

The 2nd International Symposium "Physics, Engineering and Technologies for Biomedicine"

October 10, Tuesday

MEPhI, Assembly hall

09.00 - 10.00	Registration	
10.00 - 10.30	Opening ceremony, Greeting speeches	
10.30 - 11.30	Roman Zubarev , Karolinska Institute, Sweden <i>Towards 1000 years long human lifetime - fighting the isoaspartate</i>	
11.30 - 12.00	Coffee-break	
Plenary Session I		<i>Chair Prof. H. Gutbrod</i>
12.00 - 12.45	Paras Prasad , University at Buffalo, USA, MEPhI, Russia <i>Biophotonics and Nanomedicine for Theranostics: Challenges and Opportunities</i>	
12.45 - 13.30	Roger Kamm , MIT, USA <i>Microfluidic technologies for drug screening, point-of-care assays, and disease models: Applications to cancer</i>	
13.30 - 14.00	Andrei Kabashin , CNRS, Aix-Marseille University, France, MEPhI <i>Methods and materials of nanotheranostics</i>	
14.00 - 15.00	Lunch	
Plenary Session II		<i>Chair Prof. A. Kabashin</i>
15.00 - 15.30	Andrey Kaprin , National Medical Research Center of Radiology, Russia <i>Biomedicine technologies for modern oncoradiology</i>	
15.30 - 16.00	John Mendelsohn , The Univ. of Texas MD Anderson Cancer Center, USA <i>Precision Cancer Medicine: Achievements and Prospects</i>	
16.00 - 16.30	Alexander Potapov , Research Institute of Neurosurgery, Russia <i>Biophotonics in Neurosurgery</i>	
16.30 - 17.00	Oleg Loran, Dimitry Pushkar , Russian Medical Academy of Continuous Professional Education of the Ministry of Health, A.I. Yevdokimov Moscow State University of Medicine and Dentistry, Russia <i>Diagnosis and therapy of prostate cancer: from genomics and proteomics to artificial intelligence</i>	
17.00 - 17.30	Coffee-break	

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Plenary Session III		<i>Chair Prof. A. Postnov</i>
17.30 - 18.00	Vladimir Mironov , 3D Bioprinting Solutions, Russia <i>Organ Printing</i>	
18.00 - 18.30	David Smith , Mayo Clinic, USA <i>The next generation sequencing revolution and how it will transform how we treat cancer patients</i>	
18.30 - 19.00	Vladimir Lazar , WIN Consortium, France <i>Development and validation of a new technology and biomarker strategy to predict the efficacy of combinations of targeted therapies: The Model of Lung Cancer</i>	
19:00 - 21.00	Welcome party	

The 2nd International Symposium "Physics, Engineering and Technologies for Biomedicine"

October 11, Wednesday

MEPhI, Conf. Hall 3rd floor

Invited lectures

09.30 – 10.00	Registration	
Session I		<i>Chair Prof. V. Timoshenko</i>
10.00 - 10.30	Sergey Deyev , Institute of bioorganic chemistry RAS; MEPhI, Russia <i>Novel approaches for cancer diagnosis and treatment</i>	
10.30 – 11.00	Junle Qu , University of Shenzhen, China <i>Fluorescence lifetime imaging and its applications in cellular microenvironment measurement and auxiliary diagnosis</i>	
11.00 - 11.30	Anderson Gomes , Federal University of Pernambuco, Brazil <i>Optical Coherence Tomography: from bioimaging enhanced by nanoparticles to patient evaluation in Dentistry and Rheumatology</i>	
11.30 – 12.00	Coffee-break	
Session II		<i>Chair Prof. V. Kumeiko</i>
12.00 - 12.30	Victor Timoshenko , MSU, MEPhI, Russia <i>Porous silicon nanoparticles for biomedical applications</i>	
12.30 - 13.00	Igor Nabiev , University of Reims, France, MEPhI, Russia <i>Quantum dots conjugates in functional imaging and highly sensitive biochemical assays</i>	
13.00 – 13.30	Anton Fojtik , Czech Technical University in Prague, Czech Republic; MEPhI, Russia <i>NANO – Fascinating Phenomenon</i>	
13.30 - 15.00	Lunch, Poster section overview	
Session III		<i>Chair Prof. A.Fojtik</i>
15.00 - 15.30	Natalia Epstein , MEPhI, Russia <i>The Modern Learning Factory of the non-profit partnership “Kaluga pharmaceutical cluster”</i>	
15.30 - 16.00	Vladimir Lysenko , CNRS, INL, INSA de Lyon, France; MEPhI, Russia <i>Silicon as photoelectric screen for cell imaging</i>	
16.00 - 16.30	Irina Nazarenko , Medical Center University of Freiburg, Germany <i>“Liquid biopsy” as a new biomedical approach in cancer diagnostics: benefits and pitfalls</i>	
16.30 - 17.00	Coffee-break	

