

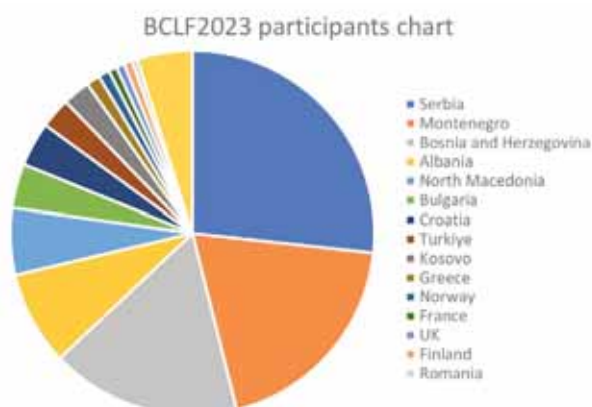
30TH MEETING OF BALKAN CLINICAL LABORATORY FEDERATION

Tanja Antunović, MACC president
Najdana Gligorović Barhanović, BCLF and MACC past president

30th Meeting of Balkan Clinical Laboratory Federation (BCLF2023) and 2nd Conference of Montenegrin Association for Clinical Chemistry and Laboratory Medicine (MACC) was held in Herceg Novi, Boka Bay, Montenegro, 27–30.09.2023. It was organized by MACC, under the auspices of International (IFCC) and European (EFLM) Federation of clinical chemistry and laboratory medicine. The meeting was accredited by local Montenegrin medical chamber and European Accreditation Council for Continuing Medical Education with 25.0 European CME credit. »Smart Event« application was used for monitoring attendance at lectures and final participants evaluation of the Meeting.

During the Opening ceremony BCLF President Prof Dobrin Svinarov, EFLM president Prof Tomris Ozben, IFCC President Khosrow Adeli and MACC President and President of BCLF2023 Organizing committee Dr Tanja Antunovic welcomed the gathering, wishing the participants successful meeting and pleasant stay in Montenegro. Prof Mario Plebani presented the organization and aims of EFLM.

BCLF2023 was attended by 408 registered participants from different parts of the world, mostly from BCLF countries (Serbia – 109 attendees, Montenegro – 79, Bosnia and Herzegovina – 69, Albania – 34, North Macedonia – 24, Bulgaria – 16, Turkiye – 11 attendees).



The scientific program included 52 lecturers with:

- Opening lecture
 - 3 plenary sessions
 - 12 sessions with 37 lectures and 14 oral presentations
 - 4 case report sessions
- 81 electronic poster presentations.

The opening lecture »Implementation of sustainable practices in medical laboratories – Switching Clinical laboratories to Green labs« was delivered by Prof Tomris Ozben (EFLM President and IFCC President-elect). Since sustainability is fast becoming the blueprint of every modern business strategy, this was great opportunity to hear more about this important issue, EFLM Taskforce for Green and Sustainable Laboratories and practices how to minimize medical laboratory impact on the environment.

Prof Gary Moor second day plenary lecture about one of the most challenging areas of laboratory medicine – »Thrombophilia screening - not so straightforward«, has been met with greatest interest of participants and unanimously rated as excellent, and more than useful. Up to date third day plenary lecture by Prof Mauricio Ferari »Big data and aging «focused on biological complexity and heterogeneity of ageing and the capacity to generate new knowledge about this process more quickly by using »big data«.

Fourth day plenary lecture about »Mass Spectrometry-Based Omics« introduced the value of this remarkably sophisticated molecular imaging technique, enhancing the current knowledge on the interaction mechanisms in health and disease.

Scientific program started with two Preopening sessions, Bone and mineral metabolism and Total testing process in clinical laboratory, listed in the table below.

After the Opening ceremony and lecture, Meeting President Dr Tanja Antunovic invited participants to the Welcoming cocktail held nearby on the open terrace by the sea. It was a great opportunity to greet old friends, get to know new colleagues and discuss the opportunities for closer cooperation.

