UC 577,1; 61 ISSN 0354-3447

Jugoslov Med Biohem 24: 157–170, 2005

Istorijat
History

DRUŠTVO MEDICINSKIH BIOHEMIČARA SRBIJE I CRNE GORE – 50 GODINA POSTOJANJA I RADA[1]

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Kratak sadržaj: Medicinska biohemija (sinonimi: klinička hemija ili klinička biohemija), kao struka i naučna disciplina razvila se iz ili uz neposredni uticaj prirodnih nauka (kao što su matematika, fizika, hemija i biohemija) i medicinskih nauka (npr. fiziologija, genetika, ćelijska biologija). Kao naučna disciplina medicinska biohemija se bavi izučavanjem metaboličkih procesa u odnosu na fiziološke i patološke promene kod ljudi i životinja. Primenom tehnika analitičke hemije i biohemije, medicinski biohemičari dobijaju niz dijagnostičkih i prognostičkih informacija, koje služe lekarima za procenu težine oboljenja i odgovora na primenjenu terapiju. Medicinska biohemija je prema tome disciplina, koja je neodvojiva od moderne medicine. Za ovu disciplinu su primenjivani brojni nazivi, koji su često konfuzni po svojoj prirodi, na primer: patološka fiziologija, klinička biologija, klinička patologija, hemijska patologija, klinička biohemija, medicinska biohemija, klinička hemija i laboratorijska medicina, a u zavisnosti od mesta nastanka. Internacionalno zvanično je prihvaćen naziv – klinička hemija, koji je prvi put 1912. godine primenio Johan Scherer, označivši svoju laboratoriju kao kliničko-hemijsku laboratoriju (Klinisch Chemische Laboratorium) u bolnici Julius u Wurzburg-u u Nemačkoj. Nakon osnivanja nacionalnih društava kliničkih hemičara, profesor Earl J. King iz Royal Postgraduate Medical School iz Londona,

[1] Tekst je pripremljen povodom obeležavanja 50-godišnjice postojanja i rada Društva medicinskih biohemičara Jugoslavije i Srbije i Crne Gore. Kompletan razvoj medicinske biohemije u našoj zemlji opisan je u monografiji »Razvoj medicinske biohemije u Jugoslaviji«.

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SOCIETY OF MEDICAL BIOCHEMISTS OF SERBIA AND MONTENEGRO 50 YEARS ANNIVERSARY[1]

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Summary: Medical biochemistry (synonyms: clinical chemistry or clinical biochemistry) in the terms of professional and scientific discipline, stems from and/or has developed along with the natural sciences and its influences (mathematics, physics, chemistry and biochemistry) and medical sciences as well (physiology, genetics, cell biology). As a scientific discipline, medical biochemistry studies metabolic processes of physiological and pathological changes with humans and animals. Applying analytical chemistry's and biochemistry's techniques enables medical biochemists to gain plenty of information related to diagnosis and prognosis which serve physicians to asses the gravity of illness and prescribe healing therapy. Therefore medical biochemistry is an integral part of modern medicine. This discipline was dubbed various, often confusing names such as pathology, physiology, clinical biology, clinical pathology, chemical pathology, clinical biochemistry, medical biochemistry, clinical chemistry and laboratory medicine, all depending on place of origin. The official, internationally accepted name – clinical chemistry, was mentioned for the first time in 1912 by Johan Scherer, who described his laboratory as Clinical Chemistry Laboratory (Klinisch Chemische Laboratorium) in the hospital Julius in Wurzburg in Germany. After creating national societies of clinical chemists, Professor Earl J. King of Royal Postgraduate Medical School from London incited an initia-

[1] This article is devoted to the 50 Anniversary of the Society of Medical Biochemists of Serbia and Montenegro. The complete development of medical biochemistry is described in the Monograph »Development of Medical Biochemistry in Yugoslavia, YuSMB, Belgrade, 1998).

[2] The author is President of the Society of Medical Biochemists of Serbia and Montenegro.

pokrenuo je 1952. godine inicijativu udruživanja nacionalnih društava u organizaciju međunarodnog karaktera, pod nazivom Internacionalna asocijacija kliničkih biohemičara, koja je bila pod nadzorom Internacionalne unije za čistu i primenjenu hemiju (IUPAC). Godinu dana kasnije u Stokholmu, naziv novoformirane asocijacije promenjen je u International Federation of Clinical Chemistry, što je zvanično i prihvaćeno 1955. godine u Briselu. Danas ova Federacija nosi naziv International Federation for Clinical Chemistry and Laboratory Medicine (IFCC). Odmah posle Drugog svetskog rata i naši medicinski biohemičari počinju da se okupljaju u svojim stručnim udruženjima. Još pre 1950. godine u Farmaceutskom društvu Srbije sastajali su se laboratorijski stručnjaci, od kojih su naročito bili aktivni prof. dr Aleksandar Damanski za bromatologiju, prof. dr Momčilo Mokranjac za toksikologiju i doc. dr Pavle Trpinac za biohemiju. Na sednici Upravnog odbora Udruženja farmaceuta NR Srbije, održanoj 22. decembra 1950. godine pokrenuto je pitanje osnivanja sekcije koja bi okupljala laboratorijske stručnjake. Sekcija za sanitarnu hemiju, koja je objedinjavala sva tri profila laboratorijskih radnika i to medicinske biohemičare, sanitarne hemičare i toksikologe, osnovana je 1. januara 1951. godine. Na šestom plenumu Saveza farmaceutskih društava Jugoslavije (SFRJ), koji je održan 15. maja 1955. godine u Splitu, doneta je odluka o osnivanju Sekcije za medicinsku biohemiju u SFDJ. Sekcija za medicinsku biohemiju SFDJ preimenovana je u Društvo za medicinsku biohemiju SFDJ, na osnovu odluke XVI plenuma SFRJ, koji je održan 15. maja 1965. godine u Banjaluci. Shodno navedenom, na osnovu odluke DMBJ, donete 6. aprila 1995. godine, a na temelju istorijskih podataka, 15. maj je ustanovljen kao Dan Društva medicinskih biohemičara Jugoslavije. Cilj DMBJ (sada DMBSCG) je da okuplja medicinske biohemičare radi unapređivanja i razvoja svih grana medicinske biohemije u zdravstvenoj delatnosti. Zadaci Društva se sastoje u ujednačavanju standarda rada u kliničko-biohemijskim laboratorijama, edukaciji medicinskih biohemičara na svim nivoima obrazovanja, podsticanju naučno-istraživačkog rada, utvrđivanju normativa rada i sprovođenju, primeni i poštovanju kodeksa etike zdravstvenih radnika. Utvrđene standarde u oblasti medicinske biohemije DMBSCG predlaže odgovarajućim saveznim i republičkim institucijama. Zadatak Društva je da omogućuje razmenu iskustava svojih članova sa članovima srodnih organizacija u zemlji i u inostranstvu.

Ključne reči: medicinska biohemija, Društvo medicinskih biohemičara Jugoslavije, Društvo medicinskih biohemičara Srbije i Crne Gore, IFCC, FESCC

tive to unite national societies into the organization with worldwide character – it was the International Association of Clinical Biochemists, monitored by the International Union for Pure and Applied Chemistry (IUPAC). On 24 July 1952 in Paris, a Second International Congress of Biochemistry was held. A year later, in Stockholm, the name of a newly formed association was altered into International Federation of Clinical Chemistry, which was officially accepted in 1955 in Brussels. Today this federation's name is International Federation for Clinical Chemistry and Laboratory Medicine (IFCC). Right after the World War II our medical biochemists began to gather within their expert societies. Even before 1950 Pharmaceutical Society of Serbia hosted laboratory experts among whom the most active were Prof. Dr. Aleksandar Damanski for bromatology, Prof. Dr. Momčilo Mokranjac for toxicology and Docent Dr. Pavle Trpinac for biochemistry. When the Managing Board of the Pharmaceutical Society of National Republic of Serbia held its session on 22 December 1950, an issue was raised with reference to creation of a Section that would gather together the laboratory experts. Section for Sanitary Chemistry, combining all three profiles of laboratory staff, i.e. medical biochemists, sanitary chemists and toxicologists, was founded on 1st of January 1951. On 15 May 1955, during the sixth plenum of the Society of Pharmaceutical Societies of Yugoslavia (SFRY) held in Split, the decision was passed to set up a Section for Medical Biochemistry in SFDJ. The Section for Medical Biochemistry in SFDJ was renamed into Society for Medical Biochemistry of SFDJ based on the decision passed during the 16th plenum of SFDJ, held on 15 May 1965 in Banjaluka. Pursuant to the decision passed by SMBY on 6 April 1995 and based on the historic data, 15 May was declared as being the official Day of the Society of Medical Biochemists of Yugoslavia. The purpose of YuSMB (currently SMBSCG) is to gather medical biochemists who would develop and enhance all the branches of medical biochemistry in health industry. Its tasks are as following: to standardize operations in clinical-biochemical laboratories, education of young biochemists on all levels, encouraging scientific research, setting up of working norms and implementation, execution and abiding by the ethics codices with health workers. SMBSCG is to promote the systemized standards in the field of medical biochemistry with the relevant federal and republican institutions. SMBSCG is to enable exchange of experiences of its members with the members of affiliate associations in the country and abroad.

