

PROFESSIONAL ACTIVITIES OF SERBIAN LABORATORY MEDICINE SPECIALISTS IN BALKAN REGION

Nada Majkić-Singh
and Snežana Jovičić
Society of Medical Biochemists of Serbia

Neighbouring Countries:
The Same Professional Aim

Under IFCC and EFLM Auspices

Pobednik (Serbian Cyrillic: Победник, English: The Victor) is a monument in the Upper Town of the Belgrade Fortress, built to commemorate Serbia's victory over Ottoman and Austro-Hungarian Empire during the Balkan Wars and the First World War. Erected in 1928, and standing at 14 metres (46 ft) high, it is one of the most famous works of Ivan Meštrović. It is also one of the most visited tourist attractions in Belgrade and the city's most recognizable landmark. It is a standing bronze male figure with a falcon in the left hand and a sword in the right, modelled by the sculptor Ivan Meštrović, set on a pedestal in the form of a Doric column on a tall cubic base, designed by the architect Petar Bajalović. The statue looks forward across the confluence of the Sava and the Danube, and over the vast Pannonian plain, towards the very distant Fruška Gora mountain (until 1918 a domain of Austro-Hungarian empire), it is probably the most powerful, most popular visual symbol of Belgrade.





SOCIETY OF MEDICAL
BIOCHEMISTS OF SERBIA



BALKAN CLINICAL
LABORATORY FEDERATION



EUROPEAN FEDERATION OF
CLINICAL CHEMISTRY
AND LABORATORY MEDICINE



INTERNATIONAL FEDERATION OF
CLINICAL CHEMISTRY
AND LABORATORY MEDICINE

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Nada Majkić-Singh and Snežana Jovičić

Belgrade, 2022

AUTHORS



Nada Majkić-Singh

Professor Dr Nada T. Majkić-Singh was born in Yugoslavia (Majkić Japra, Bosnia and Herzegovina) in 1947, graduated from the Faculty of Pharmacy of the University of Belgrade in 1969, gaining the MS degree in Medical Biochemistry in 1972, and Ph.D. degree in 1974. She began her professional career at the Faculty of Pharmacy as Associate in Medical Biochemistry, keeping the post from 1971 till 1978, while during the period 1978–84 she was an Associate Professor. Since 1984 she has been Professor in Medical Biochemistry, Clinical Chemistry and



Snežana Jovičić

Dr Snežana Jovičić, specialist in medical biochemistry, EuSpLM, was born in Belgrade in 1976. She graduated at the Faculty of Pharmacy, University of Belgrade in 2002, where she also completed her specialist studies in medical biochemistry in 2011, and her Ph.D. in 2013. Immediately after graduation, she started her internship at the Institute of Medical Biochemistry, Clinical Centre of Serbia, where she works still, from 2012 at the position of the Head of the Department at the Clinic for Cardiac Surgery. From 2008 she is engaged as the part time Teaching

Clinical Enzymology, and from 1984 till 1995 she was the Director of the Department of the Medical Biochemistry at the Faculty of Pharmacy. She was a Director of the Institute of Medical Biochemistry at the Clinical Centre of Serbia since 1986 to 2012. In the period of 1997 to 2001 she was the first President of Pharmaceutical Chamber, and from 2006 to 2014 she was President of the Chamber of Biochemists of Serbia. Now she is Executive Director of the Society of Medical Biochemists of Serbia. Professor Majkić-Singh is the author of four hundred and fifty scientific papers and twenty books. With Snežana Jovičić she is co-author of Monograph Scientific Foundation „Professor Ivan Berkeš”. She is a member of many Associations for Clinical Biochemistry and Scientific Society of Serbia. Since 1988, she has been President of the Society of Medical Biochemists of Yugoslavia (now Society of Medical Biochemists of Serbia) and Editor in Chief of the Society Journal Yugoslav Medical Biochemistry (now Journal of Medical Biochemistry). During her long and dedicated career, Professor Majkić-Singh has been awarded by the Union of the Pharmaceutical Societies of Yugoslavia (1988), the Society of Medical Biochemists of Yugoslavia and Serbia (1995, 2015), United Association of Serbia for Quality (2010) and Greek Society for activities in Balkan Region (2017).

Assistant at the Department for Medical Biochemistry of the Faculty of Pharmacy, University of Belgrade. Dr Snežana Jovičić is an active member of the Society of Medical Biochemists of Serbia, where she acts as the member of the Executive Board. From 2011 she was the Managing Editor, and from 2020 she is the Co-editor of the Journal of Medical Biochemistry, the official journal of the Society of Medical Biochemists of Serbia. Dr Snežana Jovičić is co-author of Monograph Scientific Foundation „Professor Ivan Berkeš”. Dr Snežana Jovičić is the Chair of the EFLM Patient Focused Laboratory Medicine Working Group, and the Corresponding Member of the Working Group Register. She is also the Liaison member from the Society of Medical Biochemists of Serbia in the IFCC eNewsletter Working Group. Dr Snežana Jovičić is elected for EFLM Executive Board Secretary from 2022 to 2023.

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INTRODUCTION

The **Balkan Clinical Laboratory Federation (BCLF)** as a regional organization includes all Balkan countries, i.e. Serbia, Montenegro, Bosnia and Herzegovina, Romania, Bulgaria, North Macedonia, Albania, Turkey and Greece that are also EFLM and IFCC members.

The idea of founding the Balkan Clinical Laboratory Federation occurred to us during the farewell party of the IFCC Clinical Laboratory Management Course in May 1992 in Sofia. The ideas of Professor Danev (Sofia), Professor Terzioglu (Smyrna), Dr Jullien (Athens), Dr Buzo (Tirana), Professor Shipkov (Sofia) and Assistant Professor Tzontcheva (Sofia) were refined by our brilliant visiting IFCC lecturer Professor P. Broughton. After roughly one year of lively correspondence between Sofia, Birmingham, Athens, Istanbul, Smyrna, Skopje and Bucharest the Inaugural Meeting of the Balkan Clinical Laboratory Federation has been organized in Sofia Centre of Hygiene by Professor J. Todorov, Honorary President and Founder of Bulgarian Clinical Laboratory Medicine. An important consequence of the Meeting was the Foundation of the Balkan Clinical Laboratory Federation, with the basic purpose to enhance cooperation between all societies and individuals in the Balkan area. An Executive Board was elected with Professor Stoyan Danev as President, Assistant Professor K. Tzachev as Secretary and with Professor Terzioglu, Professor Dzekova, Dr Jullien, Professor Shipkov, Professor Tzvetanova, Professor Tzontcheva and Dr Buzo as members to guide the establishment of the Federation which will do its best to forge productive links with IFCC, FESCC and other international bodies.

In September 16–19, 1993 in Florence the representatives from Yugoslavia, Albania and Bulgaria strongly supported the idea of BCLF organization and had useful talks with Professor Gerard Siest, IFCC President and other IFCC members on future objectives and activities of our Federation during the first National Meeting of the North Macedonian



Delegation of Balkan countries with colleagues from Yugoslavia at the celebration of the 40th anniversary of the Society of Medical Biochemists of Yugoslavia (Belgrade, May 1995).

Clinical Biochemists in Ohrid in 1993. The same idea was instigated by Professors Gruev, Hrisoho, Dzhekova, Traikovska, Dimitrov, etc. In 1995 the during the 40 Years Anniversary of the Serbian Society chaired by Professor Majkić-Singh and attended by representatives from Romania (Professor Cojouharu) and Bulgaria (Professors S. Danev, T. Shipkov and K. Tzatchev) gave full support to the founding of BCLF.

As a regional organization, BCLF gathers all clinical chemists from the Balkan Region with the aim of improving clinical laboratory practice in each of the Balkan countries, as a result of new medical discoveries, new technologies, and changes in the organization and in the process of laboratory support of clinical activities. To achieve this aim, BCLF will work on the basis of the strategic plan as follows: to promote Member activities, to develop and maintain BCLF communications between countries inside the region and outside towards EFCC and IFCC, to create own BCLF journal or use some well-established national journal

for publication activities, to promote BCLF through national, regional and international congresses, to organize teaching courses and joint seminars with IFCC, FESCC, WHO and other institutions, to encourage the professional development of individuals and regional working groups in National Societies and maintain the activities in standardization and research activities oriented towards the patient and towards the health of individuals, to establish collaboration, joint meetings and projects inside the Balkan countries and outside with international organizations having interest in the clinical laboratory. On the basis of the conclusions reached at the FESCC Symposium for Balkan Region (Belgrade, June 2005) the Societies from Balkan countries will work on the improvement of the education and training programs in clinical chemistry and laboratory medicine, organization, quality management and accreditation (ISO, CEN standards), external quality assessment programs, laboratory information systems, to establish the reference laboratories, and laboratories for specialized investigations (DNA methods, trace elements, tumor markers, etc.) in the Balkan countries, the interest of the BCLF member countries lies in the investigations of the specific geographic pathology of the Balkan Region (hereditary nervous, neuromuscular, hematological and other diseases, endemic Balkan nephropathy, arteriosclerosis, cardiovascular diseases, diabetes mellitus, etc. as the most frequent diseases in the region for the improvement of patient care through laboratory medicine.



Professor Stoyan Danev, BCLF President greetings to the participants (Belgrade, May 2005).



1995 Meeting-Leipzig: Happy Victory for BCLF (Professor Stoyan Danev and Professor Nada Majkić-Singh).

See addition: BCLF - PAST, PRESENT AND FUTURE (Professor Stoyan Danev, Bulgaria)
ProfDanev.pdf
([www. bclf.info](http://www.bclf.info))

This early period enhanced the INTEGRATION into IFCC, which had a most successful start during the IFCC Meeting in Leipzig 1995, when Albania, Greece and North Macedonia became regular IFCC members, followed in 1996 by Turkey and Romania. We owe this great victory to the efforts of Professor Gerard Siest and his IFCC board. The Leipzig event was a grand day for BCLF and especially for its Yugoslav and Bulgarian members. It opened the doors to further initiatives of euro integration. In 1996 BCLF became Associate Member of IFCC, FESCC and ECLM. Special tribute should be given to the companies sponsoring the trips of BCLF members to numerous sites that helped to consolidate BCLF members, to establish new links of friendship by overcoming existing social and geographic differences.

FURTHER PROGRESS OF BALKAN CLINICAL LABORATORY FEDERATION (BCLF)

The FIRST BCLF MANDATE, hosted 1993–1996 in Bulgaria (President Stoyan Danev, Secretary Kamen Tzatchev), with its three meetings in Sofia, Istanbul and Struga witnessed a steady increase in the number of attendants from 120 to 390. During the SECOND BCLF MANDATE from 1996 to 1998, hosted by Greece (President Professor Orestes Tsolas, Secretary Professor K. Sepheriadis), the meetings in Budva (1996), Ioannina (1997) and Plovdiv (1998) witnessed further initiatives.

In addition to the 4th BCLF Meeting (Budva, October 9–13, 1996), the X Congress of Medical Biochemists of Yugoslavia was held. Scientific and Organizational Board headed by Professor Dr Nada Majkić-Singh did everything to make this congress memorable according to the professional and social program. Patrons were the International Federation of Clinical Chemistry (IFCC) and the Forum of the European Societies of Clinical Chemistry (FESCC) on whose behalf Professor Matthew J. McQueen, President of IFCC and Professor Jose M. Queralto, Past-President of FESCC welcomed the participants. The participants were greeted on behalf of the BCLF by Professor Stoyan Danev announced the opening lecture entitled The Clinical Use of Tumor Markers was given by Mario Werner (Washington, USA) and the second plenary lecture by Professor Mathew J. McQueen (Hamilton, Canada) entitled Accreditation.

The THIRD BCLF MANDATE between 1999 and 2001 (President Professor Tomris Ozben) was marked by fruitful meetings in Antalya (1999), Sinaya (2000) and Ioannina (2001), whose hallmark was intensive TWINNING. We owe much to the IFCC Presidents Professor Gerard Siest, Professor Matthew McQueen and Professor Mathias Müller and to the FESCC presidents Professor Palicka and Professor Victor Blaton, whose initiatives enhanced the further progress of BCLF.

The FOURTH BCLF MANDATE in North Macedonia 2002–2004 (President Professor Todor Gruev, Secretary S. Traikovska) with its meetings in Ohrid (2002), Constanza (2003) and Belgrade (2004).

The FIFTH BCLF MANDATE in Serbia (President Professor Nada Majkić-Singh, Secretary Sanja Stanković) had in 2005 a promising start at the Meeting in Tirana, where the hospitality and good organization by Anyla Buló and her team were highly appreciated.

The Society of Medical Biochemists of Yugoslavia (later Serbia) as a member of the Balkan Clinical Laboratory Federation (BCLF) organized three BCLF Meetings, the 4th Meeting of the Balkan Clinical Laboratory Federation from 9 to 13 October 1996 in Budva, 11th Meeting of the Balkan Clinical Laboratory Federation from September 24 to 27, 2003 in Belgrade and the 20th Meeting of the Balkan Clinical Laboratory Federation from September 18 to 22, 2012. in Belgrade. The personality of Professor Nada Majkić-Singh is an additional strong argument in favor of the further progress of BCLF. Professor Stojan Danev told „I have always admired her energy, devotion, competence and warm hospitality”.



Mathias M. Muller, President of IFCC addresses the participants of the XI BCLF Meeting (Belgrade, September 2003).



Todor Gruev, President of BCLF addresses the participants of the XI BCLF Meeting (Belgrade, September 2003).



Victor Blaton, President of FESCC, addresses the participants of the XI BCLF Meeting (Belgrade, September 2003).



Bernard Gouget, on behalf of the French Society, addresses the participants of the XI BCLF Meeting (Belgrade, September 2003).



BCLF Board members after the meeting during XI BCLF Meeting (Belgrade, September 2003).



Participants of the XI BCLF Meeting in front of the White Palace (Belgrade, September 2003).

Next BCLF Presidents have been Gheorghe Benga (2008–2012) Anyla Bulo (2012–2015), Najdana Gligorović (2015–2018), and Jozo Ćorić (2018–2020). Up to now 27 Congresses of the Balkan Clinical Laboratory Federation have been organised (in Romania three times, twice in Antalya, in Athens, Skopje, Sarajevo etc.). 28th Congress of Balkan Clinical Laboratory should be organised in 2020 in Sofia, however due to the COVID-19 is organised in September 2021.

THE 1st FESCC SYMPOSIUM FOR BALKAN REGION 50th ANNIVERSARY OF THE SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA AND MONTENEGRO

It is very important to tell that Forum of the European Societies of Clinical Chemistry (FESCC) decided that the FESCC Symposium for Balkan Region would be held each year in Belgrade in organization by the Society of Medical Biochemists of Serbia and Montenegro (SMBSM). Professor Victor Blaton, at that time President of the FESCC,



Chairman of the First FESCC Symposium for the Balkan Region and marking the 50th anniversary of the Association of Medical Biochemists of Serbia and Montenegro, 10–12, June 2005, (from left to right): O. Janković, G. Sanders, N. Majkić-Singh, V. Blaton and Z. Šumarac.



Opera singer Oliver Njego at the First FESCC Symposium Opening Ceremony (Belgrade, June 2005).



Opera singer Oliver Njego at the First FESCC Symposium Opening Ceremony (Belgrade, June 2005).



Opera singer Jadranka Jovanović at the First FESCC Symposium Opening Ceremony (Belgrade, June 2005).



Opera singers Jadranka Jovanović and Oliver Njego at the First FESCC Symposium Opening Ceremony (Belgrade, June 2005).



Participants on the First FESCC Symposium Opening Ceremony with Artists (from left to right): N. Rackov, O. Janković, G. Sanders, J. Jovanović, N. Majkić-Singh and Vladan Mitrović (Belgrade, June 2005).



Participants on 50-year Society Anniversary of the Association of Medical Biochemists of Serbia and Montenegro and the First FESCC Symposium for Balkan Region at Kalemegdan (Belgrade, June 2005).



Lecturers on the First FESCC Symposium for Balkan Region (from left to right): V. Kocić-Pešić, N. Majkić-Singh, G. Sanders, R. Janson, W. Huisman (Belgrade, June 2005).



Medical biochemists at the First FESCC Symposium for Balkan Region (Belgrade, June 2005).



Faculty Farmacy students at the First FESCC Symposium for Balkan Region (Belgrade, June 2005).



The First FESCC Symposium for Balkan Region participants at Kalemegdan (Belgrade, June 2005).

supported the organization of the Symposium. The first FESCC Symposium for Balkan Region entitled „Education, Management and Standards in Laboratory Medicine” was held in Belgrade between 10 and 12 June 2005, on the occasion of the 50th anniversary of the SMBS. The symposium was coordinated by Nada Majkić-Singh and Victor Blaton. At the symposium, lectures were given by W. Huisman (The Netherlands) on accreditation, D. Burnett (England) on ISO standard 15189:2003, M. Plebani (Italy) on the external quality control program and L. Siekmann (Germany) on establishing reference laboratories in laboratory medicine.

THE 2nd FESCC SYMPOSIUM FOR BALKAN REGION

The 2nd FESCC Symposium for the Balkan Region entitled „New Diagnostic Tools and Quality in Laboratory Medicine” was held on October 17 and 18, 2006 in Novi Sad, at the Park Hotel, with the organization of the XVth Congress of Medical Biochemistry and Laboratory Medicine. The coordinators of the Symposium were N. Majkić-Singh, V. Blaton and S. Ignjatović. Both congresses were held under the auspices of the IFCC and FESCC, as well as the Ministry of Science and Environmental Protection of the Republic of Serbia.

The symposium program covered two important topics related to new diagnostic tools in clinical chemistry and the application of quality indicators in medical laboratories. Topics in these sections were presented by MP van Diejen-Visser from the Netherlands on the application of SELDI-TOF MS in protein analysis, I. Levreri from Italy on the application of 2 D-HPLC systems for plasma protein separation, R. Hiller from Austria on the application of »mikroarey «Techniques in the field of proteomics. S. Ignjatović (Serbia) spoke about biomarkers of the disease, J. Mair from Austria, R. Neumann (Germany) about prostate markers and J. Stepan (Czech Republic) about bone markers about heart natriuretic peptide.

The third part of the symposium entitled „Application of Quality Indicators in a Medical Laboratory” presents the following lectures „The quality of the sample and its impact on clinical decisions” (O. Sonntag, Germany) and „ISO 15189 and interlaboratory comparison programs” (Jakub Hejsek, Czech Republic). Gerold Gruber (Austria) gave a presentation on Dade Behring Solutions’ „Modern Sample Management”, Karin Pozsgay (Austria) spoke about Lab Automation-StreamLab, and Sanja Stanković (Serbia) spoke about Dimension Systems. The fourth part of the Symposium, which was dedicated to the round table discussion, discussed the possibility of applying new techniques and knowledge of the



Chairmen of the XVth Serbian Congress and 2nd FESCC Symposium for Balkan Region: N. Majkić-Singh, B. Nalčić and M. Đerić (Novi Sad, October 2006).

principles of evidence-based laboratory medicine in the Balkan Region, as well as the need to organize further training of laboratory staff in this direction. As the third part of the Symposium, which referred to the application of quality indicators in medical laboratories, was a continuation of the presentation from the 1st FESCC Symposium for Balkan Region (Belgrade, June 2005), it was concluded that in future FESCC symposia for the Balkan Region should consider all aspects of quality implementation. in laboratories with analysis of the situation in the countries of the Balkan Region. The participants of the Symposium evaluated the high quality of the 2nd FESCC symposium with the recommendation of their regular holding organized by the Society of Medical Biochemists of Serbia and FESCC.



Mrs Maja Gojković, Mayor of Novi Sad greets the participants of the 2nd FESCC Symposium (Novi Sad, October 2006).



Mrs Zlata Žuvela, Pharmaceutical Chamber of Serbia Director greets the participants of the 2nd FESCC Symposium (Novi Sad, October 2006).



Borislav Nalčić, President of the XVth Congress with Nada Majkić-Singh (Novi Sad, October 2006).



Mirjana Đerić with Nada Majkić-Singh (Novi Sad, October 2006).



In vivo Orchestra during Opening Ceremony of the XV Congress (Novi Sad, October 2006).



Nada Majkić-Singh, President of the Society of Medical Society of Serbia with colleagues during Opening Ceremony of the XVth Congress (Novi Sad, October 2006).



Nada Majkić-Singh with Janko Pejović (Novi Sad, October 2006).



Professor Dragan Micić, presenting the lecture at the XVth Congress (Novi Sad, October 2006).



Chairmen at the Congress Section: B. Nalčić, N. Majkić-Singh and M. Đerić (Novi Sad, October 2006).



