgium</b> Proteomic and lipidomic data for finding radioresistance and invasiveness biomarkers in breast cancer
14:30-14:45	<b>Yusuf T. Özkul</b> Erciyes University, Kayseri, Turkey Personalized Medicine	14:30-14:45	<b>Nikolay Borisov</b> Moscow Institute of Physics and Technology, Dolgoprudny, Russia Expression data normalization in oncology: technical details that change everything
14:45-15:00	<b>Ilya Okulov</b> University of Bremen, Bremen, Germany Hybrid metal-polymer composites for biomedical applications	14:45-15:00	<b>Ella Kim</b> Laboratory for Experimental Neurooncology, Johannes Gutenberg University Medical Centre Mainz, Germany Transcriptome of glioblastoma stem cells and impacts on therapy
15:00-15:15	<b>Stanislav A. Evlashin</b> Skoltech, Moscow, Russia Metal 3D printing for medical implants	15:00-15:15	<b>Sergey Larin</b> Dmitry Rogachev National Medical Research Center of Pediatric Hematology, Oncology and Immunology, Moscow, Russia OMICS data for therapeutic cell based technologies in oncology
15:15-15:30	<b>Robert A. Guryanov</b> Clinic of plastic surgery "MedLaz", Moscow, Russia Computer-assisted genioplasty	15:15-15:45	<b>Xinmin Li</b> Technology Center for Genomics & Bioinformatics, University of California, Los Angeles, USA Changing Technologies of RNA Sequencing and their Applications in Clinical Oncology: From Bulk, Single-Cell to Spatial RNA Sequencing
15:30-15:45	<b>Svintsitski Rouslan</b> 3DCERAM, Limoges, France Ceramic 3D printing for biomedical applications		
15:45-16:00	Break	15:45-16:00	<b>Gonçalo Carvalho</b> Genotyping TSS, Thermo Fisher Scientific Innovative microarray solutions for predictive genomics



09.11.2021 (Tuesday)			
Hall	Sechenov	Hall	Pirogov
16:00-17:30	Biodesign	16:00-17:30	Medical Elementology in Cardiology and Oncology
Moderators:	Petr S. Timashev Sechenov University, Moscow, Russia Evgeny A. Shirshin Moscow State University, Moscow, Russia <i>Jointly with Moscow State University</i>	Moderators:	Marina I. Sekacheva Sechenov University, Moscow, Russia Anatoly V. Skalny Sechenov University, RUDN University, Moscow, Russia Timur H. Fatkhudinov RUDN University, Moscow, Russia <i>Jointly with RUDN University</i>
16:00-16:15	Gleb S. Budylin, Alexey V. Lychagin, Marina M. Lipina Sechenov University, Moscow, Russia Methods of optical spectroscopy for the diagnosis of extra- and intra-articular injury	16:00-16:15	Jan Olav Oset Inland Norway University of Applied Sciences, Elverum, Norway Metabolic syndrome, obesity and diabetes
16:15-16:30	Natalia R. Rovnyagina, Petr S. Timashev, Yuriy M. Efremov, Andrey A. Svistunov Sechenov University, Moscow, Russia Mechanical Enhancement and Kinetics Regulation of Fmoc-Diphenylalanine Hydrogels by Thioflavin T	16:15-16:30	Philippe Collery Société de Coordination de Recherches Thérapeutiques, Development of Metal-Based Anticancer Drugs, Algajola, France Dual role of selenium and antioxidants in cancer
16:30-16:45	Boris P. Yakimov, Irina I. Vlasova Valerian E. Kagan, Sechenov University, Moscow, Russia Monitoring of degradation of the pericardium scaffolds by label-free multiphoton fluorescence lifetime imaging	16:30-16:45	Susan J.S. Chang Taipei Medical University, Taipei, Taiwan Association between trace elements and obesity-related comorbidities
16:45-17:00	Lihi Adler-Abramovich Goldschlager School of Dentistry, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel Bioinspired structures for regenerative medicine	16:45-17:00	Timur H. Fatkhudinov RUDN University, Moscow, Russia Zinc-dependent Endopeptidases
17:00-17:15	Maxim E. Darvin Charite Medical University, Berlin, Germany Multiphoton detection and characterization of dermal cells in humans in vivo	17:00-17:15	Alexey A. Tinkov Sechenov University, Moscow, Russia Biometals in metabolic syndrome and obesity
17:15-17:30	Maciej S. Lesniak Department of Neurological Surgery, Feinberg School of Medicine, Northwestern University, Chicago, USA Neural Stem Cell Delivery of Oncolytic Viruses	17:15-17:30	Tatiana V. Korobeynikova RUDN University, Moscow, Russia Micronutrients in cancer patients. Enteral nutrition: towards personalized approach
17:30-18:00	Break. Poster Session		
Hall	Sechenov		
18.00-19.30	Young Scientists' Session		
Moderators:	Denis V. Butnaru, Petr S. Timashev, Marina I. Sekacheva, Dmitry V. Telyshev, Vadim V. Tarasov Sechenov University, Moscow, Russia		