Key words: Medical Biochemistry, Society of Medical Biochemists of Yugoslavia, Society of Medical Biochemists of Serbia and Montenegro, IFCC, FESCC

Uvod

Medicinska biohemija (sinonimi: klinička hemija ili klinička biohemija), kao struka i naučna disciplina razvila se iz ili uz neposredni uticaj prirodnih nauka (kao što su matematika, fizika, hemija i biohemija) i medicinskih nauka (npr. fiziologija, genetika, ćelijska biologija). Kao naučna disciplina medicinska biohemija se bavi izučavanjem metaboličkih procesa u odnosu na fiziološke i patološke promene kod ljudi i životinja. Primenom tehnika analitičke hemije i biohemije, medicinski biohemičari dobijaju niz dijagnostičkih i prognostičkih informacija, koje služe lekarima za procenu težine oboljenja i odgovora na primenjenu

Introduction

Medical biochemistry (synonyms: clinical chemistry or clinical biochemistry) in the terms of proffesional and scientific discipline, stems from and/or has developed along with the natural sciences and its influences (mathematics, physics, chemistry and biochemistry) and medical sciences as well (physiology, genetics, cell biology). As a scientific discipline, medical biochemistry studies metabolic processes of physiological and pathological changes with humans and animals. Applying analytical chemistry's and biochemistry's techniques enables medical biochemists to gain plenty of information related to diagnosis and progno-

terapiju. Medicinska biohemija je prema tome disciplina, koja je neodvojiva od moderne medicine.

Za ovu disciplinu su primenjivani brojni nazivi, koji su često konfuzni po svojoj prirodi, na primer: patološka fiziologija, klinička biologija, klinička patologija, hemijska patologija, klinička biohemija, medicinska biohemija, klinička hemija i laboratorijska medicina, a u zavisnosti od mesta nastanka.

Internacionalno zvanično je prihvaćen naziv – klinička hemija, koji je prvi put 1912. godine primenio Johan Scherer, označivši svoju laboratoriju kao kliničko-hemijsku laboratoriju (Klinisch Chemische Laboratorium) u bolnici Julius u Wurzburg-u u Nemačkoj.

Razvoj srpske medicine

Tako reći istovremeno kada i u svetu, otpočinje i razvoj medicinske biohemije na našim prostorima. Prva hemijska ispitivanja kod nas obavljana su u 18. veku u apotekama, međutim, razvoj medicine otpočeo je mnogo ranije.

Pred kraj druge polovine 11. veka Srbi su počeli da stvaraju svoju nacionalnu kulturu i taj proces je počeo u manastiru Studenici. Tu je sv. Sava izvršio prvu reformu našeg književnog jezika i stvorio srpsko-slovensku recenziju. Sa jačim ili slabijim intenzitetom ovaj proces će se nastaviti i dalje, a svoj definitivni oblik dobiće u srpskom manastiru Hilandaru u Svetoj Gori. U tom periodu Srbi uvode i savremenu evropsku medicinu. Odmah po uređenju Hilandara sv. Sava, po ugledu na bolnicu carigradskog manastira sv. Bogorodice Evergetide, osniva u njemu prvu srpsku bolnicu. Ovde će docnije otpočeti rad i na propisivanju medicinsko-bioloških spisa, pa će 1263. godine po nalogu učenog hilandarskog igumana Domentijana, monah Teodosije prepisati šestodnev Jovana Egzarha. Iz ovog dela Srbi će se detaljnije upoznati sa osnovnim znanjem iz anatomije antičkog sveta. Posle osnivanja bolnice u manastiru Hilandaru, sv. Sava će za vreme svog boravka u manastiru Studenici (1207–1216. godina) i u njemu osnovati bolnicu koja predstavlja prvu ustanovu ovakve vrste na teritoriji srpske srednjovekovne države.

Ovim su, praktično, Srbi uvedeni u savremenu evropsku medicinu koja se, do propasti srpskih zemalja srednjeg veka, neće mnogo razlikovati od francuske i italijanske medicine. Srpska medicina razvijala se pod uticajem italo-francuskih medicinskih škola Salerna i Monpeljea. Taj uticaj se oseća od 13. veka i trajaće sve do kraja 15. veka, kada je srpska srednjovekovna medicina doživela uspon. U ovom periodu biće prevedeni na srpski jezik i spisi najuglednijih autora spomenutih škola. Uticaj vizantijske medicine biće ograničen samo na prevođenje odlomaka iz pomoćnih medicinskih nauka (biologije, normalne i patološke fiziologije). Osim toga, pod njenim uticajem u periodu od 12. do 15. veka biće osnovane i ostale srpske bol-

sis which serve physicians to asses the gravity of illness and prescribe healing therapy. Therefore medical biochemistry is an integral part of modern medicine.

This discipline was dubbed various, often confusing names such as pathology, physiology, clinical biology, clinical pathology, chemical pathology, clinical biochemistry, medical biochemistry, clinical chemistry and laboratory medicine, all depending on place of origin.

The official, internationally accepted name – clinical chemistry, was mentioned for the first time in 1912 by Johan Scherer, who described his laboratory as Clinical Chemistry Laboratory (Klinisch Chemische Laboratorium) in the hospital Julius in Wurzburg in Germany.

Development of Serbian medicine

Almost simultaneously with the rest of the world, medical biochemistry started to develop in our region as well. First chemical tests were performed in the 18th century in the pharmacies. However medicine started to develop much earlier.

At the end of the second half of the 11th century, Serbs started to create their own national culture and the process started at the monastery Studenica. That is where Saint Sava for the first time reformed our literary language and accomplished Serbian-Slovenian reform. The process carried on with the fluctuating intensity but its final shape was gained in Serbian monastery Hilandar in Mount Athos. In that very period Serbs introduced modern European medicine. Immediately upon constituting Hilandar Saint Sava founded first Serbian hospital, looking at the hospital of the Constantinople Monastery St. Marry Evergetyd as a model. This is where copying of medical-biological records begun. In 1263 upon order issued by learned priest Domentian residing in Mount Athos, monk Theodosius copied Six Day Log of John Egsarh. This helped Serbs to get to know in details the basic knowledge in anatomy of ancient world. Upon founding of a hospital in Mount Athos, Saint Sava founded another hospital within the monastery Studenica while residing there. After he had founded a hospital in Mount Athos, Saint Sava founded another one while residing in monastery Studenica (from 1207 until 1216), thus creating the first institution of that kind in the territory of medieval Serbian state.

Basically, this marked the stepping stone for Serbian medicine and its introduction into the European contemporary medicine. Up until collapse of the Serbian medieval territories the medicine practiced in Serbia was not so much different from the one practiced in, say France and Italy. In the period between 13th and 15th century Serbian medicine was influenced by Italian-French medical schools of Salerno and Montpelier. Afterwards it takes memento of

nice. U suštini, evropska srednjovekovna medicina, kao i srpska, predstavljala je medicinu Hipokrata, Galena, Aristida i drugih antičkih lekara.

Tumačenje patogeneze internih oboljenja bilo je izgrađeno na učenju antičke medicine koje je bilo zasnovano na promenama u lučenju sokova. Najveći značaj u dijagnostici i prognostici različitih oboljenja pridavan je pregledu mokraće prema promenama u njenim slojevima, dok je osnovni princip terapije bio: *contraria, contrariis curantur*. Polazeći sa stanovišta da se bolest može sprečiti puštanjem krvi, izgrađena je čitava nauka o tom postupku. O svemu tome govore i spisi naše stare medicine.

Hilandarski medicinski kodeks predstavlja najbogatiji izvor za proučavanje terminologije srpske srednjovekovne medicine. Rukopis je nastao sredinom 16. veka, pisan je na 204 lista i ima odlike kancelarijskog brzopisa. Recenzija je srpska, sa izvesnim odlikama resavskog pravopisa. Hilandarski medicinski kodeks sadrži sve najglavnije spise tadašnje naučne evropske medicine uključujući i *Spis o dijagnostici oboljenja prema promenama u mokraći*. Ovo je dosta opširan spis koji sadrži teoretska gledišta o mokraći i njenim promenama, kao i praktična uputstva za njeno korišćenje u dijagnostičke svrhe. Sudeći po tome što se u njemu citiraju Hipokrat i Galen, zatim ranovizantijski pisac Teofil Protospatr (7. vek), zatim jevrejsko-egipatski pisac Isak Izraeli (10. vek), Konstantin Afrički (11. vek) i ni jedan od docnijih pisaca, moglo bi se smatrati da je naš spis nastao pod uticajem nekog salernskog spisa. Ovakvi spisi mnogo su korišćeni u srednjovekovnoj medicini i bili su u upotrebi sve do 18. veka.