Nada Majkić-Singh with Organising Congress Committee; from left to right Marijana Dajak, Neda Milinković, Jasna Bjelanović and Bata Bogunović (Novi Sad, October 2006).



Members of the Organising Congress Committee (Novi Sad, October 2006).



Snežana Marković with Olympus company members (Novi Sad, October 2006).

THE 3rd FESCC SYMPOSIUM FOR BALKAN REGION

The 3rd FESCC Symposium for Balkan Region entitled „Theory and Application of Evidence-Based Laboratory Medicine” was held at „Hotel M” in Belgrade from 20 to 22 September 2007. The coordinators of the symposium were Nada Majkić-Singh and Victor Blaton. The 3rd FESCC Symposium for Balkan Region was jointly organized by the Society of Medical Biochemists of Serbia, Institute of Medical Biochemistry of the Clinical Centre of Serbia, and the Committee on Evidence-Based Laboratory Medicine of the International Federation for Clinical Chemistry and Laboratory Medicine (IFCC). The Symposium was held under the auspices of the IFCC, European Federation for Clinical Chemistry and Laboratory Medicine (EFCC) and the Balkan Clinical Laboratory Federation (BCLF). The Symposium for Balkan Region is organized in Belgrade on a regular basis, since Belgrade has been chosen as the regional Centre by the EFCC with the purpose of hosting meetings dealing with the education and promotion of experts in the field of Laboratory Medicine in the Balkan Region.

The 3rd Symposium focused on the application of Evidence-Based Laboratory Medicine, as part of Evidence-Based Medicine, with the aim of introducing to the experts from the Balkan Region the possibilities of selecting best laboratory evidence, that is, laboratory diagnostics, and applying them both in diagnostic procedure and in the treatment of patients. Some two hundred participants from Serbia and the Balkan Region attended the meeting, which was opened by Professor Dr Nada Majkić-Singh, president of the Society of Medical Biochemists of Serbia. Professor Dr Victor Blaton, EFCC president, spoke about the new organization of the EFCC and about its goals, and Professor Dr Rita Horvath, Chair of the Committee on Evidence based Laboratory Medicine and EFCC President Elect, introduced the activities of the IFCC EBLM Committee to the participants, as well as the content and purpose of the Belgrade Symposium. The Society of Medical Biochemists

of Serbia that coordinated the Meeting in cooperation with Professor Victor Blaton, EFCC President, and Professor Dr Rita Horvath, chair of the IFCC CEBLM organized the symposium into three Sections in which the lecturers, members of the EBLM Committee, presented their own experiences as well as the opinions and conclusions of the EBLM Committee in reference to the following topics: What is evidence-based laboratory medicine? (Rita Horvath, Hungary); How to ask the right questions? (Dunja Rogić, Croatia); Principles about searching the literature (Biljana Kosanović, Serbia); How should you read an article about a diagnostic test? (Sverre Sandberg, Norway); Simple statistics used in diagnostic test evaluations (Diler Aslan, Turkey); What is a systematic review and how can it be performed? and Evidence-based monitoring (Rita Horvath, Hungary); How to apprise guidelines? (Demonstration of the use of the AGREE Instrument with practical examples) (Rita Horvath, Hungary); Is there a correlation between the methodological quality and the validity of content of guidelines? (Joseph Watine, France); Special subjects to be addressed in diagnostic guideline compared to therapeutic guidelines (Wytze Oosterhuis, The Netherlands); How to implement EBLM in every day practice? (Sverre Sandberg, Norway). Experiences in Evidence-Based Laboratory Medicine in the Balkan Region were shared by local speakers, i.e. from Serbia by Svetlana Ignjatović and Nada Majkić-Singh, from Romania by Manole Cojocar, and by Diler Aslan from Turkey. The participants in the Symposium were given the opportunity to learn first-hand from top lecturers about the principles on which Evidence-Based Laboratory Medicine is based, as well as about the application in practice of evidence and protocols in the field of laboratory medicine. The fact that this Symposium has for the first time allowed the „philosophy„ of the principles of EBLM to spread in this part of Europe only raises its significance. Owing to nice weather conditions, our distinguished lecturers joined the Belgrade Sightseeing Tour, enjoyed in the nice view from Kalemegdan fortress to the mouth of River Sava and Danube, and had the chance to experience traditional Serbian hospitality, offered to them by the Society of Medical Biochemists of Serbia, as their host. Professor Dr Nada Majkić-Singh President of the Society of Medical Biochemists of Serbia Director of the Institute of Medical Biochemistry Clinical Centre of Serbia Belgrade Serbia.



Participants of the 3rd FESC Symposium for Balkan Region: Wytze Oosterhuis, Dunja Rogić, Sverre Sandberg, Joseph Watine (standing); Victor Blaton, Nada Majkić-Singh, Rita Horvat, Diler Aslan (seating) (Belgrade, September 2007).



Participants of the 3rd FESCC Symposium (from left to right: R. Horvat, N. Majkić-Singh, D. Aslan, W. Oosterhuis, S. Sandberg, J. Watine (Belgrade, September 2007).



Victor Blaton and Nada Majkić-Singh at the 3rd FESCC Symposium (Belgrade, September 2007).



Lecturers at the 3rd FESCC Symposium: W. Oosterhuis, J. Watine, S. Sandberg (Belgrade, September 2007).



N. Majkić-Singh, D. Rogić and W. Oosterhuis (Belgrade, September 2007).



Victor Blaton and Nada Majkić-Singh in Hotel M (Belgrade, September 2007).



Manole Cojocaru and Nada Majkić-Singh during 3rd FESCC Symposium (Belgrade, September 2007).



Rita Horvat, Nada Majkić-Singh and Svetlana Ignjatović (Belgrade, September 2007).



Participants of the 3rd FESCC Symposium, W. Oosterhuis, D. Rogić, S. Ignjatović and J. Watine (Belgrade, September 2007).



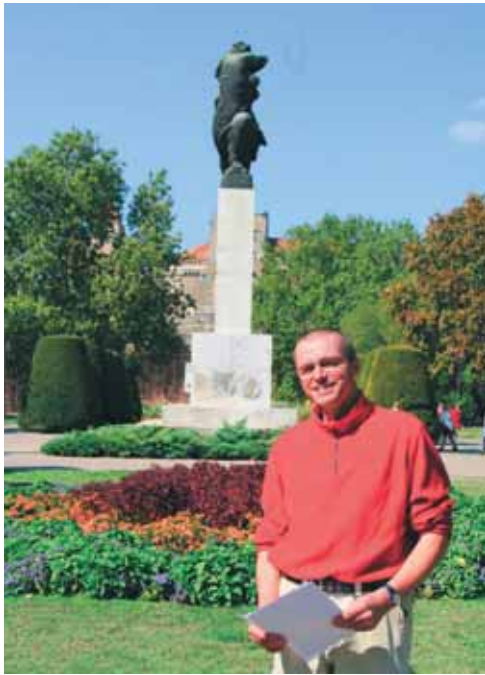
Participants of the 3rd FESCC Symposium at Kalemegdan trip (Belgrade, September 2007).



Participants of the 3rd FESCC Symposium at Kalemegdan trip; N. Majkić-Singh, M. Cojocar, J. Bjelanović, E. Čolak, T. Vodnik (Belgrade, September 2007).



Participants of the 3rd FESCC Symposium in the front of the Monument of Gratitude to France, Kalemegdan (Belgrade, September 2007).



Joseph Watine in the front of the Monument of Gratitude to France (Belgrade, September 2007).



Participants of the 3rd FESCC Symposium in the front of the „Hram Svetog Save” (Belgrade, September 2007).

THE 4th EFCC SYMPOSIUM FOR BALKAN REGION

The 4th EFCC Symposium for Balkan Region entitled „Impact of the Pre-analytical Phase on the Quality of the Laboratory Results” was held in Belgrade from 19 to 20 June 2008 together with XVI Serbian Congress of Medical Biochemistry and Laboratory Medicine. Its organizers were: N. Majkić-Singh, V. Blaton and S. Green. Lectures were given on the influence of pre-analytical factors on sample quality (S. Green, USA), pre-analytical errors (P. Bonini, Italy), safety standards at sample collection (C. Mattiuzzi, Italy), pre-analytical phase in hematology (G. Banfi, Italy), errors in the pre-analytical phase (G. Lippi, Italy), quality of diagnostic sample and recommendations (W. Guder, Germany), stability of biological samples (GL Salvagno, Italy) and application of Lean and Six Sigma in the pre-analytical phase (A. Stanković, USA). The Symposium have been organized together with the 16th Congress of Medical Biochemistry and Laboratory Medicine with international participation by the Society of Medical Biochemists of Serbia and the Institute of Medical Biochemistry of the Clinical Centre of Serbia. The Congress was organized under the auspices of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), European Federation of Clinical Chemistry and Laboratory Medicine (EFCC) and the Balkan Clinical Laboratory Federation (BCLF), as well as the Ministry of Science of the Republic of Serbia.

The organization of the Congress was the result of work and effort of all the members of the Scientific and Organizational Committees, comprised of distinguished local experts in this area. More than 400 participants from Serbia and some 100 specialists from abroad participated actively in the work of the Congress.

The plenary sections of the 16th Congress of Medical Biochemistry and Laboratory Medicine have been dedicated to the latest findings in the field of biochemical markers of various diseases and states, namely to the importance of markers of atherosclerosis, cardiac



Velibor Canić and Svetlana Ignjatović chairs of the XVIth Serbian Congress of Medical Biochemistry and Laboratory Medicine and the 4th EFCC Symposium for Balkan Region (Belgrade, June 2008).



Balkanika during Opening Ceremony of the 4th EFCC Symposium for Balkan Region (Belgrade, June 2008).



XVIth Serbian Congress of Medical Biochemistry and 4th EFCC Symposium for Balkan Region participants (from left to right): I. Miletić, N. Kovačević, A. Tzontcheva, T. Gruev (Belgrade, June 2008).



Lecturers of the 4th EFCC Symposium for Balkan Region. From left to right: N. Majkić-Singh, A. Stanković, G. Lippi, L. Drago, S. Ignjatović, C. Mattiuzzi, S. Green and G.L. Salvagno (Belgrade, June 2008).



Participants of the XVIth Serbian Congress of Medical Biochemistry and Laboratory Medicine and 4th EFCC Symposium for Balkan Region (from left to right): M. Đerić, B. Majkić-Singh, I. Mišić, B. Canić, N. Kovačević, S. Ignjatović (Belgrade, June 2008).

markers in patient treatment, biomarkers of inflammation and apoptosis, markers of ischemic stroke, certain forms of apolipoproteins, bone markers – their nature and application, markers of kidney diseases, prostate cancer and urinary tract tumor, diabetes, and up-to-date patient treatment in intensive care. The influence of oxidative stress on the appearance of a disease, as well the role of functional foods in the promotion of health has been also deliberated.

A separate section was dedicated to the application of quality indicators in medical laboratories relating to sensitivity and accuracy of the results, ways of avoiding errors in laboratories and the process of laboratory accreditation as a means of avoiding and diminishing errors and improving the general quality of the laboratory work. Besides the presentations by local experts, in the program of the Congress participations took the numbers of distinguished lecturers from the United States of America, Switzerland, Germany, Hungary, England, Italy, Montenegro, North Macedonia, Bulgaria and the Republic of Srpska.



Technical Organizational Board of the XVIth Serbian Congress of Medical Biochemistry and the 4th EFCC Symposium for Balkan Region (from left to right): S. Jovičić, M. Dajak, N. Makisimović, A. Beletić, M. Petković and Congress participant G. Stošić (Belgrade, June 2008).

The majority of registered participants presented the results of their scientific and expert research as part of the poster presentations which included cardiovascular diseases and cardiac markers, methods in clinical chemistry, proteins and enzymes, lipids and lipoproteins and free topics.

The topics selected covered in a multidisciplinary fashion the field of laboratory medicine and other medical sciences. The multidisciplinary character of the Congress is further accentuated by the fact that many experts of various profiles took active part with their work. Therefore, like in the previous years, this Congress allowed for the latest scientific and expert results to be presented and for experiences to be exchanges, which will contribute to the promotion of contemporary laboratory practice.

During the Congress the 4th EFCC Symposium for Balkan Region held under the titled The Impact of the Preanalytical Phase on the Quality of Laboratory Results, where the latest findings regarding the application and significance of the impact of preanalytical factors on the quality of laboratory results have been presented with the goal of preventing

preanalytical errors that can cause damage to the patients as well as the entire laboratory procedure. Safety measures during the process of collecting biological samples from patients e.g. during venipunctures, for the purpose of protecting the patients also have been discussed. Besides presentations on the impact of the preanalytical phase in hematology, sample stability, the recommendations and ways of educating staff regarding the quality of diagnostic samples have been reviewed. In order to achieve the best possible results, the participants presented the new approaches in laboratory medicine dealing with the application and philosophy behind the LEAN and SIX SIGMA techniques.

Experts from Europe (Italy, Germany, and Belgium) and America participated in the Symposium. The main titles of the presentations and lecturers have been: Impact of preanalytical variables on specimen quality (Sol Green, USA), Misidentification and other preanalytical errors (Pierangelo Bonnini, Italy), Standards of safety in blood collection (Camilla Mattiuzzi, Italy), Preanalytical phase in haematology (Giuseppe Banfi, Italy), Governance of the preanalytical phase: error detection (Giuseppe Lippi). Quality of diagnostic samples, recommendations and educational tools (Walter Guder, Germany), Sample stability (Gian Luca Salvagno, Italy), and Application of Lean and Six Sigma to the preanalytical phase (Ana Stanković, USA).

The experiences in the pre-analytical phase technology in medical laboratories in Balkan Region have been presented by Zorica Šumarac (Serbia), Manole Cojocar (Romania), Anna Tzontcheva (Bulgaria), Aggeliki Stathaki (Greece), Gheorghe Benga (Romania), George D. Maropoulos (Greece). Round table discussions on the topics presented served as the basis for reaching conclusions and guidelines in this area of laboratory medicine with the aim of achieving the best possible results to the benefit of patient treatment.

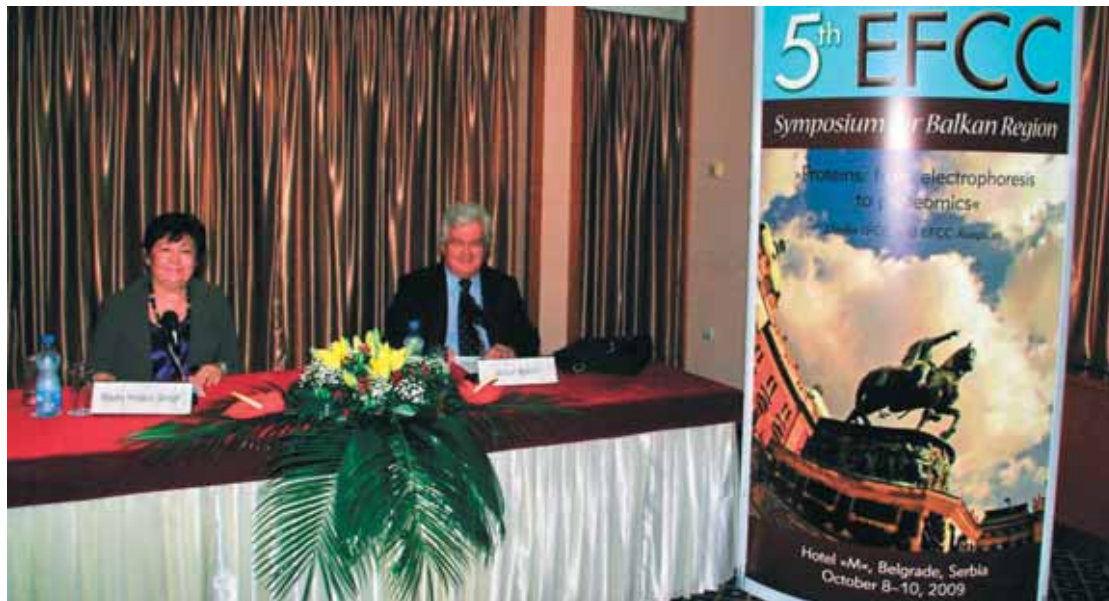
During the course of the Congress and Symposium a permanent exhibition of equipment and reagents has been on display, and many practical workshops have been organized by different companies.

As Society of Medical Biochemists of Serbia was appointed by EFCC as organizer of the Symposium for the Balkan Region and University of Belgrade (Serbia) the EFCC Educational Centre, Professor Victor Blaton, EFCC President during the opening of the Symposium presented the lecture on the EFCC activities and a new vision of the development of clinical chemistry and laboratory medicine in Europe.

THE 5th EFCC SYMPOSIUM FOR BALKAN REGION

The 5th EFCC Symposium for Balkan Region under the title „Proteins: from electrophoresis to proteomics” was held in Belgrade on 8 and 9 October 2009. The symposium coordinators were Professor Dr Nada Majkić-Singh, Chair of the Meeting, and Professor Victor Blaton, EFCC Past President. The symposium was dedicated to the 70th anniversary of the Faculty of Pharmacy of the University of Belgrade. The idea behind the 5th EFCC Symposium for Balkan Region entitled „Proteins: from electrophoresis to proteomics” was to point to the continuity of different electrophoretic techniques for studying proteins, including proteomics, which enables the analysis of a large profile of proteins, their structure and function. All the lectures were published in the Journal of Medical Biochemistry 2009; 28: 221–326 (<http://www.degruyter.com/view/j/jomb>; www.dmbj.org.rs/jmb).

The Society of Medical Biochemists of Serbia and the Institute of Medical Biochemistry of the Clinical Centre of Serbia jointly organized the Fifth EFCC Symposium for the Balkan Region entitled „Proteins: from electrophoresis to proteomics” in Belgrade, from October 8–19, 2009. The Symposium was organized under the auspices of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), European Federation of Clinical Chemistry and Laboratory Medicine (EFCC) and the Balkan Clinical Laboratory Federation (BCLF), as well as under the Ministry of Science of the Republic of Serbia. The Society, as the member of IFCC and EFCC, greatly appreciates the role it has in the continuing development of our discipline according to the IFCC mission and the Strategic plan. The symposium coordinators were Professor Dr Nada Majkić-Singh, Chair of the Meeting, and Professor Victor Blaton, EFCC Past President.



Chairmen of the 5th EFCC Symposium for Balkan Region: Professor Nada Majkić-Singh and Professor Victor Blaton (Belgrade, October 2009).



Participants of the 5th EFCC Symposium for Balkan Region with Professor Victor Blaton (Belgrade, October 2009).



Professor Victor Blaton addresses to the participants of the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Jean-Francois Giot (France) on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Gordana Matić (Serbia) and Harald Mischak (Germany) lecturers on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



The participants of the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



The participants of the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Antonia Vlahou (Greece) and Gordana Matić (Serbia), lecturers on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Todor Gruev (Macedonia) and Nada Majkić-Singh (Serbia) at the 5th EFCC Symposium for Balkan Region (Belgrade, October, 2009).



Antonia Vlahou, Gordana Matić and Harald Mischak with Nada Majkić-Singh (Belgrade, October 2009).



Sonja Pavlović and Zorica Šumarac, chairmen of the Symposium Section (Belgrade, October 2009).



Svetlana Ignjatović, Sonja Pavlović, Zorica Šumarac, Olgica Trenčevska and Gordana Matić lecturers on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Grazyna Sypniewska (Poland) lecturer on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Jim Thorn (United Kingdom) lecturer on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Hans J. van Pelt (The Netherlands) lecturer on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Xavier Bossuyt (Belgium) lecturer on the 5th EFCC Symposium for Balkan Region (Belgrade, October, 2009).



Andrew Cartwright (United Kingdom) lecturer on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Bernhard Risse (Germany) lecturer on the 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).



Marko Trtica and Dragana Backović, representatives of the Makler Company (Belgrade, October 2009).



Đorđe Miljković and Saša Miljković with Biljana Žugić and Gordana Stošić (Belgrade, October 2009).



Nada Majkić-Singh, Grazyna Sypniewska, Hans J. van Pelt, Victor Blaton and Xavier Bossuyt during 5th EFCC Symposium for Balkan Region (Belgrade, October 2009).

The idea of this EFCC Symposium was to show how the continuum of different electrophoretic techniques for protein profiling can contribute to proteomics by allowing the detection and measurement of a wide array of proteins, and the definition of their structures and functions.

The proteome is defined as the entire array of proteins, including their post-translational modifications, produced by an organism or system. Thus the proteome will vary with time and physiological or pathological events, or stresses, that a cell or organism undergoes. Proteome analysis is emerging as a potentially powerful tool to decipher pathophysiological processes, resulting in the establishment of the field of clinical proteomics. One of the main goals of clinical proteomics is to discover biomarkers for diseases in biological fluids and tissues. The complexity of the proteome requires a separation step by different electrophoretic techniques before the analysis by mass spectrometry.



