

Fourth Youth Scientific Session “BioMedicine and Quality of Life”

Institute of Biophysics and Biomedical Engineering – Bulgarian Academy of Sciences

5-6 December 2023, “Acad. Georgi Bonchev”, Bl. 21, Sofia 1113

Day 1 🍀 5 December 2023 🍀 Tuesday

8:30 - 9:20	REGISTRATION
9:20 - 9:30	 OPENING CEREMONY: Prof. Tania Pencheva, PhD Director of IBPhBME-BAS and Chair of the Programme Committee
BIOMEDICINE AND BIOMEDICAL ENGINEERING – I Moderator: Prof. Vessela Krasteva, PhD	
9:30 - 10:00	 INVITED SPEAKER: Prof. András Dér, PhD What can we learn from heart-rate variability?
10:00 - 10:20	Nia Toshkova Temperature sensitivity of bat antibodies links metabolic state with antigen-recognition diversity
10:20 - 10:40	Diana Hristova Salivary IgE specific to d1 (<i>Dermatophagoides pteronissinus</i>) in patients with persistent rhinitis
10:40 - 11:00	Irina Georgieva Chronic treatment with fingolimod and melatonin improves <i>icvAβ</i> -induced impaired cognitive performance and sphingolipid signaling in a rat model of Alzheimer’s disease
11:00 - 11:30	COFFEE BREAK
BIOMEDICINE AND BIOMEDICAL ENGINEERING – II Moderator: Assoc. Prof. Peter Vassilev, PhD	
11:30 - 11:50	Ema Gaydarska / Anelia Kostadinova Alteration in membrane lipid organization after interaction with newly synthesized photoactive dendrimers containing 4-dimethylamino-1,8-naphthalimide and 3-bromo-4-dimethylamino-1,8-naphthalimide
11:50 - 12:10	Nikoleta Kircheva Theoretical study of gallium’s (III) mechanism of therapeutic action
12:10 - 12:30	Petya Sirakova Example study on putative linear AMPs aggregation energetics

12:30 - 12:50	Ariana Langari Noninvasive biophysical markers for amyotrophic lateral sclerosis
12:50 - 13:10	SPONSOR PRESENTATION CARL ZEISS AG SEM & Multi-modal imaging in life sciences
13:10 - 14:00	LUNCH
14:00 - 15:00	POSTER SESSION
CAREER DEVELOPMENT Moderator: Prof. Anelia Dobrikova, PhD	
15:00 - 15:30	 INVITED SPEAKER: Assoc. Prof. Valentina Kaneva, PhD Role of ethical principles in science. Fostering best practices in science
15:30 - 16:00	 INVITED SPEAKER: Assoc. Prof. Vassia Atanassova, PhD From stress to progress: Responding to critical peer reviews
BIOLOGICAL MEMBRANES AND BIOMACROMOLECULES – I Moderator: Prof. Galya Staneva, PhD	
16:00 - 16:30	 INVITED SPEAKER: Prof. Margarita Staykova Lipid membranes under physical confinement
16:30 - 17:00	 INVITED SPEAKER: Milka Doktorova, PhD Phospholipid and cholesterol organization of cell plasma membranes
17:00 - 17:10	COFFEE BREAK
BIOLOGICAL MEMBRANES AND BIOMACROMOLECULES – II Moderator: Prof. Stefka Taneva, DSc	
17:10 - 17:30	Simona Stoyanova An overview of the importance of tyrosine kinases in the development of tumour diseases and their therapeutic inhibitors
17:30 - 17:50	Melisa Urtekin An overview of the dual role of eicosanoids in the development of tumour diseases
17:50 - 18:10	Philip Marinov Effect of ionizing radiation on the activity of the enzyme invertase

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Day 2  6 December 2023  Wednesday