Naše srednjovekovne bolnice, prema svojoj funkciji, mogle bi se podeliti u dve vrste ustanova. Jedne su služile isključivo za lečenje, a druge su bile skloništa za siromahe i bolesnike od neizlečivih hroničnih bolesti. Uređenje srpskih bolnica bilo je slično vizantijskim, i one su podizane uz manastire, pa su zato bile crkvene ustanove. Kao što je napred navedeno bolnica manastira Hilandara je najstarija srpska bolnica (osnovana 1199.–1200. godine). Bolnica manastira Studenice (osnovana između 1207. i 1217. godine) prva je bolnica osnovana na teritoriji srpske srednjovekovne države.

Našom najvećom srednjovekovnom bolnicom može se smatrati bolnica Stefana Uroša III Nemanjića u manastiru Dečanima, kao i bolnica cara Dušana u manastiru sv. Aranđela kod Prizrena (podignuta 1342. godine) prema zaveštanju ktitora trebalo je da služi samo za lečenje.

Kada se govori o srpskim bolnicama u srednjem veku, onda se mora ukazati na još jednu činjenicu a to je da su one istovremeno bile i medicinske škole u kojima se učilo o veštini lečenja. To znači da je lekar-empirik bolnice podučavao u veštini lečenja svog pomoćnika, tj. onoga monaha koji je trebalo da ga

its own: the works of the most prominent authors of the mentioned schools are being translated into Serbian; Byzantine medicine influences translations of the auxiliary medical sciences such as biology, normal and pathological physiology, i.e. solely its parts. Between 12th and 15th century Byzantine medicine enthused the dawn of other Serbian hospitals. The bottom line is that the European medieval medicine represented medicine of Hippocrates, Galen, Aristid and other Greek physicians, which stands the same for the Serbian medieval medicine.

Interpretation of pathogenesis of internal disorders was interpreted as disorder in juices discharging, which stemmed from the ancient medicine. Diagnosis and prognosis was mostly based on urine inspection and tracing changes in its layers. This was given the biggest importance with reference to diagnostics and prognostics of different diseases. The main principle of the therapy was: *contraria, contrariis curantur*. Blood releasing was elevated to the level of science of its own, due to belief that it can prevent illness. This was also claimed in our ancient medicine books.

Mount Athos Medical Codex is the most complex source of Serbian medieval medicine terminology. The manuscript dates from the middle of 16th century, comprises 204 pages and is composed in predominant style of office fast writing. The text was revised in Serbian with some characteristics of Resava Style Grammar. It comprises all important essays of that time including *Essay on establishing of diagnosis based on changes in urine.* This is a rather voluminous essay incorporating theoretical stands on urine and the changes in it, as well as practical guidelines for diagnostic purposes. The following were quoted in the essay: Hippocrates and Galen, Teophil Protospater a Byzantine writer from 7th century, Jewish-Egypt writer Isaac Israeli from 10th century, Constantine of Africa from 11th century. Since no author of later date is mentioned here it may be concluded that our essay was influenced by the Salern Essay. Such essays were copiously in use in medieval medicine up until 18 century.

Our medieval hospitals may be divided in two types according to their function. The first type was intended exclusively for healing, and the second were sanctuaries for the poor and the sick who suffering chronically fatal diseases. Serbian hospitals were much similar to Byzantine ones in the terms of being close to monasteries and being referred to as church institutions. As aforementioned, the hospital of the Mount Athos Monastery is the oldest Serbian hospital (founded between 1199–1200). The hospital of the Monastery Studenica was the first to be founded (between 1207–1217) on the territory of the Serbian medieval state.

Our biggest medieval hospital is considered to be hospital of Stefan Uroš III Nemanjić at the monastery Dečani, as well as hospital of the tsar Dušan

nasledi. Takva je praksa bila u Vizantiji, a do osnivanja medicinskih škola i na univerzitetima na Zapadu.

Osnivanje Velike škole

Prvo zatišje u borbi Srba za svoju slobodu u Prvom ustanku imalo je pozitivnih posledica na kulturni život našeg naroda. U to vreme, 1808. godine, osnovana je u Beogradu Velika škola, kakve, po rečima Vukovim, »Srbi nikad do onda nigdje nijesu imali«. Prilikom otvaranja ove škole Dositej je, između ostalog, rekao: »Mi valja da se staramo da izbavimo dušu našu od sužanstva duševnog«. Ta prva Velika škola, koja je uticala na sve grane narodnog života, propala je 1813. godine, zajedno sa prvim osnovama nove srpske države.

Tek 1830. godine otvara se ponovo Velika škola u Beogradu, koja se 1833. godine premešta u Kragujevac, i tu su je prvi put počeli zvati gimnazijom. Godine 1838. ova Velika škola se reorganizuje i pretvara u Licej, za koji je knez Miloš rekao: »Hoću da se predaju nauke koje se predaju i po evropskim takvim školama«. I odista, ova škola je imala zadatak da sprema državne činovike iz »pravdoslovne« i »prirodoslovne« struke.

Licej u Kragujevcu borio se sa velikim teškoćama, i tadašnji profesori težeći za povoljnijom sredinom, stalno su radili na tome da se Licej premesti iz Kragujevca u Beograd, što je i učinjeno 1841. godine.

Velika škola pretrpela je znatnije reforme 1896. i 1900. godine, kada je fakultetima data samostalnost i veća nastavna stručnost. Zakon o prvom srpskom Univerzitetu, koji je Veliku školu podigao na stepen Univerziteta, stavivši mu u zadatak »da daje višu stručnu nastavu i da obrađuje nauke« donet je 27. februara 1905. godine. Tako je tek jedno stoleće posle Ustanka, a sedamdeset godina od postanka Liceja, srpski narod dobio školu najvišeg stepena – Univerzitet.

Razvoj medicinske biohemije

Godine 1872. osnovano je Srpsko lekarsko društvo, koje i sada postoji, a iste godine pokrenut je i časopis Društva – Srpski arhiv za celokupno lekarstvo, koji još uvek izlazi.

Oko 1874. godine u Beču je doktorirao mr Jovan Đurić, kasnije beogradski apotekar i jedan od pokretača predloga za osnivanje Apotekarskog društva u Srbiji. On je tokom 1875. godine posetio Pariz radi upoznavanja francuske farmacije i opšteg ličnog usavršavanja, jer su tada u Francuskoj počeli laboratorijski da se proizvode lekovi.

U zatišju između dva srpsko-turska rata, sredinom 1877. godine, dr mr ph. Jovan Đurić dobio je koncesiju i osnovao šestu apoteku u Beogradu (»Apoteka kod Kneževog spomenika«). Iste godine

at the monastery Saint Arangel near Prizren (erected in 1342). According to patron's plans the latter mentioned should have served only for the purposes of healing.

There is also another fact to be pointed out. Apart from being intended just for the purpose of hospitalization, Serbian hospitals of the Middle Ages were medical schools providing knowledge on healing arts as well. The physician-practitioner would teach his assistant the arts of healing. His assistant was actually a monk who was supposed to inherit his title. This was the case in Byzantine, as well as in the West world until the point when medical schools were founded at the universities.

Foundation of Grand School

The first peaceful period during the First National Upraise brought some positive effects in the cultural life of Serbs. In 1808, the Grand School was founded in Belgrade. The School was first of its kind, as Vuk Karadžić used to say. On the occasion of the opening Dositej Obradović said: »We need to make sure that we get free from spiritual imprisonment.« However the Grand School which influenced all walks of life, ceased to exist in 1813 at the same time when the core of the new Serbian state collapsed.

Only in 1830 the Grand School got reopened. In 1833 it moved to Kragujevac and there it was redefined as the High School. In 1838 the School was reorganized and turned into Lyceum. Duke Miloš said at the time: »I want scientific lectures to be held here at the Lyceum, the same one as those held in European Schools.« And that's how it was; the School nurtured the future state officers who would work both in the field of law and science.

The School in Kragujevac was struggling with many obstacles. Therefore lecturers put forth a determined effort to relocate the School out of Kragujevac. Finally they fought their way through; the School was moved to Belgrade in 1841.

In 1896 and 1900 Faculties were granted broader scope of independence The Grand School underwent many changes in 1896 and 1900 when Faculties gained independence and better lecturing expertise. The Law on First Serbian University was enacted on 27 February 1905 and promoted the Grand School into the University. Pursuant to the Law, the University was bound to »provide higher expert knowledge and promote sciences.« Finally the Serbs were given their University – a century upon the Upraise and 70 years as of founding of the Lyceum.

Development of Medical Biochemistry

Serbian Medical Society was founded in 1872 and it exists even today. At the same year its Journal

izdao je i svoje prvo delo: »Kvalitativna analiza mokraće« (štamparija N. Stefanovića i druga, Beograd, 1877. godine). To je prva knjiga o analizi mokraće na srpskom jeziku. Njeno objavljivanje zabeleženo je kao značajan datum u srpskom apotekarstvu onog vremena.

U periodu od 1859. do 1893. godine prvih sedam državnih hemičara bili su farmaceuti, koji su pored hemijsko-toksikoloških, obavljali i određene medicinsko-biohemijske analize i to pre svega pljuvačke, mokraće i krvi.