10.11.2021 (Wednesday)					
08:00-09:00	Joining the online conference. Introduction to the technical information				
Hall	Sechenov				
09:00-11:00	Plenary Session 2				
Moderator:	Alexander N.Lukashev, Sechenov University, Moscow, Russia				
09:00-09:30	Alexander N.Lukashev Sechenov University, Moscow, Russia COVID aftermath				
09:30-10:00	Roman A.Ivanov Sirius University of Science and Technology, Sochi, Russia Gene Therapy: Promise vs.Reality				
10:00-10:30	Inna V. Dolzhikova FSBI National Research Center for Epidemiology and Microbiology named after the honorary academician N. F. Gamaleya of the Russian Ministry of Health, Moscow, Russia Safety and effectiveness of the Sputnik V vaccine: experience of use in Russia and abroad				
10:30-11:00	Sergey M. Deyev Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow, Russia Institute of Molecular Medicine, Sechenov University, Moscow, Russia Oncotheranostics. Successes, problems, outlook				
11:00-11:30	Break				
Hall	Sechenov	Hall	Pirogov	Hall	Abrikosov
11:30-13:00	Digital Cardiology: Big Data, Data Processing Algorithms	11:30-13:00	Technological Platforms for Creation of Innovative Gene Therapy Drugs and Vaccines	11:30-13:00	Molecular Oncology and Targeted Drug Delivery
Moderators:	Philipp Yu. Kopylov Sechenov University, Moscow, Russia Simon T. Matskeplishvili Faculty of Fundamental Medicine Moscow State University, Moscow, Russia <i>Jointly with Moscow State University</i>	Moderators:	Vadim V. Tarasov, Sechenov University, Moscow, Russia Vladimir M. Trukhan, Sechenov University, Moscow, Russia Roman A.Ivanov, Sirius University of Science and Technology, Sochi, Russia <i>Jointly with Sirius</i>	Moderators:	Andrey A. Zamyatnin Sechenov University, Moscow, Russia Alexander G. Tonevitsky HSE University, Moscow, Russia <i>Jointly with HSE University</i>
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		11:40-11:50	Olga Grigorieva Generium, Moscow, Russia Prospects for the develop- ment of cellular technolo- gies in the Russian Federation		
		11:50-12:00	Alexey V. Lychagin, David A. Pogosyan, Marina M.Lipina Sechenov University, Moscow, Russia Practical experience in the application of biological cartilage restoration methods	11:45-12:00	Surinder M. Soond University of Surrey, UK BAX protein targeting by Cathepsin S: 'friend or foe?'
11:50-12:10	Simon T. Matskeplishvili Lomonosov Moscow state university medical center, Moscow, Russia Digital technologies in cardiology — evolution or revolution?	12:00-12:15	Mikhail Yu. Samsonov R-Pharm, Moscow, Russia Real-life clinical practice research in the covid era	12:00-12:15	Diana V. Maltseva Faculty of Biology and Biotechnology, HSE University, Moscow, Russia Knockdown of CD44 prevents metastasis in HT-29 xenograft colorectal cancer model