Wednesday, 27.09.2023.			
Session 1: Bone and mineral metabolism	Emir Muzurovic - <i>Hyperparathyroidism - diagnosis with many horizons.</i>	14:00	14:30
	Etienne Cavalier - <i>Parathyroid hormone: from the first radio-immunoassay to LC-MS/MS.</i>	14:30	15:00
	Aylin Sepici Dincel - <i>Sclerostin and Dickkopf-1 as a new marker of bone disease.</i>	15:00	15:30
	Nela Raseta Simovic - <i>Bone metabolism markers in physically active postmenopausal women.</i>	15:30	16:00
Session 2: Total testing process in clinical laboratory	Mario Plebani - <i>Standardization and harmonization in laboratory medicine: data comparability is needed.</i>	16:00	16:30
	Khosrow Adeli - <i>Closing the gaps in adults and pediatric reference intervals: global initiatives.</i>	16:30	17:00
	Sverre Sandberg - <i>How to use biological variation data to 1) set performance specifications 2) monitor patients 3) generate personal reference.</i>	17:00	17:30

On Thursday, 28.09.2023, after two Lab-clinical case reports in early morning hours, the

program continued with four sessions listed in the table below. **Thursday, 28.09.2023.**

Thursday, 28.09.2023.			
Lab-clinical case reports: From diagnostics to diagnosis	Petra Uljarevic - <i>Blood morphology. A microscope: between reality and mind's eye.</i>	7:30	8:15
	Aleksandra Antovic - <i>Antiphospholipid syndrome – diagnostic and therapeutic challenges.</i>	8:15	9:00
Session 3: Laboratory haematology	Sverre Sandberg - <i>An overview on how to diagnose and monitor the different porphyrias.</i>	9:15	9:45
	Slavica Pavlovic Djuranovic - <i>What makes you stronger can kill you: Use of poly-basic peptides as new drug candidates against Plasmodium falciparum.</i>	9:45	10:15
	Marko Trtica - <i>Iron deficiency in nonanaemic COPD patients - Could low haemoglobin density and microcytic anaemia factor be useful?</i>	10:15	10:30
	Miljan Savkovic - <i>The importance of determining hepcidin-25 for treating anemia in patients with end-stage renal disease.</i>	10:30	10:45
Session 4: Thrombosis and haemostasis	Jovan Antovic - <i>Laboratory diagnosis of thrombotic microangiopathies: Measurement of ADAMTS-13.</i>	11:30	12:00
	Ivana Lopic - <i>One disease, numerous challenges: How to successfully diagnose von Willebrand disease in the laboratory?</i>	12:00	12:30
	Nikola Bakic - <i>Mainstream in haemostasis in Montenegro, can we keep up?</i>	12:30	13:00
	Milena Velizarova - <i>Optimal utilization of thrombophilia testing in asymptomatic individuals.</i>	13:00	13:15

Session 5: Cardiovascular diseases and cardiovascular disease risk prediction	Murat Cihan - <i>Clinical and laboratory applications of kynurenine and its pathway products.</i>	15:00	15:15
	Vladimir Prelevic - <i>Early vascular ageing, arterial stiffness and target organ damages in treated hypertensive patients.</i>	15:15	15:45
	Ebru Sezer - <i>Protein Bound Uremic Toxins (PBUTs); Potential impact of implementing test panels for PBUTs on patient outcomes.</i>	15:45	16:15
	Muhammed Fevzi Kilinckaya - <i>Cathepsin D in cardiovascular diseases and its relationship with cardiovascular mortality.</i>	16:15	16:30
	Aneta Boskovic - <i>Clinical implications of high-sensitivity cardiac troponin assays in acute coronary syndrome.</i>	16:30	17:00
Session 6: Immunology / Allergology	Urska Bidovec Stojkovic - <i>Exploring the latest innovations in laboratory diagnostics for drug-induced anaphylaxis: towards personalized approaches and biomarker develop.</i>	17:45	18:15
	Marija Saric Matutinovic - <i>Thyrotropin receptor antibodies: clinical relevance and methodological aspects.</i>	18:15	18:45
	Neda Milinkovic - <i>Analytical and clinical characteristics of serological immunoassays of anti-SARS-CoV-2 antibodies.</i>	18:45	19:00
	Verica Jakjimoska - <i>The bright side of COVID-19 pandemic for patients with allergic conditions.</i>	19:00	19:15

The third day of the BCLF2023 also started early with two Lab-clinical case reports, which were

followed with four scientific sessions listed in the table below.