Krajem osme decenije, 1879. godine, u Beogradu je osnovano prvo društvo apotekara u Srbiji pod nazivom Apotekarsko društvo u Srbiji. Godina 1890. je veoma značajna za apotekarstvo i njegovo društvo, jer je pokrenuto i ostvareno izlaženje stručnog časopisa Glasa apotekarskog društva u Srbiji. Izlazio je mesečno i ugasio se s 9. brojem. Po prestanku izlaženja pomenutog lista moralo se čekati dugih petnaest godina dok se, u ovom veku, nije pojavio drugi apotekarski list – Farmaceutske novine. U međuvremenu Društvo je promenilo naziv u Srpsko apotekarsko društvo.

Između dva rata, kliničko-biohemijske analize su rađene u većim bolnicama, klinikama, institutima, higijenskim zavodima. U Srbiji i u Crnoj Gori, do Prvog svetskog rata, apotekari su bili jedini hemičari, a posle rata znatan broj farmaceuta iz svih delova zemlje odlazi na usavršavanje u Francusku radi potreba vojnog saniteta. Farmaceuti su se usavršavali za rad u kliničkim, toksikološkim i bromatološkim laboratorijama. Ovo je nesumnjivo uticalo i na profil Farmaceutskih fakulteta u zemlji, koji su u planove svojih studija uveli predmet medicinska biohemija. Kasnije je, shodno potrebama došlo do formiranja posebnog obrazovnog profila – medicinskog biohemičara, kao zdravstvenog radnika.

Osnivanje i rad stručnih udruženja

Nakon osnivanja nacionalnih društava kliničkih hemičara, profesor Earl J. King iz Royal Postgraduate Medical School iz Londona, pokrenuo je 1952. godine inicijativu udruživanja nacionalnih društava u organizaciju međunarodnog karaktera, pod nazivom Internacionalna asocijacija kliničkih biohemičara, koja je bila pod nadzorom Internacionalne unije za čistu i primenjenu hemiju (IUPAC). Naime, 24. jula 1952. godine u Parizu je održan II međunarodni kongres biohemije. Godinu dana kasnije u Stokholmu, naziv novoformirane asocijacije promenjen je u International Federation of Clinical Chemistry, što je zvanično i prihvaćeno 1955. godine u Briselu. Danas ova Federacija nosi naziv International Federation for Clinical Chemistry and Laboratory Medicine (IFCC).

Odmah posle Drugog svetskog rata i naši medicinski biohemičari počinju da se okupljaju u svojim

»Serbian Archive for General Medical Craftsmanship« started to print.

In 1874 Jovan Đurić, M.Sc. completed his Ph.D. degrees in Vienna. Subsequently he engaged in the pharmacy positioned in Belgrade and became one of those who set a motion to establish a Pharmaceutical Society in Serbia. During 1875 he visited Paris for the purpose of an overall personal improvement and acquainting with the French pharmaceutical industry, where at the time the drugs started to be produced in the laboratory conditions. Between the two wars waged between Serbs and Turks, in the middle of 1877 Jovan Đurić M.Sc. Ph.D., gained concession and found up the sixth pharmacy in Belgrade »The Pharmacy by the Duke's Monument«. In the same year he published his first book »Quality Analysis of Urine«, the book published in the press offices of N. Stefanović et al. – edition 1877, Belgrade. The Quality Analysis of Urine is the first book of its kind in Serbian. The date of its publishing was highly appreciated in the contemporary circles of Serbian pharmacy.

In between 1859 and 1893, the first state chemists, seven of them in total, were actually pharmacists who performed medical-biological analysis namely analysis of saliva, urine and blood. Besides, they were engaged in chemical-toxicological analysis as well.

At the end of eighth decade, in 1879, the first Pharmaceutical Society of Serbia was founded in Belgrade. The year of 1890 was very important for the pharmacy and its Society due to a fact that the Journal Voice of Pharmaceutical Society started to be published in Serbia. It was published on a monthly basis but was extinguished after the issue no. 9. It was a long time before a new journal appeared. After fifteen long years, in the 20th century another journal started to circulate: Pharmaceutical Newspapers. In the meantime the Society changed its name into Serbian Pharmaceutical Society.

Between the wars, clinical-biochemical analyses were carried out in large scale hospitals, clinics, institutes, hygienic departments. Up until the World War I in Serbia and Montenegro there were no other chemists but pharmacists. After the War, a significant number of pharmacists from all over the country went to France for additional education related to army sanitation. Pharmacists gained further knowledge applicable at clinical, toxicological and bromatology laboratories. It is undisputable fact that this trend has influenced the studying curriculum of Faculties of Pharmacy in the country, which introduced the subject – medical biochemistry. Due to growing demand, a new profile – the medical biochemist was subsequently established ranking within the scope of health workers.

Foundation of the professional societies

After creating national societies of clinical chemists, Professor Earl J. King of Royal Postgraduate

stručnim udruženjima. Još pre 1950. godine u Farmaceutskom društvu Srbije sastajali su se laboratorijski stručnjaci, od kojih su naročito bili aktivni prof. dr Aleksandar Damanski za bromatologiju, prof. dr Momčilo Mokranjac za toksikologiju i doc. dr Pavle Trpinac za biohemiju.

Na sednici Upravnog odbora Udruženja farmaceuta NR Srbije, održanoj 22. decembra 1950. godine pokrenuto je pitanje osnivanja sekcije koja bi okupljala laboratorijske stručnjake. Sekcija za sanitarnu hemiju, koja je objedinjavala sva tri profila laboratorijskih radnika i to medicinske biohemičare, sanitarne hemičare i toksikologe, osnovana je 1. januara 1951. godine. U rukovodstvu ove sekcije bili su prof. dr Pavle Trpinac i mr ph. Ljubomir Purać kao predstavnici medicinskih biohemičara Srbije. Kasnije je ova sekcija prerasla u Sekciju za medicinsku biohemiju, čiji je prvi predsednik bio prof. dr Pavle Trpinac. Drugi predsednici ove Sekcije kasnije su bili: Radmila Topalović-Avramov (izabrana 1959. godine); Vera Mandić-Zečević (1961–1965); Tatjana Plećaš-Drljača (1965–1969); Marija Đurović (1969–1973); Olga Zvenigorodska (1973–1975); Leposava Milutinović (1975–1977); Radmila Hajduković (1977–1981); Ružica Mašić (1981–1983); Nada Majkić-Singh (1983–1987); Mirka Ilić (1987–1994); Ljiljana Kandić (1994–1997); Aleksandra Poštić-Grujin (1997–2002); Radmila Obrenović (2002–).

Sekcija za sanitarnu hemiju bila je izuzetno aktivna u periodu od 1951. do 1960. godine. Model rada srpske sekcije korišćen je pri radu drugih republičkih sekcija, te je kao takav visoko ocenjen na I kongresu medicinskih biohemičara Jugoslavije.

Na predlog Sekcije 1958. godine imenovana je Komisija za medicinsku biohemiju pri Saveznom zavodu za zdravstvenu zaštitu, koja je kasnije izradila i prve »Standardne metode«. Sekcija je aktivno učestvovala pri izradi brojnih odredbi zakona iz oblasti zdravstva (npr. predlozi za odobrenje specijalizacije iz medicinske biohemije, izrada programa za istu, izrada programa za stručne ispite i druge zakonske propise). Na inicijativu ove Sekcije prvi put se u saveznom zakonu pojavila odrednica o laboratorijskoj službi kao jedinici u zdravstvenim organizacijama. Specijalizacija iz medicinske biohemije ozakonjena je 1960. godine, a još 1952. godine u Srbiji su se pojavili prvi specijalisti medicinske biohemije iz Armije.

Sekcije za medicinsku biohemiju pri Farmaceutskim društvima u drugim republikama formirane su kasnije.

Sekcija za medicinsku biohemiju Farmaceutskog društva Vojvodine otpočela sa radom 1976. godine. Rad Sekcije za medicinsku biohemiju Farmaceutskog društva Vojvodine odvijao se u vezi s aktivnostima koje je preduzimalo Društvo medicinskih biohemičara Jugoslavije (DMBJ). Članovi Sekcije su kao članovi Izvršnog odbora i Komisija DMBJ aktivno učestvovali u njihovom radu.

Medical School from London incited an initiative to unite national societies into the organization with worldwide character – it was the International Association of Clinical Biochemists, monitored by the International Union for Pure and Applied Chemistry (IUPAC). On 24 July 1952 in Paris, a Second International Congress of Biochemistry was held. A year later, in Stockholm, the name of a newly formed association was altered into International Federation of Clinical Chemistry, which was officially accepted in 1955 in Brussels. Today this federation's name is International Federation for Clinical Chemistry and Laboratory Medicine (IFCC).

Right after the World War II our medical biochemists began to gather within their expert societies. Even before 1950 Pharmaceutical Society of Serbia hosted laboratory experts among whom the most active were Prof. Dr. Aleksandar Damanski for bromatology, Prof. Dr. Momčilo Mokranjac for toxicology and Docent Dr. Pavle Trpinac for biochemistry.

