



3rd Youth Scientific Session

BioMedicine & Quality of Life

2-3 DECEMBER

Sofia, Bulgaria

PROGRAMME



Programme of 3rd Youth Scientific Session
BioMedicine and Quality of Life'2021

2 DECEMBER 2021

9:00 - 9:30	Opening ceremony: Welcome speech by Prof. Tania Pencheva, PhD, Director of IBPhBME-BAS, and Corr. Memb. Andon Kossev, DSc, Chairman of the Program Committee
Career Development I Chair: Irina Georgieva, PhD student	
9:30 - 9:50	INVITED SPEAKER: Senior Assist. Prof. Nikola Kerekov, PhD "Scientific Outreach towards a general adult audience"
Biological Membranes and Biomacromolecules I Chair: Prof. Galya Staneva, PhD	
9:50 - 10:20	INVITED SPEAKER: Prof. Rumiana Dimova, PhD "Membrane remodeling in artificial cells: to bud or not to bud"
10:20 - 10:40	Zornica Todorova , "Extending the Eggshell membrane applications via imparting specific properties to the Eggshell membrane surface"
10:40 - 11:00	Ognyan Petkov , "Electrical properties of lipid membranes probed by impedance spectroscopy"
11:00 - 11:20	Kristin Angelova , "Stability of phospholipid bilayers interacting with synthetic amphiphilic peptides"
11:20 - 11:30	Break
Biological Membranes and Biomacromolecules II Chair: Prof. Albena Momchilova, DSc	
11:30 - 11:50	Nevena Yotova , "Influence of melatonin on the phase behavior of model lipid systems"
11:50 - 12:10	Dayana Benkova , "Molecular mechanisms of interactions of chitosan-based nanoparticles with bio-inspired membranes"
12:10 - 12:30	Vesela Yordanova , "Fatty acid polyunsaturation and oxidized lipids act as secretory phospholipase A ₂ modulators <i>in vitro</i> "
12:30 - 12:50	Avgustina Danailova , "Stability of plasma proteins in neurodegenerative pathologies"
12:50 - 13:10	Elena Zlatareva , "Biophysical characteristics of peripheral blood cells in neurodegenerative disorders"
Career Development II Chair: Irina Georgieva, PhD student	
13:10 - 13:30	INVITED SPEAKER: Justine Toms, PhD , "Blogs and podcasts about science"



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13:30 - 14:10	Lunch
14:10 - 14:30	<i>Sponsor presentation Aquachim AD</i>
Biomedical Engineering and Bioinformatics I Chair: Corr. Memb. Ilza Pajeva, DSc	
14:30 - 15:00	INVITED SPEAKER: Deyana Ivanova, PhD student "Stress and delayed pubertal timing is the limbic brain the key"
15:00 - 15:30	INVITED SPEAKER: Prof. Anela Ivanova, PhD "Can folate and its derivatives be used as vectors for targeted drug delivery?"
15:30 - 15:50	Elina Beleva , "Towards overcoming P-glycoprotein mediated multidrug resistance: <i>in silico</i> based approach to predict the binding potential of tyrosine kinase inhibitors"
15:50 - 16:00	Break
16:00 - 16:35	INVITED SPEAKER: Prof. Plamen Ivanov, DSc "The new field of network physiology: building the human physiome"
16:40 - 17:00	INVITED SPEAKER: Assoc. Prof. Vassia Atanassova, PhD "Presentation of the research infrastructure BioMMS"
Biomedical Engineering and Bioinformatics II Chair: Prof. Vessela Krasteva, PhD	
17:00 - 17:20	Yordan Hodzhev , "Blood microbiome composition in sarcoidosis patient: a whole metagenome sequencing approach"
17:20 - 17:40	Erik Dimitrov , "Synthesis and characterization of liposomal spherical nucleic acids via incorporation of a nucleolipids synthesized by different approaches"
17:40 - 18:00	Ivo Chuchulski , "Transimpedance amplifier with electronically controlled gain for bioelectrical signal monitoring"
18:00 - 18:20	Tsenka Grancharova , "Investigation of deep-tissue photothermal heating capabilities of SPIONs using porcine muscle tissues"
18:20 - 18:40	Silvija Angelova , "Experimental testing of a prototype of an active elbow orthosis based on <i>in vivo</i> investigation of elbow flexion/extension of healthy subjects"
18:40 - 19:00	Kamen Ivanov , "Feasibility of convolutional autoencoder for filtering of 50 Hz interference from the electrocardiogram"