Friday, 29.09.2023.			
Lab-clinical case reports: From diagnostics to diagnosis	Adie Viljoen - <i>Lipoprotein (a).</i>	7:30	8:15
	Marina Minic-Novcic - <i>Curious Cases of Dyslipidaemia – A Series of Case Reports.</i>	8:15	9:00
Session 7: Biomarkers in neurobehavioral and psychiatric disorders	Ole A. Andreassen - <i>Multimodal prediction of age of onset of Alzheimer's disease with potential for treatment stratification.</i>	9:15	9:45
	Sergej Djuranovic – <i>Approaches for the targeted modulation of mRNA translation in neurodegeneration.</i>	9:45	10:15
	Srdjan Djurovic - <i>Modeling psychiatric disorders with patient-derived brain organoid cultures.</i>	10:15	10:45
	Milena Petrovic - <i>The influence of COMT gene polymorphism on the severity of presentation of negative symptomatology in schizophrenia spectrum.</i>	10:45	11:00
Session 8: Precision medicine technologies and molecular diagnostics	Ron van Schaik - <i>Pharmacogenetics: prevention is key!</i>	11:45	12:15
	Maurizio Ferrari - <i>RNA editing as a diagnostic test to diagnosis bipolar disorders.</i>	12:15	12:45
	Dobrin Svinarov - <i>Clinical mass spectrometry becomes a major tool for precision medicine.</i>	12:45	13:15

Session 9: Advancing healthcare for transgender patients	Marta Bizic - <i>Genital surgery and bioethical aspects in transgender persons.</i>	15:00	15:30
	Jeroen Vervalcke - <i>Hormone treatment in transgender persons, and interpreting laboratory results.</i>	15:30	16:00
	Dusica Markovic Zigic - <i>Psychiatric aspects in transgender population.</i>	16:00	16:30
Session 10: Dyslipidemia, diabetes, adiposity	Khosrow Adeli - <i>Neuroendocrine Regulation of Food Intake and Metabolism via Gut Hormones and Enteric Neurons: Implications in Obesity & Type 2 Diabetes.</i>	17:15	17:45
	Adie Viljoen - <i>Diabetes and lipids.</i>	17:45	18:15
	Marina Minic-Novcic - <i>Familial hypercholesterolaemia, diagnosis and management.</i>	18:15	18:45
	Marina Jaksic - <i>Association between vitamin D and hypertension in preobese and obese children in Montenegro.</i>	18:45	19:00
	Aleksandra Atanasova-Boshku - <i>Dyslipidemia and relevant disorders to female reproductive health.</i>	19:00	19:15

Friday, 29.09.2023. Lab-clinical case reports: From diagnostics to diagnosis Friday, 29.09.2023. ended with the Get-together dinner, almost unanimously proclaimed as one of the best social events on conferences, not only by BCLF members, but also by distinguished guests from all around the world. Aim of the organizers was to present at least the small part of Montenegrin and Boka Bay culture, so beside

the abundant scientific knowledge participants could leave the Herceg Novi with new information from other areas of life.

The final day of BCLF2023 had two scientific sessions - Masterclasses from Balkan region, where Balkan scientist got the opportunity to present their latest scientific achievements.

Saturday, 30.09.2023.