When the Managing Board of the Pharmaceutical Society of National Republic of Serbia held its session on 22 December 1950, an issue was raised with reference to creation of a workshop that would gather together the laboratory experts. Section for Sanitary Chemistry, combining all three profiles of laboratory staff, i.e. medical biochemists, sanitary chemists and toxicologists, was founded either on 1st of January 1951. Prof. Dr. Pavle Trpinac and Ljubomir Purać M.Sc. Pharmacy, as well as representatives of medical biochemists of Serbia held positions at the Managing Board. Later on, this section grew to become Section for Medical Biochemistry, which first President was Prof. Dr. Pavle Trpinac. Its other presidents are listed in chronological order: Radmila Topalović-Avramov (elected in 1959), Vera Mandić-Zečević (1961–1965), Tatjana Plećaš-Drljača (1965–1969), Marija Đurović (1969–1973), Olga Zvenigorodska (1973–1975), Leposava Milutinović (1975–1977), Radmila Hajduković (1977–1981), Ružica Mašić (1981–1983), Nada Majkić-Singh (1983–1987), Mirka Ilić (1987–1994), Ljiljana Kandić (1994–1997), Aleksandra Poštić-Grujin (1997–2002), Radmila Obrenović (2002–).

Section for Sanitary Chemistry was very active in the period as of 1951 until 1960. The operating model of Serbian sections was later looked upon by many other republican sections and was highly praised at the first Congress of Yugoslav Medical Biochemists.

In 1958 the Commission for Medical Biochemistry with the Federal Department for Health Protection was constituted as a result of a proposition made by the Section. Consequently the Commission made the first »Standard methods«. Section actively participated in drafting various law provisions in the health area (for example proposals to grant post graduate studies in the filed of medical biochemistry, setting up its program, planning of expert exams and other

Tokom 1980. godine Sekcija medicinskih biohemičara Farmaceutskog društva Vojvodine menja naziv u Udruženje medicinskih biohemičara i isti nosi tri godine, kada se strukovnim udruženjima ponovo vraća naziv sekcija. U tom periodu Udruženje medicinskih biohemičara Vojvodine izradilo je predlog kategorizacije medicinsko-biohemijskih laboratorija u Vojvodini što je prihvaćeno i činilo je sastavni deo naučno-istraživačkog projekta »Racionalizacija i modernizacija laboratorijske dijagnostike u Vojvodini«, koji je sproveden 1977–1980. godine.

Predsednici Sekcije Vojvodine bili su do 1976. Danica Vasić, od 1976. do 1978. Verica Vuković, od 1978. do 1983. Melanija Nađ, od 1983. do 1988. Verica Vuković; od 1988. do 1999. godine Jelena Đurđević; od 1999–2003. godine Vera Cvetković; a od 2003. godine predsednik sekcije je Borislav Nalčić.

Medicinski biohemičari Crne Gore aktivno su razvijali svoju struku i radom u stručnim udruženjima: Sekciji za medicinsku biohemiju Farmaceutskog društva Crne Gore, Društvu medicinskih biohemičara Crne Gore i Društvu medicinskih biohemičara Jugoslavije. Predsednici Sekcije i Društva medicinskih biohemičara Crne Gore bili su: Dušan Teodorović, Bosiljka Vujošević, Miloš Janković, Jovan Kavarić, Blažo Petrović, Nada Cvetković, Vesna Mijatović, Milica Vuksanović i Dejan Krivokapić. Danas je Danica Popović predsednik DMBCG.

Sekcije za medicinsku biohemiju Farmaceutskih društava Srbije, Crne Gore i Vojvodine značajno su doprinele razvoju medicinske biohemije kao farmaceutske zdravstvene delatnosti. Članovi ovih sekcija aktivno su radili kako u svojim matičnim Farmaceutskim društvima, tako i u kasnije formiranom Društvu medicinskih biohemičara Jugoslavije.

Formiranje i rad Društva medicinskih biohemičara Jugoslavije

Na šestom plenumu Saveza farmaceutskih društava Jugoslavije (SFRJ), koji je održan 15. maja 1955. godine u Splitu, doneta je odluka o osnivanju Sekcije za medicinsku biohemiju u SFDJ. Sekcija za medicinsku biohemiju SFDJ preimenovana je u Društvo za medicinsku biohemiju SFDJ, na osnovu odluke XVI plenuma SFRJ, koji je održan 15. maja 1965. godine u Banjaluci. Shodno navedenom, na osnovu odluke DMBJ, donete 6. aprila 1995. godine, a na temelju istorijskih podataka, 15. maj je ustanovljen kao Dan Društva medicinskih biohemičara Jugoslavije. Četrdesetogodišnjicu postojanja i rada Društvo medicinskih biohemičara Jugoslavije obeležilo je odražavanjem XII Biohemijskih dana 15. maja 1995. godine u Beogradu u hotelu Hyatt Regency. Godišnjici su prisustvovali brojni zvaničnici i državni predstavnici saveznih i republičkih organa, kao i predstavnici balkanskih zemalja.

legal regulations). As a result of the proposal made by the Section, the federal law introduced laboratory service as a unit in the health organization, thus launching a novelty. The legal regulation on graduate studies in the area of medical biochemistry came in force in 1960. In 1952 first specialized medical biochemists came to Serbia from the Army.

Afterwards, sections for medical biochemistry were founded under the auspices of pharmaceutical societies elsewhere throughout the country, i.e. in other republics.

Section for Medical Biochemistry of the Pharmaceutical Society of Vojvodina started its operations in 1976. It was associated to the activities of Yugoslav Society of Medical Biochemists (YSMB). Members of the Section have actively participated in YuSMB operations, as being members of the Executive Board and Commissions of YuSMB.

During 1980 the Section of Medical Biochemists of Vojvodina changed its name into Association of Medical Biochemists and operated under that name for the following three years when it was decided to change the name of professional association into its previous one – section. In the period of three years Section of Medical Biochemists of Vojvodina managed to draft a proposal for categorization of medical-biochemistry laboratories in Vojvodina which was passed and instituted as an integral part of scientific research project »Rationalization and modernization of lab diagnostics in Vojvodina«, carried out during 1977–1980.

Up until 1976 representative of Vojvodina Section were Danica Vasić. From 1976 until 1978 the representative was Verica Vuković, from 1978 until 1983 Melanija Nađ, from 1983 until 1988 Verica Vuković, from 1988 until 1999 Jelena Đurđević, from 1999 until 2003 Vera Cvetković, from 2003 onwards president of the Section is Borislav Nalčić.

Medical Biochemists of Montenegro actively developed their profession through expert associations: Section for Medical Biochemistry of the Pharmaceutical Society of Montenegro, Society of Medical Biochemists of Montenegro and Society of Medical Biochemists of Yugoslavia. Presidents of Section and Society of Medical Biochemists of Montenegro were: Dušan Teodorović, Bosiljka Vujošević, Miloš Janković, Jovan Kavarić, Blaûo Petrović, Nada Cvetković, Vesna Mijatović, Milica Vuksanović i Dejan Krivokapić. The president at the moment is Danica Popović.

Workshops for medical biochemistry of Pharmaceutical Societies of Serbia, Montenegro and Vojvodina largely contributed for the cause of medical biochemistry to develop into pharmaceutical health industry. Members of these workshops were active both in their original Pharmaceutical Societies as well as in the Society of Medical Biochemists of Yugoslavia, instituted subsequently. Congress of Yugoslav Pharmacists was held in Dubrovnik on 12 October 1952.

Prvi stručni i naučni sastanak medicinskih biohemičara FNRJ održan je od 13–16. 10. 1955. godine u Zagrebu. Sastanku je prisustvovalo 120 članova sa 50 stručnih i 4 organizaciona referata. Prvi kongres medicinskih biohemičara Jugoslavije održan je takođe u Zagrebu od 7. do 11. juna 1963. godine, na kome je podneto 98 referata. Na sledećem II kongresu (Vrnjačka Banja, 4. oktobra 1967. godine) sada već Društva medicinskih biohemičara SFDJ bilo je 300 učesnika sa 143 referata i 3 plenarna predavanja. Svaki novi kongres predstavljao je novi kvalitet i vidni napredak razvoja struke. Treći kongres DMBJ održan je na Bledu, maja 1971. godine; IV kongres u Sarajevu, 1974. godine; V kongres u Skoplju, 1979. godine; VI kongres u Splitu 1983. godine; VII kongres u Novom Sadu, 1987. godine; VIII kongres 1992. godine u Beogradu; IX kongres u Budvi, 1994. godine; X kongres u Budvi, 1996. godine; XI kongres na Zlatiboru, 1998. godine; XII kongres u Subotici, 2000. godine; XIII kongres u Nišu, 2002. godine; XIV kongres u Sokobanji, 2004. godine.

