



## Program of LALS-2023

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# 17<sup>TH</sup> INTERNATIONAL CONFERENCE ON LASER APPLICATIONS IN LIFE SCIENCES

<https://lals.sciencesconf.org>



15-17 October 2023  
Muğla, Turkey

## ***Dear Participants,***

*On behalf of the Organizing Committee, we invite you to attend the “17th International Conference on Laser Applications in Life Science” (LALS-2023).*



*The conference is held from October 15-17, 2023, at the Convention Centre of the Liberty Hotels Lykia/Oludeniz in Muğla, Turkey.*

*The aim of LALS-2023 is to provide a global platform for researchers, engineers, and physicians to present and discuss recent optical techniques and innovations aimed at applications in life science. We hope to bring together professionals and scientists from various areas of life sciences to introduce novel biophotonics methods to healthcare professionals, encourage knowledge exchange, and promote the establishment of cooperation ventures. The scientific program will include plenary and invited talks.*

*We welcome you to the conference and wish a fruitful participation and enjoyment at the beautiful place.*

*Best regards,  
Conference chair,  
Prof., Dr. Kirill Larin (University of Houston, USA)*





## 17th International conference on Laser Applications in Life Sciences

15-17 October 2023, Muğla (Turkey)

### Conference Chair

Kirill Larin (University of Houston, USA)

### International Advisory Board

Name	Affiliation	Country
R. Ansari	NASA Glenn Research Center, Cleveland	USA
W. Blondel	University of Lorraine / CRAN, Nancy	France
A. Bykov	University of Oulu	Finland
A. Chikishev	M.V. Lomonosov Moscow State University	Russia
O. Conde	Universidad de Cantabria	Spain
M. Darwin	Charité Universitätsmedizin, Berlin	Germany
H. Ma	Tsinghua University	China
H. Kano	University of Tsukuba	Japan
M. Kirillin	Institute of Applied Physics RAS, N. Novgorod	Russia
K. Koenig	Saarland University	Germany
K. Larin (chair)	University of Houston	USA
I. Larina	Baylor College of Medicine, Houston	USA
A. Lugovtsov	M.V. Lomonosov Moscow State University	Russia
I. Meglinski	Aston University	UK
T. Novikova	Ecole polytechnique / LPICM, Palaiseau	France
L. Oliveira	Polytechnico de Almeida, Porto	Portugal
C. Otto	University of Twente	Netherlands
A. Popov	VTT Technical Research Centre of Finland	Finland
J. Popp	Institute of Physical Chemistry	Germany
A. Priezhev	M.V. Lomonosov Moscow State University	Russia
A. Rueck	Ulm University	Germany
H. Schneckenburger	Aalen University	Germany
E. Shirshin	M.V. Lomonosov Moscow State University	Russia
V. Tuchin	Saratov State University	Russia
Z. Zalevsky	Bar-Ilan University / Faculty of Engineering	Israel
D. Zhu	Huazhong Univ. of Science and Technology	China



**17th International conference  
on Laser Applications in Life Sciences**  
15-17 October 2023, Muğla (Turkey)

**Program at a glance**

*Rooms (see the schematic below): Yunus Emre 2 and Ibni Sina*

Saturday, 14 October 2023			
08:00 - 19:00	Registration		
Sunday, 15 October 2023			
08:00 - 19:00	Registration		
09:00 - 9:10	Opening ceremony		
9:10 - 09:55	Plenary session 1 (Yunus Emre 2) : Irina LARINA Chair: Alexander PRIEZZHEV		
10:00 - 11:00	<b>OCT and OCE - 1</b> (Yunus Emre 2) - Chair: Robert ZAWADZKI	10:00 - 10:55	<b>Tissue modification</b> (Ibni Sina) - Chair: Boris YAKIMOV
10:00 - 10:20	Wolfgang DREXLER (Invited)	10:00 - 10:20	Ralf BRINKMANN (Invited)
10:20 - 10:40	Andrew ROLLINS (Invited)	10:20 - 10:40	Elina GENINA (Invited)
10:40 - 11:00	Kostadinka BIZHEVA (Invited)	10:40 - 10:55	Ferenc BARI (Oral)
11:00-11:30	Coffee break		
11:30 - 13:00	<b>OCT and OCE - 2</b> (Yunus Emre 2) - Chair: Wolfgang DREXLER	11:30 - 12:45	<b>Artificial Intelligence</b> (Ibni Sina) - Chair: Ivan BRATCHENKO
11:30 - 11:50	Robert ZAWADZKI (Invited)	11:30 - 11:50	Viktor DREMINSKI (Invited)
11:50 - 12:10	Robert HUBER (Invited)	11:50 - 12:10	Olga M. CONDE (Invited)
12:10 - 12:30	Grigory GELIKONOV (Invited)	12:10 - 12:30	Yury KISTENEV (Invited)
12:30 - 12:45	Elena KISELEVA (Oral)	12:30 - 12:45	Ekaterina BRYANSKAYA (Oral)
12:45 - 13:00	Manmohan SINGH (Oral)		
13:00 - 14:30	Lunch		
14:30 - 16:05	<b>Spectral and Multimodal Approaches - 1</b> (Yunus Emre 2) - Chair: Evgeny SHIRSHIN	14:30 - 15:35	<b>PDT</b> (Ibni Sina) - Chair: Elina GENINA