Session 11: Masterclass from Balkan region I	Katerina Toseska-Trajkovska - <i>The science of women leadership.</i>	8:00	8:30
	Christos Tsatsanis - <i>Sepsis biomarkers: from bench to bedside.</i>	8:30	9:00
	Irini D. Leimoni - <i>Medical waste management at the biochemistry laboratory.</i>	9:00	9:30
	Ledina Mino - <i>Lipid profile in the context of cardiovascular risk: a new approach of ASoLaM in the role of laboratory specialist in patient counseling.</i>	9:30	9:45
	Vjeroslava Slavic - <i>Immunomodulatory Effect of Nanomembrane-Based Low-Volume Plasma Exchange on Intestinal Permeability in Metabolic Syndrome.</i>	9:45	10:00
	Ozlem Unay Demirel - <i>Early prediction of bloodstream infection with complete blood count parameters: An ex-vivo human whole blood model.</i>	10:00	10:15
Session 12: Masterclass from Balkan region II	Radivoj Jadric - <i>Old biomarkers and their new use.</i>	11:15	11:45
	Sorin Giju - <i>Various types of urinary casts and their diagnostic significance - manual microscopic vs automatic method - an integrated view.</i>	11:45	12:15
	Aleksandra Klisic - <i>Endocan as a novel marker of cardiometabolic disorders.</i>	12:15	12:45
	Kenan Preljevic - <i>Chemical composition, antioxidant and antibacterial activity of essential oil of <i>Satureja montana</i> L.</i>	12:45	13:00

Poster presentations from broad number of areas of laboratory medicine were shown on 28th and 29th of October in electronic form, and were available for all the participants from XX-XX h.

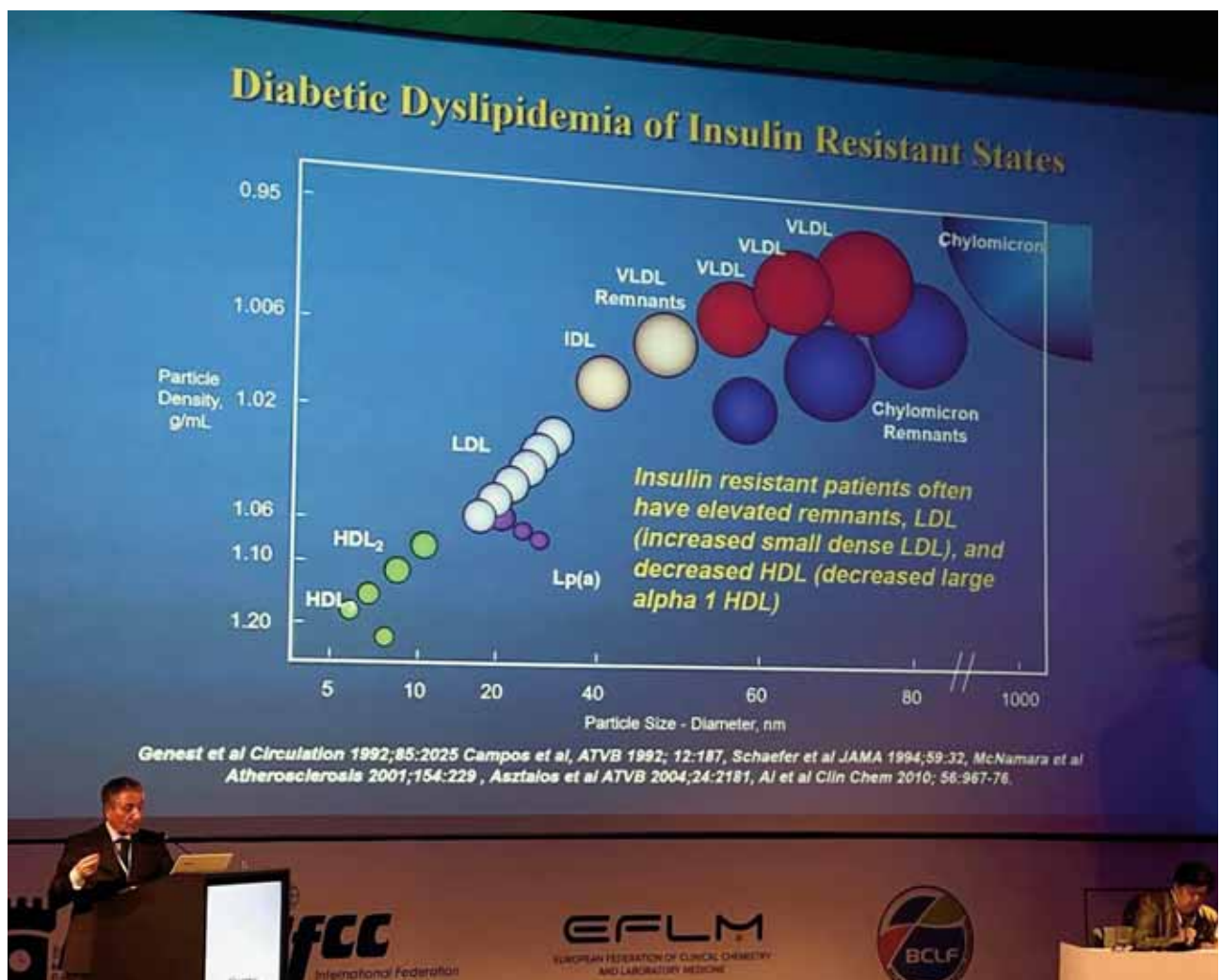
Besides the scientific part, BCLF2023 included five Commercial workshops, where leading manufacturers in this field had the opportunity to present their cutting-edge technologies:

1. Roche: Patient journey in HCC and importance of diagnostics in multidisciplinary approach, Western Balkan Initiative;
2. Sysmex: The impact of pre-analytical variables and drug interference on coagulation tests;

3. Mindray: Envision more with advanced hematology automation;
4. Sysmex: Reliable Automated Urinalysis by Sysmex;
5. Greiner Bio-One: Preanalytical phase - a continuous challenge for laboratory professionals.

According to the Participant evaluation, carried out through application Smart Event, the 30th BCLF meeting was rated with overall 4.53 mean score (5 – the best score).

30th BCLF meeting in Montenegro was very successful, we are looking forward to the next one!



Prof. Khosrow Adeli, IFCC president, lecture.



Prof. Mario Plebani, EFLM president-elect presentation of the EFLM activities.



Congress hall - Congress Venue - Park Hall, Herceg Novi.



Get together dinner, Palmon bay hotel, Igalo, Herceg Novi.



Exhibition area, Park Hall Foyer.



Prof. Nada Majkic-Singh and Dr Marina Minic Novcic as chairs.



Prof. Tomris Ozben, EFLM president lecture.



Welcome cocktail after the Opening ceremony, Gradska kafana, Herceg Novi.

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News from the Society of
Medical Biochemists of Serbia

SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA PROFESSOR IVAN BERKEŠ SCIENTIFIC FUND

Nada Majkić-Singh, The Fund President

Appreciating the work of his teacher and eminent expert, the Society of Medical Biochemists of Yugoslavia, (today the Society of Medical Biochemists of Serbia) after the death of Prof. Dr. Ivan Berkeš in 1997, in his honor, the Scientific Fund »Professor Ivan Berkeš« was formed and established the »Annual Scientific Conference« dedicated to the life and work of Professor Ivan Berkeš at the suggestion and organization of Prof. Dr. Nada Majkić-Singh.

Annual awards (diplomas and cash prizes) are awarded from the Fund to Pharmacy students, which we are doing for the twenty-sixth time this year.

The patrons of the »PROFESSOR IVAN BERKEŠ« SCIENCE FUND are:

SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA

INSTITUTE OF MEDICAL BIOCHEMISTRY OF THE FACULTY OF PHARMACY OF THE UNIVERSITY OF BELGRADE

INSTITUTE OF MEDICAL BIOCHEMISTRY OF THE MILITARY MEDICAL ACADEMY

Professor Dr. Ivan BERKEŠ, an important figure in the field of pharmacy and medicine, is the founder of medical biochemistry and clinical enzymology in the healthcare of Serbia and Yugoslavia.

Under his leadership, numerous generations of medical biochemists were educated at the Faculty of Pharmacy in Belgrade. In Serbia for a long time there was not a single laboratory, without a student of Professor Ivan Berkeš working in it.

