

- 10.40 – 11.05 **Jerzy Adamski** (Helmholtz Zentrum München, Germany; Yong Loo Lin School of Medicine, National University of Singapore, Singapore; IBKMG, Faculty of Medicine, University of Ljubljana):  
Metabolomics studies of mechanisms and biomarkers of complex diseases
- 11.05 – 11.30 **Karl Storbeck** (Stellenbosch University, SAR):  
Biosynthesis, metabolism and bioactivity of 11-oxygenated androgens
- 11.30 – 11.45 **Marija Gjorgoska** (IBKMG, Faculty of Medicine, University of Ljubljana):  
11-oxyandrogens in endometrial and ovarian cancers
- 11.45 – 12.00 **Luka Roškar** (General Hospital Murska Sobota; Faculty of Medicine, University of Ljubljana):  
Models including angiogenic factors as candidate biomarkers of endometrial cancer

12.00 – 13.00 **Lunch break**

- 13.00 – 14.30 **Plenary session 7:  
MOLECULAR BIOLOGY AND CLINICAL RESEARCH ON RARE DISEASES OF THE SKIN**  
*Chair: M. Liović, Medical Centre for Molecular Biology*
- 13.00 – 13.10 **Mirjana Liović** (MCMB, IBKMG, Faculty of Medicine, University of Ljubljana):  
Medical Centre for Molecular Biology: current projects and future perspectives  
(MCMB): current projects and future perspectives
- 13.10 – 13.25 **Mirjana Liović** (MCMB, IBKMG, Faculty of Medicine, University of Ljubljana):  
Skin fragility in epidermolysis bullosa and novel therapy approaches development
- 13.25 – 13.40 **Polona Zakošek** (Debra Slovenia):  
Patient association DEBRA Slovenia
- 13.40 – 14.05 **Duško Ilić** (Kings College London, UK):  
Stem cells in treatment of rare diseases of skin, from disease modelling to therapy
- 14.05 – 14.30 **Andreja Ambriović Ristov** (Rudjer Bošković Institute, Zagreb, Croatia):  
Talin2 and KANK2 functionally interact to regulate microtubule dynamics, paclitaxel sensitivity and cell migration

14.30 – 15.30 **Poster session with coffee**

- 15.30 – 16.30 **Plenary session 8:  
MOLECULAR BIOLOGY IN CLINICAL RESEARCH OF RARE DISEASES**  
*Chair: N. Debeljak, Medical Centre for Molecular Biology*
- 15.30 – 15.50 **Rajko Kušec** (School of Medicine, University of Zagreb, Croatia):  
How is the MPN genetics information changing our clinical judgment?
- 15.50 – 16.10 **Irena Preložnik Zupan / Saša Anžej Doma** (University Medical Centre Ljubljana):  
Diagnosis and management of familial erythrocytosis
- 16.10 – 16.20 **Aleš Maver** (University Medical Centre Ljubljana):  
Next generation sequencing for diagnosis of rare diseases in Slovenia
- 16.20 – 16.30 **Tadej Pajič** (University Medical Centre Ljubljana):  
Analysis and interpretation of next-generation sequencing data in practice
- 16.30 – 17.30 **Plenary session 9:  
MOLECULAR BIOLOGY IN PRECLINICAL RESEARCH OF CANCER**  
*Chair: P. Hudler, Medical Centre for Molecular Biology*
- 16.30 – 16.50 **Martina Bergant** (Laboratory for Environmental and Life Sciences, University Nova Gorica):  
APOBEC proteins play an important role in Human papillomavirus infection and oncogenesis
- 16.50 – 17.10 **Ario de Marco** (Laboratory for Environmental and Life Sciences, University Nova Gorica):  
Combination of pre-immune libraries and tailored panning design allows for the selection of ligands with pre-definite binding characteristics
- 17.10 – 17.30 **Klementina Fon Tacer** (Texas Center for Comparative Cancer Research, USA):  
Tumor antigens at the crossroads of male fertility and cancer therapy resistance – a single-cell perspective
- 17.30 **Closing of the symposium**



# BIOCHEMISTRY AND MOLECULAR GENETICS IN MEDICINE

Scientific symposium with international participation on the occasion of the 50th anniversary of the Institute of Biochemistry and Molecular Genetics (1972-2022) and the 30th anniversary of the Medical Centre for Molecular Biology (1992-2022) at the Faculty of Medicine, University of Ljubljana

6.-7. 7. 2023

Large lecture hall, Faculty of Medicine, Korytkova 2, Ljubljana



Univerza v Ljubljani  
Medicinska fakulteta  
Inštitut za biotehniko in  
molekularno genetiko

**06.07.2023 DAY 1**

8.00 – 8.30 Registration

8.30 – 9.00 Opening of the symposia and welcome address

9.00 – 10.30 **Plenary session 1:  
ENZYME RESEARCH FROM BENCH TO BEDSIDE**

*Chair: A. Bavec, Laboratory of enzyme research*

9.00 – 9.10 **Aljoša Bavec:**  
Laboratory of enzyme research: current projects and future perspectives

9.10 – 9.40 **Zrinka Kovarik** (Institute for Medical Research and Occupational Health, Zagreb, Croatia):  
The Toxicity of Organophosphorus Compounds Can Be Reduced by Cholinesterase Activity