VIII kongres medicinskih biohemičara Jugoslavije održan je 1992. godine u Beogradu. Ovaj kongres održan je u uslovima raspada zemlje i teških sankcija koje je prema SR Jugoslaviji uvela međunarodna zajednica. Ovim kongresom obeležena je i 40-godišnjica osnivanja Centralne kliničke laboratorije, preteče sadašnjeg Instituta za medicinsku biohemiju Kliničkog centra Srbije, kao referentne ustanove za oblast medicinske biohemije.

Naročito je uspešan, u stručnom i naučnom pogledu, bio IX kongres, koji je od 9–12. oktobra 1994. godine održan u Budvi, mada je organizovan u teškim danima ekonomskih sankcija svetske zajednice prema našoj zemlji. I ovom prilikom dokazana je vitalnost našeg naroda da se moralno održi uprkos nevoljama koje ga snalaze. Na Kongresu je izloženo preko 250 stručnih i naučnih radova zavidnog kvaliteta uz učešće brojnih stručnjaka iz graničnih disciplina npr. molekularne biologije, genetike, hemije, biologije, farmacije i medicine. Razmenjena iskustva, stečena prijateljstva i druženje učesnici kongresa će dugo pamtiti. Kongres su otvorili i na njemu učestvovali predstavnici brojnih saveznih i republičkih organa, čime je potvrđen značaj rada Društva medicinskih biohemičara Jugoslavije.

Društvo medicinskih biohemičara Jugoslavije do sada je organizovalo dva kongresa Balkanske kliničko laboratorijske federacije i to Četvrti (1996. godine) u Budvi i Jedanaesti (2003. godine) u Beogradu. Plenarna predavanja sa oba kongresa štampana su u vidu monografije *Advances in Laboratory Medicine* (DMBJ, 1996. godina) i *Jugoslovenskoj medicinskoj biohemiji* (Vol. 23, broj 3, 2004. godina).

Društvo tradicionalno, povodom dana Društva, održava Biohemijske dane; do sada je održan 21 ovakav sastanak. U okviru Sajamske izložbe »Medifarm« Društvo u saradnji sa Beogradskim sajmom

Society of Medical Biochemists of Yugoslavia

On 15 May 1955, during the sixth plenum of the Society of Pharmaceutical Societies of Yugoslavia (SFRY) held in Split, the decision was passed to set up a Section for Medical Biochemistry in SFDJ. The Section for Medical Biochemistry in SFDJ was renamed into Society for Medical Biochemistry of SFDJ based on the decision passed during the 16th plenum of SFDJ, held on 15 May 1965 in Banjaluka. Pursuant to the decision passed by SMBYu on 6 April 1995 and based on the historic data, 15 May was declared as being the official Day of the Society of Medical Biochemists of Yugoslavia. The Society celebrated its fortieth anniversary on the occasion of 12th annual celebration called The Days of Biochemistry held on 15 May 1995 in Belgrade hotel Hyatt Regency. The anniversary was attended by numerous officials and state representatives of federal and republican institutions, as well as representatives of Balkan countries.

The first expert and scientific meeting of medical biochemists of FNRY was held from 13 until 16 October 1955 in Zagreb. There were 120 members participating with 50 expert reports and 4 organizational reports. The first Congress of Medical Biochemists of Yugoslavia was also held in Zagreb from 7 until 11 June 1963. There have been 98 reports presented at the Congress. During the second congress of the renamed Society of Medical Biochemists of SFRY held in Vrnjačka Banja on 4 October 1967 there have been 300 participants who 143 reports presented and 3 plenary lectures held. Each new congress was a step forward in development of science and quality. The third Congress of SMBYu was held in Bled in May 1971, fourth was held in Sarajevo in 1974, fifth in Skoplje in 1979, sixth in Split in 1983, seventh in Novi Sad in 1987, eight in 1992 in Belgrade, ninth in Budva in 1994, tenth in Budva in 1996, eleventh in Zlatibor in 1998, twelfth in Subotica in 2000, thirteenth in Nišu in 2002, fourteenth in Sokobanja in 2004.

The Eight congress of medical biochemists of Yugoslavia was held in 1992 in Belgrade. It took place at the time when the country was falling apart and tough sanctions were introduced by international community. This congress also marked fortieth anniversary of the existence of Central Clinical Laboratory, the predecessor of the current Institute for Medical Biochemistry of Clinical Center of Serbia that is the referent institution in the area of medical biochemistry.

The 9th Congress was very much of a success in the scientific and expert terms. Although the country was in a difficult situation due to international sanctions, the Congress was nevertheless organized in the period between 9–12 October 1994 in Budva. The Serbian people once again proved their vitality and morality despite hardships they were encountering. There were 250 expert and scientific papers presented at the Congress. They were all of high quality. Also, the Congress was attended by the experts from associated

organizuje i Novine u laboratorijskoj medicini. Godine 1997. Društvo je ustanovilo Naučnu konferenciju »Profesor Ivan Berkeš« povodom koje se dodeljuju nagrade najuspešnijim studentima Farmaceutskog fakulteta.

Od samog formiranja Međunarodne federacije kliničkih hemičara (IFCC) pri IUPAC-u, medicinski biohemičari iz naše zemlje aktivno su radili na učlanjivanju medicinskih biohemičara u ovu organizaciju. Značajnu ulogu u ovim aktivnostima imale su prof. dr Marijana Fišer-Herman i primarijus Tatjana Plećaš-Drljača, koja je ujedno bila i prvi predsednik DMBJ i to u dva mandatna perioda od 13. 3. 1965. do 1971. godine. Za vreme njenog mandata, maja 1971. godine, DMBJ je postala 28. članica IFCC-a. Ovu značajnu vest Tatjana Plećaš-Drljača pozdravljajući učesnike III kongresa DMBJ, koji se 1971. godine održavao na Bledu. U to vreme predsednik IFCC-a je bio Dr Martin Rubin.

S obzirom na to da su medicinski biohemičari intenzivno radili na problemima laboratorijske službe, Savezni zavod za zdravstvenu zaštitu ozvaničio je 1959. godine Saveznu komisiju za medicinsku biohemiju, kao savetodavno telo Zavoda. Članovi Komisije bili su profesori Farmaceutskog i Medicinskog fakulteta, kao i specijalisti medicinske biohemije, rukovodioci laboratorija, bolnica i medicinskih centara. Komisija je imala 17 članova, a njen predsednik od osnivanja pa do svoje smrti, 1978. godine, bio je mr ph. Stevan Lukić. Članovi ove komisije iz Srbije i Crne Gore bili su još: mr ph. Nada Simić, sekretar, prof. dr Ivan Berkeš, mr ph. Bosiljka Daković, mr ph. Tatjana Plećaš, Prof. mr ph. Ljubomir Purać, mr ph. Zaga Subotić i prof. dr Pavle Trpinac.

Komisija je bila aktivna i radila je na svim problemima struke medicinske biohemije, kao što su pitanja nastave iz specijalizacije, organizacije i tipizacije laboratorija, kontrole kvaliteta, izrade standardnih postupaka itd. Ona je izradila »Standardne metode iz medicinske biohemije«, koje je Savezni zavod za zdravstvenu zaštitu objavio kao prvi svezak pod naslovom »Osnovne standardne metode iz medicinske biohemije, 1961. godine«, dok je drugo izdanje izašlo 1979. godine. Predlagane metode bile su proveravane u laboratorijama koje je Komisija preporučila.

Uzimajući u obzir Opšti zakon o organizaciji zdravstvene službe i zdravstvene zaštite, Komisija je izradila »Pravilnik o tipovima laboratorija«. Uz ovo je dodat i predlog opreme za određene laboratorije, kao i tipizacija prostorija i uređaja. Razmatrana su i pitanja cena laboratorijskih usluga i ekonomičnosti pri izvođenju složenih biohemijskih analiza.

Komisija je izradila Pravilnik o stručnom nadzoru biohemijskih laboratorija i sprovela dve Savezne kontrole stručnog rada pomoću kontrolnih seruma (u 1967. i 1968. godini). U isto vreme su u Saveznom zavodu za zdravstvenu zaštitu za kontrolu stručnog

branches such as molecular biology, genetics, chemistry, biology, pharmacy and medicine. Those who attended the Congress shall cherish the memory of new friendships, time spent together and the experience they shared. The Congress was opened and attended by representatives of numerous Federal and Republican organs, which spoke in favor of the importance of the Yugoslav Society of Medical Biochemists.

The Yugoslav Society of Medical Biochemists up to now has organized two congresses of Balkan Clinical Laboratory Federation, i.e. the Fourth Congress in 1996 in Budva and the Eleventh Congress in 2003 in Belgrade. Plenary lectures presented at both congresses are published in the monography *Advances in Laboratory Medicine* (YuSMB, 1996.) and *Yugoslav Medical Biochemistry*, Volume 23, number 3, year 2004.

On the occasion of the Day of the Society, the Society has organized 21 summits, the so called Biochemical Days. In cooperation with the Belgrade Fare and for the Fare Exhibition »Medifarm«, the Society also acts as the organizer of the *Novelties in Laboratory Medicine*. The most successful students of Faculty of Pharmacy are being awarder for the occasion of annual Scientific Conference »Professor Ivan Berkeš«, which was established in 1977 by the Society.

