

## NEWS FROM THE SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA

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## NEW OFFICERS APPOINTED IN THE SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA



Prof. dr Nada Majkić-Singh, National Representative



Prim. dr Zorica Šumarac, President

The Executive Board of the Society of Medical Biochemists of Serbia (SMBS) on the meeting held 12 April 2012 appointed new officers for Society Board and Representations.

Prof. Dr Nada Majkić-Singh is appointed for National Representative and dr Zorica Šumarac for President of the Society of the Medical Biochemists of Serbia. According to the Statute of the SMBS, the Assembly of the Society is constituted of actual membership in the current year. Society is managed by the Executive Board whose work is controlled by the Supervising Board. Members of the newly elected Executive Board are Zorica Šumarac – President of SMBS, Nada Majkić-Singh – Past President, Tatjana Vodnik – Secretary General, Snežana Jovičić – treasurer, Svetlana Ignjatović – member, Jelena Ošap – member, and Velibor Canić – member. Three members constitute the Supervising Board, whose mandate is limited to only one term during which they cannot be members of other Committees of the SMBS. President of the Supervising Board is Emina Čolak.

Within the SMBS operate fifteen Committees with five to nine members. These are the Scientific

Committee (which acts also as the Committee for Congress Activities); Committee for Publishing Activities; Committee for »Magistra Milica Marković« Foundation; Committee for Laboratory Standardization; Committee for Laboratory Practice Organization; Committee for Medical Laboratory Accreditation; Committee for External Quality Control; Committee for Professional Engagement of Young Biochemists; Committee for IT Activities; Committee for Cooperation with IFCC, EFLM, BCLF and Related National Organizations; Committee for Cooperation with Industry; Ethical Committee; Awards Committee; and Committee for History of Medical Biochemistry.

Center for Continuous Medical Education of the SMBS works on developing and organizing courses of continuous medical education. It has the Program Council, constituted of Presidents of all the Committees of the SMBS, and the President of the Council is the Executive Director of the SMBS.

The terms of the new officers started 1 October 2012. We all hope that their work will be as successful as their predecessors'.

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## **CHAMBER OF BIOCHEMISTS – BEGINNING THE NEW AGE OF LABORATORY PRACTICE IN SERBIA**

For many years, the leading organization that dealt with the development of profession of medical biochemistry in Serbia has been the Society of Medical Biochemists of Serbia (formerly Society of Medical Biochemists of Yugoslavia). As part of the healthcare system reforms conducted in the last decade, the Law of Healthcare Workers Chambers was adopted six years ago. Medical biochemists were the first that completely implemented the law, constituted Assembly of the Chamber and five years ago delivered first licenses. Prof. dr Nada Majkić-Singh was the first elected president of the Assembly, and dr Velibor Canić the first elected director of the Chamber.

The Chamber of Biochemists is professional organization of medical biochemists and clinical chemists with the mandatory membership for colleagues working in public healthcare institutions and private practice. In accordance with the Law, the Chamber has a number of public authorities, including the definition of codex of professional ethics, keeping directory of all the members of the Chamber, issuing, renewing and depriving the licenses for independent practice to all of the members, representing and protecting professional interests of members, proposing the list of supervisors for external quality audit, organizing Court of Honor for determination of violation of professional duties and responsibilities of members, and many others.

What are the first and obvious benefits of the work of such an organization? First of all, with the

introduction of licenses, which have to be renewed every seven years, professional development has achieved continuity. Medical biochemists and clinical chemists in Serbia today are more focused to continuous education after graduation – in order to keep their license they need to collect 24 credits per year minimum. Thanks to attendance of various courses, seminars, symposia, congresses, more colleagues are now up-to-date with latest developments in the practice of laboratory medicine, which enable them to implement this new knowledge in their every day workload. Also, more educational courses are organized throughout the year than before. In addition, with one of the major activities of the Chamber – the enhancement of control of the work of laboratories throughout the whole territory of Republic of Serbia, quality of their work is significantly improving, which is evident in results of our national external quality assessment scheme (SNEQAS). Furthermore, all laboratories, both in private and in public healthcare system, are encouraged and advised by the Chamber to commence the accreditation process according to standard ISO 15189.

The Chamber of Biochemists of Serbia lasts for five years now. Every four years delegates for the Assembly, Supervisory Board, Steering Committee, Commission for Mediation, Director and Court of Honor are elected. In 2011 year we had relections and the first convening, the session of the constituent assembly, handed over its duties to new delegates. We are all confident that they will continue the fruitful work of their predecessors.