14:30 - 14:50	Walter BLONDEL (Invited)	14:30 - 14:50	Alexander DUBROVSKY (Invited)
14:50 - 15:10	Ilya TURCHIN (Invited)	14:50 - 15:05	Vadim ELAGIN (Oral)
15:10 - 15:30	Elena ZAGAYNOVA (Invited)	15:05 - 15:20	Irina SEMENOVA (Oral)
15:30 - 15:50	Andrei LUGOVTSOV (Invited)	15:20 - 15:35	Irina NIKITENKO (Oral)
15:50 - 16:05	Boris YAKIMOV (Oral)		
<b>16:05 - 16:30</b>	<b>Coffee break</b>		
<b>16:30 - 18:10</b>	<b>Laser spectroscopy / Raman and Optical measurements - 1</b> (Yunus Emre 2) - Chair: Daria KUZNETSOVA	<b>16:30 - 17:50</b>	<b>Nanobiophotonics</b> (Ibni Sina) - Chair: Andrei LUGOVTSOV
16:30 - 16:50	Pengcheng LI (Invited)	16:30 - 16:50	Filiz YESILKOY (Invited)
16:50 - 17:10	Evgeny SHIRSHIN (Invited)	16:50 - 17:10	Clara VILCHES (Invited)
17:10 - 17:30	Ivan BRATCHENKO (Invited)	17:10 - 17:30	Anastasiia MERDALIMOVA (Invited)
17:30 - 17:50	Maxim DARVIN (Invited)	17:30 - 17:50	Irina YANINA (Invited)
17:50 - 18:10	Elena POTAPOVA (Invited)		
19:00 - 22:00	<b>Conference dinner</b>		

<b>Monday, 16 October 2023</b>			
08:00 - 19:00	Registration		
<b>09:00 - 09:45</b>	<b>Plenary session 2 (Yunus Emre 2):</b> Randy BARTELS Chair: Kirill LARIN		
<b>09:50 - 11:10</b>	<b>Spectral and Multimodal Approaches - 2</b> (Yunus Emre 2) - Chair: Peter SO	<b>10:10 - 11:00</b>	<b>Optical Microscopy and Fluorescence Imaging - 1</b> (Ibni Sina) - Chair: Tatiana NOVIKOVA
09:50 - 10:10	Alwin KIENLE (Invited)		
10:10 - 10:30	Rainer LEITGEB (Invited)	10:10 - 10:30	Alexander PRIEZZHEV (Invited)
10:30 - 10:50	Andrey DUNAEV (Invited)	10:30 - 10:45	Daria KUZNETSOVA (Oral)
10:50 - 11:10	Luís OLIVEIRA (Invited)	10:45 - 11:00	Diana GALIAKHMETOVA (Oral)
<b>11:10 - 11:35</b>	<b>Coffee break</b>		
<b>11:35 - 13:15</b>	<b>Laser spectroscopy / Raman and Optical measurements - 2</b> (Yunus Emre 2) - Chair: Luís OLIVEIRA	<b>11:35 - 13:05</b>	<b>Optical Microscopy and Fluorescence Imaging - 2</b> (Ibni Sina) - Chair: Ilya TURCHIN
11:35 - 11:55	Tatiana NOVIKOVA (Invited)	11:35 - 11:55	Peter SO (Invited)
11:55 - 12:15	Nikolay BRANDT (Invited)	11:55 - 12:15	Seemantini NADKARNI (Invited)