10.11.2021 (Wednesday)					
12:10-12:30	<b>Bruining Nico</b> Erasmus MC, Rotterdam, The Netherlands Digital Health @ the European Society of Cardiology	12:15-12:30	<b>Vasily N. Lazarev</b> FSBI Federal Scientific and Clinical Center for Physical and Chemical Medicine, FMBA of Russia, Moscow, Russia A neoantigen-based peptide vaccine for colorectal cancer	12:15-12:30	<b>Maria Raygorodskaya</b> Faculty of Biology and Biotechnology, HSE University, Moscow, Russia Low expression of CD24 is associated with poor survival in colorectal cancer
12:30-12:45	<b>Philipp Yu. Kopylov</b> Sechenov University, Moscow, Russia Advanced features of the "old" ECG	12:30-12:45	<b>Helgi Schioth</b> Uppsala University, Sweden New gene therapies using effective DNA vectors	12:30-12:45	<b>Alessandro Parodi</b> Sechenov University, Moscow, Russia Effect of the crosslinking on albumin nanoparticles delivery properties
12:45-13:00	<b>Alexander Bykov</b> R-Pharm, Moscow, Russia Federal Diabetes Program: Focus on Decreasing Cardiovascular Complications	12:45-13:00	<b>Valerya S. Drozd</b> University ITMO (SCAMT), Saint- Petersburg, Russia DNA-constructs based on binary antisense technology towards selective gene therapy	12:45-13:00	<b>Summig Up,</b> Q&A
13:00-13:30	<b>Break. Poster Session</b>				
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<b>Moderators:</b>	<b>Dmitry V. Telyshev</b> Sechenov University, Moscow, Russia <b>Marat F. Bulatov</b> Scientific and Technological Center of Unique Instrumentation of RAS, Moscow, Russia	<b>Moderators:</b>	<b>Alexander N. Lukashev</b> Sechenov University, Moscow, Russia <i>Jointly with Jan Felix Drexler, Charité, Berlin, Germany</i>	<b>Moderator:</b>	<b>Roman A. Akasov</b> Institute of Bioorganic Chemistry, RAS, Moscow, Russia
13:30-13:45	<b>Igor Meglinski</b> Sechenov University, Moscow, Russia <b>Aston University,</b> <b>Birmingham, UK</b> Digital Histo-Bio-Photonics and Optical Biopsy with Classic and Non-Classic Light	13:30-13:55	<b>Jan Felix Drexler</b> Charite University, Berlin Evolutionary origins of SARS-CoV-2	13:30-13:45	<b>Alexander S. Erofeev</b> NUST MISIS, Moscow, Russia High-resolution Label-free 3D mapping of pH, Oxygen and ROS of single living cells
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14:00-14:15	<b>Demid D. Khokhlov</b> Scientific and Technological Center of Unique Instrumentation, Russian Academy of Sciences, Moscow, Russia Non-invasive imaging of skin microcirculation in various body areas	13:55-14:15	<b>Andrei A. Deviatkin</b> Sechenov University, Moscow, Russia Rabies and tick-borne encephalitis —so new, yet so ancient	14:00-14:15	<b>Alexander Efimov</b> Tampere University, Tampere, Finland Antimicrobial phthalocyanines activated by indoor light: Protection against viruses, fungi and drug-resistant bacteria



