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International Federation of Clinical Chemistry and Laboratory Medicine





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Task Force on Ethics: recent survey

by **Ann M. Gronowski**

Chair, Task Force on Ethics (2015-2017)



Ann M. Gronowski

The IFCC Task Force on Ethics (TF-E) focuses on ethical issues in laboratory medicine. The aims of the TF-E are:

- To increase awareness among Laboratory Medicine Professionals of ethical issues
- To encourage the practice of Laboratory Medicine to the highest ethical standards
- To develop guidance documents for member societies on ethics related issues
- To provide a voice for Laboratory Medicine on ethical issues
- To link Laboratory Medicine, ethics and the public interest

In January 2018, the TF-E distributed an invitation to the national representatives from 93 Full IFCC member societies and 13 affiliate societies to complete an on-line survey. The survey was developed to allow the TF-E to measure the level of interest in ethics-related issues and to develop new materials to help member societies.

Fifty-three responses were received. Most societies (87%) reported that their national society did not have an ethics task force or committee. Several societies indicated that their ethics committee met only when and if needed to deal with ethical issues if/when they arise. Other ethics committees served to create ethics-related documents and educational materials.

Twenty-one societies reported that they had a code of ethics (or professionalism), 9 reported a conflict of interest statement for society leadership to complete, and 6 have statements outlining proper interactions with industry. Importantly, of the societies that said they did not have any ethics-related documents, 95% said that they felt they would be useful.

The societies were asked if they had faced any issues that were ethical in nature. The results are shown in Table 1.

Table 1: Has your IFCC member national society faced any issues that were ethical in nature? (19 societies responded)

63% (12/19)	Relationships with industry
37% (7/19)	Conflict of interest issues
32% (6/19)	Unprofessional conduct
5% (1/19)	Confidentiality

Table 2: Ways in which the TF-E could help member society (41 societies responded)

68% (28/41)	Sharing/developing general ethics guidelines
22% (9/41)	Sharing/developing code of ethics
10% (4/41)	Sharing/developing educational materials
7% (3/41)	Sharing/developing industry guideline
7% (3/41)	Help to resolve cases of ethics-related issues

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Twelve responded that they had ethical problems related to industry, 7 reported conflict of interest issues, 6 reported unprofessional conduct and one reported a confidentiality issue.

The survey asked for ways in which the TF-E could help member societies. The responses are shown in Table 2.

Moving forward, the TF-E plans to create a tool box with examples of documents such as the ones in Table 2. The toolbox can be useful for member societies as examples to create their own unique documents appropriate for their society. As always the TF-E is open to suggestions and available to answer questions. Do not hesitate to contact Ann Gronowski (gronowski@wustl.edu) or Nilda Fink (NFink@fbpba.org).

IFCC Committee on Clinical Laboratory Management (C-CLM) presents interactive case scenarios

Approach to common problems in the medical laboratory within the context of clinical laboratory management toolbox

by Sedef Yenice
Chair, IFCC C-CLM

It was great to have met some of you at the IFCC WorldLab in Durban, South Africa last year at our Satellite Educational Workshop on “Intelligent Clinical Laboratory Management: Impacts on Quality System Improvement” that was held on 22 October 2017.

We would like to continue engaging with you on the common issues we face in our daily work practices. C-CLM strives to interact with the fellow clinical laboratory practitioners and expects to hear your solutions. **We have prepared a group of four case scenarios** that we believe commonly occur in our laboratory environment and **would like to share them with you to receive your responses in how you would solve them.**

The objective of this exercise is to understand your perspectives on these shared problems and your proposed solutions. They reflect the contextual factors in your particular environment. This interaction will also assist the C-CLM to prepare a larger scope of training and collaborations in the area of clinical or medical laboratory management.

We started this interactive project on March 1, 2018, with the posting of first case/problem scenario and every 6 weeks a new problem/case will be posted to the webpage of C-CLM under the heading of Clinical Laboratory Management Toolbox.

Please click the link (<http://www.ifcc.org/ifcc-education-division/emd-committees/c-clm/6-c-clm-clinical-laboratory-management-toolbox/>) and go to the Clinical Laboratory Management Toolbox. There you will find the case scenarios to be downloaded, under the subheading of “Interactive Case Scenarios - Approach to Common Problems in the Medical Laboratory”:

- ➡ One of our C-CLM members, Prof. Aye Aye Khine Wamono, will evaluate the answers and provide feedback through the IFCC webpage within the timeline. Please submit your answers directly to Prof. Wamono at ayeaye.khine@smu.ac.za on the dates specified in the page.
- ➡ No individual responses will be presented. After the scheduled time of responses is completed, the consensus correct answer in association with a cumulative analysis of responses will be uploaded to the section of Answers.

The C-CLM looks forward to your participation and to engaging in many fruitful interactive discussions with all of you!

IFCC WG-GMECC: how should glucose meters be evaluated in critical care

by Cynthia Bowman

Chair and Document Editor, IFCC WG-GMECC

Sean Cunningham

Member and Document Assistant Editor, IFCC WG-GMECC

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The IFCC Working Group on How should Glucose Meters be Evaluated in Critical Care (WG-GMECC), under the IFCC POCT Task Force, has completed a document on “How Should Glucose Meters Be Evaluated for Critical Care”. It addresses the clinical practice of using Blood Glucose Meters (BGM) and what requirements they must fulfill in order to be used in critically ill patients and in Professional Healthcare Settings (PHS) on patients in various states of health and receiving intensive medical intervention and therapy.