Victor Blaton, Svetlana Ignjatović, Andrew Cartwright, Nada Majkić-Singh, Jim Thorn and Bernhard Risse (Belgrade, October, 2009).

The 1st part of the 5th Symposium for Balkan Region covered the clinical utility of serum protein electrophoresis (Xavier Bossuyt, Belgium), agarose gel electrophoresis and capillary electrophoresis in clinical chemistry (Jean-Francois Giot, France), the use of lab-on-chip electrophoresis and other methods in protein profiling (Olgica Trenčevska, North Macedonia), MADGE-Microplate array diagonal gel electrophoresis (Sanja Stanković, Serbia), isoelectrofocusing and PCR amplification-reverse hybridization assay in evaluation of alfa-1-antitrypsin deficiency (Anđelo Beletić, Serbia) and application of proteomics techniques in biomarker discovery (Antonia Vlahou, Greece).

The 2nd part of Symposium covered the urinary proteome analysis using capillary electrophoresis coupled to mass spectrometry as a powerful tool in clinical diagnosis, prognosis and therapy evaluation (Harald Mischak, Germany), glucocorticoid receptors in health and disease (Gordana Matić, Serbia) and molecular diagnosis of phenylketonuria: from detective protein to disease-causing gene mutation (Sonja Pavlović, Serbia).

The following lectures covered experiences in clinical protein arrays: biochip cardiac array technology (Grazyna Sypniewska, Poland), cytokine and growth factor array (Hans J. van Pelt, The Netherlands), colorectal cancer array – simultaneous analysis of DNA alternations with biochip array technology (Andrew Cartwright, UK) and multiparameter testing of colorectal cancer (Bernhard Risse). Jim Thorn (United Kingdom) presented the use of the Analis CDT assay for screening for alcohol abuse.

The organization of the 5th EFCC Symposium for Balkan Region was the result of work and effort of coordinators and of the Organizational Committees. More than 300 participants from Serbia and Balkan countries participated actively in the Symposium. During the Symposium a permanent exhibition of equipment and reagents organized by different companies has been display.

THE 6th EFCC SYMPOSIUM FOR BALKAN REGION

From the 4th till the 9th of October 2010, Belgrade was the host of the 17th Congress of Medical Biochemistry and Laboratory Medicine with international participation organized by the Society of Medical Biochemists of Serbia and the Institute of Medical Biochemistry of the Clinical Centre of Serbia. As part of the Congress, on the 7th of October 2010, the 6th EFCC Symposium for the Balkan Region took place, organized separately under the title Implementing Laboratory Automation, Quality and Efficiency. Symposium coordinators were Professor Nada Majkić-Singh on behalf of the Society of Medical Biochemists of Serbia and Professor Victor Blaton, Former EFCC President, on behalf of the European Federation for Clinical Chemistry and Laboratory Medicine. The Congress and Symposium were held under the auspices of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), European Federation of Clinical Chemistry and Laboratory Medicine (EFCC) and the Balkan Clinical Laboratory Federation (BCLF), as well as the Ministry of Science of the Republic of Serbia.

During the Opening ceremony, Professor Victor Blaton received an Honorary Diploma from the Society of Medical Biochemists of Serbia, the highest recognition awarded by the Society, for his contribution to the development of clinical chemistry and laboratory medicine in Serbia and the Balkan Region and for promoting these disciplines in Serbia and the global professional community.

Celebration of the 55th jubilee anniversary of the founding of the Society of Medical Biochemists of Serbia coincided with the Congress. On this occasion, Professor Nada Majkić-Singh evoked the achievements and activities of the Society of Medical Biochemists of Serbia since its establishment up to this day, by presenting the Historical Background, Aims of the Society, Society Organization, and Professional, Publishing, Congressional and other Activities.



Professor Victor Blaton receiving award „Honorary Diploma” from Professor Nada Majkić-Singh, President of the Society of Medical Biochemists of Serbia (Belgrade, October 2010).

Professor David Goldberg from Canada gave the Opening lecture on „Wine and Health: A Paradigm for Alcohol and Antioxidants” explaining the relative contributions of ethanol and the polyphenolic antioxidants of red wine by considering their potential to inhibit atherogenesis and the mechanisms involved. Other plenary sections of the 17th Congress of Medical Biochemistry and Laboratory Medicine were dedicated to the latest findings on biochemical markers for various diseases and states and their application, primarily the Detection and Clinical Significance of Free Radicals in Circulation describing the complexity of free radical metabolism in human erythrocytes (M. Spasić), the diagnostic and therapeutic significance of oxidative stress parameters in children (M. Bajčetić) and the application of electron paramagnetic resonance as a powerful tool of medical biochemistry in discovering mechanisms of disease and treatment prospects (I. Spasojević). The Thyroid Disease Diagnostics section included the following lectures: „Diagnosis of Thyroid Disease” (M. Žarković), „Genetics of Thyroid Cancer” (S. Damjanović), „Measuring Thyroglobulin Concentrations in Patients with Differentiated Thyroid

THE SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA



Honorary Diploma

presented to

Professor Victor Blaton

for promoting
Clinical Chemistry and Laboratory Medicine
in the Balkan Clinical Laboratory Federation and globally

Belgrade,
September 2010.

PRESIDENT

Prof. dr Nada Majkić-Singh



XVIIth Serbian Congress of Medical Biochemistry and Laboratory Medicine and 6th EFCC Symposium for Balkan Region Board: N. Majkić-Singh, V. Đorđević, M. Đerić, S. Ignjatović (Belgrade, October 2010).



XVIIth Serbian Congress of Medical Biochemistry and the 6th EFCC Symposium for Balkan Region participants (Belgrade, October 2010).



XVIIIth Serbian Congress of Medical Biochemistry and the 6th EFCC Symposium for Balkan Region participants, with Trumpet bend „Dejan Petrović” (Belgrade, October 2010).



Nada Majkić-Singh with Trumpet bend „Dejan Petrović” (Belgrade, October 2010).



On the Congress party in Hotel M (from left to right): M. Ilić, D. Goldberg, J. Janković, N. Majkić-Singh, O. Janković and V. Blaton (Belgrade, October 2010).

Carcinoma” (S. Savin) and „The Importance of Hormones and Proteins Determination in the Material Obtained by Fine Needle Aspiration Biopsy” (B. Trbojević).

Latest Knowledge about the „Clinical Value of Lipopolysaccharide-Binding Protein in Infection and Sepsis” (D. Schmidt), „The ESR Test: An Old Test with New Concepts” (M. Plebani and E. Piva), „D-Dimer in the Management of Venous Thromboembolism” (G. Le Gal) and „Point-of-Care D-Dimer Testing” (J. Antović), „Sensitive Cardiac Troponin Assays: Myth and Magic or A Practical Way Forward?” (D. Gaze) and „Diagnostic and Prognostic Information Provided by a High Sensitivity Assay for Cardiac Troponin T” (J. Jarausch) were all presented in the section New Biochemical Markers. The Biochemical Markers of Kidney Diseases section was devoted to „Serum and Urinary Biomarkers Determination” (V. Ležajić), „Cardiovascular Biomarkers in Chronic Kidney Disease” (M. Đerić), „Urinary NGAL as a Novel Biomarker for the Early Detection of Acute Kidney

Injury” (KM Schmidt-Ott) and the „Importance of KIM-1 Determination in Tissue and Urine of Patients with Different Kidney Diseases” (S. Simić-Ogrizović). Very important sections dealt with Protein Analysis at the Molecular Level: from fundamental research to the application in medicine, providing insights into „Individualized Therapy and Role of Thiopurine S-Methyltransferase Protein and Genetic Variants” (S. Pavlović), „A Possible Role of MARP Protein Family in Molecular Mechanism of Tumorigenesis”, and the „Role of rRNA Methyltransferases in Resistance to Antibiotics”. The Significance of Genetic Polymorphism as a Marker for Proneness to Disease Formation (I. Novaković), e.g. in relation to the „Genetic Epidemiologic Approach” (T. Pekmezović), „Genetic Predisposition to Type 1 Diabetes Mellitus” (K. Stankov) and „The Role of GSTM1 Polymorphism in Patients with Renal and Urinary Bladder Tumors” (T. Simić) were also discussed.

In the course of the 6th EFCC Symposium for Balkan Region prominent foreign and local experts introduced to the participants the means for achieving full automation and laboratory consolidation with the goal of adhering to the philosophy of Lean and Six Sigma laboratory efficiency. Experts from Italy, Germany, Switzerland, Austria and Belgium revealed their experiences along with distinguished local scientists. The following lectures were presented: „Implementing Laboratory Automation, Quality and Efficiency” (Svetlana Ignjatović and Nada Majkić-Singh), „Medical Errors: Preanalytical Issue in Patient Safety” (Mario Plebani), „Preanalytical Workstation as a Tool for Reducing Laboratory Errors” (Giorgio Da Rin), „Progressive Automation – the Solution of Choice for Improving Lab Efficiency” (Jan Michel Valid), „Centralization, Consolidation and Automation in a Local Hospital Network” (Gerd Hafner), „Concepts for Lean Laboratory Organization” (Gabriele Halwachs-Baumann) and „Automation, Lean, Six Sigma – Synergy in Tactics to Improve Lab Efficiency” (Davide Villa), „Concepts for an In vitro Diagnostic Organization: Consulting Services to Develop Customized Economical and High Quality In Vitro Diagnostic Solutions” (Gerhard Wirl) and „Lean and Six Sigma Sample Analysis Process in a Microbiology Laboratory” (Vojislav Stojiljković).

The topics selected covered in a multidisciplinary fashion the field of laboratory medicine and other medical sciences. A number of experts in various areas actively took part by contributing their work, which further accentuated the multidisciplinary character of the Congress. Like in previous years, this Congress has, therefore, made it possible for the latest



The participants on the 6th EFCC Symposium for Balkan Region, from left to right: S. Ignjatović, V. Blaton, E. Piva, G. Da Rin, J-M Valid and N. Majkić-Singh (Belgrade, October 2010).

scientific and expert results to be presented to clinical chemists from Serbia and the Balkan Region and has served as a place for exchanging experiences in order to promote contemporary laboratory practice. During the closing ceremony, Professor David Goldberg gave a very interesting and important lecture entitled „Science at the Crossroads: Fact or Fiction?” in which he examined the direction contemporary science took a while ago and offered some valuable advice.

Round table discussions on the topics presented served as the basis for reaching Conclusions and Guidelines in this area of laboratory medicine, with the aim of achieving the best possible treatment results for the benefit of patients. A permanent exhibition of equipment and reagents was on display during the Congress and Symposium, and many practical workshops were organized by various companies.

Organization of the National 17th Serbian Congress of Medical Biochemistry and Laboratory Medicine and 6th EFCC Symposium for the Balkan Region was the result of engagement and effort by the coordinators and all members of the Scientific and Organizing Committees. More than 450 participants from Serbia and other Balkan countries were actively engaged in the Congress and Symposium, and we can only hope that the program we had to offer met their expectations and that through such an exchange of experiences they were able to enrich their knowledge, which will doubtlessly be useful in everyday laboratory practice. We also sincerely hope that Belgrade, our ancient city upon two rivers, was recognized as a kind and interesting host that the Congress participants will carry in their hearts for a long time.

All lectures are published in the national journal of the Society of Medical Biochemists of Serbia – Journal of Medical Biochemistry 2010; 29: 131–230, and 29: 231–492 (www.versita.com).

THE 7th EFCC SYMPOSIUM FOR BALKAN REGION

The 7th EFCC Symposium for Balkan Region entitled „Biomarkers: From Standardization to Performance” was organized in Belgrade, under the auspices of the International Federation of Clinical Chemistry (IFCC) and European Federation of Clinical Chemistry and Laboratory Medicine (EFCC), from 23 to 25 June 2011. The coordinators of the symposium were N. Majkić-Singh, V. Blaton and S. Ignjatović. Nada Majkić-Singh gave a lecture on the topic „What is Biomarker? From Discovery to Clinical Application”; Mauro Panteghini (Italy) spoke on standardization and defining requests in heterogeneous biomarker determinations; Patrick M. M. Bossuyt (The Netherlands) on defining the feasibility and clinical validity of biomarkers. Among others, lectures were also given by B. Gouget, V. Blaton, G. Synnievska, Ph. Gillery, D. Aslan, D. Rizos, and S. Ignjatović.

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 Panteghini’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 Blaton’s talk (Department of Clinical Chemistry, Hospital



7th EFCC Symposium for Balkan Region lecturers (Belgrade, June 2011).



7th EFCC Symposium for Balkan Region participants (in first row): D. Rizos, M. Panteghini and S. Ignjatović (Belgrade, June 2011).



7th EFCC Symposium for Balkan Region lecturers (from left to right): D. Rizos, S. Ignjatović, D. Aslan, N. Majkić-Singh and A. Griesmacher (Belgrade, June 2011).

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, Croatia) summarized the recent progress in the diagnostic use of copeptine, 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



Departure of the participants of the Seventh EFCC Symposium for Balkan Region by Blue Train to Mokra Gora (Belgrade, June 2011).

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 „Šargan 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 Šargan 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



Ensemble „Kolo” in front of the Blue Train, Reilway Belgrade Station (Belgrade, June 2011).



Ensemble „Kolo” in front of the Blue Train, Reilway Belgrade Station (Belgrade, June 2011).



Ensemble „Kolo” in front of the Blue Train, Railway Belgrade Station (Belgrade, June 2011).



Z. Šumarac, N. Majkić-Singh and D. Aslan in Drvengrad, June 2011.



Biochemists at Mokra Gora, June 2011.



Biochemists at Mokra Gora, June 2011.



Symposium lecturers during trip to Mokra Gora, 2011 (from left to right): Aslan Diler, Grazyna Sypniewska, Bernard Gouget, Nada Majkić-Singh, Patrick MM Bossuyt, Sanja Stanković and Victor Blaton (Mokra Gora, June 2011).

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 Mečavnik 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.



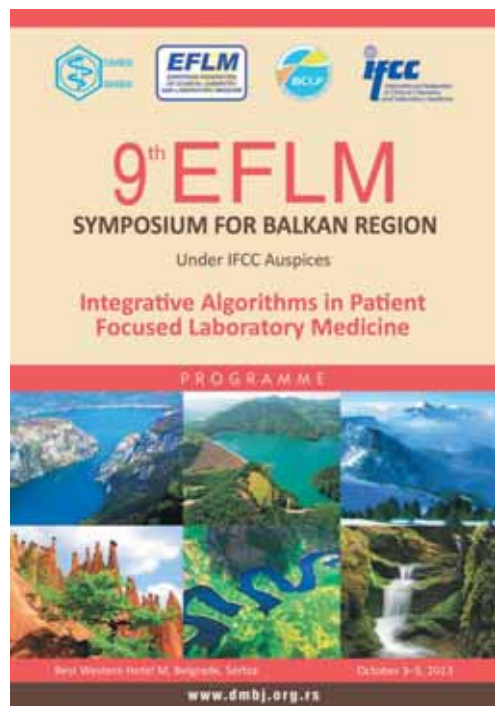
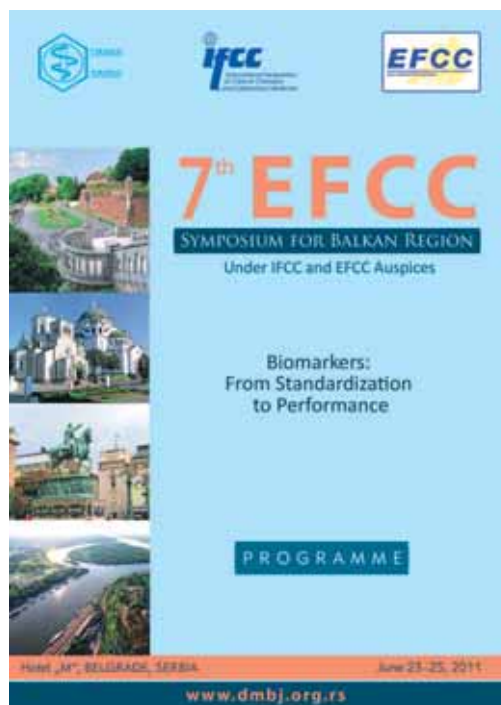
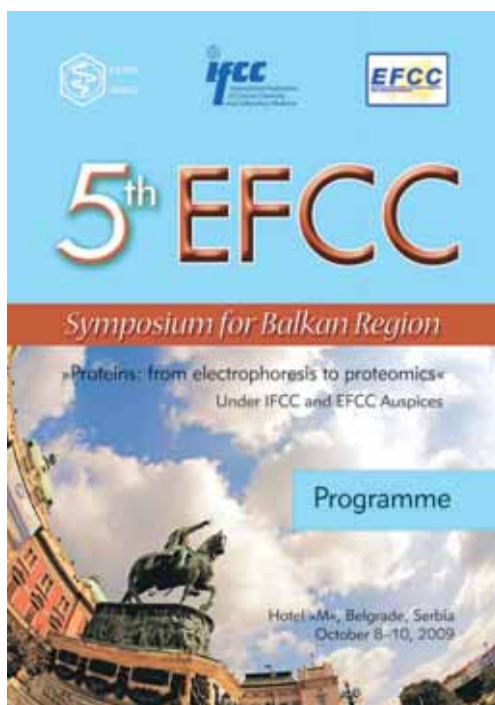
Biochemists at the trip on Mokra Gora, June 2011.

After the symposium, the lecturers and some of the participants traveled by Blue Train to Mokra Gora and Drvengrad. The following is an excerpt from the text by S. Jovičić, published in IFCC News: „News from the Society of Medical Biochemists of Serbia”

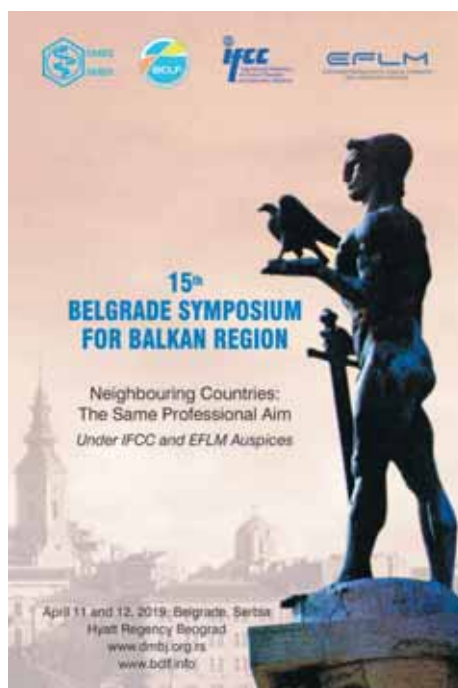
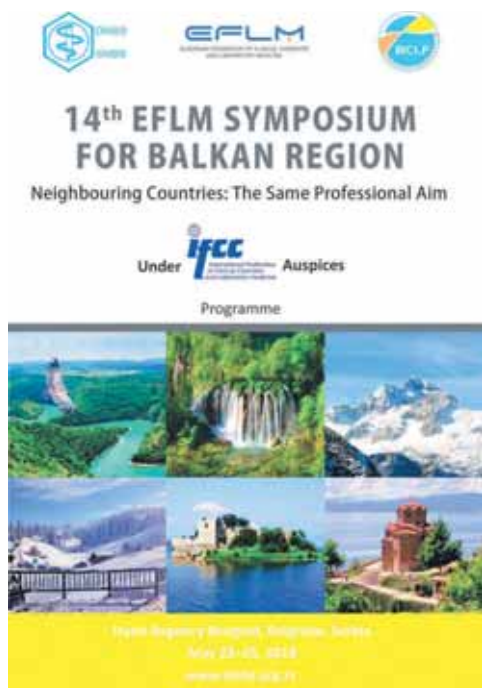
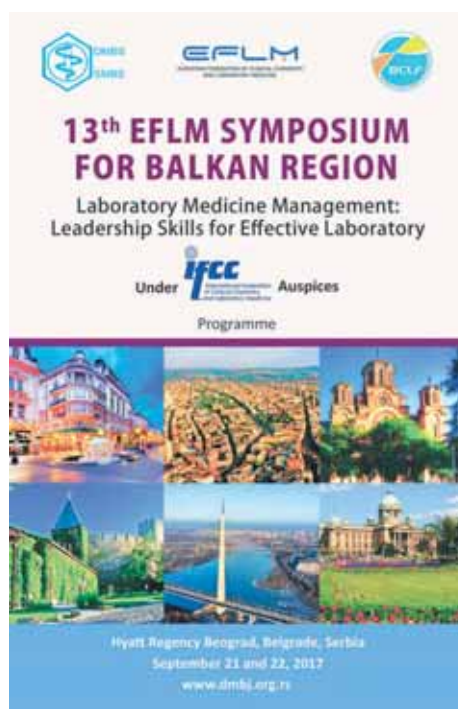
“This closed the formal part of the symposium, but it continued outside Belgrade. The two following weekend days the participants and lecturers spent on the road, or railway to be precise. They went on the nostalgic travel through time with the Blue Train - a special train used for the needs of Josip Broz Tito, lifelong President of the Socialist Federal Republic of Yugoslavia. It is one of the most famous and most popular trains in the whole world, built in 1959 for the 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 „Shargan 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 the famous steam locomotive train „Ćira”. Now, one part of this railway is renewed on the route from Shargan Vitasi station 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 a unique ethno village, a typical settlement of this area of the 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 the Balkan Region, leaving all participants with valuable new knowledge of biomarkers, but also with some unforgettable memories”.