Ever since the International Federation of Clinical Chemists was founded in IUPAC, the medical biochemists of our country have actively put efforts to assign as many medical biochemists as possible. Prof. Dr. Marijana Fišer-Herman and Tatjana Plećaš-Drljača played an important role in these activities. Tatjana Plećaš-Drljača was the first president of YuSMB for a period of time equal to two mandates, from 13 March 1965 until 1971. During her mandate, namely in May 1971, YuSMB has become the 28th member of IFCC. The news was announced by T. Plećaš-Drljača speaking at the opening of the 3rd Congress of YuSMB, held in Bled in 1971. At that period President of IFCC has been Dr Martin Rubin.

Medical biochemists worked intensively to tackle the problems of laboratory service. Therefore, in 1959, the Federal Department for Health Protection officialy founded Federal Commission for Medical Biochemistry, as its consultancy body. Members of the Commission were professors from Faculty of Pharmacy and Medicine, as well as specialists in medical biochemistry, heads of the laboratories, hospitals and medical centers. The Commission was constituted of 17 members and the President who at the time was Stevan Lukić M.Sc. Pharmacy. Mr. Lukić held the position as of the constitution of the Commission until his death in 1978. Serbian and Montenegrin members of the Commission were as well: Secretary Nada Simić M.Sc. Pharmacy, Prof. Dr Ivan Berkeš, Bosiljka Daković M.Sc. Pharmacy, Tatjana Plećaš M.Sc. Pharmacy, Prof. Ljubomir Purać M.Sc. Pharmacy, Zaga Subotić M.Sc. Pharmacy and Prof. Dr. Pavle Trpinac.

rada, održavani su seminari kojima su prisustvovali zainteresovani iz cele zemlje.

Društvo medicinskih biohemičara Jugoslavije stalno se staralo o unapređivanju svoje struke. Tako je još 1972. godine pokrenuto sprovođenje prve spoljašnje kontrole kvaliteta rada. Kontrolni serumi su pripremani u Imunološkom zavodu u Zagrebu i dostavljani laboratorijama. Prvim kontrolama obuhvaćeni su sledeći kliničko-biohemijski parametri: kalijum, natrijum, hloridi, kalcijum, fosfor, urea i ukupni proteini. Kasnijih godina spoljašnja kontrola kvaliteta rada je unapređivana i obuhvatala je sve veći broj laboratorija. Od 1991. godine Društvo medicinskih biohemičara u saradnji sa Institutom za medicinsku biohemiju Kliničkog centra Srbije sprovodi spoljašnju koktrolu kvaliteta rada pod nazivom YUNEQAS-medicinska biohemija, kojom su obuhvaćene sve laboratorije u zemlji. Rukovodilac programa spoljašnje kontrole kvaliteta rada je prof. dr Svetlana Ignjatović.

S obzirom da je prestala sa radom Savezna komisija za medicinsku biohemiju, 1980. godine pokreće se inicijativa da se formira »Savezna komisija za izbor metoda«, kao stručno telo Društva medicinskih biohemičara Jugoslavije. Njen dugogodišnji predsednik bio je prof. dr Niko Jesenovec, u čijoj redakciji su izašle dve sveske standardnih metoda, dok je treća pred raspad zemlje bila u pripremi za štampu. Komisijom za standardizaciju metoda kasnije je rukovodima dr Branislava Brkić.

Savez farmaceutskih društava Jugoslavije zbog aktivnosti na razvoju medicinske biohemije kao dela farmaceutske struke dodelio je Društvu medicinskih biohemičara Jugoslavije 1983. godine Diplomu Saveza farmaceutskih društava Jugoslavije.

Cilj DMBJ (sada DMBSCG) je da okuplja medicinske biohemičare radi unapređivanja i razvoja svih grana medicinske biohemije u zdravstvenoj delatnosti. Zadaci Društva se sastoje u ujednačavanju standarda rada u kliničko-biohemijskim laboratorijama, edukaciji medicinskih biohemičara na svim nivoima obrazovanja, podsticanju naučno-istraživačkog rada, utvrđivanju normativa rada i sprovođenju, primeni i poštovanju kodeksa etike zdravstvenih radnika. Utvrđene standarde u oblasti medicinske biohemije DMBSCG predlaže odgovarajućim saveznim i republičkim institucijama. Zadatak Društva je da omogućuje razmenu iskustava svojih članova sa članovima srodnih organizacija u zemlji i u inostranstvu.

Stručnu i naučnu aktivnost Društvo je ostvarivalo kroz rad komisija za edukaciju kadrova, standardizaciju postupaka, kontrolu kvaliteta rada, organizaciju laboratorijske službe, itd. Nacionalni predstavnici ostvarivali su vezu i saradnju sa SFDJ, IFCC i drugim srodnim organizacijama. Posredstvom ovih stručnih tela ostvarivana je značajna aktivnost DMBJ na unapređivanju struke.

The Commission was active and dealt with all issues of medical biochemistry such as lecturing for specialization, organization and composition of typeset of laboratories, quality control, forming of standard procedures, etc. The Commission drafted »Standard Methods of Medical Biochemistry« which was published by Federal Department for Health Protection in the form of the first Volume and under the name »The Basic Standard Methods of Medical Biochemistry«, 1961. The second edition was published in 1979. The proposed methods were put on test in those laboratories suggested by the Commission.

The Commission set up a Rulebook on Types of Laboratories, referring to a General Law on Organization of Health Service and Health Protection. The Proposition on some laboratories' equipment was attached thereto as well as document on typesetting of premises and equipment. Prices of laboratory services were taken in consideration as well as economizing of the complex biochemical analysis.

The Commission has also drafted the Rulebook on expert monitoring of biochemical laboratories and carried out two federal controls of expert work through control serum (in 1967 and 1968). At the same time Federal Department for Health Protection hosted seminars on expert work control. The seminars were attended by participants form all over the country.

The Yugoslav Society of Medical Biochemists has always been trying to improve the industry. Consequently, in 1972 the first external quality control was initiated to be executed. Control serums were prepared at the Immunological Department in Zagreb and were delivered to laboratories. These first controls included the following clinical-biochemical parameters: potasium, sodium, chlorides, calcium, phosphorus, urea and total proteins. In the years to come, the external quality control was enhanced and included more and more laboratories. In 1991 the Society started to implement the program of external quality control named YUNEQAS – medical biochemistry on all laboratories in the country. This was undertaken together with the Institute for Medical Biochemistry of Clinical Center of Serbia. The chair of the program is Prof. Dr. Svetlana Ignjatović.

Having in mind that the Federal Commission for Medical Biochemistry ceased to operate in 1980, an initiative was incited to form Federal Commission for Method Choice acting as the expert body of the Yugoslav Society of Medical Biochemists. Its president for many years has been Prof. Dr. Niko Jesenovec who published two essay books of standard methods while the third one was just about to be published when the country collapsed.

In 1983, Yugoslav Union of Pharmaceutical Societies awarded Yugoslav Society of Medical Biochemists with the Yugoslav Union of Pharmaceutical Societies' Diploma for developing medical biochemistry as a part of pharmacy.

U Društvu medicinskih biohemičara Jugoslavije ostvaruje se redovno članstvo (ima preko 700 redovnih članova medicinskih biohemičara), pridruženo članstvo firmi (ima preko 20 pridruženih članova firmi koje se bave proizvodnjom ili prometom potrošnih materijala i instrumenata za potrebe laboratorija) i članstvo studenata. Takođe je izražena tendencija učlanjivanja drugih profila iz srodnih prirodnih i medicinskih disciplina.

Prvi predsednik DMBJ sa mandatom od 8 godina u periodu od 1965. do 1973. godine bila je mr ph. Tatjana Plećaš-Drljača iz SR Srbije. Drugi predsednik bila je prof. dr Dušanka Mikac-Dević (1973 –1975) iz SR Hrvatske, a treći prof. dr Božidar Štraus (1975–1977), takođe iz Hrvatske. U periodu od 1977. do 1981. godine predsednik je bio prof. dr Nikola Jesenovec iz SR Slovenije, od 1981. do 1985. godine predsednik je bio prof. dr Franko Cetinić iz SR BiH. Šesti predsednik bila je prof. dr Radmila Hrizoho (1986–1988. godine) iz SR Makedonije, a zatim je za predsednika izabrana prof. dr Nada Majkić-Singh iz Srbije. Za sekretara DMBJ u istom mandatnom periodu imenovana je prim. Olivera Janković, takođe iz Srbije.

Društvo je 2003. godine promenilo naziv u Društvo medicinskih biohemičara Srbije i Crne Gore (DMBSCG).

Društvom upravljaju Izvršni odbor i Skupština. Društvo svoju aktivnost ostvaruje kroz rad komisija za standardizaciju, organizaciju i tehnologiju laboratorijske službe, kontrolu kvaliteta i edukaciju.