9.40 – 10.10 **Alessandro Pesaresi** (Istituto di Cristallografia - C.N.R, Trieste, Italy):  
Structural and mechanistic enzymology of acetylcholinesterase at the crossroads between Ljubljana and Trieste

10.10 – 10.30 **Boštjan Petrič** (IBKMG, Faculty of Medicine, University of Ljubljana):  
How does paraoxonase 1 function in cerebrospinal fluid? Some findings from a study of Alzheimer's dementia patients

10.30 – 11.00 Coffee break

11.00 – 12.30 **Plenary session 2:  
PHARMACOGENETICS AND PERSONALIZED MEDICINE**

*Chair: V. Dolžan, Pharmacogenetics laboratory*

11.00 – 11.10 **Vita Dolžan** (IBKMG, Faculty of Medicine, University of Ljubljana):  
Pharmacogenetics Laboratory: current projects and future perspectives

11.10 – 11.40 **Magnus Ingelman Sundberg** (Karolinska institutet, Stockholm, Sweden):  
The missing heritability in pharmacogenomics

11.40 – 12.10 **Julia C. Stingl** (University Clinic Aachen, Germany):  
Safety in polymedication and pharmacogenetics based precision dosing: the clinical perspective of drug-drug-gene interactions

12.10 – 12.30 **Sara Redenšek Trampuž** (IBKMG, Faculty of Medicine, University of Ljubljana):  
Biomarkers of neurodegeneration: towards personalized management of Alzheimer's and Parkinson's disease

12.30 – 14.00 Lunch break

14.00 – 15.30 **Plenary session 3:  
EXTRACELLULAR VESICLES - NEW SOURCE  
OF BIOMARKERS OF DISEASE**

*Chair: M. Lenassi, Laboratory for extracellular vesicle research*

14.00 – 14.10 **Metka Lenassi** (IBKMG, Faculty of Medicine, University of Ljubljana):  
Laboratory for extracellular vesicles: driving fundamental and biomarkers discoveries of EVs

14.10 – 14.40 **Benedetta Bussolati** (University of Torino, Italy):  
Stem cell-derived extracellular vesicles as therapeutic and diagnostic tools in kidney diseases

14.40 – 15.00 **Miha Arnot** (University Medical Centre Ljubljana):  
Molecular biomarkers in kidney transplantation

15.00 – 15.15 **Marija Holcar** (IBKMG, Faculty of Medicine, University of Ljubljana):  
Variability of blood-derived extracellular vesicles in healthy humans

15.15 – 15.30 **David Badovinac** (University Medical Centre Ljubljana):  
Predicting surgical resectability of pancreatic cancer based on plasma extracellular vesicle characteristics

15.30 – 16.30 Poster session with coffee

16.30 – 18.00 **Plenary session 4:  
TRANSLATIONAL MEDICAL BIOCHEMISTRY**

*Chair: K. Trebušak Podkrajšek, Laboratory for translational medical biochemistry*

16.30 – 16.40 **Katarina Trebušak Podkrajšek** (IBKMG, Faculty of Medicine, University of Ljubljana):  
Laboratory for translational medical biochemistry: current projects and future perspectives

16.40 – 17.10 **Bojan Vujkovic** (General Hospital Slovenj Gradec):  
Fabry nephropathy in focus: diagnostics and management

17.10 – 17.40 **Albina Nowak** (University Hospital Zürich, Switzerland):  
Novel biomarkers of Fabry nephropathy

17.40 – 18.00 **Tina Levstek** (IBKMG, Faculty of Medicine, University of Ljubljana):  
Genetic and epigenetic biomarkers for the development and progression of Fabry nephropathy

**07.07.2023 DAY 2**

8.30 – 10.00 **Plenary session 5:  
FUNCTIONAL GENOMICS AND SYSTEMS MEDICINE**

*Chair: D. Rozman, Medical Centre for Molecular Biology*

8.30 – 8.45 **Damjana Rozman, Tadeja Režen** (CFGBC, IBKMG, Faculty of Medicine, University of Ljubljana):  
Centre for functional genomics and bio-chips – from omics to systems medicine and translational research

8.45 – 9.10 **Ruchi Bansal** (University of Twente, The Netherlands):  
(Nano)Technologies empowering understanding and treatment of liver diseases

9.10 – 9.30 **Dubravka Švob Štrac** (Inštitut Ruđer Bošković, Zagreb, Croatia):  
In search for biomarkers of neuropsychiatric disorders: new perspectives on early diagnosis and personalized therapy

9.30 – 9.45 **Tadej Battelino, Jernej Kovač** (University Medical Centre and Faculty of Medicine, University of Ljubljana):  
Slovenian Reference Genome Project

9.45 – 10.00 **Vladka Čurin Šerbec** (Blood Transfusion Centre, Ljubljana):  
Biobanking in Slovenia

10.00 – 10.30 Coffee break

10.30 – 12.00 **Plenary session 6:  
MOLECULAR MECHANISMS AND BIOMARKERS IN  
HORMONE-DEPENDENT DISEASES**

*Chair: T. Lanišnik Rižner, Laboratory for molecular basis of hormone-dependent diseases and biomarkers*

10.30 – 10.40 **Tea Lanišnik Rižner** (IBKMG, Faculty of Medicine, University of Ljubljana):  
Integrative approach: from steroid hormones to multiomics biomarker discovery