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Career Development III

Chair: Irina Georgieva, PhD student

8:50 - 9:10

INVITED SPEAKER: Assoc. Prof. Vladimir Bozhilov, PhD
"Science Communication: introduction and practical guidelines"

9:10 - 9:30

INVITED SPEAKER: Milena Petkova - executive director of Karoll Knowledge Foundation, "Career as Entrepreneurship in Science"

Molecular and Cellular Biophysics I

Chair: Assoc. Prof. Biliana Nikolova, PhD

9:30 - 10:00

INVITED SPEAKER: Prof. Rumiana Bakalova, PhD
"Redox targeting of cancer: molecular imaging and therapy"

10:00 - 10:20

Venelin Denchev, "Cytotoxicity of dimethyl sulphoxide on human hematopoietic stem cells at different temperatures"

10:20 - 10:40

Svetlana Hristova, "Alterations of the surface electrostatic potential of the receptor-binding domain of S-protein of SARS-CoV-2 caused by point mutations"

10:40 - 11:00

Irina Georgieva, "The role of melatonin system on behavioral changes and concomitant oxidative stress in the icvAβ1-42 rat model"

11:00 - 11:20

Sonia Apostolova, "Effect of *Petasites hybridus* L. (Butterbur) root extract on induction of apoptosis and oxidative stress in breast cancer *in vitro* cell model"

11:20 - 11:40

Inna Sulikovska, "Study on the phototoxicity and antitumor activity of plant extracts from *Tanacetum vulgare*, *Epilobium parviflorum* and *Geranium sanguineum*"

11:40 - 11:50

Break

Biomedical Engineering and Bioinformatics III

Chair: Prof. Irena Jekova, PhD

11:50 - 12:20

INVITED SPEAKER: Prof. Krasimira Tsaneva, PhD
"Similarity network fusion for the integration of multi-omics and microbiomes in respiratory disease"

12:20 - 13:05

INVITED SPEAKER: Dr Raffaele Gravina
"Multi-user activity recognition – state-of-the-art and research challenges"

13:05 - 13:40

Lunch

13:40 - 14:00

Sponsor presentation FOT LTD
Michal Konieczny, "Imaging Flow Cytometry -Visualize a new standard for scientific discovery"



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Molecular and Cellular Biophysics II
Chair: Assoc. Prof. Biliana Nikolova, PhD

14:00 - 14:20	Ariana Langari , "Impact of polymorphism in thrombophilia genes on platelets biomechanics in early pregnancy loss"
14:20 - 14:40	Charilaos Xenodochidis , "Light inducible interconnected changes in 5-HT and MAO-A activity in smooth muscle tissues"
14:40 - 15:00	Penyo Ivanov , "Comet assay - new developments of the method"

Biomaterials, Cellular and Tissue Engineering I
Chair: Prof. Stefka Taneva, DSc

15:00 - 15:30	INVITED SPEAKER: Prof. Neus Colomina Gabarrella, PhD "Role of the SMC5/6 complex in genome stability"
15:30 - 15:50	Bonka Lozanska , "Graphene oxide as a promising nanocarrier for cancer drugs in colorectal carcinoma cells"
15:50 - 16:10	Liliya Angelova , "Ultra-short laser functionalization of HA-derived TCP-Zr-based freeze-foamed 3D temporal bone scaffolds"
16:10 - 16:30	Yordan Georgiev , "Water-extractable pectic polysaccharides from leaves of Bloody Crane's-Bill (<i>Geranium sanguineum</i> L.) affect human leukocytes and tumour cells <i>in vitro</i> "

16:30 - 16:40 Break

Biomaterials, Cellular and Tissue Engineering II
Chair: Prof. Antoaneta Popova, PhD

16:40 - 17:00	Nasko Nachev , "Polymer fibrous biomaterials with imparted antifungal activity"
17:00 - 17:20	Katya Kamenova , "Degradable disulfide shell-crosslinked mixed micelles for controlled intracellular drug release"
17:20 - 17:40	Kaloyan Berberov , "Effect of pH-regulation on the capture of lipopolysaccharides from <i>E. coli</i> EH100 by four-antennary oligoglycines in aqueous medium"
17:40 - 18:00	Hristo Manov , "New photosensitive dendrimers for use at antimicrobial photodynamic therapy"
18:00 - 18:20	Eduarda Encheva , "Investigation of mixtures of two-antennary oligoglycine and indomethacin as a delivery system for hydrophobic drugs"

18:50 Closing ceremony