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14:15-14:30	<b>Gennadii A. Piavchenko</b> Sechenov University, Moscow, Russia Structural and Functional Properties of Rat Cerebral Cortex in Acute Respiratory Arrest and Cardiac Cessation	14:15-14:40	<b>Marcel Muller</b> Charite University, Berlin, Germany Risk assessment and development of host- directed drugs for emerging coronaviruses	14:15-14:30	<b>Ekaterina Osmekhina</b> AALTO University, Helsinki, Finland Virulence inhibitors against drug resistant pathogens
14:30-14:45	<b>Dmitry I. Ryabkin</b> Sechenov University, Moscow, Russia Applications and benefits of laser tissue welding and laser-tissue soldering	14:40-15:00	<b>Alexander N. Lukashev</b> Sechenov University, Moscow, Russia Spread of the invasive mosquito Ae. albopictus in the Krasnodar Territory	14:30-14:45	<b>Ramesh Chandra</b> University of Delhi, Dehli, India From Bench to Bed Side: Opium Alkaloid — Noscapine: A Potential Chemotherapeutic Agent
14:45-15:00	<b>Summig Up, Q&amp;A</b>			14:45-15:00	<b>Indrajit Roy</b> University of Delhi, Delhi, India Nanomaterials for photoactivated therapies
15:00-15:30	<b>Break</b>	15:00-15:15	<b>Olga A. Gromova</b> Institute of Pharmacoinformatics, Federal Research Center "Informatics and Management" RAS, International Foundation for the Development of Biomedical Technologies named after V.P. Filatova, Moscow, Russia Rehabilitation of COVID-19 patients using polypeptide therapy	15:00-15:15	<b>Ekaterina Trifanova</b> FSRC "Crystallography and photonics" RAS Analysis of photoluminescent properties of upconversion nanophosphors
		15:15-15:30	<b>Break</b>	15:15-15:30	<b>Giacomo Musile</b> University of Verona, Verona, Italy A new method based on terbium-induced fluorescence for fast analysis of Carbohydrate Deficient Transferrin (CDT) the most reliable biomarker of alcohol abuse in clinical and forensic contexts
<b>Hall</b>	<b>Sechenov</b>	<b>Hall</b>	<b>Pirogov</b>		
15:30-17:00	<b>Thrombogenesis: experiment, mathematical models, clinical applications</b>	15:30-17:15	<b>Controlled Biomaterials</b>		
<b>Moderators:</b>	<b>Yuri V. Vassilevski</b> Sechenov University, Moscow, Russia <b>Mikhail A. Panteleev</b> Center for Theoretical Problems of Physicochemical Pharmacology RAS, Moscow, Russia	<b>Moderator:</b>	<b>Olga A. Sindeeva</b> Skolkovo Institute of Science and Technology, Moscow, Russia		



10.11.2021 (Wednesday)			
15:30-15:55	<b>Key Speaker</b> <b>Rajat Mittal</b> <b>John Hopkins University,</b> <b>Baltimore, USA</b> In-Silico Models of Cardiac Thrombogenesis — from Fundamental Insights to Clinical Applications	15:30-15:55	<b>Wolfgang Parak</b> <b>University of Hamburg, Hamburg, Germany</b> Uptake of colloids by cells
15:55-16:10	<b>Georgy Guria</b> <b>National medical research center for hematology;</b> <b>MIPT, Moscow, Russia</b> Intravascular blood coagulation and fibrinolysis. Experimental and theoretical approach	15:55-16:20	<b>Igor Nabiev</b> <b>Université de Reims Champagne, Reims, France</b> Biomolecular function control under the strong light-matter coupling conditions
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17:00-17:30	Break	17:00-17:15	<b>Konstantin Shevchenko</b> <b>The Institute of Cytology RAS, St-Petersburg, Russia</b> Rapidly biodegradable nanoparticles for delivery of anticancer drugs to cancer cells
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Moderator:	Dmitry V. Telyshev, Sechenov University, Moscow, Russia		
17:30-18:00	<b>Massoud Vosough</b> <b>Royan Institute for Stem Cell Biology, Tehran, Iran</b> COVID19 and Innovative Cell-based therapies		
18:00-18:30	<b>Dmitry Malin,</b> <b>Department of Medicine, University of Wisconsin Carbone Cancer Center, University of Wisconsin-Madison, Madison, USA</b> Developing cell-based models for fundamental and translation cancer research		
18:30-19:00	<b>Igor R. Efimov, George Washington University, Washington DC USA</b> Wireless networks of transient, implantable, and wearable cardiac bioelectronics		
19:00-19:15	Final Remarks. Closing Ceremony		