## SEMINAR ON EDUCATION OF MEDICAL BIOCHEMISTS TODAY

The Society of Medical Biochemists of Serbia every year organizes educational seminars, which are supervised by the Chamber of Biochemists and attendance of which carries 6 CME credits. In April 2011, the 14<sup>th</sup> educational seminar entitled »Education of Medical Biochemists and Improvement of Work Quality« was organized. The lectures were »Postgraduate Qualification in Pharmacy: Tempus PQPharm Project Goals and Harmonization with the EU«, by prof. dr Jelena Parojičić (Faculty of Pharmacy, University of Belgrade, Serbia), »The development of Standardization Business and Integrated Management System«, by prof. dr Vidosav Majstorović (Faculty of Mechanical Engineering, University of Belgrade, Serbia), »The Needs, Rules and Process of Continuing Medical Education« by prof. dr Svetlana Ignjatović (Faculty of Pharmacy, University of Belgrade, and Institute of Medical Biochemistry, Clinical Centre of Serbia, Serbia) and dr Velibor Canić (Chamber of Biochemists of Serbia, Serbia). Prof. dr Nada Majkić-Singh (Faculty of Pharmacy, University of Belgrade, and Institute of Medical Biochemistry, Clinical Centre of Serbia, Serbia) talked about »Education and Recognition of Professional Qualifications in the Field of Medical Biochemistry of Serbia«. Next to these distinguished speakers from Serbia, we were honored and very pleased to have two lecturers from the EC4 Register Commission – Dr Simone Zerah and Ms. Janet McMurray.

President of the EFCC Professional Committee and Chair of the EC4 Register Commission, dr Simone Zerah, spoke about the EC4 Register for Specialists in Laboratory Medicine. Dr Zerah dealt with structure and perspective of the EC4 Register, the importance of choosing the right name for the profession, aims of the Commission and relations with the European Commission and Parliament. We were introduced to the foundations of the Register – EC4 Syllabus (which is in accordance with ISO/EN/15189 Standard and the European Directive on the recognition of professional qualifications) and the Code of conduct (representing the ethical values required for professional behavior), as two main documents. Also, we were informed about placing EC4 Register on the Self-Regulation Database of the

European Economic and Social Committee's Single Market Observatory (EESC/SMO), with planned acquiring the level of Legislation. In the end, dr Zerah emphasized that the Register enables promotion of the profession of specialist in laboratory medicine in the E.U. and strengthens our influence at the European Commission and the Parliament.

EC4 Register Commission Secretary, Janet McMurray, elaborated about the implementation of the EU Directive on recognition of professional qualifications as applied to specialists in clinical chemistry and laboratory medicine. In her lecture, Ms. McMurray talked about systems for recognition of qualifications and Directive 2005/36/EC of the European Parliament on the recognition of professional qualifications, its effects on specialists in laboratory medicine, common platforms, education and training levels, as well as training contents in European countries, with the review of current status of common platforms and their future.

After these excellent presentations about the work of the EC4 Register Commission on common platforms for training and formation of EC4 registration of laboratory professionals, prof. dr Nada Majkić-Singh presented the situation in education and recognition of professional qualifications in the field of medical biochemistry in Serbia. In her lecture, prof. Majkić-Singh presented the educational outline and syllabus of pharmacy-medical biochemistry at the Faculty of Pharmacy, University of Belgrade; as well as the professional program of specialization and academic doctoral studies in medical biochemistry, conditions and regulations for practice and for recognition of foreign higher education, together with equivalence of standard of education, training and competence in comparison with EC4 standards.

Together with the rest of the seminar, these lectures gave us a pretty clear picture of the position of specialists in clinical chemistry and laboratory medicine in Europe today, current platform on training requirements, but also showed us where laboratory professionals in Serbia stand compared with the European colleagues, and we are happy to say that we are not very far removed.



Lecturers on Seminar (form left to right): S. Ignjatović, V. Canić, J. McMurray, N. Majkić-Singh, J. Parojčić, S. Zerah

## **7th EFCC SYMPOSIUM FOR BALKAN REGION – BIOMARKERS: FROM STANDARDIZATION TO PERFORMANCE**

At the end of June 2011, the Society of Medical Biochemists of Serbia once again had the pleasure to welcome colleagues to the 7th IFCC Symposium for Balkan Region, organized traditionally under the auspices of the International Federation of Clinical Chemistry (IFCC) and European Federation of Clinical Chemistry and Laboratory Medicine (EFCC) in Belgrade. This year, the Symposium was dedicated to the burning issue of biomarkers, entitled »Biomarkers: From Standardization to Performance«. Like in the past six years, many renowned lecturers marked this meeting.