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Session IV		<i>Chair Prof. V. Lysenko</i>
17.00 - 17.30	Orlova Anna , ITMO University, Russia <i>Multimodal nanosystems for theranostics</i>	
17.30 - 18.00	Yury Rakovich , Materials Physics Center, Spain; MEPhI, Russia <i>Organic-inorganic hybrid nanosystems for Photodynamic therapy</i>	
18.00 - 18.30	Vadim Kumeiko , Far Eastern Federal University, Russia <i>Development of Translational Medical Cluster of the Far Eastern Federal University</i>	
19.00 - 21.00	Poster Session Reading hall of the library, 2d floor	<i>Chair A. Postnov</i>

The 2nd International Symposium "Physics, Engineering and Technologies for Biomedicine"

October 12, Thursday

MEPhI, Conf. Hall 3rd floor

Invited lectures

09.30 – 10.00	Registration	
	Session V	<i>Chair Prof. A. Postnov</i>
10.00 - 10.30	Dimiter Balabanski , ELI-NP, IFIN-HH, Bucharest, Romania <i>Research on medical radioisotopes at ELI-NP: Day-one studies and prospective societal benefits</i>	
10.30 - 11.00	Alexey Lipengolts , N.N. Blokhin Russian Cancer Research Center <i>Current Status of Neutron Capture Therapy in the World and in Russia.</i>	
11.00 - 11.30	Stepan Ulyanenko , National Medical Research Center of Radiology, Russia <i>Opportunities in the proton therapy: brief analysis of one year experience at Russian proton scanning beam facility</i>	
11.30 – 12.00	Coffee-break	
	Session VI	<i>Chair A. Lipengolts</i>
12.00 - 12.30	Fabian Isensee , German Cancer Research Center, Germany <i>Medical Informatics in Cancer Research – From Images to Information</i>	
12.30 - 13.00	Marine Amouroux , CNRS CRAN/ENSEM, France <i>Consumer vs. an innovative devices' ability to generate images for teledermatology</i>	
13.00 – 13.30	Radek Pleskac , GSI/FAIR Darmstadt, Germany <i>BIOMAT Project at FAIR</i>	
13.30 - 15.00	Lunch	
	Session VII	<i>Chair Prof. S. Ulyanenko</i>
15.00 - 15.30	Walter Blondel , CNRS CRAN/ENSEM, France <i>Estimation of in vivo optical properties of human skin carcinomas using spatially resolved multimodal spectroscopy: clinical study preliminary results</i>	
15.30 - 16.00	Victor Loschenov , Prokhorov General Physics Institute of RAS; MEPhI, Russia <i>Modern instrumental and methodological approaches for brain tumors theranostics</i>	
16.00 - 16.30	Anabela Da Silva , CNRS/Institut Fresnel, France <i>Probing Biological Tissues With Elliptically Polarized Light</i>	
16.30 - 17.00	Nickolai Usov , Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, MEPhI, Russia <i>In Silico Before in-Vitro: how to predict specific absorption rate of magnetic nanoparticle assembly</i>	
17.00 - 17.30	Coffee-break	

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Session VIII		<i>Chair Prof. D. Balabanski</i>
17.30 - 18.00	Indrajit Roy , University of Delhi, India <i>Inorganic-organic hybrid nanomaterials for targeted and controlled drug</i>	
18.00 - 18.30	Yuri Kistenev , TSU, Russia <i>Applications of molecular imaging and machine learning methods for medical diagnostics</i>	
18.30 - 19.00	Alexey Kucherik , Stoletov Vladimir State University, Russia <i>Metal-carbon nanoclusters for SERS</i>	
19.00 – 21.00	Poster Session Reading hall of the library, 2d floor	<i>Chair A. Kharin</i>

The 2nd International Symposium "Physics, Engineering and Technologies for Biomedicine"