The document is already available on the IFCC website at <http://www.ifcc.org/ifcc-education-division/emd-committees/taskforcepoc/wg-gmecc/>. A second document addressing quality management and training and competency recommendations for BGM is under development.

The WG was convened in 2014 after the US Food and Drugs Administration (FDA) issued its draft guidance on blood glucose test monitoring systems for “prescription” use and concerns about the accuracy and risks of using BGM for acutely ill patients were being widely raised.

The WG has been an inclusive one with 12 members, 10 corresponding members, 3 corporate members, and 6 advisors. It has been chaired by Cynthia Bowman (US) who, along with Sean Cunningham (IE), Robert Slingerland (NL), Dieter Mesotten (BE), Brad Karon (US) and James Nichols (US), authored the document. Input from all WG participants was broad-based, open, and active, including corporate members.

Time was taken to develop agreement on core principles and recommendations from all participants and to account for the evolution of recommendations, technology and perspectives in the field of BGM. The WG elected to cover the topic with some technical and clinical depth to allow readers and stakeholders to have a resource on principles of the technology and clinical issues that must be considered when evaluating BGM for critically ill and PHS patients.

The WG agreed that all users of BGM must be aware of their limiting technical and clinical factors, that evaluation and oversight of BGM must be practical and respect resource constraints, but that there must be a single international standard for BGM performance and evaluation in critical care and PHS settings. At the current time, the WG does not recommend using capillary samples for BGM with critically ill or PHS patients, as described

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above. Options for monitoring glucose levels in those patients include using alternative instruments or using arterial or venous samples with BGM cleared for those samples. However, the WG is aware that vendors and groups have data promoting the use of capillary samples for critically ill and PHS patients. An FDA public advisory committee meeting will receive testimony supporting that use on March 30, 2018.

The WG is hoping that the document will stimulate active multi-specialty discussion in many settings and will serve to foster collaborative awareness and best practices between laboratory, clinical, and corporate stakeholders for BGM. Many of the principles included in the document are general ones applying to good laboratory and clinical practice for POCT in general. It is also hoped that this document and topic will be

an ongoing discussion in inter-society meetings with an evolution of recommendations and practices for current and future technologies. Using the principles of the document could promote a good basis for ongoing partnership with laboratory, clinical, and corporate stakeholders in dealing with other laboratory testing issues.

The WG-GMECC looks forward to your feedback and fruitful interactive discussions with you.

For any comment or request of information, please email:

Cynthia Bowman at
Cynthia.BowmanMD@baystatehelth.org;
or
Sean Cunningham at
sean.cunningham99@gmail.com.

The 9th Beginner's Course in Molecular Diagnostics

18-24 February 2018 – Martin, Slovakia



by *Evi Lianidou*
Chair, IFCC C-CMBC Committee



The course participants and the tutors

The 9th IFCC Beginner's Course in Molecular Biology, organised by the C-CMBC, took place at Biomed in Martin, Slovakia, between 18-24 February 2018.

The local supporting team consisted of the President of the Slovak Society of Clinical Biochemistry (SSKB) **Prof. Oliver Rácz** (Department of Physiological Pathology, Košice), **Prof. Erika Halašová** (Division of Molecular Medicine, Biomed, Martin), **Prof. Dušan Dobrota** (Department of Medical Biochemistry, Martin) and the executive member of the implementation task force **Dr. Katarína Baluchová** (Division of Oncology, Biomed, Martin).

THE WORKSHOP TUTORS:

The following IFCC C-CMBC committee members were the tutors who gave all lectures and organized the practical part of the course, assisted by the IFCC Junior members, namely:

1. **Evi Lianidou**, PhD., Professor of Analytical Chemistry – Clinical Chemistry, University of Athens, Greece (Chair of the C-CMBC Committee)
2. **Andrea Ferreira-Gonzales**, PhD., Professor of Pathology and Director of Molecular Diagnostics

Laboratory, VCU, Richmond, USA (Consultant of the C-CMBC Committee)

3. **Verena Haselmann**, M.D., PhD., Institute of Clinical Chemistry, University Medicine Mannheim, Medical Faculty Mannheim of the University of Heidelberg, Germany (Member of the C-CMBC Committee)
4. **Ettore Domenico Capoluongo**, PhD., Professor of Clinical Biochemistry and Clinical Biology, Department of Laboratory Medicine, Catholic University – Agostino Gemelli Teaching Hospital, Rome, Italy (Member of the C-CMBC Committee)
5. **Zsolt Kovacs**, M.D., Associate lecturer, Department of Biochemistry and Environmental Chemistry, University of Medicine and Pharmacy, Târgu Mureș, Romania (IFCC Junior member, selected through the Romanian course)

THE MOLECULAR BIOLOGY COURSE:

Dr. Katarína Baluchová was selected by the SSKC as the trainee for this course, and was trained at the Institute for Clinical Chemistry in Mannheim, Germany



L-R: Prof. Andrea Ferreira-Gonzales (USA), Dr. Verena Hasselman (Germany), Prof. Ettore Capoluongo (Italy), Dr. Zsolt Kovacs (Romania), Prof. Evi Lianidou (Greece), Dr. Katarina Baluchova (Slovakia), Prof. Dušan Dobrota (Slovakia), Prof. Erika Halašová (Slovakia)

to attain credentials for the course. All C-CMBC members and course participants were hosted by Jessenius Faculty of Medicine (JFM) in Martin. The course took place at the Division of Molecular Medicine, BioMed, Martin and was attended by 20 participants from eight Slovakian institutions. The participants were allocated to one of four groups, each led by one of the tutors. The practical laboratory sessions were based on the C-CMBC manual.