In the first section, professor Nada Majkić-Singh (Institute for Medical Biochemistry, Clinical Centre of Serbia, Belgrade, Serbia) introduced us with biomarkers, process of their validation and development of guidelines for biomarker application in her lecture entitled »What is Biomarker? From Discovery to Clinical Application«. Professor Mauro Pantheghini's lecture (Department of Clinical Sciences »Luigi Sacco«, University of Milan, Milan, Italy) was about standardization approaches and definition of performance requirements for heterogeneous biomarker assays. Professor Patrick M.M. Bossuyt (Department of Clinical Epidemiology and Biostatistics, Academic Medical Center, University Amsterdam, The Netherlands) defined biomarker performance and clinical validity, expressed in terms of the marker's accuracy, and summarized and presented the available measures of diagnostic accuracy.

Second section was dedicated to the use of biomarkers in cardiovascular events and it was opened with professor Victor Bleton's talk (Department of Clinical Chemistry, Hospital AZ Sing-Jan AV, Brugge, Belgium) about novelties among prospective markers in this field. Professor Grazyna Sypniewska (Department of Laboratory Medicine, Collegium Medicum, Nicolaus Copernicus University, Bydgoszcz, Poland) presented results of her group's study about performance of apolipoproteins B and A by comparing apolipoprotein concentrations and apoB:apoA-I with traditional lipid measures and atherogenic indices in as biomarkers in acute coronary syndrome patients. Adriana Unić (Clinical Department of Laboratory Diagnostics, Dubrava University Hospital, Zagreb, Croa-

tia) summarized the recent progress in the diagnostic use of copeptin, C-terminal part of the arginine vasopressin precursor peptide found to be stable and sensitive marker for antidiuretic hormone release, in cardiovascular diseases. This section was closed by Sanja Stanković (Institute of Medical Biochemistry, Clinical Centre of Serbia, Belgrade, Serbia) with an overview of potential new roles for myeloperoxidase as biomarker in cardiovascular disease.

The second day of the symposium started with professor Bernard Gouget (Federation Hospitaliere France, Paris, France), who opened the third section with his special lecture on biomarkers, biospecimen and European biobanking infrastructures for translational research. Professor Philippe Gillery (Laboratory of Pediatric Biology and Research – University Hospital of Reims and Laboratory of Medical Biochemistry and Molecular Biology, Faculty of Medicine of Reims, France) introduced us with nonenzymatic post-translational modification derived products as new biomarkers of protein aging. This section was concluded with professor Diler Aslan's lecture (Pamukkale University School of Medicine, Department of Medical Biochemistry, Denizli, Turkey), where biomarkers recommended for prediction or diagnosis of diabetes complications in the clinical practice and laboratory medicine guidelines were reviewed and results of several clinical studies were summarized.

The fourth section started with the lecture about a novel combination of biomarkers for the prediction of ovarian cancer, including human epididymis protein 4 (HE4) and CA125, presented by professor Demetrios Rizos (Medical School, University of Athens, Greece). Professor Andrea Griesmacher (Central Institute of Medical and Chemical Laboratory Diagnostics, LKH – University Hospital of Innsbruck, Austria) continued with the overview of biomarkers for bone turnover. This section was concluded with the review of biomarkers of fetal anomalies incorporated in first and second trimester screening strategies presented by professor Svetlana Ignjatović (Institute of Medical Biochemistry, Clinical Centre of Serbia, Belgrade, Serbia).

The fifth and last section was, traditionally, dedicated to experiences from Balkan region in the use and development of biomarkers. It started with the lecture of Miroslava Janković (Institute for the application of Nuclear Energy – INEP, University of Belgrade, Serbia) about the status and perspective of glycans as biomarkers and about the glycome as promising source of new biomarkers. Afterwards, professors Majkić-Singh, Blaton and Ignjatović chaired the round table discussion on presented topics.