Selected programme front pages of EFLM Symposium for Balkan Region.



Selected programme front pages of the EFLM Symposium for Balkan Region.

THE 8th EFCC SYMPOSIUM FOR BALKAN REGION

The 20th Meeting of the Balkan Clinical Laboratory Federation was held in parallel with the 8th EFLM Symposium for the Balkan Region and the 18th Congress of Medical Biochemistry of Serbia under the common name BCLF 2012 BELGRADE MEETINGS from 18 to 22 September 2012 in Belgrade, at the Best Western Hotel „Hotel M”. The congresses were held under the auspices of the Ministries of Health and Science of the Republic of Serbia, as well as the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and the European Federation of Clinical Chemistry and



The 20th BCLF Meeting chairmen (from left to right): Zorica Šumarac, Nada Majkić-Singh, Etleva Refatllari and Svetlana Ignjatović (Belgrade, September 2012).



The Infinity Quintet (Belgrade, September 2012).

Laboratory Medicine (EFLM). The organizers were the Society of Medical Biochemists of Serbia (DMBS), the Balkan Clinical Laboratory Federation (BCLF) and the Institute of Medical Biochemistry of the Clinical Center of Serbia. The President of the Scientific Committee was Nada Majkić-Singh, and the President of the Organizing Committee was Zorica Šumarac. The Scientific Committee consisted of representatives of all Balkan countries. The 8th EFLM Symposium for the Balkan Region was held as a pre-congress scientific activity. The Infinity Quintet with classical music performed first at the opening ceremony of the congress.

The Congress was opened by Professor Nada Majkić-Singh, Professor Ian Watson, EFLM President and Professor Vladimir Đukić, State Secretary of the Ministry of Health of Serbia on behalf of the Minister.

The inaugural lecture entitled „Vitamin D: A D-Lightful Solution for Good Health” was given by the famous Professor Michael Holick (Boston, USA). Seven sections were held at

the congress, where the following lecturers spoke: Preanalytics – the right way to improve patient safety (Mario Plebani, Padua, Italy; Vladimir Palička, Hradec Králové, Czech Republic; Ana-Maria Šimundić, Zagreb, Croatia; Steve Kitchen, Scheffield, UK); Experiences in preanalytics from the Balkan Region (Mustafa Serteser, Istanbul, Turkey; Simona Berbecar, Bucharest, Romania; Zorica Šumarac, Belgrade, Serbia); Education and Training of Specialists in Laboratory Medicine (Ian Watson, Liverpool, UK; Victor Blaton, Brugge, Belgium; Elizabeta Topić, Zagreb, Croatia); New Biochemical Markers (Sanja Stanković, Belgrade, Serbia; Emina Čolak, Belgrade, Serbia; Violeta Anastasovska, Skopje, Macedonia; Raluca Dumache, Timisoara, Romania; Nuray Ulusu, Ankara, Turkey; Demetrios Rizos, Athens, Greece; Radmila Obrenović, Belgrade, Serbia; Aylin Sepici Dincel, Ankara, Turkey; Albana Daka, Tirana, Albania); Tumor Markers and Molecular Diagnosis of Cancer (Camelia Grigore, Sibiu, Romania; Anyla Bullo-Kasneci, Tirana, Albania); Standardization in Laboratory Medicine (Muhittin Serdar, Ankara, Turkey; Bernard Gouget, Paris, France; Mirka Ilić, Belgrade, Serbia; Steve Kitchen, Sheffield, UK; Milko Shishenkov, Sofia, Bulgaria). 133 posters are on display. Two Workshops by Abbott and Sysmex Europe were held. The main sponsors of the congress were Interlab exim, Makler, ADOC, Roche, Abbott and Magna pharmacy, as well as smaller sponsors Yunycom, BioMerieux, Labteh, Vicor, Superlab and Neomedica.

The 8th EFCC Symposium for Balkan Region was held under the title „Vitamin D Deficiency: A new challenge for laboratory medicine” in Belgrade, at the hotel „Best Western Hotel M”, on September 19, 2012 and with the XVIII Congress of Medical Biochemistry and Laboratory Medicine and the 20th Meeting of the Balkan Clinical Laboratory Federation, which were held from 18 to 22 September 2012 under the common name „BCLF 2012 BELGRADE MEETINGS”. Since three congresses were held in the same period, Ian Watson, President of EFLM, attended the congress and addressed the participants at the opening. The plenary lecture, entitled „Vitamin D: A D-lightful Solution for Good Health”, was given by the famous Professor Michael Holick (Boston, USA), who fascinated the participants with his presentation.

This Symposium was also organized under the auspices of the IFCC, EFLM, BCLF and the Ministries of Health and Science of the Republic of Serbia. The coordinators were N. Majkić-Singh and S. Ignjatović. E. Topić (Croatia) addressed the participants on behalf of EFLM. The following lectures were held within the Symposium: Biochemistry and



Professor Ian Watson, EFLM President addresses to the BCLF 2012 Belgrade Meetings (Belgrade, September 2012).



Professor Michael F. Holick present the opening lecture on the BCLF 2012 Meetings (Belgrade, September 2012).



Participants of the 20th BCLF Meeting (Belgrade, September 2012).

metabolism of vitamin D (S. Jovičić and a group of associates, Serbia), Importance of vitamins for the diagnosis and monitoring of hypovitaminosis (M. Vogeser, Germany), The role of vitamin D in osteoporosis), The role of vitamin D in sarcoidosis (V. Mihailović-Vučinić, Serbia), Importance of vitamin D in the prevention of renal and cardiovascular diseases (D. Pavlović, Croatia), Biological and clinical effects of vitamin D in the elderly population (R. Fournier, France), The contribution of nutrition to the status of vitamin D (M. Nikolić, Serbia), then lectures on standardization of vitamin D determination (HJ Pablo Roth, Germany), choice of determination methods (M. Serteser, Turkey), comparison of different methods and their feasibility, USA). Experiences on this issue in the Balkan Region are also commonly presented, comparing different methods (S. Jovičić and a group of associates, Serbia), the level of vitamin D in healthy postmenopausal women (A. Kapetanaki, Greece) and the impact of vitamin D on osteoarthritis (A. Sepici Dincel, Turkey). Traditionally, all of these lectures have been published in the Journal of Medical Biochemistry 2012; 31: 263–448. (<http://www.degruyter.com/view/j/jomb>; www.dmbj.org.rs/jmb)

THE SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA



Honorary Diploma

presented to

Professor Stoyan Danev

for promoting
Clinical Chemistry and Laboratory Medicine
in the Balkan Clinical Laboratory Federation and globally

Belgrade,
September 2012.

PRESIDENT
Prof. dr Nada Majkić-Singh



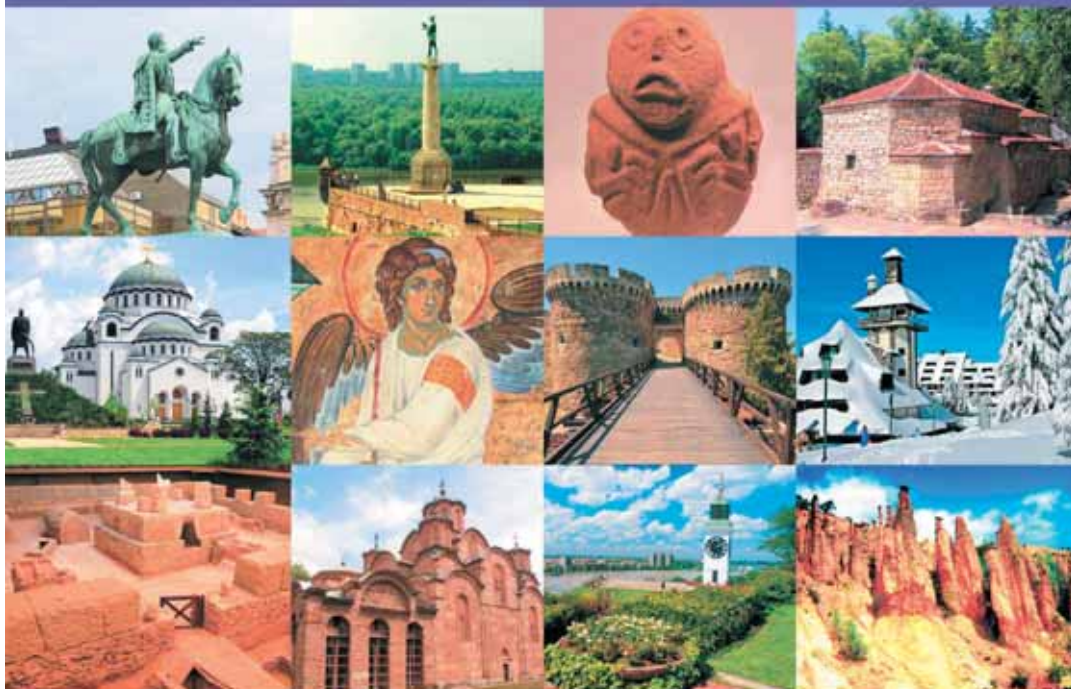
BCLF 2012 BELGRADE MEETINGS

20th Meeting of the Balkan Clinical Laboratory Federation

8th EFLM Symposium for Balkan Region

18th Congress of Medical Biochemists of Serbia

FINAL PROGRAMME



www.bclf2012.org

September 18–22, 2012

Best Western Hotel M, Belgrade, Serbia

THE 9th EFLM SYMPOSIUM FOR BALKAN REGION

Nine years ago, EFLM appointed the Society of Medical Biochemists of Serbia as host of educational symposium for clinical chemists of the Balkan Region. This year's, 9th EFLM Symposium for Balkan Region entitled „Integrative Algorithms in Patient Focused Laboratory Medicine” was organized under the auspices of the IFCC, Balkan Clinical Laboratory Federation, Ministry of Education, Science and Technological Development of Serbia, and Ministry of Health of Republic of Serbia. The two-day symposium was held from October 3rd to 5th as part of the EFLM Committee of Education and Training and EFLM Working Group on Congress and Postgraduate Education activity in 2013.

The first section was dedicated to the introduction to molecular-genetic diagnostics and molecular genetic markers, as a base for personalized medicine, presented by two leading Serbian scientists in this field – Professor Ivana Novaković (Institute of Human Genetics of Belgrade's University School of Medicine, Serbia) and Professor Sonja Pavlović (Institute of Molecular Genetics and Genetic Engineering of University of Belgrade, Serbia). After words, we had the honor to listen about the incorporation of molecular diagnostics in clinical laboratories and quality assurance in molecular biomedicine and life sciences from the two leading experts in these fields, Professor Mario Pazzagli (Department of Clinical Physiopathology, University of Florence, Italy) and Professor Michael Neumaier (Institute for Clinical Chemistry, Medical Faculty Mannheim of University of Heidelberg, Germany).

Second section was dedicated to patient focused management of thrombophilia. This complexed topic was opened with the lecture about its molecular basis, presented by Dr Valentina Djordjević (Institute of Molecular Genetics and Genetic Engineering, University of Belgrade, Serbia). The talk about the laboratory investigation of thrombophilia followed through the comprehensive presentation of Dr Sandra Margetić (Department of Laboratory



Members of the 9th EFLM Symposium for Balkan Region Organizing and Scientific Committee with lecturers. (From left to right: Dr Sandra Margetić, Dr Andjelo Beletić, Professor Mario Pazzagli, Professor Elizabeta Topić, Professor Nada Majkić-Singh, Professor Ksenija Fumić, Professor Sonja Pavlović, Dr Zorica Šumarac and Professor Svetlana Ignjatović) (Belgrade, October 2013).

Haematology and Coagulation, University Hospital Center, Zagreb, Croatia). The section was closed with the presentment of principles of integrative approach to patient with thrombophilia, when Dr Gorana Matić from the Department of Haematology, Haemostasis, and Prevention of Thrombosis (Laboratory Medicine Center, Clinical Center of Vojvodina, Novi Sad, Serbia), presented their experiences in this field.

Section three was dedicated to the detection of molecular defects in the field of endocrinology. The lecturers from the Clinic of Endocrinology, Diabetes and Metabolic Diseases of Clinical Center of Serbia and University of Belgrade's School of Medicine brought us closer to understanding the application of molecular diagnostics in the management of endocrine tumors. We had the privilege to listen about integrative protocols in evaluation of multiple endocrine neoplasia from the distinguished Professor Svetozar Damjanović, and Dr Dragana Miljić presented molecular defects in the pathogenesis of pituitary tumors. The role of pharmacogenetics in the treatment of diabetes was elaborated



Students and graduates of University of Belgrade School of Pharmacy with their Professors (Professor Nada Majkić-Singh and Professor Svetlana Ignjatović), President of SMBS (Dr Zorica Šumarac), their liaison with SMBS (Dr Andjelo Beletić) and Director of Chamber of Biochemists (Dr Valibor Canić) on the 9th EFLM Symposium for Balkan Region (Belgrade, October 2013).

in the presentation of the esteemed Professor Elizabeta Topić, Chair of the EFLM Committee of Education and Training, and professor at the Faculty of Pharmacy and Biochemistry of University of Zagreb, Croatia. The section was closed with the lecture about molecular genetics and molecular cytogenetics in the evaluation of congenital heart defects, presented by Dr Goran Čuturilo from the Department of Clinical Genetics, University Children's Hospital of the University of Belgrade's School of Medicine, Serbia.

The following section, dedicated to pharmacogenomics, was opened with the introduction by the distinguished Professor Gerard Siest, from the research unit „Cardiovascular Genetics” of the Nancy University of Lorraine's Faculty of Pharmacy, France, with the emphasis on its future evolution and the role of the European Society of Pharmacogenomics and Theranostics (ESPT) in it. Professor Irena Mlinarič-Rašćan from the University of Ljubljana's Faculty of Pharmacy, Slovenia, talked about the pharmacogenomics of thiopurine S-methyltransferase and presented her work in this field. The section was concluded with

the lecture about pharmacogenomics of drugs for cardiovascular system, presented by Dr Sanja Stanković (Center for Medical Biochemistry, Clinical Center of Serbia).

The Symposium's closing section was dedicated to rare diseases. Professor Ksenija Fumić from Clinical Department of Laboratory Diagnostics of Medical Center of Zagreb and University of Zagreb's Faculty of Pharmacy and Biochemistry, Croatia, in her comprehensive lecture opened the section and presented integrative algorithms in diagnostics of lysosomal storage diseases. The talk about molecular basis, clinical presentation, therapeutic options and integrative approach in diagnostics of alpha-1-antitrypsin deficiency was presented jointly, from the aspect of both the laboratory and clinical practice professional, by Dr Andjelo Beletić, from Center for Medical Biochemistry, and Dr Aleksandra Dudvarski-Ilić, from Clinic of Pulmology of Clinical Center of Serbia. Dr Maja Stojiljković-Petrović, from the Laboratory for Molecular Haematology of University of Belgrade's Institute of Molecular Genetics and Genetic Engineering, concluded the section with her presentation of molecular characteristics, phenotypic diversity and genotype-estimated therapeutic responsiveness of Serbian patients with phenylketonuria.

All sections were extremely well visited and about 250 registered participants and students attended the Symposium. The lectures instigated interesting discussions which completed the overall impression that once again Society of Medical Biochemists of Serbia organized a successful meeting according to the EFLM standards.

The 9th EFLM Symposium for Balkan Region organized by the Society of Medical Biochemists of Serbia and the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) under the auspices of the IFCC, BCLF and Ministry of Science and Health of the Republic of Serbia was held in Belgrade from 3 to 5 October 2013 under the title „Integrative Algorithms in Patient Focused Laboratory Medicine”. The first part of the symposium was dedicated to molecular-genetic diagnostics (I. Novaković, Serbia), molecular genetic markers as the basis for personalized medicine (S. Pavlović, Serbia), application of molecular diagnostics in clinical laboratories (M. Pazzagli, Italy), and quality assurance in molecular biomedicine (M. Neumaier, Germany). All the lectures were published in the Journal of Medical Biochemistry 2014; 33:1 (1–134) (<http://www.degruyter.com/view/j/jomb>; www.dmbj.org.rs/jmb).

THE 10th EFLM SYMPOSIUM FOR BALKAN REGION

The 10th EFLM Symposium for Balkan Region was held together with the 19th Congress of Medical Biochemistry and Laboratory Medicine in Belgrade, between 9 and 13 September 2014, under the title „Paediatric Laboratory Medicine: Some Aspects of Obesity, Metabolic Syndrome, Neonatal Screening, Reference Intervals”. The Scientific Board of the symposium included Professors Nada Majkić-Singh, President, Edgard Delvin (Canada), Elizabeta Topić (Croatia), Grazyna Sypniewska (Poland) and Svetlana Ignjatović (Serbia).



Scientific Board of the 10th EFLM Symposium for Balkan Region: Nada Majkić-Singh and Edgard Delvin (Belgrade, September 2014).



Lecturers on the 10th EFLM Symposium for Balkan Region (From left to right) sitting: N. Majkić-Singh, Z. Šumarac, M. Čvorkov-Dražić; standing: I. Balogh, E. Delvin, R. Pollitt, A. Burlina (Belgrade, September 2014).

An important role in the organization of the symposium was dedicated to Professor Edgard Delvin regarding the proposed program and lecturers. Among others, the following lecturers should be mentioned: V. Nobili (Italy), M. Kocova (Macedonia), V. Zdravković (Serbia), R. Pollitt (UK), A. Burlina (Italy), I. Balogh (Hungary), M. Čvorkov-Dražić (Serbia), V. Anastasovska (Macedonia), B. Repič Lampert (Slovenia), T. Milenković (Serbia), J. Henny (France), K. Adeli (Canada) and P. Ridefelt (Sweden). All the lectures were printed in the Journal of Medical Biochemistry 2015; 34:1(1–150) (<http://www.degruyter.com/view/j/jomb>; www.dmbj.org.rs/jmb).

The end of summer and first days of autumn are the traditional season for Belgrade meetings of medical biochemists of Serbia. This year, September 9–13, 2014, were the days of the 19th National Congress of Medical Biochemistry and Laboratory Medicine and of the 10th EFLM Symposium for the Balkan Region. The Society of Medical Biochemists of Serbia and the



Lecturers of the 10th EFLM Symposium for Balkan Region (from left to right: N. Majkić-Singh, J. Henny, P. Ridefelt, K. Adeli, E. Delvin) (Belgrade, September 2014).

European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) together with the Medical Biochemistry Clinical Center of Serbia, and Faculty of Pharmacy University of Belgrade organized in Belgrade (September 11–12, 2014) the 10th EFLM Symposium for Balkan Region under the title „Pediatric Laboratory Medicine: Some Aspects of Obesity, Metabolic Syndrome, Neonatal Screening, Reference Intervals and Critical Values.” EFLM appointed Belgrade (Serbia) and the Society of Medical Biochemists of Serbia (SMBS) as the organizer of educational symposia for clinical chemists in the Balkan Region and as a result of this decision ten symposia have been organized thus far very successfully. The 10th EFLM Symposium for Balkan Region is organized under the auspices of the International Federation of Clinical Chemistry (IFCC), Balkan Clinical Laboratory Federation (BCLF), as well as the Ministry of Education, Science and Technological Development, and Ministry of Health of Republic of Serbia. The Scientific Committee members were Symposium President Nada Majkić-Singh (Serbia), Edgard Delvin (Canada), Elizabeta Topic (Croatia), Grazyna Sypniewska (Poland), and Svetlana Ignjatović (Serbia).



Lecturers of the 10th EFLM Symposium for Balkan Region (from left to right: N. Majkić-Singh, V. Anastasovska, B. Repič, T. Milinković and M. Kočova) (Belgrade, September 2014).