On November 16, 2010, the Thirteenth Annual Scientific Conference dedicated to the 100th anniversary of the birth of Professor Ivan Berkeš was held in Belgrade, in which experts from Belgrade (N. Majkić-Singh), Zagreb (S. Margetić) and Skopje (S. Efremeova-Aaron) where Professor Ivan Berkeš lived and worked, held their lectures. Diplomas and monetary awards were also traditionally awarded from the Scientific Fund »Professor Ivan Berkeš« to the best



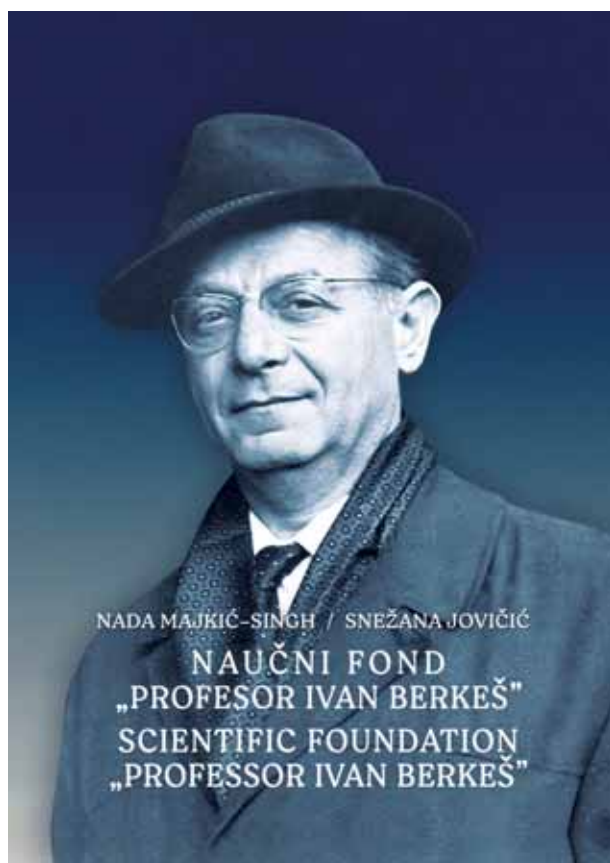
Professor Dr. Ivan Berkeš (1910–1997)

students of the Faculty of Pharmacy in Belgrade, namely: Zori Četković and Jeleni Joksić.

In 2020, the Society of Medical Biochemists of Serbia marked the 110th anniversary of the birth of Professor Ivan Berkeš, on which occasion the Monograph – LIFE AND WORK OF PROFESSOR IVAN BERKEŠ and FUND LAUREATES: WHERE ARE THEY AND WHAT ARE THEY DOING TODAY?

So far, the Fund has 56 laureates and their biographies are described in the Monograph.

The First Annual Scientific Conference »Professor Ivan Berkeš« was held on November 25, 1998. in Belgrade in the »Inter-Continental Belgrade« hotel with the Second Congress of Pharmacists of Yugoslavia.



The first laureates of the Fund were:

VESNA VUKOVIĆ (graduate pharmacist-medical biochemist) i

NEBOJŠA CEKIĆ (pharmacist graduate)

The Twenty Third Annual Scientific Conference »Professor Ivan Berkeš« were co-organized and hosted by the Faculty of Pharmacy, University of Belgrade was held on 15. December 2022 (see www.dmbj.org.rs).

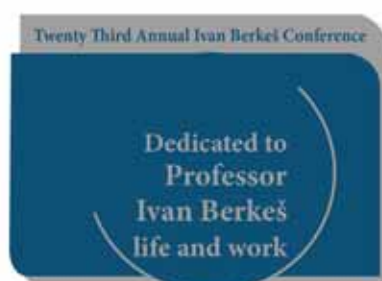
Laureates of the Scientific Fund »Professor Ivan Berkeš« in 2022 were:

ĐORĐE STANIVUK (Master of Pharmacy - Medical Biochemist) and

JOVANA ŽIVANOVIĆ (Master of Pharmacy)



Organizator
Prof. dr Nada Majkić-Singh



Organizer
Professor Nada Majkić-Singh

DMBS



SMBS

The received Diplomas and monetary awards.