11.11.2021 (Thursday)	
08:00-09:00	Introduction to the technical information
Hall	Abrikosov
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Moderator:	Vladimir E. Frankevich FSBI «National Medical Research Center for Obstetrics, Gynecology and Perinatology named after V.I.Kulakov», Ministry of Health of the Russian Federation, Moscow, Russia
09:00-09:20	Kira V. Vyatkina FGBU VOIN Saint-Petersburg Academic University of the Russian Academy of Sciences named after J.I. Alferova, Saint-Petersburg, Russia Applications of De Novo Sequencing in Cancer Cell Line Analysis
09:20-09:40	Irina A. Tarasova V.L. Talrose Institute for Energy Problems of Chemical Physics N.N. Semenov Federal Research Center of Chemical Physics, Russian Academy of Sciences Ultrafast mass spectrometry based protein profiling for cancer research and diagnostics
09:40-10:00	Alexey A. Sysoev National Research Nuclear University MEPhI, Moscow, Russia Physics and technology of advanced MS instruments for medical diagnostics
10:00-10:20	Svetlana S. Novikova Institute of Biomedical Chemistry (IBMC), Moscow, Russia Mass spectrometric analysis of proteomic signatures of extracellular vesicles for lung cancer recognition
10:20-10:40	Vladimir E. Frankevich FSBI «National Medical Research Center for Obstetrics, Gynecology and Perinatology named after V.I.Kulakov», Ministry of Health of the Russian Federation, Moscow, Russia The study of metastasis into signalling lymph nodes upon breast cancer: from molecular mechanisms to express diagnostics <i>Supported by M-Spectr</i>
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11:10-11:30	Cravotto Giancarlo University of Turin, Turin, Italy / Sechenov University, Moscow, Russia Enabling technologies in analytical samples preparation
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Moderator:	Anna V.Maslennikova Privolzhsky Research Medical University, Nizhny Novgorod, Russia
12:00-12:25	Simon Joosse University Medical Center Hamburg-Eppendorf, Germany, Hamburg Liquid biopsy: prognostic and predictive biomarkers in cancer management
12:25-12:50	Majid Warkiani University of Technology Sydney, Sydney, Australia / Sechenov University, Moscow, Russia Integrated Microfluidic Systems for Cancer Liquid Biopsy
12:50-13:05	Malek A.V. Subcellular technology Lab, N.N. Petrov's NMRC of oncology Qualitative and quantitative analysis of plasma extracellular nanovesicles for cancer diagnostics and monitoring
13:05-13:20	Alexey S. Rzhevskiy Sechenov University, Moscow, Russia Disseminated tumour cells in early diagnosis and prognostics of prostate cancer
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<b>B-03</b>	Matrix-bound nanovesicles in 2D- and 3D culture models	<b>Maria Peshkova</b> , Nastasia Kosheleva, Nataliya Kebets, Anastasia Shpichka, Peter Timashev, Xing-Jie Liang
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The publishing house publishes quarterly medical journals "Practical Pulmonology" (VAK), "Asthma and Allergy" (both official publications of the Russian Respiratory Society), "Nervous Diseases" (VAK), "Atmosphere. News of Cardiology" (VAK), "General Medicine" (official publication of the Pirogov Russian National Research Medical University, VAK), Bulletin of the National Society for the Study of Parkinson's Disease and Movement Disorders. The publishing house annually publishes 5-10 editions on topical issues of respiratory diseases, neurology, cardiology, the latest technologies and methods of diagnosis and treatment.



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The magazine provides multilateral dialogue on a program implementation of health care, development of modern medical technologies, enhancement of organizational activities, search of effective innovative solutions, serves as the tool in personnel policy strengthening reputation and stimulating the best employees providing progress and professional success of domestic medicine. Read articles of the colleagues and join dialogue on [www.ktovmedicine.ru](http://www.ktovmedicine.ru).