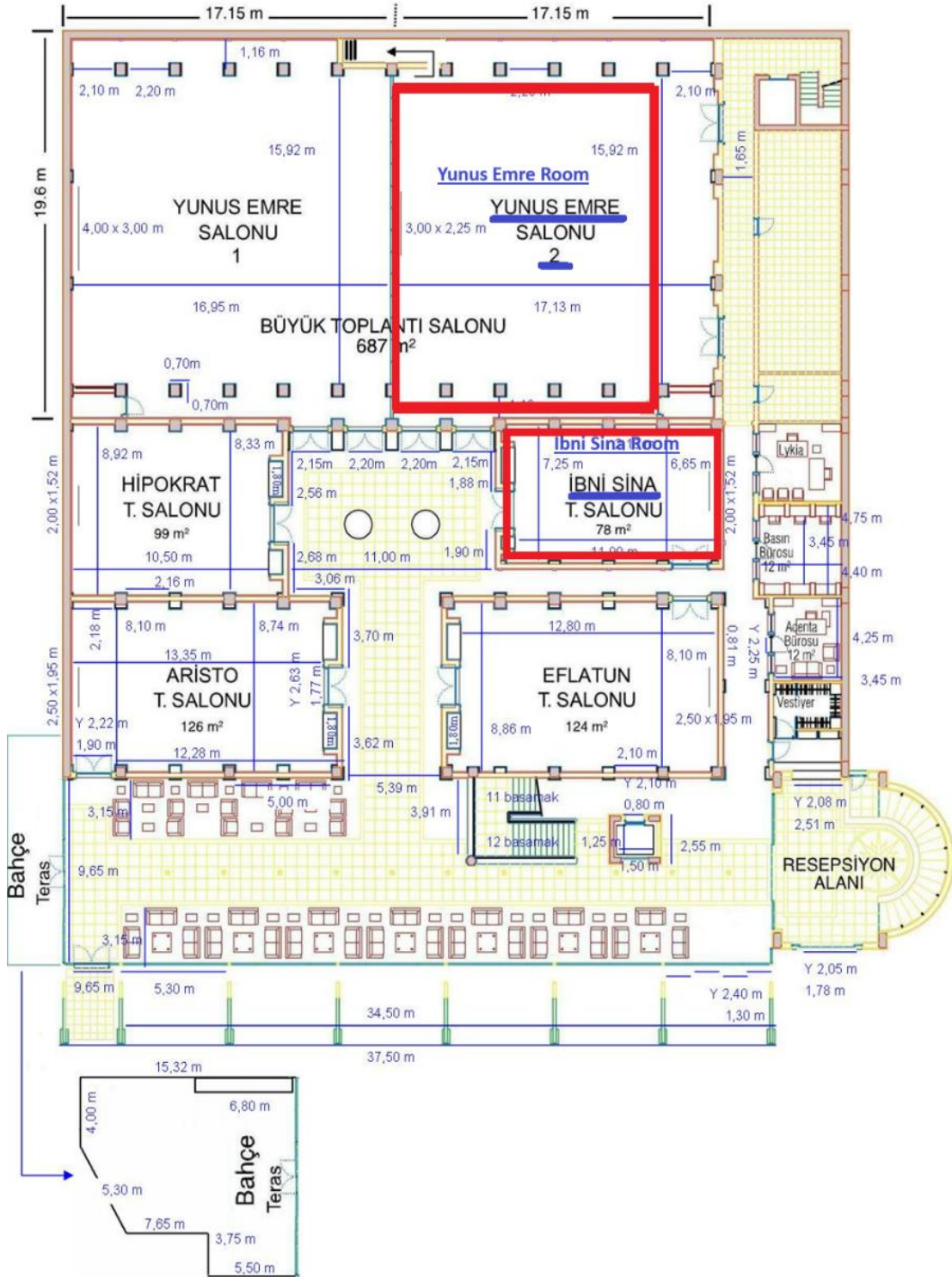
12:15 - 12:30	Anna MANKOVA (Oral)	12:15 - 12:35	Herbert SCHNECKENBURGER (Invited)
12:30 - 12:45	Olga PARASHCHUK (Oral)	12:35 - 12:50	Liubov SHIMOLINA (Oral)
12:45 - 13:00	Elena ZHARKIKH (Oral)	12:50 - 13:05	Diana YUZHAKOVA (Oral)
13:00- 13:15	Irina BALAKHNINA (Oral)		
13:20 - 13:30	<b>Group photo</b>		
<b>13:30- 15:00</b>	<b>Lunch</b>		
<b>15:00 - 17:00</b>	<b>Poster session</b> - Chairs: Kirill LARIN, Alexander PRIEZZHEV		
15:00 - 15:45	Brief presentations of the posters (3 min each, Yunus Emre 2). The list of presenters below		
15:45 - 17:00	Poster session		
<b>19:00 - 22:00</b>	<b>IAB meeting (for members)</b>		