The Pre-Course seminar was held by Prof. Andrea Ferreira-Gonzales and focused on basics of nucleic acid amplification. During the pre-course day, peripheral blood samples were collected from each participant. Consequently, DNA was isolated on day one and used in subsequent experiments throughout the course. Each Course day started at 9:00 am with lectures on basic concepts of DNA isolation, DNA quantitation, PCR, real-time PCR and on different topics comprising the field of laboratory medicine and molecular diagnostics. The workshop continued with laboratory work, focusing on:

- Preparation of buffers and working solutions
- Isolation of DNA from peripheral blood samples
- DNA quality control
- Agarose gel electrophoresis
- PCR for HPV-PCR detection, HLA B57 detection, BRAF detection, RFLP FV Leiden and RFLP LCT detection and quantitative PCR CMV testing



Peripheral Blood collection

In-silico training on PCR assay design and RFLP assay design were also part of the workshop. At the end of the Course, Prof. Andrea Ferreira-Gonzales and Dr. Verena Haselmann gave the state-of-art lectures on Next generation sequencing and Liquid biopsy respectively.

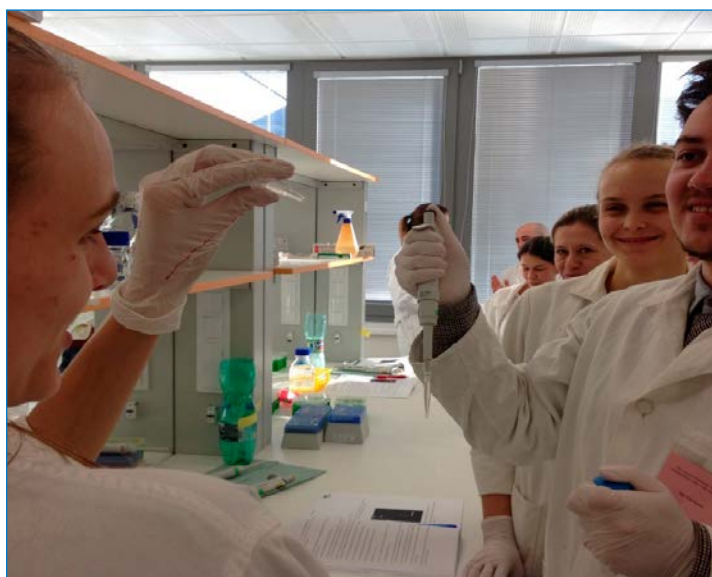
The selection of the new IFCC C-CMBC Junior Member from the Slovakia Course was based on the evaluation of all participants by:

- Results of the final written examination
- General performance during the laboratory sessions
- Personal interview with tutors

Mr. Michal Cibulka, PhD student from the Department of Medical Biochemistry, Jessenius Faculty of Medicine in Martin was elected as the next Junior Member of C-CMBC.

SPONSORS:

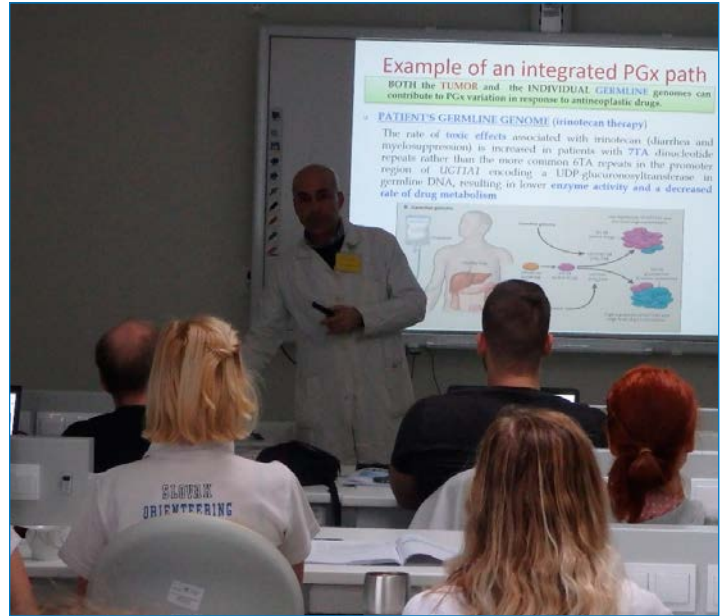
The “lab in a suitcase” was completed/extended with the help of faithful sponsors of the programme and generous funding from the IFCC. More specifically, the basic equipment and reagents used in the practical course were provided by *Biorad*, *Eppendorf*, and the *Lesser-Loewe Foundation*. *Roche Diagnostics Greece* provided the CMV kit and all necessary reagents used for the the real time quantitative PCR experiment.