The Symposium lectures were presented through three sections: Pediatric Obesity – Insulin Resistance – Non-alcoholic Fatty Liver Disease (NAFLD); Neonatal Screening for Metabolic Disease (two parts); and Pediatric Reference Intervals and Critical Values. The lecturers were from Canada (2), Italy (2), North Macedonia (2), Serbia (5), UK (1), Hungary (1), Slovenia (1), France (1), and Sweden (1). The papers of the lectures presented were published in *Journal of Medical Biochemistry* 2015; 34: 1–150 (www.degruyter.com/view/j/jomb). Special thanks of the organizers go to Professor Edgard Delvin (Montreal Children's Hospital, McGill University, Montreal, Canada) who helped to design the program of the symposium, and suggested the topics and lecturers.

The first section of the symposium was dedicated to pediatric obesity, insulin resistance and non-alcoholic fatty liver disease (NAFLD). Professor Edgard Delvin gave the introduction with the lecture about the prevalence, secular trends and consequences of

obesity, where he also mentioned the fundamentals of sented results of several studies in obese children of different ages performed in the Republic of North Macedonia, which showed higher leptin and lower adiponectin levels in obese children, who also presented with a more atherogenic lipoprotein profile, associated with increased insulin resistance, emphasizing the need for the onset of therapy preventing cardiovascular complications at a younger age. Professor Vera Zdravkovic closed the first section with the talk about the importance of early diagnosis of prediabetes, as early complication of childhood obesity, and non-invasive methods to perform it.

The second section was dedicated to the neonatal screening for metabolic disorders. The opening lecture by Professor Rodney Pollitt (Sheffield Children's Hospital, UK) reviewed different viewpoints and international perspectives on newborn screening, which was an excellent introduction for the issues in standardization of neonatal screening programs presented by Professor Alberto Burlina (University of Padua, Italy). Professor Istvan Balogh (Department of Laboratory Medicine, University of Debrecen, Hungary) talked about the relevance of adding the detection of population-specific mutations to commercial allele specific CFTR gene mutation detection method in order to achieve the required sensitivity of molecular testing in newborn screening. The first part of the section was closed with Serbian experiences in screening in the prevention of thalassemia syndromes, presented by Dr Milica Čvorkov-Dražić (Society of Medical Biochemists of Serbia).

The second part continued with the presentation of results of the study of direct molecular diagnosis of CYP21A2 point mutations in North Macedonian and Serbian patients with 21-hydroxylase deficiency by Professor Violeta Anastasovska (Genetic Laboratory, Department of Endocrinology and Genetics, University Children's Clinic, Skopje, Republic of North Macedonia). Professor Barbka Repic Lampert (Unit for Special Laboratory Diagnostics, University Children Hospital, University Medical Center Ljubljana, Slovenia) presented the selective screening for metabolic disorders in a Slovenian pediatric population. The section dedicated to newborn screening was closed by Dr Tatjana Milenković (Department of Endocrinology, Mother and Child Health Care Institute of Serbia „Dr Vukan Ćupić” Belgrade, Serbia), who presented their 30 years' experience with the screening program for congenital hypothyroidism in Central Serbia (1983–2014).

The Symposium was closed with current issues in pediatric reference intervals and critical values. Professor Joseph Henny (Versailles Saint Quentin University, Villejuif, France) introduced the concepts and complexity in establishing reference values in pediatrics. Afterwards, Professor Khosrow Adeli (Clinical Biochemistry, The Hospital for Sick Children, University of Toronto, Canada) discussed the concept and feasibility of common reference intervals, as well as the CALIPER reference interval database. Finally, the epidemiology and pathophysiology of NAFLD, and covered the present biomarkers and the development of new ones.

Professor Valerio Nobili (Bambino Gesù Children's Hospital, Rome, Italy) continued with the epidemiology and natural history of NAFLD, elaborating on the complex interplay between genes and the environment in NAFLD pathogenesis, and the possibility of discovering the potential early predictors and suitable noninvasive diagnostic tools based on the pathogenetic mechanisms and histological patterns. Metabolic setup and risks in obese children was discussed by Professor Mirjana Kocova (University Pediatric Clinic, Skopje, Republic of North Macedonia). Professor Kocova presection and the whole symposium was concluded by Professor Peter Ridefelt (Department of Medical Sciences, Clinical Chemistry, Uppsala University, Sweden), who presented the results of a population-based Swedish study which obtained pediatric reference intervals, and emphasized the problem of lacking reference intervals for the youngest age group – those under six months of age.

The design of the program of this symposium enabled the laboratory professionals in the Balkan Region and our country to learn about this very important area of laboratory medicine. The presence of excellent lecturers and professionals in this field gives very high recognition and prestige to this meeting, which will influence the development of clinical chemistry and laboratory medicine in the Balkan Region. We hope that the EFLM Symposium in Belgrade will continue its successful progress like in previous years, striving to focus on the new data in the field of laboratory medicine.



„Dear Professor Majkic-Singh,

Many thanks for the way that you and your team looked after me (and the other foreigners) at the meeting last week. Landing in a strange place where one does not speak the language is often a fraught experience but, thanks to you, my stay in Belgrade was anxiety-free (except as always when giving a talk) and full of interest. The social side, particularly the tour of the city that you provided for us, was greatly appreciated and the scientific programme very stimulating. At a time when the world seems to be falling to pieces again, it is heartening to meet with international colleagues for the joint purpose of improving peoples' lives rather than destroying them.

Best wishes, Rodney Pollitt”



„Dear Prof Majkic-Singh,

I would like to thank you again for your kind invitation to participate to the 10th EFLM Meeting for Balkan Region. It was a pleasure for me to give a lecture to a such attentive audience. It was also an opportunity for me to discover Belgrade for the first time. I was deeply touched by the warm hospitality of my Serbian colleagues. I appreciated their availability and their kindness. Kindly pass my best thanks to all your staff and the Organizing Committee. It is my pleasure to see you in Paris, next year, at the EuroMedlab Meeting.

Kindest regards, Joseph”

THE 11th EFLM SYMPOSIUM FOR BALKAN REGION

The 11th EFLM Symposium for Balkan Region was held in Belgrade on 14 May 2015, together with the celebration of the 60th anniversary of the Society of Medical Biochemists of Serbia, under the title „Laboratory Medicine Specialist Focuses on the Patients Well-being”. It was organized by the Society of Medical Biochemists of Serbia and the European Federation for Clinical Chemistry and Laboratory Medicine (EFLM), under the auspices of the IFCC, BCLF and Ministry of Science and Health of the Republic of Serbia. On behalf of the 60th Society Anniversary the symposium was chaired by Nada Majkić-Singh, Simone Zérah and Elizabeta Topić. The following topics were discussed: Introduction: European laboratory medicine specialist (Nada Majkić-Singh, Belgrade, Serbia); Verification of in vitro medical diagnostics (IVD) metrological traceability: Role and responsibilities of Laboratory Medicine specialists (Mauro Panteghini, Milan, Italy); Implementation, and the transposition of the Directive and the Register (Simone Zérah, Bagnolet, France; Jean-Philippe Brochet, Bordeaux, France); Towards common training frameworks for specialists in laboratory medicine (Wieringa Gilbert, Manchester, UK); Common Values in the Liberal Professions in Europe (Ian D Watson, Liverpool, UK); Laboratory Medicine in the EU (Wytze Oosterhuis, Heerlen, The Netherlands); Present situation of accreditation in Europe (Willem Huisman, The Hague, The Netherlands); Pre-analytical phase quality management – how and why? (Ana-Maria Šimundić, Zagreb, Croatia); Post-analytical phase quality management – new achievements (Mario Plebani, Padova, Italy); and many lecturers from Balkan Region.



Lecturers and participants of the 11th EFLM Symposium for Balkan Region and SMBS 60th Anniversary (Belgrade, May 2015).



Lecturers on the 11th Symposium for Balkan Region (Belgrade, May 2015).



Professor Mauro Panthegini, EFLM President receiving the Society of Medical Biochemists Honorary Diploma to the EFLM from Nada Majkić-Singh and Zorica Šumarac (Belgrade, May 2015).



Professor Maurizio Ferrari, IFCC President receiving the Society of Medical Biochemists Honorary Diploma to the EFLM from Nada Majkić-Singh (Belgrade, May 2015).



Professor Nada Majkić-Singh delivers Honorary Diploma to Dr Simone Zérah (Belgrade, May 2015).

THE SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA



Honorary Diploma

presented to

Simone Zérah

European Specialist in Laboratory Medicine

for promoting
Clinical Chemistry and Laboratory Medicine
in Europe and globally

Belgrade,
May 2015,

PRESIDENT

Zorica Šumarić
dr. sc. primarijus Zorica Šumarić



60 ГОДИНА
ДРУШТВА МЕДИЦИНСКИХ БИОХЕМИЧАРА СРБИЈЕ

Повеља

Међународној федерацији за клиничку хемију
и лабораторијску медицину

*International Federation of Clinical Chemistry
and Laboratory Medicine (IFCC)*

У знак признања и захвалности
за значајан допринос раду и развоју
Друштва медицинских биохемичара Србије

У Београду,
15. мај 2015.

ПРЕДСЕДНИК ДМБС
Zorica Šumarać
Прим. dr sc. Зорица Шумарац



60 ГОДИНА
ДРУШТВА МЕДИЦИНСКИХ БИОХЕМИЧАРА СРБИЈЕ

Повеља

Европској федерацији за клиничку хемију
и лабораторијску медицину

*European Federation for Clinical Chemistry
and Laboratory Medicine (EFLM)*

У знак признања и захвалности
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Друштва медицинских биохемичара Србије

У Београду,
15. мај 2015.

ПРЕДСЕДНИК ДМБС
Zorica Šumarać
Прим. dr sc. Зорица Шумарац

THE 12th EFLM SYMPOSIUM FOR BALKAN REGION

12th EFLM Symposium for Balkan Region was held in Belgrade on 26 May 2016, under the title „Harmonization of total process: Influence of the extra-laboratory phases”. The following lectures were included: Extra-analytical phases quality management – new achievements (Mario Plebani, Padova, Italy); Rational Use of Laboratory Tests: Harmonization Case Study 2013–2015 (Gustav Kovač); Harmonization of pre-analytical phase—where are we now? (Zorica Šumarac, Belgrade, Serbia); External quality assessment for the pre-analytical phase (Ana Maria Šimundić); Quality Indicators – Experience of IFCC WG „Laboratory Errors and Patient Safety” on Project „Model of Quality Indicator” (Laura Sciacovelli).

On May 25–27, Society of Medical Biochemists of Serbia (SMBS) and Faculty of Pharmacy of the University of Belgrade organized the 20th Congress of Medical Biochemistry and Laboratory Medicine with international participation. The congress was organized under the auspices of International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), European Federation of Clinical Chemistry and Laboratory Medicine (EFLM), Balkan Clinical Laboratory Federation (BCLF), Ministry of Education, Science, and Technological Development, and Ministry of Health of Republic of Serbia. It had five sessions dedicated to the current findings in different areas of clinical chemistry and laboratory medicine, and their application in patient care.

During the opening ceremony, after the review of the past congresses through photos presentation, the traditional reward of the „Magistra Milica Marković” Foundation, intended to laboratories that advanced the most in the past two years between the two congresses, was awarded to the laboratory of the Community Health Centre „Palilula” from Belgrade. The reward was Alifax Test 1 BCL fully automated analyzer for determination of



President of SMBS, Dr Zorica Šumarac, Milka Golubović and Executive Director SMBS, Prof. Dr Nada Majkić-Singh, with the laureates of the „Magistra Milica Marković” Foundation Award dr Slavica Kalezić Milošević, director of Helth Centre “Palilula”, medical biochemist Dragana Vučić and mr Goran Granić the representative of Promedia company (Belgrade, May 2016).

erythrocytes sedimentation rate, donated by the company Promedia. Also, on the occasion of the jubilee of the 20th Congress, SMBS delivered Diplomas and Acknowledgments to individuals and organizations that contributed significantly to the work of the SMBS and to the development of medical biochemistry in Serbia.

The working part of the 20th Congress officially started with the opening plenary lecture entitled „Quality assurance in clinical chemistry: a touch of statistics and a lot of common sense” held by the distinguished professor Elvar Theodorsson, from the Linköping University, Sweden. The first session was dedicated to the new biomarkers in laboratory medicine – the role of genome-wide association studies in new biomarkers discovery in the case of osteoporosis, paraoxonase enzymes in cardiovascular disease, LC-MS/MS for analysis of cholesterol synthesis and absorption markers, and adiponectin in coronary artery disease. Toxicological, pharmacokinetic, and biochemical aspects of the application of drugs were the topics of the second session. The talks comprehended the influence of



Professor Dr Elvar Theodorsson with members of the Scientific and the Organizing Committee of the 20th Congress (from left to right: Professor Dr Nada Majkić-Singh, Professor Dr Elvar Theodorsson, Dr Zorica Šumarac, Dr Snežana Jovičić, Dr Velibor Canić) (Belgrade, May 2016).



Participants on the XXth Congress of Medical Biochemistry and Laboratory Medicine and the 12th EFLM Symposium for Balkan Region (Belgrade, May 2016).

environmental pollutants cadmium and polychlorinated biphenyls on thyroid hormone levels, the recommendations on application of therapeutic drug monitoring, diagnostic and therapeutic possibilities in familiar hypercholesterolemia, and monitoring of biochemical parameters in the assessment of immunosuppressive therapy safety. The third session was dedicated to contemporary methodological approaches in laboratory medicine – application of HPLC-MS/MS techniques, PCR methodology implementation in pathogen detection and human genomics, implementation of the recommendations of the World Health Organization in standardization of spermogram making, and pharmacogenetics testing, biochemical and therapeutic monitoring as the basis of personalized medicine. The fourth session elaborated the role of oxidative stress in contemporary diseases, as risk factor for the development of eye disease, in prediabetes, then the role of genetic polymorphisms of glutathione transferases omega class in end-stage renal disease, and the role of reduced antioxidant defense and obesity in the development of cardiovascular disease in young people. The closing, fifth session was dedicated to molecular biomarkers of diagnosis and monitoring of therapeutic response in immune diseases – multiple sclerosis, liver fibrosis and celiac disease.

As part of the 20th Congress, the 12th EFLM Symposium for Balkan Region was organized by the SMBS and EFLM on May 26 and 27. This year's Symposium was entitled „Harmonization of the total process: Influence of the extra-laboratory phases”. The Symposium was opened with the plenary lecture of the distinguished Professor Mario Plebani, the leading expert in this field, entitled „Extraanalytical phases quality management – new achievement”. During the four part program, European and Serbian lecturers presented different aspects of important issues in extra-laboratory phases. The topics covered rational ordering of laboratory parameters, harmonization and external quality assessment of preanalytical phase, quality indicators, application of biological variability, drug interferences, systematic automated sample interferences testing, management of processes in the preanalytical phase, the impact of laboratory test results, management of critical-risk results as a tool for improvement clinicians' decisions, urinalysis, critical values reporting, solutions in monitoring performance in pre-pre and post-post analytical phases, managing laboratory demand, clinical awareness about pre and post analytical phase, and the level of communication between clinicians and medical



Lecturers of the opening session of the 12th EFLM Symposium for Balkan Region, from left to right: Dr Zorica Šumarac, Dr Laura Sciacovelli, Professor Dr Mario Plebani, Professor Dr Nada Majkić-Singh, Professor Dr Ana-Maria Šimundić, Professor Dr Gustav Kovač (Belgrade, May 2016).

laboratory. Next to Professor Plebani, the participants had the pleasure to hear about these issues from the eminent lecturers, members of EFLM and IFCC working groups – Professor Dr Gustav Kovač, Dr Zorica Šumarac, Professor Dr Ana-Maria Šimundić, Laura Sciacovelli, Professor Dr Tatjana Cvetković, Professor Dr Dunja Rogić, Professor Dr Éva Ajzner, Professor Dr Svetlana Ignjatović, Professor Dr Mercèdes Ibarz, Dr Pinar Eker, and Ass Dr Snežana Jovičić; as well as from national specialists in this field – Ass Dr Neda Milinković, Dr Vera Lukić, Dr Drina Topalov, Dr Biljana Glišić, and Dr Zorica Reljić.

The congress program also included two industrial workshops and poster session, with notable participation of students of medical biochemistry at the Faculty of Pharmacy, University of Belgrade, with their research results.



Students of the Medical Biochemistry at the Faculty of Pharmacy, University of Belgrade, with Professor Dr Nada Majkić-Singh, Dr Zorica Šumarac, and Dr Snežana Jovičić (Belgrade, May 2016).

The 20th Congress and 12th EFLM Symposium for Balkan Region were marked with significant attendance of medical biochemists and laboratory specialists from mostly Serbia, but also from Bosnia and Herzegovina, Montenegro, Croatia, North Macedonia, and Turkey. With the closing of these events, SMBS has announced the 13th EFLM Symposium for Balkan Region for September 2017, which will be dedicated to laboratory medicine management and leadership skills for effective laboratory.

THE 13th EFLM SYMPOSIUM FOR BALKAN REGION

The 13th EFLM Symposium for Balkan Region was held on 21 and 22 September 2017 entitled „Laboratory Medicine Management: Leadership Skills for Effective Laboratory” successfully fulfilled high expectations set thirteen years ago. The 13th EFLM Symposium for Balkan Region opened Professor Sverre Sandberg, the EFLM President, with the reminder of the role and current developments in the EFLM. The welcoming word of the Symposium President Professor Nada Majkić-Singh followed, when the participants were



Sverre Sandberg, EFLM President addresses the Symposium participants (Belgrade, September 2017).



The Symposium lecturers: Sverre Sandberg, Nada Majkić-Singh, Bernard Gouget, Snežana Jovičić, Nataša Bogavac Stanojević, Paul Collinson, Ivan Brandslund (Belgrade, September 2017).

introduced with the Society of Medical Biochemists of Serbia's activities and the contents of the previous symposia. Lectures presented by Professor Paul Collinson (St George's Medical School, London, UK), Professor Ivan Brandslund (Health Science Faculty, University of Southern Denmark, Hospital Lillebaelt, and Vejle County Hospital, Denmark) Dr Per Jorgensen (Copenhagen University Hospital – Rigshospitalet, Denmark), Professor Sverre Sandberg (University of Bergen, Norway), Professor Bernard Gouget (Counsellor for Public Health at the Fédération Hospitalière de France) followed. Professor Matthias Nauck (University of Greifswald, Germany), Professor Mario Plebani (School of Medicine, University of Padova, Italy), Professor Tomáš Zima (First Faculty of Medicine, Charles University and General University Hospital Prague, Czech Republic), Dr Herbert Stekel (General Hospital Linz, Austria) and some local lecturers.

Thirteen years ago, European Federation for Clinical Chemistry (EFLM) appointed Belgrade and the Society of Medical Biochemists of Serbia as the organizer of educational symposia for clinical chemists and laboratory medicine professionals of the Balkan Region. These annual symposia have been organized with great success in the twelve previous years, always covering the topics of the greatest current interest in the field of clinical chemistry and laboratory medicine. In this manner, this years' EFLM Symposium for Balkan Region entitled „Laboratory Medicine Management: Leadership Skills for Effective Laboratory” successfully fulfilled high expectations set thirteen years ago. The 13th EFLM Symposium for Balkan Region was held on 21 and 22 September, and organized under the auspices of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), Balkan Clinical Laboratory Federation (BCLF), Ministry of Education, Science and Technological Development of Serbia and Ministry of Health of Serbia.

During the two-day Symposium, eminent foreign and local experts introduced participants to the latest developments in the management in laboratory medicine, leadership skills of laboratory medicine professionals, laboratory medicine planning, organization and strategy, medical laboratory accreditation and competence, and laboratory medicine environmental health and safety. Also, the optimization of the post-analytical phase, economy of consolidation and decentralization of medical laboratories, how to use laboratory information system and manage laboratory data, and also how to implement economic evaluation of laboratory testing were elaborated. Experiences regarding accreditation process and total quality management were discussed, with the accent on the balance between the accreditation process and patient safety, possible errors and risks in sample collection, and how to register frequent pre-analytical incidents, and efficiently manage unexpected events and accidents. Special attention was given to laboratory reports form, its categorization and actions, as well as to the use of statistics in laboratory practice.

The 13th EFLM Symposium for Balkan Region opened Professor Sverre Sandberg, the EFLM President, with the reminder of the role and current developments in the EFLM. The welcoming word of the Symposium President Professor Nada Majkić-Singh followed, when the participants were introduced with the Society of Medical Biochemists of Serbia's activities and the contents of the previous symposia. The first session of the Symposium was dealing with types of medical laboratories and strategy. In the first part, the word was

about the role of laboratory medicine in the evolution of medical practice. Professor Paul Collinson (St George's Medical School, London, UK) was the first speaker, and his inspiring talk was dedicated to laboratory medicine faced with the evolution of medical practice. Since laboratory medicine is an integral part of medical practice, medical practice usually lead laboratory medicine, but equally laboratory medicine can be the standard setter and innovate and develop to support or extend clinical medical practice. Professor Collinson presented examples for the initiative of laboratory medicine in treatment monitoring, in the introduction of new tests, in responsiveness to new treatment strategies which utilize testing in novel ways, and in its response to the appearance of new diseases. Professor Ivan Brandslund (Health Science Faculty, University of Southern Denmark, Hospital Lillebaelt, and Vejle County Hospital, Denmark) followed with his lecture that elaborated principles of leadership in clinical laboratories, based on the European Foundation for Quality Management Excellence model mixed with a personal experience of what is necessary and helpful.