<b>Tuesday, 17 October 2023</b>			
08:00 - 11:30	Registration		
<b>09:00 - 09:45</b>	<b>Plenary session 3 (Yunus Emre 2): Audrey BOWDEN Chair: Irina LARINA</b>		
<b>09:50 - 10:25</b>	<b>Translational Biophotonics</b> (Yunus Emre 2) - Chair: Herbert SCHNECKENBURGER	<b>09:50 - 10:25</b>	<b>Terahertz (Ibni Sina)</b> - Chair: Yury KISTENEV
09:50 - 10:10	Alexey POPOV (Invited)	09:50 - 10:10	Olga CHERKASOVA (Invited)
10:10 - 10:25	Polina ERMAKOVA (Oral)	10:10 - 10:25	Valeriy TEPLYAKOV (Oral)
<b>10:30 - 10:50</b>	<b>Closing and Young Researcher Award Ceremony (Yunus Emre 2)</b>		
<b>11:10 - 14:00</b>	<b>Lunch</b>		
<b>14:00 - 21:00</b>	<b>Social program</b>		

### List of poster presenters

1. Jinling LU
2. Arina VOITOVA
3. Arina EVSUKOVA
4. Svetlana RODIMOVA
5. Vadim ELAGIN
6. Roman KORNEV
7. Vanesa LUKINSONE
8. Lyudmila BRATCHENKO
9. Maria KARABUT
10. Ioanna GORBUNOVA

## Schema of "Yunus Emre 2" and "Ibni Sina" rooms





**17th International conference  
on Laser Applications in Life Sciences**  
15-17 October 2023, Muğla (Turkey)

**Sessions Program**

<b>Date and Time</b>	October 15 (Sunday) / 9:10 - 09:55
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Plenary session 1
<b>Session Chair</b>	Alexander PRIEZZHEV (Russia)

Time	9:10 - 09:55
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**[Plenary] Functional Optical Coherence Tomography for Investigation of Cilia Function In Vivo**  
**Irina LARINA**

Department of Integrative Physiology, Baylor College of Medicine, Houston, USA

<b>Date and Time</b>	October 15 (Sunday) / 10:00 - 11:00
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	OCT and OCE - 1
<b>Session Chair</b>	Robert ZAWADZKI (USA)

Time	10:00 - 10:20
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**[Invited] Towards OCT on a Chip**

**Wolfgang DREXLER**

Medical University of Vienna, Vienna, Austria

Time	10:20 - 10:40
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**[Invited] Polarization-Sensitive OCT Guided Catheter Ablation of Atrial Fibrillation**

**Andrew ROLLINS**

Case Western Reserve University, Cleveland, USA

Time	10:40 - 10:55
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**[Invited] Structural and Functional Imaging of the Retina with UHR-OCT**

**Kostadinka BIZHEVA**

University of Waterloo, Waterloo, Canada

<b>Coffee Break</b>	11:00 - 11:30
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<b>Date and Time</b>	October 15 (Sunday) / 10:00 - 10:55
<b>Place</b>	Ibni Sina
<b>Session Title</b>	Tissue modification
<b>Session Chair</b>	Boris YAKIMOV (Russia)

Time	10:00 - 10:20
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**[Invited] Automatic Temperature Controlled Retinal Laser Therapies – Method and First Clinical Results**

**Ralf BRINKMANN**

University of Lübec and Medical Laser Center Lübec, Lübec, Germany

Time	10:20 - 10:40
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**[Invited] New Approaches to the Laser Plasmon Resonance Phototherapy of Cancer**

**Elina GENINA**

N.G. Chernyshevsky Saratov National Research State University, Saratov, Russia

Time	10:40 - 10:55
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**[Oral] Design and Optimalization of Laser-Induced Drug Release in Stroke Therapy**

**Ferenc BARI**

University of Szeged, Szeged, Hungary

<b>Coffee Break</b>	11:00 - 11:30
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<b>Date and Time</b>	October 15 (Sunday) / 11:30 - 13:00
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	OCT and OCE - 2
<b>Session Chair</b>	Wolfgang DREXLER (Austria)

Time	11:30 - 11:50
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**[Invited] Progress on Assessment of Retinal Physiology with Light**

**Robert ZAWADZKI**

University of California Davis, USA

Time	11:50 - 12:10
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**[Invited] New Trends in Megahertz-OCT**

**Robert HUBER**

University of Lübeck, Lübeck, Germany

Time 12:10 - 12:30

**[Invited] OCT Mapping of Tympanic Membrane Mobility**

**Grigory GELIKONOV**

Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia

Time 12:30 - 12:45

**[Oral] Changes in the Microcirculation and Metabolism of the Small Intestine after its Sympathetic Denervation**

**Elena KISELEVA**

Institute of Experimental Oncology and Biomedical Technologies, Privolzhsky Research Medical University, Nizhny Novgorod, Russia