This year, diplomas and monetary awards were presented on November 4 at the opening of the IV TMB CONGRESS – Cardiovascular risk factors - diagnostic challenges and importance

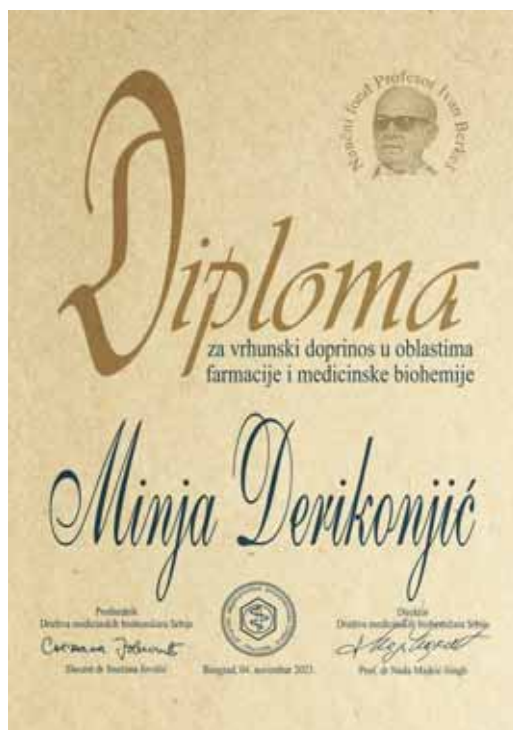
The laureates of the Scientific Fund »Professor Ivan Berkeš« in 2023 are:

MINJA DERIKONJIĆ (Master of Pharmacy – Medical Biochemist) and

NASTASIJA ANĐELKOVIĆ (Master of Pharmacy



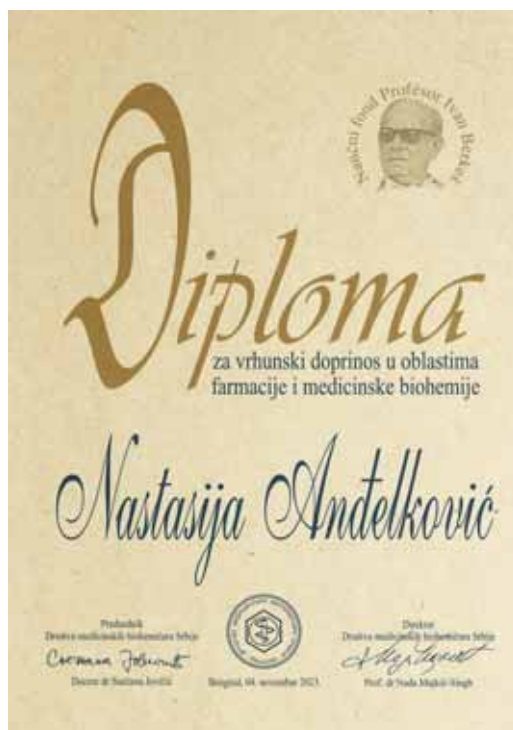
Minja Derikonjić was born on 23.03.1999. in Pancevo, where she finished elementary school as a student of the generation, after which she entered the »Uroš Predić« Gymnasium-natural sciences and mathematics. She graduated from high school in 2018 with a »Vuk Karadžić« diploma. In the same year, she entered the Faculty of Pharmacy of the University of Belgrade, majoring in pharmacy-medical biochemistry, from which she graduated in September 2023 with an average grade of 9.72. Graduate thesis entitled »Examining the predictive and diagnostic potential of insulin-like growth factor 1 in patients with colorectal cancer«, under the mentorship of Prof. Dr. Aleksandra Zeljković, she defended at the Department of Medical Biochemistry. She received award »Professor Ivan Berkeš« from the Scientific Fund as the best graduated student of the Faculty of Pharmacy majoring in pharmacy-medical biochemistry in the 2022/2023 year. During her studies, she got three times the Annual Award of the Faculty of Pharmacy for the best students. She is a scholarship recipient of the Fund for Young Talents of the Republic of Serbia-Dositeja for the year 2022/2023, and for four years she was also a scholarship holder of the Ministry of Education, Science and Technological Development of the