In the second part of the first session, the issues in leadership and management in clinical biochemistry were discussed. Dr Per Jorgensen (Copenhagen University Hospital – Rigshospitalet, Denmark) analyzed the influence of the rapid scientific and technological advancements that increase the diagnostic possibilities and change the interfaces among the various specialties of laboratory medicine, the increase of the demands for laboratory tests with demographic changes with a growing elderly population, the increased complexity of the health care systems and the more well-informed patients that call for improved clinical pathways, the change of the modern European countries from „production societies” towards knowledge and innovation societies” that increases the need for integration of research into daily clinical work, as well as the need for a quicker integration of new knowledge into clinical practice. The lecture about the optimization of the post-analytical phase of Professor Sverre Sandberg (University of Bergen, Norway) followed. Professor Sandberg elaborated this topic from the main features of post analytical phase – verification of results, reflex/reflective testing, report forms, reference limits, reference change values, how to comment test results and report critical results, to the post-post analytical phase, which is usually outside the direct influence of laboratory health persons. The focus was on how laboratory professionals should work with the post-analytical phases to secure a sensible use of laboratory and clinical resources.

The second session was dedicated to laboratory medicine planning and organisation. The evolution of the medical laboratories in France in the light of economics, managerial and architectural challenges were analyzed by Professor Bernard Gouget (Counsellor for Public Health at the Fédération Hospitalière de France). The role of laboratory information system (LIS) in laboratory medicine through an experience and practical examples was presented by Dr Vera Lukić (Laboratory Department at the Railway Healthcare Institute, Belgrade, Serbia), who evaluated advantages of using LIS, and discussed further possibilities in its use. Laboratory data management and the wide range of possibilities of using the large amount of information produced by laboratory information systems, the use of queries performed into the laboratory and clinical databases, and the appropriate analytical approach were presented by Dr Snežana Jovičić (Center for Medical Biochemistry, Clinical Center of Serbia, Faculty of Pharmacy, University of Belgrade, Serbia). Professor Nataša Bogavac-Stanojević (Faculty of Pharmacy, University of Belgrade, Serbia) discussed the implementation of economic evaluation of laboratory testing. The most appropriate tool for quantitative assessment of the economic value of laboratory testing are cost-effectiveness (CEA) and cost-utility (CUA) analysis. However, recently emerged the multicriteria decision analysis which allows comparison of diagnostic strategies in terms of benefits, opportunities, costs and risks. All analysis are constructed to identify laboratory test that produce the greatest healthcare benefit with the resources available.

The third session was dedicated to the medical laboratory accreditation and competence. In this session, total quality management and accreditation were discussed. First, Professor Matthias Nauck (University of Greifswald, Germany) presented the benefits and experiences with the EFQM (European Foundation for Quality Management) Excellence Model for Medical Laboratory.

Professor Mario Plebani (School of Medicine, University of Padova, Italy) followed with his talk about the ISO 15189 accreditation in the sense of navigation between quality management and patient safety, and its last version oriented on process approach with detailed division with clearly defined requirements. Professor Plebani elaborated the benefits of accreditation are standardization of all processes, responsibility of each member of team, personal policy, demonstrability of results, systematic evaluation of suppliers, better communication with partners. The accreditation of laboratories improves facilitation

of accurate and rapid diagnostics, efficiency of treatment and reduction of errors in the laboratory process. This system of standard procedures has the aim to improve the quality and patient safety, through the verification of examination procedures for imprecision, trueness and diagnostic accuracy, and for estimating measurement uncertainty. Also, the role of quality indicators (QIs) as a fundamental requirements of the ISO 15189 was discussed.

Professor Tomáš Zima (First Faculty of Medicine, Charles University and General University Hospital Prague, Czech Republic) continued with the lecture about accreditation system, process and benefits for laboratories. He stressed that the benefits of accreditation are standardization of all processes, responsibility of each member of team, personal policy, demonstrability of results, systematic evaluation of suppliers, and better communication with partners. The accreditation of labs improves facilitation of accurate and rapid diagnostics, efficiency of treatment and reduction of errors in the laboratory process.

The last, fourth session in its first part was dealing with the laboratory medicine environmental health and safety. Professor Svetlana Ignjatović (Faculty of Pharmacy, University of Belgrade; Centre for Medical Biochemistry, Clinical Centre of Serbia) focused on the form of laboratory reports, its categorization and actions. Dr Herbert Stekel (General Hospital Linz, Austria) made a review of possible errors and risks in sample collection, like the correct identification of the patient, the time of sampling, the sample volume, the use of additives, and – last but not least – the time of transportation and the information given to the laboratory. Dr Zorica Šumarac (Centre for Medical Biochemistry, Clinical Centre of Serbia) presented experience with forming the register of frequent pre-analytical incidents, and efficient management of unexpected events and accidents. This part of the fourth session ended with the review of efficient management of unexpected events and accidents within laboratory medicine by Prof, Duško Mirković (Faculty of Pharmacy, University of Belgrade; Centre for Medical Biochemistry, Clinical Centre of Serbia).

In the second part, Dr Ciprian-Valentin Mihali (“Vasile Goldis” Western University of Arad, Romania) presented his work on nanoparticles and other pollutants emitted by apartment heating appliances fuelled, as an important public health issue. The Symposium was closed with the talk of Professor Dr Jelena Kotur-Stevuljević (Faculty of Pharmacy,

University of Belgrade, Serbia) on the use of statistics in laboratory practice and its connection to university teaching.

The special lecture was prepared by the students of medical biochemistry of the Faculty of Pharmacy, University of Belgrade, organized in the Team of Medical Biochemistry Students, Belgrade Pharmacy Students' Association. Their representatives, Ana Đorđević and Tamara Stamenić, presented their view on laboratory medicine management and leadership for effective laboratory, in an original and refreshing way.

The central event of the 13th EFLM Symposium for Balkan Region was the presentation of the Honorary Diploma of the Society of Medical Biochemists of Serbia, as the highest recognition presented to foreign colleagues, for promoting Clinical Chemistry and Laboratory Medicine in Europe and globally, and for significant contribution to the work and development of the Society of Medical Biochemists of Serbia. It was awarded, so far,



Mario Plebani receiving SMBS Honorary Diploma from Zorica Šumarac (Belgrade, September 2017).



Nada Majkić-Singh and Zorica Šumarac with Mario Plebani (Belgrade, September 2017).

THE SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA



Honorary Diploma

presented to

Professor Mario Plebani

for promoting
Clinical Chemistry and Laboratory Medicine
in Europe and globally

Belgrade,
September 21, 2017

PRESIDENT
Zorica Šumarcic
Prim. dr sc. Zorica Šumarcic

to Professor Victor Blaton, Professor Stoyan Danev, and Professor Simone Zerah. On this occasion, the Honorary Diploma was awarded to the distinguished Professor Mario Plebani for his huge activity and great contribution to the development and improvement of Clinical Chemistry and Laboratory Medicine at the national and international level, as well as for his contribution to the work and development of the Society of Medical Biochemists of Serbia.

The 13th EFLM Symposium for Balkan Region, with over 200 participants from Balkan and European countries, fulfilled the high expectations defined during the previous ones. The presence of distinguished lecturers gave very high recognition and prestige to this Meeting, which influences the development of clinical chemistry and laboratory medicine in the Balkan Region and strives to focus on the new data in the field of laboratory medicine. This is the opportunity to thank them and all the participants for another successful symposium.



Dragana Backović, introducing Makler workshop (Belgrade, September 2017).



Poonam Rao presenting GEM Premier 5000 (Belgrade, September 2017).



Tomaš Zima, Mario Plebani, Svetlana Ignjatović, Mathias Nauck (Belgrade, September 2017).



Vera Lukić, Ciprian-Valentin Mihali, Jelena Kotur-Stevuljević (Belgrade 2017).



Nada Majkić-Singh with Ana Đorđević and Tamara Stamenić (Belgrade, September 2017).



Ana Đorđević and Tamara Stamenić, Pharmaceutical Faculty students presenting lecture „NEXT Generation Leaders” (Belgrade, September 2017).



Ana Đorđević and Tamara Stamenić with student colleagues during the 13th EFLM Symposium for Balkan Region (Belgrade, September 2017).



Z. Šumarac, M. Stojanov, M. Žarković, N. Majkić-Singh after presentation Prof. M. Stojanov book (Belgrade, September 2017).



Symposium lecturers: D. Mirković, Z. Šumarac, H. Stekel, S. Ignjatović (Belgrade, September 2017).



Participants from Clinical Centre of Serbia: Z. Šumarac, S. Jovičić, B. Lugić, N. Maksić, B. Žugić (Belgrade, September 2017).

THE 14th EFLM SYMPOSIUM FOR BALKAN REGION

The Biannual Serbian Congress of Medical Biochemistry and Laboratory Medicine with international participation was held in Belgrade 23 – 25th May 2018. It was organized for the 21st time by the Society of Medical Biochemists of Serbia (SMBS) and University of Belgrade Faculty of Pharmacy, under the auspices of the IFCC, EFLM and Balkan Clinical Laboratory Federation (BCLF), as well as the Ministry of Education, Science, and Technological Development and Ministry of Health of Republic of Serbia.



Congress Organising team: Danijela Mijailović, Milica Miljković, Tamara Gojković, Bojana Lugić, Iva Perović Blagojević, Snežana Jovičić, Tamara Stamenić (Belgrade, May 2018).



Professor Nataša Bogavac-Stanojević, President of the Scientific Board, opening the XXI Serbian Congress of Medical Biochemistry and Laboratory Medicine (Belgrade, May 2018).



Professor Zorica Šumarac, President of the Society of Medical Biochemists of Serbia addressed to the Congress participants (Belgrade, May 2018).

During the opening ceremony, participants were welcomed by the president of the congress' Scientific Board, Professor Nataša Bogavac-Stanojević, and also greeted by the Dean of the University of Belgrade Faculty of Pharmacy, Professor Zorica Vujić, as well as the president of the Pharmaceutical Association of Serbia, Professor Vesna Matović.

The working part of the Congress has started with the 14th EFLM Symposium for Balkan Region. Professor Ana-Maria Šimundić, President Elect of the EFLM, opened the Symposium with the perspective on the past, present and future of laboratory medicine. This year's Symposium had a running title „Neighboring Countries: the Same Professional Aim”. The second part of the 14th EFLM Symposium for Balkan Region wrapped the whole



Professor Vesna Matović, President of the Pharmaceutical Association of Serbia greeted to the Congress participants (Belgrade, May 2018).



Professor Zorica Vujić, Dean of the Pharmaceutical Faculty greeted to the Congress participants (Belgrade, May 2018).

event, with the two-part session entitled „Forum of Young Researchers”, in which PhD candidates at the Department of Medical Biochemistry University of Belgrade Faculty of Pharmacy presented their research.

Traditionally, on this occasion SMBS handed the Award of the Foundation „Magistra Milica Marković”, presented to medical biochemists or laboratories for promoting the technological and organizational work principles of clinical laboratories, improving the quality of laboratory services, and for promoting the profession. This years award went to the Community Health Center Laboratory in Vršac and its Head, Dr Jon Čoban.



The Laureat of the Award of the Foundation „Magistra Milica Marković”, Jon Čoban, with the President of the Foundation Milka Golubović (Belgrade, May 2018).



Mr Ljubomir Štrbac, director of the Makler Company receiving Award Diploma from Milka Golubović, President of „Magistra Milica Marković Foundation” (Belgrade, May 2018).

Also, SMBS acknowledges special contribution to the promotion of medical biochemistry science and profession with Honorary Diploma. This years laureate was Petnica Science Center, situated near the town of Valjevo, in western Serbia, a unique independent institution dedicated to development of scientific culture, scientific literacy, education and culture, primary among high school and university students, as well as training of teachers in novel techniques, methods, and contents in the field of science and technology. The Director of Petnica Science Center, Mr. Vigor Majić, also received an Honorary Diploma for his life long work and endeavours in this esteemed and unique institution in the world. Also, Mr. Majić opened the working part of the Congress with his plenary lecture entitled „Where are they? – Fermi Paradox and the Art of Losing Gifted Students”. The working part of the Congress has started with the 14th EFLM Symposium for Balkan Region.



Vigor Majić, Director of Petnica Science Center, Valjevo with Nada Majkić-Singh (Belgrade, May 2018).



Vigor Majić, Director of Petnica Science Center, Valjevo with Zorica Šumarac (Belgrade, May 2018).



Dr Velimir Marković, Milica Marković son greeted participants (Belgrade, May 2018).



Dr Velimir Marković, Professor Zorica Šumarac, Mr Ljubomir Štrbac, Professor Nada Majkić-Singh, Dr Jon Čoban, mr Milka Golubović (Belgrade, May 2018).



Professor Zorica Šumarac (President of SMBS), Professor Nataša Bogavac-Stanojević (President of the Scientific Board of the XXI Congress), laureate of the Honorary Diploma Mr. Vigor Majić (Director of Petnica Science Center), Professor Nada Majkić-Singh (Executive Director of SMBS), Mr. Nikola Božić (Program Director of Petnica Science Center), Dr Snežana Jovičić (President of the Organisational Board of the XXI Congress) (Belgrade, May 2018).



Dr Dragana Puhalo-Sladoje, Professor Zorica Šumarac, Professor Jozo Ćorić, Professor Ana-Maria Šimundić, Professor Evgenija Homšak (Belgrade, May 2018).

Professor Ana-Maria Šimundić, President Elect of the EFLM, opened the Symposium with the perspective on the past, present and future of laboratory medicine. This year's Symposium had a running title „Neighboring Countries: the Same Professional Aim”, and it was dedicated in its first part, to the laboratory medicine achievements in neighboring countries of this region – organization of external quality control in laboratory medicine in Bosnia and Herzegovina (Professor Jozo Ćorić), the results of iodine intake survey in Republic of Macedonia in a 10 years gap (Dr Sonja Kuzmanovska), experience with interferences in laboratory assays in Montenegro (Dr Najdana Gligorović-Barhanović), survey on heavy metals and trace elements in human breast milk in Turkey (Dr Ayşegül Çebi), survey on the role of adipose tissue in maintenance of energy homeostasis in Republic of Srpska, Bosnia and Herzegovina (Dr Dragana Puhalo Sladoje). Professor



Professor Vesna Spasojević-Kalimanovska, Dr Sonja Kuzmanovska, Dr Zorica Šumarac, Dr Ayşegül Çebi, Dr Najdana Gligorović-Barhanović (Belgrade, May 2018).

Evgenija Homšak presented the EFLM project „EFLMLABX”, whose aim is exchanging practice in laboratory medicine throughout Europe. Finally, Professor Zorica Šumarac presented the recommendations of the EFLM Working Group on Preanalytical Phase for venous blood sampling.

The first session of the Congress was dedicated to novel trends in laboratory medicine – opportunities, challenges, and perspectives in advanced lipid and oxidative-stress status testing (Professor Jelena Vekić), applications of six sigma and economy methods in clinical laboratory (Professor Nataša Bogavac-Stanojević), the potential of quantitative PCR in laboratory medicine (Assistant Professor Miron Sopić), the role of novel biomarkers in inflammatory lung diseases (Dr Jasmina Ivanišević), and qualitative characteristics of high density lipoproteins in children with chronic renal disease (Dr Danijela Ristovski-Kornic).



Students of the University of Belgrade Faculty of Pharmacy who presented their work during the Poster session on XXlst Congress of Medical Biochemists of Serbia (Belgrade, May 2018).

Patient-oriented approach in the evaluation of analytical quality in medical laboratories was the topic of the second session, where the new concept in quality management in medical laboratories focused on irregular (individual) analytical errors was presented (Professor Svetlana Ignjatović), with the examples of clinical cases in endocrinology related to irregular analytical errors (Professor Miloš Marković), and the causes of these errors were presented and elaborated – biotin (Dr Vera Lukić) and antibodies (Dr Neda Milinković).

The third session dealt with the role of laboratory medicine in personalized medicine – the technique of new generation sequencing (Professor Sonja Pavlović), the significance of studying micro RNA (Professor Barbara Ostanek), the role of pharmacogenomics in cancer management (Professor Marija Hiljadnikova Bajro), and the role of gene

polymorphisms for adipocytokines in the risk for colorectal cancer development (Professor Ana Ninić). Factors and risk assessment of metabolic and endocrine disorders were the topic of the final session, presenting the integral endocrinological approach in gestational diabetes management (Professor Đuro Macut), risk assessment of exposure to endocrine disrupting chemicals (Professor Biljana Antonijević), European guidelines for risk assessment in food safety (Professor Ivan Stanković), and telomere length as biomarker of aging, environmental and lifestyle influences (Professor Jelena Kotur-Stevuljević).

The second part of the 14th EFLM Symposium for Balkan Region wrapped the whole event, with the two-part session entitled „Forum of Young Researchers”, in which PhD candidates at the Department of Medical Biochemistry University of Belgrade Faculty of Pharmacy presented their research. The presentations covered topics from the association of polymorphism of matriptase-2 and HFE mutations with hepcidin and iron status in preterminal and terminal renal failure (Miljan Savković), the role of resistin gene expression and its concentration in coronary heart disease (Dr Jelena Munjas), the role of genetic factors in resistance to clopidogrel therapy (Dr Dragana Bačković), to the relationship between serum biomarkers of vitamin B12 status and morphometric parameters of leukocytes in patients at increased risk of deficiency (Dragana Totošković). In the second part, the connection of cholesterol homeostasis and cardiometabolic risk was presented (Tamara Gojković), followed with the research on PON1 activity distribution among HDL subclasses in renal pathology (Milica Miljković), qualitative and quantitative characteristics of high-density lipoproteins in non-alcoholic fatty liver disease (Jelena Janać), and closing with the qualitative analysis of LDL and HDL cholesterol in colorectal cancer development risk assessment (Milica Stevanović).

This years' Congress and Symposium had over 250 registered participants from Serbia, Bosnia and Herzegovina, Macedonia, Montenegro, and Turkey. The poster session was very vibrant, with the significant participation of students of medical biochemistry of the Faculty of Pharmacy University of Belgrade, with presentation of their scientific projects. With the inspiring discussions that the lectures provoked, and exchange of experience, we may say that expectations were met and even overcome.

THE 15th BELGRADE SYMPOSIUM FOR BALKAN REGION

The 15th Belgrade Symposium for Balkan Region organized by the Society of Medical Biochemists of Serbia, held on 11 and 12 April 2019 continued the fourteen years long tradition of EFLM Symposiums for Balkan Region. The 15th Belgrade Symposium for Balkan Region continued tradition of gathering laboratory medicine professionals from the Balkan countries in order to share experience and discuss topics of mutual interest, therefore the new title of the Symposium was „Neighboring Countries: the Same Professional Aim”. However, the borders of the Symposium expanded beyond the Balkans, and this regional meeting had also speakers from Italy, Austria, Slovenia, Croatia, Hungary, Cyprus, and Israel. The Symposium was organized under the auspices of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), European Federation of Clinical Chemistry and Laboratory Medicine (EFLM), Balkan Clinical Laboratory Federation (BCLF), Ministry of Education, Science and Technological Development of Serbia and Ministry of Health of Serbia.

During two days and within eight sessions, eminent foreign and local experts introduce the medical laboratory and strategy, laboratory medicine management, leadership skills, accreditation and competencies, laboratory standards in Balkan countries, as well as challenges in laboratory medicine that we meet today.

After the opening ceremony and welcome addresses of the EFLM President-Elect, Professor Ana-Maria Šmudić; EFLM Secretary, Professor Guiseppe Lippi; BCLF President, Dr Jozo Ćorić, and Professor Vesna Matović, the President of the Pharmaceutical Association of Serbia, the Symposium was opened with the session hosted by the IFCC Emerging Technologies Division. Professors Bernard Gouget and Damien Gruson presented how we

can use e-health tools in medical laboratories to obtain better outcomes, as well as the benefits of digital tools and machine learning in laboratory medicine. The Symposium continued with the inspiring session dealing with leadership skills. The characteristics and skills necessary for a leader in laboratory medicine, all the aspects of project management important in laboratory medicine practice, and the importance of communication between the clinical laboratory and its users were presented by Professors Ana-Maria Šimundić, Giuseppe Lippi, and Graham Beastall.