October 13, Friday

MEPhI, Conf. Hall 3rd floor

Invited lectures

09.00 - 10.00	Registration	
Session IX		<i>Chair Prof. V. Oleinikov</i>
10.00 - 10.30	Sergey Suchkov , PhysBio, MEPhI, I.M.Sechenov First Moscow State Medical University, Russia <i>Translational medicine: myth or reality?</i>	
10.30 - 11.00	Sergey Zaitsev et al , MEPhI, Russia <i>Recognition of leucocytes from blood and bone marrow in the diagnosis of acute leukemias</i>	
11.00 - 11.30	David Smith , Mayo Clinic, USA <i>Different whole genome sequencing strategies to characterize oropharyngeal squamous cell carcinomas and how this could transform the clinical treatment of patients with this cancer</i>	
11.30 - 12.00	Coffee-break	
Session X		<i>Chair S. Zaitsev</i>
12.00 - 12.30	Rudolf Steiner , ILM; Messtechnik an der Universität Ulm, Germany, MEPhI, Russia <i>Laser-tissue interaction on the molecular level</i>	
12.30 - 13.00	Hans Lentzen , MELEMA Pharma GmbH, Germany <i>From a medicinal plant to a modern genetically engineered biological for personalized medicine – an example of drug design and bioengineering</i>	
13.00 - 13.30	Igor Pronin , Research Institute of Neurosurgery, Russia <i>Advanced imaging of brain gliomas</i>	
13.30 - 15.00	Lunch	

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Invited lectures

Session XI		<i>Chair Prof. S. Suchkov</i>
15.00 - 15.30	Irina Zavestovskaya , MEPhI, Russia <i>Scientific and educational agenda of the Institute of Engineering Physics for Biomedicine</i>	
15.30 - 16.00	Natali Bakhtina , Karlsruhe Institute of Technology, Germany <i>Microfluidic approaches for small motile organisms handling and tracking during magnetic resonance microscopy</i>	
16.00 - 16.30	Galina Belostotskaya , IEPHB RAS; Institute of Experimental Medicine, Almazov National Medical Research Centre, Russia <i>Development of a bifunctional translational platform to develop therapeutics of the newest generation targeted for the post-infarction condition management and being applied into biopharma</i>	
16.30 - 17.00	Coffee-break	
Session XII		<i>Chair Prof. I. Zavestovskaya</i>
17.00 - 17.30	Penny J. Beuning , Northeastern University, USA <i>Harnessing DNA damage processing enzymes for biotechnology and human health</i>	
17.30 - 18.00	Igor Meglinski , University of Oulu, Finland; MEPhI, Russia <i>Encapsulated bio-sensors for non-invasive stress assessment of aquatic animals for environmental monitoring</i>	
18.00 - 18.30	Vladimir Oleinikov , Institute of Bioorganic Chemistry; MEPhI, Russia <i>Correlative microscopy: a potent tool for biomedicine</i>	
19.00 – 21.00	Conference dinner	

The 2nd International Symposium "Physics, Engineering and Technologies for Biomedicine"

October 14, Saturday

Hotel Intourist Kolomenskoe

Invited lectures

09.30 - 10.00	Registration	
	Session XIII	<i>Chair Prof. A. Kabashin</i>
10.00 - 10.30	Alexander Grishin , KTH Royal Institute of Technology, Sweden <i>Biocompatible Films and Nanofibers for Bioengineering, Multimodal Bioimaging and Sensors</i>	
10.30 - 11.00	Carlos Malpica , Metabolon, USA <i>New targets from the human genome and second genome with metabolomics</i>	
11.00 - 11.30	John Milford Aitken , 1000 Airplanes Ltd, New Zealand <i>International Cooperation in the Global Search For new Antimicrobial and Pharmaceutical Therapies - A Joint New Zealand Russian model to advance the Scientific Effort</i>	
11.30 - 12.00	Shawn Norman Murphy , Partners HealthCare System Inc, USA <i>Integrating Genomic and Clinical Data for Precision Medicine</i>	
12.00 - 13.00	Coffee-break	
13.00 - 15.00	Round table «Translational Medicine through the View of Hi-Tech, Biopharma, Clinical Practice And Education» Co-Chairs: Sergey Suchkov, Victor Timoshenko, Alexandr Tyukavin, John Mendelsohn, Shawn Norman Murphy, Vladimir Lazar Participants: I. Zavestovskaya, A. Roziev, Yury Rakovich, Indrajit Roy, Carlos Malpica, Galina Belostotskaya, Nikolai Bovin, John Milford Aitken, Natalia Bakhtina, Aleksey Moskovtsev, Vladimir Oleinikov, Yuri Kistenev, Junle Qu, Irina Nazarenko, Aleksandr Gluhov, Evgeniya Kogan, Sergey Bolevich, Maria Studeneva, Leonid Levkovich-Maslyuk, David Smith, Anastasiya Voronkova, Arsenii Sadykov, Vladimir Bodu, Christian Garbe, Paras Prasad, Anton Fojtik, Igor Meglinski, Andrey Kabashin, Piotr Timashev, Rudolf Steiner	
15.00 - 16.00	Closing ceremony	
16.00 - 18.00	Guide tour on Moscow	