Time 12:45 - 13:00

**[Oral] Reverberant Optical Coherence Elastography of Murine Embryos**

**Manmohan SINGH**

Department of Biomedical Engineering, University of Houston, Houston, USA

**Lunch** 13:00 - 14:30

<b>Date and Time</b>	October 15 (Sunday) / 11:30 - 12:45
<b>Place</b>	Ibni Sina
<b>Session Title</b>	Artificial Intelligence
<b>Session Chair</b>	Ivan BRATCHENKO (Russia)

Time 11:30 - 11:50

**[Invited] Advanced Approaches to Optical Imaging Data Processing**

**Viktor DREMIN**

Orel State University, Orel, Russia

Time 11:50 - 12:10

**[Invited] AI-Based Approaches for Cardiovascular Diagnosis and Tumor Margin Delineation**

**Olga M. CONDE**

University of Cantabria, Cantabria, Spain

Time 12:10 - 12:30

**[Invited] Breath Air Analysis using IR and THz Laser Spectroscopy and Machine Learning**

**Yury KISTENEV**

Tomsk State University, Tomsk, Russia

Time	12:30 - 12:45
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**[Oral] Classification of Maxillary Sinus Pathologies in Digital Diaphanoscopy Based on Machine Learning**

**Ekaterina BRYANSKAYA**

Orel State University, Orel, Russia

<b>Lunch</b>	13:00 - 14:30
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<b>Date and Time</b>	October 15 (Sunday) / 14:30 - 16:05
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Spectral and Multimodal Approaches - 1
<b>Session Chair</b>	Evgeny SHIRSHIN (Russia)

Time	14:30 - 14:50
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**[Invited] Multimodal Optical Spectroscopy for Human Skin Cancer In Vivo Diagnosis**

**Walter BLONDEL**

Université de Lorraine, Nancy, France

Time	14:50 - 15:10
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**[Invited] VIS-NIR Diffuse Reflectance Spectroscopy System with Self-Calibrating Probe: Pilot In Vivo Studies**

**Ilya TURCHIN**

Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia

Time	15:10 - 15:30
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**[Invited] Biophotonics for Stem Cells Research**

**Elena ZAGAYNOVA**

Privolzhskiy Medical Research University, Nizhny Novgorod, Russia

Time	15:30 - 15:50
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**[Invited] Application of Laser Techniques for Investigating the Effect of Vital Blood Plasma Proteins on Erythrocytes and Platelets Aggregation**

**Andrei LUGOVTSOV**

M.V. Lomonosov Moscow State University, Moscow, Russia

Time	15:50 - 16:05
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**[Oral] Spatial Frequency Domain Imaging in Total Blood Hemoglobin Assessment: Comparison to Other Non-Invasive Optical Techniques**

**Boris YAKIMOV**

M.V. Lomonosov Moscow State University, Moscow, Russia

<b>Coffee Break</b>	16:05 - 16:30
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<b>Date and Time</b>	October 15 (Sunday) / 14:30 - 15:35
<b>Place</b>	Ibni Sina
<b>Session Title</b>	PDT
<b>Session Chair</b>	Elina GENINA (Russia)

Time	14:30 - 14:50
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**[Invited] Photobiomodulation Improves Restoration of Functions of the Meningeal Lymphatics: The Perspectives for Therapy of Alzheimer's Disease**

**Alexander DUBROVSKY**

N.G. Chernyshevsky Saratov National Research State University, Saratov, Russia

Time	14:50 - 15:05
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**[Oral] Development of Antibacterial Photodynamic Therapy for Urology**

**Vadim ELAGIN**

Privolzhsky Research Medical University, Nizhny Novgorod, Russia

Time	15:15 - 15:20
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**[Oral] FLIM-Assisted Analysis of Radachlorin Localization in Living Cells**

**Irina IVA**

Ioffe Institute, Russian Academy of Sciences, Saint Petersburg, Russia

Time	15:20 - 15:35
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**[Oral] Development of Anti-Age Technology Based on Ethosomes for Transdermal Delivery of Methylene Blue Photosensitizer**

**Irina NIKITENKO**

Clinic of Aesthetic Cosmetology and Dermatovenerology LLC "EsteMed", Moscow, Russia

<b>Coffee Break</b>	16:05 - 16:30
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<b>Date and Time</b>	October 15 (Sunday) / 16:30 - 18:10
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Laser spectroscopy / Raman and Optical measurements - 1
<b>Session Chair</b>	Daria KUZNETSOVA (Russia)