The central part of the Symposium was sharing experiences between regional countries in implementing laboratory standards, harmonization, and teaching and training in laboratory medicine. Experiences from Slovenia, Croatia, Serbia, Bosnia and Herzegovina, Montenegro, Albania, North Macedonia, and Bulgaria were presented by Evgenija Homšak, Jasna Leniček-Krleža, Svetlana Ignjatović, Ermin Begović, Najdana Gligorović-Barhanović, Anyla Buló Kasneci, Danica Labudovic, and Margaritka Bončeva.

The second day of the Symposium was opened by two sessions dedicated to laboratory organization and planning. Very important and provocative issue of management of laboratory tests demands through personal experience was presented by Professor Dunja Rogić. Professor Nataša Bogavac-Stanojević presented her work where she showed through cost-effectiveness analysis that the increase in laboratory use could actually decrease hospital costs. The use of six sigma for risk management and the optimal design of analytical quality control in clinical laboratory practice was presented by Adriana Unić. Also, the current views on measurement uncertainty in everyday practice were presented by Dr Neda Milinković. Laboratory role in accreditation of healthcare institutions by the Agency for Accreditation of Healthcare Institutions in Serbia was presented from two point of views, of a surveyor (Professor Zorica Šumarac) and a chief of accredited laboratory (Dr Vera Lukić).

The challenges met in laboratory medicine covered evolving regulatory challenges in in vitro diagnostics, presented by Professor Tomris Ozben. Professor Marielle Kaplan presented the efforts in national harmonization program of critical values communication in Israel. We were introduced with the assessment of medical residents' skills in choosing appropriate laboratory request and subsequent interpretation of laboratory tests results in a Romanian

university center by Professor Ioana Brudașcă. Dr Dragana Pap presented the challenges and perspectives of QMS, and the road map for achieving standardization in laboratory medicine.

The final sessions dealt with specific areas of laboratory medicine, namely current positions in laboratory testing in hemostasis, laboratory drug management, and latest results in endocrine disruptor research. About the latest protocols in laboratory diagnostics of anticoagulation, laboratory testing of lupus anticoagulant using different aPTT reagents, and assessment of hipercoagulable state in normal pregnancy and preeclampsia using global haemostatic assays talked Professor Andrea Griesmacher, Professor Violeta Dopsaj, and Sanja Lalić-Ćosić. The contribution of laboratory to therapeutic drug monitoring, challenges, and perspectives, integration of pharmacogenomics in clinical practice, as well as the latest research results in pharmacogenomics of the antidepressants of the SSRI group were presented by Professor Nicholas Papgeorgakis, Angela Melpidou, Andriani Grigoratou, and Professor Vesna Pešić. The Symposium was closed with the presentation of the latest research results on endocrine disrupting chemicals inducing oxidative stress, their effect on organisms, and particularly the influence of di-2-ethylhexyl phthalate on the oxidative stress tissue damage and on the fatty acids composition, by Professor Nuriye Nuray Ulusu and Dr Duygu Aydemir.

The two day Symposium with over 250 participants pointed out the same issues and problems that laboratory medicine professionals in this region meet in their every day work and practice, provoking discussions and exchange of opinion. The positive impressions of all the participants demonstrated that these local meetings addressing the practical issues that we are all facing and exchanging experience are necessary in laboratory medicine practice, and that the local problems are usually common.

The central part of the Symposium was sharing experiences between regional countries in implementing laboratory standards, harmonization, and teaching and training in laboratory medicine. Experiences from Slovenia, Croatia, Serbia, Bosnia and Herzegovina, Montenegro, Albania, North Macedonia, and Bulgaria were presented by Evgenija Homšak, Jasna Lenček-Krleža, Svetlana Ignjatović, Ermin Begović, Najdana Gligorović-Barhanović, Anyla Buló Kasneci, Danica Labudovic, and Margaritka Bončeva. Here we attached the VLP report on the Belgrade Meeting with great thanks to Bernard Gouget and Damien Gruson.



Chairmen of the 15th Belgrade Symposium for Balkan Region: Nada Majkić-Singh, Zorica Šumarac and Snežana Jovičić (Belgrade, April 2019).



Ana-Maria Šimundić (Zagreb, Croatia) (Belgrade, April, 2019).



Giuseppe Lippi (Verona, Italy) (Belgrade, April, 2019).



Jozo Ćorić (Sarajevo, Bosnia and Herzegovina) (Belgrade, April, 2019).



Vesna Matović (Belgrade, Serbia) (Belgrade, April, 2019).



The Chairs of the Opening Session: Dr Bernard Gouget (France) and Dr Snežana Jovičić (Serbia) (Belgrade, April 2019).



Bernard Gouget (Paris, France) (Belgrade, April, 2019).



Snežana Jovičić (Belgrade, Serbia) (Belgrade, April, 2019).



Gragam H. Beastall (United Kingdom) (Belgrade, April, 2019).



Zorica Šumarac (Belgrade, Serbia) (Belgrade, April, 2019).



Bernard Gouget, Snežana Jovičić and Damien Gruson (Belgrade, April, 2019).



Participants on the 15th Belgrade Symposium for Balkan Region (Belgrade, April, 2019).



Lecturers on the 15th Belrade Symposium for Balkan Region: D. Gruson, B. Gouget and GH. Beastall (Belgrade, April, 2019).



Colleagues greating the birthday to Nada Majkić-Singh (Belgrade, April, 2019).



After Opening Ceremony (from left to right): N. Majkić-Singh, B. Gouget, Z. Šumarac, S. Jovičić, D. Gruson, V. Matović, G. Lippi, J. Corić (Belgrade, April, 2019).



Anyla Bullo Kasneci (Tirana, Albania) (Belgrade, April 2019).



Danica Labudovik (Skopje, North Macedonia) (Belgrade, April 2019).



Anyla Buló, Danica Labudovik, Nada Majkić-Singh, Najdana Gligorović-Barhanović, Zorica Šumarac and Margaritka Bonceva (Belgrade, April 2019).



Chairmen of the Symposium Session: Evgenija Homšak (Ljubljana, Slovenia) and Svetlana Ignjatović, Belgrade, Serbia) (Belgrade, April, 2019).



Jasna Leniček-Krleža (Zagreb, Croatia) (Belgrade, April, 2019).



Ermin Begović (Sarajevo, Bosnia and Herzegovina) (Belgrade, April, 2019).



Colleagues from Slovenia and Croatia: E. Homšak, AM. Šimundić, J. Leniček-Krleža, A. Unić (Belgrade, April, 2019).



Miljan Savković, Zorica Šumarac, Snežana Jovičić, Svetlana Ignjatović, Evgenija Homšek and Ermin Begović (Belgrade, April 2019).



Dunja Rogić, Vera Lukić, Nataša Bogavac-Stanojević and Zorica Šumarac (Belgrade, April 2019).



Nataša Bogavac-Stanojević (Belgrade, Serbia) (Belgrade, April 2019).



Adriana Unić (Zagreb, Croatia) (Belgrade, April 2019).



Neda Milinković (Belgrade, Serbia) (Belgrade, April 2019).



Najdana Gligorović-Barhanović (Podgorica, Montenegro) (Belgrade, April 2019).



Neda Milinković and Svetlana Ignjatović (Belgrade, April 2019).



Symposium chairmen Tomris Ozben (Antalya, Turkey) and Ioana Brudașcă (Romania) (Belgrade, April 2019).



Tomris Ozben (Antalya, Turkey) (Belgrade, April 2019).



Violeta Dopsaj (Belgrade, Serbia) (Belgrade, April 2019).



Chairmen of the Symposium Session: Vesna Kalimanovska-Spasojević (Belgrade, Serbia) and Ana-Maria Šimundić (Zagreb, Croatia) (Belgrade, April 2019).



Angela Melpidou, Nicholas Papageorgakis, Andriani Grigoratou, Vesna Pešić and Najdana Gligorović-Barhanović (Belgrade, April 2019).



Symposium chairman: Nuriye Nuray Ulusu (Istanbul, Turkey) and Jozo Ćorić (Sarajevo, Bosnia and Herzegovina) (Belgrade, April 2019).



Nuriye Nuray Ulusu (Istanbul, Turkey) (Belgrade, April 2019).



Iona Brudașcă, Dragana Pap, Tomris Ozben and Marielle Kaplan (Belgrade, April 2019).



Violeta Dosaj (Belgrade, Serbia), Andrea Griesmacher (Innsbruck, Austria) and Sanja Lalić (Belgrade, Serbia) (Belgrade, April 2019).



Vera Lukić (Belgrade, Serbia) (Belgrade, April 2019).



Jozo Ćorić, Nada Majkić-Singh, Nuriye Nuray Ulusu and Duygu Aydemir (Belgrade, April 2019).



Speakers and chairs of the 15th Belgrade Symposium for Balkan Region. A-M. Šimundić, G. Beastall, N. Majkić-Singh, Z. Šumarac, B. Gouget, G. Lippi, V. Kalimanovska-Spasojević, D. Gruson, E. Homšek, J. Leniček-Krleža (Belgrade, April 2019).



Speakers and chairs of the 15th Belgrade Symposium for Balkan Region (Belgrade, April 2019).



Students of the Faculty of Pharmacy, Belgrade University with Professor Nada Majkić-Singh (Belgrade, April 2019).



Tomris Ozben, Bernard Gouget, Nada Majkić-Singh and Graham H. Beastall during Speakers Dinner (Belgrade, April 2019).



Nada Majkić-Singh, Boban Canić and Ana-Maria Šimundić during Speakers Dinner (Belgrade, April 2019).



Nada Majkić-Singh, Zorica Šumarac and Ljubomir Štrbac during Speakers Dinner (Belgrade, April 2019).



Participants of the Speaker's dinner during the 15th EFLM Symposium for Balkan Region (Belgrade, April 2019).



Zorica Šumarac, Bernard Gouget, Nada Majkić-Singh, Boban Canić, Vesna Matović and Ana Maria Šimundić during Speakers Dinner (Belgrade, April 2019).

VLP REPORT BELGRADE SMBS
PROMOTING BCLF IDENTITY IN BELGRADE
WITH THE E-NERGIZED SMBS
WRITTEN BY DR BERNARD GOUGET
AND PROFESSOR DR DAMIEN GRUSON

By Dr Bernard GOUGET, Chair, Committee on Mobile Health and Bioengineering
in Laboratory Medicine (C-MHBLM, President-Healthcare Division Committee
Comité Français d'accréditation (Cofrac), Chair of the EFLM Task Group
„European Laboratory Day” (TG-ELD)

Professor Damien GRUSON, IFCC Member EC-Emerging Technologies Division,
Professor Sergio BERNARDINI, Chair IFCC Emerging Technologies Division

With a 7,000 year of history, Belgrade is one of the oldest cities in Europe. From ancient Slavic tribes, over Roman and Ottoman Empire, to Austro-Hungarians, Belgrade has always been a meeting point among different civilizations. The fusion of cultures is best expressed in the Serbian good neighborly relations, traditional cuisine and folklore, creating a unique ambiance and a very warm hearted atmosphere that we appreciated during the social dinner at the historical restaurant of the „Dom Aero Kluba” located at the corner of Uzun Mirkova and Kralja Petra streets. Today, Contemporary Belgrade is a modern European capital with over 2 million citizens, an economic and scientific hub of the entire region, the most accessible Balkan country and the city where the 15th Belgrade symposium for Balkan Regions was given the utmost attention, making all delegates feel very special and distinguished while in the capital of Serbia.

The congress organized from April 11–12th, 2019 by the Society of Medical Biochemists of Serbia (SMBS), full member of EFLM and IFCC was held at the conference center of the Hyatt Regency in new Belgrade, located on the left bank and under the watchful eye of Pobednik „the Victor”, statue built in 1928 by Ivan Mestrovic, looking forward across the confluence of the Sava and the Danube. It is one of the most popular visual symbols of the city, located in the Belgrade fortress at the place where the medieval castle stood once. Three hundred participants attended the symposium from all Balkan countries, Albania, Bosnia and Herzegovina, Bulgaria, Greece, Macedonia, Montenegro, Romania, Serbia, Turkey as well as from the Austria, Belgium, Cyprus France, Hungary, Italy, Israel, and Slovenia. There were eight sessions and 36 outstanding oral presentations covering state-of-the-art topics in laboratory medicine in hemostasis, drug management, endocrinology, -omics as well as leadership skills, lab organization and planning, quality management and accreditation.

The role of the specialist in lab medicine is becoming more complex and as such requires increasingly a deep understanding of management, strategy, education and new technologies to improve clinical laboratory practices. The conference allowed us to have a detailed diagnosis of the national organization's and practices. We discovered the latest trends in harmonization of training, territorial strategies with private and public labs networks as well as the use of state-of-the-art technologies in all the BCLF countries. Such presentations provided, a clear vision of the needs and expectations of each Balkan member society and a profound insight of the construction of the BCLF identity in a dynamic context, highlighting the specificities of each country and reinforcing the similarities of this regional community sharing certain strong values to improve the quality of care and public health.

In the country of the genial Nikola Tesla, Serbian-American, engineer-physicist and modern Prometheus, it was a great honor as chair of the IFCC C-MHBLM to open the congress with a plenary lecture on preparing the specialist of lab medicine to deliver the digital future. Professor Damien Gruson, distinguished representative of the IFCC-EC-ETD, chaired by Professor Sergio Bernardini, delivered a lecture on digital tools in Lab medicine and presented the very attractive concept of Machine learning, defined as a small part of the study of AI and referring to a specific sub-section of computer science related to constructing efficient algorithms that can make accurate predictions about future clinical outcomes.

The path of genomics, digital medicine and AI incorporation into clinical practices is fraught of challenges. Technological innovation is increasingly shift the balance of care toward more centralized highly specialized care and decentralized testing. Through progressively miniaturized and increasingly powerful mobile computing capabilities, everyone is now capable of monitoring, tracking and transmitting health metrics continuously. Harnessing the power of digital technologies via biosensors, wearables for diagnostic and remote monitoring, smart phones, tablets, computers, web portals and telemedicine is essential for achieving universal health coverage. These new devices are not end in themselves, they are vital tools to promote health, keep the world safe and serve the vulnerable and people must be assured that their own data is safe. We need to assimilate quickly the changes and create a culture of innovation and visionary digital leadership and be aware on any ethical implications. Successful implementation in lab medicine is requiring education, more intensive training and investment in informatics, genomic medicine for the future generation as well as effective clinical and managerial governance processes.

Congratulations to Professor Dr Nada Majkic-Singh, SMBS National Representative, for continuing actively her legendary journey of promoting the Balkans, for her achievements in Lab Medicine and mentorship inspiring the next generation. Thank you to Doc Dr Zorica Sumarac, President SMBS; and to Dr Snezana Jovicic, co-President COC and SD committees and all who contributed to making the Balkan symposium a great success. This 15th Belgrade symposium successfully combined the high-level scientific program, a large turnout of the IVD companies and enlightening social interactions, blended with great hospitality. Belgrade (Serbia) is in a remarkable regeneration, and one of the most exciting places for promoting Lab Medicine.

THE 16th BELGRADE SYMPOSIUM FOR BALKAN REGION

16th Belgrade Symposium for Balkan Region under the title „Laboratory Medicine Management Leadership Skills for Effective Laboratory” has been planned for September 2020 together with 22nd Serbian Congress of Medical Biochemistry and Laboratory Medicine with international participation, however is postponed for the new date due to Covid pandemic. Anyway we hope that activities of laboratory medicine specialists in Balkan Region will continue in future with same success in cooperation with experts from IFCC and EFLM and that we will be able to organize Belgrade Congresses in 2022.

It was planed that from September 23–25th 2020, Belgrade host the **22nd Serbian Congress of Medical Biochemistry and Laboratory Medicine with international participation**, and **16th Belgrade Symposium for Balkan Region** organized by the Society of Medical Biochemists of Serbia and Faculty of Pharmacy, University of Belgrade.

However, Congress and Symposium due to the COVID-19 will be organised form, 12–14 September 2022 under the auspices of the *International Federation of Clinical Chemistry and Laboratory Medicine* (IFCC), *European Federation of Clinical Chemistry and Laboratory Medicine* (EFCC) and *Balkan Clinical Laboratory Federation* (BCLF), as well as the Ministry of Education, Science and Technological development and Ministry of Health of the Republic of Serbia.

The focus of 22nd Congress of Medical Biochemistry and Laboratory Medicine and 16th Belgrade symposium for Balkan Region will be the innovations and trends that are shaping the future of laboratory medicine. Lectures will be dedicated to the new concept in quality management in medical laboratories, organization of external quality control in laboratory and pre- analytical and analytical errors management. Special attention will be given to

diagnostics and treatment by utilizing new generation of laboratory methods and innovations in personalized medicine, novel trends in laboratory medicine and the risk assessment of metabolic and endocrine disorders. Congress will also consider other aspects of our professional engagement, such as accreditation in medical laboratories and risk assessment in food safety.

The Society of Medical Biochemists of Serbia also has the pleasure to welcome you to the **16th Belgrade Symposium for Balkan Region** being held under the title „**Laboratory Medicine Management: Leadership Skills for Effective Laboratory**“.

We are very pleased to announce prominent scientists and laboratory professionals from neighbouring countries. We also invite you to participate in our Section for PhD students and young researchers “Forum of Young Researchers”. This section aspires to be an ideal place for young researchers, laboratory professionals and students to interact and share ideas.

22nd Congress of Medical Biochemistry and Laboratory Medicine will be a unique opportunity to liaise with your professional colleagues from neighbouring countries, learn and share your knowledge and discuss the latest research outcomes and technological advancements as well as new ideas in medical laboratory practice.

Organization of the Congress is the result of engagement and effort by all members of the Scientific and Organizing Boards. It is our hope that the programme we are offering will meet your expectations, that you will take active part in the discussion and that through such an exchange of experiences you will enrich your knowledge, which would doubtlessly be useful to our everyday laboratory practice.

Chairman of Scientific Committee Board is Professor Vesna Spasojević-Kalimanovska, and Organising Committee Board Dr Iva Perović Blagojević.

Professor Mario Plebani (Padova, Italy) will present Opening Lecture “Laboratory medicine in the era of COVID-19: lessons for the future”.



XXII

SRPSKI KONGRES
MEDICINSKE BIOHEMIJE
I LABORATORIJSKE MEDICINE
sa međunarodnim učešćem

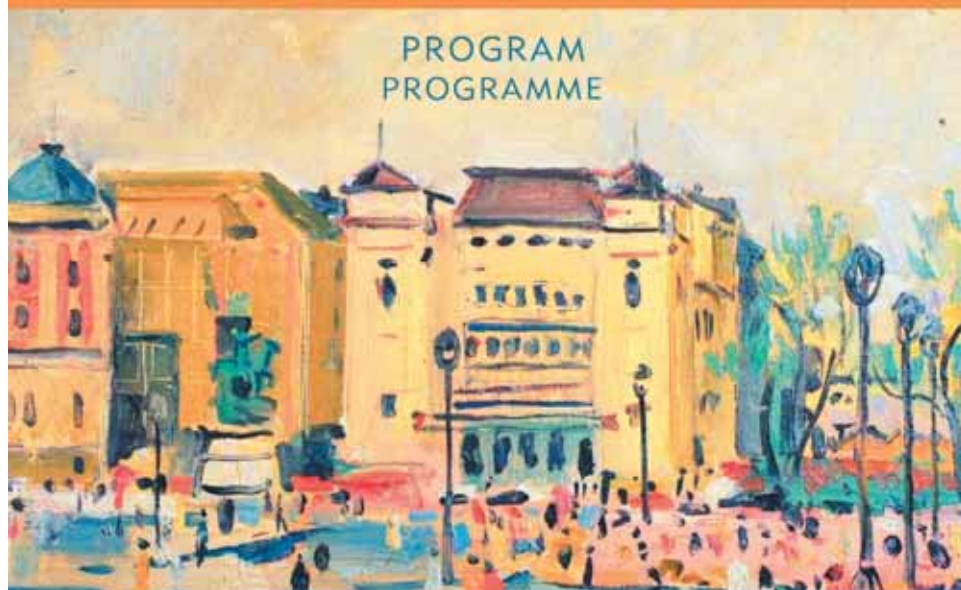
SERBIAN CONGRESS
OF MEDICAL BIOCHEMISTRY
AND LABORATORY MEDICINE
with international participation

&

16th BELGRADE SYMPOSIUM FOR BALKAN REGION

Organizovani pod pokroviteljstvom IFCC i EFLM
Organized under IFCC and EFLM auspices

PROGRAM
PROGRAMME



Hyatt Regency Beograd, Belgrade, Serbia

September 12–14, 2022

www.dmbj.org.rs

The following sessions and lectures are organised: **PROFESSIONAL CHALLENGES IN THE ERA OF INNOVATIONAL TECHNOLOGIES:** Meeting the leadership challenge of disruptive innovation (Gilbert Wieringa, Farnworth, United Kingdom); Added value by interpretative commenting (Wytze Oosterhuis, Heerlen/Sittord, The Netherlands); Smartphone applications using laboratory medicine data – reliability and benchmarking (Snežana Jovičić, Belgrade, Serbia).