This closed the formal part of the symposium, but it continued outside Belgrade. The two following weekend days the participants and lecturers spent on the road, or railway to be precise. They went on the nostalgic travel through time with the Blue Train – a special train used for the needs of Josip Broz Tito, lifelong President of the Socialistic Federal Republic of Yugoslavia. It is one of the most famous and most popular trains in the whole world, built in 1959 for special needs of president Tito. Designed as a place that provides accommodation, working conditions and opportunity to complete all protocol obligations while traveling, this train was real residence on wheels in the country and abroad. The destination was Mokra Gora, a mountain in the western part of Serbia, between mountains Zlatibor and Tara. There, they have changed the commodity of the presidential train with »argan eight«, another curiosity of the

Railway Museum of Serbia. From 1925 to 1974, this was the popular route from Belgrade to Dubrovnik and Zelenika on the Adriatic coast, where on 760 mm narrow-gauge track, through tunnels, over the bridges and through mountain gorges, ran famous steam locomotive train »Ćira«. Now, one part of this railway is renewed on the route from station argan Vitasi to Mokra Gora, which represents unique construction work, passes through 22 tunnels, over five bridges, and overcomes the altitude difference of 300 meters, and all that on a total distance of 15440 meters. Here, the participants had an opportunity to see all the beauty and richness of the nature of this region. The visit to the town of Drvengrad was unforgettable. Situated on the top of Mećavnik hill, Drvengrad (Wooden Town) was built by the world famous film director Emir Kusturica after the shooting of his film »Life is a miracle« in the site of Mokra Gora. Drvengrad presents unique ethno village, typical settlement of this area of XIX century, consisting of wooden buildings, such as so called cottages, characteristic for living on the nearby mountains.

After two days of enjoying the intact nature of Western Serbia and its food specialties, the caravan of biochemists arrived back to the Belgrade Main Railway Station. This definitely ended this year's EFCC Symposium for Balkan Region, leaving all participants with valuable new knowledge of biomarkers, but also with some unforgettable memories.



7<sup>th</sup> EFCC Symposium for Balkan Region lecturers



Symposium lecturers during trip to Mokra Gora (from left to right): Aslan Diler, Grazyna Sypniewska, Bernard Gouget, Nada Majkić-Singh, Patrick MM Bossuyt, Sanja Stanković, Victor Blaton



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## XXVII BIOCHEMICAL DAY IN BANJA LUKA

The end of October 2011, was the time when medical biochemists from Serbia, traditionally, had the pleasure to socialize with their colleagues from Republic of Srpska, Bosnia and Herzegovina. The Association of Medical Biochemists of Republic of Srpska and the Society of Medical Biochemists of Serbia organized joint meeting, XXVII Biochemical Day, on October 28<sup>th</sup> in Banja Luka, the capital of Republic of Srpska. There were around 100 participants from Serbia, Republic of Srpska and Federation of Bosnia and Herzegovina. The topic of this year's meeting was »Dilemmas and progress in determination of some biomarkers: present state«. After opening remarks by the president of the Society of Medical Biochemists of Serbia, professor Nada

Majkić-Singh, the lecturers from Institute of Medical Biochemistry, Clinical Centre of Serbia and Faculty of Pharmacy, University of Belgrade, presented the latest novelties in biochemical prenatal screening strategies (professor Svetlana Ignjatović), clinical use of high-sensitivity troponin assays (ass. Sanja Stanković), present issues in vitamin D determination (assistant professor Duško Mirković) and the use of C-reactive protein values as a guide for statin therapy in primary prevention of cardiovascular disease complications (Snežana Jovičić). Beside this official part, this was the great opportunity to exchange experience and get up-to-date with current issues in clinical laboratory practice between these two biochemical communities in neighboring countries.



From left to right: Dr Sanja Avram-Šolaja (President of the Association of Medical Biochemists of Republic of Srpska), Prof. Dr Svetlana Ignjatović, Sanja Stanković, Prof. Dr Nada Majkić-Singh (president of the Society of Medical Biochemists of Serbia) and Dr Velibor Canić (president of Chamber of Biochemists of Serbia).

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## THE XIV ANNUAL SCIENTIFIC CONFERENCE »PROFESSOR IVAN BERKEŠ«

The 2011 Annual Scientific Conference »Professor Ivan Berkeš« was held on December 1st at Military Medical Academy in Belgrade. As it is customary, the lecturers were clinical laboratory professionals who have defended their doctoral thesis in the course of the past year at the Faculty of Pharmacy and Faculty of Medicine. This year, they were: Dr Janko Pejović (Military Medical Academy, Belgrade), Dr Marijana Dajak (Faculty of Pharmacy, University of Belgrade), Dr Jasenka Laloš-Miljuš (Faculty of Medicine, University of Banja Luka) and Dr Jelena Popović (Faculty of Medicine, University of Niš).