Time	16:30 - 16:50
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**[Invited] Quantitative Blood Flowmetry Imaging Using Laser Speckle and High-Density Optical Flow Tracing**

**Pengcheng LI**

Huazhong University of Science and Technology (HUST), Britton Chance Center for Biomedical Photonics and Wuhan National Laboratory for Optoelectronics, Wuhan, China

Time 16:50 - 17:10

**[Invited] The Quest for Novel Endogenous Fluorophores in the Human Organism**

**Evgeny SHIRSHIN**

M.V. Lomonosov Moscow State University, Moscow, Russia

Time 17:10 - 17:30

**[Invited] Raman Spectroscopy for Optical and Liquid Biopsy of Non-Communicable Disease**

**Ivan BRATCHENKO**

Samara National Research University, Samara, Russia

Time 17:30 - 17:50

**[Invited] Discovery of New Structures in the Stratum Corneum of Glabrous Skin with Optical Methods: Crystallized Urea Dendriform Structures Affect the Hydration Levels**

**Maxim DARVIN**

Charité-Universitätsmedizin Berlin, Berlin, Germany

Time 17:50 - 18:10

**[Invited] Optical Spectroscopy in the Assessment of the Functional State of the Liver**

**Elena POTAPOVA**

Orel State University, Orel, Russia

**Conference Dinner**

19:00 - 22:00

<b>Date and Time</b>	October 15 (Sunday) / 16:30 - 17:50
<b>Place</b>	Ibni Sina
<b>Session Title</b>	Nanobiophotonics
<b>Session Chair</b>	Andrei LUGOVTSOV (Russia)

Time 16:30 - 16:50

**[Invited] Metasurface-Enhanced Mid-Infrared Spectral Tissue Imaging and Biosensing**

**Filiz YESILKOY**

University of Wisconsin-Madison, WI, USA

Time 16:50 - 17:10

**[Invited] A Toolbox for Personalized Plasmonic Photothermal Cancer Therapy**

**Clara VILCHES**

The Institute of Photonic Sciences (ICFO), Barcelona, Spain

Time 17:10 - 17:30

**[Invited] Optical Sensors Based on Hollow-Core Microstructured Optical Waveguides**

**Anastasiia MERDALIMOVA**

Skolkovo Institute of Science and Technology, Moscow, Russia



Time 17:30 - 17:50

**[Invited] Control of Up-Conversion Nanoparticle Luminescence Intensity by Optical Clearing or Heating**

**Irina YANINA**

N.G. Chernyshevsky Saratov National Research State University, Saratov, Russia

**Conference Dinner** 19:00 - 22:00

<b>Date and Time</b>	October 16 (Monday) / 9:00 - 09:45
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Plenary session 2
<b>Session Chair</b>	Kirill LARIN (USA)

Time 9:00 - 09:45

**[Plenary] Widefield, 3D, coherent(ish) nonlinear for imaging in tissues**

**Randy BARTELS**

University of Wisconsin, Madison, USA

<b>Date and Time</b>	October 16 (Monday) / 9:50 - 11:10
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Spectral and Multimodal Approaches - 2
<b>Session Chair</b>	Peter SO (USA)

Time 9:50 - 10:10

**[Invited] Light Propagation in Biological Tissue and Its Applications**

**Alwin KIENLE**

Institute for Laser Technologies in Medicine and Metrology, University of Ulm, Ulm, Germany

Time 10:10 - 10:30

**[Invited] OCT Guided Clinical Raman Spectroscopy of the Eye**

**Rainer LEITGEB**

Medical University of Vienna, Vienna, Austria

Time 10:30 - 10:50

**[Invited] Wearable Multimodal Analyzers in the Study of the Microcirculatory Bed and Oxidative Metabolism of Biotissue**

**Andrey DUNAEV**

Orel State University, Orel, Russia

Time 10:50 - 11:10

**[Invited] Computer Assisted Reconstruction of the Absorption Spectra of Human Normal and Pathological Kidney**

**Luís OLIVEIRA**

Polytechnic of Porto – School of Engineering (ISEP), Porto, Portugal

**Coffee Break** 11:10 - 11:35

<b>Date and Time</b>	October 16 (Monday) / 10:10 - 11:00
<b>Place</b>	Ibni Sina
<b>Session Title</b>	Optical Microscopy and Fluorescence Imaging - 1
<b>Session Chair</b>	Tatiana NOVIKOVA (France)

Time 10:10 - 10:30

**[Invited] Effect of Endothelium on RBC Interaction and Adhesion in Microfluidic Channels Studied by Laser-Optic Techniques**