Republic of Serbia. During her studies, she engaged in scientific research at the departments of medical biochemistry and toxicology. The student scientific research paper on the topic »Examination of biochemical indicators of cardiometabolic risk in patients with hypothyroidism«, carried out at the Department of Medical Biochemistry under the mentorship of Prof. Dr. Aleksandra Zeljković, she presented at the XV Mini-Congress of students of the Faculty of Pharmacy and the 61st Congress of Biomedical Sciences Students of Serbia on Kopaonik in 2022. The following year, she participated in the XVI Mini-Congress of the students of the Faculty of Pharmacy, where her student scientific research paper entitled »Exposure assessment of inhabitants of Pancevo to benzene«, carried out at the Department of Toxicology under the mentorship of Prof. Dr. Marijana Čurčić, declared the best in the field of toxicology. She enrolled in doctoral academic studies in the 2023/2024 school year at the Department of Medical Biochemistry of the Faculty of Pharmacy in Belgrade. From October 2023, she is doing an internship at the Clinical Hospital Center »Dr. Dragiša Mišović-Dedinje«, at the Laboratory Diagnostics Service.



Nastasija Anđelković was born on 27th February 1999 in Kraljevo. She completed Medical high School-Kraljevo as the best student of generation. In 2018 she enrolled in the Faculty of Pharmacy in Belgrade (Master of Pharmacy) and graduated in July 2023. During her studies she was the member of the Student Scientific-Research Center (CNIRS) in Faculty of Pharmacy in Belgrade and Social media-team coordinator. She was engaged in scientific research work at the Department of Pharmaceutical Chemistry where she did three research papers under mentorship of Prof. Branka Ivković and at the Department of Pharmaceutical Technology under mentorship of Prof. Snežana Savić and Ass. Ines Nikolić. One of the papers named *»How do we actually see the invisible: analysis of the impact of measuring conditions and sample preparation procedure on the size estimation of nanoparticles/nanodroplets through dynamic light scattering«* which was awarded as the best work in the field of pharmaceutical technology on the XV Mini-Congress of Students of the Faculty of Pharmacy and on the 61th Congress of Biomedical Sciences Students of Serbia in Kopaonik mountain in 2022. and the paper named *»Characterization of propiophenone deri-*



vatives as potential antiseptics/disinfectants« which was awarded the best work in the field of pharmaceutical chemistry on the 62th Congress of Biomedical Sciences Students of Serbia in Kopaonik mountain in 2023. She is co-author of one research paper which is published in the Journal of the Serbian Chemical Society – JSCS, named: *»Application of liquid chromatography in defining the interaction of newly synthesized chalcones and related compounds with human serum albumin«*. She defended her graduate thesis entitled *»Characterization of propiophenone derivatives as potential antiseptics/disinfectants«* at the Department of Pharmaceutical Chemistry under mentorship of Prof. Branka Ivković. During her studies, she was awarded for her success by the Faculty of Pharmacy for several years. She received award for the best graduated student (Pharmacy programme) during 2022/2023 at the University of Belgrade – Faculty of Pharmacy from the Scientific Foundation *»Professor Ivan Berkeš«*. During her studies, she was a scholar of the Ministry of Education, Science and Technological Development, Republic of Serbia. She is a scholarship holder of the Fund for Young Talents of the Republic of Serbia – *Dositeja*, and holder of *»Talent program in the public sector«*.



Minja Derikonjić with Nada Majkić-Singh and Snežana Jovičić.



Nastasija Anđelković with Nada Majkić-Singh and Snežana Jovičić.



Nada Majkić-Singh and Snežana Jovičić with Fund Professor Ivan Berkeš 2023 winners Minja Derikonjić and Nastasija Anđelković.



Anđelija Jocić, TMB Coordinator with Nada Majkić-Singh and Snežana Jovičić.