Isolation of genomic DNA



Sample loading on an agarose gel



Seminar room

Artificial intelligence and big data: the next digital disruption



Bernard Gouget

by Bernard Gouget

Counselor for Public Health FHF

Chair-Human Health Care Committee on Accreditation -COFRAC

Chair-IFCC Nominations Committee (2016-2017)

General Secretary of the International Francophone Federation of Clinical Biology and Laboratory Medicine (FIFBCML)

The constantly increasing volume of data and the increase in calculation speeds have brought Artificial Intelligence (AI) and Big Data to the forefront. These two booming and promising technologies are irreversible. The truly revolutionary potential of the two technologies resides in the possibilities offered by their convergence. In healthcare, as in many other fields, technological progress has caused an exponential explosion in the volume of information collected at any time.

This is a boon for health research, for which big data is an almost inexhaustible source of new knowledge that is indispensable to innovation and medical progress.

The enormous volume of data now available raises technical challenges concerning data storage and mining capabilities. Increasingly complex computer and statistical programs and algorithms are essential. Data mining platforms with servers and supercomputers are pooled for more operability internationally. Examples include the European immuno-monitoring platform managed by several biotechnology companies, including the cancer Centre and INSERM, that aim to assist physicians with treatment decisions in oncology and infectious diseases and allow analysis of initial patient immunological status

Mining Big Data, which combines all socio-demographic and healthcare information, has many benefits: identification of disease risk factors, diagnostic assistance, choosing treatments and monitoring their efficacy, pharmaco-vigilance, epidemiology, etc. Unfortunately, this information is fragmented and heterogeneous. In order to make processing and mining this complex information possible, it must be acquired in a structured manner and encoded before being integrated into databases or data warehouses. Standards are being developed, such as I2B2 (Informatics for Integrating Biology and the Bedside), developed in Boston. Thanks to these standards, hospitals and health centres will be better armed to compile all the data collected (pharmacy, laboratory medicine, imaging, genomics, health economics, clinical practice, etc.) in biomedical data warehouses that can be queried by researchers via web interfaces. Many research teams work on integrated platforms, to match databases and aggregate their data with those of cohorts.

If we want to set in motion the development of a medicine that works as early as possible, population studies are necessary. We can hope that researchers will soon be able to access gigantic biological databases to tap them, initiate research, and create hypotheses to construct a new medical paradigm based on early screening and targeted therapies. A futurist fantasy? Finland has already embarked on this path.

Big Data and Artificial Intelligence are two inextricably linked technologies, to the point that we talk about Big Data Intelligence since nearly every field of AI is concerned with applications in the healthcare field: from the representation of knowledge and the modeling of reasoning to robotics, and including statistical learning and the automatic processing of natural language. The expected benefits include: diagnostic assistance, in particular in difficult cases, assistance with writing medical reports, assistance with medical procedure coding, or even assistance with publishing research results by helping to write them. 5P medicine (preventative, personalized, precise, participatory, and predictive) is one of the fields

to exploit on the basis of “omics.” This field promises a paradigm shift and significant advances where symptoms will no longer be the main guide for diagnosis, but rather patients will be treated according to their own genome, epigenome or metabolome. Extracting information from textual medical reports for the secondary use of healthcare data and assistance with mining knowledge published in the scientific literature will be part of the possibilities offered by AI. These data offer phenomenal raw material that complement the algorithms for AI in healthcare for a better approach to databases.

One of the lines for development of AI relies on acceptability, especially by clinicians, researchers and biologists, as well as patients, institutions and businesses. One of the major lines concerns the deployment of models and algorithms built to preserve privacy and confidentiality. Ethics and use must also be taken into consideration to facilitate acceptability. In addition, the clinical benefit of AI systems must be proven, and cybersecurity questions must be addressed.

It is also essential to train the medical biologists right now in function of the digital world in which they will practice. The technologies have an increasingly important place alongside medical diagnosis and the clinic. Digital teaching must be integrated by the medical universities using transversality of expertises. Simulation using interactive digital means must also be more widely deployed in both initial and continuing training. A reflection has to be undertaken quickly on the foreseeable evolution of the professional exercise in Lab Medicine because of the tasks that could be accomplished by intelligent systems.

Machines will not routinely replace healthcare providers; rather they will provide support to them. This is indispensable for communicating results and diagnosis. AI will considerably evolve and transform professions, refocusing them on intervention and leaving diagnosis to machines. All these challenges are intimidating. They can lead to suspicion around this convergence of AI and Big Data. It is important to remember that technologies are only disruptive when we are poorly prepared.

IFCC welcomes a new affiliate member

Egyptian Association of Healthcare Quality and Patient Safety



DESCRIPTION

The Egyptian Association of Healthcare Quality and Patient Safety is an official association under the supervision of a medical research institute – Alexandria University. The society gathers a group of specialists in the field of healthcare quality and laboratory medicine.