**Alexander PRIEZZHEV**

M.V. Lomonosov Moscow State University, Moscow, Russia

Time 10:30 - 10:45

**[Oral] Biomedical Imaging Reveals Optical Criteria for Violated Liver Regenerative Potential**

**Daria KUZNETSOVA**

Privolzhsky Research Medical University, Nizhny Novgorod, Russia

Time 10:45 - 11:00

**[Oral] Enhancing Optogenetics: First Demonstration of Nonlinear Properties of Monomeric and Dimeric *Deinococcus Radiodurans* Bacterial Phytochrome**

**Diana GALIAKHMETOVA**

Aston Institute of Photonic Technologies, Aston University, Birmingham, United Kingdom

**Coffee Break** 11:10 - 11:35

<b>Date and Time</b>	October 16 (Monday) / 11:35 - 13:15
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Laser spectroscopy / Raman and Optical measurements - 2
<b>Session Chair</b>	Luís OLIVEIRA (Portugal)

Time	11:35 - 11:55
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**[Invited] Partial Mueller Polarimetry: an Avenue for In Vivo Tissue Diagnosis**

**Tatiana NOVIKOVA**

The National Centre for Scientific Research (CNRS), Ecole polytechnique and Polytechnic Institute of Paris, Palaiseau, France

Time	11:55 - 12:15
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**[Invited] Raman Spectroscopy of UV Doze-Dependent Conformational Changes of Human Hair Keratins**

**Nikolay BRANDT**

M.V. Lomonosov Moscow State University, Moscow, Russia

Time	12:15 - 12:30
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**[Oral] Raman Spectroscopy of Proteins as a Technique to Reveal Markers of Tertiary structure**

**Anna MANKOVA**

M.V. Lomonosov Moscow State University, Moscow, Russia

Time	12:30 - 12:45
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**[Oral] Low-Frequency Raman Spectroscopy of Organic Semiconductors and Biomolecules**

**Olga PARASHCHUK**

M.V. Lomonosov Moscow State University, Moscow, Russia

Time	12:45 - 13:00
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**[Oral] Diagnostics of Peripheral Blood Flow Disorders in Various Pathologic Conditions Using Wearable Laser Doppler Flowmetry Devices**

**Elena ZHARKIKH**

Orel State University, Orel, Russia

Time	13:00 - 13:15
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**[Oral] Comparison of the Fluorescence Spectra of Teeth Samples under UV Excitation**

**Irina BALAKHNINA**

M.V. Lomonosov Moscow State University, Moscow, Russia

<b>Group Photo</b>	13:20 - 13:30
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<b>Lunch</b>	13:30 - 15:00
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<b>Date and Time</b>	October 16 (Monday) / 11:35 - 13:05
<b>Place</b>	Ibni Sina
<b>Session Title</b>	Optical Microscopy and Fluorescence Imaging - 2
<b>Session Chair</b>	Ilya TURCHIN (Russia)

Time	11:35 - 11:55
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**[Invited] Exploring the Potential of Multiphoton Patterning**

**Peter SO**

Massachusetts Institute of Technology, Cambridge, USA

Time	11:55 - 12:15
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**[Invited] Speckle Rheological Microscopy (SHEAR) to Explore Tumor Mechanopathology**

**Seemantini NADKARNI**

Wellman Center for Photomedicine, Massachusetts General Hospital and Harvard Medical School, USA

Time	12:15 - 12:35
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**[Invited] Making Your Microscope More Versatile for Life Sciences**

**Herbert SCHNECKENBURGER**

Aalen University, Aalen, Germany

Time	12:35 - 12:50
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**[Oral] Changes in Plasma Membrane Microviscosity of Human Colorectal Cancer Cells With Different Migration Activity**

**Liubov SHIMOLINA**

Institute of Experimental Oncology and Biomedical Technologies, Privolzhsky Research Medical University, Nizhny Novgorod, Russia

Time	12:50 - 13:05
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**[Oral] A Personalized Approach to Evaluate the Effectiveness of Immunotherapy Using FLIM of NAD(P)H in T-cells**

**Diana YUZHAKOVA**

Institute of Experimental Oncology and Biomedical Technologies, Privolzhsky Research Medical University, Nizhny Novgorod, Russia

<b>Group Photo</b>	13:20 - 13:30
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<b>Lunch</b>	13:30 - 15:00
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<b>Date and Time</b>	October 16 (Monday) / 15:00 - 17:00
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Poster Session
<b>Session Chairs</b>	Kirill LARIN (USA), Alexander PRIEZZHEV (Russia)