This Annual Scientific Conference and Fund »Professor Ivan Berkeš« was established to honor life

and work of professor Ivan Berkeš, one of the founders of medical biochemistry in former Yugoslavia. He taught medical biochemistry at Universities in Zagreb, Skopje and Belgrade. His work at the Faculty of Pharmacy of the University of Belgrade was in great part directed towards the definition and foundation of the specialist studies program. Also, professor Berkeš introduced Clinical Enzymology as an independent discipline. With over 200 publications, mentoring of 150 specialists in medical biochemistry and several tens of doctoral candidates, professor Berkeš left an indelible mark in clinical laboratory profession in Serbia. After his death in 1997, the Society of Medical Biochemists of Yugoslavia and the Faculty of Pharmacy of the University of Belgrade founded the



Awarded students with the Dean and Professors of Faculty of Pharmacy (from left to right): Milena Anđelković, Professor Nada Majkić-Singh, Professor Nada Kovačević, Sanela Đorđević, Ana Milojević, Professor Svetlana Ignjatović

Scientific Fund and Annual Scientific Conference named after him, as a sign of appreciation and respect for this remarkable teacher and eminent expert.

Awards from the Scientific Fund »Professor Ivan Berkeš« are given yearly to the two best graduate students from the Faculty of Pharmacy of the University of Belgrade, one graduate in pharmacy, and the other in medical biochemistry. However 2011 called for a special event as the first students graduated according to the new syllabus harmonized with the Bologna declaration. Hence, this year the Fund gave four diplomas and monetary awards; two to students graduated according to previous school system – Mladen Milović (pharmacy graduate) and Milena

Anđelković (pharmacy-medical biochemistry graduate), and two to »Bologna graduates« – Sanela Đorđević (Master of Pharmacy) and Ana Milojević (Master of Pharmacy-medical biochemistry).

After the traditional welcoming address of colonel Professor Marijan Novaković, Head of Military Medical Academy, and of Professor Nada Kovačević, Dean of Faculty of Pharmacy and Chair of the event, Professor Majkić-Singh, presented awards.

With this successful conference, we remembered once again, the legacy of professor Ivan Berkeš, whose students represent the core of science of medical biochemistry and clinical laboratory practice in Serbia today.

## TWIN STUDENT EXCHANGE BETWEEN SERBIA AND CROATIA

The European Pharmacy Student Association (EPSA), among other activities, organizes TWIN projects that are probably one of the most attractive. TWIN represents bilateral student exchange for pharmacy students from different European countries. This means that 15–20 students from one country visit their colleagues from abroad, who afterwards return the visit. The average duration of TWIN is five to seven days. Recently, one TWIN project has included medical biochemistry students from Belgrade University School of Pharmacy, Serbia, and Zagreb University School of Pharmacy and Biochemistry, Croatia. Considering that training in clinical chemistry and laboratory medicine in most European countries begins after graduation, this was a rare

opportunity for students from two countries with a tradition of laboratory medicine education starting from the first year of undergraduate studies, to share experience and to connect.

This particular TWIN project started in October 2011 with the visit of Serbian students to their Croatian colleagues, who have returned their visit in the end of February this year. Each year EPSA establishes one universal topic for all TWIN projects that is elaborated through lectures, workshops and discussions. This time it was »Antimicrobial resistance«. Besides interesting lectures on this topic both in Zagreb and Belgrade, students were introduced to the work of both national societies for medical biochemistry.



Students from Zagreb and Belgrade at the excursion in Varazdin, Croatia.

Society of Medical Biochemists of Serbia was the patron of the Belgrade meeting, so besides lectures on the role of PCR in diagnostics of antimicrobial resistance, the role of sepsis biomarkers in antimicrobial therapy selection and the follow-up of antimicrobial drug concentration in body fluids, Prof. Dr Nada Majkić-Singh President of the Society of Medical Biochemists in Serbia presented to our young Croatian colleagues and guests the history of the Serbian Society and of laboratory medicine practice in Serbia. They also visited the Departments for Polyclinic and Emergency Laboratory Diagnostics of the Institute of Medical Biochemistry in the Clinical Centre of Serbia. One of the lecturers was Andjelo Beletić, acting liaison for the TWIN project and responsible for the collaboration of the Society of Medical Biochemists of Serbia with the IFCC Task Force for Young Scientists (IFCC TF-YS) and a Full Member of the Young Scientist of the EFCC Working Group on Congresses and Post-Graduate Education (EFCC WG-CPE). Mr. Beletić emphasized that through lectures and discus-

sions addressing professional development and education, as well as positions in health care systems, specific experiences and ideas for improving current state had been exchanged. The overall impression was that our young colleagues recognized the specific advances of their education, integrating various biomedical, pharmacological and clinical disciplines, in management of antimicrobial resistance. He concluded that the success of this particular TWIN project strongly suggests that similar meetings be organized more often and incorporated into regular activities of the corresponding IFCC and EFCC working groups.