DMBJ ostvaruje značajnu međunarodnu saradnju kao članica svih međunarodnih stručnih i naučnih organizacija koje se bave kliničkom hemijom i srodnim disciplinama tj. laboratorijskom medicinom.

Društvo medicinskih biohemičara Jugoslavije je u kontinuitetu, po isključivom ovlašćenju Saveznog ministarstva za rad, zdravstvo i socijalnu politiku i Ministarstva za informisanje Republike Srbije, članica sledećih međunarodnih organizacija:

– Međunarodne federacija za kliničku hemiju (International Federation of Clinical Chemistry, IFCC);
– Foruma evropskih društava za kliničku hemiju (Forum of the European Societies of Clinical Chemistry, FESC;
– Evropske konfederacije za laboratorijsku medicinu (European Confederation of Laboratory Medicine, ECLM);
– Balkanske federacije za kliničku laboratoriju (Balkan Federation of Clinical Laboratory, BCLF)

Nacionalni predstavnik DMBJ u IFCC je prof. dr Nada Majkić-Singh a u FESC prim. Olivera Janković. Društvo medicinskih biohemičara Srbije i Crne Gore u ECLM predstavlja prof. dr Svetlana Ignjatović. U radu pojedinih komiteta IFCC-a učestvovali su kao predstavnici DMBJ: prim. Olivera Janković, prof. dr Svetlana Ignjatović, asistent Duško Mirković i prim. dr Nataša Lalić, spec. med. biohemije.

The purpose of YuSMB (currently SMBSCG) is to gather medical biochemists who would develop and enhance all the branches of medical biochemistry in health profession. Its tasks are as following: to standardize operations in clinical-biochemical laboratories, education of young biochemists on all levels, encouraging scientific research, setting up of working norms and implementation, execution and abiding by the ethics codices with health workers. The aim of SMBSCG is to promote the systemized standards in the field of medical biochemistry with the relevant federal and republican institutions. SMBSCG is to enable exchange of experiences of its members with the members of affiliate associatioons in the country and abroad.

The Society is exercising its expert and scientific role through the various commissions for staff education, standardization of procedures, quality control, organizing laboratory services, etc. National representatives are maintaining contacts with SFDJ, IFCC and other affiliate organizations. Through intermediation with such expert bodies, the YuSMB has significantly influenced promotion of the profession.

The YuSMB has wide net of regular members (there are over 700 regular members of medical biochemists), associate members-firms (there are over 20 associate members-firms that specialize in production and sale of laboratory disposables and instruments) and members-students. There is a growing tendency of others becoming members, even those stemming from related natural and medical disciplines.

The first president of YuSMB with 8 year mandate, in the period from 1965 until 1973, was. Tatjana Plećaš-Drljača from SR Serbia. The second president was Prof. Dr. Dušanka Mikac-Dević (1973–1975) from SR Croatia, and the third was Prof. Dr. Božidar Štraus (1975 1977), also from Croatia. In the period from 1977 until 1981 the president was Prof. Dr. Nikola Jesenovec from SR Slovenia, from 1981 until 1985 the president was Prof. Dr. Franko Cetinić from SR Bosnia Herzegovina. The sixth president was Prof. Dr. Radmila Hrizoho (1986 1988) from SR Macedonia, followed by Prof. Dr. Nada Majkić-Singh from Serbia, while Prim. Olivera Jankovic from Serbia was appointed as the YuSMB Secretary.

In 2003 the Society was renamed in the Society of Medical Biochemists of Serbia and Montenegro. (SMBSCG).

The Society is run by the Executive Board and the Assembly. The Society is exercising its role through various commissions for standardization, organization and technology of laboratory services, quality control and staff education.

Being a member of all international expert and scientific organizations of clinical chemistry and related disciplines, i.e. laboratory medicine, the YuSMB has accomplished cooperation on international level.

DMBJ od 1981. godine izdaje časopis »Jugoslovensku medicinsku biohemiju«, koji se danas referiše u većini svetskih referentnih časopisa i ima rang naučnog časopisa najvišeg stepena iz ove oblasti, i ostvaruje drugu značajnu izdavačku delatnost. DMBJ je 1994. godine izdalo knjigu autora N. Majkić-Singh »Medicinska biohemija«, a 1977. godine knjiga autora V. Miletića »Imunohemijske metode«. Godine 1998. Društvo je izdalo monografiju »Razvoj medicinske biohemije u Jugoslaviji« autora N. Majkić-Singh, J. Đurđević i J. Kavirić u kojoj je opisan kompletan razvoj medicine biohemije u našoj zemlji, a 2002. godine i monografiju »Centralna laboratoja – Institut za medicinsku biohemiju Kliničkog centra Srbije«. Od izdatih dela treba još navesti monografije: Advances in Laboratory Medicine (DMBJ, Beograd, 1997) i Primena medicinske biohemije u laboratorijskoj medicini (DMBJ, Beograd, 2000).

Svoj rad i odnose DMBSCG usmerava u pravcu državnih organa i drugih institucija i to:

– Ranije, Saveznog ministarstva za rad, zdravstvo i socijalnu politiku, i
– Saveznog zavoda za zaštitu i unapređivanje zdravlja, i sada
– Republičkih ministarstava za zdravlje,
– Republičkih ministarstava za nauku,
– Republičkih zavoda za zaštitu zdravlja,
– Republičkih fondova socijalnih osiguranja,
– Farmaceutskog i Medicinskog fakulteta, i
– srodnih udruženja i društava.

Priznanja Društva

Društvo medicinskih biohemičara SCG svojim članovima medicinskih biohemičarima i drugim fizičkim i pravnim licima kao priznanje za unapređivanje medicinske biohemije na stručnom i naučnom planu dodeljue Diplomu i Zahvalnicu. Do sada su ova priznanja dodeljena svim najaktivnijih članovima Društva, zatim srodnim ustanovama sa kojima je Društvo sarađivalo, kao i firmama-pridruženim članicama koje su pomagale rad Društva tokom svih proteklih godina.

Poruka uprave DMBSCG

Utemeljivači medicinske biohemije u našoj zemlji, počev od beogradskih apotekara Pavla Ilića i Jovana Đurića, bili su još prof. dr Pavle Trpinac, pukovnik prof. Ljubomir Purać, mr Stevan Lukić i prof. dr Ivan Berkeš. Za sve njih, kao i za plejadu izvrsnih medicinskih biohemičara praktičara važio je

moto Normana Majlera

»Ako čovek mora nešto da uradi, neće mu biti ništa ako to uradi kako treba«.

As exclusively authorized by Federal Ministry for Labor, Health and Social Policy and the Ministry of Information of the Republic of Serbia, the YuSMB has continuously been a member of the following organization:

– International Federation of Clinical Chemistry (IFCC),
– Forum of the European Societies of Clinical Chemistry (FESC),
– European Confederation of Laboratory Medicine, (ECLM),
– Balkan Federation of Clinical Laboratory (BCLF).

YuSMB National Representative at IFCC is Prof. Dr. Nada Majkić-Singh and at FESCC Prim. Olivera Janković. YuSMB National Representative at ECLM is Prof. Dr. Svetlana Ignjatović. Certain IFCC Commities have been attended by the following YuSMB representatives: Olivera Janković, Svetlana Ignjatović Duško Mirković and Nataša Lalić.

Since 1981 YuSMB publishes its journal »Yugoslav Medical Biochemistry«. It is being referred to in most of international journals and is positioned as a scientific journal of the highest rank. The YuSMB is the publisher of other important works such as »Medical Biochemistry« the book by N. Majkić-Singh published in 1994. In 1977 the Society published the book »Immunochemical methods« by V. Miletić.

In terms of work and maintaining relations, the SMBSCG inclines towards following state organs and other institutions such as:

– Federal Ministry for Labor, Health and Social Policy, previously in force
– Federal Agency for Health Protection and Prevention, even now in force
– Republican Ministry for Health,
– Republican Ministry for Science,
– Republican Fund for Health Protection,
– Republican Fund for Social Insurance,
– Faculty of Pharmacy and Faculty of Medicine, and
– Related associations and societies.

The Society Award

The Society of Medical Biochemists of Serbia and Montenegro assign to the members the Society and other institutions, the Awards for the contribution of the development of the Society aims.

Message from the Society Board

The architects of medical biochemistry in our country besides Pavle Ilić and Jovan Đurić are also Prof. Dr. Pavle Trpinac, colonel Prof. Ljubomir Purac, M. Sc. Stevan Lukić and Prof. Dr. Ivan Berkeš. For all of them and also for other excellent medical biochemists adhere a motto by Norman Mailer:

Današnjoj upravi DMBSCG bila bi čast da ovaj moto usvoje kao svoj, sadašnje i buduće generacije mladih temeljno školovanih medicinskih biohemičara, u težnji da nastave delo svojih predaka.

»If man's got to do something he'll have no trouble if he does it right.«

Today's SMBSCG management would be honored to adopt this motto as being the bond between present and the future generations of young, throughly educated medical biochemists aiming at continuation of their ancestors' work.

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Rad primljen: 12. 03. 2005.

Prihvaćen za štampu: 15. 04. 2005.