Brief presentations of the posters (3 min for each)	15:00 - 15:45
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Posters	15:45 - 17:00
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1. **Jinling LU** (Huazhong University of Science and Technology, Wuhan, China), *Simultaneous Detection of Fluorescent and Hemodynamic Signals from Deep Brain Structures in Awake Mice*
2. **Arina VOITOVA** (BIOSPEC Ltd, Moscow, Russia), *Synthesis of Ethosomes with Methylene Blue for Transdermal Photocosmetology*
3. **Arina EVSUKOVA** (N.G. Chernyshevsky Saratov National Research State University, Saratov, Russia), *Night Photostimulation of Clearance of Beta-Amyloid from the Brain of Mice with Alzheimer's Disease*
4. **Svetlana RODIMOVA** (Privolzhsky Research Medical University, Nizhny Novgorod, Russia), *Fluorescent Intravital Bioimaging to Analyze Nanoparticles Cytotoxicity and Biodistribution Using Tissue Slices*
5. **Vadim ELAGIN** (Privolzhsky Research Medical University, Nizhny Novgorod, Russia), *Evaluation of the Safety and Biodistribution of Nanoparticles in Precision-Cut Liver Slices Using Fluorescent Bioimaging*
6. **Roman KORNEV** (G.G. Devyat'kh Institute of Chemistry of High-Purity Substances of RAS, Nizhny Novgorod, Russia), *Laser-Induced Dielectric Breakdown as a Novel Method for Obtaining Isotopically Enriched Nanoscale Substances*
7. **Vanesa LUKINSONE** (University of Latvia, Riga, Latvia), *Photons Distribution and Propagation in Biological Tissue*
8. **Lyudmila BRATCHENKO** (Samara National Research University, Samara, Russia), *Multivariate Analysis and Deep Learning for Recognition of Surface-Enhanced Raman Spectra of Human Blood in Problems of Medical Physics*
9. **Maria KARABUT** (Privolzhsky Research Medical University, Nizhny Novgorod, Russia), *Biomedical Label-Free Method Reveals Criteria for Toxic Liver Damage in Precision-Cut Liver Slices*
10. **Ioanna GORBUNOVA** (Ioffe Institute, Russian Academy of Sciences, Saint Petersburg, Russia), *The Study of Excited-States Relaxation Pathways in NADH and FAD by the Analysis of Fluorescence Quantum Yield and Fluorescence Decay Times*



<b>Date and Time</b>	October 17 (Tuesday) / 9:00 - 09:45
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Plenary session 3
<b>Session Chair</b>	Irina LARINA (USA)

Time	9:00 - 9:45
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**[Plenary] Progress Towards High Sensitivity and Specificity Detection of Early-Stage Bladder Cancer**

**Audrey BOWDEN**

Vanderbilt University, Nashville, USA

<b>Date and Time</b>	October 17 (Tuesday) / 9:50 - 10:25
<b>Place</b>	Yunus Emre 2
<b>Session Title</b>	Translational Biophotonics
<b>Session Chair</b>	Herbert SCHNECKENBURGER (Germany)

Time	9:50 - 10:10
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**[Invited] Biotissue-Mimicking Phantoms as an Enabling Technology in Biophotonics Research**

**Alexey POPOV**

VTT Technical Research Centre of Finland, Oulu, Finland

Time	10:10 - 10:25
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**[Oral] Marker-Independent Pancreas and Islets Quality Diagnostics with FLIM**

**Polina ERMAKOVA**

Privolzhsky Research Medical University, Nizhny Novgorod, Russia

<b>Closing and Young Researcher Award Ceremony (Yunus Emre 2)</b>	10:30 - 10:50
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<b>Lunch</b>	11:10 - 14:00
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<b>Date and Time</b>	October 17 (Tuesday) / 9:50 - 10:25
<b>Place</b>	Ibni Sina
<b>Session Title</b>	Terahertz
<b>Session Chair</b>	Yury KISTENEV (Russia)

Time	9:50 - 10:10
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**[Invited] Terahertz Spectroscopy in Glioma Diagnostics**

**Olga CHERKASOVA**

Institute of Automation and Electrometry, Siberian Branch of the Russian Academy of Sciences,  
Novosibirsk, Russia

Time	10:10 - 10:25
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**[Oral] Effects of Intense 1-6 THz Pulses Irradiation on Albumin**

**Valeriy TEPLYAKOV**

M.V. Lomonosov Moscow State University, Moscow, Russia

<b>Closing and Young Researcher Award Ceremony (Yunus Emre 2)</b>	10:30 - 10:50
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<b>Lunch</b>	11:10 - 14:00
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## NOTES