Beside the educational activities, the TWIN projects play also a social role and represent a great opportunity to meet new people, learn on their cultures and customs. Young medical biochemists from both Croatia and Serbia were excellent hosts to each other, presenting traditional food specialties, music, and a good time and adventures of nightlife. This unique experience assured new friendships for life.

## **BCLF 2012 BELGRADE MEETINGS OF LABORATORY MEDICINE PROFESSIONALS**

This September 2012, Belgrade was the center of gathering of clinical laboratory professionals of Balkan region, when between 18<sup>th</sup> and 22<sup>nd</sup> three important events took place – 20<sup>th</sup> Meeting of the Balkan Clinical Laboratory Federation (BCLF), 8<sup>th</sup> EFLM Symposium for Balkan Region and 18<sup>th</sup> Congress of Medical Biochemists of Serbia. These happenings were organized by the Society of Medical Biochemists of Serbia and the Institute of Medical Biochemistry Clinical Center of Serbia, under the auspices of IFCC and EFLM, as well as the Ministry of Health and the Ministry of Education and Science of Republic of Serbia.

20<sup>th</sup> BCLF Meeting was opened with welcoming addresses made by prof. Nada Majkić-Singh (Meeting President), prof. Ian Watson (EFLM President), prof. Etleva Refetlari (on behalf of prof. Anyla Bulo-Kasneci, BCLF President) and prof. Vladimir Đukić (on behalf of Ministry of Health of Republic of Serbia), who greeted about 500 participants from Balkan countries. Also, at the opening ceremony and regarding the 20<sup>th</sup> anniversary of establishment and work of the BCLF, Society of Medical Biochemistry of Serbia honored professor Stojan Danev from Bulgaria, the founder of BCLF, with the highest award of the Society.

The opening ceremony of the 18<sup>th</sup> Congress of Medical Biochemists of Serbia was marked with the introduction of the newly established Fund »Magistra Milica Marković«. This was the way to honor the life and work of Milica Marković, dedicated to the improvement of laboratory practice in the days of the foundation of the Institute of Medical Biochemistry of the Clinical Center of Serbia in 1980's and 1990's. Thanks to her engagement, the Institute established modern organization of laboratory work technology, which was later certified according to ISO quality management system. The first two rewards from the Fund »Magistra Milica Marković« were awarded to Milka Golubović and Gordana Kartaljević for their contribution to the improvement of technological and organizational principles of work in clinical laboratories in the Republic of Serbia.

The beginning of the 18<sup>th</sup> Congress of Medical Biochemists of Serbia was marked with two outstanding sessions. The first was dedicated to biological and clinical significance of nitric oxide and L-arginine metabolism intermediates. Pathophysiological importance of nitric oxide in coronary heart disease, the nitrosative stress in neuropathology and the role of dimethylarginines in renal disease progression were presented by the research group from the Institute of Medical Biochemistry of the Niš Clinical Center, under the supervision of prof. Vidosava Djordjević. Symposium in clinical immunology followed, which was focused on the importance of immunoserological parameters in differential diagnosis in relation to idiopathic systemic vasculitis, clinical and laboratory characteristics of cryoglobulinemia, and clinical and laboratory diagnosis of hereditary angioedema. Speakers, led by prof. Branka Bonači-Nikolić, presented experiences derived from their long-lasting work at the Clinic for Allergy and Immunology of the Clinical Center of Serbia.

Within the 18<sup>th</sup> Congress of Medical Biochemists of Serbia annual EFLM Symposium for Balkan Region was held. This year's topic was vitamin D deficiency as a new challenge for laboratory medicine. After the introduction in biochemistry and metabolism of vitamin D (made by Snežana Jovičić from Center for Medical Biochemistry, Clinical Center of Serbia, Belgrade, Serbia), the distinguished experts in this field presented current knowledge on challenges in diagnosis and monitoring hypovitaminosis D (prof. Michael Vogesser, University Hospital, Munich, Germany), the role of vitamin D in osteoporosis (prof. Vera Popović, University School of Medicine and Department of Neuroendocrinology, Clinical Center of Serbia, Belgrade, Serbia), in the prevention of renal and cardiovascular disease (prof. Draško Pavlović, Sestre Milosrdnice University Hospital, Zagreb, Croatia), in multisystem sarcoidosis (prof. Violeta Mihailović-Vučinić, Clinic of Pulmology, Clinical Center of Serbia, Belgrade, Serbia), as well as its biological effects in elderly population (prof. Roxana Oprisiu-Fournier, Internal Medicine and Geriatric Department, University Hospital, Amiens,