MISSION

The mission of this society is to spread the quality culture and contribute to the improvement of healthcare outcomes by offering training and consultation for healthcare providers according to international standards.

OBJECTIVES

1. **To improve** the quality culture for healthcare providers by:
 - Continuing basic and advanced training programmes in different healthcare activities.
 - Providing newsletters for all updated scientific information in healthcare quality and patient safety.
 - Arranging scientific events aiming to communicate all new updates in healthcare and laboratory quality as well as patient safety.

2. **To ensure** a network of qualified practitioners and providers providing exchange experience
3. **To support** quality improvement in laboratory medicine.
4. **To collaborate** with national and international organizations to improve the future of laboratory medicine.

The board formulation:

The board is formed from eleven university members from the medical research Institute and Faculty of Medicine as well as medical laboratory pioneers.

The association members:

The association has around 30 core members as well as 300 functional members. All the members are professionals in the field of healthcare quality and laboratory medicine with a special division for the students to ensure that all segments are represented.

Activities:

The Egyptian association for healthcare quality and patient safety organized more than 30 events in collaboration with governmental and nongovernmental organizations focusing on the latest updates in the field.

Clinical Chemistry Trainee Council: Pearls of laboratory medicine



by **Nader Rifai**
Founder of CCTC programme
Ann Gronowski
Co-Chair, CCTC programme

Clinical Chemistry Trainee Council (CCTC) is a free multi-lingual online educational program for laboratory medicine trainees and their mentors (www.traineecouncil.org). This program is an initiative of the journal *Clinical Chemistry*. Over 11,500 registrants from 156 countries currently use this program, approximately 40% are from emerging and developing countries.

The CCTC website contains a variety of educational materials including Pearls of Laboratory Medicine. Pearls are 10-15 min lectures about an analyte or diagnosis spanning all disciplines of laboratory medicine including clinical chemistry, hematology & coagulation, microbiology, immunology, transfusion medicine, and molecular diagnostics. In addition, there are lectures related to laboratory management. Each presentation is curriculum-based and peer-reviewed.

A group of board-certified faculty members from the various disciplines of laboratory medicine determined the curricula and have been populating the program with lectures devoted to the topics of interest. These individuals are responsible for

soliciting, handling the review process and editing each Pearl. Currently, 156 Pearls have been posted with a goal of completing 300 by the end of 2019. See Table 1 for the breakdown of number of Pearls in the various disciplines.

39 Pearls have been translated to Spanish and 15 to Japanese; all are available on the CCTC website. This series have been downloaded ~75,000 times and the top 5 downloaded Pearls are listed in Table 2.

One particularly useful feature of the Pearls, to those whose native language is not English, is the fact that a transcript of the presentation is also provided thus enabling the user to listen to and read the materials at the same time. Such an exercise, in and by itself, is beneficial to improve one's scientific English language proficiency. The Pearls can be accessed either from your computer or your mobile device.

We encourage all trainees in laboratory medicine and their mentors to take advantage of this free resource and register to gain access to these materials by going to www.traineecouncil.org. It takes less than one minute! Enjoy the Pearls.

Table 1

Disciplines	Number of Pearls
Clinical Chemistry	64
Molecular Diagnostics	30
Hematology/Coagulation	17
Transfusion Medicine	16
Immunology	10
Microbiology	15
Laboratory Management	5

Table 2

- Immunoassays
- Point-Of-Care Testing
- Fetal Lung Maturity
- Neonatal Hyperbilirubinemia
- Warfarin Pharmacogenetics

NEWS FROM REGIONAL FEDERATIONS AND MEMBER SOCIETIES



The Tunisian Society of Clinical Biology goes all out!

by Fethy Ben Hassine

STBC General Secretary

Abderrazek Hedhili

IFCC-AFCB Representative

Bernard Gouget

FIFBCML General Secretary

The XXXI Journées Nationales de Biologie Clinique (JNBC) 2017 of the Tunisian Society of Clinical Biology (Société Tunisienne de Biologie Clinique-STBC) was the opportunity to set up the Maghrebine Federation of Clinical Biology that brings together Tunisia, Algeria and Morocco to exchange experiences and news on Lab Medicine.

Almost 800 attendees with the mission of collecting science convened at the Royal Hammamet Convention centre, including high ranking government officials, health and laboratory medicine experts, social partners and industry representatives.

The congress organizers were passionate about creating an innovative and sustainable congress, with lively

discussions and exchange of knowledge, practices and experiences between the attendees.

Symposia and technical sessions for the 303 accepted e-posters were held in rooms with special multimedia tools to enhance the interactions between presenters and participants as well as to create more dynamic collaborative talks.

The main sessions focused on haemoglobinopathies, myelodysplastic syndromes, imported parasites, antibiotic alternatives, hepatitis C, diabetes management, tuberculosis.

The Molecular Biology Course for Young Researchers has become a tradition, the theme of New Generation



L-R: Dr. Naoufel Nabli, Pr. Farouk Barguelil, Dr. Najoua Gharbi, Dr. Fethy Ben Hassine, Pr. Taieb Messaoud, Pr. Neziha Kaabachi, Pr. Slama Hmida, Pr. Abdelhédi Miled, Dr. Khelil Ben Abdallah, Pr. Manel Chaabane

Article continued on next page

Sequencing (NGS) and Broadband Sequencing Platforms attracted a high attendance and the learning and knowledge exchange continued with IVD booths visits.