CAREER DEVELOPMENT	
Moderator: Prof. Anelia Dobrikova, PhD	
9:00 - 9:30	 INVITED SPEAKER: Prof. Irena Vassileva, PhD Academic integrity in biosciences: Upholding ethical standards in research and education
9:30 - 10:00	 INVITED SPEAKER: Assoc. Prof. Emilia Pecheva, PhD UK science and innovation network and opportunities for science and higher education initiatives with the UK
BIOMATERIALS, CELLULAR AND TISSUE ENGINEERING – I	
Moderator: Prof. Biliana Nikolova, PhD	
10:00 - 10:30	 INVITED SPEAKER: Radoslav Aleksandrov, PhD Alterations in PARP1 dynamics induced by PARP inhibitors in living cells
10:30 - 10:50	Poornima Santhosh Doxorubicin loaded thermostable nanoarchaeosomes: A next-generation drug carrier for breast cancer therapeutics
10:50 - 11:10	Dayana Benkova Antifungal activity of chitosan-based nanomaterials against <i>Alternaria solani</i> . Can they be reliable and effective bionanopesticides?
11:10 - 11:40	COFFEE BREAK
BIOMATERIALS, CELLULAR AND TISSUE ENGINEERING – II	
Moderator: Prof. Rumiana Tzoneva, PhD	
11:40 - 12:00	Marin Simeonov Hybrid materials from poly(acrylic acid) and calcium phosphates – synthesis and characterization
12:00 - 12:20	Atanas Valev Towards vascularized 3D-printed tissues

12:20 - 12:40	Charilaos Xenodochidis Investigation of the synergic impact of electromagnetic radiation with different wavelengths and graphene oxide-based and gold nanoparticles on HepG2 cell viability
12:40 - 13:00	Aleksandrina Nesheva Therapeutic potential of Iscador Qu and Iscador M in breast cancer model
13:00 - 14:00	LUNCH
14:00 - 15:00	POSTER SESSION
MOLECULAR BIOPHYSICS AND BIOINFORMATICS Moderator: Corr. Member Prof. Ilza Pajeva, DSc	
15:00 - 15:30	 INVITED SPEAKER: Assoc. Prof. Atanas Kurutos, PhD Biocompatible fluorescent probes emitting in the visible, near-infrared region, and beyond: From small molecules to supramolecular assemblies
15:30 - 15:50	 INVITED SPEAKER: Yan Yan, PhD Topological signal processing – a shape description-based approach for human state investigation in biomedical engineering
15:50 - 16:10	Ivo Umlenski Blood donation practice and its associated factors in Ruse district of Bulgaria, 2017-2022 investigation via a data analytics approach
16:10 - 16:30	Yu-Shi Liu Topological descriptors for gait-based identity recognition
16:30 - 17:00	 INVITED SPEAKER: Prof. Anelia Horvath, PhD Identification and analysis of cell-specific expressed genetic variants from scRNA-seq data
17:00 - 17:30	PROGRAMME COMMITTEE DISCUSSION FOR SELECTING THE BEST ORAL AND POSTER PRESENTATIONS
17:30	CLOSING CEREMONY & AWARDS & COCKTAIL

Website



<https://biomed.bas.bg/en/bmq/bmq-2023/>

Organizer



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Poster Session Foyer, 2nd Floor

Aleksander Aleksandrov

Are serum concentrations of N^ε-carboxymethyllysine (CML) and imidazolone associated with the onset and progression of microvascular complications in diabetic patients?

Andon Tenev

Generalized net model of rehabilitation algorithm for patients with osteoporosis

Avgustina Danailova

Effects of different factors on the biophysical behavior of human erythrocytes

Denitsa Hristova

Physico-chemical characterization of DNA delivery systems based on functionalized polyoxazolines

Diliana Doneva

Effects of different light spectra on final biomass production and nutritional quality of *Eruca sativa* plants

Katya Kamenova

Immobilization of proteolytic enzyme serratiopeptidase into nanosized polymeric micelles

Katya Kamenova

Preparation of hydrogels based on natural products for biomedical application

Martin Stefanov

Impact of salinity on the functions of the photosynthetic apparatus in pea and maize plants

Milena Staneva

Investigation of influence of the semantic priming on characteristics of voluntary saccadic movements of two groups mature healthy people on colorful images (photography) with high resolution in left and right part of visual field

Poornima Budime Santhosh

Doxorubicin loaded thermostable archaeosomes: A novel drug carrier for cancer therapeutics

Rumena Stancheva

Mixed polymeric micelles as platforms for delivery of nucleic acids

Siyana Keremedchieva

Generalized net model of rehabilitation algorithm for patients with lateral epicondylitis

Stefani Petrova

Effect of *Nepeta nuda* L. plant extract on red blood cells' resistance against oxidative stress

Vladislava Dishliyska

Cold-active sialidase produced by Antarctic fungus *Penicillium griseofulvum*

Vladislava Petkova

β -Naphthol-benzothiazole based azo dyes: Reversible photopharmacological agents?