France) and contribution of diet to vitamin D status (prof. Maja Nikolić, University School of Medicine, Niš, Serbia). Challenges in vitamin D measurement, standardization, analytical methods and performance of immunoassays and mass spectrometry were elaborated by prof. Heinz Juergen (Pablo) Roth (Limbach Laboratory, Heidelberg, Germany), prof. Mustafa Serteser (Acibadem University School of Medicine, Istanbul, Turkey) and prof. Nikolina Babić (Pritzker School of Medicine, University of Chicago, IL, USA). Traditionally for these EFLM meetings, experiences from Balkan countries in vitamin D determination (exposed by Snežana Jovičić from Serbia, prof. Demetrios Rizos from Greece and prof. Aylin Sepici Dinçel from Turkey) closed this years symposThe plenary lecture of the 8<sup>th</sup> EFLM Symposium for Balkan Region was also the opening lecture of the 20<sup>th</sup> BCLF Meeting. We had the pleasure and honor to hear the amazing lecture by the doyen and legend of vitamin D research, prof. Michael Holick. Professor Holick presented vitamin D as a »D-lightful« solution for good health in his unique manner, which most of us, fortunate to hear it, will never forget.

Topics of this year's BCLF Meeting could have been classified into four groups. The first part was dedicated to preanalytics as the way for improving patient safety, through the elaboration of influence of pre-analytical errors (prof. Mario Plebani, University Hospital Padova, Italy), patient identification errors (prof. Vladimír Palička, Charles University, Hradec Králové, Czech Republic), detection and management of hemolyzed samples (prof. Ana-Maria Šimundić, University Hospital Center Sestre Milosrdnice, Zagreb, Croatia) and pre-analytical phase in relation to hemostasis (prof. Steve Kitchen, Sheffield Haemophilia and Thrombosis Centre, UK). This was closed with experiences in preanalytics from Balkan region countries – Serbia (dr Zorica Šumarac), Turkey (prof. Mustafa Serteser) and Romania (prof. Simona Berbecar).

On education and training of specialists in laboratory medicine, the burning topic in European laboratory medicine professional circles, through the significance of patient safety laboratory medicine, harmonization of European education in laboratory medicine and recognition of professional qualifications, as well as the continuous professional development crediting system in EFLM societies, spoke the most distinguished guests from the EFLM – prof. Ian

D. Watson, president; prof. Victor Blaton, founder and past president; and prof. Elizabeta Topić, from the EFLM Committee for Education and Training.

The third part was dedicated to experiences with new biochemical markers in myocardial infarction, malignancies, bone mineralization diseases, genetic disorders, prenatal screening, and autoimmune diseases, exposed by laboratory professionals from Balkan countries (exposed by S. Stanković, E. Čolak and R. Obrenović from Serbia; V. Anastasovska from Macedonia; R. Dumache and C. Grigore from Romania; N. Ulusu, O. Goruroglu Ozturk and A. Sepici Dinçel from Turkey; D. Rizos and C. Kroupis from Greece; A. Daka and E. Refetlari from Albania).

The session on standardization in laboratory medicine closed this years BCLF Meeting. The issues in analytical standardization and harmonization (dr Muhittin Serdar, Turkey), innovation and strategies in point-of-care testing (prof. Bernard Gouget, France), turnaround time in the emergency biochemical laboratories (dr Mirka Ilić, Serbia), effects of new oral anti-coagulants on laboratory tests in haemostasis (dr Steve Kitchen, UK) and current practices and future perspectives in urinalysis (prof. Milko Shishenkov, Bulgaria) were elaborated.

Plenary lecture on clinical pharmacogenomics and the concept of personalized medicine by prof. Nikolina Babić from the Department of Pathology, University of Chicago, drew great attention, since the adoption of pharmacogenomics into routine practice is not common, but genetic testing is becoming increasingly patient driven through direct-to-consumer testing.