The new STBC Executive Board (2018-2020) was also elected during the congress:

- Pr. Taieb Ben Messaoud, Président
- Pr. Brahim Nsiri, 1st Vice-President
- Pr. Farouk Barguellil 2nd Vice-President
- Pr. Manel Chaabane, General Secretary
- Pr. Asma Gheriani, 1st assistant General Secretary
- Pr. Kalthoum Kallel, 2nd assistant General Secretary
- Dr. Khelil Ben Abdallah, Treasurer
- Dr. Leila Kallel, assistant Treasurer
- Pr. Amina Bibi, archivist

Professor Slama HMIDA, STBC President 2014-2017, has chosen to honour former members of the Tunisian Society of Clinical Biology Society retiring after recognition of outstanding services, contributing to the promotion of medical biology in Tunisia.

This tribute is the beginning of a tradition that can be provided in the future as well, in a sustainable way as a pledge of solidarity and strengthening links between medical biologists of different generations.

Three of the most valuable former members of the STBC were honoured (see photo):

- Pr. Abdelhedi Miled, one of the founders and ex STBC Vice President;
- Pr. Neziha Kaabachi, STBC President during 2 terms;

- Dr. Najoua Gharbi, ex-Treasurer and ex STBC President.

A further novelty during the congress was **the creation of the “Pr. Abderraouf Mbaza Award”**, who was the pioneer of the Tunisian Clinical Biology field and the founder of the STBC. This award is dedicated to a young researcher and is additionally endowed with 5000 DT and will be presented for the first time in 2018.

A comprehensive survey of attendees conducted during the conference found that the expectations of the participants were not only met, but also exceeded. They were not merely satisfied, but also impressed and they were motivated to implement their newly acquired knowledge in their work.

During the closing ceremony, Prof. Slama Hmida warmly encouraged and congratulated Prof. A. Hedhili, who currently sits on IFCC-EB (2018-2020) as AFCB Regional Representative. It is a tremendous honour for our country to represent the Arabic region.

The STBC has a long and proud tradition of providing leading edge expertise, outstanding biomedical research, and comprehensive education in Lab medicine. Pr. Slama Hmida, expressed appreciation for the warm collaboration with his EB members and is convinced that the new team will bring innovation and enhance attractiveness.

The XXXII JNBC 2018 will take place at the Royal Hotel Hammamet on 10-12 May 2018 with topics such as antibiotic resistance, biosensors, fungal infections, genetics and omics, monitoring of the growth of the child, infectious diseases amongst others.



News from the Society of Medical Biochemists of Serbia

The 20th annual 'Professor Ivan Berkeš' Scientific Conference

by Snezana Jovicic

Liaison Member, IFCC eNewsletter Working Group

Honouring the life and work of Professor Ivan Berkeš, one of the founders of the medical biochemistry profession in former Yugoslavia, the Society of Medical Biochemists of Serbia organized for the twentieth time, in December 2017, the traditional annual Scientific Conference.

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Professor Ivan Berkeš taught at Universities of Zagreb, Skopje and Belgrade. His work at the Faculty of Pharmacy, University of Belgrade, was pivotal for the design of a postgraduate specialization studies program, and in foundation of clinical enzymology as an independent discipline. Professor Berkeš was a mentor to over 150 medical biochemistry specialists and several dozen PhD students. He authored over 200 papers in international and national journals, as well as several books. Upon his death, in 1997, his former students gathered in the Society of Medical Biochemists of Serbia and established the *Scientific Foundation "Professor Ivan Berkeš"*. The Foundation traditionally awards the best students graduated at the Faculty of Pharmacy University of Belgrade and organizes the Annual Scientific Conference where the doctoral dissertations defended in the field of medical biochemistry during the past year are presented.

The 20th annual Scientific Conference was organized traditionally by Professor Nada Majkić-Singh, Professor Berkeš' student and associate, who contributed the most to the remembrance of his legacy. The Conference was held on December 7, 2017 under the patronage of the Society of Medical Biochemists of Serbia, Scientific Foundation „Professor Ivan Berkeš“ and the Faculty of Pharmacy University of Belgrade.

It gathered over 200 participants: students, older colleagues who were the students of Professor Berkeš, young graduate medical biochemists and teachers of the Faculty of Pharmacy. Traditional guests were the family members of Professor Berkeš: his son and grandson, with their families.



Family of professor Berkeš and audience at the Conference

Professor Nada Majkić-Singh opened the Conference, with the opening welcome and word on its history and significance.

On behalf of the Faculty of Pharmacy, the participants were welcomed by the Vice Dean, professor Nataša Bogavac-Stanojević. After the opening words, the choir of students „Raskovnik“ performed, adding the festivity to the event.



Choir of students of Faculty of Pharmacy „Raskovnik“; the conductor Djordje Perović; on the piano, Vladimir Vujović

The opening ceremony was closed by awarding the valedictorians of the two graduate programmes of the Faculty of Pharmacy, University of Belgrade – Tamara AntoniĆ, Master of Pharmacy-Medical Biochemist, and Sandra Tešić, Master of Pharmacy. Prof. Nada Majkić-Singh and Professor Marina Milenković, the Vice Dean for Education, handed the awards to this year's laureates.

