


Fifth Youth Scientific Session “BioMedicine and Quality of Life”

Institute of Biophysics and Biomedical Engineering – Bulgarian Academy of Sciences

4-5 December 2025, “Acad. Georgi Bonchev”, Bl. 21, Sofia 1113

Day 1 🍀 4 December 2025 🍀 Thursday

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
Moderator: Prof. Anelia Dobrikova, PhD	
9:30 - 10:00	 INVITED SPEAKER: Assoc. Prof. Yordan Georgiev, PhD Influence of Adsorbed Small Bioactive Molecules on the <i>in vitro</i> Immunomodulatory Effects of Herbal Polysaccharide
10:00 - 10:20	Daniel Parzhanov Metabolite Profiling of <i>Rhodiola rosea</i> L. From Two Different Localities in Bulgaria
10:20 - 10:40	Viktor Rashev Anti-Coronavirus Activity of Bulgarian Plant Extracts Loaded in Liposomal Nanocarriers Stabilized With Chitosan
10:40 - 11:00	Monika Konstantinova Humic Acid Improves Basil Resilience to Water Deficit, Enhancing the Photosynthetic Efficiency and Antioxidant Activation
11:00 - 11:30	COFFEE BREAK
Moderator: Prof. Biliانا Nikolova, PhD	
11:30 - 12:00	 INVITED SPEAKER: Prof. Ivanka Dimova, PhD The Way to the Next Generation Reproductive Genetics
12:00 - 12:20	Erik Dimitrov Cyclic Polymer Brushes as Versatile Nanoplatforms for Drug and Gene Delivery
12:20 - 12:40	Radina Deneva Electro-Assisted Delivery of Natural Redox-Modulators via Alkali Lignin-Based Biopolymer Formulations for the Treatment of MDA-MB-231 Triple-Negative Breast Cancer Cell Line

12:40 - 13:00	Lidiya Kechidzhieva Assessing the Therapeutic Potential of Phytochemicals in Collagen Antibody-Induced Arthritis in Mice
13:00 - 13:20	Ariana Langari Albumin Thermal Stabilization and Plasma Proteins Aggregation as Diagnostic Markers for Preeclampsia: Impact of Disease Severity
13:20 - 14:00	LUNCH
Moderator: Prof. Rumiana Tzoneva, PhD	
14:00 - 14:30	 INVITED SPEAKER: Assoc. Prof. Tonya Andreeva, PhD Surface Adaptation, Characterization and Modeling of Patient Specific Additively Manufactured Permanent and Bioresorbable Implants Based on <i>in vivo</i> , <i>in vitro</i> , and <i>in silico</i> Methods
14:30 - 14:50	Maria Lyudmilova Influence of Silver Nanoparticles on Liposomal Membrane Properties With Relevance to Drug Delivery and Photothermal Therapy
14:50 - 15:10	Blagovest Napoleonov MoS ₂ Thin-Film Layers for Antibacterial Applications
15:10 - 15:30	Dayana Benkova Chitosan-Based Nanomaterials: A Systematic Study on Their Multifunctional Applications
15:30 - 15:50	COFFEE BREAK
Moderator: Prof. Sashka Krumova, PhD	
15:50 - 16:20	 INVITED SPEAKER: Sen. Assist. Prof. Nia Petrova, PhD Bioelectricity Production and Photosynthetic Characterization of the Highly Exoelectrogenic Green Alga <i>Parachlorella Kessleri</i> MACC-38
16:20 - 16:40	Lyudmila Yovchevska Halophilic and Halotolerant Fungi From the Bulgarian Black Sea Coast – Mechanisms of Adaptation
16:40 - 17:00	Vesela Yordanova Biophysical Insights Into Petasin-Mediated Modulation of Mast Cell Model Membranes
17:00 - 17:30	 INVITED SPEAKER: Sen. Assist. Prof. Kolyo Dankov, PhD Applied Biophysical Methods in Astrobiology
17:30 - 18:30	POSTER SESSION

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Day 2  5 December 2025  Friday

	Moderator: Prof. Ivanka Tsakovska, PhD		
9:00 - 9:30		INVITED SPEAKER: Assoc. Prof. Maya Zaharieva, PhD Photodynamic Inactivation of Bovine Coronavirus With the Photosensitizer Toluidine Blue O	
9:30 - 9:50	Parashkev Katerski Computoxpredictor: A Computational Platform for Predicting Toxicokinetics and Toxicodynamics of Chemicals		
9:50 - 10:10	Elena Keskinova Analysis of Antibody Repertoires Using Igome Graphs and Molecular Docking		
10:10 - 10:40	COFFEE BREAK		
	Moderator: Assoc. Prof. Peter Vassilev, PhD		
10:40 - 12:30		INVITED SPEAKERS	
	Assoc. Prof. Vassia Atanassova, PhD	Assoc. Prof. Justine Toms, PhD	
			Sen. Assist. Prof. Ana Lazarova, PhD
	AI in Science		
12:30 - 13:00	CLOSING CEREMONY		
13:00 - 14:00	LUNCH		
14:00 - 16:00	SCIENTIFIC WORKSHOP, Bl. 105 Moderators: Assoc. Prof. Vassia Atanassova, PhD Assoc. Prof. Peter Vassilev, PhD		

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Poster Session Foyer, 2nd Floor

Eliana Mihaylova

Gene Expression in Different Sample Types Among Bulgarian Endometriosis Patients – Challenges and Opportunities

Svetlana Yovinska

Study of CYP2D6 Gene Polymorphisms in Men With Non-Obstructive Azoospermia in the Bulgarian Population

Diana Kichukova

Synthesis and Characterization of Zeolite With Bulgarian Herbals Composites

Slavena Davidova

Identifying the Prevalence of *Listeria Monocytogenes* in Minced Meat at Different Storage Temperatures Through Artificial Contamination

Vladislava Dishliyska

Biological Active Molecules Synthesized From Antarctic Fungi

Izabela Taneva

Synthesis of Heterocyclic Extended 1,8-Naphtalimides

Kalina Krastilova

Peri-Disubstituted Dichalcogenides of Naphtalimides as Promising Anticancer Agent

Niya Delcheva

Synthesis and Biological Evaluation of Linear and Star-Shaped Poly(E-Caprolactone)-Block-Polyglycidol Copolymers as Drug Carriers

Preslava Borisova

Photosynthetic Response of Two Basil Varieties to Drought Stress: The Role of Anthocyanins

Albena Jordanova

Study of the Mechanism of Dendrimer Penetration Into Eukaryotic Cells

Ivan Jordanov

Visual Imaging Processing of Abstractionism in Art

Teona Trampevski

Chemical Synthesis and Biological Assessment of Multimodal Pressure Sensors with Biocompatible and Antibacterial Properties