This year's BCLF Belgrade Meetings had 133 poster presentations by participants from all the Balkan countries (Serbia, Romania, Bulgaria, Turkey, Greece, Albania, Macedonia, Bosnia and Herzegovina, Montenegro), but also from Argentina, Iran, Sweden, France, Netherlands and Italy. The awards for best posters went to Turkey, Serbia and Bosnia and Herzegovina, respectively.

This was the third time that the Society of Medical Biochemists of Serbia successfully organized BCLF Meeting, and the second time that it was held in Belgrade, the capital of Serbia. According to reactions and feedback from both participants and invited speakers, we have fulfilled their expectations and even overcame them.



Michael F. Holick presenting Opening lecture during the 20<sup>th</sup> BCLF Belgrade Meetings



Ian Watson, EFLM President during welcome address to participants of 20<sup>th</sup> BCLF Belgrade Meetings



Lecturers on 8<sup>th</sup> EFLM Symposium for Balkan Region (from left to right): S. Ignjatović, E. Topić, N. Majkić-Singh, M. Vogeser, M. Fournier



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*News from the Society of  
Medical Biochemists of Serbia*

## **SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA THE FIFTEENTH ANNUAL IVAN BERKEŠ CONFERENCE**

Annual Scientific Conference and Fund »Professor Ivan Berkeš« were established to honor life and work of professor Ivan Berkeš, one of the founders of medical biochemistry in former Yugoslavia. He taught medical biochemistry at Universities in Zagreb, Skopje and Belgrade. Upon his arrival in Belgrade, in 1960s, he directed his work towards the definition and foundation of the specialist studies program at the University School of Pharmacy. With mentoring more than 150 specialists in medical biochemistry and several tenths of doctoral candidates, professor Berkeš left an indelible mark in clinical laboratory profession in Serbia. Also, professor Berkeš introduced Clinical Enzymology as an independent discipline. He published over 200 scientific papers in national and international journals, and wrote several books, among which »General and Medical Enzymology« stands out. After his death in 1997, Society of Medical Biochemists of Yugoslavia and School of Pharmacy of the University of Belgrade founded Scientific Fund and Annual Scientific Conference named after him, as a sign of appreciation and respect for this remarkable teacher and eminent expert. Scientific Fund »Professor Ivan Berkeš« awards each year two best graduate students from the School of Pharmacy, University of Belgrade, one Master of Pharmacy and one Master of Pharmacy-Medical Biochemist.

The 2012 Annual Scientific Conference »Professor Ivan Berkeš« was held on December 4<sup>th</sup> at the Military Medical Academy in Belgrade. After the traditional welcoming address of prof. dr Nada Majkić-Singh, who chairs this Meeting together with prof. dr Svetlana Ignjatović and dr Janko Pejović, during which we were reminded of the life and work of professor Berkeš, welcoming addresses of colonel prof.

dr Marijan Novaković, Head of Military Medical Academy, and prof. dr Zorica Vujić, Dean of University School of Pharmacy, followed. This year's awards to the best students were presented by prof. dr Nada Majkić-Singh and dr Zorica Šumarac, the President of the Society of Medical Biochemists of Serbia. Recipients were Marija Todosijević, Master of Pharmacy, and Mladen Stankov, Master of Pharmacy-Medical Biochemist.

During the scientific part of the program, traditionally, this year's defended doctoral thesis in medical biochemistry at School of Pharmacy and School of Medicine of Universities of Belgrade and Niš were presented. The opening lecture entitled »Enzymes: small machines in our life« was presented by prof. dr N. Nuray Ulusu from Ankara, Turkey. The four doctorates were presented by dr Zorica Šumarac (School of Pharmacy, University of Belgrade), dr Radmila Obrenović (School of Pharmacy, University of Belgrade), dr Sanja Stanković (School of Pharmacy, University of Belgrade) and dr Zorica Dimitrijević (School of Medicine, University of Niš), while dr Emina Čolak (School of Pharmacy, University of Belgrade) presented her subspecialist thesis. The conference was closed with the promotion of the book »Clinical Enzymology« by prof. dr Nada Majkić-Singh. Prof. dr Vidosava Đorđević (School of Medicine, University of Niš), prof. dr Svetlana Ignjatović (School of Pharmacy, University of Belgrade) and the author talked about the book.

With another successful conference, we remembered once again, the legacy of professor Ivan Berkeš, whose students represent the core of science of medical biochemistry and clinical laboratory practice in Serbia today.



Awarded best students from Faculty of Pharmacy with members of the Scientific Foundation »Ivan Berkeš«. From left to right: Z. Šumarac, S. Ignjatović, N. Majkić-Singh, M. Stankov, M. Todosijević