Professor Svetlana Ignjatović and Professor Vesna Spasojević-Kalimanovska chaired the scientific part of the Conference. The program encompassed all of the three fields of the medical biochemistry curriculum – medical biochemistry, toxicological chemistry and sanitary chemistry. In the first part, the results of the ongoing scientific projects of the Faculty of Pharmacy and Ministry of Science, Education and Technological Development were presented.

The speakers were Professor Aleksandra Zeljković (“Assessment of LCAT and CETP activities as a tool for estimation of structural and functional properties of HDL particles”) and Professor Mirjana Bećarević (“Diagnostic and therapy of antiphospholipid syndrome”).

The second part was dedicated to doctoral thesis presentations. Dr. Marina Pjanović presented her work on bone formation markers and vitamin D in pregnancy. Metabolic and immunological effects of administration of two *Lactobacillus* strains in mice fed a high fat diet were presented by Dr. Ana Djurić. The Conference was closed with the presentation on the study on rats of cadmium and polychlorinated biphenyls mixture toxicity by Dr. Aleksandra Buha-Đorđević.



Laureate of the “Professor Ivan Berkeš” Scientific Foundation, Sandra Tešić (middle) with professor Marina Milenković (left) and professor Nada Majkić-Singh (right)



Laureate of the “Professor Ivan Berkeš” Scientific Foundation, Tamara AntoniĆ (in the middle) with professor Marina Milenković (left) and professor Nada Majkić-Singh (right)



Participants in the scientific part of the Conference with laureates
 L-R: assistant Milica Miljković, professor Aleksandra Zeljković, professor Vesna Matović, professor Vesna Spasojević-Kalimanovska, professor Nataša Bogavac-Stanojević, Tamara AntoniĆ, professor Marina Milenković, professor Nada Majkić-Singh, Sandra Tešić, professor Mirjana Bećarević, professor Svetlana Ignjatović

IFCC's Calendar of Congresses, Conferences & Events

Calendar of IFCC Congresses/Conferences and Regional Federations' Congresses

Apr 18 - 21, 2018	 <p>ARAB FEDERATION OF CLINICAL BIOLOGY AFCB</p>	<i>15th Arab Conference of Clinical Biology and Laboratory Medicine</i>	Ramallah, PS
Jul 2 - 4, 2018		<i>1st IFCC, EFLM, AFCB Conference "Laboratory Medicine: Meeting the needs of Mediterranean Nations"</i>	Rome, IT
May 19 - 23, 2019	 <p>May 19-23 BARCELONA EUROMEDLAB 2019</p>	<i>IFCC - EFLM EuroMedLab 2019</i>	Barcelona, ES
Sep 11 - 13, 2019	 <p>COLABIOCLI</p>	<i>COLABIOCLI Regional Congress 2019</i>	Panama, PA
Nov 17 - 20, 2019	 <p>15th APFCB CONGRES 2019</p>	<i>APFCB Regional Congress 2019</i>	Jaipur, IN
May 24 - 28, 2020	 <p>IFCC WorldLab SEOUL 2020</p>	<i>XXIV IFCC WorldLab - Seoul 2020</i>	Seoul, KR
May 16 - 20, 2021		<i>XXIV IFCC - EFLM EuroMedLab - Munich 2021</i>	Munich, DE
May 21 - 25, 2023		<i>XXV IFCC - EFLM WorldLab - EuroMedLab - Rome 2023</i>	Rome, IT