CHALLENGES IN LABORATORY MEDICINE MANAGEMENT OF EFFECTIVE LABORATORIES: The professional development of laboratory medicine professionals in/through EFLM countries: What tools and opportunities do we have? (Evgenija Homšak, Maribor, Slovenia); Accreditation of laboratories (Dunja Rogić, Zagreb, Croatia); Framework for the development of laboratory guidelines (Nataša Bogavac-Stanojević, Belgrade, Serbia); Managing things and leading people (Katerina Tošeska-Trajkoska, Skopje, North Macedonia).

IMPROVING CHILDREN'S HEALTH THROUGH LABORATORY MEDICINE: New biomarkers of acute kidney injury (Dušan Paripović, Belgrade, Serbia); Delayed puberty – diagnostic challenges (Rade Vuković, Belgrade, Serbia); New markers for sepsis in neonatology (Ana Đorđević-Vujačić, Belgrade, Serbia); The role of laboratory in diagnosis and monitoring of co-morbidities in type 1 diabetes mellitus (Dragana Bojanin, Belgrade, Serbia).

CLINICAL LABORATORY IN FEMALE REPRODUCTIVE HEALTH MANAGEMENT: Significance of biochemical parameters in pregnancy complications risk assessment (Daniela Ardalić, Belgrade, Serbia); Tests of ovarian reserve – Diagnostic accuracy (Aleksandra Stefanović, Belgrade, Serbia); The role of sex steroids in women and men older than fifty years (Svetlana Vujović, Belgrade, Serbia).

NOVEL BIOMARKERS IN THE ERA OF PERSONALIZED MEDICINE: Cancer pharmacogenetics – a mighty precision medicine tool (Milena Čavić, Belgrade, Serbia); Advanced lipid status biomarkers in colorectal cancer (Aleksandra Zeljković, Belgrade, Serbia); Galectins as biomarkers: potential and perspectives (Žanka Bojić-Trbojević, Belgrade, Serbia); Challenges in laboratory diagnostics of thyroid disorders (Bosa Mirjanović-Azarić, Republika Srpska, Bosnia and Herzegovina).

FORUM OF YOUNG RESEARCHERS (PhD studies - unique road to professional achievements): PhD in IVD industry – expectations and possibilities (Gordana Dmitrašinić, Belgrade, Serbia); PhD as a comprehensive upgrade for successful carrier development in IVD (Tijana Krnjeta Janićijević, Belgrade, Serbia); Gene expression of adiponectin receptors in patients with colorectal cancer (Marija Mihajlović, Belgrade, Serbia); Cholesterol homeostasis markers in high-risk pregnancy (Tamara Antonić, Belgrade, Serbia); Paraoxonase 1 status and high density lipoprotein particles distribution in preeclampsia (Gorica Banjac, Belgrade, Serbia).

FOREIGN LECTURES IN THE PERIOD 1992–2019.

In the period from 1992 to 2015, numerous foreign congresses, symposiums for the Balkan Region and meetings of the Balkan Federation organized by the Society of Medical Biochemists of Serbia were attended by numerous foreign lecturers:

Khosrow Adeli (Toronto, Canada), Effie Anagnostou-Cacaras (Athens, Greece), Violeta Anastovska (Skopje, Macedonia), Jovan P. Antović (Stockholm, Sweden), Armando D' Angelo (Milano, Italy), Diler Aslan (Denizli, Turkey), Nikolina Babić (Chicago, USA), István Balogh (Debrecen, Hungary), Giuseppe Banfi (Italy), Graham H. Beastall (Glasgow, UK), Gheorghe Benga (Cluj-Napoca, Romania), Simona Berbecar (Bucharest, Romania), Victor Blaton (Brugge, Belgium), Judith A. P. Bons (Maastricht, The Netherlands), Xavier Bossuyt (Leuven, Belgium), Patric M. M. Bossuyt (Amsterdam, Holand), Anyla Buló (Kasneji) (Tirana, Albania), Alberto Burlina (Padova, Italy), David Burnett (Penarth, United Kingdom), Pierre Carayon (Marseille, France), Andrew Cartwright (UK), Manole Cojocarú (Bucharest, Romania), Albana Daka (Prifgaj) (Tirane, Albania), Stoyan Danev (Sofia, Bulgaria), Edgard E. Delvin (Montreal (QC), Marja P. van Dieijen-Visser (Maastricht, The Netherlands), Lorenzo Drago (Milano, Italy), Snežana Efremova Aaron (Skopje, Republika Makedonija), G. Efremov (Skopje, Macedonia), Kaya Emerk (Marmara, Turkey), Ksenija Fumić (Zagreb, Croatia), Zbigniew Gaciong (Earshaw, Poland), Grégoire Le Gal (Bohars, France), Philippe Gillery (Reims Cedex, France), Jean-Francois Giot (Evry Cedex, France), David M. Goldberg (Toronto, Canada), Ozlem Goruroglu Ozturk (Adana, Turkey), Bernard Gouget (Paris, France), Sol Green (NY, USA), Gerold Gruber (Vienna, Austria), Camelia Grigore (Sibiu, Romania), Todor Gruev (Skopje, Macedonia), Andrea Griesmacher (Insbruk, Austria), Walter G. Guder (Munchen, Germany), Gerd Hafner (Gisen, Germany), Gabriele Halwachs-Bauman (Steyr, Austria), Richard Hiller (Austria), Jakub Hejsek (Prague, Czech Republic), Joseph Henny (Villejuif, France), Brigit Herzig

(Germany), Michael F. Holick (New Jersey, USA), Andrea Rita Horvath (Sydney, Australia), Willem Huisman (The Hague, The Netherlands), Rob TP Jansen (HB Nijmegen, The Netherlands), Jochen Jarausch (Penzberg, Germany) Janos Kappelmayer (Debrecen, Hungary), Steve Kitchen (Sheffield, United Kingdom), Desmond Kenny (Dublin, Ireland), Mirjana Kocova (Skopje, Mecedonia), Gabor L. Kovacs (Pecs, Hungary), Christos Kroupis (Athens, Greece), Dolphe Kutter (Grand Duchy of Luxembourg, Luxembourg), Isabella Levrieri (Genova, Italy), William Li (Shenzhen, China), Jean-Claude Libeer (Brussels, Belgium), David C. Gaze (London, United Kingdom), Giuseppe Lippi (Verona and Parma, Italy), Danica Labudovic (Skopje, Macedonia), Johannes Mair (Innsbruck, Austria), Sandra Margetić (Zagreb, Hrvatska), Matthew J. McQueen (Ontario, Canada), Jasminka Mehanović-Nikolić (Banja Luka, Republika Srpska, BiH), Jasmina Laloš-Miljuš (Banja Luka, Republika Srpska, BiH), Irena Mlinarič-Raščan (Ljubljana, Slovenia), C. H. Muller (Switzerland), Cyrill Müller (Heidelberg, Germany), Mathias M. Müller (Wien, Austria), Janet McMurray (London, UK), Camilla Mattiuzzi (Verona, Italy), Harald Mischak (Hannover, Germany), Michael Neumaier (Mannheim, Germany), Nora Nikolac (Zagreb, Croatia), Valerio Nobili (Rome, Italy), N. Nuray Ulusu (Ankara, Turkey), Wytze Oosterhuis (Tilburg, The Netherlands), Roxana Oprisiu/Fournier (Amiens, France), Tomris Ozben (Antalya, Turkey), Nazmi Ozer (Mersin, Turkey), Vladimir Palička (Hradec Kralove, Czech Republic), Mauro Panteghini (Milano, Italy), Draško Pavlović (Zagreb, Hrvatska), Mario Pazzagli (Firenze, Italy), Hans J. Van Pelt (Leiden, The Netherlands), Elisa Piva (Padova, Italy), Mario Plebani (Padova, Italy), Biljana Polenakovic (Skopje, Macedonia), Matej Podbregar (Ljubljana, Slovenia), Rodney Politt (Scheffield, UK), Danica Popović-Pribilović (Podgorica, Crna Gora), Karin Pozsgay (Vienna, Austria), Jose M. Queralto (Barcelona, Spain), Peter Ridefelt (Uppsala, Sweden), Robert Rej (Albany, U.S.A.), Barbka Repič Lampret (Ljubljana, Slovenia), Giorgio Da Rin (Bassano del Grappa, Italy), Bernard Risse (Penzberg, Germany), Demetrios Rizos (Athens, Greece), Dunja Rogić (Zagreb, Croatia), Heinz Juergen (Pablo) Roth (Heidelberg, Germany), Gian Luca Salvagno (Verona, Italy), Sverre Sandberg (Bergen, Norway), Gerard Sanders (PG Amstelveen, The Netherlands), Doris Schmidt (Eschborn, Germany), Kai M. Schmidt-Ott (Berlin, Germany), Hainrick Schmid-Gayk (Hadelberg, Germany), Todor Shipkov (Sofia, Bulgaria), Aylin Sepici Dincel (Ankara, Turkey), Muhittin Serdar (Ankara, Turkey), Mustafa Serteser (Kozyata/Istanbul, Turkey), Milko Shishenkov (Sofia, Bulgaria), Lothar Siekmann (Bonn, Germany), Gerard Siest (Nancy, France), Ana Stanković (Franklin Lakes, USA), Ana Stavljenić-Rukavina

(Zagreb, Hrvatska), Jan Stepan (Prague, Czech Republic), Grazyna Sypniewska (Bydgoszcz, Poland), Dobrin Svinarev (Sofia, Bulgaria), Ana-Maria Šimundić (Zagreb, Croatia), Lothar Thomas (Frankfurt, Germany), Jim Thorn (Nyon, Switzerland), Elizabeta Topić (Zagreb, Hrvatska), Olgica Trenčevska (Skopje, Macedonia), Anna Tzontcheva (Sofia, Bulgaria), Orestes Tsolas (Athens, Greece), Kamen Tzatchev (Sofia, Bulgaria), P. J. Twomey (UK), V. S. Singh (New Delhi, India), Jean-Michel Valid (Nyon, Switzerland), Zoltan Vajda (Budapest, Hungary), Davide Villa (Monza, Italy), Antonia Vlahou (Athens, Greece), Michael Vogeser (München, Germany), Pirko Vihko (Finska), Joseph Watine (Rodez Cédex 09, France), Ian Watson (Liverpool, United Kingdom), Gerdhard Wirl (Mannheim, Germany), Mario Werner (Washington, USA), J. T. Whicher (Leeds, England), Simone Zérah (Bagnolet, France), Darko Černe (Ljubljana, Slovenia), Adam Uldal (Sweeden), Adriana Unić (Zagreb, Croatia), Jožo Ćorić (Sarajevo, Bosnia and Herzegovina), Svoboda Đekova-Stojkova (Skopje, Macedonia).

The following pages contain photographs of some invited lecturers who, at the invitation of the Society of Medical Biochemists, participated in the scientific program of the Congress and Symposium.



Stoyan Danev (Sofia, Bulgaria).



Jose M. Queralto (Barcelona, Spain).



Mario Werner (Washington, SAD).



Effie Anagnostou-Cacaras (Athens, Greece).



Jose M. Queralto (Barcelona, Spain), Stoyan Danev (Sofia, Bulgaria), Matthew J. McQueen (Ontario, Canada).



Jean-Claude Libeer (Brussels, Belgium).



Mathias M. Müller (Wiena, Austria).



Graham H. Beastall (Glasgow, UK).



Desmond Kenny (Dublin, Ireland).



Mauro Panteghini (Milano, Italy).



Gerard Siest (Nancy, France).



Hainrick Schmid-Gayk (Heidelberg, Germany).



Tomris Ozben (Antalya, Turkey).



Janos Kappelmayer (Debrecen, Hungary).



Lothar Thomas (Frankfurt/Main, Germany).



Anna Tzontcheva (Sofia, Bulgaria).



Rob TP Jansen (HB Nijmegen, The Netherlands).



Gerard Sanders (PG Amstelveen, The Netherlands).



Willem Huisman (The Hague, The Netherlands).



David Burnett (Penarth, United Kingdom).



Mario Plebani (Padova, Italy).



Lothar Siekmann (Bern, Germany).



Demetrios Rizos (Athens, Greece).



Diler Aslan (Denizli, Turkey).



Victor Blaton (Brugge, Belgium).



Kaya Emerk (Marmaris, Turkey).



Andrea Rita Horvath (Sydney, Australia).



Sverre Sandberg (Bergen, Norway).



Giuseppe Lippi (Verona, Italy).



Sol Green (New York, USA).



Walter G. Guder (Munich, Germany).



Ana Stanković (Franklin Lakes, USA).



Wytze Oosterhuis (Tilburg, The Netherlands).



Manole Cojocaru (Bucharest, Romania).



Oswald Sonntag (Munich, Germany).



Bernard Gouget (Paris, France).



Grazyna Sypniewska (Bydgoszcz, Poland).



Patric M. M. Bossyt (Amsterdam, The Netherlands).



David Goldberg (Toronto, Canada).



Simone Zérah (Bagnolet, France).



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Andriani Grigoratou (Greece).



Nuriye Nuray Ulusu (Ankara, Turkey).



Andrea Unić (Zagreb, Croatia)



Danica Labudovik (Skopje, North Macedonia).

DOMESTIC LECTURERS IN THE PERIOD FROM 1992–2019.

Dragan Alavantić, Slađana Andrejević, Slobodan Apostolski, Milica Bajčetić, Anđelo Beletić, Ljiljana Beslać-Bumbaširević, Mirjana Bećarević, Gordana Bjelaković, Radmila Blagojević-Lazić, Ljiljana Bogavac, Nataša Bogavac-Stanojević, Mirjana Bogić, Branka Bonači-Nikolić, Branislava Brkić, Nada Bujišić, Petar Bulat, Zorana Vasiljević, Jelena Vekić, Tatjana Vodnik, Dragana Vukosavljević, Ljubinka Gligić, Milka Golubović, Lazar Davidović, Marijana Dajak, Svetozar Damjanović, Marina Deljanin-Ilić, Bogomir Dimitrijević, Olivera Dimitrijević, Nada Dimković, Violeta Dopsaj, Aleksandra Dudvarski-Ilić, Aleksandar Dujić, Jadranka Dunderski, Mirjana Đerić, Predrag B. Đorđević, Vidosava Đorđević, Ljubica Đukanović, Jelena Đurđević, Srđan Đurđević, Vesna Đurđević-Obradović, Bogdan Đuričić, Miloš Žarković, Saša Živić, Mirjana Živković, Miroslava Zamaklar, Zaharije Zaharijević, Lilika Zvezdanović, Vera Zdravković, Vesna Zejak, Nenad Ivančević, Svetlana Ignjatović, Mirka Ilić, Predrag Janićijević, Olivera Janković, Miodrag Jevremović, Miloš Jelić, Vera Jerant-Pantić, Tatjana Jeftović-Stoimenov, Verica Jovanović, Živana Jovanović, Slobodan D. Jovanović, Milica Jovetić, Pavle Jović, Snežana Jovičić, Jelena Joksimović, Jovan Kavarić, Tomislav Kažić, Gordana Kalijadis, Borislav Kamenov, Aleksandra Kendereški, Radmila Kovačević, S. Kojić, Vladimir Kostić, Jelena Kotur-Stevuljić, Gordana Kocić, Slavica Kundalić, Nataša Lalić, Nebojša Lalić, Višnja Ležajić, Ljiljana Lepšanović, Helena Lončar-Stevanović, Aleksandar Lučić, Nada Majkić-Singh, Vidosav D. Majstorović, Dragan Manojlović, Snežana Marković, Gordana Matić, Đuro P. Macut, Zoran Mijušković, Verica Milatović-Jezdić, Dušan Milenković, Tatjana Milenković,

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REFERENCES

1. Majkić-Singh N. Srpska medicinska biohemija u 21. veku – posle 70 godina. Društvo medicinskih biohemičara Srbije, Beograd, 2015.
2. Sajt Društva medicinskih biohemičara Srbije: www.dmbj.org.rs
3. Sajt Balkan Clinical Federation: www.bclf.info
4. Arhiva Društva medicinskih biohemičara Srbije

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1. Jovičić, Snežana, 1976- [аутор]

a) Forum of the European Societies of Clinical Chemistry - Симпозијуми

b) Лабораторијска дијагностика

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The Balkan Clinical Laboratory Federation (BCLF) EFLM Symposium for Balkan Region

as a regional organization includes all Balkan countries, i.e. Serbia, Montenegro, Bosnia and Herzegovina, Romania, Bulgaria, North Macedonia, Albania, Turkey and Greece that are also EFLM and IFCC members.

The idea of founding the **Balkan Clinical Laboratory Federation (BCLF)** occurred to us during the farewell party of the IFCC Clinical Laboratory Management Course in May 1992 in Sofia. The ideas of Professor Stoyan Danev (Sofia), Professor Terzioglu (Smyrna), Dr Jullien (Athens), Dr Buzo (Tirana), Professor Shipkov (Sofia) and Assistant Professor Tzontcheva (Sofia) were refined by brilliant visiting IFCC lecturer Professor P. Broughton.

In September 16–19, 1993 in Florence the representatives from Yugoslavia, Albania and Bulgaria strongly supported the idea of BCLF organization and had useful talks with Professor Gerard Siest, IFCC President and other IFCC members on future objectives and activities of our Federation during the first National Meeting of the North Macedonian Clinical Biochemists in Ohrid in 1993. The same idea was instigated by Professors Gruev, Hrisoho, Dzhekova, Traikovska, Dimitrov, etc. In 1995 the during the 40 Years Anniversary of the Serbian Society chaired by Professor Majkić-Singh and attended by representatives from Romania (Professor Cojoharu) and Bulgaria (Professors S. Danev, T. Shipkov and K. Tzatchev) gave full support to the founding of BCLF. As a regional organization, BCLF gathers all clinical chemists from the Balkan Region with the aim of improving clinical laboratory practice in each of the Balkan countries, as a result of new medical discoveries, new technologies, and changes in the organization and in the process of laboratory support of clinical activities. On the basis of the conclusions reached also at the **FESCC Symposium for Balkan Region**.

The Society of Medical Biochemists of Yugoslavia (later Serbia) as a member of the Balkan Clinical Laboratory Federation (BCLF) organized three BCLF Meetings, the 4th Meeting of the Balkan Clinical Laboratory Federation from 9 to 13 October 1996 in Budva, 11th Meeting of the Balkan Clinical Laboratory Federation from September 24 to 27, 2003 in Belgrade and the 20th Meeting of the Balkan Clinical Laboratory Federation from September 18 to 22, 2012. in Belgrade. The personality of Professor Nada Majkić-Singh is an additional strong argument in favor of the further progress of BCLF. Professor Stoyan Danev told „I have always admired her energy, devotion, competence and warm hospitality”.

In addition to the 4th BCLF Meeting (Budva, October 9–13, 1996), the X Congress of Medical Biochemists of Yugoslavia was held. Scientific and Organizational Board headed by Professor Dr Nada Majkić-Singh did everything to make this congress memorable according to the professional and social program. Patrons were the International Federation of Clinical Chemistry (IFCC) and the Forum of the European Societies of Clinical Chemistry (FESCC) on whose behalf Professor Matthew J. McQueen, President of IFCC and Professor Jose M. Queralto, Past-President of FESCC welcomed the participants. The participants were greeted on behalf of the BCLF by Professor Stoyan Danev announced the opening lecture entitled The Clinical Use of Tumor Markers was given by Mario Werner (Washington, USA) and the second plenary lecture by Professor Mathew J. McQueen (Hamilton, Canada) entitled Accreditation.

It is very important to tell that Forum of the European Societies of Clinical Chemistry (FESCC) decided that the **FESCC Symposium for Balkan Region** would be held each year in Belgrade in organization by the Society of Medical Biochemists of Serbia and Montenegro (SMBSM). Professor Victor Blaton, at that time President of the FESCC, supported the organization of the Symposium. The first FESCC Symposium for Balkan Region entitled „Education, Management and Standards in Laboratory Medicine” was held in Belgrade between 10 and 12 June 2005, on the occasion of the 50th anniversary of the SMBS. The symposium was coordinated by Nada Majkić-Singh and Victor Blaton. Up to now Society of Medical Biochemists organized fifteen EFLM Symposium for Balkan Region.

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