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Web-site: [www.lvrach.ru](http://www.lvrach.ru)

The journal “Treating doctor” is a professional medical publication. Since 2008, the decision of the Presidium of the Supreme Attestation Commission (VAK), is included in the list of leading peer-reviewed scientific journals. The magazine has a practical focus and publishes articles of leading experts, opinion leaders, highlighting the current problems of the clinic, diagnosis and treatment of a wide range of nosologies; optimal for today algorithms of diagnostics and therapy of internal diseases, cupping of urgent states. Our main readers are practicing physicians of various specialties: physicians, pediatricians, endocrinologists, cardiologists, rheumatologists, psychoneurologists, pulmonologists, gastroenterologists, otolaryngologists, dermatovenereologists, infectious disease specialists, urinephrologists and gynecologists, family doctors, ambulance doctors. The magazine is received monthly by the heads of public health services, chief doctors, deputy head physicians on the medical side, heads of departments, rectors of universities, heads of departments and teachers of medical schools. “Treating doctor” — 12 issues a year. Topics for the year: Pediatrics. Uronephrology. Cardiology. Angiology. Gastroenterology. Hepatology. Allergology. Rheumatology. Psychoneurology. Dermatovenereology. Nutrition. Proctology. Bronchopulmonology. ENT diseases. Infections. Vaccine prophylaxis. Endocrinology. Gynecology. Neonatology.

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Web-site: [www.con-med.ru](http://www.con-med.ru)

Medical Marketing Agency «Mediamedika» publishes periodicals for postgraduate education of doctors of various specialties: journal «Consilium Medicum», applications “Consilium Medicum” — “Neurology”, “Pediatrics”, “Surgery”, “Gastroenterology”, “Diseases of the respiratory system”, “Dermatology”; magazines “Polyclinic doctor's handbook”, “Systemic hypertension”, “Cardiosomatics”, “Gynecology”, “Modern Oncology”, “Psychiatry and psychopharmacotherapy”, “Psychiatric disorders in general medicine”, “The pharmacist's guide”, “Infections in surgery”; the newspaper “District therapist”, “District pediatrician”, “Newspaper of the Neurologist”, “Diary of a psychiatrist”, “Cardiogazeta”, “Gastrointestinal”, “Women's consultation”, “Pervostolnik”, “Dental Tribune”; as well as books, handbooks and methodical guides. All specialized publications are distributed free of charge.





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Is one of the largest Russian medical publishers. Founded in 1993 by a group of prominent Russian medical scientists. It publishes 25 peer-reviewed scientific and practical medical journals, 24 of which are included in the list of VAK, including journals: "Pathology Archive", "Otorhinolaryngology Bulletin", "Ophthalmology Bulletin", "Questions of balneology, physiotherapy and curative physical culture", "Evidence Gastroenterology", "Evidence Cardiology", "Questions of Neurosurgery "named after N.N. Burdenko", "Journal of Neurology and Psychiatry. S.S. Korsakov", "Cardiology and Cardiovascular Surgery", "Clinical Dermatology and Venereology", "Laboratory Service", "Oncology. Journal named after P.A. Herzen, Problems of Reproduction, Problems of Endocrinology, Preventive Medicine, Russian Rhinology, Russian Dentistry, Russian Bulletin of the Obstetrician-Gynecologist, Stomatology, Forensic Expertise, Phlebology, "Surgery. Journal named after N.I. Pirogov, Endoscopic Surgery.

Many of them are presented in the international bibliographic databases MEDLINE, SCOPUS (EMBASE), GOOGLE SCHOLAR, RINC, Web of Science (Russian Science Citation Index — RSCI).



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The Publishing House “Russian Physician” was established in 1995 and continues the tradition of publishing scientific and practical journals for specialists in Russia.

Such journals as: “Doctor” — the leading medical journal intended for doctors of all specialties, scientists and teachers of medical schools, “Molecular Medicine”, which publishes the results of scientific researches in such areas as the study of the molecular and genetic bases of the etiology and pathogenesis of socially significant diseases with the purpose of developing new diagnostic methods and methods for effective therapy of human diseases, including on the basis of nuclear medicine technologies, “Pharmacy”, which covers all issues related to the theory and practice of modern pharmaceuticals, the technology of manufacturing medicines, obtaining and researching medicines, “Sports Medicine: Science and Practice” is the first Russian specialized scientific and practical publication in the field of sports medicine and anti-doping support of sports, “Medical Sister”, “Questions of Biological, Medical and Pharmaceutical Chemistry” are recommended by the VAK and are included in the Scientific Electronic Library and occupy the leading position in the index of scientific citation.



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