Calendar continued on next page

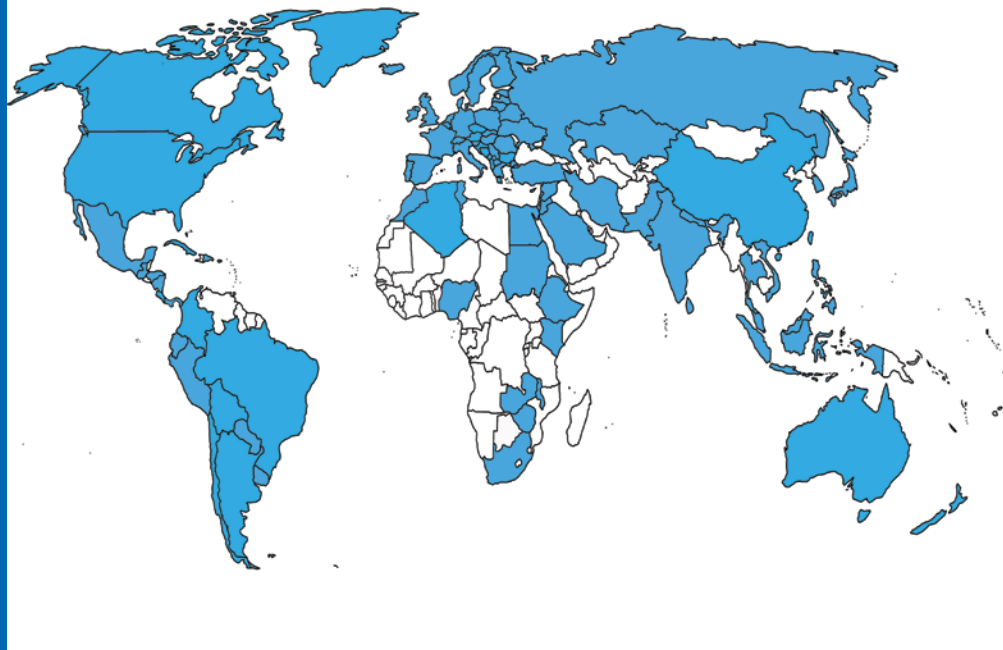
Calendar of events with IFCC auspices

Apr 18 - 21, 2018	<i>The 10th International Palestinian Conference of Laboratory Medicine and the 15th Arab Conference of Clinical Biology</i>	Ramallah, PS
Apr 26 - 28, 2018	<i>V Jornadas Bioquimica de Cuyo</i>	Mendoza, AR
Apr 28 - 29, 2018	<i>TBS-BD Preanalytical Phase Symposium</i>	Kaysery, TR
May 9 - 12, 2018	<i>2nd Congress of Romanian Association of Laboratory Medicine</i>	Bucharest, RO
May 9 - 12, 2018	<i>9th Congress of the Croatian Society of Medical Biochemistry & Laboratory Medicine</i>	Zagreb, HR
May 23 - 25, 2018	<i>21st Serbian Congress of Medical Biochemistry and Laboratory Medicine with international participations</i>	Belgrade, SRB
May 23 - 25, 2018	<i>14th EFLM Symposium for Balkan Region</i>	Belgrade, SRB
May 24 - 25, 2018	<i>XVI Meeting of the SEQCML Scientific Committee</i>	Madrid, ES
May 30 - 31, 2018	<i>The new era of Laboratory Medicine: from Diagnosis to Clinical Management</i>	Erice, IT
Jun 3 - 6, 2018	<i>CSCC 2018 Annual Conference</i>	Ottawa, CA
Jun 6 - 8, 2018	<i>Focus 2018 - Annual Meeting of ACB</i>	Manchester, UK
Jun 9 - 12, 2018	<i>XXXVII Nordic Congress in Medical Biochemistry</i>	Trondheim, NO
Jun 12 - 15, 2018	<i>XXXVI Nordic Congress of Clinical Chemistry</i>	Helsinki, FI
Jun 18 - 19, 2018	<i>2nd EFLM Strategic Conference "The end of Laboratory Medicine as we know it? Handling disruption of Laboratory Medicine in digital health"</i>	Mannheim, DE
Jun 21 - 22, 2018	<i>7th International Symposium on Critical Care Testing and Blood Gases</i>	Antibes, FR
Jun 30 - Jul 3, 2018	<i>International Society for Enzymology Conference</i>	Naxos, GR
Jul 13 - 14, 2018	<i>Turning Science Into Caring (TSIC)</i>	Shanghai, CN
Sep 26 - 29, 2018	<i>15th Annual Meeting of the German Society for Clinical Chemistry and Laboratory Medicine - The foundation for diagnosis and therapy</i>	Mannheim, DE
Sep 30 - Oct 3, 2018	<i>Santorini Conference "Systems medicine and personalised health & therapy" - "The odyssey from hope to practice".</i>	Santorini, GR
Oct 3 - 5, 2018	<i>26th BCLF Meeting and 6th National Congress of MSMBLM</i>	Skopje, MK
Oct 30, 2018	<i>International Conference on Laboratory Medicine "LABORATORY MEDICINE: 25 YEARS ON"</i>	Padova, IT
Nov 1 - 4, 2018	<i>2nd International Cell Death Research Congress</i>	Magosa, CY
Nov 29, 2018	<i>International Scientific Meeting of the Centre of Metrological Traceability in Laboratory Medicine (CIRME) "Standardization in Laboratory Medicine and Patient Safety"</i>	Milan, IT
Dec 7 - 8, 2018	<i>52e Journée de Biologie Praticienne</i>	Paris, FR

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Egypt: Egyptian Association of Healthcare Quality and Patient Safety
India: Association of Medical Biochemists of India (AMBI)
Iran: Iranian Association of Clinical Laboratory Doctors (IACLD)
Jordan: Society for Medical Technology & Laboratories (SMTL)
Mexico: Federación Nacional de Químicos Clínicos (CONAQUIC A.C.)
Nepal: Nepalese Association for Clinical Chemistry (NACC)
Philippines: Philippine Council for Quality Assurance in Clinical Laboratories (PCQACL)
Russia: Regional Association for Clinical Laboratory Diagnosis, St. Petersburg
Spain: Asociación Española de Farmacéuticos Analistas (AEFA)
Turkey: Society of Clinical Biochemistry Specialists (KBUD)
Ukraine: Association for Quality Assurance of Laboratory Medicine (AQALM)

Regional Federations

Arab Federation of Clinical Biology (AFCB)
African Federation of Clinical Chemistry (AFCC)
Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine (APFCB)
European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)
Latin America Confederation of Clinical Biochemistry (COLABIOCLI)
North American Federation of Clinical Chemistry and Laboratory Medicine (NAFCC)

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